

# Washington Flora Checklist

## A checklist of the Vascular Plants of Washington State Hosted by the University of Washington Herbarium

The Washington Flora Checklist aims to be a complete list of the native and naturalized vascular plants of Washington State, with current classifications, nomenclature and synonymy. The checklist currently contains **3,929** terminal taxa (species, subspecies, and varieties).

### Taxa included in the checklist:

- \* Native taxa whether extant, extirpated, or extinct.
- \* Exotic taxa that are naturalized, escaped from cultivation, or persisting wild.
- \* Waifs (e.g., ballast plants, escaped crop plants) and other scarcely collected exotics.
- \* Interspecific hybrids that are frequent or self-maintaining.
- \* Some unnamed taxa in the process of being described.

Family classifications follow [APG IV](#) for angiosperms, PPG I (J. Syst. Evol. 54:563-603. 2016.) for pteridophytes, and Christenhusz et al. (Phytotaxa 19:55-70. 2011.) for gymnosperms, with a few exceptions. Nomenclature and synonymy at the rank of genus and below follows the [2nd Edition of the Flora of the Pacific Northwest](#) except where superseded by new information.

Accepted names are indicated with blue font; synonyms with black font.  
Native species and infraspecies are marked with **boldface** font.

**Please note:** This is a working checklist, continuously updated. Use it at your discretion.

Created from the Washington Flora Checklist Database on September 17th, 2018 at 9:47pm PST.  
Available online at <http://biology.burke.washington.edu/waflora/checklist.php>

Comments and questions should be addressed to the checklist administrators:  
David Giblin ([dgiblin@uw.edu](mailto:dgiblin@uw.edu))  
Peter Zika ([zikap941@gmail.com](mailto:zikap941@gmail.com))

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# Ferns and Lycophytes:

## Aspleniaceae [FNA2, HC2] Spleenwort Family

**Synonyms:** (none)

**References:** (none)

### *Asplenium* [FNA2, HC, HC2]

Sp. Pl. 2: 1078. 1753; Gen. Pl. ed. 5, 485, 1754.  
spleenwort

#### *Asplenium scolopendrium* L. [FNA2, HC2]

Sp. Pl. 2: 1079. 1753.

var. *scolopendrium* [HC2]

#### *Asplenium trichomanes* L. [FNA2, HC, HC2]

Sp. Pl. 2: 1080. 1753.

maidenhair spleenwort

#### ssp. *quadrivalens* D.E. Mey. [FNA2, HC2]

Ber. Deutsch. Bot. Ges. 74: 456. 1962.

maidenhair spleenwort

Tetraploid; taxonomy follows FNA Vol. 2, the subspp. were not recognized in H&C.

#### ssp. *trichomanes* [FNA2, HC2]

Sp. Pl. 2: 1080.

maidenhair spleenwort

*Asplenium melanocaulon* Willd.

diploid

#### *Asplenium viride* Huds. [HC, HC2]

green spleenwort

*Asplenium trichomanes-ramosum* L. [FNA2]

FNA2: "Hybridization between *Asplenium trichomanes-ramosum* and *A. trichomanes* produces the fertile allotetraploid *A. adulterinum*, which occurs on Vancouver Island."

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## Athyriaceae [HC2] Lady Fern Family

**Synonyms:** (none)

**References:** (none)

### *Athyrium* [FNA2, HC, HC2]

Tent. Fl. Germ. 3(1,1): 31, 58. 1799.

lady-fern

#### *Athyrium distentifolium* Tausch ex Opiz [HC, HC2]

alpine lady-fern

*Athyrium alpestre* (Hoppe) Clairville [FNA2]

#### ssp. *americanum* (Butters) Hultén [HC2]

American alpine lady fern

*Athyrium alpestre* (Hoppe) Clairville var. *americanum* Butters [FNA2]

*Athyrium americanum* (Butters) Maxon [KZ99, Peck]

*Athyrium distentifolium* Tausch ex Opiz var. *americanum* (Butters) Cronquist [VPPNW1, HC]

JPM use of (Hoppe) T. Moore as author is incorrect; KZ99 use of (Hoppe) Milde as author is incorrect; *A. alpestre* (Hoppe) Rylands ex T. Moore is superfluous, coined in 1857, after the 1811 *A. alpestre* (Hoppe) Clairv.; here we follow FNA. The combination *Athyrium distentifolium* Tausch ex Opiz var. *americanum* (Butters) was used in 1966 by B. Boivin, but lacking sufficient bibliographic reference to validate it (IM1), so here we use the 1969 combination by Cronquist, following FNA, not KZ99

***Athyrium filix-femina*** (L.) Roth ex Mertens [Abrams, FNA2, HC, HC2, Peck]

Arch. Bot. (Leipzig). 2(1): 106. 1799.

lady-fern

ssp. ***cyclosorum*** (Rupr.) C. Chr. [HC2, ILBC5, KZ99]

lady fern, northwestern lady fern

*Athyrium alpestre* (Hoppe) Clairville ex T. Moore var. *cyclosorum* (Rupr.) T. Moore

*Athyrium filix-femina* (L.) Roth ex Mertens var. *cyclosorum* Rupr. [FNA2]

FNA2: "*Athyrium filix-femina* var. *cyclosorum* is most similar to the European var. *filix-femina*; it differs in having broader, nearly equilateral pinnules and medial to supramedial sori. The variety is distributed in northwestern North America with disjunct populations in northwestern Quebec and Ontario."

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## Azollaceae (see Salviniaceae)

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## Blechnaceae [FNA2, HC2] Chain Fern Family, Deer Fern Family

**Synonyms:** (none)

**References:** (none)

***Struthiopteris*** [HC2]

hard fern

***Struthiopteris spicant*** (L.) Weiss [Abrams, HC2]

deer fern

*Blechnum spicant* (L.) Sm. [FNA2, HC]

*Blechnum spicant* (L.) Sm. ssp. *nipponicum* (Kunze) A. Löve & D. Löve

***Woodwardia*** [FNA2, HC, HC2]

chain-fern

***Woodwardia fimbriata*** Sm. [FNA2, HC, HC2]

Cycl. 38(76). 1818.

giant chain fern

*Woodwardia chamissoi* Brack. [Abrams]

FPNW gives authority as Rees, but here we follow FNA Vol. 2 and KZ99 and give the authority as J.E. Smith in Rees

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## Cystopteridaceae [HC2] Fragile Fern Family

**Synonyms:** (none)

References: (none)

**Cystopteris** [FNA2, HC, HC2]

Neues J. Bot. 1(2): 26. 1806.  
bladder-fern

**Cystopteris fragilis** (L.) Bernh. [FNA2, HC, HC2]

Neues J. Bot. 1(2): 26, plate 2, fig. 9. 1806.  
bladder fern, brittle fern, fragile fern

*Cystopteris dickieana* Sim  
*Polypodium fragile* L.

FNA2: "Especially in the western portion of its North American range (British Columbia, Washington, Montana, Idaho, Oregon, California), *Cystopteris fragilis* appears to be developing morphologically and ecologically distinctive variants. Hybrid individuals with aborted spores have been discovered, and plants from these areas increasingly tend to grow on both soil and rock and to have slightly different morphologies on the two substrates. These variants intergrade, however, and are not sufficiently distinct to warrant species status. This polymorphic polyploid is probably actively speciating at the tetraploid level, perhaps through gene silencing (C. R. Werth and M. D. Windham 1991)."

**Gymnocarpium** [FNA2, HC, HC2]

Phytologist. 4: 371. 1851.  
oak-fern

**Gymnocarpium ×brittonianum** (Sarvela) Pryer & Haufler [HC2]

Syst. Bot. 18(1): 168.  
hybrid oak fern

**Gymnocarpium disjunctum** (Rupr.) Ching [FNA2, HC2]

Acta Phytotax. Sin. 10: 304. 1965.  
Pacific oak fern, western fern

*Dryopteris disjuncta* (Rupr.) C.V. Morton  
*Gymnocarpium dryopteris* (L.) Newman ssp. *disjunctum* (Rupr.) Sarvela  
*Gymnocarpium dryopteris* (L.) Newman var. *disjunctum* (Rupr.) Ching [VPPNW1]  
*Polypodium dryopteris* L. var. *disjunctum* Rupr.

No distinction between *Gymnocarpium disjunctum* and *G. dryopteris* was made in our floras until recently.

**Gymnocarpium dryopteris** (L.) Newman [FNA2, HC, HC2], misapplied

Phytologist. 4: app. 24. 1851.  
common fern, northern oak fern

*Dryopteris linnaeana* C. Chr. [Abrams, Peck]  
*Lastrea dryopteris* (L.) Bory  
*Phegopteris dryopteris* (L.) Fée  
*Polypodium dryopteris* L.  
*Thelypteris dryopteris* (L.) Slosson

FNA2: "*Gymnocarpium dryopteris* is a fertile allotetraploid species that arose following hybridization between *G. appalachianum* and *G. disjunctum* (see reticulogram). Its wide distribution over much of the north temperate zone has provided ample opportunity for secondary contact between *G. dryopteris* and each of its diploid parents, thereby resulting in a wide-ranging composite of abortive-spored triploid crosses (*G. disjunctum* × *G. dryopteris* and *G. appalachianum* × *G. dryopteris*). These relationships are shown on the diagram. Sterile triploid plants are not restricted only to areas where the range of the tetraploid overlaps with that of either diploid. Their broad distribution could be explained in part by their spores, which are of two types: malformed, black, and with very exaggerated perispores, or round with extensive netted perispores (K. M. Pryer and D. M. Britton 1983). The latter spore type is capable of germination and presumably permits the plants to reproduce apogamously. The name *G. × brittonianum* (Sarvela) Pryer & Haufler has been applied to the *G. disjunctum* × *G. dryopteris* hybrid formula (K. M. Pryer and C. H. Haufler 1993). The type of *G. × brittonianum* has aborted and round spores, and leaves that strongly resemble those of *G. disjunctum*. They are large, 3-pinnate-pinnatifid, and the second and third pairs of

pinnae are sessile with basal basiscopic pinnules markedly longer than the basal acroscopic pinnules. Sterile triploid plants with a morphology similar to the type of *G. × brittonianum* are frequent. The biology of both of these cryptic hybrid taxa needs further study, which should lead to detailed morphologic descriptions and distribution maps. *Gymnocarpium dryopteris* also hybridizes with both *G. jessoense* subsp. *parvulum* and *G. robertianum* ."

***Gymnocarpium dryopteris* (L.) Newman [FNA2, HC, HC2]**

Phytologist. 4: app. 24. 1851.

common fern, northern oak fern

*Dryopteris linnaeana* C. Chr. [Abrams, Peck]

*Lastrea dryopteris* (L.) Bory

*Phegopteris dryopteris* (L.) Fée

*Polypodium dryopteris* L.

*Thelypteris dryopteris* (L.) Slosson

FNA2: "*Gymnocarpium dryopteris* is a fertile allotetraploid species that arose following hybridization between *G. appalachianum* and *G. disjunctum* (see reticulogram). Its wide distribution over much of the north temperate zone has provided ample opportunity for secondary contact between *G. dryopteris* and each of its diploid parents, thereby resulting in a wide-ranging composite of abortive-spored triploid crosses (*G. disjunctum* × *G. dryopteris* and *G. appalachianum* × *G. dryopteris*). These relationships are shown on the diagram. Sterile triploid plants are not restricted only to areas where the range of the tetraploid overlaps with that of either diploid. Their broad distribution could be explained in part by their spores, which are of two types: malformed, black, and with very exaggerated perispores, or round with extensive netted perispores (K. M. Pryer and D. M. Britton 1983). The latter spore type is capable of germination and presumably permits the plants to reproduce apogamously. The name *G. × brittonianum* (Sarvela) Pryer & Haufler has been applied to the *G. disjunctum* × *G. dryopteris* hybrid formula (K. M. Pryer and C. H. Haufler 1993). The type of *G. × brittonianum* has aborted and round spores, and leaves that strongly resemble those of *G. disjunctum*. They are large, 3-pinnate-pinnatifid, and the second and third pairs of pinnae are sessile with basal basiscopic pinnules markedly longer than the basal acroscopic pinnules. Sterile triploid plants with a morphology similar to the type of *G. × brittonianum* are frequent. The biology of both of these cryptic hybrid taxa needs further study, which should lead to detailed morphologic descriptions and distribution maps. *Gymnocarpium dryopteris* also hybridizes with both *G. jessoense* subsp. *parvulum* and *G. robertianum* ."

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## Dennstaedtiaceae [FNA2, HC2] Bracken Fern Family

**Synonyms:** (none)

**References:** (none)

***Pteridium* [FNA2, HC, HC2]**

Fl. Carniol. 169. 1760.

bracken, brake-fern

***Pteridium aquilinum* (L.) Kuhn [FNA2, HC, HC2]**

Reisen Ost-Afrika. 3(3): 11. 1879.

ssp. ***pubescens*** (Underw.) J.A. Thomson, Mickel & Mehl.

bracken, northern bracken

*Pteridium aquilinum* (L.) Kuhn ssp. *lanuginosum* (Bong.) Hultén [ILBC5]

*Pteridium aquilinum* (L.) Kuhn var. *pubescens* Underw. [FNA2, HC, HC2]

*Pteris aquilinum* (L.) Kuhn var. *pubescens* (Underw.) Clute

We follow FNA and JPM, not recognizing more than one taxon in our area.

## Dryopteridaceae [FNA2, HC2] Wood Fern Family

**Synonyms:** (none)

**References:** (none)

### *Dryopteris* [FNA2, HC, HC2]

Fam. Pl. 2: 20, 551. 1763.  
wood-fern

#### *Dryopteris arguta* (Kaulf.) Maxon [FNA2, HC, HC2]

Amer. Fern J. 11: 3. 1921.  
coastal fern, marginal wood fern

*Aspidium argutum* Kaulf.

FNA gives authorship as (Kaulf.) Maxon, a 1921 combination; Watt published in 1866. FNA2: "Dryopteris arguta is somewhat variable. It has been suggested that more than one taxon is involved. No hybrids involving *D. arguta* are known."

#### *Dryopteris carthusiana* (Vill.) H.P. Fuchs [FNA2, HC2]

Bull. Soc. Bot. France. 105: 339. 1959.  
spinulose fern, toothed wood fern

*Dryopteris austriaca* (Jacq.) Schinz & Thell. var. *spinulosa* (O.F. Muell.) Fiori

*Dryopteris spinulosa* (O.F. Muell.) Watt

*Polypodium carthusianum* Vill.

*Polypodium spinulosum* O.F. Muell.

*D. austriaca* is European. FNA2: "Dryopteris carthusiana is tetraploid. Dryopteris intermedia is one parent, as indicated by chromosome pairing in their hybrid *D. × triploidea* Wherry. The other parent is the hypothetical missing ancestral species "*D. semicristata*" (see discussion for *D. cristata*). Dryopteris carthusiana hybridizes with five species; hybrids can be separated from *D. intermedia* by the lack of glandular hairs and by having 2-pinnate leaves."

#### *Dryopteris cristata* (L.) A. Gray [FNA2, HC, HC2]

Manual. 631. 1848.  
crested wood fern fern, shield fern

*Polypodium cristatum* L.

#### *Dryopteris expansa* (C. Presl) Fraser-Jenk. & Jermy [FNA2, HC2]

Brit. Fern Gaz. 11: 338. 1977.  
northern fern, spreading wood fern

*Dryopteris assimilis* S. Walker

*Dryopteris campyloptera* (Kunze) Clarkson [FNA2], misapplied

*Dryopteris dilatata* (Hoffm.) A. Gray [Abrams, Peck], misapplied

*Dryopteris dilatata* (Hoffm.) A. Gray var. *americana* (Fisch.) Hultén

*Nephrodium expansum* C. Presl

*Dryopteris dilatata* is European; no distinction between *D. expansa* and *D. carthusiana* was made in our floras until recently. FNA2: "Dryopteris expansa is diploid and is one of the parents of *D. campyloptera*. Where their ranges overlap in eastern Canada, these two species are very difficult to distinguish except by chromosome number. The growth habit (*D. expansa* leaves are more erect) is useful in the field. Three hybrids involving *D. expansa* are known; all are very rare."

#### *Dryopteris filix-mas* (L.) Schott [FNA2, HC, HC2]

Gen. Fil. plate 67. 1834.  
male fern

*Polypodium filix-mas* L.

FNA2: "The taxonomy of *Dryopteris filix-mas* is not well understood. In North America, this fern has been considered both an auto- and an allopolyploid and may be composed of at least two closely related taxa."

Plants in the northeast and northwest are tetraploid. These differ morphologically and ecologically from a taxon of unknown chromosome number in the southwestern Rocky Mountains. The Rocky Mountain taxon closely resembles the Mexican *D. pseudofilix-mas* (Fée) Rothmaler. *Dryopteris filix-mas* also occurs in Europe, and it is known to be an allopolyploid of *D. caucasica* (A. Braun) Fraser-Jenkins & Corley x *oreades* Fomin."

***Polystichum*** [FNA2, HC, HC2]

Tent. Fl. Germ. 3: 31, 69. 1799.  
holly-fern, sword-fern

***Polystichum andersonii*** M. Hopkins [FNA2, HC, HC2]

Amer. Fern J. 3: 116, plate 9. 1913.  
Anderson's sword fern, Vancouver holly fern

*Polystichum braunii* (Spenner) Fée ssp. *andersonii* (M. Hopkins) Calder & Roy L. Taylor  
*Polystichum braunii* (Spenner) Fée var. *andersonii* (M. Hopkins) Hultén

FNA2: "*Polystichum andersonii* is an allotetraploid (D. H. Wagner 1979); its diploid parents are *P. munitum* and *P. kwakiutlii*. The triploid cross, *P. munitum* x *andersonii*, has been analyzed cytologically (W. H. Wagner Jr. 1973). It is the only sterile hybrid in the genus that develops large colonies through vegetative propagation by its bulblets. Hybrids look very much like some of the more deeply incised forms of *Polystichum munitum* except that they have abundant filiform scales, abortive sori, and nearly triangular lowermost pinnae with  $\hat{A}\pm$  equally incised acroscopic and basiscopic auricles."

***Polystichum californicum*** (D.C. Eaton) Diels [FNA2, HC, HC2]

Nat. Pflanzenfam. 1(4): 191. 1899.  
California sword fern

*Aspidium californicum* D.C. Eaton  
*Polystichum aculeatum* (L.) Roth var. *californicum* (D.C. Eaton) Jeps.

Abrams gives authorship (D.C. Eaton) Underw., a 1900 publ., Diels published the combination in 1899. FNA2: "*Polystichum californicum* is an allopolyploid, the evolutionary roots of which include *P. dudleyi* as the 2-pinnate ancestor. Morphologic and ecological data indicate *P. imbricans* is ancestor to the northern forms and *P. munitum* is ancestor to southern forms, suggesting *P. californicum* is an amalgam of interfertile tetraploids with polyphyletic origins (D. H. Wagner 1979). Cytological analysis corroborates this (A. D. Callan 1972; W. H. Wagner Jr. 1973), but chloroplast DNA studies have detected only the involvement of *P. imbricans* in the ancestry of *P. californicum* (P. S. Soltis et al. 1991). The more xeric, rock-inhabiting members of the complex (showing the parental influence of *P. imbricans*) occupy the northern half of the range whereas plants of more mesic habitats are found to the south. Hybrids with both *P. dudleyi* and *P. munitum* are found frequently, because these three species are often sympatric (W. H. Wagner 1973). The hybrid with *P. dudleyi* (a triploid) will key to that species. The hybrid with *P. munitum* resembles a less-incised form of *P. californicum* with aborted sporangia. *Polystichum californicum* x *imbricans* has been found only once, in Oregon (A. D. Callan 1972). Another hybrid that will key here, based on its overall appearance, is *P. munitum* x *scopulinum*. It lacks filiform microscales and also has malformed sporangia. Such a specimen was the basis of the report of *Polystichum californicum* in eastern Washington (C. L. Hitchcock et al. 1955--1969, vol. 1). The sterile diploid hybrid between *P. dudleyi* and *P. munitum* is indistinguishable from *P. californicum* except for aborted sporangia and chromosome number (W. H. Wagner Jr. 1973)."

***Polystichum californicum*** (D.C. Eaton) Diels x ***Polystichum munitum*** (Kaulf.) C. Presl

***Polystichum imbricans*** (D.C. Eaton) D.H. Wagner [FNA2, HC2]

Pteridologia. 1: 50. 1979.  
imbricate sword-fern, rock sword-fern

ssp. ***imbricans*** [FNA2, HC2]

Pteridologia. 1: 50.  
imbricate fern, narrow-leaved sword fern

*Polystichum munitum* (Kaulf.) C. Presl ssp. *nudatum* (D.C. Eaton) Ewan  
*Polystichum munitum* (Kaulf.) C. Presl var. *imbricans* (D.C. Eaton) Maxon [HC, Peck]

FNA2: "*Polystichum imbricans* subsp. *imbricans* grows in the Coast Ranges and the Sierra-Cascade

axis. It is isolated in the Willowa Mountains of eastern Oregon. Sun forms of *Polystichum munitum* are often mistaken for *P. imbricans*; characteristics of the distal petiolar scales and indusial margins are more reliable than gross morphologic features for distinguishing them. *Polystichum imbricans* has narrow distal petiolar scales that fall off early; *P. munitum* has wide distal petiolar scales (the largest more than 1 mm wide) that are persistent. *Polystichum imbricans* hybridizes readily with *P. munitum*, the hybrids usually being sterile but in some places forming hybrid swarms because of partial fertility of the hybrids (D. H. Wagner 1979). The hybrids with *P. californicum* are discussed under that species."

***Polystichum kruckebergii* W.H. Wagner [FNA2, HC, HC2]**

Amer. Fern J. 56: 4. 1966.

holly fern, Kruckeberg's sword fern fern

FNA2: "*Polystichum kruckebergii* is widely but sporadically distributed in small numbers in both the Sierra-Cascade and Rocky Mountain systems. Populations sometimes consist of only two or three dwarfed plants that are difficult to distinguish from *P. scopulinum*, with which they may occur. The spreading teeth of equal size at the pinna apex will usually distinguish this species. *Polystichum kruckebergii* is a tetraploid presumed to be of hybrid origin, with *P. lonchitis* and *P. lemmonii* as its diploid progenitors (W. H. Wagner Jr. 1973), although this hypothesis has not been confirmed. The hybrid with *P. munitum* has been found in Washington (P. S. Soltis et al. 1987) with both parents, and it is distinguished by intermediate morphology and abortive sporangia."

***Polystichum kruckebergii* W.H. Wagner × *Polystichum munitum* (Kaulf.) C. Presl [FNA2]**

hybrid holly fern

reported from WA by Soltis et al. 1987, acc. to FNA

***Polystichum lemmonii* Underw. [FNA2, HC2]**

Native Ferns ed. 6. 116. 1900.

Lemmon's holly fern, Shasta fern

*Polystichum mohrioides* (Bory) C. Presl var. *lemmonii* (Underw.) Fernald [Peck]

FNA2: "*Polystichum lemmonii* forms sterile hybrids with *P. scopulinum* and *P. munitum*. The first hybrid may be abundant where the two parents grow together, which they frequently do in the Wenatchee Mountains of Washington and Siskiyou Mountains of northern California and southwest Oregon. The hybrid is very similar to *P. lemmonii* but has malformed sporangia and slightly less divided pinnae than *P. lemmonii*. The *P. lemmonii* × *P. munitum* hybrid is morphologically indistinguishable from *P. scopulinum*; it is a sterile diploid reported only twice from the Wenatchee Mountains of Washington (W. H. Wagner Jr. 1973; P. S. Soltis et al. 1989). It is possible that this hybrid involves *P. imbricans* and not *P. munitum*; neither study distinguished between them. American authors have misapplied the name *Polystichum mohrioides* (Bory) C. Presl, a South American species, to *P. lemmonii*."

***Polystichum lemmonii* Underw. × *Polystichum munitum* (Kaulf.) C. Presl [FNA2]**

hidden sword fern

Reported twice from Wenatchee Mountains (Wagner 1973, Soltis et al. 1989) and morphologically indistinguishable from *P. scopulinum*; parentage possibly *P. imbricans* ssp. *imbricans* (not *P. munitum*) acc. to FNA.

***Polystichum lemmonii* Underw. × *Polystichum scopulinum* (D.C. Eaton) Maxon [FNA2]**

serpentine holly fern

Reported from Wenatchee Mountains in FNA; voucher at WTU.

***Polystichum lonchitis* (L.) Roth [FNA2, HC, HC2]**

Tent. Fl. Germ. 3(1): 71. 1799.

mountain fern, northern holly fern

*Polypodium lonchitis* L.

FNA2: "The spiny spores of *P. lonchitis* are distinctive and distinguish this from dwarfed forms of other 1-pinnate species."

***Polystichum munitum* (Kaulf.) C. Presl [FNA2, HC, HC2]**

Tent. Pterid. 83. 1836.

common sword fern, western fern

(see also *Polystichum imbricans*)

*Aspidium munitum* Kaulf.

*Polystichum munitum* (Kaulf.) K. Presl var. *munitum* [HC]

FNA2: "Polystichum munitum appears to be most closely related to *P. imbricans* based on morphologic (D. H. Wagner 1979) and electrophoretic (P. S. Soltis et al. 1990) analyses. The chloroplast DNA of *P. imbricans*, however, is divergent (G. Yatskievych et al. 1988), suggesting a chloroplast origin independent of the nuclear genome. That *Polystichum munitum* is related to *P. acrostichoides* is supported by data from chloroplast DNA analysis (G. Yatskievych et al. 1988) but contradicted by data from electrophoretic studies (P. S. Soltis et al. 1990). *Polystichum munitum* can be distinguished from *P. imbricans* by its persistent, wide (the largest wider than 1 mm) distal petiolar scales; such scales of *P. imbricans* are less than 1 mm wide and fall off early. From an evolutionary standpoint, *Polystichum munitum* is a diploid progenitor of *P. andersonii*, *P. californicum*, *P. setigerum*, and, perhaps, *P. scopulinum*. Hybrids with all except *P. setigerum* have been reported, all triploid, attesting to its parental role in the tetraploids (see discussion under each). Hybrids with *P. braunii* (A. Sleep and T. Reichstein 1967), *P. kruckebergii* (P. S. Soltis et al. 1987), *P. dudleyi* (W. H. Wagner Jr. 1973), and *P. lemmonii* (P. S. Soltis et al. 1989) also have been reported."

***Polystichum munitum* (Kaulf.) C. Presl × *Polystichum scopulinum* (D.C. Eaton) Maxon [FNA2]**

hybrid sword fern

FNA cites eastern WA collection treated by FPNW1 as *P. californicum*

***Polystichum scopulinum* (D.C. Eaton) Maxon [FNA2, HC, HC2]**

Fern Bull. 8: 29. 1900.

mountain holly fern, rock sword fern

*Aspidium aculeatum* (L.) Sw. var. *scopulinum* D.C. Eaton

*Polystichum mohrioides* (Bory) C. Presl var. *scopulinum* (D.C. Eaton) Fernald [Peck]

FNA2: "Polystichum scopulinum is widely distributed in the United States west of the 110th meridian, where it occurs in sporadic, usually small populations. The species is abundant only on montane serpentine outcrops. The populations in Newfoundland and Quebec are dramatically disjunct. *Polystichum scopulinum* is an allopolyploid, believed on morphologic grounds to be derived from *P. imbricans* × *lemmonii* (D. H. Wagner 1979). Based on putative hybridization between *P. scopulinum* and *P. munitum* (P. S. Soltis et al. 1989; W. H. Wagner Jr. 1973), however, *P. munitum* may also be involved. This hybrid is discussed under *P. californicum*."

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## Equisetaceae [FNA2, HC, HC2] Horsetail Family

**Synonyms:** (none)

FNA2: "Equisetum occurs in moist places such as riverbanks, lakeshores, roadsides, ditches, seepage areas, meadows, marshes, and wet woodlands. Aerial stems of *Equisetum* vary considerably in habit and appearance, even on individual plants, because of environmentally induced modifications affecting height and branching. Many taxonomically trivial varieties and forms have been named. For an extended discussion of this, see R.L. Hauke (1966). Four widespread, named hybrids are treated in the key and fully described below. In species descriptions and in the key, length and width are given for the leaf sheath, excluding the free teeth. If the length and width of flattened sheaths are approximately equal and the sides are straight, the sheath is more or less square in face view, i.e., about as long as broad; if the length is greater than the width and the sides are straight, the sheath is more or less elongate in face view, i.e., longer than broad; if the length is greater than the width and the sides are slightly convex, the sheath is elliptic in face view. Stomates are usually visible at 20x magnification. Reticulation in *Equisetum* is summarized in the reticulograms, which show the known and expected hybrids in North America. Most of those in *Equisetum* subg. *Equisetum* are still unknown in North America, but they should be sought, especially north of 45° N latitude. According to W.J. Cody and D.M. Britton (1989), *E. × font-queri* occurs rarely in British Columbia and materials possibly representing *E. × arcticum* Rothmaler have been taken in the Richardson Mountain region of Mackenzie. R.L. Hauke (1978) cited collections of *E. × font-queri* from British Columbia and California."

### References:

\* Hauke, R.L. 1966. A systematic study of *Equisetum arvense*. *Nova Hedwigia* 13: 81-109. Hauke, R.L. 1979.

*Equisetum ramosissimum* in North America. Amer. Fern J. 69: 1?5.

***Equisetum*** [FNA2, HC, HC2]

Sp. Pl. 2: 1061. 1753; Gen. Pl. ed. 5, 484, 1754.  
horsetail, scouring-rush

***Equisetum arvense*** L. [FNA2, HC, HC2]

Sp. Pl. 2: 1061. 1753.  
common horsetail, field horsetail

*Equisetum arvense* L. var. *boreale* (Bong.) Rupr.

FNA2: "Among the many infraspecific taxa that have been named in this species, *Equisetum arvense* var. *boreale* Bongard has been most generally accepted and has been applied to plants with tall, erect stems with 3-ridged branches. Because both 3-ridged and 4-ridged branches may occur on a single stem, the variety *boreale* is not recognized here as distinct (R.L. Hauke 1966)."

***Equisetum ×ferrissii*** Clute [FNA2, HC2]

Fern Bull. 12: 22. 1904.  
Ferriss' scouring rush

*Equisetum hyemale* L. var. *elatum* (Engelm.) C.V. Morton [Peck]  
collected at Bingen, Klickitat Co.

***Equisetum fluviatile*** L. [FNA2, HC, HC2]

Sp. Pl. 2: 1062. 1753.  
or river horsetail, swamp, water

*Equisetum limosum* L. [Peck]

***Equisetum hyemale*** L. [FNA2, HC, HC2]

Sp. Pl. 2: 1062. 1753.  
common scouring-rush

ssp. ***affine*** (Engelm.) Calder & Roy L. Taylor [FNA2, HC2]

Canad. J. Bot. 43: 1387. 1965.  
common scouring rush, Dutch rush, prairie scouring rush

*Equisetum hyemale* L. var. *affine* (Engelm.) A.A. Eaton [HC]

*Equisetum hyemale* L. var. *californicum* J. Milde [Abrams]

*Equisetum praealtum* Raf. [Abrams]

***Equisetum laevigatum*** A. Braun [FNA2, HC, HC2]

Amer. J. Sci. Arts. 46: 87. 1844.  
smooth scouring rush

*Equisetum funstonii* A.A. Eaton [Peck]

*Equisetum kansanum* J.H. Schaffn. [Peck]

FNA2: "Schaffner named this species *Equisetum kansanum* because he applied the name *E. laevigatum* to what we now know is the hybrid *E. × ferrissii*. The coarser-stemmed, occasionally persistent forms in the southwestern United States have been called *Equisetum funstonii*."

***Equisetum ×litorale*** Kühlew. ex Rupr. [FNA2]

Beitr. Pflanzenk. Russ. Reiches. 4: 91. 1845.  
shore horsetail

FNA2: "*Equisetum × litorale* is a hybrid between *E. arvense* and *E. fluviatile*. It should be expected where the parents coexist. This hybrid has been mistaken for *Equisetum palustre*; the solid branches with long first internodes and channeled valleys distinguish it from that species."

***Equisetum ×mackaii*** (Newman) Brichan [FNA2, HC2]

Phytologist. 1: 369. 1843 (Nov. 1842).  
small scouring rush

*Equisetum hyemale* L. var. *mackaii* Newman

*Equisetum trachyodon* (A. Braun) W.D.J. Koch [ILBC5]

Reported in WA by Lellinger (1985) but not recorded for WA in FNA. FNA2: "The hybrid between *Equisetum hyemale* and *E. variegatum*, *E. x mackaii*, is often mistaken for small forms of *E. hyemale*."

***Equisetum xnelsonii*** (A.A. Eaton) J.H. Schaffn. [FNA2, HC2]

Amer. Fern J. 16: 46. 1926.

Nelson's horsetail

FNA2: "*Equisetum x nelsonii*, the hybrid between *E. laevigatum* and *E. variegatum*, is often mistaken for small forms of *E. x ferrissii*."

***Equisetum palustre*** L. [FNA2, HC, HC2]

Sp. Pl. 2: 1061. 1753.

marsh horsetail

*Equisetum palustre* L. var. *americanum* Vict.

FNA2: "The name *Equisetum palustre* var. *americanum* has been used for specimens from the flora that have longer teeth than those from Eurasia."

***Equisetum pratense*** Ehrh. [FNA2, HC, HC2]

Hannover. Mag. 22: 138. 1784.

meadow horsetail

***Equisetum scirpoides*** Michx. [FNA2, HC, HC2]

Fl. Bor.-Amer. 2: 281. 1803.

sedgelike horsetail, dwarf scouring rush

***Equisetum sylvaticum*** L. [FNA2, HC, HC2]

Sp. Pl. 2: 1061. 1753.

wood horsetail, woodland horsetail

***Equisetum telmateia*** Ehrh. [FNA2, HC, HC2]

Hannover. Mag. 21: 287. 1783.

giant horsetail

ssp. ***braunii*** (J. Milde) Hauke [FNA2, HC2]

Nova Hedwigia. 30: 434. 1978.

giant horsetail, great horsetail

*Equisetum telmateia* Ehrh. var. *braunii* (J. Milde) J. Milde [HC]

***Equisetum variegatum*** Schleich. ex F. Weber & D. Mohr [FNA2, HC, HC2]

Bot. Taschenb. 60, 447. 1807.

variegated horsetail, northern scouring-rush

ssp. ***alaskanum*** (A.A. Eaton) Hultén [FNA2, HC2]

Acta Univ. Lund. 37(1): 59. 1941.

Alaskan scouring rush

*Equisetum variegatum* Schleich. ex F. Weber & D. Mohr var. *alaskanum* A.A. Eaton [HC]

ssp. ***variegatum*** [FNA2, HC2]

Bot. Taschenb. 60, 447.

variegated horsetail, northern scouring rush

*Equisetum variegatum* Schleich. ex F. Weber & D. Mohr var. *variegatum* [HC]

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## Grammitidaceae (see Polypodiaceae)

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## Hymenophyllaceae [FNA2, HC2] Filmy fern family

**Synonyms:** (none)

**References:** (none)

***Hymenophyllum*** [FNA2, HC2]

filmy fern

***Hymenophyllum wrightii*** Bosch [FNA2, HC2]

Ned. Kruidk. Arch. 4: 391. 1859.

Wright's filmy fern

Gametophyte stage recently (2015) collected on the Olympic Peninsula.

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## Isoetaceae [FNA2, HC, HC2] Quillwort Family

**Synonyms:** (none)

**References:** (none)

***Isoetes*** [FNA2, HC, HC2]

Sp. Pl. 2: 1100. 1753; Gen. Pl. ed. 5, 486, 1754.

quillwort

***Isoetes bolanderi*** Engelm. [FNA2, HC, HC2]

Amer. Naturalist. 8: 214. 1874.

Bolander's quillwort

*Isoetes bolanderi* Engelm. var. *parryi* Engelm.

*Isoetes bolanderi* Engelm. var. *pygmaea* (Engelm.) Clute [Abrams]

*Isoetes californica* Engelm.

*Isoetes pygmaea* Engelm.

FNA2: "Small plants with leaves less than 2.5 cm have been called *Isoetes bolanderi* var. *pygmaea* (Engelmann) Clute. *Isoetes bolanderi* hybridizes with *I. echinospora* and *I. occidentalis*."

***Isoetes howellii*** Engelm. [FNA2, HC, HC2]

Trans. Acad. Sci. St. Louis. 4: 385. 1882.

Howell's quillwort

*Isoetes melanopoda* Gay & Durieu var. *californica* A.A. Eaton

*Isoetes nuda* Engelm.

*Isoetes underwoodii* L.F. Hend.

FNA2: "In many respects, *Isoetes howellii* appears similar to *I. melanopoda*. Small plants with leaves less than 10 cm and megaspores less than 420 μm diam. have been called *I. howellii* var. *minima* (A. A. Eaton) N. E. Pfeiffer."

***Isoetes maritima*** Underw. [FNA2, HC2]

Bot. Gaz. 13: 94. 1888.

maritime quillwort

*Isoetes beringensis* Kom.

*Isoetes echinospora* Durieu var. *maritima* (Underw.) A.A. Eaton

*Isoetes macounii* A.A. Eaton

FNA2: "*Isoetes maritima* hybridizes with *I. echinospora* and *I. occidentalis* [= *I. truncata* (A. A. Eaton) Clute]."

***Isoetes minima*** A.A. Eaton [HC2]

Fern Bulletin 6: 30.

midget quillwort

*Isoetes howellii* Engelm. var. *minima* (A.A. Eaton) N. Pfeiff.

BEN 304: "Several field characters distinguish plants of *I. minima* from plant of *I. nuttallii*. First, *I. minima* has an incomplete velum covering up to 75% of the sporangium whereas, *I. nuttallii* has a complete velum covering 100% of the sporangium. Second, *I. minima* has spinulose textured megaspores ranging 290-350  $\mu$ m in diameter. In contrast, *I. nuttallii* has smooth to tuberculate textured megaspores ranging 360-600  $\mu$ m in diameter. Third, *I. minima* is generally a smaller plant with leaves up to only 4 cm long whereas, *I. nuttallii* is usually larger plant with leaves up to 20 cm long."

***Isoetes nuttallii*** A. Br. [FNA2, HC, HC2]

Amer. Naturalist. 8: 215. 1874.

Nuttall's quillwort

*Isoetes opaca* Nutt.

*Isoetes suksdorfii* Baker

***Isoetes occidentalis*** L.F. Hend. [FNA2, HC2]

Bull. Torrey Bot. Club. 27: 358. 1900.

western quillwort

*Isoetes flettii* (A.A. Eaton) N.E. Pfeiff. [Abrams]

*Isoetes lacustris* L. [FNA2, HC], misapplied

*Isoetes lacustris* L. var. *paupercula* Engelm.

*Isoetes paupercula* (Engelm.) A.A. Eaton

*Isoetes piperi* A.A. Eaton [Abrams]

FNA2: "Megaspores of *Isoetes occidentalis* are variable in wall pattern. Populations exist with rugulate or tuberculate megaspores and other population with cristate to echinate megaspores. Plants with thin-walled megaspores that crack easily have been called *I. paupercula*. Populations in which megaspores have short ridges and tubercles in a band along the equator have been called *I. flettii*. Populations with broad-based tubercles on the megaspores have been called *I. piperi*. The variation in megaspore pattern may indicate multiple allopolyploid origins for *I. occidentalis*. The general aspect of *Isoetes occidentalis* and its tough, dark green leaves suggested to early workers an affinity with *I. lacustris*. *Isoetes occidentalis* hybridizes with *I. bolanderi*, *I. echinospora*, and *I. maritima* [= *I. x truncata* (A. A. Eaton) Clute]."

***Isoetes tenella*** L  man [HC2]

M  m. Soc. Linn. Paris 6: 179.

bristle-like quillwort, spiny spored quillwort

*Isoetes braunii* Durieu [Abrams]

*Isoetes echinospora* Durieu [FNA2, HC]

*Isoetes echinospora* Durieu var. *braunii* (Durieu) Engelm.

*Isoetes echinospora* Durieu var. *muricata* (Durieu) Engelm.

*Isoetes muricata* Durieu

*Isoetes setacea* Lam. [VPPNW1]

FNA2: "North American plants of *Isoetes echinospora*, which bear stomata, have been called *I. muricata* or *I. echinospora* var. *braunii* to distinguish them from European plants of *I. echinospora*, which do not have stomata. *Isoetes echinospora* is a distinct species but has considerable variation, especially in size, color, and form of leaves. It is the most commonly encountered quillwort in oligotrophic, noncalcareous lakes and ponds of northeastern North America. *Isoetes echinospora* hybridizes with *I. bolanderi*; *I. engelmannii* [= *I. x eatonii* Dodge (later synonym = *I. x gravesii* A. A. Eaton)]; *I. lacustris* [= *I. x hickeyi* Taylor & Luebke]; *I. maritima*; *I. riparia* [= *I. x dodgei* A. A. Eaton]; and *I. tuckermanii*."

***Isoetes x truncata*** (A.A. Eaton) Clute

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## Lycopodiaceae [FNA2, HC, HC2] Club-Moss Family

**Synonyms:** (none)

Generic ranking is disputed in the family; here we do not recognize *Diphasiastrum*, but otherwise tentatively follow FNA, noting that generic differences are so minor that the segregate genera may all be best treated as subgenera

within Lycopodium

**References:** (none)

***Dendrolycopodium*** [HC2]

tree-clubmoss

***Dendrolycopodium dendroideum*** (Michx.) A. Haines [HC2]

prickly tree clubmoss, tree ground-pine

*Lycopodium dendroideum* Michx. [FNA2]

*Lycopodium hickeyi* W. H. Wagner, Beitel & R. C. Moran [FNA2], misapplied

*Lycopodium obscurum* L. [FNA2, HC], misapplied

*Lycopodium obscurum* L. var. *dendroideum* (Michx.) D.C. Eaton

***Diphasiastrum*** [FNA2, HC2]

Preslia. 47: 104. 1975.

clubmoss

***Diphasiastrum alpinum*** (L.) Holub [FNA2, HC2]

Preslia. 47: 107. 1975.

alpine clubmoss ground-pine

*Lycopodium alpinum* L. [HC]

FNA2 authors place this taxon in the genus *Diphasiastrum*, and have the following comment: FNA2: "The branchlet leaves of *Diphasiastrum alpinum* are unique in the genus, and the trowel-shaped underside leaves with their flared and rolled blades and contracted bases are particularly unusual. The leaves of the other North American species are much simpler in shape and contour."

***Diphasiastrum alpinum*** (L.) Holub × ***Diphasiastrum sitchense*** (Rupr.) Holub [FNA2, HC2]

hybrid clubmoss

*Lycopodium alpinum* L. × *Lycopodium sitchense* Rupr.

FNA2: "The hybrid *Diphasiastrum alpinum* × *sitchense* is very rare. It is known from Greenland, British Columbia, Newfoundland, Montana, Oregon, and Washington. Specimens of *D. sitchense* from Greenland, Newfoundland, and Washington cited by J. H. Wilce (1965) are actually this hybrid."

\* Wilce, J. H. 1965. Section *Complanata* of the genus *Lycopodium*. Beih. Nova Hedwigia 19: 1-233.

***Diphasiastrum complanatum*** (L.) Holub [FNA2, HC2, ILBC5]

Preslia. 47: 108. 1975.

ground cedar, trailing ground-pine

*Lycopodium complanatum* L. [HC]

*Lycopodium complanatum* L. var. *complanatum* [Abrams]

***Diphasiastrum sitchense*** (Rupr.) Holub [FNA2, HC2]

Preslia. 47: 108. 1975.

Alaskan clubmoss, Sitka clubmoss

*Lycopodium sabinifolium* Willd. var. *sitchense* (Rupr.) Fernald [Peck], orthographic variant

*Lycopodium sitchense* Rupr. [HC]

***Huperzia*** [FNA2, HC2]

J. Bot. (Schrader). 1800(2): 126. 1801 Gemma fir-moss [for Johann Pete. 1816.

firmoss

*Phlegmariurus* [FNA2]

***Huperzia continentalis*** Testo, A. Haines & A.V. Gilman [HC2]

Systematic Botany 41(4):894-901.

alpine firmoss

*Huperzia haleakalae* (Brack.) Holub [FNA2], misapplied

*Lycopodium selago* L. [HC], misapplied

Easily confused with *Huperzia miyoshiana*. Recently (2016) published in Systematic Botany, in which history of name *Huperzia haleakelea* is explained.

***Huperzia miyoshiana* (Makino) Ching [FNA2, HC2]**

Acta Bot. Yunnan. 3(3): 303, 304. 1981.  
fir clubmoss

*Lycopodium selago* L. [HC], misapplied

*Huperzia chinensis* is not listed in the 2002 database of all plants names, and the source of this name in KZ99 is unknown

***Huperzia occidentalis* (Clute) Kartesz & Gandhi [FNA2, HC2]**

Phytologia. 70: 201. 1991.  
western clubmoss

*Huperzia porophila* (F.E. Lloyd & Underw.) Holub [FNA2], misapplied

*Lycopodium selago* L. [HC], misapplied

*Lycopodium selago* L. var. *patens* (P. Beauv.) Desv., misapplied

FNA uses *Huperzia occidentalis* (Clute) Beitel, but this combination was published in 1992, and is a later isonym (identical epithet & same type) of *Huperzia occidentalis* (Clute) Kartesz & Gandhi (1991)

***Lycopodiella* [FNA2, HC2]**

Preslia. 36: 20, 22. 1964.  
bog clubmoss

*Palhinhaea* [FNA2]

*Pseudolycopodiella* [FNA2]

***Lycopodiella inundata* (L.) Holub [FNA2, HC2]**

Preslia. 36: 21. 1964.  
bog clubmoss, marsh clubmoss, northern bog clubmoss

*Lycopodium inundatum* L. [HC]

*Lycopodium inundatum* L. var. *inundatum* [HC]

***Lycopodium* [FNA2, HC, HC2]**

Sp. Pl. 2: 1100. 1753; Gen. Pl. ed. 5, 486, 1754.  
clubmoss

(see also *Dendrolycopodium*, *Diphasiastrum*, *Huperzia*, *Lycopodiella*, *Spinulum*)

***Lycopodium clavatum* L. [FNA2, HC, HC2]**

Sp. Pl. 2: 1101. 1753.  
common clubmoss, elk-moss, stag's horn moss, ground pine, running pine

*Lycopodium clavatum* L. var. *integerrimum* Spring [ILBC5, Abrams], misapplied

*Lycopodium clavatum* L. var. *integrifolium* Goldie

*Lycopodium clavatum* L. var. *subremotum* Vict.

FNA2: "Plants found in eastern North America have been called *Lycopodium clavatum* var. *clavatum*; those in the western part of the range, which have been called *L. clavatum* var. *integrifolium* Goldie, are distinguished by early shedding of the characteristic hairs on the leaf tips."

***Lycopodium lagopus* (Laest. ex C. Hartm.) G. Zinserling ex Kuzeneva Prochorova [FNA2, HC2]**

Fl. Murmansk. Obl. 1: 80. 1953.  
ptarmigan clubmoss, one-cone ground-pine

*Lycopodium clavatum* L. var. *integerrimum* Spring [ILBC5, Abrams]

***Spinulum* [HC2]**

bristly clubmoss, stiff clubmoss

***Spinulum annotinum* (L.) A. Haines [HC2]**

interrupted clubmoss, stiff clubmoss

*Lycopodium annotinum* L. [FNA2, HC]

*Lycopodium annotinum* L. var. *pungens* (Bach. Pyl.) Desv. [Abrams], invalidly published

FNA2: "This widespread and common club-moss has been divided into various forms or varieties, some of which have been treated as species. Present evidence supports the hypothesis that these are environmentally induced forms, the most distinctive of which has been called *Lycopodium annotinum* var. *alpestre* C. Hartman, with leaves only 2.5--6 mm, very leathery, entire-margined, and appressed. Plants intermediate between this and *L. annotinum* var. *annotinum* are a form that has been called var. *pungens* (Bachelot de la Pylaie) Desvaux, an invalid name. Both are found in cold, bleak, northern or high elevation habitats. The species should be studied in detail to determine whether it contains any groups that should be recognized taxonomically."

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## Marsileaceae [FNA2, HC, HC2] Pepperwort Family, Water-Clover Family

**Synonyms:** (none)

**References:**

- \* Braun, A. 1871. Hr. Braun theilte neuere Untersuchungen über die Gattungen Marsilea und Pilularia. Monatsber. Königl. Preuss. Akad. Wiss. Berlin 1870: 653?753.

***Marsilea* [FNA2, HC, HC2]**

Sp. Pl. 2: 1099. 1753; Gen. Pl. ed. 5, 485, 1754.  
clover-fern, pepperwort, waterclover

***Marsilea mutica* Mett. [HC2]**

Annales des Sciences Naturelles; Botanique, série 4 15: 88.  
Australian waterclover

Known at least from Snohomish and Pacific counties (J. Parsons, personal communication, 2016).  
Specimen collected from Pacific County in 2016.

***Marsilea oligospora* Goodd. [FNA2, HC2]**

Bot. Gaz. 33: 66. 1902.  
Nelson's pepperwort, Pacific clover-fern water-clover

FNA2: "Marsilea oligospora recently has been reseeded from *M. vestita* (D. M. Johnson 1986), from which it differs consistently in its nodding sporocarps that lack a pronounced distal tooth and its pilose leaves and stems. Where their ranges overlap, *M. oligospora* also has longer sporocarp stalks than does *M. vestita*. Plants of this species were recently grown from spores 100 years old (D. M. Johnson 1985)."

***Marsilea vestita* Hook. & Grev. [FNA2, HC, HC2]**

Icon. Filic. 2: plate 159. 1830.  
hairy clover-fern, pepperwort, water-clover pepperwort

*Marsilea fournieri* C. Chr.

*Marsilea mucronata* A. Braun

*Marsilea tenuifolia* Engelm. ex A. Braun

*Marsilea uncinata* A. Braun

*Marsilea vestita* Hook. & Grev. ssp. *tenuifolia* (Engelm. ex A. Braun) D.M. Johnson

*Marsilea vestita* Hook. & Grev. ssp. *vestita* [JPM]

FNA2: "A number of segregate species have been named and recognized in regional floras in North America: *Marsilea mucronata* A. Braun (less hairy, found east of Rocky Mountains), *M. uncinata* (glabrous, sporocarp stalks long, distal tooth of sporocarp hooked, south central United States), *M. tenuifolia* (pinnae very narrow, central Texas), and *M. fournieri* (small plants and pinnae, southwest). The features upon which these species are based intergrade into one another. The species are therefore best treated as conspecific with *M. vestita* (D. M. Johnson 1986). Putative hybrids between *Marsilea macropoda* and this species are discussed under the former."

***Pilularia* [FNA2, HC, HC2]**

Sp. Pl. 2: 1100. 1753; Gen. Pl. ed. 5, 486, 1754.  
pillwort

***Pilularia americana*** A. Braun [FNA2, HC, HC2]

Monatsber. Königl. Preuss. Akad. Wiss. Berlin. 1863: 435. 1864.  
American pillwort

Recently reported by C. Bjork. FNA2: "Pilularia americana also has been reported from Alaska. I have seen no vouchers from Alaska, nor have I seen the Oregon vouchers. Because of its grasslike appearance and subterranean sporocarps, *P. americana* is probably overlooked and more common than records indicate. The telltale circinate vernation of the leaves is the best characteristic for distinguishing it from similar plants. *Pilularia caroliniana* A. Braun, an invalid name, has been used for this species and may appear on specimens."

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## Ophioglossaceae [FNA2, HC, HC2] Adder's-Tongue Family

**Synonyms:** (none)

**References:** (none)

***Botrychium*** [FNA2, HC, HC2]

J. Bot. (Schrader). 1800(2): 8, 110. 1801.  
moonwort  
(see also *Botrypus*, *Sceptridium*)

***Botrychium ascendens*** W.H. Wagner [FNA2, HC2]

Amer. Fern J. 76: 36, figs. 1, 2. 1986.  
upswept moonwort

*Botrychium campestre* W.H. Wagner & Farrar var. *campestre*, misapplied

Don Farrar believes records of *B. campestre* from WA are misidentified *B. ascendens*

***Botrychium campestre*** W.H. Wagner & Farrar [FNA2, HC2]

Amer. Fern J. 76: 39, figs. 2, 4, 5. 1986.

var. ***lineare*** (W.H. Wagner) Farrar [HC2]

narrow-leaf grapefern, slender moonwort

*Botrychium lineare* W.H. Wagner

recently described (Wagner and Wagner 1994), known from Ferry Co.

\* Wagner, W. H. and F. S. Wagner. 1994. Another widely disjunct, rare and local North American moonwort  
Ophioglossaceae: *Botrychium* subgen. *Botrychium*. American Fern Journal 84: 5-10.

***Botrychium crenulatum*** W.H. Wagner [FNA2, HC2]

Amer. Fern J. 71: 21. 1981.  
dainty moonwort, scalloped moonwort

***Botrychium hesperium*** (Maxon & R.T. Clausen) W.H. Wagner & Lellinger [FNA2, HC2]

Amer. Fern J. 71: 92. 1981.  
western moonwort

*Botrychium matricariifolium* (Döll) A. Braun ex W.D.J. Koch [FNA2], misapplied

An undescribed species similar to *B. hesperium* has been collected in Stevens Co.

***Botrychium lanceolatum*** (S.G. Gmel.) Angström [FNA2, HC, HC2]

Bot. Not. 1854: 68. 1854.  
lance-leaved grapefern, red triangle moonwort  
(see also *Botrychium viride*)

*Botrychium lanceolatum* (S.G. Gmel.) Angström ssp. *lanceolatum* [FNA2]

*Botrychium lanceolatum* (S.G. Gmel.) Angström var. *lanceolatum* [KZ99]

***Botrychium michiganense*** W.H. Wagner ex A.V. Gilman, Farrar & Zika [HC2]

Michigan moonwort

*Botrychium matricariifolium* (Döll) A. Braun ex W.D.J. Koch [FNA2], misapplied

*B. michiganense* is an allotetraploid formerly confused with *B. hesperium*. The name remains unpublished.

***Botrychium minganense*** Vict. [FNA2, HC2]

Proc. & Trans. Roy. Soc. Canada. ser. 3, 21: 331. 1927.

Mingan moonwort

*Botrychium lunaria* (L.) Sw. var. *minganense* (Vict.) Dole

FNA2: "Specimens of *Botrychium minganense* have sometimes been misidentified as *B. dusenii* (H.Christ) Alston, a South American species."

***Botrychium montanum*** W.H. Wagner [FNA2, HC2]

Amer. Fern J. 71: 29. 1981.

western goblin, mountain moonwort

***Botrychium neolunaria*** Stensvold & Farrar [HC2]

common moonwort

*Botrychium lunaria* (L.) Sw. [FNA2, HC], misapplied

*Botrychium lunaria* (L.) Sw. var. *onondagense* (Underw.) House [HC]

*Botrychium onondagense* Underw.

Vouchered reports from Cascades and east are misidentifications of other taxa (especially *B. crenulatum*); reports from the Olympics need verification. FNA2: "*Botrychium lunaria* grows with many other species of *Botrychium*, occasionally hybridizing with them. This species, geographically the most widespread of the moonworts, has notably uniform morphology."

***Botrychium paradoxum*** W.H. Wagner [FNA2, HC2]

Amer. Fern J. 71: 24. 1981.

paradox moonwort, two-spiked moonwort

***Botrychium pedunculosum*** W.H. Wagner [FNA2, HC2]

Amer. Fern J. 76: 43, figs. 2, 7. 1986.

stalked moonwort

***Botrychium pinnatum*** H. St. John [FNA2, HC2]

Amer. Fern J. 19: 11. 1929.

northwestern moonwort, St. John's moonwort

*Botrychium boreale* J. Milde ssp. *obtusilobum* (Rupr.) R.T. Clausen

FNA2: "*Botrychium pinnatum* is most commonly associated with *B. lanceolatum* and *B. lunaria*. Specimens of *B. pinnatum* have been misidentified as *Botrychium boreale*."

***Botrychium simplex*** E. Hitchc. [FNA2, HC, HC2]

Amer. J. Sci. 6: 103, plate 8. 1823.

least moonwort

var. ***compositum*** (Lasch) Milde [HC2, JPM]

var. ***simplex*** [HC2]

Amer. J. Sci. 6: 103, plate 8.

little grapefern, least moonwort

***Botrychium viride*** Farrar [HC2], unpublished name

green triangle moonwort

***Botrypus*** [HC2]

rattlesnake-fern

***Botrypus virginianus*** (L.) Michx. [HC2]

rattlesnake fern, common grapefern, Virginia grapefern

*Botrychium virginianum* (L.) Sw. [FNA2, HC]

*Osmunda virginiana* L.

FNA2: "Botrychium virginianum is the most widespread Botrychium in North America."

**Ophioglossum** [FNA2, HC, HC2]

Sp. Pl. 2: 1062. 1753; Gen. Pl. ed. 5, 484, 1754.  
adder's-tongue

**Ophioglossum pusillum** Raf. [FNA2, HC2]

Précis Découv. Somiol. 46. 1814.  
northern adder's-tongue

*Ophioglossum vulgatum* L. [FNA2, HC], misapplied

FNA2: "Ophioglossum pusillum is inconspicuous and may be much more common than collections indicate. It differs from *O. vulgatum* in having an ephemeral, membranous basal sheath."

**Sceptridium** [HC2]

grape-fern

**Sceptridium multifidum** (Gmel.) Tagawa [HC2]

J. Jap. Bot. 33: 200. 1958.  
leathery grapefern

*Botrychium californicum* Underw. [Abrams]

*Botrychium coulteri* Underw.

*Botrychium multifidum* (S.G. Gmel.) Rupr. [FNA2, HC]

*Botrychium silaifolium* C. Presl [Peck, ILBC5]

*Osmunda multifida* S.G. Gmel.

V.B.A. Trevisan made this combination in 1874, after F.J. Ruprecht had invalidly published it in 1859.

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## Osmundaceae [FNA2, HC2]

**Synonyms:** (none)

**References:** (none)

**Osmunda** [FNA2, HC2]

Sp. Pl. 2: 1063. 1753; Gen. Pl. ed. 5, 484, 1754.

*Osmunda regalis* L. [FNA2, HC2]

Sp. Pl. 2: 1065. 1753.

var. *regalis* [HC2]

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## Parkeriaceae (see Pteridaceae)

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## Polypodiaceae [FNA2, HC, HC2] Polypody Fern Family

**Synonyms:**

Grammitidaceae [FNA2]

a number of hybrids between these species are reported in the literature

**References:** (none)

***Polypodium* Sw. [FNA2, HC, HC2]**

Sp. Pl. 2: 1082. 1753; Gen. Pl. ed. 5, 485, 1754.  
polypody

***Polypodium amorphum* Suksd. [FNA2, HC2]**

Werdenda. 1: 16. 1927.  
irregular polypody

*Polypodium montense* F.A. Lang [HC]

FNA2: "The diploid *Polypodium amorphum* is one of the progenitors of allotetraploid *P. hesperium*, and these two species are occasionally sympatric. Although *P. amorphum* can be mistaken for *P. hesperium*, consistent differences exist for separating these two species (see comments under *P. hesperium*). Hybridization between *P. amorphum* and *P. hesperium* results in triploid individuals with misshapen spores (F. A. Lang 1971)."

***Polypodium glycyrrhiza* D.C. Eaton [FNA2, HC, HC2]**

Amer. J. Sci. Arts. ser. 2, 22: 138. 1856.  
licorice fern

*Polypodium aleuticum* A.E. Bobrov

*Polypodium falcatum* Kellogg

*Polypodium occidentale* (Hook.) Maxon

*Polypodium vulgare* L., misapplied

*Polypodium vulgare* L. var. *falcatum* (Kellogg) H. Christ

*Polypodium vulgare* L. var. *occidentale* Hook. [Peck]

FNA2: "*Polypodium glycyrrhiza* hybridizes with *P. calirhiza* and with *P. hesperium* to produce sterile triploids with misshapen spores. *Polypodium glycyrrhiza* was involved in the origin of both of these allotetraploid species, and some individuals can be difficult to identify. Free versus anastomosing venation distinguishes this species from *P. calirhiza*; the presence of adaxial hairs on the rachis separates it from *P. hesperium*. An additional character for distinguishing these taxa is spore length, which is less than 58 Åµm in diploid *P. glycyrrhiza* and more than 58 Åµm in the two tetraploid species."

***Polypodium hesperium* Maxon [FNA2, HC, HC2]**

Proc. Biol. Soc. Wash. 13: 200. 1900.  
western polypody

*Polypodium prolongilobum* Clute

*Polypodium vulgare* L. var. *columbianum* Gilbert [Peck]

*Polypodium vulgare* L. var. *hesperium* (Maxon) A. Nelson & J.F. Macbr.

FNA2: "Using morphologic and chromosomal data, F. A. Lang (1971) proposed that *Polypodium hesperium* originated through allotetraploidy involving *P. glycyrrhiza* and *P. amorphum*, a hypothesis recently supported by electrophoretic studies (C. H. Haufler, M. D. Windham, and E. W. Rabe, unpublished). Variations in spore surface morphology and banding patterns observed in isozyme studies indicate that *P. hesperium* may have originated more than once from different individuals of the same species. Some collections of *P. hesperium* can be mistaken for *P. glycyrrhiza*, but the latter species is easily distinguished by its pubescent rachises, linear blade scales, and smaller spores (less than 58 Åµm). Although *P. amorphum* has sporangiasters and *P. hesperium* lacks them, misshapen sporangia in *P. hesperium* can mimic these distinctive soral structures. Therefore, it is often necessary to use a combination of soral, stem scale, and blade scale features (discussed in the key) to separate *P. hesperium* from *P. amorphum*. Hybridization occurs between *P. hesperium* and each of its progenitor diploids to form triploid individuals with misshapen spores (F. A. Lang 1971). Rare, sterile, tetraploid hybrids with *P. saximontanum* have also been detected (M. D. Windham, unpublished)."

***Polypodium scouleri* Hook. & Grev. [FNA2, HC, HC2]**

Icon. Filic. 1: 56. 1829.  
coast, leathery polypody, Scouler's polypody

FNA2: "The distinctive *Polypodium scouleri* has occasionally been assigned to the genus *Goniophlebium* because of its anastomosing venation and conspicuous areoles. Its venation pattern can be quite variable, however, and cannot be used as the sole feature distinguishing *P. scouleri* from *P. californicum*. Combining venation characteristics with others provided in the key distinguishes it clearly from its

congeners in *Polypodium*. Some evidence suggests that *P. scouleri* hybridizes with *P. californicum* (S. A. Whitmore, unpubl.). I. Manton (1951) reported diploid and triploid cytotypes for *P. scouleri*, and variation in spore size suggests that the species may also include tetraploid populations."

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## Pteridaceae [FNA2, HC2] Maidenhair Fern Family

### Synonyms:

Parkeriaceae [FNA2]

Vittariaceae [FNA2]

FNA2: "Considerable disagreement exists concerning the circumscription and proper name of this family. The taxa comprising the Pteridaceae in this treatment were assigned to the Sinopteridaceae and Pteridaceae by D. B. Lellinger (1985) and were included in five families by R. E. G. Pichi-Sermolli (1977). The broad concept followed here is similar (except for the exclusion of *Ceratopteris*) to that espoused by R. M. Tryon and A. F. Tryon (1982), who applied the name Pteridaceae to the group. Until very recently, the newer name Adiantaceae was more commonly used. As represented in North America, Pteridaceae comprise three major evolutionary lines (the adiantoids, the pteroids, and the cheilanthoids). Characteristics holding the family together include abaxial (usually submarginal) sori that lack indusia or are protected by a reflexed or revolute leaf margin, spores that are usually globose-tetrahedral and trilete, and chromosome base numbers of 30 or 29 (rarely 27). The xeric-adapted members of the family (particularly the cheilanthoids) have undergone extensive parallel and convergent evolution, and they have frustrated attempts to produce a natural generic classification based on macromorphologic characteristics alone. Although some workers have aggregated species into a few large genera (e.g., J. T. Mickel 1979b), most tend to recognize smaller segregate genera based on a combination of morphologic, chromosomal, and biochemical data. The latter approach seems to provide a more useful, evolutionarily informative classification and is the one adopted here. *Aspidotis* and *Notholaena* are maintained here as distinct from *Cheilanthes*, and three recently described genera (*Argyrochosma*, *Astrolepis*, and *Pentagramma*) have been incorporated into the treatment. The reasons for these changes in generic circumscription are discussed under the individual genera."

**References:** (none)

### *Adiantum* [FNA2, HC, HC2]

Sp. Pl. 2: 1094. 1753; Gen. Pl. ed 5, 485. 1754.  
maidenhair fern

#### *Adiantum aleuticum* (Rupr.) Paris [FNA2, HC2]

Rhodora. 93: 112. 1991.  
northern maidenhair fern

*Adiantum boreale* C. Presl

*Adiantum pedatum* L. [FNA2, HC], misapplied

The combination *A. aleuticum* var. *subpumilum* has been published (Alverson, American Fern Journal, 100(4):230-233. 2010), so the full combination here can be var. *aleuticum* if one recognizes the distinctiveness of var. *subpumilum*. FNA2: "Although the western maidenhair has traditionally been interpreted as an infraspecific variant of *Adiantum pedatum*, the two taxa are reproductively isolated and differ in an array of morphologic characteristics. Therefore, they are more appropriately considered separate species (C. A. Paris and M. D. Windham 1988). Morphologic differences between *A. pedatum* and *A. aleuticum* are subtle; the two may be separated, however, using characteristics in the key. *Adiantum aleuticum* occurs in a variety of habitats throughout its range, from moist, wooded ravines to stark serpentine barrens and from coastal cliffs to subalpine boulder fields. Although morphologic differences exist among populations in these diverse habitats, they are not consistent. Consequently, infraspecific taxa are not recognized here within *A. aleuticum*."

#### var. *aleuticum* [HC2]

Aleutian maidenhair, western maidenhair

*Adiantum pedatum* L. var. *aleuticum* Rupr. [Abrams]

### *Aspidotis* [FNA2, HC, HC2]

Gen. Fil. 68. 1947.  
aspidotis, Indian's dream

***Aspidotis densa* (Brack.) Lellinger [FNA2, HC, HC2]**

Amer. Fern J. 58: 141. 1968.  
Oregon cliff brake, Indian's dream, podfern

*Cheilanthes siliquosa* Maxon [Peck]  
*Cryptogramma densa* (Brack.) Diels [VPPNW1]  
*Onychium densum* Brack.  
*Pellaea densa* (Brack.) Hook.

***Cryptogramma* [FNA2, HC, HC2]**

Narr. Journey Polar Sea. 767. 1823.  
parsley-fern, rock-brake

***Cryptogramma acrostichoides* R. Br. [FNA2, HC2]**

Narr. Journey Polar Sea. 754, 767. 1823.  
American parsley fern rockbrake  
(see also *Cryptogramma cascadenis*)

*Cryptogramma crispa* (L.) R. Br. ex Hook. ssp. *acrostichoides* (R. Br.) Hultén  
*Cryptogramma crispa* (L.) R. Br. ex Hook. var. *acrostichoides* (R. Br.) C.B. Clarke [HC]

FNA2: "Cryptogramma acrostichoides has often been treated as a variety or subspecies of the strictly European *Cryptogramma crispa* (Linnaeus) R. Brown, which has a chromosome number of 2n = 120."

***Cryptogramma cascadenis* E.R. Alverson [FNA2, HC2]**

Amer. Fern J. 79: 95. 1989.  
Cascade parsley fern rockbrake

FNA2: "Populations of *Cryptogramma cascadenis* were previously identified as *C. acrostichoides*."

\* Alverson, E. R. 1989. *Cryptogramma cascadenis*, a new parsley-fern from western North America. American Fern Journal 79: 95-102.

***Cryptogramma stelleri* (S.G. Gmel.) Prantl [FNA2, HC, HC2]**

Bot. Jahrb. Syst. 3: 413. 1882.  
fragile rockbrake, slender rockbrake, Steller's rockbrake  
*Pteris stelleri* S.G. Gmel.

***Myriopteris* [HC2]**

lace-fern, lip fern

***Myriopteris gracilis* Fée [Grusz & Windham 2013, HC2]**

Mém. Fam. Foug. 5: 150, t. 29, f. 6. 1852.  
Fée's lip fern, slender fern, Fée's lace-fern

*Cheilanthes feei* T. Moore [FNA2, HC]

Reports of *Cheilanthes lanosa* (Michx.) D.C. Eaton from the Olympic Peninsula (VPPN1) have not been confirmed by FNA or Buckingham et al. (1995). FNA2: "*Cheilanthes feei* is an apogamous triploid of unknown parentage. It has small, beadlike blade segments similar to those of subg. *Physapteris*, but most morphological characteristics suggest a clear relationship to members of subg. *Cheilanthes* (T. Reeves 1979). The species is most often confused with *C. parryi*, from which it can be distinguished by its thinner, sparser pubescence and smaller ultimate segments."

***Myriopteris gracillima* (D. C. Eaton) J. Sm. [Grusz & Windham 2013, HC2]**

Hist. Fil. 280. 1875.  
lace fern, lace lip fern

*Cheilanthes gracillima* D. C. Eaton [FNA2, HC]

FNA2: "*Cheilanthes gracillima* is a well-marked species, but it apparently hybridizes with *C. intertexta* (see reticulogram) to produce plants of intermediate morphology with malformed spores that have been called *C. gracillima* var. *aberrans* M. E. Jones (A. R. Smith 1974)."

***Pellaea*** [FNA2, HC, HC2]

Fil. Spec. 59. 1841.  
cliff-brake

***Pellaea brachyptera*** (T. Moore) Baker [FNA2, HC2]

Syn. Fil. ed. 2. 477. 1874.  
Sierran cliffbrake

*Platyloma brachyptera* T. Moore

FNA2: "The distinctive *Pellaea brachyptera* reportedly hybridizes with *P. mucronata* (A. F. Tryon 1957; D. B. Lellinger 1985); the hybrids are morphologically intermediate plants with malformed spores."

***Pellaea breweri*** D.C. Eaton [FNA2, HC, HC2]

Proc. Amer. Acad. Arts. 6: 555. 1865.  
Brewer's cliffbrake

FNA2: "*Pellaea breweri* is distinguished from other North American taxa (except for some populations of *P. glabella*) by the presence of prominent articulation lines near the base of the petiole. The leaves are easily detached, and many herbarium specimens consist of separate leaves and stems, the latter covered with petiole bases of approximately equal length."

***Pellaea gastonyi*** Windham [FNA2, HC2]

Contr. Univ. Michigan Herb. 19: 36. 1993.  
Gastony's cliff-brake

The specimen at RM was annotated by Michael Windham, author of the taxon, in 2006. FNA2: "*Pellaea gastonyi* is an apogamous tetraploid that has originated through repeated hybridization between *P. atropurpurea* and *P. glabella*. Isozyme studies (G. J. Gastony 1988) indicate that *P. glabella* subsp. *missouriensis* was the diploid parent of plants found in Missouri, whereas diploid *P. glabella* subsp. *occidentalis* was involved in the origin of *P. gastonyi* populations occurring in western North America. *Pellaea gastonyi* is most often confused with *P. atropurpurea*, from which it differs in having sparsely villous rachises, smaller ultimate segments, and spores averaging more than 62  $\mu\text{m}$  in diameter."

***Pellaea glabella*** Mett. ex Kuhn [FNA2, HC, HC2]

Linnaea. 36: 87. 1869.  
smooth cliff-brake

ssp. ***occidentalis*** (E.E. Nelson) Windham [FNA2, HC2]

Contr. Univ. Michigan Herb. 19: 39. 1993.

*Pellaea glabella* Mett. ex Kuhn var. *occidentalis* (E.E. Nelson) Butters [HC]

ssp. ***simplex*** (Butters) A. Löve & D. Löve [FNA2, HC2]

Taxon. 26: 325. 1977.  
simple cliffbrake

*Pellaea atropurpurea* (L.) Link var. *simplex* (Butters) C.V. Morton

*Pellaea glabella* Mett. ex Kuhn var. *simplex* Butters [HC]

*Pellaea occidentalis* (E.E. Nelson) Rydb. ssp. *simplex* (Butters) Gastony

*Pellaea suksdorfiana* Butters [Abrams]

FNA2: "This western counterpart of *Pellaea glabella* subsp. *glabella* is an apogamous tetraploid. A. F. Tryon (1957) and D. B. Lellinger (1985) hypothesized that it might have arisen as a hybrid between the western diploid member of the *P. glabella* complex (here called subsp. *occidentalis*) and *P. atropurpurea*. G. J. Gastony (1988) has shown conclusively, however, that *P. glabella* subsp. *simplex* is an autopolyploid derivative of subsp. *occidentalis* and does not contain genes contributed by *P. atropurpurea*."

***Pentagramma*** [FNA2, HC2]

Windham, & E. Wollenweber, Amer. Fern J. 80: 15. 1990.  
gold-back fern

***Pentagramma triangularis*** (Kaulf.) Yatsk., Windham & E. Wollenw. [FNA2, HC2]

Amer. Fern J. 80: 15. 1990.  
gold fern, gold-back fern

*Pentagramma triangularis* (Kaulf.) Yatsk., Windham & E. Wollenw. ssp. *semipallida* (J.T. Howell) Yatsk. [FNA2]

*Pentagramma triangularis* (Kaulf.) Yatsk., Windham & E. Wollenw. ssp. *triangularis* [FNA2]

*Pityrogramma triangularis* (Kaulf.) Maxon [HC]

*Pityrogramma triangularis* (Kaulf.) Maxon var. *triangularis*

FNA2: "We here restrict *Pentagramma triangularis* subsp. *triangularis* to plants with yellow farina and glabrous adaxial leaf surfaces occurring throughout a large region in westernmost North America. This subspecies comprises a complex of morphological, cytological, and phytochemical variants, at least some of which may deserve formal taxonomic recognition, following more detailed studies. Plants with yellow farina reported from Arizona, Nevada, and Utah may represent tetraploid hybrids between *P. triangularis* subsp. *triangularis* and *P. triangularis* subsp. *maxonii* and are not mapped herein."

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## Salviniaceae [FNA2, HC, HC2] Floating-Fern Family

### Synonyms:

Azollaceae [FNA2] (Mosquito Fern Family)

FNA2: "Agriculturally, *Azolla* is famous for its symbiosis with the nitrogen-fixing *Anabaena azollae* Strasburger, a cyanobacterium (blue-green alga) found at the stem apices, beneath indusia, and in cavities of the upper leaf lobes. Because the plants fix nitrogen, they are often used as a green fertilizer or mixed with livestock feed as a nutritional supplement. *Azolla pinnata* has been cultivated for many centuries in rice paddies in northern Vietnam and southeastern China, where it acts as a fertilizer after it decomposes. *Azolla* is the most frequently studied genus of ferns in the world because of its economic importance. The three North American species are naturalized in Europe and South Africa, and they have been introduced into Hawaii for horticulture and into Asia for agriculture. All species have been studied for agricultural uses in rice-producing areas. *Azolla* is usually found in stagnant or slow-moving water of ponds, lakes, marshes, swamps, and streams. Plants turn reddish when under stress, such as from poor nutrition, salinity, or high temperatures. Sporulation needs further investigation."

**References:** (none)

### *Azolla* [FNA2, HC, HC2]

Encycl. 1: 343. 1783.

mosquito-fern

#### *Azolla filiculoides* Lam. [FNA2, HC, HC2]

Encycl. 1: 343. 1783.

duckweed fern, large mosquito fern

FNA2: "*Azolla filiculoides* is cold tolerant, surviving even in fragmented parts under thin ice. It usually reaches a climax population in late spring, becomes fertile, collapses, and is replaced by other more heat-tolerant aquatics such as *Lemna* spp. Hybrids between this species (male) and *A. microphylla* Kaulfuss (female), a species of Central America, South America, and the West Indies, have been reported (Do V. C. et al. 1989)."

#### *Azolla microphylla* Kaulf. [HC2]

Mexican waterfern fern, mosquito fern

*Azolla mexicana* Schlttdl. & Cham. ex Kunze [FNA2, HC]

KZ99 gives authorities as Schlecht. & Cham. ex K. Presl, here we follow H&C and FNA Vol. 2. FNA2: "*Azolla mexicana* is generally less cold tolerant and has a narrower environmental range than *A. caroliniana*. Both species are closely related and are similar vegetatively in culture. In the western United States, *A. mexicana* is often fertile."

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## Selaginellaceae [FNA2, HC, HC2] Spike-Moss Family

**Synonyms:** (none)

**References:** (none)

***Selaginella*** [FNA2, HC, HC2]

Prodr. Aethéogam. 101. 1805.  
lesser-clubmoss, spike-moss

***Selaginella douglasii*** (Hook. & Grev.) Spring [FNA2, HC, HC2]

Bull. Acad. Roy. Sci. Bruxelles. 10: 138. 1843.  
Douglas' spikemoss clubmoss, lesser clubmoss

*Lycopodium douglasii* Hook. & Grev.

FNA2: "*Selaginella douglasii* , with no close relatives in the flora, is easy to identify by its shiny green leaves when young, turning shiny light brown when old, with an orange to red spot at the base, or totally reddish. Its closest relative is the Mexican *S. delicatissima* Linden ex A. Braun."

***Selaginella oregana*** D.C. Eaton [FNA2, HC, HC2]

Bot. California. 2: 350. 1880.  
festoon spikemoss, Oregon spikemoss

FNA2: "Pendent on trunks and branches of mossy trees ( *Acer macrophyllum* Pursh, *Populus trichocarpa* Torrey & A. Gray ex Hooker, and *Alnus rubra* Bongard) or on deep-shaded and moist rocky banks; of conservation concern; 0--200 m; B.C.; Calif., Oreg., Wash. *Selaginella oregana* , one of the most distinct species in the flora, is easily distinguished by its usually long, epiphytic-pendent stems, slightly loose strobili, and curled branches (in dry specimens). In the flora, *S. oregana* is most closely related to *S. underwoodii* . It is sometimes confused with *S. wallacei* (see discussion), and it shares some characteristics with the Mexican species, *S. extensa* L. Underwood. In *S. oregana* , very often where a branch fork occurs, one of the branches is arrested (R. M. Tryon 1955). The strobili of *S. oregana* are among the longest in the flora, and they often show several novel features. Very often the apex of a strobilus undergoes a period of vegetative growth, thus becoming a vegetative shoot, and after an interval the apex reverts to the fertile condition, forming a strobilus again. In other cases, the strobilus forks, giving rise to two new strobili."

***Selaginella scopulorum*** Maxon [FNA2, HC2]

Amer. Fern J. 11: 36. 1921.  
cliff spikemoss, Rocky Mountain spikemoss

*Selaginella densa* Rydb. [FNA2, HC, HC2], misapplied  
*Selaginella densa* Rydb. var. *scopulorum* (Maxon) R.M. Tryon [HC]  
*Selaginella engelmannii* Hieron. var. *scopulorum* (Maxon) C.F. Reed

FNA2: "*Selaginella scopulorum* is a member of the *S. densa* complex, in which there is a clear need for more systematic studies. Some specimens of *S. scopulorum* from Montana, Wyoming, and Colorado have more conspicuous whitish bristles than those elsewhere and are difficult to distinguish from *S. densa*."

***Selaginella wallacei*** Hieron. [FNA2, HC, HC2]

Hedwigia. 39: 297. 1900.  
Wallace's spikemoss

FNA2: "*Selaginella wallacei* is extremely variable depending on its habitat (R. M. Tryon 1955). Plants in dry, exposed conditions have short stems, form compact mats with tightly appressed leaves adnate to the stem, and have a rather keeled, abruptly bristled apex. Plants from moist habitats have long stems, form rather moderately long-creeping mats, and have less appressed, decurrent, fleshy leaves, with a more plane-attenuate apex that gradually tapers into a bristle. Plants from exposed, dry conditions sometimes are confused with *S. scopulorum* , but they have a keeled apex with well-defined ridges on the abaxial groove whereas in *S. scopulorum* the leaf apex is  $\hat{\pm}$  plane and attenuate, and the ridges on the abaxial groove are not prominent. Plants from moist habitats somewhat resemble plants of *S. underwoodii*. R. M. Tryon (1955) found strobili 9 cm long in *Selaginella wallacei* , the longest strobili known within subg. *Tetragonostachys* and comparable only to those of *S. oregana*."

## Thelypteridaceae [FNA2, HC2] Maiden Fern Family

**Synonyms:** (none)

**References:** (none)

### *Oreopteris* [HC2]

mountain fern

#### *Oreopteris quelpaertensis* (H. Christ) Holub [HC2]

mountain fern, queen's-veil maiden fern

*Dryopteris oreopteris* (Ehrh.) Maxon [Abrams]

*Dryopteris quelpaertensis* H. Christ

*Thelypteris limbosperma* (All.) H.P. Fuchs [HC], misapplied

*Thelypteris quelpaertensis* (H. Christ) Ching [FNA2]

### *Parathelypteris* [HC2]

marsh fern

#### *Parathelypteris nevadensis* (Baker) Holttum [HC2]

Sierran marsh fern

*Dryopteris nevadensis* (D.C. Eaton) Underw.

*Dryopteris oregana* C. Chr. [Peck]

*Nephrodium nevadense* Baker

*Thelypteris nevadensis* (Baker) Clute ex C.V. Morton [FNA2, HC]

### *Phegopteris* [FNA2, HC2]

Mém. Foug. 5: 242. 1852.

beechfern

#### *Phegopteris connectilis* (Michx.) Watt [FNA2, HC2]

Canad. Naturalist & Quart. J. Sci. 3: 29. 1866.

narrow beech fern, northern fern

*Dryopteris phegopteris* (L.) C. Chr. [Peck]

*Phegopteris polypodioides* Fée

*Polypodium connectile* Michx.

*Polypodium phegopteris* L.

*Thelypteris phegopteris* (L.) Slosson [HC]

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## Vittariaceae (see Pteridaceae)

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## Woodsiaceae [HC2] Cliff Fern Family

**Synonyms:** (none)

**References:** (none)

### *Woodsia* [FNA2, HC, HC2]

Prodr. 158. 1810.

cliff-fern, woodsia

#### *Woodsia oregana* D.C. Eaton [FNA2, HC, HC2]

Canad. Naturalist & Quart. J. Sci. n. s. 2: 90. 1865.

Oregon cliff-fern, Oregon woodsia

ssp. *oregana* [FNA2, HC2]

Canad. Naturalist & Quart. J. Sci. n. s. 2: 90.

Oregon fern, western cliff fern

FNA2: "The variability and promiscuity of *Woodsia oregana* have been major sources of taxonomic difficulties in *Woodsia*, and more work will be necessary before relationships in this complex are fully resolved. As defined here, *W. oregana* comprises two subspecies that are chromosomally and biochemically distinct. In addition, the two taxa are nearly allopatric, with the diploid (subsp. *oregana*) confined to the Pacific Northwest and the tetraploid (subsp. *cathcartiana*) extending from the southwestern United States to eastern Canada."

***Woodsia scopulina*** D.C. Eaton [FNA2, HC, HC2]

Canad. Naturalist & Quart. J. Sci. 2: 91. 1865.

cliff-fern, woodsia

ssp. *laurentiana* Windham [FNA2, HC2]

Contr. Univ. Michigan Herb. 19: 59. 1993.

Laurentian cliff fern

ssp. *scopulina* [FNA2, HC2]

Naturalist & Quart. J. Sci. 2: 91.

mountain fern, Rocky Mountain cliff fern

# Gymnosperms:

## Cupressaceae [FNA2, HC, HC2] Cypress Family

**Synonyms:** (none)

**References:** (none)

### *Callitropsis* [HC2]

cedar, cypress

#### *Callitropsis nootkatensis* (D. Don) D.P. Little [HC2]

Alaskan yellow cedar

*Chamaecyparis nootkatensis* (D. Don) Spach [FNA2, HC]

*Cupressus nootkatensis* D. Don [JPM]

### *Juniperus* [FNA2, HC, HC2]

Sp. Pl. 2: 1038. 1753; Gen. Pl. ed. 5, 461, 1754.

juniper

#### *Juniperus chinensis* L. [HC2]

#### *Juniperus communis* L. [FNA2, HC, HC2, VPBC1]

Sp. Pl. 2: 1040. 1753.

common juniper, mountain juniper

#### var. *depressa* Pursh [FNA2, HC, HC2]

Fl. Amer. Sept. 2: 646. 1814.

common juniper, dwarf juniper, ground juniper, prostrate juniper

*Juniperus communis* L. ssp. *depressa* (Pursh) Franco [KZ99]

Per FNAV2, "larger individuals of this var. (to 10 m.) have been misidentified as var. *communis*." WTU voucher [Kartesz]

#### var. *kelleyi* R.P. Adams [HC2]

This is one of the only two var. FNAV2 recognizes for WA. The 2nd is var. *depressa* Pursh. [Hitchcock]. Var. *montana* replaces var. *depressa* in the Sierra Nev., Cascade Range and Coast Ranges [IMF]

#### *Juniperus occidentalis* Hook. [FNA2, HC, HC2]

Fl. Bor.-Amer. 2: 166. 1838.

western juniper.

*Juniperus occidentalis* Hook. ssp. *occidentalis* [JPM]

*Juniperus occidentalis* Hook. var. *occidentalis* [FNA2]

#### *Juniperus rigida* Siebold & Zucc. [HC2]

var. *conferta* (Parl.) Patschke [HC2]

var. *rigida* [HC2]

#### *Juniperus scopulorum* Sarg. [FNA2, HC, HC2]

Gard. & Forest. 10: 420, fig. 54. 1897.

Rocky Mountain juniper, seaside juniper, Rocky Mountain redcedar

*Juniperus maritima* R.P. Adams

*Juniperus scopulorum* Sarg. ssp. *patens*

*Juniperus virginiana* L. ssp. *montana* Vasey [IMF1]

*Juniperus virginiana* L. ssp. *scopulorum* (Sarg.) A.E. Murray [IMF1]

\* Adams, R.P. 2007. *Juniperus maritima*, a new species from Puget Sound, North America. *Phytologia* 89(3): 263-283.

**Thuja** [FNA2, HC, HC2]

Sp. Pl. 2: 1002. 1753; Gen. Pl. ed. 5, 435, 1754.  
arborvitae, cedar

**Thuja plicata** Donn ex D. Don [FNA2, HC, HC2]

Descr. Pinus. 2: [19]. 1824.  
canoe cedar, western red cedar

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## Pinaceae [FNA2, HC, HC2] Pine Family

**Synonyms:** (none)

**References:** (none)

**Abies** [FNA2, HC, HC2]

Gard. Dict. Abr., ed. 4. vol. 1. 1754.  
fir

**Abies amabilis** Douglas ex J. Forbes [FNA2, HC, HC2]

Pinet. Woburn. 125, plate 44. 1839.  
Pacific silver fir

**Abies grandis** (Douglas ex D. Don) Lindl. [FNA2, HC, HC2]

Penny Cycl. 1: 30. 1833.  
grand fir

*Pinus grandis* Douglas ex D. Don

FNA2: "Abies grandis is rather uniform morphologically and chemically. At its southern limit in southern Oregon and northern California, it introgresses with *A. concolor* (J.L. Hamrick and W.J. Libby 1972; E.Zavarin et al. 1975; D.B. Zobel 1973). In the area of introgression, specimens in lower, wetter habitats are best assigned to *A. grandis*; those in higher, drier habitats, to *A. concolor*. Others are best considered to be *A. concolor*  $\hat{=}$  *A. grandis*."

**Abies lasiocarpa** (Hook.) Nutt. [FNA2, HC, HC2]

N. Amer. Sylv. 3: 138. 1849.  
alpine fir, subalpine fir

*Abies balsamea* (L.) Mill. ssp. *lasiocarpa* (Hook.) B. Boivin

*Abies balsamea* (L.) Mill. var. *fallax* (Engelm.) B. Boivin

*Pinus lasiocarpa* Hook.

FNA2: "The only unique populations in this species come from coastal Alaska (A. S. Harris 1965; C. J. Heusser 1954). They are found at lower elevations (0--900 m) and appear to be isolated with no reported introgression between them and the coastal mountain populations. The population on the Prince of Wales Island has distinct terpene patterns and needs morphological and developmental studies to see if these patterns contrast with neighboring populations. Through central British Columbia and northern Washington, *Abies lasiocarpa* introgresses with *A. bifolia*. These trees may have morphologic features resembling either species and may have intermediate terpene patterns; they are best classified as interior subalpine fir (*A. bifolia*  $\hat{=}$  *lasiocarpa*). At the southern end of its range, *A. lasiocarpa* possibly hybridizes with *A. procera* (R.S. Hunt and E.von Rudloff 1979). *Abies lasiocarpa* shares with *A. procera* a red periderm, crystals in the ray parenchyma (R.W. Kennedy et al. 1968), and reflexed tips of the bracts, features not shared with *A. bifolia*. *Abies lasiocarpa* usually exists in small stands at high elevations and is not often observed. Its differences in comparison to *A. bifolia* have prompted studies (W.H. Parker et al. 1979) to see if it is *A. bifolia* introgressed with the sympatric *A. amabilis*. *Abies lasiocarpa* and *A. amabilis*, however, are separated by many morphologic features, and no hybrids have been found (W.H. Parker et al. 1979)."

\* Harris, A.S. 1965. Subalpine fir [*Abies lasiocarpa* (Hook.) Nutt.] on Harris Ridge near Hollis, Prince of Wales Island, Alaska. NorthW. Sci. 39: 123?128.

\* Heusser, C.J. 1954. Alpine fir at Taku glacier, Alaska, with notes on its post glacial migration to the territory. Bull.

Torrey Bot. Club 81: 83?86.

- \* Zavarin, E., K. Snajberk, T. Reichert, and Tsien E. 1970. On the geographic variability of the monoterpenes from the cortical blister oleoresin of *Abies lasiocarpa*. *Phytochemistry* 9: 377?395.

ssp. ***bifolia*** (A. Murray bis) Silba [HC2]

Rocky Mountain subalpine fir

*Abies bifolia* A. Murray bis [FNA2]

ssp. ***lasiocarpa*** [HC2]

subalpine fir

***Abies procera*** Rehder [FNA2, HC, HC2]

Rhodora. 42: 522. 1940.

noble fir

*Abies nobilis* (Douglas ex D. Don) Lindl.

- \* Maze, J. and W.H. Parker. 1983. A study of population differentiation and variation in *Abies procera*. *Canad. J. Bot.* 61: 1094?1104.

***Larix*** [FNA2, HC, HC2]

Gard. Dict. Abr., ed. 4. vol. 2. 1754.

larch

***Larix lyallii*** Parl. [FNA2, HC, HC2]

Conif. Nov. 3. 1863.

subalpine larch

FNA2: "*Larix lyallii* and *L. occidentalis* (*Larix* sect. *Multiseriales*) are similar morphologically and have similar geographic ranges. Just how closely the two species are related has not been determined, but they probably originated from a common ancestor resembling *L. potaninii* Batalin. Although the geographic ranges of the two species overlap considerably, elevational differences of 150 to 300m usually separate them. Some morphologically intermediate specimens have been collected from Washington and Montana. Because of its restricted distribution and growth at timberline, alpine larch has no commercial importance; it is often dwarfed and misshapen."

***Larix lyallii*** Parl. [FNA2, HC, HC2], misapplied

Conif. Nov. 3. 1863.

subalpine larch

FNA2: "*Larix lyallii* and *L. occidentalis* (*Larix* sect. *Multiseriales*) are similar morphologically and have similar geographic ranges. Just how closely the two species are related has not been determined, but they probably originated from a common ancestor resembling *L. potaninii* Batalin. Although the geographic ranges of the two species overlap considerably, elevational differences of 150 to 300m usually separate them. Some morphologically intermediate specimens have been collected from Washington and Montana. Because of its restricted distribution and growth at timberline, alpine larch has no commercial importance; it is often dwarfed and misshapen."

***Larix lyallii*** Parl. × ***Larix occidentalis*** Nutt. [HC2]

***Larix occidentalis*** Nutt. [FNA2, HC, HC2]

N. Amer. Sylv. 3: 143, plate 120. 1849.

western larch

FNA2: "Western larch, when forest grown, is usually branch-free over most of its height. This is one of the most valuable timber-producing species in western North America. Its wood is made into framing, railway ties, pilings, exterior and interior finishing work, and pulp. In some localities it is the preferred firewood."

***Picea*** [FNA2, HC, HC2]

Fl. Berlin. 2: 794. 1824.

spruce

***Picea ×albertiana*** S. Br. [HC2]

interior spruce

***Picea engelmannii*** Engelm. [FNA2, HC, HC2]

Trans. Acad. Sci. St. Louis. 2: 212. 1863.  
Engelmann's spruce

var. *engelmannii* [FNA2, HC2]

Trans. Acad. Sci. St. Louis. 2: 212.  
Engelmann spruce

*Picea engelmannii* Engelm. var. *glabra* Goodman [HC]

*Picea glauca* (Moench) Voss [FNA2, HC, HC2]

Mitt. Deutsch. Dendrol. Ges. 16: 93. 1907.

Black Hills spruce, Porsild spruce, western white spruce  
(see also *Picea albertiana*)

*Abies canadensis* Mill.

*Picea alba* (Aiton) Link

*Pinus alba* Aiton

Recently collected on 2012 Foray in Pend Oreille County, WA. FNA2: "In areas of sympatry *Picea glauca* and *P. engelmannii* regularly hybridize and intergrade completely (R.Daubenmire 1974; E.H. Garman 1957; K.W. Horton 1959; L.Roche 1969; T.M.C. Taylor 1959). This has greatly complicated the taxonomy of *P. glauca*, a dominant tree of interior forests of Canada and Alaska. Three varieties have been recognized. *Picea glauca* var. *albertiana* was described as having unusually prominent leaf bases, cones nearly as broad as long, cone scales acute and broader than long, and an unusually narrow crown. These are common characteristics of hybrids (e.g., R.Daubenmire 1974). *Picea glauca* var. *porsildii* was described as differing from the type variety by having smooth bark with resin blisters, short angular cone scales, an unusually broad crown, and pubescent twigs. These characteristics, also largely intermediate between those of *P. glauca* var. *glauca* and *P. engelmannii*, may reflect hybridization where the species overlap. Although the two varieties noted above are reported from well beyond the range of sympatry, the diagnostic characteristics are not well correlated and occur rather sporadically. Also the most distinctive feature of the varieties, the crown shape, is in part responsive to competitive pressures. Because of the problems of hybridization and sporadic occurrence of key characters, *P. glauca* is treated here in the broad sense."

*Picea sitchensis* (Bong.) Carrière [FNA2, HC, HC2]

Traité Gén. Conif. 260.

Sitka spruce

*Abies falcata* Raf.

*Abies menziesii* (Douglas ex D. Don) Lindl.

*Picea falcata* (Raf.) Suringar

*Picea menziesii* (Douglas ex D. Don) Carrière

*Pinus menziesii* Douglas ex D. Don

*Pinus* [FNA2, HC, HC2]

Sp. Pl. 2: 1000. ; Gen Pl. ed. 5. 1753; Gen. Pl. ed. 5, 434, 1754.  
pine

*Pinus albicaulis* Engelm. [FNA2, HC, HC2]

Trans. Acad. Sci. St. Louis. 2: 209. 1863.

white-bark pine

*Apinus albicaulis* (Engelm.) Rydb.

*Pinus contorta* Douglas ex Loudon [FNA2, HC, HC2]

Arbor. Frutic. Brit. 4: 2292, figs. 2210, 2211. 1838.

var. *contorta* [FNA2, HC, HC2]

Arbor. Frutic. Brit. 4: 2292, figs. 2210, 2211.

shore pine

var. *latifolia* Engelm. [FNA2, HC, HC2]

Botany (Fortieth Parallel). 331. 1871.

lodgepole pine

*Pinus contorta* Douglas ex Loudon ssp. *latifolia* (Engelm.) Critchfield

*Pinus divaricata* (Aiton) Sudw. var. *hendersonii* (Lemmon) B. Boivin  
*Pinus divaricata* (Aiton) Sudw. var. *latifolia* (Engelm. ex S. Watson) B. Boivin

FNA2: "Pinus contorta var. latifolia is fire successional. It is the most wide-ranging and commercially utilized variety. Its poor self-pruning character makes it less desirable for lumber but adequate for mine timbers, fences, and pulpwood."

var. ***murrayana*** (Grev. & Balf.) Engelm. [FNA2, HC2]

Bot. California. 2: 126. 1880.  
Sierra lodgepole pine

*Pinus contorta* Douglas ex Loudon ssp. *murrayana* (Grev. & Balf.) Critchfield  
*Pinus murrayana* Grev. & Balf.

***Pinus monticola*** Douglas ex D. Don [FNA2, HC, HC2]

Descr. Pinus [ed. 3]. 2: unnumbered page between 144 and 145. 1832.  
western white pine

*Pinus strobus* L. var. *monticola* (Douglas ex D. Don) Nutt.  
*Strobus monticola* (Douglas ex D. Don) Rydb.

*Pinus pinaster* Aiton [HC2]

***Pinus ponderosa*** Douglas ex P. Lawson & C. Lawson [FNA2, HC, HC2]

Agric. Man. 354. 1836.  
blackjack pine, bull pine, ponderosa pine, western yellow pine

var. ***ponderosa*** [FNA2, HC2]

Agric. Man. 354.

*Pinus beardsleyi* A. Murray  
*Pinus benthamiana* Hartw.

*Pinus washoensis* H. Mason & Stockw. [FNA2]

***Pseudotsuga*** [FNA2, HC, HC2]

Traité Gén. Conif., ed. 2. 256. 1867.  
Douglas fir, Oregon pine

***Pseudotsuga menziesii*** (Mirb.) Franco [FNA2, HC, HC2]

Bol. Soc. Brot. ser. 2, 24: 74. 1950.

*Abies menziesii* Mirb.  
*Abies mucronata* Raf.  
*Abies taxifolia* Poir.  
*Pinus taxifolia* Lamb.  
*Pseudotsuga douglasii* (Lindl.) Carrière  
*Pseudotsuga mucronata* (Raf.) Sudw.  
*Pseudotsuga taxifolia* (Lamb.) Britton

var. ***glauca*** (Mayr) Franco [FNA2, HC, HC2]

Bol. Soc. Brot. ser. 2, 24: 77. 1950.  
pino real Colorado, Rocky Mountain Douglas-fir

*Pseudotsuga douglasii* (Lindl.) Carrière var. *glauca* Mayr  
*Pseudotsuga flahaultii* Flous  
*Pseudotsuga menziesii* (Mirb.) Franco var. *flahaultii* (Flous) Silba  
*Pseudotsuga taxifolia* (Lamb.) Britton var. *glauca* (Beissn.) Sudw.

var. ***menziesii*** [FNA2, HC, HC2]

Bol. Soc. Brot. ser. 2, 24: 74.  
Douglas-fir

***Tsuga*** [FNA2, HC, HC2]

hemlock

***Tsuga heterophylla*** (Raf.) Sarg. [FNA2, HC, HC2]

Silva. 12: 73, plate 605. 1898.

western hemlock

*Abies heterophylla* Raf.

FNA2: "Tsuga × jeffreyi (Henry) Henry was described from southwestern British Columbia and western Washington as a hybrid between *T. heterophylla* and *T. mertensiana*. Hybridization is rare, if it occurs at all, and it is therefore of little consequence (R.J. Taylor 1972). At the upper elevational limits of its distribution and under stressful conditions, *T. heterophylla* tends to resemble *T. mertensiana*, e.g., leaves are less strictly 2-ranked and stomatal bands on the abaxial leaf surfaces are less conspicuous than at lower elevations."

***Tsuga × jeffreyi* (Henry) Henry [FNA2, HC2]**

Proc. Roy. Irish Acad. 34: 55.

FNA2: "Tsuga × jeffreyi (Henry) Henry was described from southwestern British Columbia and western Washington as a hybrid between *T. heterophylla* and *T. mertensiana*. Hybridization is rare, if it occurs at all, and it is therefore of little consequence (R.J. Taylor 1972). At the upper elevational limits of its distribution and under stressful conditions, *T. heterophylla* tends to resemble *T. mertensiana*, e.g., leaves are less strictly 2-ranked and stomatal bands on the abaxial leaf surfaces are less conspicuous than at lower elevations."

***Tsuga mertensiana* (Bong.) Carrière [FNA2, HC, HC2]**

Traité Gén. Conif., ed. 2. 250. 1867.

mountain hemlock

*Abies hookeriana* A. Murray bis

*Abies mertensiana* Bong.

*Hesperopeuce mertensiana* (Bong.) Rydb.

*Picea hookeriana* (A. Murray bis) Bertrand

*Tsuga crassifolia* Flous

FNA2: "M. Van Campo-Duplan and H. Gausson (1948) postulated that this taxon originated by hybridization between *Picea* and *Tsuga*. Although this is unlikely, some characteristics such as leaf arrangement and shape, phenolic chemistry, and pollen grain structure lend some support for this hypothesis."

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## Taxaceae [FNA2, HC, HC2] Yew Family

**Synonyms:** (none)

**References:** (none)

***Taxus* [FNA2, HC, HC2]**

Sp. Pl. 2: 1040. 1753; Gen. Pl. ed. 5, 462, 1754.

yew

***Taxus baccata* L. [HC2, Stace 1997]**

Sp. Pl. 2: 1040.

English yew

Recently collected in several places in King Co. as a garden escape.

***Taxus brevifolia* Nutt. [FNA2, HC, HC2]**

N. Amer. Sylv. 3: 86, plate 108. 1849.

Pacific yew, western yew

*Taxus baccata* L. ssp. *brevifolia* (Nutt.) Pilger

*Taxus baccata* L. var. *brevifolia* (Nutt.) Koehne

*Taxus baccata* L. var. *canadensis* Benth.

*Taxus lindleyana* A. Murray bis

*Taxus bourcierii* Carrière

FNA2: "The name *Taxus baccata* Hooker has been misapplied to this species. The leaves of *Taxus*

brevifolia are usually somewhat falcate. The wood of *Taxus brevifolia* is hard and durable, yet easily worked, making it popular for construction of novelty items by local woodworkers. Because of this, large trees are unscrupulously poached; in some areas the species has been nearly extirpated. The bark of the tree is a promising natural source of taxol, a drug for treating various cancers; exploitation of the species for medicinal purposes is further threatening it."

\* Taylor, R. L. and S. Taylor. 1981. *Taxus brevifolia* in British Columbia. *Davidsonia* 12(4): 89-94.

# Dicots:

## Aceraceae (see Sapindaceae)

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### Adoxaceae [HC, HC2] Muskroot Family

**Synonyms:** (none)

**References:** (none)

#### ***Sambucus*** [HC, HC2]

elder, elderberry

##### ***Sambucus cerulea*** Raf. [HC, HC2, VPBC1]

blue elde, blue elder, blue elderberry

*Sambucus caerulea* Raf., orthographic variant

*Sambucus caerulea* Raf. var. *neomexicana* (Wooton) Rehder, orthographic variant

*Sambucus cerulea* Raf. var. *cerulea*

*Sambucus glauca* Nutt.

*Sambucus mexicana* C. Presl ex DC. [JPM]

*Sambucus mexicana* C. Presl ex DC. ssp. *caerulea* (Raf.) E. Murray, orthographic variant

*Sambucus mexicana* C. Presl ex DC. var. *caerulea* (Raf.) E. Murray, orthographic variant

*Sambucus neomexicana* Wooton

*Sambucus neomexicana* Wooton var. *vestita* (Wooton & Standl.) Kearney & Peebles

*Sambucus nigra* L. ssp. *caerulea* (Raf.) R. Bolli [JPM2], orthographic variant

*Sambucus cerulea* (caerulea) var. *neomexicana* and *S. neomexicana* are considered by some authorities to be a valid variety of *S. cerulea* and should probably not be listed as synonymous with *S. cerulea* var. *cerulea*.

##### ***Sambucus nigra*** L. [HC2]

ssp. *nigra* [HC2]

##### ***Sambucus racemosa*** L. [HC, HC2]

red elder

##### var. ***arborescens*** (Torr. & A. Gray) A. Gray [HC, HC2, VPBC1]

coast red elderberry

*Sambucus pubens* Michx. var. *arborescens* Torr. & A. Gray

*Sambucus racemosa* L. var. *racemosa* [JPM2], misapplied

##### var. ***melanocarpa*** (A. Gray) McMinn [HC, HC2]

Man. Calif. Shrubs 529.

black elderberry

*Sambucus melanocarpa* A. Gray

#### ***Viburnum*** [HC, HC2]

viburnum

##### ***Viburnum edule*** (Michx.) Raf. [HC, HC2, JPM2]

Med. Repos., ser. 2, 5: 254.

high-bush cranberry, squashberry

*Viburnum opulus* L. var. *edule* Michx.

*Viburnum pauciflorum* Bach. Pyl. ex Torr. & A. Gray

***Viburnum ellipticum*** Hook. [HC, HC2, JPM2]

Flora Boreali-Americana 1: 280.  
western blackhaw, oval-leaved viburnum

*Viburnum ellipticum* Hook. var. *macrocarpum* Suksd.

***Viburnum lantana*** L. [HC2]

wayfaring-tree

***Viburnum opulus*** L. [HC, HC2]

highbush cranberry

var. ***americanum*** Aiton [HC, HC2]

Hort. Kew. 1: 280.

American bush cranberry, cranberry-tree

*Viburnum opulus* L. ssp. *trilobum* (Marshall) R.T. Clausen

*Viburnum trilobum* Marshall

var. ***opulus*** [HC2, Stace 1997]

Sp. Pl. 1: 268.

high-bush cranberry

***Viburnum tinus*** L. [HC2]

laurustinus

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## Amaranthaceae [FNA4, HC, HC2] Amaranth Family

### Synonyms:

Chenopodiaceae [FNA4, HC] (Goosefoot Family)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

### References:

- \* Angiosperm Phylogeny Group. 1998. An ordinal classification for the families of flowering plants. *Ann. Missouri Bot. Garden* 85: 531-553.
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- \* Judd, W. S. and I. K. Ferguson. 1999. The genera of Chenopodiaceae in the southeastern United States. *Harvard Pap. Bot.* 4: 365-416.
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- \* Wahl, H. A. 1952. A preliminary study of the genus *Chenopodium* in North America. *Bartonia* 27: 1-46.
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### ***Amaranthus*** [FNA4, HC, HC2]

Sp. Pl. 2: 989. 1753; Gen. Pl., ed. 5, 427. 1754.  
amaranth, pigweed

#### ***Amaranthus albus*** L. [FNA4, HC, HC2]

Syst. Nat. ed. 10. 2: 1268. 1759.  
white pigweed, tumbleweed

*Amaranthus albus* L. var. *pubescens* (Uline & W.L. Bray) Fernald  
*Amaranthus pubescens* (Uline & W.L. Bray) Rydb.

FNA: "Amaranthus albus and *A. blitoides* are rather often confused in herbaria. The species are easily distinguished by their seed size and luster."

*Amaranthus blitoides* S. Watson [FNA4, HC2]

Proc. Amer. Acad. Arts. 12: 273. 1877 (as *Amarantus*).

matweed, prostrate pigweed

*Amaranthus graecizans* L. [FNA4, HC], misapplied

Often confused with *Amaranthus albus* L., but differentiated by seed size and luster. Taxonomy follows FNA. *Amaranthus graecizans* is native to the Mediterranean, and has never been found in the western United States.

*Amaranthus blitum* L. [FNA4, HC2]

Sp. Pl. 2: 990. 1753.

livid amaranth, pale amaranth

*Amaranthus ascendens* Loisel.

*Amaranthus blitum* L. ssp. *polygonoides* (Moq.) Cattetero

*Amaranthus lividus* L.

Similar to *Amaranthus viridis* L. Recently collected on lakeshores in King Co. (Jacobson et al. 2001). Subspecies classification needs further research according to FNA.

\* Jacobson, A. L., F. C. Weinmann, and P. F. Zika. 2001. Noteworthy collections. Washington. Madroño 48: 213-214.

*Amaranthus californicus* (Moq.) S. Watson [FNA4, HC, HC2]

Bot. California. 2: 42. 1880 (as *Amarantus*).

California amaranth

*Mengea californica* Moq.

*Amaranthus caudatus* L. [FNA4, HC2]

Sp. Pl. 2: 990. 1753.

*Amaranthus cruentus* L. [FNA4, HC2]

Syst. Nat. ed. 10. 2: 1269. 1759.

blood amaranth, caterpillar amaranth, purple amaranth

*Amaranthus hybridus* L. ssp. *cruentus* (L.) Thell.

*Amaranthus hybridus* L. var. *cruentus* (L.) Moq.

Derived from cultivated forms of *Amaranthus hybridus*, and perhaps best treated as a form of that species, according to FNA.

\* Sauer, J. D. 1967. The grain amaranths and their relatives: A revised taxonomic and geographic survey. Ann. Missouri Bot. Garden 54: 103-137.

*Amaranthus deflexus* L. [FNA4, HC2]

Mant. Pl. 2: 295. 1771.

Argentina amaranth

*Amaranthus hybridus* L. [FNA4, HC2]

Sp. Pl. 2: 990. 1753.

green amaranth, hybrid amaranth, smooth amaranth, green pigweed, smooth pigweed

Often mistaken for *Amaranthus powellii* or *A. retroflexus*.

\* Costea, M., A. Sanders, and G. Waines. 2001a. Preliminary results toward a revision of the *Amaranthus hybridus* species complex (Amaranthaceae). Sida 19: 931-974.

\* Costea, M., A. Sanders, and G. Waines. 2001b. Notes on some little known *Amaranthus* taxa (Amaranthaceae) in the United States. Sida 19: 975-992.

*Amaranthus hypochondriacus* L. [FNA4, HC2]

Sp. Pl. 2: 991. 1753.

*Amaranthus powellii* S. Watson [FNA4, HC, HC2]

Proc. Amer. Acad. Arts. 10: 347. 1875 (as *Amarantus*).  
green amaranth, Powell's amaranth

*Amaranthus bracteosus* Uline & W.L. Bray

*Amaranthus powellii* S. Watson ssp. *bouchonii* (Thell.) Costea & Carretero [KZ99]

*Amaranthus powellii* S. Watson ssp. *powellii* [KZ99]

*Atriplex retroflexus* L. var. *powellii* (S. Watson) B. Boivin

According to FNA, recognition of subspecies is premature (Wilkin 1992).

\* Wilkin, P. 1992. The status of *Amaranthus bouchonii* Thellung within *Amaranthus* section *Amaranthus*: New evidence from studies of morphology and isozymes. Bot. J. Linn. Soc. 108: 253-267.

***Amaranthus retroflexus* L. [FNA4, HC, HC2]**

Sp. Pl. 2: 991. 1753.

redroot pigweed, rough pigweed

*Amaranthus retroflexus* L. var. *salicifolius* I.M. Johnst.

***Amaranthus tuberculatus* (Moq.) J.D. Sauer [FNA4, HC2]**

Madroño. 13: 18. 1955.

rough-fruited waterhemp, tall waterhemp

*Acnida altissima* Riddell ex Moq.

*Acnida altissima* Riddell ex Moq. var. *prostrata* (Uline & W.L. Bray) Fernald

*Acnida altissima* Riddell ex Moq. var. *subnuda* (S. Watson) Fernald

*Acnida concatenata* (Moq.) Small

*Acnida subnuda* (S. Watson) Standl.

*Acnida tamariscina* (Nutt.) Alph. Wood

*Acnida tamariscina* (Nutt.) Alph. Wood var. *concatenata* (Moq.) Uline & W.L. Bray

*Acnida tamariscina* (Nutt.) Alph. Wood var. *tuberculata* (Moq.) Uline & W.L. Bray

*Acnida tuberculata* Moq.

*Amaranthus ambigens* Standl.

*Amaranthus rudis* J.D. Sauer [KZ99]

*Amaranthus tamariscinus* Nutt.

Reported from Klickitat Co. by KZ (Madrono 1955); reported from King Co. by Jacobson (2001). Taxonomy follows FNA.

\* Costea, M. and D. A. DeMason. 2001. Stem morphology and anatomy in *Amaranthus* L. (Amaranthaceae): Taxonomic significance. J. Torrey Bot. Soc. 128: 254-281.

\* Henrickson, J. 1999. Studies in New World *Amaranthus* (Amaranthaceae). Sida 18: 783-807.

\* <b>AJ</b> = Jacobson, A. L. 2001. Wild Plants of Greater Seattle. Publ. by the author, Seattle. 494 pp.

\* Mosyakin, S. L. and K. R. Robertson. 1996. New infrageneric taxa and combinations in *Amaranthus* L. (Amaranthaceae). Ann. Bot. Fenn. 33: 275-281.

\* Sauer, J. D. 1955. Revision of the dioecious amaranths. Madroño 13: 5-46.

\* Sauer, J. D. 1972. The dioecious amaranths: A new species name and major range extensions. Madroño 21: 426-434.

***Atriplex* [FNA4, HC, HC2]**

Sp. Pl. 2: 1052. 1753; Gen. Pl. ed. 5, 472. 1754.

greasewood, orache, saltbush, shadscale, silverscale

(see also *Grayia*)

***Atriplex argentea* Nutt. [FNA4, HC, HC2]**

Gen. N. Amer. Pl. 1: 198. 1818.

silver orache, silverscale orache

var. ***argentea*** [FNA4, HC2, KZ99]

Gen. N. Amer. Pl. 1: 198.

silver saltbush, silverscale

*Atriplex volutans* A. Nelson

***Atriplex canescens* (Pursh) Nutt. [FNA4, HC, HC2]**

Gen. N. Amer. Pl. 1: 197. 1818.

fourwing saltbush, hoary saltbush, shadscale, wingscale  
(see also *Atriplex gardneri*)

*Atriplex nuttallii* S. Watson [HC]

*Atriplex nuttallii* Wats. var. *nuttallii* [HC]

var. *canescens* [FNA4, HC, HC2]

Gen. N. Amer. Pl. 1: 197.

hoary saltbush

*Atriplex canescens* (Pursh) Nutt. var. *angustifolia* (Torr.) S. Watson

*Atriplex canescens* (Pursh) Nutt. var. *occidentalis* (Torr. & Frém.) S.L. Welsh & Stutz

FNA4 includes Washington within the range of this taxon, indicating a population in eastern Washington near Spokane. No WA specimens are currently known from any Pacific Northwest herbaria.

\* Stutz, H. C. and S. C. Sanderson. 1979. The role of polyploidy in the evolution of *Atriplex canescens*. In: J. R. Goodin and D. K. Northington, eds. 1929. Arid Plant Resources.... Lubbock. Pp. 615-621.

***Atriplex dioica*** Raf. [FNA4, HC, HC2]

Amer. Monthly Mag. & Crit. Rev. 2(2): 119. 1817.

thickleaf orach, saline saltbush

*Atriplex dioica* (Nutt.) J.F. Macbr., misapplied

*Atriplex patula* L. var. *subspicata* (Nutt.) S. Watson

*Atriplex subspicata* (Nutt.) Rydb.

This is the common native annual of coastal salt marshes and beaches. Taxonomy and nomenclature follow FNA, departing from the treatment in H&C, where plants called *Atriplex dioica* (Nutt.) J. F. Macbr. (from Montana) are now considered *A. suckleyi* (Torr.) Rydb. (Bassett et al. 1979). The name *Atriplex dioica* (Nutt.) J. F. Macbr. was published in 1918; the name *Atriplex dioica* Raf. was published in 1817. FNA4: "The distribution of the species is evidently bipartite, with an eastern coastal series extending northward mainly from New Jersey to Newfoundland and along the St. Lawrence seaway, and perhaps extending to James Bay of Hudson Bay. The western grouping lies mainly west of the 95th meridian of longitude, where it has been collected since early historical times to the present in saline marshes or other saline sites from the Yukon Territory and Northwest Territories, southward to southern California, northern Arizona, northern New Mexico, and Oklahoma. Rafinesque gave the following information: "Stem upright angular branched, leaves petiolate, deltoid, acute, thick, scaly, the proximal opposite toothed, the distal alternate, hastate, entire: flowers dioical glomerate, male spiked naked, female unequal, sepals deltoid, warty-crested." The name *Atriplex dioica* Rafinesque antedates *Chenopodium subspicatum* Nuttall by half a year, being published in December 1817. Hence, it is the correct name for the widely ranging species, which has passed most recently under the name *A. subspicata*. Nuttall's description of the habitat of *Chenopodium subspicatum* is: "In saline soils around Mandan Village, Missouri," a designation of habitat that applies to this day. The species forms a mirror-image set of specimens with the remarkably similar *Atriplex prostrata*, from which it may be distinguished in most cases by the thickened, merely ovate to lanceolate leaf blades, and less commonly but in some localities exclusively triangular-hastate to lanceolate, mostly scurfy and prominently 3-veined leaf blades. In some specimens, including the types of both *Chenopodium subspicatum* and *Atriplex carnososa*, the blades bear a hastate lobe at or above the base and sometimes match triangular-hastate profile of *A. prostrata*. The leaves of *A. prostrata* are typically thin-textured, green, not scurfy, and the veins of the blade are obscure. I. J. Bassett et al. (1983) disallowed within *A. dioica* (as *A. subspicata*) any but those with lanceolate blades, including those with the proximalmost leaves with a pair of subbasal hastate lobes. However, there are numerous specimens in which the blades are thickened and transitional in that regard to the triangular-hastate profile as in *A. prostrata*. Certainly those specimens with triangular or triangular-hastate leaves taken prior to the introduction of *A. prostrata* sometime late in the nineteenth or early twentieth century, clearly belong to the indigenous *A. dioica*. Whether there are intermediates between diploid ( $2n = 18$ ) *A. prostrata* and tetraploid or hexaploid ( $2n = 36, 54$ ) *A. dioica* is not known. There does not seem to be any consistent feature or combination of features by which all specimens can be assigned to one or the other of the two taxa. It seems probable, however, that *A. prostrata* is a late introduction from Europe, and that it, along with the related *A. heterosperma*, is now invading habitats previously occupied exclusively by the indigenous *A. dioica*."

\* Bassett, I. J., C. W. Crompton, J. McNeill, and P. M. Taschereau. 1983. The Genus *Atriplex* (Chenopodiaceae) in

Canada. Agriculture Canada Monogr. 31: 1-72.

- \* Bassett, J., I. J. Bassett, and C.W. Crompton. 1979. *Atriplex suckleyi* (Torrey) Rydb., the correct name for *A. dioica* (Nutt.) Macbride. *Taxon* 28: 588-590.
- \* McNeill, J., I. J. Bassett, C. W. Crompton, and P. M. Taschereau. 1983. Taxonomic and nomenclatural notes on *Atriplex* L. (Chenopodiaceae). *Taxon* 32: 549-556.

***Atriplex gardneri* (Moq.) D. Dietr. [FNA4, HC2]**

Syn. Pl. 5: 537. 1852.

Gardner's saltbush

**var. *falcata* (M.E. Jones) S.L. Welsh [FNA4, HC2]**

Great Basin Naturalist. 44: 191. 1984.

moundscale, gardner's saltbush, sickle saltbush, saltsage

*Atriplex falcata* (M.E. Jones) Standl. [KZ99]

*Atriplex nuttallii* S. Watson var. *falcata* M.E. Jones [HC]

Taxonomy follows FNA and most of the concepts of Hanson (1962), recognizing 7 varieties.

- \* Hanson, C. A. 1962. Perennial *Atriplex* of Utah and the northern deserts. Unpublished M.S. thesis, Brigham Young University.

***Atriplex gmelinii* C.A. Mey. ex Bong. [FNA4, HC2]**

Mém. Acad. Imp. Sci. St. Pétersbourg, Sér. 6, Sci. Math. 2: 160. 1838.

Gmelin's orache

**var. *gmelinii* [FNA4, HC2]**

Mém. Acad. Imp. Sci. St. Pétersbourg, Sér. 6, Sci. Math. 2: 160.

Gmelin's saltbush orach

*Atriplex gmelinii* C.A. Mey. ex Bong. var. *zosterifolia* (Hook.) Moq.

*Atriplex patula* L. var. *obtusata* (Cham.) C.L. Hitchc. [HC]

*Atriplex patula* L. var. *zosteraefolia* (Hook.) Hitchc. [HC]

*Atriplex patula* L. var. *zosterifolia* (Hook.) C.L. Hitchc.

Native annual on coastal beaches and salt marshes. The synonym is also spelled *zosteraefolia*.

***Atriplex heterosperma* Bunge [FNA4, HC, HC2]**

Beitr. Fl. Russl. 272. 1852.

orach, Russian atriplex orach

*Atriplex micrantha* Ledeb. [KZ99], misapplied

FNA4: "Russian atriplex occurs with greasewood, saltgrass, cottonwood, tamarix, and weedy annuals. It is a handsome, vigorous ruderal, weedy annual indigenous to Europe east to Chinese Turkestan that appears to be invading saline lowland and other disturbed areas throughout much of North America. It is similar to *Atriplex prostrata* from which it can be distinguished by the entire margin and smooth surfaces of the fruiting bracteoles. Additionally, the leaves are thick-textured and often bear one or more lobes or teeth irregularly along the blade above the subbasal main hastate lobe. The staminate spikes when young are very slender, mainly less than 2.5 mm thick."

***Atriplex hortensis* L. [FNA4, HC, HC2]**

Sp. Pl. 2: 1053. 1753.

garden orache, French spinach

*Atriplex nitens* Schkuhr

FNA4: "*Atriplex hortensis* has been widely grown as a potherb, has escaped from cultivation, and is now established especially in moist ruderal sites. It is easily distinguished by its rounded, samaralike, entire, and smooth fruiting bracteoles, and the presence of two kinds of pistillate flowers, the one enclosed by bracteoles and lacking sepals, the other without bracteoles but subtended by sepals. *Atriplex nitens* (see list of excluded taxa) is distinguished from *A. hortensis* in *Flora Europea* (P. Aellen 1964b) by having leaf blades densely white scurfy beneath, the distal surface lustrous, as opposed to green and dull for *A. hortensis*. Occasional specimens, treated here as *A. hortensis*, have leaves somewhat scurfy."

***Atriplex littoralis* L. [FNA4, HC2]**

Sp. Pl. 2: 1054. 1753.

grassleaf orache, narrow-leaved orache

*Atriplex patula* L. var. *littoralis* (L.) A. Gray [HC]

Recently collected in San Juan County (Zika 2003).

- \* Bassett, I. J., C. W. Crompton, J. McNeill, and P. M. Taschereau. 1983. The Genus *Atriplex* (Chenopodiaceae) in Canada. Agriculture Canada Monogr. 31: 1-72.
- \* McNeill, J. I. J. Bassett, C. W. Crompton, and P. M. Taschereau. 1983. Taxonomic and nomenclatural notes on *Atriplex* L. (Chenopodiaceae). Taxon 32: 549-556.
- \* Zika, P. F. 2003. Noteworthy collections, Oregon and Washington. Madroño 50: 313-314.

*Atriplex longipes* Drejer [Flora Europaea, HC2]

long-stalked orache, Baltic saltbush

*Atriplex longipes* Drejer ssp. *praecox* (Hülph.) Turesson

*Atriplex praecox* Hülph.

*Atriplex oblongifolia* Waldst. & Kit. [FNA4, HC2]

Descr. Icon. Pl. Hung. 3: 278, plate 211. 1812.

oblongleaf orache

Reported for Washington in Bassett et al. (1983). FNA4: "I. J. Bassett et al. (1983) indicated that *Atriplex oblongifolia* formed abundant, very fertile hybrids with *A. patula* in the Botanic Garden at Manchester University. This is a weedy species with facies similar to both *A. dioica* and *A. glabriuscula* var. *acadiensis*. The proximal branches at least are opposite, similar to phases of the nearly allied *A. patula*, however. It is likewise an introduced ruderal weed of roadsides and other waste places. Its spread in North America awaits documentation. The thin, entire fruiting bracts without appendages are pointed to as diagnostic of this entity from other similar species."

- \* Bassett, I. J., C. W. Crompton, J. McNeill, and P. M. Taschereau. 1983. The Genus *Atriplex* (Chenopodiaceae) in Canada. Agriculture Canada Monogr. 31: 1-72.

*Atriplex patula* L. [FNA4, HC, HC2]

Sp. Pl. 2: 1053. 1753.

halberdleaf orache, spear orache

(see also *Atriplex gmelinii*, *Atriplex littoralis*, *Atriplex prostrata*)

*Atriplex hastata* L. ssp. *patula* (L.) S. Pons

*Atriplex hastata* L. var. *patula* (L.) Farw.

*Atriplex patula* L. var. *patula* [HC]

FNA4: "*Atriplex patula* appears to have been a rather recent introduction in North America from Eurasia, not arriving perhaps until sometime in the early to mid-eighteenth century. It simulates depauperate specimens of *A. dioica*, *A. glabriuscula*, and other similar species when leaves are reduced to a near-linear profile. Such specimens are difficult if not impossible to assign to any of the species."

*Atriplex prostrata* Boucher ex DC. [FNA4, HC2]

Fl. Franç. ed. 3. 3: 387. 1805.

fat hen, hastate orache, thin-leaf orache

*Atriplex triangularis* Willd. [JPM]

A common annual introduction in coastal habitats, also found east of the Cascades. FNA4: "*Atriplex prostrata* often grows with willow, tamarix, *Scirpus* (*Schoenoplectus* and *Bulboschoenus* segregates), *Juncus*, *Distichlis*, and *Typha*. Perhaps the phase along coastal eastern North America is indigenous, but this and the related *Atriplex heterosperma* evidently moved quickly from one palustrine habitat to another following subsequent introductions from the Old World. They were probably initially introduced as ballast waifs, and subsequently dispersed by waterfowl. The two species are now commonplace in lands within and adjacent to marshes in much of North America west of the initial sites of introduction. The name for the species taken up here follows the nomenclatural interpretation of J. McNeill et al. (1983)."

*Atriplex rosea* L. [FNA4, HC, HC2]

Sp. Pl., ed. 2. 2: 1493. 1763.

red orach, tumbling orach

FNA4: "At least some early collections were from ballast dumps at harbors on both coasts. It seems probable that the plants were quickly spread inland from initial centers of introduction by birds and more

recently along railroads."

***Atriplex semibaccata*** R. Br. [FNA4, HC2]

Prodr. 406. 1810.

Australian saltbush, berry saltbush, creeping saltbush

*Atriplex flagellaris* Wooton & Standl.

Perennial subshrub reported for Washington in FNA4. FNA4: "The red-fleshy fruiting bracteoles are diagnostic of this introduced perennial, which is multi-stemmed from an often buried woody caudex. The Australian species *Atriplex muelleri* Benthham is somewhat similar. It has been reported, but not verified, in the North American flora."

***Atriplex truncata*** (Torr. ex S. Watson) A. Gray [FNA4, HC, HC2]

Proc. Amer. Acad. Arts. 8: 398. 1872.

wedge orache, wedgeleaf orache, wedgescale orache

*Atriplex subdecumbens* M.E. Jones

*Atriplex truncata* (Torr. ex S. Watson) A. Gray var. *stricta* A. Gray

***Bassia*** [FNA4, HC, HC2]

Mélanges Philos. Math. Soc. Roy. Turin. 3: 177. 1766.

bassia, smotherweed

***Bassia hyssopifolia*** (Pall.) Kuntze [FNA4, HC, HC2]

Revis. Gen. Pl. 2: 547. 1891.

bassia, fivehorn smotherweed

*Echinopsilon hyssopifolium* (Pall.) Moq.

*Salsola hyssopifolia* Pall.

Taxonomy follows Collins and Blackwell (1979), not Scott (1978). H&C mention the possibility of finding introduced *Bassia hirsuta* (L.) Asch in the Pacific Northwest, but FNA reports it only from the northeastern United States.

\* Collins, S. L. and W. H. Blackwell. 1979. *Bassia* (Chenopodiaceae) in North America. *Sida* 8: 57-64.

\* Scott, A. J. 1978. A review of the classification of *Chenopodium* L. and related genera (Chenopodiaceae). *Bot. Jahrb. Syst.* 100: 205-220.

***Bassia scoparia*** (L.) A.J. Scott [HC2]

Feddes Repert. 81(2?3): 108.

red belvedere, mock cypress, summer cypress

*Chenopodium scoparium* L.

*Kochia alata* Bates

*Kochia scoparia* (L.) Schrad. [FNA4, HC]

*Kochia scoparia* (L.) Schrad. f. *trichophylla* (A. Voss) Stapf ex Schinz & Thell.

*Kochia scoparia* (L.) Schrad. ssp. *scoparia* [FNA4]

Taxonomy follows FNA, where it is noted that *Kochia scoparia* (L.) Schrad. subsp. *densiflora* (Turcz. ex Moq.) Aellen is a casual alien in North America. It can be identified by long floral pubescence and habit characters.

***Beta*** [FNA4, HC, HC2]

Sp. Pl. 1: 222. 1753; Gen. Pl. ed. 5, 103. 1754.

***Beta vulgaris*** L. [FNA4, HC, HC2]

Sp. Pl. 1: 222. 1753.

common beet

**ssp. *vulgaris*** [FNA4, HC2]

Sp. Pl. 1: 222.

beet, cultivated beet

No specimens from wild populations in Washington are present in Pacific Northwest herbaria. This species is considered excluded until naturalized populations are documented. A.L. Jacobson reports it from the Seattle area, however no specimens have been made to date.

**Blitum** [HC2]

goosefoot, povertyweed

*Monolepis* [FNA4]

*Monolepis* [HC], orthographic variant

**Blitum capitatum** L. [HC2]

Sp. Pl. 1: 4. 1753

strawberry blight, Indian ink, Indian paint

*Chenopodium capitatum* (L.) Ambrosi [FNA4, HC]

*Chenopodium capitatum* (L.) Ambrosi var. *capitatum* [FNA4]

The varieties need more study and are hard to distinguish.

**Blitum hastatum** Rydb. [HC2]

Over's Goosefoot

*Chenopodium capitatum* (L.) Ambrosi var. *parvicapitatum* S.L. Welsh [FNA4]

*Chenopodium overi* Aellen

**Blitum nuttallianum** Schult. [HC2]

Mant. 1: 65. 1822

Nuttall's povertyweed

*Monolepis chenopodioides* Moq.

*Monolepis nuttalliana* (Schult.) Greene [FNA4]

*Monolepis nuttalliana* (Schultes) Greene [HC], orthographic variant

**Blitum spathulatum** (A. Gray) S. Fuentes, Uotila & Borsch [HC2]

prostrate monolepis

*Monolepis spathulata* A. Gray [FNA4]

*Monolepis spathulata* Gray [HC], orthographic variant

Not reported in WA by either H&C or FNA, however identification of single specimen collected in WA verified by Noel Holmgren in 2011 in association with publication of final volume of Intermountain Flora. Presence in WA represents significant disjunction from known range from southern ID, southeastern OR south to Baja California.

**Blitum virgatum** L. [HC2]

Sp. Pl. 1: 4-5.

leafy goosefoot

*Chenopodium foliosum* (Moench) Asch. [FNA4, HC]

*Chenopodium virgatum* Thunb. [Abrams]

FNA4: "Chenopodium foliosum is probably native to the mountains of south and central Europe and western Asia. Several closely related segregate species are currently recognized within the *C. foliosum* group (P. Uotila 1979, 1993, 1997). *Chenopodium foliosum* listed and illustrated in J. C. Hickman (1993) is in fact *C. capitatum* var. *parvicapitatum*."

**Chenopodiastrum** [HC2]

goosefoot

**Chenopodiastrum murale** (L.) S. Fuentes, Uotila & Borsch [HC2]

nettleleaf goosefoot, wall goosefoot, sowbane

*Chenopodium murale* L. [FNA4, HC]

*Chenopodium urbicum* L. [FNA4, HC], misapplied

KZ notes *Chenopodium urbicum* was reported from farmyards in Whatcom Co. by Muenscher (1930), whose voucher may be at CU or WS. However, Muenscher (1941) does not list the species again, instead listing *C. murale* from farmyards. The FNA authors did not find a specimen to verify the Washington report of *C. urbicum*, or reports from Oregon and British Columbia, so the occurrence of *Chenopodium urbicum* must remain dubious in the Pacific Northwest. Validated FNA records of *C. urbicum* are all mapped in the northeastern United States. FNA4: "*Chenopodium murale* is distinctive and is one of the more common species of the genus in the world, especially in tropical and subtropical regions."

- \* Bassett, I. J. and C. W. Crompton. 1982. The genus *Chenopodium* in Canada. *Canadian Journal of Botany* 60: 586-610.
- \* Muenscher, W. C. 1930. Some changes in the weed flora of Whatcom County, Washington. *Torreyia* 30: 130-134.
- \* Muenscher, W. C. 1941. The Flora of Whatcom County, State of Washington. Publ. by the author, Ithica, NY. 139 p.

***Chenopodiastrum simplex* (Torrey) S. Fuentes, Uotila & Borsch [HC2]**

giant goosefoot, maple leaf goosefoot

*Chenopodiastrum hybridum* (L.) S. Fuentes, Uotila & Borsch, misapplied

*Chenopodium gigantospermum* Aellen

*Chenopodium hybridum* L. var. *gigantospermum* (Aellen) Rouleau

*Chenopodium hybridum* L. var. *simplex* Torr.

*Chenopodium simplex* (Torr.) Raf. [FNA4]

A forest species that can occur in waste ground. Here we follow the taxonomy of FNA, and consider *Chenopodium hybridum* L. to be an Old World species not recorded in our area, with differences in the seed coat, pericarp, and chromosome number (Baranov 1964). FNA4: "A closely related Eurasian diploid species, *Chenopodium hybridum* Linnaeus, probably also occurs in North America as introduced. Its occurrence in the New World needs confirmation. *Chenopodium simplex* differs from its Eurasian counterpart in having a smoother seed coat, a yellowish pericarp that is more adherent to the seed, and a different chromosome number (A. I. Baranov 1964; R. D. Dorn 1988b)."

- \* Baranov, A. I. 1964. On the perianth and seed characters of *Chenopodium hybridum* and *C. gigantospermum*. *Rhodora* 66: 168-171.
- \* Dorn, R. D. 1988. *Chenopodium simplex*, an older name for *C. gigantospermum* (Chenopodiaceae). *Madroño* 35: 162.

***Chenopodium* [FNA4, HC, HC2]**

Sp. Pl. 1: 218. 1753; Gen. Pl. ed. 5. 103. 1754.

goosefoot, lamb's quarters, pigweed

(see also *Blitum*, *Chenopodiastrum*, *Dysphania*, *Oxybasis*)

***Chenopodium album* L. [FNA4, HC, HC2]**

Sp. Pl. 1: 219. 1753.

lambsquarters, pigweed

*Chenopodium album* L. var. *album* [KZ99]

*Chenopodium album* L. var. *missouriense* (Aellen) Bassett & Crompton [KZ99]

*Chenopodium album* L. var. *stevensii* Aellen [KZ99]

FNA4: "*Chenopodium album*, one of the worst weeds and most widespread synanthropic plants on the Earth, in its broad circumscription is also among the most polymorphic plant species. It is a loosely arranged aggregate of still insufficiently understood races. Hundreds of segregate microspecies and infraspecific entities (including nomenclatural combinations) of the *C. album* aggregate have been described and/or recognized by various authors. Some authors have recognized numerous segregate intergrading species, while others have developed elaborate infraspecific hierarchies with numerous subspecies, varieties, forms, and even numerous subforms (e.g., B. Jüttersonke and K. Arlt 1989), or have combined both approaches. Neither approach has brought satisfactory and uncontroversial results. It is evident that most recent evolutionary processes within the group were greatly affected by anthropic factors, including extensive recent invasions, hybridization between previously geographically isolated taxa, poly-ploidy, intensive selective processes and mutagenesis in synanthropic habitats, gene drift, and so forth. All of these modern factors further complicated the taxonomic situation. Consequently, no infraspecific taxa are formally recognized in the present treatment. We attempt, however, to outline below the most common or noteworthy groups currently placed in *Chenopodium album* sensu lato. Although we list such groups under binomials, they should be considered here as informal groupings rather than accepted species. It should be also kept in mind that many enigmatic and deviant forms of the *Chenopodium album* aggregate are in fact hybrids with other (occasionally several) species, and between infraspecific entities. *C. album* hybridizes with *C. sueticum* (producing *C. xfersajevii* Aellen & Iljin), *C. opulifolium* (producing *C. xpreissmannii* Murr), *C. strictum* [producing *C. xpseudostratum* (Zschacke) Murr], *C. ficifolium* (producing *C. xjedlickae* Dvorák or *C. xzahnii* Murr), *C. berlandieri* (producing *C. xvariabile* Aellen), and some other species."

- \* Bassett, I. J. and C. W. Crompton. 1982. The genus *Chenopodium* in Canada. *Canadian Journal of Botany* 60:

586-610.

- \* Dvorák, F. 1984. Annotated chromosome counts for *Chenopodium pedunculare* Bertol. Scripta Fac. Sci. Nat. Univ. J. E. Purkynianae Brun. 14: 455-462.
- \* Dvorák, F. 1992. Study on *Chenopodium purpurascens* B. de Juss. ex Jacq. and on some related taxa. Feddes Repert. 103: 152-173.

***Chenopodium atrovirens* Rydb. [FNA4, HC2]**

Mem. New York Bot. Gard. 1: 131. 1900.

pinyon goosefoot

*Chenopodium fremontii* S. Watson var. *atrovirens* (Rydb.) Fosberg [HC]

Similar to *C. pratericola*. In H&C the range of *Chenopodium atrovirens* (under the name *C. fremontii* var. *atrovirens* (Rydb.) Fosberg) appears to include Washington, according to KZ. But FNA could find no WA vouchers. Thus we assume that those reports are based on what H&C called *C. fremontii* var. *fremontii*, which is documented from Grant Co., WA.

***Chenopodium berlandieri* Moq. [FNA4, HC2]**

Chenop. Monogr. Enum. 23. 1840.

Berlandieri's goosefoot

var. ***zschackei* (Murr) Murr ex Graebn. [FNA4, HC2]**

Syn. Mitteleur. Fl. 5(1): 81. 1913.

pitseed goosefoot

*Chenopodium berlandieri* Moq. ssp. *zschackei* (Murr) A. Zobel

*Chenopodium zschackei* Murr

Very similar in appearance to *C. album*, but distinguished from that species by having more open inflorescence, honeycomb-pitted pericarp, and strongly carinate (keeled) sepals in fruit. Need mature fruits to distinguish between the two taxa.

***Chenopodium desiccatum* A. Nelson [FNA4, HC2]**

Bot. Gaz. 34: 362. 1902.

narrowleaf goosefoot

*Chenopodium leptophyllum* (Moq.) Nutt. ex S. Watson var. *oblongifolium* S. Watson [HC]

Taxonomy follows FNA, separating *Chenopodium desiccatum* from *C. pratericola* on minor differences in habit and the nature of the perianth. Reports from Washington need confirmation, the species is not credited to our state in FNA.

***Chenopodium fremontii* S. Watson [FNA4, HC, HC2]**

Botany (Fortieth Parallel). 287. 1871 (as fremonti).

Fremont's goosefoot

(see also *Chenopodium atrovirens*)

*Chenopodium fremontii* S. Watson var. *fremontii* [HC]

In H&C the range of *Chenopodium atrovirens* (under the name *C. fremontii* var. *atrovirens* (Rydb.) Fosberg) appears to include Washington, according to KZ. But FNA could find no WA vouchers. Thus we assume that those reports are based on what H&C called *C. fremontii* var. *fremontii*, which is documented from Grant Co., WA.

***Chenopodium hians* Standl. [FNA4, HC2]**

N. Amer. Fl. 21: 16. 1916.

Hians goosefoot

Closely related to *Chenopodium pratericola*. Reported from Grant Co., Washington (Vantage, Thompson 6787 NY) by Wahl (1952), and by FNA.

- \* Wahl, H. A. 1952. A preliminary study of the genus *Chenopodium* in North America. *Bartonia* 27: 1-46.

***Chenopodium incognitum* Wahl [HC2]**

***Chenopodium leptophyllum* (Moq.) Nutt. ex S. Watson [FNA4, HC, HC2]**

Proc. Amer. Acad. Arts. 9: 94. 1874.

narrowleaf goosefoot

(see also *Chenopodium desiccatum*, *Chenopodium subglabrum*)

*Chenopodium album* L. var. *leptophyllum* Moq.  
*Chenopodium leptophyllum* (Nutt. ex Moq.) S. Watson var. *leptophyllum* [HC]

H&C recognizes var. *leptophyllum* for WA plants, however FNA does not recognize varieties.

***Chenopodium opulifolium* Schrad. ex DC. [FNA4, HC2]**

Fl. Franç. ed. 3. 6: 372. 1815.

***Chenopodium pratericola* Rydb. [FNA4, HC2]**

Bull. Torrey Bot. Club. 39: 310. 1912.

desert goosefoot, narrowleaf goosefoot

*Chenopodium desiccatum* A. Nelson var. *leptophylloides* (Murr) Wahl

\* Crawford, D. J. 1975. Systematic relationships in the narrow-leaved species of *Chenopodium* of the western United States. *Brittonia* 27: 279-288.

***Chenopodium xschulzeanum* Murr [FNA4]**

Allg. Bot. Z. Syst. xii. 110.

hybrid goosefoot

FNA4: "Hybrids between *Chenopodium rubrum* and *C. glaucum* are known as *C. xschulzeanum* Murr and have been seen from waste areas in Illinois and Washington. These plants in general resemble *C. rubrum* with small, mealy leaves and horizontal seeds, but they also have some leaves shaped like those of *C. glaucum*."

***Chenopodium strictum* Roth [FNA4, HC2]**

Nov. Pl. Sp. 180. 1821.

white goosefoot

*Chenopodium album* L. ssp. *striatum* (Kra?an) Murr

*Chenopodium album* L. var. *microphyllum* Boenn. [KZ99]

*Chenopodium album* L. var. *striatum* Kra?an [KZ99]

*Chenopodium striatum* (Kra?an) Murr

*Chenopodium strictum* Roth ssp. *striatiforme* (Murr) Uotila

FNA4: "Presumed native American plants of *Chenopodium strictum* were recognized as a separate species, subspecies, or variety [*C. glaucophyllum* Aellen; *C. strictum* subsp. *glaucophyllum* (Aellen) Aellen; *C. strictum* var. *glaucophyllum* (Aellen) Wahl]. These plants are very variable, and usually have broader leaves and more lax inflorescences, which might be a result of hybridization with other species of the *C. album* aggregate. The native status of such forms is very questionable. Typical *C. strictum* also occurs in North America, but seems to be less common. Some narrow species and hybrids of the *C. strictum* aggregate are recognized in Eurasia (P. Aellen 1928; F. Dvořák 1989; P. Uotila 1977, 1993, 1997). Some of these taxa, especially *C. striatiforme* Murr and *C. novopokrovskyanum* (Aellen) Uotila, are superficially similar to the native North American taxa of subsect. *Leptophylla*. Eurasian forms of the *C. strictum* group usually can be distinguished by their venation pattern (in most cases more than three visible veins even in narrowest leaves). Considering the likely alien status and wide variability of *C. strictum* in North America, no attempt is made here to subdivide it into infraspecific entities."

\* Dvořák, F. 1989. Study on *Chenopodium strictum* agg. *Feddes Repert.* 100: 197-234.

***Chenopodium subglabrum* (S. Watson) A. Nelson [FNA4, HC2]**

Bot. Gaz. 34: 362. 1902.

smooth goosefoot

*Chenopodium leptophyllum* (Moq.) Nutt. ex S. Watson var. *subglabrum* S. Watson [HC]

***Corispermum* [FNA4, HC, HC2]**

Sp. Pl. 1: 4. 1753; Gen. Pl. ed. 5. 5. 1754.

bugseed, tickseed

***Corispermum americanum* (Nutt.) Nutt. [FNA4, HC2]**

Trans. Amer. Philos. Soc., n.s. 5: 165. 1834.

American bugseed

**var. *americanum* [FNA4, HC2]**

American bugseed

Taxonomy follows FNA, where all members of the genus are considered native in Washington (Bentacourt et al. 1984). Formerly treated as introductions from Europe (Maihle & Blackwell 1978).

- \* Betancourt, J. L., A. Long, D. J. Donahue, A. J. T. Jull, and T. H. Zabel. 1984. Pre-Columbian age for North American *Corispermum* L. (Chenopodiaceae) confirmed by accelerator radiocarbon dating. *Nature* 311: 653-655.
- \* Maihle, N. J., and W. H. Blackwell. 1978. A synopsis of North American *Corispermum* (Chenopodiaceae). *Sida* 7: 382-391.

***Corispermum hookeri* Mosyakin [FNA4, HC2]**

Novon. 5: 349. 1995.  
Hooker's bugseed

var. ***pseudodeclinatum* Mosyakin [FNA4, HC2]**

Novon. 5: 350. 1995.  
Hooker's bugseed

Known in Washington from the mouth of Okanogan River, and possibly along the Columbia River in Grant County. May intergrade with *C. pallasii*.

***Corispermum pacificum* Mosyakin [FNA4, HC2]**

Novon. 5: 345, fig. 1A. 1995.  
Pacific bugseed

Recently described (Mosyakin 1995), and our most common species in Washington, on the banks of the Snake and Columbia Rivers. Putative hybrids with *C. villosum* reported in FNA. FNA4: "*Corispermum pacificum* seems to be closely related to Siberian *C. crassifolium* Turczaninov and *C. maynense* Ignatov. The latter species occurs in the northeastern Russian Far East and may be expected to occur in Alaska. *Corispermum pacificum* differs from *C. maynense* by its usually more robust habit, and its wing rounded (rarely rounded-truncate or indistinctly emarginate, but not triangular) at apex. From *C. crassifolium* it may be distinguished by the constant presence of perianth segments, and more flattened black mature fruits. *Corispermum pacificum* probably also occurs in adjacent regions of British Columbia. *Corispermum pacificum* is placed in subsect. *Crassifolia* (S. L. Mosyakin 1997). This subsection seems to be of Siberian origin, with its central species, *C. crassifolium*, being closest to the hypothetic ancestral taxon. The presence of perianth segments in *C. pacificum* may be explained by ancient hybridization with representatives of subsect. *Pallasiana*. Reproductive isolation between the sympatric species of *Corispermum* may be achieved by different flowering periods. Occasional hybrids between *C. pacificum* and *C. villosum* are similar in their habit to *C. pacificum* in having usually broad leaves and rather dense inflorescences but they have mostly aborted fruits suggesting that *C. pacificum* and *C. villosum* are taxonomically distant species."

- \* Mosyakin, S. L. 1995. New taxa of *Corispermum* L. (Chenopodiaceae), with preliminary comments on the taxonomy of the genus in North America. *Novon* 5: 340-353.
- \* Mosyakin, S. L. 1998. New subsections of *Corispermum* L. (Chenopodiaceae). *Thaiszia* 7: 9-15.

***Corispermum pallasii* Steven [FNA4, HC2]**

Mém. Soc. Imp. Naturalistes Moscou. 5: 336. 1817.  
Pallas' bugseed

Occurs along the Columbia River in Washington, with Collections from Wahkiakum County and Grant county.

***Corispermum pallidum* Mosyakin [FNA4, HC2]**

Novon. 5: 347, fig. 1B. 1995.  
pale bugseed

*Corispermum nitidum* Kit. ex Schult. [FNA4, HC], misapplied

Recently described from sand deposits in Douglas and Grant Cos. (Mosyakin 1995), last collected in 1931. FNA4: "The combination of characteristics of *Corispermum pallidum* is very distinctive: pale, flattened, and small fruit body; very wide (especially as compared to the fruit dimensions), thin, translucent wing with erose margins, long style bases (ca. 0.7-1 mm, including their parts adnate to wing), distinctly divided in their upper parts to below the edge of the wing. Young bracts and distal leaves of *C. pallidum* are often papillose on margins and veins, in combination with typical branched trichomes. *Corispermum pallidum* seems to be related to the eastern Asian *C. macrocarpum* Bunge ex Maximowicz aggregate (subsect. *Platyptera* Mosyakin)."

- \* Betancourt, J. L., A. Long, D. J. Donahue, A. J. T. Jull, and T. H. Zabel. 1984. Pre-Columbian age for North American *Corispermum* L. (Chenopodiaceae) confirmed by accelerator radiocarbon dating. *Nature* 311: 653-655.
- \* Mosyakin, S. L. 1995. New taxa of *Corispermum* L. (Chenopodiaceae), with preliminary comments on the taxonomy of the genus in North America. *Novon* 5: 340-353.

***Corispermum villosum* Rydb. [FNA4, HC2]**

Bull. Torrey Bot. Club. 24: 191. 1897 (as *Coriospermum*).  
hairy bugseed

Closely related to *Corispermum americanum* and *C. pallasii*. FNA4: "*Corispermum villosum* may also occur in British Columbia, Manitoba, Nevada, South Dakota, and Utah. It is probably introduced rather than native in Ontario (where it is found mostly in Thunder Bay district, known for its grain elevators and mills), Quebec, and Wisconsin. Plants from Minnesota and North Dakota are transitional toward *C. americanum*. *Corispermum villosum* is also distinguished by having style bases forming a triangular "beak" distinctly protruding over the edge of the wing/fruit. Some specimens of *C. villosum* are very similar to the small-fruited and narrow-winged European representatives of *C. pallasii*. Together with some Eurasian species, *C. pallasii*, *C. americanum*, and *C. villosum* belong to the same group of closely related species, and occasional transitional forms between these taxa are not uncommon in North American material. The names *Corispermum orientale* Lamarck and *C. hyssopifolium* were commonly misapplied to *C. villosum*."

***Cycloloma* [FNA4, HC2]**

Chenop. Monogr. Enum. 17. 1840.  
cycloloma, pigweed

***Cycloloma atriplicifolium* (Spreng.) J.M. Coult. [FNA4, HC2]**

Mem. Torrey Bot. Club. 5: 143. 1894.  
winged pigweed

***Dysphania* [FNA4, HC2]**

Prodr. 411. 1810.  
goosefoot, wormseed

***Dysphania ambrosioides* (L.) Mosyakin & Clemants [FNA4, HC2]**

Ukrayins'k. Bot. Zhurn., n. s. 59: 382. 2002.  
Mexican tea, wormseed

*Chenopodium ambrosioides* L. [HC]  
*Teloxys ambrosioides* (L.) W.A. Weber

FNA4: "Southern populations of *Dysphania ambrosioides* are native while those populations in the northern part of the flora area are introduced."

- \* Carolin, R. C. 1983. The trichomes of the Chenopodiaceae and Amaranthaceae. *Bot. Jahrb. Syst.* 103: 451-466.
- \* Mosyakin, S. L. and S. E. Clemants. 2002. New nomenclatural combinations in *Dysphania* R. Br. (Chenopodiaceae): taxa occurring in North America. *Ukrayins'k Bot. Zhurn.*, n.s. 59: 380-385.
- \* Weber, W. A. 1985. The genus *Teloxys* (Chenopodiaceae). *Phytologia* 58: 477-478.
- \* Wilson, P. G. 1984. Chenopodiaceae. In: R. Robertson et al., eds. 1981+. *Flora of Australia*. 23+ volumes. Canberra. Vol. 4, pp. 81-317.
- \* Wilson, P. G. 1987. Generic status in the Chenopodiaceae. *Newslett. Austral. Syst. Bot. Soc.* 53: 78-85.

***Dysphania botrys* (L.) Mosyakin & Clemants [FNA4, HC2]**

Ukrayins'k. Bot. Zhurn., n. s. 59: 383. 2002.  
Jerusalem oak goosefoot, Jerusalem oak

*Chenopodium botrys* L. [HC]  
*Teloxys botrys* (L.) W.A. Weber

The similar Eurasian and African species *Chenopodium schraderiana* Schult. should be sought as an adventive, according to FNA. It has keeled perianth parts with nearly sessile glands, and a leafy inflorescence, compared to *C. botrys*. FNA4: "*Dysphania botrys* is related to a species from Africa and southern Eurasia, *D. schraderiana* (Schultes) Mosyakin & Clemants, which may occur locally in North America as introduced. *Dysphania schraderiana* has distinctly keeled perianth segments with mostly sessile or subsessile glands. The general inflorescence in *D. schraderiana* is usually leafy almost to the top, distal cauline leaves are similar to proximal ones (in *D. botrys* distal leaves are normally much

reduced, and the distal portion of the general inflorescence appears nearly leafless). H. A. Wahl (1954) reported that *D. schraderiana* (as *Chenopodium schraderianum*) had been grown in Ontario. He did not indicate that it had escaped."

***Dysphania pumilio* (R. Br.) Mosyakin & Clemants [FNA4, HC2]**

Ukrayins?k. Bot. Zhurn., n. s. 59: 382. 2002.  
small crumbweed, clammy goosefoot

*Chenopodium pumilio* R. Br. [HC]  
*Teloxys pumilio* (R. Br.) W.A. Weber

FNA4: This species has gone under the misapplied name *Chenopodium carinatum* R. Brown (now *Dysphania carinata*).

***Grayia* [FNA4, HC2]**

Bot. Beechey Voy. 387. 1841.  
hopsage

*Zuckia* [FNA4]

***Grayia spinosa* (Hook.) Moq. [FNA4, HC2]**

Prodr. 13(2): 119. 1849.  
spiny hopsage

*Atriplex spinosa* (Hook.) Collotzi [HC]  
*Chenopodium spinosum* Hook.

***Halogeton* [FNA4, HC, HC2]**

Icon. Pl. 1: 10, plate 40. 1829.  
halogeton

***Halogeton glomeratus* (M. Bieb.) C.A. Mey. [FNA4, HC, HC2]**

Icon. Pl. 1: 10. 1829.  
halogeton, saltlover

*Anabasis glomerata* M. Bieb.

FNA4: "A noxious and toxic weed in disturbed, barren, alkaline soils, *Halogeton glomeratus* is able to withstand high concentrations of salinity. It is often associated with *Sarcobatus vermiculatus* and *Atriplex confertifolia* and is found in the cold deserts of western United States. The first collection of *Halogeton* in the United States was by Ben Stahmann in Wells, Nevada, in 1934. It was not until the fall of 1942, when a herder lost 160 sheep, that the species was recognized as toxic to livestock (J. A. Young et al. 1999)."

\* Blackwell, W. H., J. D. Haacke, and C. O. Hopkins. 1979. *Halogeton* (Chenopodiaceae) in North America. *Sida* 8: 157-169.

***Krascheninnikovia* [FNA4, HC2]**

Novi Comment. Acad. Sci. Imp. Petrop. 16: 551. 1772.  
white sage, winter sage, winterfat

*Eurotia* [HC]

***Krascheninnikovia lanata* (Pursh) A. Meeuse & A. Smit [FNA4, HC2]**

Taxon. 20: 644. 1971.  
winterfat

*Ceratoides lanata* (Pursh) J.T. Howell  
*Diotis lanata* Pursh  
*Eurotia lanata* (Pursh) Moq. [HC]  
*Eurotia lanata* (Pursh) Moq. var. *subspinosa* (Rydb.) Kearney & Peebles

FNA4: "*Krascheninnikovia lanata* often forms pure stands. It occurs throughout the intermountain region except in the northwest corner of central Oregon. It is called winterfat because of its nutritional importance for domestic livestock, especially sheep."

***Micromonolepis* [FNA4, HC2]**

Nat. Pflanzenfam., ed. 2. 16c: 499. 1934.  
povertyweed

***Micromonolepis pusilla*** (Torr. ex S. Watson) Ulbr. [FNA4, HC2]

Nat. Pflanzenfam., ed. 2. 16c: 500. 1934.  
red povertyweed

*Monolepis pusilla* Torr. ex S. Watson

*Monolepis pusilla* Torr. [HC], orthographic variant

Micromonolepis is monotypic, and restricted to the western United States.

***Nitrophila*** [FNA4, HC, HC2]

Botany (Fortieth Parallel). 297. 1871.  
nitrewort

***Nitrophila occidentalis*** (Moq.) S. Watson [FNA4, HC, HC2]

Botany (Fortieth Parallel). 297. 1871.  
boraxweed

Possibly extirpated in WA, H&C say eastern WA. FNA4: "*Nitrophila occidentalis* often occurs with *Distichlis*, *Juncus*, and *Sarcobatus*."

***Oxybasis*** [HC2]

goosefoot

***Oxybasis chenopodioides*** (L.) S. Fuentes, Uotila & Borsch [HC2]

low goosefoot, red goosefoot

*Blitum chenopodioides* L.

*Chenopodium botryodes* Sm.

*Chenopodium chenopodioides* (L.) Aellen [FNA4, HC]

The Linnaean basionym was neotypified (Uotila 2001). FNA4: "The name *Chenopodium botryodes* Smith was sometimes applied to *C. chenopodioides* because of uncertainty about the proper application and typification of the name *Blitum chenopodioides* Linnaeus. The recent publication by P. Uotila (2001) provides a reasonable solution by maintaining the traditional usage through neotypification of the Linnaean name."

\* Uotila, P. 2001. Taxonomic and nomenclatural notes on *Chenopodium* (Chenopodiaceae) for Flora Nordica. *Ann. Bot. Fenn.* 38: 95-97.

***Oxybasis glauca*** (L.) S. Fuentes, Uotila & Borsch [HC2]

glaucous goosefoot, oakleaf goosefoot

*Chenopodium glaucum* L. [FNA4, HC]

**ssp. *glauca*** [HC2]

oak-leaf goosefoot

*Chenopodium glaucum* L. var. *glaucum* [FNA4]

Recently (2015) collected in Franklin County; native to Eurasia.

**ssp. *salina*** (Standl.) Mosyakin [HC2]

Rocky Mountain goosefoot

*Chenopodium glaucum* L. ssp. *salinum* (Standl.) Aellen

*Chenopodium glaucum* L. var. *salinum* (Standl.) B. Boivin [FNA4]

*Chenopodium salinum* Standl. [KZ99]

Subspecies not recognized in H&C. Taxonomy follows FNA, recognizing the native plant as a separate variety from *C. glaucum* var. *glaucum* of Eurasia.

***Oxybasis macrosperma*** (Hook. f.) S. Fuentes, Uotila & Borsch [HC2]

large seed goosefoot

*Chenopodium farinosum* Standl.

*Chenopodium macrospermum* Hook. f. [FNA4]

*Chenopodium macrospermum* Hook. f. var. *farinosum* (S. Watson) J.T. Howell [KZ99]

*Chenopodium macrospermum* Hook. f. var. *halophilum* (Phil.) Aellen [KZ99]

*Chenopodium murale* L. var. *farinosum* S. Watson

FNA4: "Chenopodium macrospermum is native and diverse in South America. Much, if not all, of the North American material is introduced from there and appears to represent more than one part of the variation. Until a reliable treatment of the South American material is published we are not assigning names to the variants in North America."

***Oxybasis rubra* (L.) S. Fuentes, Uotila & Borsch [HC2]**

red goosefoot

*Chenopodium rubrum* L. [FNA4, HC]

var. ***humilis* (Hook.) Mosyakin [HC2]**

marshland goosefoot

*Chenopodium humile* Hook.

*Chenopodium rubrum* L. ssp. *humile* (Hook.) Aellen

*Chenopodium rubrum* L. var. *humile* (Hook.) S. Watson [FNA4, HC]

FNA4: *Chenopodium rubrum* var. *humile* has been treated as a species, variety, or form, or not recognized at all. It is native in western North America and introduced east of the plains. Sometimes it has been misidentified as *C. chenopodioides*. Patterns of distribution of these taxa in North America are in need of further study."

var. ***rubra* [HC2]**

red goosefoot

*Chenopodium rubrum* L. var. *rubrum* [FNA4, HC]

FNA4: "Hybrids between *Chenopodium rubrum* and *C. glaucum* are known as *C. xschulzeanum* Murr and have been seen from waste areas in Illinois and Washington. These plants in general resemble *C. rubrum* with small, mealy leaves and horizontal seeds, but they also have some leaves shaped like those of *C. glaucum*."

***Salicornia* [FNA4, HC, HC2]**

Sp. Pl. 1: 3. 1753; Gen. Pl. ed. 5. 4. 1754.

glasswort, saltwort, samphire

*Sarcocornia* [FNA4, HC2]

***Salicornia depressa* Standl. [FNA4, HC2]**

N. Amer. Fl. 21: 85. 1916.

low saltwort

*Salicornia europaea* L. [HC], misapplied

*Salicornia maritima* S.L. Wolff & Jefferies [FNA4], misapplied

*Salicornia virginica* L. [HC]

H&C name *S. europaea* is misapplied. This is the common native annual species in coastal marshes. FNA suggests *S. virginica* may be the best name for this plant, if the Atlantic and Pacific populations are the same taxon. As with all our *Corispermum* taxa, for many decades this plant was mistakenly given the binomial and introduced status of a European species. FNA4: "*Salicornia depressa* is the common and widespread species in coastal areas of North America. No detailed taxonomic investigation of the tetraploid populations has ever been undertaken in North America. It is possible that a number of different taxa exist; the Pacific Coast populations in particular seem distinct from those of the Atlantic Coast. This species has generally been called *Salicornia europaea* by North American authors, but that name refers to a diploid European species that does not occur in North America. The earliest name that is probably referable to this species is *Salicornia virginica* Linnaeus, which must be typified by specimens collected by John Clayton probably from Virginia. The specimens are sterile but clearly annual, as indicated by Linnaeus in the protologue. The name was applied to an annual species by P. C. Standley (1916), but subsequently came to be misapplied to the perennial species of the east coast now treated in *Sarcocornia*."

***Salicornia perennis* Mill.**

Gard. Dict. ed. 8, *Salicornia* no. 2. 1768

chickenclaws, glasswort, woody glasswort, woody saltwort glasswort, pickleweed, pickleweed

*Salicornia ambigua* Michx. [Abrams]

*Sarcocornia perennis* (Mill.) A.J. Scott [FNA4, HC2]

FNA treats this as the genus *Sarcocornia*, segregated from *Salicornia* by its perennial instead of annual growth, but this seems insufficient for generic realignment, and trivializes the obvious floral and fruit similarities. FNA4: "Sarcocornia is taxonomically difficult and has never been the subject of a taxonomic revision for the Northern Hemisphere. Although it is possible to identify dry specimens to some extent, by comparison, it is impossible to obtain from dried specimens data that can be used in a taxonomic revision. Characters that may be taxonomically useful are lost on drying, especially flower and inflorescence characters and those derived from the fleshy vegetative segments. Habit appears to be useful, but few specimen labels note the habit of the living plant, and the parts collected rarely allow for a reliable determination of habit. Some species, such as *S. perennis* are prostrate, with the woody stems readily rooting in the substrate. Others such as *S. pacifica* are procumbent to erect shrubs in which the woody stems usually do not root. This apparently obvious habit difference is sometimes confounded by external factors, erect species becoming procumbent due to water movement, trampling, or burial by silt or sand deposits. Conversely, prostrate rooting species can be disturbed by erosion and appear to be procumbent plants of a nonrooting species. One of the most useful characters, the indumentum on the testa of the seeds, is rarely present in dried specimens because of the lateness of the plants' flowering season. Plants collected in August and September rarely have even immature seeds present, so most herbarium specimens do not display this character. The consequence of these problems is that most accounts of *Sarcocornia* in North America recognize only one species, frequently using the name *Salicornia virginica* Linnaeus for the collective entity. The type specimens of *S. virginica* were collected by John Clayton, presumably from Virginia, which are immature annuals and not flowering. The name *S. virginica* cannot be applied to a species in this genus."

***Salicornia rubra*** A. Nelson [FNA4, HC, HC2]

Bull. Torrey Bot. Club. 26: 122. 1899.

red glasswort saltwort

*Salicornia borealis* S.L. Wolff & Jefferies

H&C Info: *Salicornia rubra* is known only from Okanogan Co. in Washington. FNA4: "*Salicornia rubra* is very similar to the Eurasian species *S. prostrata* Pallas, which occurs in very similar inland habitats. No direct comparison of these two species has been possible and it is not at all clear how they differ from each other."

***Salsola*** [FNA4, HC, HC2]

Sp. Pl. 1: 222. 1753; Gen. Pl. ed. 5, 104. 1754.

Russian thistle

***Salsola tragus*** L. [FNA4, HC2]

Cent. Pl. II. 13. 1756.

Russian thistle, tumbleweed

*Salsola australis* R. Br.

*Salsola iberica* (Sennen & Pau) Botsch. ex Czerepanov

*Salsola kali* L. [FNA4, HC, HC2], misapplied

*Salsola kali* L. var. *tenuifolia* Tausch ex Moq. [VPPNW2]

*Salsola pestifer* A. Nelson

*Salsola kali* L. subsp. *pontica* (Pall.) Mosyakin has been collected in Multnomah Co., Oregon, and may be found in Washington. Recent molecular work may change the nomenclature again (Ryan & Ayers 2000). FNA4: "*Salsola tragus* probably was introduced to South Dakota in 1870 or 1874 in flaxseed imported from Russia (J. C. Beatley 1973c; C. W. Crompton and I. J. Bassett 1985; S. L. Mosyakin 1996). Now this noxious weed occupies almost all of its potential range in North America. It seems, however, to be quite rare in the southeastern part of the United States. *Salsola tragus* has been known in North American and European botanical literature under numerous names (for detailed synonymy see S. L. Mosyakin 1996 and S. Rilke 1999). Judging from the photographs of the Linnaean specimen of *S. tragus* (LINN 315.3), which should be regarded as a lectotype, it is the correct name for the widespread, narrow-leaved, weedy representative of the *S. kali* aggregate (Á. Degen 1936-1938, vol. 2; N. N. Tzvelev 1993; S. L. Mosyakin 1996; S. Rilke 1999). In the present circumscription, *Salsola tragus* is an extremely polymorphic species

consisting of several more or less distinct races (subspecies or segregate species). Several varieties may be recognized within *S. tragus*, many of them are just morphological variants of little or no taxonomic value. Studies using allozymes and DNA-based molecular markers in some North American and Eurasian representatives of *Salsola tragus* indicate that there are at least two cryptic genetically divergent populations (F. J. Ryan and D. R. Ayres 2000). More studies may clarify distribution, origin, and taxonomic status of these infraspecific taxa (or cryptic species). In spite of being a noxious weed, *Salsola tragus* is an additional forage source for livestock in arid rangelands. The mature plant may break off at the stem base to form a tumbleweed."

- \* Beatley, J. C. 1973. Russian-thistle (*Salsola*) species in western United States. *J. Range Management* 26: 225-226.
- \* Crompton, C. W. and I. J. Bassett. 1985. The biology of Canadian weeds. 65. *Salsola pestifer* A. Nels. *Canad. J. Pl. Sci.* 65: 379-388.
- \* Mosyakin, S. L. 1996. A taxonomic synopsis of the genus *Salsola* (Chenopodiaceae) in North America. *Ann. Missouri Bot. Garden* 83: 387-395.
- \* Rilke, S. 1999. Revision der Sektion *Salsola* s.l. der gattung *Salsola* (Chenopodiaceae). *Biblioth. Bot.* 149: 1-190.
- \* Ryan, F. J. and D. R. Ayers. 2000. Molecular markers indicate two cryptic, genetically different populations of Russian thistle (*Salsola tragus*) in California. *Canadian Journal of Botany* 78: 59-67.

### **Spinacia** [FNA4, HC, HC2]

Sp. Pl. 2: 1027. 1753; Gen. Pl. ed. 5, 452. 1754.

#### *Spinacia oleracea* L. [FNA4, HC, HC2]

Sp. Pl. 2: 1027. 1753.

spinach

*Spinacia oleracea* L. var. *inermis* Peterm.

*Spinacia oleracea* L. var. *oleracea*

H&C note it persists in old garden areas (in the key to genera), but give no further details. The cultivated forms are given as synonymy, following FNA. FNA4: :Reports of populations in Canada and inland areas of the United States appear to be from gardens where the plants do not persist without benefit of cultivation. Spinach is an important and widely cultivated crop of unknown origin, though known from the Mediterranean region since ancient times. The plant is prized as a rich source of vitamins, calcium, iron, and antioxidant carotenoids, but, if ingested in excessive amounts, the high concentration of oxalates in the leaves can be toxic by inhibiting the absorption of calcium. The cultivated form named var. *oleracea* has spiny seeds and tends to be more cold hardy than var. *inermis*, the smooth-seeded variety that is more tolerant of warm weather."

### **Suaeda** [FNA4, HC, HC2]

Onomat. Bot. Compl. 8: 797. 1776.

[name conserved]

seablite

#### *Suaeda calceoliformis* (Hook.) Moq. [FNA4, HC2]

Chenop. Monogr. Enum. 128. 1840.

paiuteweed, common seablite, horned seablite, pahute weed

*Chenopodium calceoliformis* Hook.

*Suaeda americana* (Pers.) Fernald

*Suaeda depressa* (Pursh) S. Watson var. *erecta* S. Watson

*Suaeda maritima* (L.) Dumort. [FNA4, HC, HC2], misapplied

*Suaeda maritima* (L.) Dumort. ssp. *maritima*, misapplied

Found in coastal salt marshes and inland. Similar to *Suaeda occidentalis*, differing only in floral bracts and branching pattern. McNeill et al. (1977) discuss the misapplication of the name *Suaeda depressa* for this plant. FNA4: "The name *Suaeda depressa* has been misapplied to this species (J. McNeill et al. 1977). In the northeastern part of its range, *S. calceoliformis* was long known as *S. americana*, but the two were found to be conspecific (I. J. Bassett and C. W. Crompton 1978). *Suaeda calceoliformis* can easily be confused with *S. occidentalis*, with which it is sympatric in the Great Basin; see comments under *S. occidentalis*. Plants of the annual Mexican seepweed, *S. mexicana* (Standley) Standley also are similar to *S. calceoliformis*, but are more or less shiny, yellowish or light brown, and have opposite leaves at the base and alternate ones distally. *Suaeda mexicana* has been reported once (in 1895) from El Paso County, Texas, but no specimens have been located to substantiate the report."

- \* Bassett, I. J. and C. W. Crompton. 1978. The genus Suaeda (Chenopodiaceae) in Canada. Canadian Journal of Botany 56: 581-591.
- \* McNeill, J. I. J. Bassett, and C. W. Crompton. 1977. Suaeda calceoliformis, the correct name for Suaeda depressa auct. Rhodora 79: 133-138.

***Suaeda nigra* (Raf.) J.F. Macbr. [FNA4, HC, HC2]**

Contr. Gray Herb. 56: 50. 1918.

bushy seablite seepweed

*Suaeda fruticosa* (L.) Forssk., misapplied

*Suaeda intermedia* S. Watson [HC]

*Suaeda moquinii* (Torr.) Greene [KZ99]

*Suaeda torreyana* S. Watson [Abrams]

FNA4: "Suaeda nigra is the correct name for the species previously known as Suaeda moquinii. The type specimen was collected in 1820 by Edwin James along the Canadian River in the Texas panhandle. J. Torrey (1827) tentatively identified it as "Chenopodium maritimum L. ?". Rafinesque named it Chenopodium nigrum, long before Torrey's publication of the name Chenopodium moquinii in 1856. C. O. Hopkins and W. H. Blackwell (1977) suggested that the name Chenopodium nigrum was both a nomen nudum and a superfluous name. But the publication of that name included a clear reference to Torrey's 1832 publication, which means that the name was not a nomen nudum, and the specimen belonged to a new species, which means that the name was not superfluous. "Suaeda fruticosa" with the incorrect author combination (Linnaeus) Forsskål has been misapplied to this species (H. J. Schenk and W. R. Ferren Jr. 2001). Suaeda nigra exhibits much phenotypic plasticity, as well as genetic variability, and is wide ranging. This combination has resulted in the naming of many variants that often reflect a response to localized or regional habitat conditions such as degree of wetness, salinity, or freezing temperatures (C. O. Hopkins and W. H. Blackwell 1977). In California and adjacent states, for example, glabrous plants (*S. torreyana* var. *torreyana*) and pubescent plants (*S. torreyana* var. *ramosissima*) occur throughout the distribution of the species. In California it is coastal but not estuarine in the San Francisco Bay area and in Orange and San Diego counties. Plants of northern latitudes or higher elevations that are prone to freezing tend to have annual stems from a woody base. Plants that occur in more southern or milder conditions are usually shrubs with perennial stems. Plants in seasonally flooded wetlands tend to be facultative annuals. In the western and northern part of the range, most plants of Suaeda nigra are glabrous or sparsely pubescent and more or less long leaved."

\* Bassett, I. J. and C. W. Crompton. 1978. The genus Suaeda (Chenopodiaceae) in Canada. Canadian Journal of Botany 56: 581-591.

\* Schenk, H. J. and W. R. Ferren Jr. 2001. On the sectional nomenclature of Suaeda (Chenopodiaceae). Taxon 50: 857-873.

***Suaeda occidentalis* (S. Watson) S. Watson [FNA4, HC, HC2]**

Proc. Amer. Acad. Arts. 9: 90. 1874.

slender seablite, western seepweed

*Schoberia occidentalis* S. Watson

Found in saline situations east of the Cascades. FNA4: "This species is easily confused with Suaeda calceoliformis, which occurs throughout its range. There are virtually no differences in floral characters. Bracts of *S. occidentalis* often appear thin-margined at the base in dried specimens but not in fresh material, whereas bracts of *S. calceoliformis* have visible membranous margins in both. Differences in bract and branching characteristics are usually distinct in fresh specimens. Larger specimens of *S. occidentalis* are usually branched throughout, with the spreading branches resulting in a more-or-less spherical shape of the plant. The mostly ascending branches of the more-erect *S. calceoliformis* tend to be concentrated in the upper half of the main stems, with primary branches sometimes arising from the base, and therefore creating a candelabrum shape of the plant."

\* Hopkins, C. O. and W. H. Blackwell. 1977. Synopsis of Suaeda (Chenopodiaceae) in North America. Sida 7: 147-173.

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## Anacardiaceae [HC, HC2] Sumac Family

**Synonyms:** (none)

**References:** (none)

**Rhus** [HC, HC2]

sumac  
(see also *Toxicodendron*)

**Rhus glabra** L. [HC, HC2]

Sp. Pl. 1: 265.  
smooth sumac

**Rhus typhina** L. [Flora of Virginia, HC2]

Cent. Pl. II 14.  
staghorn sumac

Easily distinguished from *Rhus glabra* by the abundance of pubescence on stems and petioles.

**Toxicodendron** [HC2]

poison ivy, poison oak

**Toxicodendron diversilobum** (Torr. & A. Gray) Greene [HC2, IFBC]

Leaf. Bot. Observ. Crit. 1(9): 119.  
Pacific poison-oak

*Rhus diversiloba* Torr. & A. Gray [HC]  
*Toxicodendron radicans* (L.) Kuntze ssp. *diversilobum* (Torr. & A. Gray) Thorne

**Toxicodendron radicans** (L.) Kuntze [HC2]

western poison ivy

*Rhus radicans* L. [HC]

var. **rydbergii** (Small ex Rydb.) Erskine [Draft FNA, HC2]

poison-ivy, western poison-ivy

*Rhus radicans* L. var. *rydbergii* (Small ex Rydb.) Rehder  
*Rhus rydbergii* (Small ex Rydb.) Greene  
*Rhus toxicodendron* L. var. *vulgaris* Michx.  
*Toxicodendron radicans* (L.) Kuntze ssp. *radicans*, misapplied  
*Toxicodendron rydbergii* (Small ex Rydb.) Greene [IFBC]

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## Apiaceae [HC2] Carrot Family

**Synonyms:**

Umbelliferae [HC]

All accepted taxon by the sources are noted as [FNA3][H&C], added synonyms to KZ list are indicated by [VPBC1+][JPM+]; KZ synonyms and accepted taxon are not noted except when the accepted KZ name is not used as the taxon. Additional references include Systematic Botany Monographs Vol. 4, Systematics of Tuberous Lomatiums, 1984, Mark A. Schlessman, cited as [SBM4]

**References:**

\* <b>SBM4</b> = Schlessman, M.A. 1984. Systematics of tuberous Lomatium (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

**Aegopodium** [HC2]

**Aegopodium podagraria** L. [HC2, VPBC1]

bishop's goutweed

*Aegopodium podagraria* L. var. *variegatum* L.H. Bailey

Not included in H&C. Naturalization in WA needs to be verified

**Anethum** [HC2]

*Anethum graveolens* L. [HC2, VPBC1]

Sp. Pl. 1: 263.

dill

Not included in H&C. Known from a few locations in Washington, where likely escaped from cultivation.

**Angelica** [HC, HC2]

angelica

*Angelica arguta* Nutt. [HC, HC2, IMF3, VPBC1]

Lyall's angelica, sharptooth angelica

*Angelica lyallii* S. Watson

*Angelica piperi*

*Angelica canbyi* J.M. Coult. & Rose [HC, HC2]

Canby's angelica

*Angelica genuflexa* Nutt. [HC, HC2, VPBC1]

kneeling angelica

*Angelica hendersonii* J.M. Coult. & Rose [HC, HC2]

Henderson's angelica, woolly angelica

*Angelica tomentosa* S. Watson var. *hendersonii* (J.M. Coult. & Rose) Di Tomaso

*Angelica lucida* L. [HC, HC2, VPBC1]

seacoast angelica, sea-watch

*Coelopleurum actaeifolium* (Michx.) J.M. Coult. & Rose

*Coelopleurum gmelinii* (DC.) Ledeb.

*Coelopleurum longipes*

*Coelopleurum lucida* L.

*Coelopleurum lucidum* (L.) Fernald

*Coelopleurum lucidum* (L.) Fernald ssp. *gmelinii* (DC.) Á. Löve & D. Löve

*Coelopleurum maritimum*

**Anthriscus** [HC, HC2]

anthriscus, chervil

*Anthriscus caucalis* M. Bieb. [HC2, VPBC1]

burr chervil

*Anthriscus neglecta* Boiss. & Reut. var. *scandix* (Scop.) Hyl.

*Anthriscus scandicina* Mansf. [HC]

*Anthriscus vulgaris*

*Scandix anthriscus*

*Anthriscus cerefolium* (L.) Hoffm. [HC2]

*Anthriscus sylvestris* (L.) Hoffm. [HC, HC2]

wild chervil

*Chaerophyllum sylvestre* L.

**Apium** [HC2]

celery

*Apium graveolens* L. [HC2]

var. *dulce* (Mill.) DC. [HC2]

*Celeri graveolens* (L.) Britton

Not included in H&C. Naturalization in WA needs to be verified

*Apium prostratum* Labill.

prostrate marshwort

Not included in H&C. Naturalization in WA needs to be verified

**Berula** [HC, HC2]

berula, water parsnip

**Berula incisa** (Torr.) G.N. Jones [HC2]

stalky berula, cut-leaf-water-parsnip

*Berula erecta* (Huds.) Coville var. *incisa* (Torr.) Cronquist [HC, IMF3, VPBC1]

*Berula pusilla* Fernald

*Berula pusillum*

*Sium erectum* Huds. [IMF]

*Sium incisum* Torr. [VPBC, VPBC]

*Sium pusillum* Nutt.

**Carum** [HC, HC2]

**Carum carvi** L. [HC, HC2, VPBC1]

Sp. Pl. 1: 263.

caraway

**Chaerophyllum** [HC2]

chervil

**Chaerophyllum temulum** L. [HC2]

Sp. Pl. 1: 258.

rough chervil

**Cicuta** [HC, HC2]

water-hemlock

**Cicuta bulbifera** L. [HC, HC2, VPBC1]

bulblet-bearing water-hemlock, bulbous water-hemlock

**Cicuta douglasii** (DC.) J.M. Coult. & Rose [HC, HC2, VPBC1]

Douglas' water-hemlock, western water-hemlock

*Cicuta maculata* L. var. *californica* (A. Gray) B. Boivin

**Cicuta maculata** L. [HC2]

spotted water-hemlock

var. **angustifolia** Hook. [HC2, JPM]

spotted cowbane

*Cicuta occidentalis* Greene

Not included in H&C.

var. **maculata** [VPBC1]

Pacific hemlock-parsley

(see also *Cicuta maculata* var. *angustifolia*)

*Cicuta curtissii* J.M. Coult. & Rose

*Cicuta maculata* L. var. *curtissii* (J.M. Coult. & Rose) Fernald

*Cicuta mexicana* J.M. Coult. & Rose

Not included in H&C. Occurrence in WA needs to be verified.

**Conioselinum** [HC, HC2]

hemlock-parsley

**Conioselinum pacificum** (S. Watson) J.M. Coult. & Rose [HC, HC2, JPM, VPBC1]

Pacific hemlock-parsley

*Conioselinum chinense* (L.) Britton, Sterns & Poggenb. var. *pacificum* (S. Watson) B. Boivin

*Conioselinum gmelinii* (Bray) Steud. [KZ99]  
*Selinum pacificum* S. Wats.

**Conium** [HC, HC2]

poison-hemlock

*Conium maculatum* L. [HC, HC2, VPBC1]

poison-hemlock

**Cymopterus** [HC, HC2]

spring parsley

*Rhysopterus* [HC]

***Cymopterus foeniculaceus*** Torr. & A. Gray [HC2]

montane spring parsley

*Cymopterus elrodi*

*Cymopterus terebinthinus* (Hook.) Torr. & A. Gray var. *foeniculaceus* (Nutt. ex Torr. & A. Gray) Cronquist [HC, IMF3]

*Cymopterus thapsoides*

*Pteryxia terebinthina* (Hook.) J.M. Coult. & Rose var. *foeniculacea* (Torr. & A. Gray) Mathias

***Cymopterus terebinthinus*** (Hook.) Torr. & A. Gray [HC, HC2]

turpentine spring parsley

(see also *Cymopterus foeniculaceus*)

*Cymopterus terebinthinus* (Hook.) Torr. & A. Gray var. *terebinthinus* [HC, IMF3]

*Pteryxia terebinthina* (Hook.) Coult. & Rose

*Pteryxia terebinthina* (Hook.) J.M. Coult. & Rose

*Pteryxia terebinthina* (Hook.) J.M. Coult. & Rose var. *terebinthina*

**Daucus** [HC, HC2]

carrot

*Daucus carota* L. [HC, HC2, VPBC1]

Queen Anne's-lace, wild carrot

***Daucus pusillus*** Michx. [HC, HC2, VPBC1]

American wild carrot

*Daucus carota* L. var. *microphyllus*

*Daucus microphyllus*

**Eryngium** [HC, HC2]

coyote-thistle, eryngo

***Eryngium articulatum*** Hook. [HC, HC2]

bee-thistle, beefthistle eryngo

***Eryngium petiolatum*** Hook. [HC, HC2]

Oregon eryngo, rush-leaf eryngo

*Eryngium petiolatum* Hook. var. *juncifolium*

*Eryngium planum* L. [HC, HC2]

blue eryngo

**Foeniculum** [HC, HC2]

fennel

*Foeniculum vulgare* Mill. [HC, HC2, VPBC1]

sweet fennel

*Anethum foeniculum*

*Foeniculum foeniculum* (L.) Karst.

*Foeniculum officinale*

**Glehnia** [HC, HC2]

glehnia

**Glehnia leiocarpa** Mathias [HC, HC2]

American glehnia

*Cymopterus littoralis* A. Gray

*Glehnia littoralis* F. Schmidt ex Miq. ssp. *leiocarpa* (Mathias) Hultén [VPBC1, JPM]

*Glehnia littoralis* F. Schmidt ex Miq. var. *leiocarpa* (Mathias) B. Boivin

**Heracleum** [HC, HC2]

cow-parsnip, hogweed

**Heracleum mantegazzianum** Sommier & Levier [HC2, VPBC1]

giant hogweed

Not included in H&C. Native to Asia. WA State class A noxious weed

**Heracleum maximum** Bartr. [HC2, ILBC1]

American cow-parsnip, cow parsnip

*Heracleum douglasii*

*Heracleum lanatum* Michx. [HC, IMF3, JPM, VPBC1]

*Heracleum sibiricum* L.

*Heracleum sibiricum* L. var. *angustifolium* Jacq.

*Heracleum sphondylium* L. ssp. *montanum* (Schleich. ex Gaudin) Briq.

*Heracleum sphondylium* L. var. *lanatum* (Michx.) Dorn

*Pastinaca lanatum*

**Levisticum** [HC2]

garden lovage

**Levisticum officinale** W.D.J. Koch [HC2]

**Ligusticum** [HC, HC2]

licorice-root, lovage

**Ligusticum apiifolium** (Nutt. ex Torr. & A. Gray) A. Gray [HC, HC2, JPM]

celery-leaf wild lovage

*Cynapium apiifolium*

**Ligusticum canbyi** (J.M. Coult. & Rose) J.M. Coult. & Rose [HC, HC2, VPBC1]

Rev. N. Amer. Umbell., 86.

Canby's wild lovage

*Ligusticum caeruleimontanum* H. St. John

*Ligusticum leibergii* J.M. Coult. & Rose

**Ligusticum grayi** J.M. Coult. & Rose [HC, HC2, IMF3, JPM]

Gray's lovage, sheep wild lovage

*Ligusticum apiifolium* var. *minus* Gray ex Brewer & Wats. [IMF]

*Ligusticum caeruleomontanum*

*Ligusticum cusickii*

*Ligusticum purpureum*

*Ligusticum tenuifolium* var. *dissimilis*

*Pimpinella apidora* var. *nudicaulis*

**Ligusticum tenuifolium** S. Watson [HC, HC2, IMF3]

slender-leaf wild lovage

*Ligusticum filicinum* S. Watson var. *tenuifolium* (S. Watson) Mathias & Constance

*Ligusticum oreganum*

H&C and IMF3 state range to Blue Mts of Oregon. No specimens from WA have been located, and recent FNA treatment does not include WA within the distribution of this species. It is considered excluded from

WA until evidence is located to the contrary.

***Lilaeopsis*** [HC, HC2]

*lilaeopsis*

***Lilaeopsis occidentalis*** J.M. Coult. & Rose [HC, HC2, VPBC1]

western grasswort, western *lilaeopsis*

*Crantziola occidentalis*

*Lilaeopsis lineata* var. *occidentalis*

***Lomatium*** [HC, HC2]

biscuit-root, *lomatium*

*Orogenia* [HC]

***Lomatium ambiguum*** (Nutt.) J.M. Coult. & Rose [HC, HC2, IMF3, VPBC1]

streambank desert-parsley, swale desert-parsley, lacy *lomatium*

*Cogswellia ambigua* (Nutt.) M.E. Jones [IMF]

*Peucedanum ambiguum* (Nutt.) Nutt. ex Torr. & A. Gray

***Lomatium anomalum*** M.E. Jones ex J.M. Coult. & Rose [HC2]

nine-leaf *lomatium*

*Lomatium triternatum* (Pursh) J.M. Coult. & Rose var. *anomalum* (M.E. Jones ex J.M. Coult. & Rose)

Mathias [HC, IMF3]

*Lomatium bicolor* (S. Watson) J.M. Coult. & Rose

***Lomatium bradshawii*** (Rose ex Mathias) Mathias & Constance [HC, HC2]

Bradshaw's desert-parsley

*Leptotaenia bradshawii* Rose ex Mathias

***Lomatium brandegeei*** (J.M. Coult. & Rose) J.F. Macbr. [HC2]

Brandegee's desert-parsley

*Cynomarathrum brandegeei* J.M. Coult. & Rose

*brandegei* (Coult. & Rose) J.F. Macbr. [HC, VPBC1]

***Lomatium brevifolium*** J.M. Coult. & Rose [HC2]

narrowfruit biscuit-root

*Lomatium triternatum* (Pursh) J.M. Coult. & Rose var. *alatum* J.M. Coult. & Rose

*Lomatium triternatum* (Pursh) J.M. Coult. & Rose var. *brevifolium* (J.M. Coult. & Rose) Mathias

*Lomatium triternatum* (Pursh) J.M. Coult. & Rose var. *macrocarpum* (J.M. Coult. & Rose) Mathias [JPM]

Treated by H&C as a synonym of *Lomatium triternatum* (Pursh) Coult. & Rose ssp. *triternatum* var. *triternatum*

***Lomatium canbyi*** (J.M. Coult. & Rose) J.M. Coult. & Rose [HC, HC2, IMF3]

chucklusa, Canby's desert-parsley

*Cogswellia canbyi* (Coult. & Rose) M.E. Jones

*Peucedanum canbyi* J.M. Coult. & Rose

\* **<b>SBM4</b>** = Schlessman, M.A. 1984. Systematics of tuberous *Lomatium* (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

***Lomatium columbianum*** Mathias & Constance [HC, HC2]

Columbia Gorge desert-parsley

*Leptotaenia purpurea*

***Lomatium cous*** (S. Watson) J.M. Coult. & Rose [HC, HC2, IMF3]

cous, cous-root desert-parsley

*Lomatium circumdatum* (S. Watson) J.M. Coult. & Rose

*Lomatium montanum* J.M. Coult. & Rose

***Lomatium cuspidatum*** Mathias & Constance [HC, HC2]

Wenatchee desert-parsley, Wenatchee Mountain lomatium

*Leptotaenia watsoni*

***Lomatium dissectum*** (Nutt.) Mathias & Constance [HC, HC2]

fern-leaved desert parsley

(see also *Lomatium multifidum*)

*Leptotaenia dissecta* Nutt.

*Leptotaenia foliosa* var. *dissecta*

*Lomatium dissectum* (Nutt.) Mathias & Constance var. *dissectum* [HC, VPBC1]

***Lomatium farinosum*** (Geyer ex Hook.) J.M. Coult. & Rose [HC, HC2]

Hamblen's lomatium

*Lomatium farinosum* (Geyer ex Hook.) J.M. Coult. & Rose var. *farinosum*

*Lomatium farinosum* (Geyer ex Hook.) J.M. Coult. & Rose var. *hambleniae* (Mathias & Constance)

Schlessman

*Lomatium hambleniae* Mathias & Constance [HC]

*Peucedanum farinosum* Geyer ex Hook.

\* <b>SBM4</b> = Schlessman, M.A. 1984. Systematics of tuberous *Lomatium* (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

***Lomatium geyeri*** (S. Watson) J.M. Coult. & Rose [HC, HC2, VPBC1]

Geyer's desert-parsley

*Orogenia fusiformis* var. *leibergii*

*Orogenia leibergii*

*Peucedanum evittatum* Coult. & Rose

\* <b>SBM4</b> = Schlessman, M.A. 1984. Systematics of tuberous *Lomatium* (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

***Lomatium gormanii*** (Howell) J.M. Coult. & Rose [HC, HC2, IMF3]

Gorman's desert-parsley, salt and pepper

*Lomatium gormanii* (T.J. Howell) Coult. & Rose f. *purpureum*

*Peucedanum confusum* Piper

See IMF3 for a discussion of this taxon and *L. piperi*

***Lomatium grayi*** (J.M. Coult. & Rose) J.M. Coult. & Rose [HC, HC2, VPBC1]

Gray's lomatium, milfoil lomatium

*Cogswellia grayi* (Coult. & Rose) Coult. & Rose [IMF]

*Cogswellia millefolia* (Wats.) M.E. Jones [IMF]

*Cogswellia millefolia* (Wats.) M.E. Jones var. *depauperata* M.E. Jones [IMF]

*Lomatium grayi* (J.M. Coult. & Rose) J.M. Coult. & Rose var. *grayi* [IMF3]

*Lomatium millefolium* (Wats.) Macbr. [IMF]

*Peucedanum grayi* var. *aberrans* M.E. Jones [IMF]

***Lomatium knokei*** Darrach [HC2]

Darrach, M.E. 2014. Phytoneuron 2014-109: 1?12.

Knoke's biscuit-root

Known only from Kittitas County, WA.

***Lomatium laevigatum*** (Nutt.) J.M. Coult. & Rose [HC, HC2]

slickrock desert-parsley, smooth lomatium

***Lomatium leptocarpum*** (Torr. & A. Gray) J.M. Coult. & Rose [HC, HC2, IMF3]

gumbo-lomatium

*Lomatium ambiguum* (Nutt.) J.M. Coult. & Rose ssp. *leptocarpum* (Torr. & Gray) E. Murray [IMF]

*Lomatium bicolor* (S. Watson) J.M. Coult. & Rose var. *leptocarpum* (Torr. & A. Gray) Schlessman [JPM, IMF]

*Peucedanum bicolor* (S. Wats.) Coult. & Rose var. *gumbonis* M.E. Jones [IMF]

*Peucedanum leptocarpum* Nutt. ex Torr. & Gray [IMF]  
*Peucedanum nuttallii* var. *leptocarpum* (Torr. & Gray) Walp. [IMF]  
*Peucedanum triternatum* var. *leptocarpum* Torr. & Gray [IMF]

\* <b>SBM4</b> = Schlessman, M.A. 1984. Systematics of tuberous Lomatium (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

***Lomatium linearifolia*** (S. Watson) J.F. Smith & Mansfield [HC2]

Great Basin Indian-potato, linear-leaved orogenia

*Orogenia linearifolia* S. Watson [HC, IMF3]  
*Orogenia linearifolia* S. Watson var. *lata* Payson

***Lomatium lithosolamans*** J.F. Sm. & M.A. Feist [HC2]

Phytotaxa 316(1): 96.  
Hoover's tauschia, Hoover's umbrella-wort  
*Tauschia hooveri* Mathias & Constance [HC]

***Lomatium macrocarpum*** (Nutt. ex Torr. & A. Gray) J.M. Coult. & Rose [HC, HC2, IMF3, JPM, VPBC1]

large-fruit desert-parsley, bigseed lomatium

*Cogswellia macrocarpa* (Nutt. ex Torr. & A. Gray) M.E. Jones  
*Ferula macrocarpa* Hook. & Arn.  
*Lomatium flavum*  
*Lomatium macrocarpum* (Nutt. ex Torr. & A. Gray) J.M. Coult. & Rose var. *artemisiarum* Piper  
*Lomatium macrocarpum* (Nutt. ex Torr. & A. Gray) J.M. Coult. & Rose var. *ellipticum* (Torr. & A. Gray) Jeps.  
*Peucedanum macrocarpum* Nutt. ex Torr. & A. Gray

***Lomatium martindalei*** (J.M. Coult. & Rose) J.M. Coult. & Rose [HC, HC2]

Cascade desert-parsley, coast range lomatium

*Lomatium angustatum* (J.M. Coult. & Rose) H. St. John  
*Lomatium angustatum* (J.M. Coult. & Rose) H. St. John var. *flavum* G.N. Jones  
*Lomatium martindalei* (J.M. Coult. & Rose) J.M. Coult. & Rose var. *angustatum* (J.M. Coult. & Rose) J.M. Coult. & Rose [HC]  
*Lomatium martindalei* (J.M. Coult. & Rose) J.M. Coult. & Rose var. *flavum* (G.N. Jones) Cronquist [HC]  
*Lomatium martindalei* (J.M. Coult. & Rose) J.M. Coult. & Rose var. *martindalei* [HC, JPM, VPBC1]

***Lomatium multifidum*** (Nutt.) R.P. McNeill & Darrach [HC2]

fern-leaved desert parsley

*Leptotaenia multifida* Nutt.  
*Lomatium dissectum* (Nutt.) Mathias & Constance var. *eatonii* (J.M. Coult. & Rose) Cronquist [HC]  
*Lomatium dissectum* (Nutt.) Mathias & Constance var. *multifidum* (Nutt.) Mathias & Constance [HC, VPBC1]

***Lomatium nudicaule*** (Pursh) J.M. Coult. & Rose [HC, HC2, IMF3, JPM, VPBC1]

Indian-consumption-plant, barestem lomatium, pestle parsnip

*Cogswellia nudicaulis* (Pursh) M.E. Jones  
*Lomatium platyphyllum*

***Lomatium piperi*** J.M. Coult. & Rose [HC2, JPM2]

Contributions from the United States National Herbarium 7(1): 211. .  
Piper's lomatium

*Cogswellia piperi* (Coult. & Rose) M.E. Jones

Treated as synonymous with *L. gormanii* by 1973 Flora of the Pacific Northwest. See IMF3 for a discussion of this taxon and *L. gormanii*.

\* <b>SBM4</b> = Schlessman, M.A. 1984. Systematics of tuberous Lomatium (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

***Lomatium quintuplex*** Schlessman & Constance [HC2]

Umptanum desert-parsley

Not included in H&C; newly described species in 1984.

\* <b>SBM4</b> = Schlessman, M.A. 1984. Systematics of tuberous Lomatium (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

***Lomatium rollinsii*** Mathias & Constance [HC, HC2]

Rollins' desert-parsley

\* <b>SBM4</b> = Schlessman, M.A. 1984. Systematics of tuberous Lomatium (Umbelliferae). Systematic Botany Monographs Volume 4. American Society of Plant Taxonomists. 55 pp.

***Lomatium salmoniflorum*** (J.M. Coult. & Rose) Mathias & Constance [HC, HC2]

Salmon River desert-parsley

***Lomatium sandbergii*** (J.M. Coult. & Rose) J.M. Coult. & Rose [HC, HC2]

Sandberg's biscuit-root

***Lomatium serpentinum*** (M.E. Jones) Mathias [HC, HC2]

Snake Canyon desert-parsley

*Cogswellia fragrans*

***Lomatium simplex*** (Nutt.) J.F. Macbr. [HC2]

nine-leaf biscuit-root

*Lomatium platycarpum* (Torr.) J.M. Coult. & Rose

*Lomatium simplex* (Nutt.) J.F. Macbr. var. *leptophyllum* (Hook.) Mathias

*Lomatium simplex* (Nutt.) J.F. Macbr. var. *simplex*

*Lomatium triternatum* (Pursh) J.M. Coult. & Rose ssp. *platycarpum* (Torr.) Cronquist [HC]

H&C treats this taxon as *Lomatium triternatum* ssp. *platycarpum*

***Lomatium suksdorfii*** (S. Watson) J.M. Coult. & Rose [HC, HC2]

Suksdorf's desert-parsley

*Cogswellia suksdorfii*

***Lomatium tamanitchii*** Darrach & Thie [HC2]

Madroño 57(3):203-208.

ribseed biscuit-root

\* Madroño 57(3):203-208.

***Lomatium tenuissimum*** (Geyer ex Hook.) Feist & G.M. Plunkett [HC2]

Leiberg's umbrella-wort

*Leibergia orogenioides* J.M. Coult. & Rose

*Lomatium orogenioides* (J.M. Coult. & Rose) Mathias [HC]

*Tauschia tenuissima* (Geyer ex Hook.) Mathias & Constance [WNHP]

Historically known from Spokane County- possibly extirpated in WA

***Lomatium thompsonii*** (Mathias) Cronquist [HC, HC2]

Thompson's desert-parsley

*Lomatium suksdorfii* (S. Watson) J.M. Coult. & Rose var. *thompsonii* Mathias

***Lomatium triternatum*** (Pursh) J.M. Coult. & Rose [HC, HC2]

triternate biscuit-root

(see also *Lomatium anomalum*, *Lomatium brevifolium*, *Lomatium simplex*)

*Lomatium triternatum* (Pursh) Coult. & Rose ssp. *triternatum* [HC, VPBC1]

*Lomatium triternatum* (Pursh) J.M. Coult. & Rose var. *triternatum* [HC, IMF3]

H&C includes *Lomatium triternatum* var. *macrocarpum*, and var. *brevifolium* with this taxon

***Lomatium tuberosum*** Hoover [HC, HC2]

potato desert-parsley, Hoover's lomatium

***Lomatium utriculatum*** (Nutt. ex Torr. & A. Gray) J.M. Coult. & Rose [HC, HC2, JPM, VPBC1]

bladder desert-parsley, spring gold, fine-leaved desert parsley

*Lomatium vaseyi* (J.M. Coult. & Rose) J.M. Coult. & Rose

***Lomatium watsonii*** (J.M. Coult. & Rose) J.M. Coult. & Rose [HC, HC2]

Watson's desert-parsley

*Lomatium frenchii* Mathias & Constance

***Myrrhis*** [HC2]

anise

*Myrrhis odorata* (L.) Scop. [HC2]

***Oenanthe*** [HC, HC2]

oenanthe, water-parsley

***Oenanthe sarmentosa*** C. Presl ex DC. [HC, HC2, JPM, VPBC1]

Pacific water-dropwort, American water-parsley

***Osmorhiza*** [HC, HC2]

sweet-cicely, sweet-root

***Osmorhiza berteroi*** DC. [HC2, JPM2]

Chilean sweet-cicely, mountain sweet-cicely

*Osmorhiza brevipes* (J.M. Coult. & Rose) Suksd.

*Osmorhiza chilensis* Hook. & Arn. [HC, IMF3, JPM, VPBC1]

*Osmorhiza divaricata* (Britton) Suksd.

*Osmorhiza intermedia*

*Osmorhiza nuda* Torr.

*Osmorhiza nuda* Torr. var. *brevipes* (Coult. & Rose) Jeps [IMF]

*Osmorhiza nuda* Torr. var. *divaricata* (Britton) Jeps

*Scandix divaricata* (Britton) Koso-Pol. [IMF]

*Washingtonia brevipes* Coult. & Rose [IMF]

*Washingtonia divaricata* Britton

*Washingtonia intermedia*

***Osmorhiza depauperata*** Phil. [HC, HC2, IMF3, JPM, VPBC1]

blunt-fruit sweet-cicely

*Osmorhiza chilensis* Hook. & Arn. var. *cupressimontana* (B. Boivin) B. Boivin

*Osmorhiza obtusa* (J.M. Coult. & Rose) Fernald

*Washingtonia obtusa* J.M. Coult. & Rose

***Osmorhiza occidentalis*** (Nutt. ex Torr. & A. Gray) Torr. [HC, HC2, JPM, VPBC1]

Sierran sweet-cicely, western sweet-cicely

*Glycosma ambiguum*

*Glycosma occidentalis* Nutt. ex Torr. & A. Gray

*Osmorhiza ambigua* (A. Gray) J.M. Coult. & Rose

*Osmorhiza ambiguum*

***Osmorhiza purpurea*** (J.M. Coult. & Rose) Suksd. [HC, HC2, JPM, VPBC1]

purple sweet-cicely

*Osmorhiza chilensis* Hook. & Arn. var. *purpurea* (J.M. Coult. & Rose) B. Boivin

*Osmorhiza leibergii* (J.M. Coult. & Rose) Blank.

*Washingtonia leibergii*

*Washingtonia purpurea* J.M. Coult. & Rose

***Pastinaca*** [HC, HC2]

parsnip

***Pastinaca sativa*** L. [HC, HC2, VPBC1]

common parsnip, wild parsnip

*Pastinaca sativa* L. var. *pratensis* Pers.

**Perideridia** [HC, HC2]

false-caraway, yampah

**Perideridia bolanderi** (A. Gray) A. Nelson & J.F. Macbr. [HC, HC2]

Bolander's yampah

*Eulophus bolanderi*

*Podosciadium bolanderi*

ssp. **bolanderi** [HC2, IMF3, JPM]

JPM, H&C and IMF3 state range to Oregon- occurrence in WA needs to be verified

**Perideridia montana** (Blank.) Dorn [HC2, IMF3]

Gairdner's yampah

*Atenia montana* (Blank.) Rydb.

*Carum garrettii* A. Nelson ex Coult. & Rose [IMF]

*Carum montanum* Blank.

*Perideridia gairdneri* (Hook. & Arn.) Mathias ssp. *borealis* T.I. Chuang & Constance [HC, JPM2]

*Perideridia gairdneri* (Hook. & Arn.) Mathias var. *montana* (Blank.) B. Boivin [IMF]

See IMF3 for a discussion of this taxon

**Perideridia oregana** (S. Watson) Mathias [HC, HC2, JPM]

squaw-potato

*Atenia oregana*

*Carum oregana*

**Petroselinum**

parsley

*Petroselinum crispum* (Mill.) Fuss

**Pimpinella** [HC, HC2]

pimpinella

*Pimpinella saxifraga* L. [HC, HC2]

burnet-saxifrage

ssp. *nigra* (Mill.) Gaudin [HC, HC2]

burnet-saxifrage

**Sanicula** [HC, HC2]

sanicle

**Sanicula arctopoides** Hook. & Arn. [HC, HC2, VPBC1]

footsteps-of-spring, bear's-foot sanicle

*Sanicula crassicaulis* Poepp. ex DC. var. *howellii* (J.M. Coult. & Rose) Mathias

*Sanicula xhowellii* (J.M. Coult. & Rose) Shan & Constance

**Sanicula bipinnatifida** Douglas ex Hook. [HC, HC2, VPBC1]

purple black-snakeroot, purple sanicle

*Sanicula bipinnatifida* Douglas ex Hook. var. *flava* Jeps.

**Sanicula crassicaulis** Poepp. ex DC. [HC, HC2]

Pacific sanicle

var. **crassicaulis** [HC, HC2, VPBC1]

Pacific sanicle

*Sanicula menziesii*

var. **tripartita** (Suksd.) H. Wolff [HC, HC2]

*Sanicula tripartita* Suksd.

***Sanicula graveolens*** Poepp. ex DC. [HC, HC2, VPBC1]

Sierran black-snakeroot

*Sanicula apiifolia*

*Sanicula graveolens* Poepp. ex DC. var. *septentrionalis* (Greene) H. St. John

*Sanicula nevadensis* S. Watson

*Sanicula nevadensis* S. Watson var. *septentrionalis* (Greene) Mathias

*Sanicula septentrionalis* Greene

***Sanicula marilandica*** L. [HC, HC2, VPBC1]

Sp. Pl. 1: 235

Maryland black-snakeroot

*Caucalis mirilandica*

*Sanicula canadensis* var. *marilandica*

*Sanicula marilandica* L. var. *petiolulata* Fernald

***Scandix*** [HC, HC2]

scandix

***Scandix pecten-veneris*** L. [HC, HC2, VPBC1]

shepherd's-needle, Venus'-comb

Neither WTU nor WS has a specimen more recent than collections by Suksdorf. Until contemporary collections are made from naturalized populations here in WA, this species is considered excluded from the flora.

***Sium*** [HC, HC2]

water-parsnip

***Sium suave*** Walter [HC, HC2, VPBC1]

water parsnip, hemlock water-parsnip

*Sium cicutifolium* Schrank

*Sium floridanum* Small

*Sium suave* Walter var. *floridanum* (Small) C.F. Reed

***Tauschia*** [HC, HC2]

tauschia

(see also *Lomatium*)

***Tauschia stricklandii*** (J.M. Coult. & Rose) Mathias & Constance [HC, HC2]

Strickland's tauschia, Strickland's umbrella-wort

*Hesperogenia stricklandii* J.M. Coult. & Rose

***Torilis*** [HC, HC2]

hedge parsley

***Torilis arvensis*** (Huds.) Link [HC, HC2, IFBC]

Enum. Hort. Berol. Alt. 1: 265.

field hedge-parsley

WA State class B noxious weed.

ssp. *arvensis* [HC2]

***Torilis japonica*** (Houtt.) DC. [HC, HC2, IFBC]

Prodr. 4: 219.

***Turgenia*** [HC2]

***Turgenia latifolia*** (L.) Hoffm. [HC2]

*Caucalis latifolia* L. [HC]

***Yabea*** [HC2]

California hedge-parsley

***Yabea microcarpa*** (Hook. & Arn.) Koso-Pol. [HC2, IMF3, JPM]

California hedge-parsley, false hedge-parsley

*Caucalis microcarpa* Hook. & Arn. [HC]

***Zizia*** [HC, HC2]

zizia

***Zizia aptera*** (A. Gray) Fernald [HC, HC2, KZ99]

heart-leaved Alexanders

var. ***occidentalis*** Fernald [HC, HC2, IMF3, VPBC1]

heart-leaved Alexanders

*Zizia cordata* W.D.J. Koch ex DC.

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## Apocynaceae [HC, HC2] Dogbane Family

### Synonyms:

Asclepiadaceae [HC] (Milkweed Family)

References: (none)

***Apocynum*** [HC, HC2]

dogbane

***Apocynum androsaemifolium*** L. [HC, HC2]

spreading dogbane

*Apocynum ambigens* Greene

*Apocynum androsaemifolium* L. ssp. *pumilum* (A. Gray) B. Boivin

*Apocynum androsaemifolium* L. var. *androsaemifolium* [HC]

*Apocynum androsaemifolium* L. var. *pumilum* A. Gray [HC]

***Apocynum cannabinum*** L. [HC, HC2]

clasping-leaved dogbane, Indian hemp, Indian-hemp

*Apocynum cannabinum* L. var. *glaberrimum* A. DC. [HC]

*Apocynum cannabinum* L. var. *suksdorfii* (Greene) Bég. & Beloserky [HC]

*Apocynum sibiricum* Jacq. [HC]

*Apocynum sibiricum* Jacq. var. *salignum* (Greene) Fernald [HC]

***Apocynum xfloribundum*** Greene [HC2, IMF]

*Erythea* 1(7): 151.

western dogbane

*Apocynum medium* Greene [HC, KZ99]

***Asclepias*** [HC, HC2]

milkweed

***Asclepias cryptoceras*** S. Watson [HC, HC2]

Botany Fortieth Parallel 283, pl. 28, f. 1-4.

pallid milkweed

*Asclepias cryptoceras* S. Watson ssp. *davisii* (Woodson) Woodson [KZ99]

*Asclepias cryptoceras* S. Watson var. *davisii* (Woodson) W.H. Baker

*Asclepias davisii* Woodson

***Asclepias fascicularis*** Decne. [HC, HC2]

Prodr. 8: 569.

narrow-leaf milkweed

*Asclepias incarnata* L. [Draft FNA]

Sp. Pl. 1: 215.

swamp milkweed

Recently (2017) documented from Okanogan County.

*Asclepias speciosa* Torr. [HC, HC2]

Ann. Lyceum Nat. Hist. New York 2: 218-219.

showy milkweed

*Asclepias giffordii* Eastw.

**Vinca** [HC, HC2]

periwinkle

*Vinca major* L. [HC, HC2]

greater periwinkle

*Vinca minor* L. [HC2]

Sp. Pl. 1: 209.

lesser periwinkle

Not in H&C; reported by AJ; equally common as *V. major*.

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## Aquifoliaceae [HC2] Holly Family

**Synonyms:** (none)

**References:** (none)

**Ilex** [HC2]

holly

*Ilex aquifolium* L. [HC2, IFBC]

Sp. Pl. 1: 125.

English holly

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## Araliaceae [HC, HC2] Ginseng Family

**Synonyms:** (none)

**References:** (none)

**Aralia** [HC, HC2]

spikenard

*Aralia nudicaulis* L. [HC, HC2]

wild sarsaparilla

*Aralia nudicaulis* L. var. *elongata* Nash

*Aralia nudicaulis* L. var. *prolifera* Apgar

**Hedera** [HC, HC2]

ivy

*Hedera colchica* (K. Koch) K. Koch [HC2]

*Hedera helix* L. [HC, HC2]

common ivy, English ivy  
(see also *Hedera hibernica*)

*Hedera helix* L. ssp. *helix* [Stace 1997]

The classification of *Hedera* is disputed, here we follow the taxonomy of Stace (1997). A weed in western Washington, but not as abundant as subsp. *hibernica* (Murai 1999; Jacobson 2001).

- \* <b>AJ</b> = Jacobson, A. L. 2001. Wild Plants of Greater Seattle. Publ. by the author, Seattle. 494 pp.
- \* Murai, M. 1999. Understanding the invasion of Pacific Northwest forests by English ivy (*Hedera* spp., Araliaceae). Unpublished M. S. thesis, College of Forest Resources, University of Washington, Seattle.
- \* <b>Stace 1997</b> = Stace, C. 1997. New Flora of the British Isles. Second Edition. Cambridge University Press, Cambridge, UK. 1130 p.

*Hedera hibernica* (G. Kirchn.) Bean [HC2]

Atlantic ivy

*Hedera helix* L. ssp. *hibernica* (G. Kirchn.) D.C. McClint. [Stace 1997]

The taxonomy of *Hedera* is disputed, here we follow the taxonomy of Stace (1997). The subspecies are distinguished by the aspect and color of their stellate hairs, and to a lesser degree by the leaf lobing of sterile shoots. An abundant weed in western Washington (Murai 1999; Jacobson 2001). In the horticultural trade generally called CV 'Hibernica' or simply (and incorrectly) English ivy.

- \* <b>AJ</b> = Jacobson, A. L. 2001. Wild Plants of Greater Seattle. Publ. by the author, Seattle. 494 pp.
- \* Murai, M. 1999. Understanding the invasion of Pacific Northwest forests by English ivy (*Hedera* spp., Araliaceae). Unpublished M. S. thesis, College of Forest Resources, University of Washington, Seattle.
- \* <b>Stace 1997</b> = Stace, C. 1997. New Flora of the British Isles. Second Edition. Cambridge University Press, Cambridge, UK. 1130 p.

*Hydrocotyle* [HC, HC2]

marsh-pennywort, water-pennywort

*Hydrocotyle ranunculoides* L. f. [HC, HC2, VPBC1]

Suppl. Pl. 177. [1782].

floating marsh-pennywort

*Hydrocotyle cymbalarifolia* Muhl.

Formerly placed in Apiaceae.

*Oplopanax* [HC, HC2]

*Oplopanax horridum* (Sm.) Miq. [HC2]

Ann. Mus. Bot. Lugduno-Batavum 1: 16.

devil's club, devil's-club

*Echinopanax horridum* (Sm.) Dcne. & Planch

*Echinopanax horridum* (Sm.) Decne. & Planch. ex Harms [KZ99]

*Fatsia horridum* (Sm.) Benth & Hook. f. ex Brewer & S. Watson

*Oplopanax horridum* (Sm.) Miq. [HC]

*Panax horridum* (Sm.)

*Ricinophyllum horridum* Nelson & Macbr.

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## Aristolochiaceae [FNA3, HC, HC2] Birthwort Family

**Synonyms:** (none)

**References:** (none)

*Asarum* [FNA3, HC, HC2]

Sp. Pl. 1: 442. 1753; Gen. Pl. ed. 5, 201, 1754.

wild ginger

***Asarum caudatum* Lindl. [FNA3, HC, HC2]**

Edwards's Bot. Reg. 17: footnote after plate 1399. 1831.  
wild ginger

*Asarum caudatum* Lindl. var. *caudatum* [KZ99]

FNA3: "In most populations of *Asarum caudatum*, the distal portion of the sepal is spreading or weakly reflexed and 30-75 mm. A single population south of Mt. Shasta, California, has the distal sepals strongly reflexed and unusually short, often as little as 1.1 cm. Flowers of these plants superficially resemble those of *A. lemmonii*; they differ in being horizontal, not descending as in *A. lemmonii*, and in the filiform-attenuate sepals. Native Americans used *Asarum caudatum* medicinally to treat headaches, intestinal pain, knee pain, indigestion, boils, tuberculosis, and colic, and as a general tonic (D. E. Moerman 1986)."

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## Asclepiadaceae (see Apocynaceae)

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## Asteraceae [FNA19, HC2] Aster Family

### Synonyms:

Compositae [HC]

Many taxonomic and nomenclatural changes have occurred within Asteraceae since the publication of Hitchcock and Cronquist (1973). The Flora of North America project (FNA) published the Asteraceae volumes in 2007, and that has served as the primary literature resource for the taxonomy and nomenclature provided here. Some of the introduced taxa in Washington belonging to this family are not included in the FNA volumes. Many of these can be found in Stace's New Flora of the British Isles (1997). Ken Chambers and Scott Sundberg provided a treatment of the Asteraceae for the Oregon Flora Project (OFP), and some of their taxonomic decisions are followed here rather than what is provided in FNA.

### References:

\* Barkley, T. M. 1999. The segregates of *Senecio*, s.l., and *Cacalia*, s.l., in the Flora of North America north of Mexico. *Sida* 18: 661-672.

### ***Achillea* [FNA19, HC, HC2]**

Sp. Pl. 2: 896. 1753; Gen. Pl. ed. 5, 382. 1754.  
yarrow

#### ***Achillea millefolium* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 899. 1753.  
milfoil, yarrow

*Achillea borealis* Bong.

*Achillea lanulosa* Nutt. var. *eradiata* (Piper) M. Peck

*Achillea lanulosa* Nutt. var. *lanulosa*

*Achillea millefolium* L. ssp. *lanulosa* (Nutt.) Piper [HC]

*Achillea millefolium* L. var. *alpicola* (Rydb.) Garrett [HC]

*Achillea millefolium* L. var. *borealis* (Bong.) Farw.

*Achillea millefolium* L. var. *californica* (Pollard) Jeps. [HC]

*Achillea millefolium* L. var. *lanulosa* (Nutt.) Piper [HC]

*Achillea millefolium* L. var. *litoralis* Ehrendorfer ex Nobs

*Achillea millefolium* L. var. *millefolium*

*Achillea millefolium* L. var. *occidentalis* DC.

*Achillea millefolium* L. var. *pacifica* (Rydb.) G.N. Jones

The varietal taxonomy is complicated by polyploids, ecotypes and ecoclines, here we follow Stace (1997) and Chambers and Sundberg (2000) in not recognizing the numerous intergrading morphologies

*Achillea ptarmica* L. [FNA19, HC2]

Sp. Pl. 2: 898. 1753.  
pearl yarrow

FNA19 lists this species as occurring in WA. No voucher, reported by R. Old in Kz99. FNA19: "Achillea ptarmica is naturalized from Eurasia. "Double-flowered" plants originated as cultivars; apparently, they persist outside of cultivation."

*Adenocaulon* [FNA19, HC, HC2]

Bot. Misc. 1: 19, plate 15. 1829.  
pathfinder, trail plant

*Adenocaulon bicolor* Hook. [FNA19, HC, HC2]

Bot. Misc. 1: 19, plate 15. 1829.  
pathfinder, trailplant

*Ageratina* [FNA21, HC2]

Hist. Nat. Vég. 10: 286. 1841.  
snakeroot

*Ageratina occidentalis* (Hook.) R.M. King & H. Rob. [FNA21, HC2]

Phytologia. 19: 224. 1970.  
western boneset, western snakeroot

*Eupatorium occidentale* Hook. [HC]

*Agoseris* [FNA19, HC, HC2]

Fl. Ludov. 58. 1817.  
false-dandelion, mountain-dandelion

*Agoseris xagrestis* Osterh. [HC2]

field agoseris

*Agoseris glauca* (Pursh) Raf. var. *agrestis* (Osterh.) Q. Jones ex Cronquist [HC]

*Agoseris apargioides* (Less.) Greene [FNA19, HC, HC2]

Pittonia. 2: 177. 1891.  
seaside agoseris

var. *maritima* (E. Sheldon) G.I. Baird [FNA19, HC, HC2]

Sida. 21: 716. 2004.  
seaside agoseris

*Agoseris apargioides* (Less.) Greene ssp. *maritima* (E. Sheldon) Q. Jones  
*Agoseris maritima* E. Sheldon

*Agoseris aurantiaca* (Hook.) Greene [FNA19, HC, HC2]

Pittonia. 2: 177. 1891.  
orange agoseris

var. *aurantiaca* [FNA19, HC, HC2]

orange agoseris, slender agoseris

*Agoseris angustissima* Greene

*Agoseris arachnoidea* Rydb.

*Agoseris aurantiaca* (Hook.) Greene ssp. *aurantiaca*

*Agoseris gracilens* (A. Gray) Greene

*Agoseris greenei* (A. Gray) Rydb.

*Agoseris howellii* Greene

*Agoseris nana* Rydb.

*Agoseris prionophylla* Greene

*Agoseris subalpina* G.N. Jones

*Agoseris vulcanica* Greene

FNA19: "Variety *aurantiaca* is widespread in the western cordillera and is disjunct in Quebec. Two morphologic trends occur within this variety. Plants of wetter habitats represent the typical var.

aurantiaca; those of drier habitats resemble what past authors have called *Agoseris gracilens* (including *A. gracilens* var. *greenei*). There is a weak geographic trend to this variation, with the *aurantiaca* phase occurring mostly along the Rocky Mountains axis and the *gracilens* phase mostly along the Cascade Mountains-Sierra Nevada axis. In their extremes they appear distinct, but their intergradation is so complete that separation becomes arbitrary. Putative hybrids between var. *aurantiaca* and *A. glauca*, *A. grandiflora*, *A. monticola*, and *A. parviflora* have been collected. Corolla color in var. *aurantiaca* is variable but most commonly orange. Pink-flowered forms occur sporadically. They have been recognized as *Agoseris lackschewitzii*. Recognition of pink forms is unmerited; if it were, the older name *A. carnea* would have priority."

var. ***carnea*** (Rydb.) P. Lesica [HC2]

Journal of Botanical Research Institute of Texas 6(1): 25-27.  
pink agoseris

*Agoseris lackschewitzii* Douglas M. Hend. & R.K. Moseley

***Agoseris xelata*** (Nutt.) Greene [FNA19, HC, HC2]

Pittonia. 2: 177. 1891.  
tall agoseris, tall goat-chicory

*Agoseris laciniata* (Nutt.) Greene

***Agoseris glauca*** (Pursh) Raf. [FNA19, HC, HC2]

Herb. Raf. 39. 1833.  
pale agoseris, short-beaked agoseris  
(see also *Agoseris agrestis*, *Agoseris monticola*)

var. ***dasycephala*** (Torr. & A. Gray) Jeps. [FNA19, HC, HC2]

Man. Fl. Pl. Calif. 1005. 1925.  
pale goat-chicory

*Agoseris glauca* (Pursh) Raf. var. *aspera* (Rydb.) Cronquist

FNA19: "Variety *dasycephala* occurs primarily at high elevations in the western cordillera, extending eastward onto the northern prairies, and disjunctively in the Canadian arctic (Caribou Hills). It is more readily distinguished from var. *glauca* southward, where the two varieties are  $\hat{A}\pm$  elevationally separated. Difficulty in separating them occurs northward, where they are nearer each other and pockets of complete introgression occur, e.g., southeastern British Columbia and southwestern Alberta. Hybrids with *Agoseris aurantiaca* and *A. parviflora* also occur. Variety *dasycephala* contains regional phases that exhibit a step-clinal distribution. The large number of synonyms reflects the variation. As circumscribed here, var. *dasycephala* encompasses most of what has been called *Agoseris glauca* var. *agrestis* (see discussion under var. *glauca*)."

var. ***glauca*** [FNA19, HC, HC2]

Herb. Raf. 39.  
pale agoseris, short beaked agoseris

*Agoseris lacera* Greene

*Agoseris lapathifolia* Greene

*Agoseris longissima* Greene

*Agoseris microdonta* Greene

*Agoseris procera* Greene

*Agoseris vicinalis* Greene

FNA19: "Variety *glauca* is usually found at lower elevations from the northern prairies westward to valleys and basins of the North American cordillera. Misidentification is often due to falsely assuming this variety is strictly glabrous. Some regional phases have a high percentage of individuals with weakly puberulent peduncles and/or phyllaries. In addition, var. *glauca* intergrades with var. *dasycephala* in some locations."

***Agoseris grandiflora*** (Nutt.) Greene [FNA19, HC, HC2]

Pittonia. 2: 178. 1891.  
large-flowered agoseris

*Stylopappus grandiflorus* Nutt.

var. **grandiflora** [FNA19, HC2]

Pittonia. 2: 178.

large flowered agoseris, large flower goat-chicory

*Agoseris cinerea* Greene

*Agoseris grandiflora* (Nutt.) Greene var. *intermedia* (Greene) Jeps.

*Agoseris grandiflora* (Nutt.) Greene var. *plebeia* (Greene) G.L. Wittrock

*Agoseris intermedia* Greene

*Agoseris marshallii* (Greene) Greene

*Agoseris obtusifolia* (Suksd.) Rydb.

*Agoseris plebeia* (Greene) Greene

FNA19: "Variety *grandiflora* is most commonly found east of the Cascade Mountains and southward into California and occurs primarily in grassland, steppe, or chaparral. It has regional phases, especially southward in its range. These appear more or less distinct but they so completely intergrade that their separation becomes arbitrary. Variety *grandiflora* rarely forms intermediates with other species; putative hybrids with *A. apargioides* have been collected. It is one of the suspected parental taxa of *A. xelata*, especially the Sierra Nevada populations."

var. **leptophylla** G.I. Baird [FNA19, HC2]

Sida. 21: 267. 2004.

Puget Sound agoseris

FNA19: "Variety *leptophylla* is most commonly found west of the Cascade Mountains from Vancouver Island through the Puget Sound and Willamette Valley to the Siskiyou-Klamath Mountains region of southwestern Oregon and northwestern California. It also occurs sporadically in mesic forest areas on the eastern slopes of the Cascade Mountains, and disjunctively in the Selkirk-Clearwater Mountains region of British Columbia and northern Idaho. In the Selkirk-Clearwater Mountains region, Columbia River Gorge, southern Willamette Valley, and Siskiyou-Klamath Mountains region var. *grandiflora* and var. *leptophylla* are sympatric and appear to be introgressive. In those regions, intermediate specimens are not uncommon. It may be one of the parental taxa of *A. xelata* (which see), especially the Puget Sound-Willamette Valley populations."

***Agoseris heterophylla*** (Nutt.) Greene [FNA19, HC, HC2]

Pittonia. 2: 178. 1891.

annual agoseris

*Agoseris heterophylla* (Nutt.) Greene ssp. *heterophylla*

var. ***heterophylla*** [FNA19, HC, HC2]

*Agoseris heterophylla* (Nutt.) Greene ssp. *normalis* Piper

***Agoseris monticola*** Greene [FNA19, HC2]

Pittonia. 4: 37. 1899.

mountain agoseris, Sierra Nevada agoseris

*Agoseris glauca* (Pursh) Raf. var. *monticola* (Greene) Q. Jones [HC]

FNA19: "*Agoseris monticola* occurs mainly in the Sierra Nevada and sporadically eastward in the Great Basin (Jarbridge and Ruby Mountains) and northward to the Cascade Range and Blue Mountains of Oregon. It appears to be allied with *A. glauca* and has been treated as a variety of the latter. Ecologically, it approaches *A. glauca* var. *dasycephala*; the two are morphologically and geographically separate from each other. Intermediates between *A. monticola* and *A. aurantiaca*, *A. glauca*, and *A. parviflora* are known."

***Agoseris retrorsa*** (Benth.) Greene [FNA19, HC, HC2]

Pittonia. 2: 178. 1891.

spear leaved agoseris, spear leaf goat-chicory

*Macrorhynchus angustifolius* Kellogg

*Macrorhynchus retrorsus* Benth.

***Ambrosia*** [FNA21, HC, HC2]

Sp. Pl. 2: 987. 1753; Gen. Pl. ed. 5, 425. 1754.

bursage, burweed, ragweed

***Ambrosia acanthicarpa*** Hook. [FNA21, HC, HC2]

Fl. Bor.-Amer. 1: 309. 1833.

flat spine bur-ragweed, annual bursage, bur ragweed

*Franseria acanthicarpa* (Hook.) Coville

***Ambrosia artemisiifolia*** L. [FNA21, HC, HC2]

Sp. Pl. 2: 988. 1753.

annual ragweed, common ragweed

*Ambrosia artemisiifolia* L. var. *elatior* (L.) Descourtiz

*Ambrosia artemisiifolia* L. var. *paniculata* (Michx.) Blank.

*Ambrosia elatior* L.

*Ambrosia glandulosa* Scheele

*Ambrosia monophylla* (Walter) Rydb.

FNA21: "Hybrids between *Ambrosia psilostachya* and *A. artemisiifolia* have been called *A. xintergradiens* W. H. Wagner." FNA21: "The name *Ambrosia xhelenae* Rouleau applies to hybrids between *A. artemisiifolia* and *A. trifida*."

***Ambrosia chamissonis*** (Less.) Greene [FNA21, HC, HC2]

Man. Bot. San Francisco. 188. 1894.

silver beachweed, beach bur, cutleaf beach bur, silver burr-ragweed

*Ambrosia chamissonis* (Less.) Greene var. *bipinnatisecta* (Less.) J.T. Howell [HC]

*Ambrosia chamissonis* (Less.) Greene var. *chamissonis* [HC]

*Franseria chamissonis* Less. ssp. *bipinnatisecta* (Less.) Wiggins & Stockw.

*Franseria chamissonis* Less. ssp. *chamissonis*

*Franseria chamissonis* Less. var. *bipinnatisecta* Less.

*Franseria chamissonis* Less. var. *chamissonis*

Lumped in Jepson Manual & by Kartesz, split into var. *chamissonis* and var. *bipinnatisecta* by Chambers and Sundberg (2000). Chambers and Sundberg (2000) note intermediates between vars. on a few sheets.

***Ambrosia psilostachya*** DC. [FNA21, HC, HC2]

Prodr. 5: 526. 1836.

perennial ragweed, western ragweed

*Ambrosia psilostachya* DC. var. *californica* (Rydb.) S.F. Blake

*Ambrosia psilostachya* DC. var. *coronopifolia* (Torr. & A. Gray) Farw.

*Ambrosia psilostachya* DC. var. *lindheimeriana* (Scheele) Blank.

*Ambrosia rugelii* Rydb.

FNA21: "Hybrids between *Ambrosia psilostachya* and *A. artemisiifolia* have been called *A. xintergradiens* W. H. Wagner."

***Ambrosia trifida*** L. [FNA21, HC, HC2]

Sp. Pl. 2: 987. 1753.

giant ragweed

*Ambrosia aptera* DC.

*Ambrosia trifida* L. var. *integrifolia* (Muhl. ex Willd.) Torr. & A. Gray

*Ambrosia trifida* L. var. *texana* Scheele

*Ambrosia trifida* L. var. *trifida* [HC]

Split in Kz99, lumped by Chambers and Sundberg (2000). FNA21: "The name *Ambrosia xhelenae* Rouleau applies to hybrids between *A. artemisiifolia* and *A. trifida*." WTU specimens on loan, so no specimen data available as of Aug. 2007.

***Anaphalis*** [FNA19, HC, HC2]

Prodr. 6: 271. 1838.

pearly-everlasting

***Anaphalis margaritacea*** (L.) Benth. & Hook. f. [FNA19, HC, HC2]

Gen. Pl. 2: 303. 1873.

pearly everlasting

*Anaphalis margaritacea* (L.) Benth. & Hook. f. var. *occidentalis* Greene  
*Anaphalis margaritacea* (L.) Benth. & Hook. f. var. *subalpina* (A. Gray) A. Gray  
*Gnaphalium margaritaceum* L.

Kz99: Benth., Chambers and Sundberg (2000): Benth. & Hook. f.; follow BC authorship here

**Anisocarpus** [FNA21, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 388. 1841.  
anisocarpus

**Anisocarpus madioides** Nutt. [FNA21, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 388. 1841.  
woodland tarplant, tarweed, woodland tarweed

*Madia madioides* (Nutt.) Greene [HC]

**Antennaria** [FNA19, HC, HC2]

Fruct. Sem. Pl. 2: 410, plate 167, fig. 3. 1791.  
everlasting, pussy-toes

**Antennaria alpina** (L.) Gaertn. [FNA19, HC, HC2]

Fruct. Sem. Pl. 2: 410. 1791.  
alpine pussytoes

*Antennaria alpina* (L.) Gaertn. var. *canescens* Lange  
*Gnaphalium alpinum* L.

This species should not be confused with *A. media* var. *alpina*, which is common in alpine areas throughout Washington. The first specimen of *A. alpina* deposited at WTU was collected in 2007. FNA19: "Excluded names: Some *Antennaria* names are based on early-generation interspecific hybrids, including: *A. xrousseui* A. E. Porsild = ? *A. alpina* × *A. rosea* *Antennaria alpina* is one of the more morphologically variable agamic complexes in the genus. Some taxonomists have argued that true *Antennaria alpina* does not occur in North America, because none of the North American material exactly matches the type of *A. alpina*, which is from Lapland (M. O. Malte 1934; A. E. Porsild 1965). If one uses a strict typological species concept, then this is true; I recognize that this species complex is composed of innumerable apomictic clones and am circumscribing a broad species concept for *A. alpina*. The potential morphologic overlap between the *A. media* and *A. alpina* complexes is a major taxonomic problem. The chief difference between members of the two complexes is the presence of prominent flags on cauline leaves in *A. alpina* and their absence in *A. media*. *Antennaria alpina* of North America is gynoeious and characterized by its dark green to black phyllaries and conspicuous flags on the distal cauline leaves. The basal leaves vary from glabrous, as in the type material, to pubescent. The primary progenitors of the *A. alpina* complex include *A. aromatica*, *A. densifolia*, *A. friesiana* subsp. *alaskana*, *A. friesiana* subsp. *neoalaskana*, *A. monocephala* subsp. *monocephala*, and *A. pulchella*."

**Antennaria alpina** (L.) Gaertn. [FNA19, HC, HC2], misapplied

Fruct. Sem. Pl. 2: 410. 1791.  
alpine pussytoes

*Antennaria alpina* (L.) Gaertn. var. *canescens* Lange  
*Gnaphalium alpinum* L.

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dark green to black phyllaries and conspicuous flags on the distal cauline leaves. The basal leaves vary from glabrous, as in the type material, to pubescent. The primary progenitors of the *A. alpina* complex include *A. aromatica*, *A. densifolia*, *A. friesiana* subsp. *alaskana*, *A. friesiana* subsp. *neoalaskana*, *A. monocephala* subsp. *monocephala*, and *A. pulchella*."

***Antennaria anaphaloides* Rydb. [FNA19, HC, HC2]**

Mem. New York Bot. Gard. 1: 409. 1900.

tall pussytoes

*Antennaria anaphaloides* Rydb. var. *straminea* B. Boivin

*Antennaria pulcherrima* (Hook.) Greene ssp. *anaphaloides* (Rydb.) W.A. Weber

*Antennaria pulcherrima* (Hook.) Greene var. *anaphaloides* (Rydb.) G.W. Douglas

***Antennaria corymbosa* E.E. Nelson [FNA19, HC, HC2]**

Bot. Gaz. 27: 212. 1899.

flat topped pussytoes, meadow pussytoes

*Antennaria acuta* Rydb.

*Antennaria dioica* (L.) Gaertn. var. *corymbosa* (E.E. Nelson) Jeps.

*Antennaria hygrophila* Greene

*Antennaria nardina* Greene

Scarcely different from *A. rosea*. FNA19: "*Antennaria corymbosa* is characterized by linear-oblongate basal leaves and white-tipped phyllaries, each with a distinct black spot near the base of the scarious portion. A form with black phyllaries (*A. acuta*) occurs sporadically throughout the range of the species (R. J. Bayer 1988). *Antennaria corymbosa* is a sexual progenitor of the *A. rosea* complex."

***Antennaria dimorpha* (Nutt.) Torr. & A. Gray [FNA19, HC, HC2]**

Fl. N. Amer. 2: 431. 1843.

cushion pussytoes, low pussytoes

*Antennaria dimorpha* (Nutt.) Torr. & A. Gray var. *integra* L.F. Hend.

*Antennaria dimorpha* (Nutt.) Torr. & A. Gray var. *latisquama* (Piper) M. Peck

*Antennaria dimorpha* (Nutt.) Torr. & A. Gray var. *macrocephala* D.C. Eaton

*Antennaria dimorpha* (Nutt.) Torr. & A. Gray var. *nuttallii* D.C. Eaton

*Antennaria latisquama* Piper

*Antennaria macrocephala* (D.C. Eaton) Rydb.

*Gnaphalium dimorphum* Nutt.

var. *latisquama* is an illegitimate name

***Antennaria flagellaris* (A. Gray) A. Gray [FNA19, HC, HC2]**

Proc. Amer. Acad. Arts. 17: 212. 1882.

stoloniferous everlasting, flagellate pussytoes, whip pussytoes

*Antennaria dimorpha* (Nutt.) Torr. & A. Gray var. *flagellaris* A. Gray

***Antennaria geyeri* A. Gray [FNA19, HC, HC2]**

Mem. Amer. Acad. Arts, n. s. 4: 107. 1849.

Geyer's pussytoes, pinewoods pussytoes

FNA19: "*Antennaria geyeri* is distinctive because it has woody upright branches and is not stoloniferous. It lacks basal leaves at flowering and has heads that are often described as subdioecious (central flowers are often bisexual). As the only member of the Geyerae group, *A. geyeri* is not closely related to any other species of *Antennaria*; it bears strong similarities to some species of *Anaphalis* (R. J. Bayer 1990; Bayer et al. 1996)."

***Antennaria howellii* Greene [FNA19, HC2]**

Pittonia. 3: 174. 1897.

ssp. ***howellii* [FNA19, HC2]**

Pittonia. 3: 174.

Howell's pussytoes

*Antennaria neglecta* Greene ssp. *howellii* (Greene) Hultén

*Antennaria neglecta* Greene var. *howellii* (Greene) Cronquist [HC]

*Antennaria neodioica* Greene ssp. *howellii* (Greene) Bayer

ssp. **neodioica** (Greene) R.J. Bayer [FNA19, HC2]

Brittonia. 41: 397. 1989.

Blue Mountains everlasting, field pussytoes

*Antennaria howellii* Greene ssp. *petaloidea* (Fernald) R.J. Bayer [FNA19]

*Antennaria neglecta* Greene var. *attenuata* (Fernald) Cronquist [HC]

*Antennaria neglecta* Greene var. *neodioica* (Greene) Cronquist

*Antennaria pedicellata* Greene

\* Bayer, R.J. and G.L. Stebbins. 1993. A synopsis with keys for the genus *Antennaria* (Asteraceae: Inuleae: Gnaphaliinae) for North America. Canadian Journal of Botany 71: 1589-1604.

**Antennaria lanata** (Hook.) Greene [FNA19, HC, HC2]

Pittonia. 3: 288. 1898.

woolly everlasting, woolly pussytoes

*Antennaria carpathica* (Wahlenb.) Hook. var. *lanata* Hook., orthographic variant

**Antennaria luzuloides** Torr. & A. Gray [FNA19, HC, HC2]

Fl. N. Amer. 2: 430. 1843.

silvery brown everlasting, woodrush pussytoes

ssp. **luzuloides** [FNA19, HC2]

silvery brown everlasting, woodrush pussytoes

*Antennaria argentea* Benth. ssp. *argentea*

*Antennaria luzuloides* Torr. & A. Gray var. *luzuloides*

**Antennaria media** Greene [FNA19, HC2]

Pittonia. 3: 286. 1898.

alpine pussytoes, Rocky Mountain pussytoes

*Antennaria alpina* (L.) Gaertn. var. *media* (Greene) Jeps. [HC]

FNA19: "The main distinction between *A. media* and *A. alpina* is flags on distal cauline leaves present in *A. alpina* and mostly absent in *A. media* (Bayer 1990d). Phyllaries of the pistillate plants in *A. alpina* tend to be acute; they are blunter in *A. media*. At some point, it may be preferable to follow W. L. Jepson ([1923?1925]) and some later authors and treat *A. media* as a subspecies of *A. alpina*. *Antennaria media* appears to be an autopolyploid derivative of *A. pulchella*; genes from *A. pulchella* may have introgressed into the *A. alpina* and *A. parvifolia* complexes indirectly through *A. media*."

**Antennaria microphylla** Rydb. [FNA19, HC, HC2]

Bull. Torrey Bot. Club. 24: 303. 1897.

rosy everlasting, desert pussytoes, elegant pussytoes, pulvinate pussytoes, rosy pussytoes, small-leaf pussytoes

*Antennaria bracteosa* Rydb.

*Antennaria concinna* E.E. Nelson

*Antennaria microphylla* Lunell var. *solstitialis* Lunell

*Antennaria nitida* Greene

*Antennaria rosea* Greene [FNA19]

*Antennaria rosea* Greene ssp. *arida* (E.E. Nelson) R.J. Bayer [FNA19]

*Antennaria rosea* Greene ssp. *confinis* (Greene) R.J. Bayer [FNA19]

*Antennaria rosea* Greene ssp. *pulvinata* (Greene) R.J. Bayer [FNA19]

*Antennaria rosea* Greene ssp. *rosea* [FNA19]

*Antennaria rosea* Greene var. *nitida* (Greene) Breitung

*Antennaria solstitialis* Lunell

FNA19: "*Antennaria microphylla* is a primary sexual progenitor of the *A. rosea* polyploid agamic complex (R. J. Bayer 1990b). A. Cronquist (1955) included *A. rosea* within his circumscription of *A. microphylla*. It is preferable to recognize sexual diploids as distinct from their morphologically discrete hybrid apomictic derivatives. *Antennaria microphylla* is always dioecious and has stems distally stipitate-glandular and white phyllaries; *A. rosea* is always gynoeocious and has stems without glandular hairs and phyllaries only occasionally white. Some authors (A. E. Porsild 1950; E. H. Moss 1959; Porsild and W. J. Cody 1980) have recognized *A. nitida* as distinct; comparisons of the nomenclatural types of the two show that they are conspecific. *Antennaria microphylla* has allelopathic properties (G. D. Manners and D. S. Galitz 1985)."

- \* Bayer, R.J. and G.L. Stebbins. 1987. Chromosome numbers, patterns of distribution, and apomixis in *Antennaria* (Asteraceae: Inuleae). *Systematic Botany* 12: 305-319.
- \* <b>Buckingham et al. 1995</b> = Buckingham, N. M., E. G. Schreiner, T. N. Kaye, J. E. Burger, and E. L. Tisch. 1995. *Flora of the Olympic Peninsula*. Northwest Interpretive Association and the Washington Native Plant Society, Seattle, WA. 199 p.

***Antennaria monocephala* DC. [FNA19, HC2]**

Prodr. 6: 269. 1838.

pygmy pussytoes

Recently (2017) photographed in Glacier Peak Wilderness. Identification confirmed by Jamie Fenneman at UBC.

ssp. ***angustata*** (Greene) Hultén [FNA19, HC2]

Ark. Bot., n. s. 7: 135. 1968.

***Antennaria parvifolia* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 406. 1841.

little-leaf pussytoes

***Antennaria pulcherrima* (Hook.) Greene [FNA19, HC, HC2]**

Pittonia. 3: 176. 1897.

showy pussytoes

*Antennaria pulcherrima* (Hook.) Greene var. *pulcherrima*

***Antennaria racemosa* Hook. [FNA19, HC, HC2]**

Fl. Bor.-Amer. 1: 330. 1834.

slender everlasting, Hooker's pussytoes, raceme pussytoes

***Antennaria stenophylla* (A. Gray) A. Gray [FNA19, HC, HC2]**

Proc. Amer. Acad. Arts. 17: 213. 1882.

narrowleaved pussytoes

*Antennaria alpina* (L.) Gaertn. var. *stenophylla* A. Gray

*Antennaria leucophaea* Piper

***Antennaria umbrinella* Rydb. [FNA19, HC, HC2]**

Bull. Torrey Bot. Club. 24: 302. 1897.

brown everlasting, brown-bract pussytoes, umber pussytoes

***Anthemis* [FNA19, HC, HC2]**

Sp. Pl. 2: 893. 1753; Gen. Pl. ed. 5, 381. 1754.

chamomile, dogfennel, mayweed

(see also *Cota*)

***Anthemis arvensis* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 894. 1753.

corn chamomile, field chamomile

*Anthemis arvensis* L. var. *arvensis*

***Anthemis cotula* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 894. 1753.

mayweed chamomile, stinking chamomile, dogfennel

***Arctium* [FNA19, HC, HC2]**

Sp. Pl. 2: 816. 1753; Gen. Pl. ed. 5, 357. 1754.

burdock, clotbur

***Arctium lappa* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 816. 1753.

great burdock, greater burdock

***Arctium minus* (Hill) Bernh. [FNA19, HC, HC2]**

Syst. Verz. 154. 1800.

common burdock, lesser burdock

**Arnica** [FNA21, HC, HC2]

Sp. Pl. 2: 884. 1753; Gen. Pl. ed. 5, 376. 1754.

arnica

**Arnica chamissonis** Less. [FNA21, HC, HC2]

Linnaea. 6: 238. 1831.

leafy arnica, meadow arnica, narrowleaf arnica, silvery arnica, leafy leopardbane

*Arnica chamissonis* Less. ssp. *chamissonis* [HC]

*Arnica chamissonis* Less. ssp. *foliosa* (Nutt.) Maguire [HC]

*Arnica chamissonis* Less. ssp. *incana* (A. Gray) Maguire

*Arnica chamissonis* Less. var. *andina* (Nutt.) Ediger & T.M. Barkl.

*Arnica chamissonis* Less. var. *chamissonis*

*Arnica chamissonis* Less. var. *foliosa* (Nutt.) Maguire [HC]

*Arnica chamissonis* Less. var. *incana* (A. Gray) Hultén [HC]

*Arnica chamissonis* Less. var. *interior* Maguire [HC]

*Arnica chamissonis* Less. var. *maguirei* (A. Nels.) Maguire [HC]

**Arnica cordifolia** Hook. [FNA21, HC, HC2]

Fl. Bor.-Amer. 1: 331. 1834.

heart leaf arnica, hear-leaf leopardbane

*Arnica cordifolia* Hook. var. *cordifolia* [HC]

*Arnica cordifolia* Hook. var. *pumila* (Rydb.) Maguire [HC]

**Arnica discoidea** Benth. [FNA21, HC]

Pl. Hartw. 319. 1849.

rayless arnica, rayless leopardbane

*Arnica discoidea* Benth. var. *eradiata* (A. Gray) Cronquist [HC]

*Arnica grayi* A. Heller

*Arnica parviflora* A. Gray ssp. *alata* (Rydb.) Maguire

*Arnica parviflora* A. Gray ssp. *parviflora*

Wolf and Denford (1984) do not accept infraspecific taxa in this species (Chambers and Sundberg 2000)

\* Wolf, S. J. and K. E. Denford. 1984. Taxonomy of *Arnica* (Compositae) subgenus *Austromontana*. *Rhodora* 86: 239-309.

**Arnica fulgens** Pursh [FNA21, HC, HC2]

Fl. Amer. Sept. 2: 527. 1813.

hillside arnica, orange arnica, shining leopardbane

**Arnica gracilis** Rydb. [FNA21, HC2]

Bull. Torrey Bot. Club. 24: 297. 1897.

slender arnica, slender leopardbane

*Arnica latifolia* Bong. var. *gracilis* (Rydb.) Cronquist [HC]

**Arnica lanceolata** Nutt. [FNA21, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 407. 1841.

clasping arnica, stream bank arnica

ssp. **prima** (Maguire) Strother & S.J. Wolf [FNA21, HC2]

Novon. 16. 2006.

clasping arnica, streambank arnica, streambank leopardbane

*Arnica amplexicaulis* Nutt. [HC]

*Arnica amplexicaulis* Nutt. ssp. *amplexicaulis*

*Arnica amplexicaulis* Nutt. var. *amplexicaulis* [HC]

*Arnica amplexicaulis* Nutt. var. *piperi* H. St. John & F.A. Warren [HC]

*Arnica amplexifolia* Rydb. ssp. *prima* Maguire

**Arnica latifolia** Bong. [FNA21, HC, HC2]

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 147. 1832.

broad leaved arnica, mountain arnica, daffodil leopardbane

(see also *Arnica gracilis*)

*Arnica latifolia* Bong. var. *latifolia* [HC]

***Arnica longifolia*** D.C. Eaton [FNA21, HC, HC2]

Botany (Fortieth Parallel). 186. 1871.  
longleaf arnica, seep spring arnica, spear-leaf leopardbane

*Arnica longifolia* D.C. Eaton ssp. *myriadenia* (Piper) Maguire

***Arnica mollis*** Hook. [FNA21, HC, HC2]

Fl. Bor.-Amer. 1: 331. 1834.  
cordilleran arnica, hairy arnica, cordilleran leopardbane

***Arnica nevadensis*** A. Gray [FNA21, HC, HC2]

Proc. Amer. Acad. Arts. 19: 55. 1883.  
Nevada arnica, Sierra arnica, Sierran leopardbane

*Arnica tomentella* Greene

***Arnica ovata*** Greene [FNA21, HC2]

Pittonia. 4: 161. 1900.  
sticky arnica, sticky leaf arnica

*Arnica xdiversifolia* Greene [HC]

***Arnica parryi*** A. Gray [FNA21, HC, HC2]

Amer. Naturalist. 8: 213. 1874.  
Parry's arnica

*Arnica angustifolia* Vahl ssp. *eradiata* A. Gray

*Arnica parryi* A. Gray ssp. *parryi*

*Arnica parryi* A. Gray ssp. *sonnei* (Greene) Maguire

*Arnica parryi* A. Gray var. *parryi* [HC]

*Arnica parryi* A. Gray var. *sonnei* (Greene) Cronquist

***Arnica rydbergii*** Greene [FNA21, HC, HC2]

Pittonia. 4: 36. 1899.  
Rydberg's arnica, subalpine arnica, subalpine leopardbane

***Arnica sororia*** Greene [FNA21, HC, HC2]

Ottawa Naturalist. 23: 213. 1910.  
bunch arnica, twin arnica, twin leopardbane

*Arnica fulgens* Pursh var. *sororia* (Greene) G.W. Douglas & Ruyle-Douglas

***Artemisia*** [FNA19, HC, HC2]

Sp. Pl. 2: 845. 1753; Gen. Pl. ed. 5, 367. 1754.  
artemisia, mugwort, sagebrush, wormwood

*Picrothamnus* [FNA19]

*Sphaeromeria* [FNA19]

***Artemisia absinthium*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 848. 1753.  
absinthe, oldman, wormwood

*Artemisia absinthium* L. var. *absinthium*

***Artemisia annua*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 847. 1753.  
sweet Annie, sweet sagewort, annual wormwood

***Artemisia arbuscula*** Nutt. [FNA19, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 398. 1841.  
dwarf sagebrush, low sagebrush

ssp. ***arbuscula*** [FNA19, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 398.  
little sagebrush, low sagebrush

*Artemisia arbuscula* Nutt. var. *arbuscula* [HC]

FNA19: "The relatively large heads of *Artemisia arbuscula* subsp. *arbuscula* suggest a relationship with *A. cana*; the extreme morphologic variability of this subspecies from east to west may be the result of hybridization with various subspecies within the *A. cana* complex."

\* Winward, A.H. 1980. Taxonomy and ecology of sagebrush in Oregon. Oregon State University Agricultural Experiment Station Bulletin No. 642, Corvallis.

\* Winward, A.H. and E.D. McArthur. 1995. Lahontan sagebrush (*Artemisia arbuscula* ssp. *longicaulis*): a new taxon. Great Basin Naturalist 55: 151-157.

***Artemisia biennis* Willd. [FNA19, HC, HC2]**

Phytographia. 11. 1794.

biennial wormwood

*Artemisia biennis* Willd. var. *biennis*

FNA19: "*Artemisia biennis* is naturalized and weedy in the eastern portion of its range. It is morphologically similar to *A. annua*, differing primarily in the coarser leaf lobes and larger heads that are sessile in axils of leaflike bracts. *Artemisia biennis* is considered native to the northwest United States; it may be introduced in other parts of its range. The type specimen is a horticultural specimen from New Zealand."

***Artemisia campestris* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 846. 1753.

Pacific sagewort, northern wormwood

var. ***borealis*** (Pall.) M. Peck [HC2]

*Artemisia borealis* Pall. [FNA19]

*Artemisia borealis* Pall. ssp. *borealis* [FNA19]

*Artemisia borealis* Pall. ssp. *richardsoniana* (Besser) Korobkov [FNA19]

*Artemisia campestris* L. ssp. *borealis* (Pall.) H.M. Hall & Clem. [HC]

*Artemisia campestris* L. var. *purshii* (Besser) Cronquist [HC]

var. ***caudata*** (Michx.) Palmer & Steyerm. [HC2]

northern wormwood

(see also *Artemisia campestris* var. *scouleriana*)

*Artemisia campestris* L. ssp. *caudata* (Michx.) H.M. Hall & Clem. [FNA19, HC]

var. ***scouleriana*** (Besser) Cronquist [HC, HC2]

Leaflets of Western Botany 7(2): 20.

Pacific sagewort, Scouler's wormwood

*Artemisia campestris* L. ssp. *pacifica* (Nutt.) H.M. Hall & Clem. [FNA19]

var. ***wormskioldii*** (Besser ex Hook.) Cronquist [HC, HC2]

Columbia Islands sagewort, Wormskiold's wormwood sagewort

***Artemisia cana* Pursh [FNA19, HC, HC2]**

Fl. Amer. Sept. 2: 521. 1813.

hoary sagebrush, silver sagebrush

ssp. ***bolanderi*** (A. Gray) G.H. Ward [FNA19, HC2]

Contr. Dudley Herb. 4: 192. 1953.

***Artemisia douglasiana* Besser [FNA19, HC, HC2]**

Fl. Bor.-Amer. 1: 323. 1833.

Douglas mugwort, Douglas sagewort, Douglas wormwood

*Artemisia vulgaris* L. var. *douglasiana* (Besser) H. St. John

***Artemisia dracunculus* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 849. 1753.

dragon sagewort, tarragon, dragon wormwood

*Artemisia dracunculus* L. ssp. *dracunculus*

*Artemisia dracunculus* L. var. *dracunculus* [HC]

***Artemisia frigida* Willd. [FNA19, HC, HC2]**

Sp. Pl. 3: 1838. 1803.  
prairie sagebrush, prairie sagewort

***Artemisia furcata* M. Bieb. [FNA19, HC2]**

Fl. Taur.-Caucas. 3: 567. 1819.  
three-forked mugwort, forked wormwood, three-forked wormwood

*Artemisia furcata* M. Bieb. var. *furcata*  
*Artemisia furcata* M. Bieb. var. *heterophylla* (Besser) Hultén  
*Artemisia trifurcata* Stephani ex Spreng. [HC]

FNA19: "Artemisia furcata extends from the islands of the Bering Sea into southern and interior Alaska, parts of Canada (disjunct in British Columbia and the northernmost Rocky Mountains of Alberta), and on Mt. Rainier in Washington. The array of names applied to *A. furcata* shows the taxonomic confusion arising from a myriad of morphologic variants that may indicate introgression with other species."

***Artemisia ludoviciana* Nutt. [FNA19, HC, HC2]**

Gen. N. Amer. Pl. 2: 143. 1818.  
western mugwort, prairie sage

ssp. ***candicans* (Rydb.) D.D. Keck [FNA19, HC2]**

Proc. Calif. Acad. Sci., ser. 4. 25: 447. 1946.  
gray sagewort

*Artemisia ludoviciana* Nutt. var. *latiloba* Nutt. [HC]

ssp. ***incompta* (Nutt.) D.D. Keck [FNA19, HC2]**

Publ. Carnegie Inst. Wash. 520: 327. 1940.  
intermediate sagewort, mountain wormwood

*Artemisia ludoviciana* Nutt. var. *incompta* (Nutt.) Cronquist [HC]

ssp. ***lindleyana* (Bess.) K.L. Chambers [HC2]**

*Artemisia lindleyana* Besser. [HC]

ssp. ***ludoviciana* [FNA19, HC2]**

western mugwort, Louisiana sagewort, silver wormwood

*Artemisia diversifolia* Rydb.  
*Artemisia gnaphaloides* Nutt.  
*Artemisia ludoviciana* Nutt. var. *ludoviciana* [HC]

***Artemisia michauxiana* Besser [FNA19, HC, HC2]**

Fl. Bor.-Amer. 1: 324. 1833.  
Michaux's mugwort, lemon sagewort, Michaux's wormwood

*Artemisia vulgaris* L. var. *michauxiana* (Besser) H. St. John

FNA19: "Members of the *Artemisia ludoviciana* complex with deeply lobed leaves are sometimes confused with *A. michauxiana*, and there is evidence that plants hybridize in some locations. *Artemisia michauxiana* is distinguished by its glabrous, bright green to yellow-green foliage and lemony-sweet fragrance."

***Artemisia norvegica* Fr. [FNA19, HC, HC2]**

Novit. Fl. Svec. 56. 1817.  
mountain sagewort, boreal wormwood

ssp. ***saxatilis* (Besser) H.M. Hall & Clem. [FNA19, HC2]**

Publ. Carnegie Inst. Wash. 326: 58. 1923.  
mountain sagewort

*Artemisia arctica* Less. ssp. *arctica*  
*Artemisia norvegica* Fr. var. *saxatilis* (Besser) Jeps. [HC]  
*Artemisia saxatilis* Less.

***Artemisia rigida* (Nutt.) A. Gray [FNA19, HC, HC2]**

Proc. Amer. Acad. Arts. 19: 49. 1883.  
scabland sagebrush, stiff sagebrush

***Artemisia spiciformis* Osterh. [FNA19, HC2]**

Bull. Torrey Bot. Club. 27: 507. 1900.  
snowfield sagebrush, spiked sagebrush

*Artemisia tridentata* Nutt. ssp. *spiciformis* (Osterh.) Kartesz & Gandhi

FNA19: "Often confused with *Artemisia rothrockii*, *A. spiciformis* has been recognized only recently as a widespread, high-elevation sagebrush of late-lying snowfields. Molecular analysis has not yet determined the degree to which this species intergrades with *A. cana* subsp. *viscidula* and *A. tridentata* subsp. *vaseyana*, the presumed parents of this putative hybrid. Because snow-field sagebrush produces fertile seeds and forms a stable community type, it is treated here as a distinct species."

***Artemisia stelleriana* Besser [FNA19, HC2]**

Nouv. Mém. Soc. Imp. Naturalistes Moscou. 3: 79, plate 5. 1834.  
dusty miller, oldwoman, beach wormwood, Steller's wormwood

***Artemisia suksdorfii* Piper [FNA19, HC, HC2]**

Bull. Torrey Bot. Club. 28: 42. 1901.  
coastal mugwort, Suksdorf's sagewort, coastal wormwood

*Artemisia vulgaris* L. var. *littoralis* Suksd.

***Artemisia tilesii* Ledeb. [FNA19, HC, HC2]**

Mém. Acad. Imp. Sci. St. Pétersbourg Hist. Acad. 5: 568. 1814.  
Aleutian mugwort, Cascade wormwood

*Artemisia elatior* (Torr. & A. Gray) Rydb.

*Artemisia hookeriana* Besser

*Artemisia tilesii* Ledeb. ssp. *elatior* (Torr. & A. Gray) Hultén

*Artemisia tilesii* Ledeb. ssp. *unalaschcensis* (Besser) Hultén

*Artemisia tilesii* Ledeb. var. *elatior* Torr. & A. Gray

*Artemisia tilesii* Ledeb. var. *unalaschcensis* Besser [HC]

FNA19: "*Artemisia tilesii* has a bewildering array of variation in leaf and inflorescence morphology that has been separated into four infraspecific taxa recognized in some floras. I am unable to separate these taxa consistently and am including them within a broad circumscription of the species."

***Artemisia tridentata* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 398. 1841.  
big sagebrush

**ssp. *tridentata* [FNA19, HC2]**

big sagebrush

*Artemisia tridentata* Nutt. var. *tridentata*

**ssp. *vaseyana* (Rydb.) Beetle [FNA19, HC2]**

Rhodora. 61: 83. 1959.  
mountain big sagebrush, Vasey sagebrush

*Artemisia tridentata* Nutt. var. *vaseyana* (Rydb.) B. Boivin

**ssp. *wyomingensis* Beetle & A.M. Young [FNA19, HC2]**

Rhodora. 67: 405. 1965.  
Wyoming sagebrush

*Artemisia tridentata* Nutt. var. *wyomingensis* (Beetle & A.M. Young) S.L. Welsh

*Seriphidium tridentatum* (Nutt.) W.A. Weber ssp. *wyomingense* (Beetle & A.M. Young) W.A. Weber

FNA19: "Subspecies *wyomingensis* is the common sagebrush of rocky or fine-grained soils from valleys to high plateaus in the Great Basin. It is an allopolyploid that may be derived from the populations of subsp. *tridentata* with which it occurs. Identification is based primarily on the shorter leaves of subsp. *wyomingensis*, its usually shorter stature, and its shorter flowering branches that are retained from year to year. Wyoming sagebrush may be increasing in abundance in response to increased grazing pressure and drought in the high valleys of the Great Basin."

***Artemisia tripartita* Rydb. [FNA19, HC, HC2]**

Mem. New York Bot. Gard. 1: 432. 1900.

cut-leaf sagebrush, threetip sagebrush

ssp. *tripartita* [FNA19, HC2]

cutleaf sagebrush, threetip sagebrush

*Artemisia vulgaris* L. [FNA19, HC, HC2]

Sp. Pl. 2: 848. 1753.

mugwort, lobed wormwood

*Artemisia vulgaris* L. var. *selengensis* (Turcz. ex Besser) Maxim.

*Artemisia vulgaris* L. var. *vulgaris*

***Askellia*** [HC2]

elegant hawksbeard

***Askellia pygmaea*** (Ledeb.) Sennikov [HC2]

low hawksbeard

*Crepis nana* Richardson [FNA19, HC]

*Crepis nana* Richardson ssp. *nana* [HC]

*Crepis nana* Richardson ssp. *ramosa* Babc. [HC]

*Crepis nana* Richardson var. *lyratifolia* (Turcz.) Hultén

*Crepis nana* Richardson var. *ramosa* (Babc.) Cronquist

FNA19: "Crepis nana occurs in North America and northern Asia. It is recognized by the tufted, cespitose habit, elongate roots and rhizomes, and occurrence in alpine habitats. In the typical form, the plants are tufted, the stems are not leafy, and the heads are borne among the leaves. Taller specimens with elongated, leafy branches and heads borne well beyond the basal leaves are sometimes recognized as subsp. *ramosa*; these characteristics appear to be part of the normal range of variation for the species. *Crepis nana* is closely related to *C. elegans*, differing mainly in the shape of the cypselae. The cypselae of *C. nana* are almost always more columnar, wider at bases, and with broader ribs, than those of *C. elegans*."

***Baccharis*** [FNA20, HC, HC2]

Sp. Pl. 2: 860. 1753; Gen. Pl. ed. 5, 370. 1754.

baccharis

***Baccharis pilularis*** DC. [FNA20, HC, HC2]

Prodr. 5: 407. 1836.

chaparral broom, coyote brush

ssp. ***consanguinea*** (DC.) C.B. Wolf [FNA20, HC2]

Occas. Pap. Rancho Santa Ana Bot. Gard. 1: 21. 1935.

chaparral broom

*Baccharis pilularis* DC. var. *consanguinea* (DC.) Kuntze [HC]

Collected in Pacific Co., a northern range extension.

\* Sayce, K. 2002. Noteworthy collections, Washington, *Baccharis pilularis*. Madroño 49: 132.

***Balsamorhiza*** [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 349. 1840.

balsamroot

***Balsamorhiza xbonseri*** H. St. John [HC2]

hybrid balsamroot

(= *Balsamorhiza rosea* × *Balsamorhiza sagittata*)

***Balsamorhiza careyana*** A. Gray [FNA21, HC, HC2]

Mem. Amer. Acad. Arts, n. s. 4: 81. 1849.

Carey's balsamroot

*Balsamorhiza careyana* A. Gray var. *careyana* [HC]

*Balsamorhiza careyana* A. Gray var. *intermedia* Cronquist [HC]

***Balsamorhiza careyana*** A. Gray × ***Balsamorhiza hookeri*** Nutt.

hybrid balsamroot

***Balsamorhiza deltoidea*** Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 351. 1840.  
deltoid balsamroot, Puget balsamroot

***Balsamorhiza hookeri*** Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 349. 1840.  
hairy balsamroot, hare's head balsamroot, Hooker's balsamroot

*Balsamorhiza hirsuta* Nutt. [HC]

*Balsamorhiza hirsuta* Nutt. var. *lagocephala* W.M. Sharp

*Balsamorhiza hookeri* Nutt. var. *hirsuta* (Nutt.) A. Nelson

*Balsamorhiza hookeri* Nutt. var. *hookeri* [HC]

*Balsamorhiza hookeri* Nutt. var. *lagocephala* (W.M. Sharp) Cronquist [HC]

FNA19: "At one time or another, most species of subg. *Balsamorhiza* have been synonymized under *B. hookeri*. Nevertheless, a number of taxa are justifiably segregated as species by their morphologic differences and geographic restrictions. One might logically choose either of two taxonomies: recognizing only two species in the entire genus, one representing subg. *Artorhiza* and the other subg. *Balsamorhiza*, or recognizing each slightly differing population as a species. Either course results in an unsatisfactory classification. The present classification is a compromise. A knotty problem persists. A central cluster of populations from eastern Washington to southeastern California display a number of minor and locally discrete morphologies. They tend to be less isolated from each other than are the peripheral populations, although some tend to mimic the latter ones in one or more characteristics. Their evolutionary history may be involved with past hybridizations with each other or with species of subg. *Artorhiza*, gene drift, and polyploidy. At present, it appears impossible to reach a satisfactory classification."

***Balsamorhiza hookeri* Nutt. × *Balsamorhiza sagittata* (Pursh) Nutt.**

hybrid balsamroot

***Balsamorhiza incana*** Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 350. 1840.  
hoary balsamroot, woolly balsamroot

***Balsamorhiza rosea*** A. Nelson & J.F. Macbr. [FNA21, HC, HC2]

Bot. Gaz. 56: 478. 1913.  
rosy balsamroot

***Balsamorhiza sagittata*** (Pursh) Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 350. 1840.  
arrowleaf balsamroot

***Balsamorhiza serrata*** A. Nelson & J.F. Macbr. [FNA21, HC, HC2]

Bot. Gaz. 56: 479. 1913.  
serrate balsamroot, toothed balsamroot

***Balsamorhiza × terebinthacea*** (Hook.) Nutt. [HC2]

wormwood balsamroot

Chambers & Sundberg use this epithet for any cross between *B. deltoidea*, *B. careyana*, and *B. sagittata*, the three deltoid-leaved taxa; see Weber (1953)

\* Weber, W.A. 1953. *Balsamorhiza terebinthacea* and other hybrid balsam-roots. *Madroño* 12: 47-49.

***Balsamorhiza × tomentosa*** Rydb. [HC2]

wooly hybrid balsamroot

\* Ownbey, M. and W.A. Weber. 1943. Natural hybridization in the genus *Balsamorhiza*. *American Journal of Botany* 30: 179-187.

***Bellis*** [FNA20, HC, HC2]

Sp. Pl. 2: 886. 1753; Gen. Pl. ed. 5, 378. 1754.  
bellis, daisy

***Bellis perennis*** L. [FNA20, HC, HC2]

Sp. Pl. 2: 886. 1753.

English daisy, lawn daisy

***Bidens*** [FNA21, HC, HC2]

Sp. Pl. 2: 831. 1753; Gen. Pl. ed. 5, 362. 1754.  
beggar-ticks, bur-marigold, sticktight

***Bidens amplissima*** Greene [FNA21, HC, HC2]

Pittonia. 4: 268. 1901.

Vancouver Island beggar ticks

*Biden cernua* L. var. *elata* Torr. & A. Gray

*Bidens elata* (Torr. & A. Gray) Sherff

Long considered an endemic in SW British Columbia, but historical collections were recently uncovered from Whatcom Co., and the species is extant in Snohomish Co. (Ganders et al. 2002).

\* Ganders, F., R. Klinkenberg, and B. Klinkenberg. 2002. British Columbia loses an endemic species: *Bidens amplissima* (Asteraceae) also occurs in Washington State. Botanical Electronic News (BEN): 293, 12 July 2002. [<http://www.ou.edu/cas/botany-micro/ben/>]

***Bidens beckii*** Torr. ex Spreng. [FNA21, HC, HC2]

Neue Entd. 2: 135. 1821.

Beck's water marigold

*Megalodonta beckii* (Torr. ex Spreng.) Greene

*Megalodonta beckii* (Torr. ex Spreng.) Greene var. *beckii*

*Megalodonta beckii* (Torr. ex Spreng.) Greene var. *hendersonii* Sherff

*Megalodonta beckii* (Torr. ex Spreng.) Greene var. *oregonensis* Sherff

***Bidens cernua*** L. [FNA21, HC, HC2]

Sp. Pl. 2: 832. 1753.

bur marigold, nodding beggar ticks

*Bidens cernua* L. var. *cernua*

*Bidens cernua* L. var. *elliptica* Wiegand

*Bidens cernua* L. var. *minima* (Huds.) Pursh

***Bidens connata*** Muhl. ex Willd. [FNA21, HC2]

Sp. Pl. 3: 1718. 1803.

swamp beggar ticks

Not in H&C. Recently collected from four counties in western Washington; perhaps introduced by the cranberry industry (Zika 2003). FNA21: "Bidens connata may be better treated as part of *B. tripartita*."

\* Zika, P. F. 2003. Noteworthy collections, Oregon and Washington. Madroño 50: 313-314.

***Bidens frondosa*** L. [FNA21, HC, HC2]

Sp. Pl. 2: 832. 1753.

leafy beggarticks, devil's pitchfork, sticktight

***Bidens tripartita*** L. [FNA21, HC, HC2]

Sp. Pl. 2: 831. 1753.

three lobed beggarticks

FNA21: "Plants with cypsela mid-nerve strongly developed (cypselae more or less strongly 4-angled and, often, tuberculate) that are treated below as *Bidens connata* have been included in *B. tripartita*, perhaps rightly so. And some botanists have included (or advocated inclusion of) *B. eatonii*, *B. heterodoxa*, and/or *B. infirma* in *B. tripartita*, as well, perhaps rightly so."

***Bidens vulgata*** Greene [FNA21, HC, HC2]

Pittonia. 4: 72. 1899.

tall beggarticks, western sticktight

Considered Introduced in OR & Native in BC.

***Blepharipappus*** [FNA21, HC, HC2]

Fl. Bor.-Amer. 1: 316. 1833.

eyelash tarweed

***Blepharipappus scaber*** Hook. [FNA21, HC, HC2]

Fl. Bor.-Amer. 1: 316. 1833.

blepharipappus, rough eyelashweed

*Blepharipappus scaber* Hook. ssp. *laevis* (A. Gray) D.D. Keck

*Blepharipappus scaber* Hook. ssp. *scaber*

*Blepharipappus scaber* Hook. var. *scaber* [HC]

FNA21: "Blepharipappus scaber is unusual among self-incompatible, continental tarweeds for occurring widely in western North America and having a relatively limited distribution in the California Floristic Province."

***Boltonia*** [FNA20, HC, HC2]

Sert. Angl. 27. 1789.

Doll's-daisy

***Boltonia asteroides*** (L.) L'Hér. [FNA20, HC, HC2]

Sert. Angl. 27. 1789.

white Doll's-daisy

var. ***recognita*** (Fernald & Griscom) Cronquist [FNA20, HC, HC2]

Bull. Torrey Bot. Club. 74: 149. 1947.

asterlike boltonia, white doll's-daisy

*Boltonia latisquama* A. Gray var. *microcephala* Fernald & Griscom

*Boltonia latisquama* A. Gray var. *occidentalis* A. Gray

*Boltonia latisquama* A. Gray var. *recognita* Fernald & Griscom

*Boltonia recognita* (Fernald & Griscom) G.N. Jones

***Brickellia*** [FNA21, HC, HC2]

Sketch Bot. S. Carolina. 2: 290. 1823.

brickellbush, brickellia, thoroughwort

***Brickellia grandiflora*** (Hook.) Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 287. 1840.

tasselflower brickellbush, large flowered tasselflower, large flowered thoroughwort

*Brickellia grandiflorum* Hook.

***Brickellia microphylla*** (Nutt.) A. Gray [FNA21, HC, HC2]

Smithsonian Contr. Knowl. 3(5): 85. 1852.

small-leaved brickellbush

var. ***microphylla*** [FNA21, HC, HC2]

Smithsonian Contr. Knowl. 3(5): 85.

small leaved brickellia

*Brickellia microphylla* (Nutt.) A. Gray var. *watsonii* (B.L. Rob.) S.L. Welsh

*Brickellia watsonii* B.L. Rob.

***Brickellia oblongifolia*** Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 288. 1840.

narrow-leaved brickellbush, narrow-leaved thoroughwort

var. ***oblongifolia*** [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 288.

narrowleaf brickellia

***Cacaliopsis*** [FNA20, HC2]

Proc. Amer. Acad. Arts. 19: 50. 1883.

cacaliopsis, silvercrown

***Cacaliopsis nardosmia*** (A. Gray) A. Gray [FNA20, HC2]

Proc. Amer. Acad. Arts. 19: 50. 1883.

silvercrown luina, tall silvercrown

*Cacalia nardosmia* A. Gray

*Cacaliopsis nardosmia* (A. Gray) A. Gray ssp. *glabrata* (Piper) Piper

*Luina nardosmia* (A. Gray) Cronquist [HC]

*Luina nardosmia* (A. Gray) Cronquist var. *glabrata* (Piper) Cronquist [HC]

Kz99 lumps the vars., as does Strother 1978, Chambers and Sundberg (2000) split them

***Calendula*** [FNA19, HC2]

Sp. Pl. 2: 921. 1753; Gen. Pl. ed. 5, 393. 1754.

*Calendula officinalis* L. [FNA19, HC2]

Sp. Pl. 2: 921. 1753.

pot marigold

garden origin? (Stace 1997) generally a waif, or spreading from gardens

***Canadanthus*** [FNA20, HC2]

Phytologia. 77: 250. 1995.

mountain aster

***Canadanthus modestus*** (Lindl.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 251. 1995.

few flowered aster, great northern aster

*Aster major* (Hook.) Porter

*Aster modestus* Lindl. [HC]

*Aster modestus* Lindl. var. *major* (Hook.) Muenscher

*Aster sayianus* Nutt.

*Aster unalaschensis* Less. ex Bong. var. *major* Hook.

*Weberaster modestus* (Lindl.) Å. Löve & D. Löve

***Carduus*** [FNA19, HC, HC2]

Sp. Pl. 2: 820. 1753; Gen. Pl. ed. 5, 358. 1754.

plumeless thistle

*Carduus acanthoides* L. [FNA19, HC, HC2]

Sp. Pl. 2: 821. 1753.

plumeless thistle, spiny plumeless thistle

ssp. *acanthoides* [FNA19, HC2]

*Carduus nutans* L. [FNA19, HC, HC2]

Sp. Pl. 2: 821. 1753.

musk thistle, nodding thistle

*Carduus pycnocephalus* L. [FNA19, HC, HC2]

Sp. Pl. Ed. 2., 2: 1151. 1763.

Italian plumeless thistle

ssp. *pycnocephalus* [FNA19, HC2]

Sp. Pl. Ed. 2., 2: 1151.

Italian plumeless thistle

*Carduus tenuiflorus* Curtis [FNA19, HC, HC2]

Fl. Londin. 2(6,61): plate 55. 1789.

slender flowered thistle, winged plumeless thistle

*Carduus pycnocephalus* L. var. *tenuiflorus* (Curtis) Fiori

FNA 19: "*Carduus tenuiflorus* has been reported from New Jersey, Texas, and Washington; I have not seen specimens from those states. *Carduus pycnocephalus* and *C. tenuiflorus* are similar annuals with small, usually tightly clustered heads. The number of heads per capitulescence is usually ultimately greater in *C. tenuiflorus*, but early season plants of this species often have only a few heads. At the end of the growing season the fruiting heads of *C. tenuiflorus* are aggregated in dense, subspheric clusters. Stem

wings tend to be more pronounced in *C. tenuiflorus*. Fresh corollas of *C. pycnocephalus* are rose-purple whereas those of *C. tenuiflorus* have a more pinkish tinge, but this difference is subtle and not reliable on herbarium material. The phyllaries of *C. tenuiflorus* are membranous-margined, more or less glabrate, and lack the short, stiff, upwardly appressed trichomes of *C. pycnocephalus*. All published chromosome counts for *Carduus tenuiflorus* from both Old and New World material are the same. The two species sometimes grow in mixed populations and at times appear to intergrade. Hybridization has been reported in Europe (S. W. T. Batra et al. 1981) and is suspected to occur in California. Hybrids between *C. pycnocephalus* and *C. tenuiflorus* have been designated *Carduus xtheriotii* Rouy."

***Carthamus*** [FNA19, HC, HC2]

Sp. Pl. 2: 830. 1753; Gen. Pl. ed. 5, 361. 1754.  
distaff thistle

***Carthamus tinctorius*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 830. 1753.  
safflower

***Centaurea*** [FNA19, HC, HC2]

Sp. Pl. 2: 909. 1753; Gen. Pl. ed. 5, 389. 1754.  
centaurea, knapweed, star-thistle  
(see also *Rhaponticum*)

***Cnicus*** [HC]

***Centaurea benedicta*** (L.) L. [FNA19, HC2]

Sp. Pl. Ed. 2., 2: 1296. 1763.  
blessed thistle

***Cnicus benedictus*** L. [HC]

FNA19: "Recent molecular phylogenetic studies (A. Susanna et al. 1995; N. Garcia-Jacas et al. 2000, 2001) have begun to clarify relationships within *Centaurea* and between *Centaurea* and other genera. Some taxa traditionally included within *Centaurea* (e.g., the two native North American species, *Centaurea americana* and *C. rothrockii*) fall outside the redefined generic boundaries and are here treated in *Plectocephalus*. Others usually placed into segregate genera (e.g., *Cnicus benedictus*) are firmly nested within *Centaurea*..... Although *Cnicus* has usually been recognized as a distinctive monotypic genus, it has been merged into *Centaurea* by various authors (e.g., K. Bremer 1994; G. Wagenitz and F. H. Hellwig 1996). Recent molecular systematic studies (N. Garcia-Jacas et al. 2000) provide additional evidence that it is nested within *Centaurea*."

***Centaurea calcitrapa*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 917. 1753.  
purple starthistle, red starthistle

FNA19 includes WA within the range of this species.

***Centaurea cyanus*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 911. 1753.  
bachelor's button, garden cornflower

***Centaurea diffusa*** Lam. [FNA19, HC, HC2]

Encycl. 1: 675. 1785.  
diffuse knapweed, tumble knapweed, white knapweed

***Centaurea xgerstlaueri*** Erdner [FNA, HC2]

meadow knapweed, protean knapweed  
(= *Centaurea jacea* x *Centaurea nigra* or *nigrescens*)

*Centaurea debeauxii* Godr. & Grenier ssp. *thuillieri* Dostál

*Centaurea xmoncktonii* C.E. Britton [FNA19]

*Centaurea nigra* L. x *Centaurea jacea* L.

*Centaurea pratensis* Thuill. [HC], superfluous renaming (illegitimate)

FNA19: "*Centaurea xmoncktonii* is native to Europe or originated in North America from European ancestry. Meadow knapweeds represent an array of mutually interfertile intermediates derived by

hybridization and backcrossing among the various cytotypes of the *Centaurea jacea* complex. The plants variously combine features of *C. jacea* and *C. nigra*, and perhaps *C. nigrescens* as well. The hybrid complex includes both diploids and tetraploids. Extremes approach the parental types. Meadow knapweeds are often present without either parent in the immediate vicinity. They are considered to be noxious weeds in British Columbia, Idaho, Oregon, and Washington. *Centaurea pratensis* J. L. Thuillier, sometimes applied to plants that belong here, is not a legitimate name." Chambers and Sundberg (2000) treat as *C. pratensis* Thuill., which is *C. jacea* × *nigra*.

*Centaurea iberica* Trevir. ex Spreng. [FNA19, HC2]

Syst. Veg. 3: 406. 1826.

Iberian knapweed, Iberian starthistle

FNA19: "Iberian star thistle is considered to be a noxious weed in several states of the western United States. Weed control measures in Oregon and Washington have apparently eradicated the species in those states. *Centaurea iberica* is very similar to *C. calcitrapa*, from which it differs by its pappose cypselae and often more robust habit." Chambers and Sundberg (2000) give author as Spreng. WA report is MT database Kz99, are there specimens?

*Centaurea jacea* L. [FNA19, HC, HC2]

Sp. Pl. 2: 914. 1753.

brown knapweed, brownray knapweed

*Centaurea macrocephala* Puschkarew ex Willd. [FNA19, HC2]

Sp. Pl. 3: 2298. 1803.

globe knapweed

*Centaurea melitensis* L. [FNA19, HC, HC2]

Sp. Pl. 2: 917. 1753.

Maltese starthistle, tocalote

*Centaurea montana* L. [FNA19, HC, HC2]

Sp. Pl. 2: 911. 1753.

mountain bluet, mountain cornflower, montane starthistle

*Centaurea nigra* L. [FNA19, HC, HC2]

Sp. Pl. 2: 911. 1753.

hardheads, black knapweed, lesser knapweed

*Centaurea nigrescens* Willd. [FNA19, HC2]

Sp. Pl. 3: 2288. 1803.

short fringed knapweed, Tyrol knapweed

*Centaurea dubia* Suter [HC]

*Centaurea dubia* Suter ssp. *nigrescens* (Willd.) Hayek

*Centaurea dubia* Suter ssp. *vochinensis* (Bernh. ex Rchb.) Hayek

*Centaurea jacea* L. ssp. *nigrescens* (Willd.) Celakovsky

*Centaurea transalpina* Schleich. ex DC.

*Centaurea vochinensis* Bernh. ex Rchb.

FNA19: Tyrol knapweed is considered to be a noxious weed in Washington and Oregon. In recent years there has been much controversy regarding the name(s) to be applied to the North American Tyrol knapweeds. The names *Centaurea vochinensis*, *C. nigrescens*, and *C. dubia* have all been used in twentieth-century North American floras, and J. T. Kartesz and C. A. Meacham (1999) have accepted *C. transalpina* as well. R. J. Moore (1972) tentatively accepted two species, *C. nigrescens* and *C. dubia*, placing *C. transalpina* and *C. vochinensis* as synonyms through application beneath both species. Moore discussed the considerable similarities and practical difficulties of differentiating the taxa. H. A. Gleason and A. Cronquist (1991) recognized *C. dubia* as including *C. nigrescens* and *C. vochinensis*. E. G. Voss (1972?1996, vol. 3) recognized *C. nigrescens* as including *C. dubia* and *C. vochinensis*. Kartesz and Meacham accept *C. nigrescens* as a species, including *C. vochinensis*; they also accept *C. transalpina* with *C. dubia* as a synonym. In our investigation of the North American Tyrol knapweeds we have not been able to distinguish more than one (admittedly variable) entity. At the species level the correct name for this taxon is *Centaurea nigrescens*. *Centaurea dubia* Suter, sometimes applied to plants that belong here, is not a valid name."

*Centaurea solstitialis* L. [FNA19, HC, HC2]

Sp. Pl. 2: 917. 1753.  
yellow starthistle, St. Barnaby's thistle

*Centaurea stoebe* L. [FNA19, HC2]

Sp. Pl. 2: 914. 1753.  
spotted knapweed

*ssp. australis* (A. Kern) Greuter [FNA, HC2]

spotted knapweed

*Centaurea biebersteinii* DC., misapplied

*Centaurea stoebe* L. *ssp. micranthos* (S.G. Gmel. ex Gugler) Hayek [FNA19]

FNA19 includes a brief reference to this taxon in the text for *C. stoebe*. BC flora uses this interpretation, noting it is closely related to *C. paniculata*, but Chambers and Sundberg (2000) think the use of *C. bieb.* for our plants may be misapplied, and "needs further study".

*Centaurea trichocephala* M. Bieb. ex Willd. [FNA19, HC2]

Sp. Pl., ed. 4 [Willdenow] 3(3): 2286.  
featherhead knapweed

FNA19: "A population of *Centaurea trichocephala* M. Bieberstein ex Willdenow (featherhead or hairy-head knapweed) was found in the late 1970s in a degraded pasture in eastern Washington (B. F. Roché and C. T. Roché 1991). A weed-control program was instituted, and the plants were successfully eradicated. Although it is apparently not established anywhere in North America, *C. trichocephala* is listed as a noxious weed in Oregon. These plants resemble *C. phrygia* in having elongate, pectinate-fringed phyllary appendages. In *C. trichocephala* the linear-filiform, featherlike appendages are much narrower than the phyllary bodies. Plants of the species spread by horizontal roots. According to Roché and Roché, *C. trichocephala* is apparently self-sterile; the Oregon plants spread clonally and formed no seeds."

\* Wagenitz, G. 1975. *Centaurea* L., pp. 465-585, in *Flora of Turkey and the East Aegean Islands*, vol. 5, P.H. Davis, ed. Edinburgh University Press, Edinburgh.

*Centaurea xvarnensis* Velen. [HC2]

hybrid diffuse knapweed, sand knapweed  
(= *Centaurea diffusa* x *Centaurea stoebe ssp. micranthos*)

*Centaurea xpsammogena* G. Gáyer

This name appears at the bottom of the description for *C. diffusa*. Both the International Plant Names Index (IPNI) and TROPICOS show this name published as "*Centaurea psammogena* Gayer". IPNI indicates that the name represents a taxon of hybrid origin.

*Centromadia* [FNA21, HC2]

Fl. Francisc. 4: 424. 1897.  
spikeweed

*Centromadia pungens* (Hook. & Arn.) Greene [FNA21, HC2]

Man. Bot. San Francisco. 196. 1894.  
common spikeweed

*Hemizonia pungens* (Hook. & Arn.) Torr. & A. Gray [HC]

*ssp. pungens* [FNA21, HC2]

Man. Bot. San Francisco. 196.  
common spikeweed, western spikeweed

*Hemizonia pungens* (Hook. & Arn.) Torr. & A. Gray *ssp. septentrionalis* D.D. Keck

*Hemizonia pungens* (Hook. & Arn.) Torr. & A. Gray *var. pungens* [HC]

*Hemizonia pungens* (Hook. & Arn.) Torr. & A. Gray *var. septentrionalis* (D.D. Keck) Cronquist [HC]

Noxious in WA. FNA21: "Subspecies *pungens* is circumscribed broadly to include subsp. *maritima* and subsp. *septentrionalis* based on morphologic and molecular data (B. G. Baldwin, unpubl.). As treated here, *Centromadia pungens* subsp. *pungens* occurs widely in central and northern California, and it is putatively introduced in southwestern California and outside the state."

***Chaenactis*** [FNA21, HC, HC2]

Prodr. 5: 659. 1836.

chaenactis, false-yarrow

***Chaenactis douglasii*** (Hook.) Hook. & Arn. [FNA21, HC, HC2]

Bot. Beechey Voy. 354. 1839.

hoary chaenactis, hoary false-yarrow

var. ***douglasii*** [FNA21, HC, HC2]

Bot. Beechey Voy. 354.

dustymaidens, hoary false yarrow

*Chaenactis douglasii* (Hook.) H. & A var. *achilleaefolia* (H. & A.) A. Nels. [HC]

*Chaenactis douglasii* (Hook.) Hook. & Arn. var. *achilleifolia* (Hook. & Arn.) A. Gray

*Chaenactis douglasii* (Hook.) Hook. & Arn. var. *glandulosa* Cronquist [HC]

*Chaenactis douglasii* (Hook.) Hook. & Arn. var. *montana* M.E. Jones [HC]

*Chaenactis douglasii* (Hook.) Hook. & Arn. var. *rubricaulis* (Rydb.) Ferris

*Chaenactis pedicularia* Greene

*Chaenactis ramosa* Stockw. [HC]

FNA21: "Most of the diploid elements of var. *douglasii* are distinctive and are connected by a morphologically continuous series of polyploids (usually assigned to var. *achilleifolia*). Some diploid forms (including var. *rubricaulis* and *Chaenactis ramosa*) appear repeatedly and discontinuously in suitable habitats. In particular, forms named var. *montana* seem to arise wherever the species reaches sufficient elevation. Such populations have no historic or genetic cohesion to justify their recognition as a collective taxon, even though their reduced stature may become genetically fixed in each instance. (Variety *alpina*, recognized below with hesitation, may be just an extreme such case.) " Possibly not a syn, Kz99, BC & Chambers and Sundberg (2000) differ

***Chaenactis thompsonii*** Cronquist [FNA21, HC, HC2]

Vasc. Pl. Pacif. N.W. 5: 123, fig. [p. 125]. 1955.

Thompson's pincushion

FNA21: "*Chaenactis thompsonii* appears to be sister to *C. evermannii*; it is known from the mountains of central and northwestern Washington. The similar habits of *C. thompsonii* and *C. ramosa* (= *C. douglasii* var. *douglasii*) appear to result from convergent evolution in the distinctive habitat of their type localities (Wenatchee Mountains), not from a close genetic relationship as suggested by Cronquist."

***Chondrilla*** [FNA19, HC, HC2]

Sp. Pl. 2: 796. 1753; Gen. Pl. ed. 5, 348. 1754.

gum-succory, skeletonweed

***Chondrilla juncea*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 796. 1753.

hogbite, rush skeletonweed, gum succory

FNA19: "*Chondrilla juncea* is native to the Mediterranean region of Europe, North Africa, and Asia Minor. It is a weed in North America (not listed as noxious at the federal level). Its deep and extensive root system competes strongly for soil moisture and nutrients and makes control difficult because it helps the plants survive drought, cultivation, grazing, and most selective herbicides. The large, stiff branches and stems interfere with harvesting. The species is said to be "the most serious weed of Australian wheat-growing regions" (F. D. Panetta and J. Dodd 1987). It also infests millions of acres in California, Idaho, Oregon, and Washington. *Chondrilla juncea* is an obligate apomict; its seeds are formed by a parthenogenetic process (E. Battaglia 1949). Nevertheless, the species is highly variable in morphology and biochemical traits."

***Chrysothamnus*** [FNA20, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 323. 1840.

rabbit-brush

(see also *Ericameria*)

***Chrysothamnus humilis*** Greene [FNA20, HC, HC2]

Pittonia. 3: 24. 1896.

Truckee green rabbitbrush, Truckee rabbitbrush

*Chrysothamnus viscidiflorus* (Hook.) Nutt. ssp. *humilis* (Greene) H.M. Hall & Clem.  
*Chrysothamnus viscidiflorus* (Hook.) Nutt. var. *humilis* (Greene) Jeps.  
*Ericameria humilis* (Greene) L.C. Anderson

Reported from WA in FNA.

***Chrysothamnus viscidiflorus* (Hook.) Nutt. [FNA20, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 324. 1840.

green rabbit-brush

ssp. ***lanceolatus* (Nutt.) H.M. Hall & Clem. [FNA20, HC2]**

Publ. Carnegie Inst. Wash. 326: 181. 1923.

green rabbitbrush, lanceleaf green rabbitbrush, sticky-leaf rabbitbrush, yellow rabbitbrush

*Chrysothamnus viscidiflorus* (Hook.) Nutt. var. *lanceolatus* (Nutt.) Greene [HC]

*Ericameria viscidiflora* (Hook.) L.C. Anderson ssp. *lanceolata* (Nutt.) L.C. Anderson

ssp. ***viscidiflorus* [FNA20, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 324.

sticky flowered rabbitbrush, sticky-leaf rabbitbrush, yellow rabbitbrush

*Chrysothamnus viscidiflorus* (Hook.) Nutt. ssp. *pumilus* (Nutt.) H.M. Hall & Clem.

*Chrysothamnus viscidiflorus* (Hook.) Nutt. ssp. *stenophyllus* (A. Gray) H.M. Hall & Clem.

*Chrysothamnus viscidiflorus* (Hook.) Nutt. var. *pumilus* (Nutt.) Jeps.

*Chrysothamnus viscidiflorus* (Hook.) Nutt. var. *stenophyllus* (A. Gray) H.M. Hall [HC]

*Chrysothamnus viscidiflorus* (Hook.) Nutt. var. *viscidiflorus* [HC]

*Ericameria viscidiflora* (Hook.) L.C. Anders. ssp. *viscidiflora*

*Ericameria viscidiflora* (Hook.) L.C. Anderson var. *stenophylla* (A. Gray) L.C. Anderson

***Cichorium* [FNA19, HC, HC2]**

Sp. Pl. 2: 813. 1753; Gen. Pl. ed. 5, 354. 1754.

chicory

***Cichorium intybus* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 813. 1753.

chicory, wild succory

***Cirsium* [FNA19, HC, HC2]**

Gard. Dict. Abr. ed. 4. vol. 1. 1754.

thistle

***Cirsium arvense* (L.) Scop. [FNA19, HC, HC2]**

Fl. Carniol. ed. 2. 2: 126. 1772.

Canada thistle, Canadian thistle, creeping thistle

*Cirsium arvense* (L.) Scop. var. *arvense* [HC]

*Cirsium arvense* (L.) Scop. var. *horridum* Wimm. & Grab. [HC]

*Cirsium arvense* (L.) Scop. var. *mite* Wimm. & Grab.

Kz99, Cronquist & Chambers and Sundberg (2000) lump the vars., H&C, Stace (1997) & BC recognize them.

***Cirsium brevifolium* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 421. 1841.

Palouse thistle

*Cirsium palousense* (Piper) Piper

\* Howell, J.T. 1959. Studies in *Cirsium*-II. Leaflets W. Botany 9: 9-15.

***Cirsium brevistylum* Cronquist [FNA19, HC, HC2]**

Leaf. W. Bot. 7: 26. 1953.

clustered thistle, short styled thistle

FNA19: "*Cirsium brevistylum* occurs in the coast ranges and adjacent coastal slope from southwestern British Columbia to southern California. In the Pacific Northwest its range extends inland to the northern Rocky Mountains of southern British Columbia, Idaho, and northwestern Montana, and the Blue and

Wallowa ranges of eastern Oregon. It is absent from the central and southern Cascade Range. In older literature the name *Cirsium edule* was widely misapplied to this species. A. Cronquist (1953) pointed out that the type of *C. edule* has corolla and style features quite different from those of the plants that had been called by that name and established the name *C. brevistylum*, based upon the notably short styles of this species. Hybrids of *C. brevistylum* with *C. edule* have been named *C. xvancouveriense* R. J. Moore & C. Frankton."

***Cirsium edule* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 420. 1841.

edible thistle

**var. *edule* [FNA19, HC2]**

edible thistle, Indian thistle, Macoun's thistle

*Carduus macounii* Greene

*Cirsium edule* Nutt. var. *macounii* (Greene) D.J. Keil [FNA19]

*Cirsium hallii* (A. Gray) M.E. Jones [HC]

*Cirsium macounii* (Greene) Petr.

**var. *wenatchense* D.J. Keil [FNA19, HC2]**

Sida. 21: 213. 2004.

Wenatchee thistle

FNA19: "Variety *wenatchense* is known only from the Wenatchee Mountains of central Washington. Little is known of its ecology." FNA key separates out this variety on the basis of th heads being mostly borne singly and peduncles 10?30 cm.

***Cirsium flodmanii* (Rydb.) Arthur [FNA19, HC, HC2]**

Torrey. 12: 34. 1912.

Flodman's thistle

reported by C. Bjork, is there a voucher?

***Cirsium foliosum* (Hook.) DC. [FNA19, HC2]**

Prodr. 6: 654. 1838.

leafy thistle

*Carduus foliosus* Hook.

***Cirsium foliosum* (Hook.) DC. [FNA19, HC2], misapplied**

Prodr. 6: 654. 1838.

leafy thistle

*Carduus foliosus* Hook.

***Cirsium hookerianum* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 418. 1841.

Hooker's thistle, white thistle

***Cirsium inamoenum* (Greene) D.J. Keil [FNA19, HC2]**

Sida. 21: 214. 2004.

Greene's thistle

*Cirsium wallowense* M. Peck

**var. *inamoenum* [FNA19, HC2]**

Sida. 21: 214.

Greene's thistle

*Cirsium neomexicanum* A. Gray [FNA19, HC2], misapplied

*Cirsium subniveum* Rydb. [HC]

Known from a single collection in Garfield County. FNA19: "Plants of northeastern Oregon, southeastern Washington, and adjacent western Idaho often have large heads and densely tomentose foliage. These were named *Cirsium wallowense* by Peck. Similar plants occur sporadically in other portions of the range of *Cirsium inamoenum* var. *inamoenum* and I chose not to recognize these northwestern populations as a third variety. Additional study might clarify the relationships of these plants."

***Cirsium remotifolium* (Hook.) DC. [FNA19, HC, HC2]**

Prodr. 6: 655. 1838.

fewleaf thistle, remote-leaved thistle

*Carduus remotifolius* Hook.

*Cirsium callilepis* (Greene) Jeps. [HC]

*Cirsium callilepis* (Greene) Jeps. var. *oregonense* (Petr.) J.T. Howell [HC]

*Cirsium remotifolium* (Hook.) DC. ssp. *remotifolium*

*Cirsium remotifolium* (Hook.) DC. var. *odontolepis* Petr. [FNA19]

*Cirsium remotifolium* (Hook.) DC. var. *remotifolium* [FNA19]

*Cirsium remotifolium* (Hook.) DC. var. *rivulare* Jeps. [FNA19]

FNA19: "Variety *remotifolium* occurs primarily west of the Cascade Range in Washington and Oregon and on coastal-facing slopes in northwestern California. Intermediates with var. *odontolepis* are known through much of that range." "*Cirsium remotifolium* occurs from the Coast Ranges and valleys of the Pacific Northwest to the western slopes of the Cascade and Klamath ranges, south in the California North Coast Ranges to the San Francisco Bay region. It is closely related to the *C. clavatum* complex of the Rocky Mountains region. Both have a similar growth habit and some forms variably express the character of broadly scarious, lacerate-toothed phyllary margins. Gray, in naming *Cnicus carlinoides* var. *americanus*, included as syntypes both California and Colorado specimens. F. Petrak (1917) treated both the West Coast plants and those of the Rocky Mountains as *Cirsium* subsect. *Americana*, recognizing *C. remotifolium* with several infraspecific taxa plus two other species, *C. callilepis* and *C. amblylepis* from the West Coast, and four additional species from the Rocky Mountains. A. Cronquist (1955) rejected Petrak's subspecies, treating *C. remotifolium* in a restricted sense, limited to plants of Washington and Oregon without dilated phyllary tips, and circumscribed *C. centaureae* broadly to include the Rocky Mountains and West Coast plants with dilated phyllary tips. Because of the frequent presence of dilated phyllary tips in *C. remotifolium* in the restricted sense, Cronquist acknowledged the likelihood of past introgression with *C. centaureae* in the broad sense. J. T. Howell (1960b) recognized three species: *Cirsium remotifolium*, *C. acanthodontum*, and *C. callilepis*, the latter with four varieties collectively corresponding to the West Coast representatives of *C. centaureae* (in the sense of Cronquist). Because of the great similarity of the various West Coast plants and their intergradation, I see no value in recognizing two or more species. The West Coast and Rocky Mountains plants are clearly related, but are separated by the Great Basin region and there is little chance of current genetic interchange. As is often the case with American *Cirsium*, genetic enrichment from past hybridization with other nearby species within their respective areas has likely been fertile ground for evolutionary diversification. Different species have contributed genes in the Pacific states and in the Rockies. I have chosen to recognize two geographically-based species complexes, each with intergrading races here treated as varieties. I treat the West Coast plants as *C. remotifolium* and the Rocky Mountains plants as *C. clavatum*."

***Cirsium scariosum* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 420. 1841.

elk thistle, meadow thistle

*Cirsium hookerianum* Nutt. var. *scariosum* (Nutt.) B. Boivin

*Cirsium magnificum* (A. Nelson) Petr. [HC]

*Cirsium scariosum* Nutt. var. *americanum* (A. Gray) D.J. Keil [FNA19]

*Cirsium scariosum* Nutt. var. *citrinum* (Petr.) D.J. Keil [FNA19]

*Cirsium scariosum* Nutt. var. *coloradense* (Rydb.) D.J. Keil [FNA19]

*Cirsium scariosum* Nutt. var. *congdonii* (R.J. Moore & Frankton) D.J. Keil [FNA19]

*Cirsium scariosum* Nutt. var. *robustum* D.J. Keil [FNA19]

*Cirsium scariosum* Nutt. var. *scariosum* [FNA19]

*Cirsium scariosum* Nutt. var. *thorneae* S.L. Welsh [FNA19]

*Cirsium scariosum* Nutt. var. *toyabense* D.J. Keil [FNA19]

*Cirsium tioganum* (Congdon) Petr. var. *tioganum*

***Cirsium undulatum* (Nutt.) Spreng. [FNA19, HC, HC2]**

Syst. Veg. 3: 374. 1826.

wavy leaf thistle

*Cirsium undulatum* (Nutt.) Spreng. var. *undulatum*

FNA19: "*Cirsium undulatum* is widely distributed in the western half of North America from the dry plains

and plateaus of the Pacific Northwest eastward across the Great Plains to Manitoba and the Dakotas and south to Texas, New Mexico, and northwestern Mexico. It occurs in scattered localities in the Rocky Mountains and northeastern Great Basin region. At least some of the few widely scattered records from the eastern United States are probably introductions. *Cirsium undulatum* is both widespread and variable. Plants of the Great Plains region tend to be low-growing with a few large heads and elongate corollas. Plants of the Pacific Northwest are usually taller and produce smaller, more numerous heads with shorter corollas. A detailed study of this species might reveal races worthy of recognition as infraspecific taxa. Wavyleaf thistle is listed by California as a noxious weed. However, most reports of *Cirsium undulatum* in California are based upon misidentifications of *C. canescens*. *Cirsium undulatum* is known to hybridize with *C. flodmanii*, *C. hookerianum*, and *C. scariosum* var. *coloradense*. J. T. Howell (1960b) reported that *C. undulatum* was suspected to hybridize with *C. brevifolium* in the Pacific Northwest."

*Cirsium vulgare* (Savi) Ten. [FNA19, HC, HC2]

Fl. Napol. 5: 209. 1835.  
bull thistle, common thistle

*Carduus vulgare* Savi

*Columbiadoria* [FNA20, HC2]

Phytologia. 71: 249. 1991.  
goldenweed

*Columbiadoria hallii* (A. Gray) G.L. Nesom [FNA20, HC2]

Phytologia. 71: 249. 1991.  
Columbia River daisy, Hall's goldenweed

*Haplopappus hallii* A. Gray [HC]

FNA20:"*Columbiadoria hallii* is known from the vicinity of the eastern Columbia River Gorge. It occurs also "at scattered stations [south] in the Cascades to the Calapooia Mountains," where the plants "are not precisely like the others, and may prove to be varietally distinct" (A. Cronquist 1955, p. 216)."

*Conyza* [FNA20, HC, HC2]

Syn. Gen. Compos. 203. 1832.  
conyza, horseweed

*Conyza bonariensis* (L.) Cronquist [FNA20, HC, HC2]

Bull. Torrey Bot. Club. 70: 632. 1943.

South American conyza

(see also *Conyza sumatrensis* var. *sumatrensis*)

recently reported from King Co. by A. L. Jacobson

*Conyza canadensis* (L.) Cronquist [FNA20, HC, HC2]

Bull. Torrey Bot. Club. 70: 632. 1943.

Canadian fleabane, horseweed

*Conyza canadensis* (L.) Cronquist var. *canadensis*

*Conyza canadensis* (L.) Cronquist var. *glabrata* (A. Gray) Cronquist

BC & Kz99 do not lump, Chambers and Sundberg (2000) do. FNA20:"*Conyza canadensis* is thought to be native to North America and is now widely adventive, e.g., in South America, Europe, Asia, and Africa. Plants with stems glabrous and phyllaries red-tipped are sometimes treated as var. *pusilla*; similar plants with stems glabrous and phyllaries stramineous (not red-tipped) are sometimes treated as var. *glabrata*."

*Conyza sumatrensis* (Retz.) E. Walker [HC2]

asthmaweed

*Conyza floribunda* Kunth [FNA20]

Recently collected (2016) in Seattle.

var. *sumatrensis* [HC2]

*Coreopsis* [FNA21, HC, HC2]

Sp. Pl. 2: 907. 1753; Gen. Pl. ed. 5, 388. 1754.

coreopsis, tickseed

*Coreopsis grandiflora* Hogg ex Sweet [FNA21, HC2]

Brit. Fl. Gard. 2: plate 175. 1826.  
bigleaf tickseed

*Coreopsis grandiflora* Hogg ex Sweet × *Coreopsis lanceolata* L. [HC2]

*Coreopsis lanceolata* L. [FNA21, HC2]

Sp. Pl. 2: 908. 1753.  
lance-leaved tickseed

Not in H&C. Recently (2008) collected in San Juan County.

*Coreopsis tinctoria* Nutt. [FNA21, HC, HC2]

J. Acad. Nat. Sci. Philadelphia. 2: 114. 1821.  
calliopsis, Columbia coreopsis, golden tickseed

*Coreopsis atkinsoniana* Douglas ex Lindl. [HC]

*Coreopsis tinctoria* Nutt. var. *atkinsoniana* (Douglas ex Lindl.) H.M. Parker ex E.B. Sm.

*Coreopsis tinctoria* Nutt. var. *tinctoria*

Kz99 has auth. as Parker ex E.B. Sm., Chambers and Sundberg (2000) do not. FNA21: "Coreopsis tinctoria is widely grown in public and residential gardens, and commercially (for cut flowers), and has become widely established in the flora area. As here circumscribed, Coreopsis tinctoria includes plants that others (without agreement among themselves) have treated as distinct species or infraspecific taxa: C. atkinsoniana (plants mostly 50?150+ cm, seldom branched from bases; cypselae 2.5?3 mm, "narrowly" winged; pappi 0.1?0.2 mm; mostly Idaho, Montana, Oregon, Washington), C. cardaminefolia (plants mostly 20?50 cm, seldom branched at bases; cypselae 2 mm, "narrowly to widely" winged; pappi 0 or 0.1?0.2 mm; mostly Arkansas, Kansas, Louisiana, Nebraska, Oklahoma, Texas), and C. tinctoria var. similis (plants mostly 10?30 cm, usually branched from bases; cypselae 2?3 mm, "widely" winged; pappi 0.2?1 mm; Texas and Mexico)."

\* Smith, E.B. 1975. The chromosome numbers of North American Coreopsis with phyletic implications. Bot. Gaz. 136: 78-86.

*Cota* [FNA19, HC2]

Fl. Sicul. Syn. 2: 866. 1845.  
chamomile

*Cota austriaca* (Jacq.) Sch. Bip. [HC2]

Oesterr. Bot. Wochenbl. 4: 155.  
Austrian chamomile

*Anthemis austriaca* Jacq. [Stace 1997]

*Cota tinctoria* (L.) J. Gay ex Guss. [FNA19, HC2]

Fl. Sicul. Syn. 2: 867. 1845.  
golden chamomile, yellow chamomile, golden marguerite, Golden marguerite

*Anthemis tinctoria* L. [HC, Stace 1997]

This species is not included in FNA19.

*Cota triumfettii* (L.) J. Gay [HC2]

Fl. Sicul. Syn. 2: 867. (dt. 1844; publ. Sep-Oct 1845?).

Collected (2013) in Kittitas County.

*Cotula* [FNA19, HC, HC2]

Sp. Pl. 2: 891. 1753; Gen. Pl. ed. 5, 380. 1754.  
cotula

*Cotula coronopifolia* L. [FNA19, HC, HC2]

Sp. Pl. 2: 892. 1753.  
brass buttons, common brass buttons

***Crepis*** [FNA19, HC, HC2]

Sp. Pl. 2: 805. 1753; Gen. Pl. ed. 5, 350. 1754.  
hawksbeard  
(see also *Askellia*)

***Crepis acuminata*** Nutt. [FNA19, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 437. 1841.  
long leaved hawksbeard, tapertip hawksbeard

*Crepis acuminata* Nutt. ssp. *acuminata* [HC]

***Crepis atribarba*** A. Heller [FNA19, HC2]

Bull. Torrey Bot. Club. 26: 314. 1899.  
slender hawksbeard

*Crepis atrabarba* Heller [HC], orthographic variant

*Crepis atrabarba* A. Heller ssp. *atrabarba* [HC], orthographic variant

*Crepis atrabarba* A. Heller ssp. *originalis* Babc. & Stebbins [HC], orthographic variant

*Crepis atribarba* A. Heller ssp. *atribarba*

*Crepis atribarba* A. Heller ssp. *originalis* (Babc. & Stebbins) Babc. & Stebbins

Ortho spelling *atrabarba* Chambers and Sundberg (2000). FNA19: "*Crepis atribarba* is generally recognized by the deeply pinnately lobed leaves with linear lobes, fine tomentulose indument on stems and leaves, setose phyllaries, and dark green, strongly ribbed cypselae. It is a variable mixture that includes polyploid, apomictic forms and hybrids with *C. acuminata* and other species. The typical form is recognized by its short stature, narrow pinnately lobed, tomentulose leaves, stems with 3?10 heads, and phyllaries with scattered, black, eglandular setae. Larger, more robust forms with stems 30?70 cm, 10?30+ heads, narrower involucre, and few or no black setae have been recognized as subsp. *originalis*. The latter was considered by E. B. Babcock (1947) to represent the original diploid form of the species; it is difficult to distinguish in practice."

***Crepis bakeri*** Greene [FNA19, HC, HC2]

Erythea. 3: 73. 1895.  
Baker's hawksbeard

*Crepis bakeri* Greene ssp. *bakeri* [FNA19, HC]

*Crepis bakeri* Greene ssp. *cusickii* (Eastw.) Babc. & Stebbins [FNA19]

*Crepis bakeri* Greene ssp. *idahoensis* Babc. & Stebbins [FNA19, HC]

FNA19: "*Crepis bakeri* is generally recognized by the low stature, dense rosettes of pinnately lobed leaves with coarsely dentate lobes, tomentose stems and leaves, stipitate-glandular hairs distally on stems, relatively large involucre, and densely flowered heads. It is considered closely related to *C. occidentalis*. Three somewhat weakly defined subspecies were recognized by E. B. Babcock (1947)."

***Crepis barbiger*** Leiberg ex Coville [FNA19, HC, HC2]

Contr. U.S. Natl. Herb. 3: 565, plate 26. 1896.  
bearded hawksbeard

FNA19: "*Crepis barbiger* is recognized by its relatively tall stature, deeply pinnately lobed leaves, tomentulose stems, and phyllaries with coarse, green, eglandular setae. It is a complex of polyploid, apomictic forms, combining characteristics of *C. atribarba*, *C. acuminata*, and *C. modocensis*, from which the species is presumed to have been derived by intercrossing (E. B. Babcock 1947)."

***Crepis capillaris*** (L.) Wallr. [FNA19, HC, HC2]

Linnaea. 14: 657. 1840.  
smooth hawksbeard

*Crepis capillaris* (L.) Wallr. var. *capillaris*

FNA19: "*Crepis capillaris* is recognized by its shallow root system, dense rosettes of coarsely dentate or pinnately lobed leaves, erect slender stems, auriculate-based cauline leaves, relatively small heads, phyllaries with double rows of black setae, and fluffy white pappi. It is weedy and can become a serious lawn pest. It is one of only three species of *Crepis* with  $2n = 6$ ; E. B. Babcock (1947) considered it to be advanced in the genus." Reports of var. *agrestis* Atkinson & Sharpe (1993) are not supported by a specimen.

***Crepis intermedia* A. Gray [FNA19, HC, HC2]**

Syn. Fl. N. Amer. 1(2): 432. 1884.

gray hawksbeard intermediate hawksbeard, limestone hawksbeard

***Crepis modocensis* Greene [FNA19, HC, HC2]**

Erythea. 3: 48. 1895.

low hawksbeard, Modoc hawksbeard

*Crepis modocensis* Greene ssp. *glareosa* (Piper) Babc. & Stebbins [FNA19]

*Crepis modocensis* Greene ssp. *modocensis* [FNA19, HC]

*Crepis modocensis* Greene ssp. *rostrata* (Coville) Babc. & Stebbins [FNA19, HC]

*Crepis modocensis* Greene ssp. *subacaulis* (Kellogg) Babc. & Stebbins [FNA19]

*Crepis rostrata* Coville

***Crepis nicaeensis* Balbis ex Pers. [FNA19, HC, HC2]**

Syn. Pl. 2: 376. 1807.

French hawksbeard, Turkish hawksbeard

FNA19 lists this as occurring in WA. FNA19: "Crepis nicaeensis is distinguished by the annual or biennial habit, shallow root system, hispid stems, and glabrate phyllaries enclosing outer cypselae. It is similar in habit to *C. biennis*, which differs in its larger heads and 13-20-ribbed cypselae; it is considered closely related to *C. capillaris* (E. B. Babcock 1947)."

***Crepis occidentalis* Nutt. [FNA19, HC, HC2, JPM]**

J. Acad. Nat. Sci. Philadelphia. 7: 29. 1834.

western hawksbeard

*Crepis occidentalis* Nutt. ssp. *conjuncta* Babc. & Stebbins [FNA19, HC]

*Crepis occidentalis* Nutt. ssp. *costata* (A. Gray) Babc. & Stebbins [FNA19, HC]

*Crepis occidentalis* Nutt. ssp. *occidentalis* [FNA19, HC]

*Crepis occidentalis* Nutt. ssp. *pumila* (Rydb.) Babc. & Stebbins [FNA19, HC]

*Crepis occidentalis* Nutt. var. *costata* A. Gray

Taxonomy follows Stebbins in Jepson Manual in not recognizing subspecies in species of *Crepis* that are largely apomictic. FNA19 does recognize four subspecies. FNA19: "Crepis occidentalis is recognized by the old, brown leaf bases persisting on caudices, by stems, leaves, and phyllaries gray-tomentose, and by loose, corymbiform arrays with relatively few, relatively large heads. It is widespread and polymorphic. Some specimens have coarse setae or black, stipitate glands on the phyllaries in addition to the tomentose indument, the stipitate glands sometimes extending proximally on stems. Four intergrading subspecies were recognized by E. B. Babcock (1947). The sexual diploid forms are found in subsp. *occidentalis* and occur in northern California and adjacent Nevada. The other subspecies are polyploid and apomictic (Babcock)."

***Crepis pleurocarpa* A. Gray [FNA19, HC2]**

Proc. Amer. Acad. Arts. 17: 221. 1882.

naked stemmed hawksbeard

*Crepis acuminata* Nutt. var. *pleurocarpa* (A. Gray) Jeps.

FNA19: "Crepis pleurocarpa is distinguished by its narrow, acuminate, silvery leaves, 5-10, strongly keeled phyllaries with conspicuous white, tomentose margins, strongly ribbed cypselae, and relatively few florets per head. Otherwise, it is very similar to *C. acuminata* and *C. intermedia*."

***Crepis runcinata* (E. James) Torr. & A. Gray [FNA19, HC, HC2]**

Fl. N. Amer. 2: 487. 1843.

dandelion hawksbeard, meadow hawksbeard

ssp. ***runcinata* [FNA19, HC, HC2]**

Fl. N. Amer. 2: 487.

dandelion hawksbeard, meadow hawksbeard

*Crepis runcinata* (E. James) Torr. & A. Gray ssp. *glauca* (Nutt.) Babc. & Stebbins [FNA19, HC]

*Crepis runcinata* (E. James) Torr. & A. Gray ssp. *hispidulosa* (Howell ex Rydb.) Babc. & Stebbins [FNA19, HC]

*Crepis runcinata* (E. James) Torr. & A. Gray ssp. *imbricata* Babc. & Stebbins [FNA19]

*Crepis runcinata* (E. James) Torr. & A. Gray var. *hispidulosa* Howell ex Rydb.

*Crepis setosa* Haller f. [FNA19, HC, HC2]

Arch. Bot. (Leipzig). 1(2): 1. 1797.

bristly hawksbeard, rough hawksbeard

FNA19: "Crepis setosa is recognized by its annual habit, shallow roots, coarsely setose stems, leaves, and involucre, the relatively large runcinate leaves, sagittate-laciniate cauline leaves, finely beaked cypselae, and white, fine pappus bristles."

*Crepis tectorum* L. [FNA19, HC, HC2]

Sp. Pl. 2: 807. 1753.

annual hawksbeard, narrow leaf hawksbeard, rooftop hawksbeard

*Crocidium* [FNA20, HC, HC2]

Fl. Bor.-Amer. 1: 335, plate 118. 1834.

crocidium, spring-gold

*Crocidium multicaule* Hook. [FNA20, HC, HC2]

Fl. Bor.-Amer. 1: 335, plate 118. 1834.

spring gold, gold star

*Crupina* [FNA19, HC, HC2]

Ann. Mus. Natl. Hist. Nat. 16: 157. 1810.

crupina

*Crupina vulgaris* Pers. ex Cass. [FNA19, HC, HC2]

Dict. Sci. Nat. ed 2. 12: 68. 1818.

bearded creeper, crupina

Couderc-LeVaillant and Roché (1993) report for WA

\* Couderc-LeVaillant, M. 1993. Evidence of multiple introduction of *Crupina vulgaris* in infestations in the western United States. *Madroño* 40: 63-65.

*Cyclachaena* [FNA21, HC2]

Index Seminum (Frankfurt). 1836: 4. 1838.

marsh-elder

*Cyclachaena xanthiifolia* (Nutt.) Fresenius [FNA21, HC2]

Index Seminum (Frankfurt). 1836: 4. 1836.

carelessweed, burweed marsh elder, tall marsh elder

*Iva xanthifolia* Nutt. [HC]

*Iva xanthiifolia* Nutt.

FNA21: "Cyclachaena xanthiifolia is thought to be native to North American prairies and is evidently adventive east of the Mississippi River and in western states. It was recorded once from California as a weed in commercially grown carrots (specimen in CAS)."

*Dieteria* [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 300. 1840.

tansyaster

*Dieteria canescens* (Pursh) Nutt. [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 300. 1840.

hoary-aster

*Machaeranthera canescens* (Pursh) A. Gray [HC]

var. *incana* (Lindl.) D.R. Morgan & R.L. Hartm. [FNA20, HC2]

Sida. 20: 1396. 2003.

tall hoary aster, hoary-aster

*Aster attenuatus* (Howell) Frye & Rigg ex M. Peck, illegitimate name

*Dieteria incana* (Lindl.) Torr. & A. Gray

*Diplopappus incanus* Lindl.

*Machaeranthera canescens* (Pursh) A. Gray var. *incana* (Lindl.) A. Gray

*Machaeranthera incana* (Lindl.) Greene

\* Turner, B.L. 1987. Taxonomic study of Machaeranthera, sections Machaeranthera and Hesperastrum (Asteraceae). Phytologia 62: 207-266.

***Doronicum*** [FNA20, HC2]

Sp. Pl. 2: 885. 1753; Gen. Pl. ed. 5, 377. 1754.  
leopard's bane

*Doronicum pardalianches* L. [FNA20, HC2]

Sp. Pl. 2: 885. 1753.  
great leopard's-bane

Recently (2014) collected in Skamania County.

***Eatonella*** [FNA21, HC, HC2]

Proc. Amer. Acad. Arts. 19: 19. 1883.  
Eatonella

*Eatonella nivea* (D.C. Eaton) A. Gray [FNA21, HC, HC2]

Proc. Amer. Acad. Arts. 19: 19. 1883.  
white Eatonella, white false tickhead

*Burielia nivea* D.C. Eaton

FNA21 does not show this species occurring in WA, however there are specimens from WA at WTU.

***Echinops*** [FNA19, HC, HC2]

Sp. Pl. 2: 814. 1753; Gen. Pl. ed. 5, 356. 1754.  
globe-thistle

*Echinops exaltatus* Schrad. [FNA19, HC2]

Hort. Gott. 2: 15, plate 9. 1811.  
tall globe thistle

voucher? reported in WA by Abrams, Kz99

*Echinops ritro* L. [FNA19, HC2]

Sp. Pl. 2: 815. 1753.  
southern globe-thistle

ssp. *ruthenicus* (M. Bieb.) Nyman [FNA19, HC2]

Consp. Fl. Eur. 2: 399. 1879.  
southern globe thistle

*Echinops ruthenicus* M. Bieb. [HC]

No specimens of this taxon are known from Washington, despite being reported in WA by Abrams and Kartesz. Until a specimen is produced from WA, this taxon will not be considered part of the flora.

*Echinops sphaerocephalus* L. [FNA19, HC2]

Sp. Pl. 2: 814. 1753.  
great globe thistle

FNA19: "Echinops sphaerocephalus is sometimes cultivated, and sometimes it escapes from cultivation."

***Erechtites*** [FNA20, HC, HC2]

Fl. Ludov. 65. 1817.  
burnweed, fireweed

*Erechtites glomeratus* (Desf. ex Poir.) DC. [FNA20, HC2]

Prodr. 6: 297. 1838.  
cut leaf burnweed, New Zealand burnweed, Australian fireweed

*Erechtites arguta* (A. Richardson) DC. [HC]

*Erechtites glomerata* (Desf. ex Poir.) DC.

FNA20 shows this species occurring in Washington.

*Erechtites hieraciifolius* (L.) Raf. ex DC. [FNA20, HC2]

Prodr. 6: 294. 1838.

eastern burnweed, eastern fireweed

*Erechtites hieracifolia* (L.) Raf. ex DC. [HC], orthographic variant

var. *hieraciifolius* [FNA20, HC2]

In A. P. de Candolle and A. L. P. P. de Candolle, Prodr. 6: 294.

American burnweed

FNA20: "Variety hieraciifolius is highly variable and mildly weedy. In the flora area, it occurs naturally from Quebec to Florida and westward to about the limits of the eastern deciduous forest; it is sporadically adventive on the West Coast and elsewhere in temperate regions."

*Erechtites minimus* (Poir.) DC. [FNA20, HC2]

Prodr. 6: 437. 1838.

Australian burnweed, toothed coast burnweed

*Erechtites minima* (Poir.) DC. [HC], orthographic variant

*Erechtites prenanthoides* (A. Richardson) DC.

*Senecio minimus* Poir. [JPM2]

*Ericameria* [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 318. 1840.

goldenbrush, rabbit-brush

*Ericameria bloomeri* (A. Gray) J.F. Macbr. [FNA20, HC2]

Contr. Gray Herb. 56: 36. 1918.

rabbitbush heath goldenrod, rabbitbrush goldenweed

*Haplopappus bloomeri* A. Gray [HC]

*Haplopappus bloomeri* A. Gray var. *angustatus* A. Gray

*Haplopappus bloomeri* A. Gray var. *bloomeri*

*Haplopappus bloomeri* A. Gray var. *sonnei* Greene

intergrades with *E. greenei*

*Ericameria greenei* (A. Gray) G.L. Nesom [FNA20, HC2]

Phytologia. 68: 153. 1990.

Greene's heath goldenrod, Greene's goldenweed

*Haplopappus bloomeri* A. Gray var. *greenei* (A. Gray) Cronquist

*Haplopappus greenei* A. Gray [HC]

*Haplopappus greenei* A. Gray var. *greenei*

*Haplopappus greenei* A. Gray var. *mollis* A. Gray

*Ericameria nana* Nutt. [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 319. 1840.

dwarf heath goldenrod, rubber weed

*Haplopappus nanus* (Nutt.) D.C. Eaton [HC]

WA report 1906 Contrib. from the US Nat. Herb. (Kz99), voucher? Neither FNA nor H&C include WA in the range of this species. WA Natural Heritage Program does not track this species. Based on this information, this species should be removed from the list.

*Ericameria nauseosa* (Pall. ex Pursh) G.L. Nesom & G.I. Baird [FNA20, HC2]

Phytologia. 75: 84. 1993.

common rabbit-brush

*Chrysothamnus nauseosus* (Pall. ex Pursh) Britton [HC]

var. *nana* (Cronquist) G.L. Nesom & G.I. Baird [FNA20, HC2]

Phytologia. 75: 87. 1993.

little rabbitbrush

*Chrysothamnus nauseosus* (Pall. ex Pursh) Britton ssp. *nana* (Cronquist) D.D. Keck

*Chrysothamnus nauseosus* (Pall. ex Pursh) Britton var. *nana* Cronquist [HC]

Nomenclature follows FNA20, and Chambers and Sundberg (2000), which do not use quadrinomials.

\* Nesom, G.L. and G.I. Baird. 1993. Completion of *Ericameria* (Asteraceae: Astereae), diminution of *Chrysothamnus*. *Phytologia* 75: 74-93.

var. ***speciosa*** (Nutt.) G.L. Nesom & G.I. Baird [FNA20, HC2]

*Phytologia*. 75: 87. 1993.  
rubber rabbitbrush

*Chrysothamnus nauseosus* (Pall. ex Pursh) Britton ssp. *albicaulis* (Nutt.) H.M. Hall & Clem.  
*Chrysothamnus nauseosus* (Pall. ex Pursh) Britton ssp. *speciosus* (Nutt.) H.M. Hall & Clem.  
*Chrysothamnus nauseosus* (Pall. ex Pursh) Britton var. *albicaulis* (Nutt.) Rydb. [HC]  
*Chrysothamnus nauseosus* (Pall. ex Pursh) Britton var. *speciosus* (Nutt.) H.M. Hall

Nesom & Baird (1993) made the transfer from *Chrysothamnus* to *Ericameria*.

***Ericameria resinosa*** Nutt. [FNA20, HC2]

*Trans. Amer. Philos. Soc.*, n. s. 7: 319. 1840.  
Columbian heath goldenrod, Columbia goldenweed  
*Haplopappus resinosus* (Nutt.) A. Gray [HC]

***Erigeron*** [FNA20, HC, HC2]

*Sp. Pl.* 2: 863. 1753; *Gen. Pl.* ed. 5, 371. 1754.  
daisy, erigeron, fleabane

***Erigeron acris*** L. [FNA20, HC, HC2]

*Sp. Pl.* 2: 863. 1753.  
(see also *Erigeron elatus*, *Erigeron nivalis*)

var. ***kamtschaticus*** (DC.) Herder [FNA20, HC2]

*Bull. Soc. Imp. Naturalistes Moscou*. 38: 392. 1865.  
bitter fleabane

*Erigeron acris* L. ssp. *politus* (Fr.) Schinz & R. Keller  
*Erigeron acris* L. var. *asteroides* (Andrz. ex Besser) DC. [HC]  
*Trimorpha acris* (L.) Gray var. *asteroides* (Andrz. ex Besser) G.L. Nesom

\* Nesom, G.L. 1992. Taxonomic notes on *Erigeron* (Asteraceae: Astereae) of California, Nevada, and Arizona. *Phytologia* 73: 186-202.

***Erigeron aliciae*** Howell [FNA20, HC, HC2]

*Fl. N.W. Amer.* 317. 1900.  
Eastwood's daisy, Alice's fleabane

***Erigeron annuus*** (L.) Pers. [FNA20, HC, HC2]

*Syn. Pl.* 2: 431. 1807.  
sweet scabrous erigeron, annual fleabane, eastern daisy fleabane

*Aster annuus* L.  
*Erigeron annuus* (L.) Pers. var. *discoideus* (Vict. & J. Rouss.) Cronquist

***Erigeron aureus*** Greene [FNA20, HC, HC2]

*Pittonia*. 2: 16. 1891.  
golden daisy, golden fleabane

*Erigeron aureus* Greene var. *acutifolius* Raup

FNA20: "*Erigeron aureus* var. *acutifolius* has leaves apically acute (versus rounded to broadly obtuse, sometimes emarginate, in the typical form) and is known only from the type locality, a peat bog in British Columbia (Peace River District). It was not listed or otherwise recognized in a recent flora of that province (G. W. Douglas et al. 1998?2002, vol. 1). *Erigeron xarthurii* B. Boivin was described as "sp. nov." and was noted to have originated as a hybrid between *E. acris* and *E. aureus*. It was treated by E. H. Moss and J. G. Packer (1983) as a hybrid. Specimens cited by Boivin are from widely separated localities in southwestern British Columbia and adjacent Alberta. It was included at specific rank in the treatment by A. C. Budd et al. (1987) but not by H. J. Scoggan (1978?1979, part 4) or G. W. Douglas et al. (1998?2002, vol. 1)."

***Erigeron basalticus* Hoover [FNA20, HC, HC2]**

Leafl. W. Bot. 4: 40. 1944.  
basalt fleabane

***Erigeron bloomeri* A. Gray [FNA20, HC, HC2]**

Proc. Amer. Acad. Arts. 6: 540. 1865.  
scabland fleabane

**var. *bloomeri* [FNA20, HC, HC2]**

Proc. Amer. Acad. Arts. 6: 540.  
bloomer's daisy, scabland fleabane

***Erigeron caespitosus* Nutt. [FNA20, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 307. 1840.  
tufted daisy, tufted fleabane

FNA20 lists WA within the range of this species, and H&C suggests that it occurs in WA. FNA20: "*Erigeron caespitosus* as recognized here is highly variable and perhaps justifiably could be divided into more than one taxon. Plants at lower elevations tend to produce tall stems branching above the middle and long, white rays. At higher elevations, especially in Idaho, western Montana, Utah, and Wyoming, stems tend to be shorter and simple and the rays commonly are blue to violet. In the Bitterroot Mountains (Ravalli and Deerlodge counties, Montana), short-stemmed, blue-rayed plants also have strigose cauline vestiture (in contrast to typically deflexed-hirtellous stems); these vestiture variants occur in the same area with plants apparently similar in all other features. Strigose populational variants also occur in Saskatchewan and Yukon, and *E. abajoensis*, largely distinguished by strigose cauline vestiture, might be considered a regional variant of *E. caespitosus*. In eastern Idaho and southwestern Montana, plants of *E. caespitosus* are commonly encountered with cauline leaves obovate and distinctly subclasping. Plants with strongly 3-nerved basal leaves occur in Carbon and Gallatin counties, Montana.

***Erigeron chrysopsidis* A. Gray [FNA20, HC, HC2]**

Syn. Fl. N. Amer. 1(2): 210. 1884.  
golden daisy, dwarf yellow fleabane

**var. *chrysopsidis* [FNA20, HC, HC2]**

In A. Gray et al., Syn. Fl. N. Amer. 1(2): 210.  
golden daisy, dwarf yellow fleabane, golden fleabane

*Erigeron chrysopsidis* A. Gray ssp. *chrysopsidis* [HC]

***Erigeron compositus* Pursh [FNA20, HC, HC2]**

Fl. Amer. Sept. 2: 535. 1813.  
cutleaf daisy, dwarf mountain fleabane, fernleaf fleabane, trifid mountain fleabane

*Erigeron compositus* Pursh var. *compositus* [HC]

*Erigeron compositus* Pursh var. *discoideus* A. Gray [HC]

*Erigeron compositus* Pursh var. *glabratus* Macoun [HC]

*Erigeron trifidus* Hook. [HC2], misapplied

FNA20: "Correlations among ploidal level, breeding systems, and morphologic variation have been studied in detail in *Erigeron compositus*. Five informally designated population systems of diploids are geographically restricted (all of the northwestern United States and adjacent Canada) and primarily sexual, compared to the polyploids, which are agamospermous and apparently of hybrid origin, at least in some cases (R. D. Noyes et al. 1995; Noyes and D. E. Soltis 1996). Reduction in ray floret laminae usually is correlated with polyploidy. Plants with 1-ternately lobed leaves have been identified as var. *glabratus*, an element of variation that does not have a geographic pattern. Among closely related species, *Erigeron compositus* is the only one that produces strongly thickened caudex branches; occasional collections show a tendency toward the slender, loose branches characteristic of the other species."

\* Noyes, R. D. and D. E. Soltis. 1996. Genotypic variation in agamospermous *Erigeron compositus* (Asteraceae). Amer. J. Bot. 83: 1292?1303.

\* Noyes, R. D., D. E. Soltis, and P. S. Soltis. 1995. Genetic and cytological investigations in sexual *Erigeron compositus* (Asteraceae). Syst. Bot. 20: 132?146.

***Erigeron corymbosus* Nutt. [FNA20, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 308. 1840.

foothill daisy, longleaf fleabane

***Erigeron davisii*** (Cronquist) G.L. Nesom [FNA20, HC2]

Sida. 21: 22. 2004.

Davis's daisy, Davis's fleabane

*Erigeron engelmannii* A. Nelson var. *davisii* (Cronquist) Cronquist [HC]

Specimens from southeastern WA.

***Erigeron disparipilus*** Cronquist [FNA20, HC, HC2]

Brittonia. 6: 194. 1947.

Snake River daisy, white cushion fleabane

***Erigeron divergens*** Torr. & A. Gray [FNA20, HC, HC2]

Fl. N. Amer. 2: 175. 1841.

diffuse daisy, spreading fleabane

FNA20: "Polyploidy and agamospermy apparently are common in *Erigeron divergens* and contribute to the variability and, probably to some extent, the polymorphism characteristic of this species. Diploids appear to be scattered through the range of the species, at least in its southern part."

var. *divergens* [HC2]

***Erigeron eatonii*** A. Gray [FNA20, HC, HC2]

Notes Compositae. 91. 1880.

Eaton's daisy

var. *villosus* (Cronquist) Cronquist [FNA20, HC, HC2]

Vasc. Pl. Pacif. N.W. 5: 175. 1955.

Eaton's shaggy daisy, Eaton's shaggy fleabane

*Erigeron eatonii* A. Gray ssp. *villosus* Cronquist

\* Strother, J.L. and W.J. Ferlatte. 1988. Review of *Erigeron eatonii* and allied taxa (Compositae: Astereae).  
Madroño 35: 77-91.

***Erigeron elatus*** (Hook.) Greene [FNA20, HC2]

Pittonia. 3: 164. 1897.

swamp fleabane

*Erigeron acris* L. var. *elatus* (Hook.) Cronquist [HC]

*Trimorpha acris* (L.) A. Gray var. *elatus* (Hook.) G.L. Nesom

*Trimorpha elata* (Hook.) G.L. Nesom

Reported from WA in FNA. Currently no specimens exist in Pacific Northwest herbaria.

***Erigeron elegantulus*** Greene [FNA20, HC, HC2]

Erythea. 3: 65. 1895.

volcanic daisy, blue dwarf fleabane

***Erigeron filifolius*** (Hook.) Nutt. [FNA20, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 308. 1840.

Peck's threadleaf fleabane

*Erigeron filifolius* (Hook.) Nutt. var. *filifolius* [HC]

*Erigeron filifolius* (Hook.) Nutt. var. *robustior* M. Peck [HC]

FNA20: "The densely white-strigose stem bases, linear-filiform leaves relatively unreduced distally, and relatively few heads with coiling, usually blue rays are distinctive for *Erigeron filifolius*. Proximal leaves are not clustered as a basal rosette; they are inserted on closely spaced nodes that are slightly more separated distally. Plants identified as var. *robustior* (with more ray florets, fewer heads, and thicker stems, centered in Oregon and Washington) intergrade with the typical form and apparently are separated arbitrarily."

***Erigeron flettii*** G.N. Jones [FNA20, HC, HC2]

Bot. Surv. Olympic Penins. 244. 1936.

Flett's fleabane, Olympic Mt. fleabane

FNA20: "Erigeron flettii differs from E. grandiflorus in having fewer, wider, consistently white rays, broadly spatulate basal leaves with bases constricted into narrow petioles longer than the blades and apices rounded or obtuse, less dense involucre vestiture, and strongly barbellate pappus bristles. It is known only from the Olympic Mountains."

**Erigeron glacialis** (Nutt.) A. Nelson [FNA20, HC2]

Bot. Gaz. 37: 270. 1904.  
glacier fleabane

var. **glacialis** [FNA20, HC2]

Bot. Gaz. 37: 270.  
peregrine fleabane

*Erigeron peregrinus* (Banks ex Pursh) Greene ssp. *callianthemus* (Greene) Cronquist [HC]

*Erigeron peregrinus* (Banks ex Pursh) Greene ssp. *callianthemus* (Torr. & A. Gray) Cronquist

*Erigeron peregrinus* (Banks ex Pursh) Greene var. *angustifolius* (A. Gray) Cronquist [HC]

*Erigeron peregrinus* (Banks ex Pursh) Greene var. *callianthemus* (Greene) Cronquist

*Erigeron peregrinus* (Banks ex Pursh) Greene var. *eucallianthemus* Cronquist [HC]

*Erigeron peregrinus* (Banks ex Pursh) Greene var. *peregrinus* [FNA20, HC2], misapplied

*Erigeron peregrinus* (Banks ex Pursh) Greene var. *scaposus* (Torr. & A. Gray) Cronquist [HC]

Plants previously included within E. peregrinus (except E. peregrinus var. thompsonii) are now included within E. glacialis var. glacialis.

**Erigeron grandiflorus** Hook. [FNA20, HC, HC2]

Fl. Bor.-Amer. 2: 18, plate 123. 1834.  
large-flowered fleabane

*Erigeron simplex* Greene [HC]

Known from single collection (1933) in Okanogan County.

**Erigeron howellii** (A. Gray) A. Gray [FNA20, HC, HC2]

Syn. Fl. N. Amer. 1(2): 209. 1884.  
Howell's daisy, Howell's fleabane

*Erigeron salsuginosus* (Richardson ex R. Br.) A. Gray var. *howellii* A. Gray

**Erigeron inornatus** (A. Gray) A. Gray [FNA20, HC, HC2]

Notes Compositae. 88. 1880.  
California rayless daisy

var. **inornatus** [FNA20, HC, HC2]

Notes Compositae. 88.  
California rayless daisy, unadorned fleabane

**Erigeron karvinskianus** DC. [FNA20, HC2]

Prodr. 5: 285. 1836.

**Erigeron leibergii** Piper [FNA20, HC, HC2]

Bull. Torrey Bot. Club. 28: 41. 1901.  
Leiberg's fleabane

**Erigeron linearis** (Hook.) Piper [FNA20, HC, HC2]

Contr. U.S. Natl. Herb. 11: 567. 1906.  
desert yellow daisy, lineleaf fleabane

*Diplopappus linearis* Hook.

*Erigeron peucephyllus* A. Gray

hybridizes with E. bloomeri (Chambers and Sundberg 2000)

**Erigeron lonchophyllus** Hook. [FNA20, HC, HC2]

Fl. Bor.-Amer. 2: 18. 1834.  
short rayed daisy, spear leaved fleabane

*Erigeron acris* L. ssp. *racemosus* (Nutt.) Clem. & E.G. Clem.

*Trimorpha lonchophylla* (Hook.) G.L. Nesom

***Erigeron nivalis*** Nutt. [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 311. 1841.  
northern daisy

*Erigeron acris* L. ssp. *debilis* (A. Gray) Piper

*Erigeron acris* L. var. *debilis* A. Gray [HC]

*Trimorpha acris* (L.) Gray var. *debilis* (A. Gray) G.L. Nesom

FNA20: "Erigeron nivalis usually has been treated as an infra-specific taxon within *E. acris*; the two are broadly sympatric in the northwestern United States and Canada without obvious intergrades. Both occur over a wide range of elevations and in similar habitats. *Erigeron nivalis* probably occurs in Nevada; it has not been taxonomically distinguished there. *Erigeron scotteri* was regarded by E. H. Moss and J. G. Packer (1983) as a synonym of *E. acris* (presumably var. *debilis* = *E. nivalis*; the heads are relatively small and borne singly)."

***Erigeron oregonus*** A. Gray [FNA20, HC, HC2]

Proc. Amer. Acad. Arts. 19: 2. 1883.  
gorge daisy, Oregon fleabane

***Erigeron peregrinus*** (Banks ex Pursh) Greene [FNA20, HC, HC2], misapplied

Pittonia. 3: 166. 1897.  
wandering daisy, wandering fleabane  
(see also *Erigeron glacialis*)

***Erigeron peregrinus*** (Banks ex Pursh) Greene [FNA20, HC, HC2]

Pittonia. 3: 166. 1897.  
wandering daisy, wandering fleabane  
(see also *Erigeron glacialis*)

var. ***thompsonii*** (S.F. Blake ex J.W. Thomp.) Cronquist [FNA20, HC, HC2]

Brittonia. 6: 144. 1947.

*Erigeron thompsonii* S.F. Blake ex J.W. Thomp.

Douglas et al. (1998) synonymize WA endemic var. *thompsonii*.

***Erigeron philadelphicus*** L. [FNA20, HC, HC2]

Sp. Pl. 2: 863. 1753.  
Philadelphia daisy, Philadelphia fleabane

var. ***philadelphicus*** [FNA20, HC2]

Sp. Pl. 2: 863.  
Philadelphia daisy, Philadelphia fleabane

***Erigeron piperianus*** Cronquist [FNA20, HC, HC2]

Brittonia. 6: 197. 1947.  
Piper's fleabane

***Erigeron poliospermus*** A. Gray [FNA20, HC, HC2]

Syn. Fl. N. Amer. 1(2): 210. 1884.  
hairy-seeded daisy, cushion fleabane

var. ***cereus*** Cronquist [FNA20, HC, HC2]

Brittonia. 6: 194. 1947.  
Kittitas fleabane

FNA20: "Variety *cereus* grows in Chelan, Douglas, Grant, and Kittitas counties, apparently occurring as an enclave within the range of the typical variety. The vestiture and elongate proximal internodes of var. *cereus* are distinctive even within the group of species most closely related to *Erigeron poliospermus*; intergrades with typical *E. poliospermus* in vestiture and habit appear to be relatively common. Analogous variants occur within *E. concinnus* and are recognized at varietal rank."

var. ***poliospermus*** [FNA20, HC, HC2]

Brittonia. 6: 194.  
hairy seeded daisy, cushion fleabane

***Erigeron pumilus*** Nutt. [FNA20, HC, HC2]

Gen. N. Amer. Pl. 2: 147. 1818.  
shaggy fleabane

var. ***intermedius*** (Cronquist) S.L. Welsh [FNA20, HC2]

Brittonia. 6: 180. 1947.  
shaggy fleabane

*Erigeron pumilus* Nutt. ssp. *intermedius* Cronquist [HC]  
*Erigeron pumilus* Nutt. var. *euintermidius* Cronquist [HC]  
*Erigeron pumilus* Nutt. var. *gracilior* Cronquist [HC]

FNA20: "Variety *gracilior* was described by A. Cronquist (1947) as "plants slender, the larger stems either not more than 1.5 mm thick near the base or bearing fewer than 5 heads." Such plants occur mostly in the southern part of the variety's range (mostly Idaho and Oregon, some in Washington); while the gracile tendency seems real, many arbitrary identifications must be made if two taxa are recognized."

var. ***pumilus*** [FNA20, HC2]

Gen. N. Amer. Pl. 2: 147.  
shaggy fleabane

*Erigeron pumilus* Nutt. ssp. *pumilus* [HC]

***Erigeron salishii*** G.W. Douglas & Packer [FNA20, HC2]

Canad. J. Bot. 66: 414, fig. 1. 1988.  
Salish daisy, star peak fleabane

often confused with *E. trifidus*, or *E. compositus*.

***Erigeron speciosus*** (Lindl.) DC. [FNA20, HC, HC2]

in A. P. de Candolle and A. L. P. P. de Candolle, Prodr. 5: 284  
showy daisy, triple nerved daisy, showy fleabane, splendid fleabane, triple nerved fleabane

*Erigeron speciosus* (Lindl.) DC. var. *macranthus* (Nutt.) Cronquist [HC]  
*Erigeron speciosus* (Lindl.) DC. var. *speciosus* [HC]  
*Erigeron subtrinervis* Rydb. ex Porter & Britton ssp. *conspicuus* (Rydb.) Cronquist  
*Erigeron subtrinervis* Rydb. ex Porter & Britton var. *conspicuus* (Rydb.) Cronquist [HC]  
*Stenactis speciosa* Lindl.

Taxonomy follows Flora of North America not recognizing varieties; FNA 20 (Nesom): "Plants glabrous and glandular on the phyllaries, stems, and leaves have been recognized as var. *macranthus*; they intergrade with hairier forms and do not show a coherent geographic pattern." WA report St. John (1963); reports for BC & OR (Kz99) misapplied (Chambers and Sundberg 2000).

***Erigeron strigosus*** Muhl. ex Willd. [HC, HC2]

branched daisy, daisy fleabane

var. ***septentrionalis*** (Fernald & Wiegand) Fernald [FNA20, HC, HC2]

Rhodora. 44: 340.  
prairie fleabane

*Erigeron strigosus* Muhl. ex Willd. ssp. *septentrionalis* (Fernald & Wiegand) Wagenitz

FNA and H&C (1973) both consider this taxon to be native. FNA20: "The distributional data given here are highly provisional; the author has not attempted to sort this taxon accurately, if it can be. According to A. Cronquist (1947), var. *septentrionalis* is scattered mostly in the northern half of the continent and (1994) is "found chiefly in New England and adjacent Canada." It is "morphologically transitional" to *Erigeron annuus* (A. Cronquist 1994) and, as implied by the synonymy, may be more appropriately treated as part of *E. annuus* (D. Frey et al. 2003). As noted by Fernald in the original description, the stems may be nearly glabrous or lightly hispid, in contrast to the more densely strigose to strigillose ones of typical *E. strigosus*." Cronquist (1955, Vol 5) believes western plants called this are hybrids (*E. annuus* × *strigosus*), and var. *septentrionalis* is native in e US.

var. ***strigosus*** [FNA20, HC, HC2]

Sp. Pl. 3: 1956.  
branching daisy, daisy fleabane

*Erigeron annuus* (L.) Pers. ssp. *strigosus* (Muhl. ex Willd.) Wagenitz

FNA considers and H&C (1973) consider this taxon native. Introduced (in OR, Chambers and Sundberg (2000), uncertain if native in BC (Douglas et al. 1998 Reported in WA by Creso (1984)

***Erigeron subtrinervis*** Rydb. ex Porter & Britton [FNA20, HC, HC2], misapplied

Mem. Torrey Bot. Club. 5: 328.  
three-veined fleabane

FNA20: "Erigeron subtrinervis is variable in vestiture, perhaps reflecting gene exchange with *E. speciosus*. *Erigeron speciosus* var. *mollis* (A. Gray) S. L. Welsh may be a recurrent hybrid; it is identified here within *E. subtrinervis*."

***Erigeron subtrinervis*** Rydb. ex Porter & Britton [FNA20, HC, HC2]

Mem. Torrey Bot. Club. 5: 328.  
three-veined fleabane

FNA20: "Erigeron subtrinervis is variable in vestiture, perhaps reflecting gene exchange with *E. speciosus*. *Erigeron speciosus* var. *mollis* (A. Gray) S. L. Welsh may be a recurrent hybrid; it is identified here within *E. subtrinervis*."

***Eriophyllum*** [FNA21, HC, HC2]

Gen. Sp. Pl. 28. 1816.  
woolly sunflower

***Eriophyllum lanatum*** (Pursh) J. Forbes [FNA21, HC, HC2]

Hort. Woburn. 183. 1833.  
common woolly sunflower

var. ***achilleoides*** (DC.) Jeps. [FNA21, HC2]

Man. Fl. Pl. Calif., 1118. 1925.

var. ***integrifolium*** (Hook.) Smiley [FNA21, HC, HC2]

Univ. Calif. Publ. Bot. 9: 378. 1921.  
Oregon sunshine

FNA21: "Variety *integrifolium* intergrades with var. *lanatum* in Oregon and Washington near the Columbia River. The intermediate populations that have been analyzed are polyploid (J. S. Mooring 2001)."

var. ***lanatum*** [FNA21, HC, HC2]

Gen. Sp. Pl. 28.  
common eriophyllum, common woolly sunflower

var. ***leucophyllum*** (DC.) W.R. Carter [FNA21, HC2]

Prelim. Cat. Fl. Vancouver. 82. 1921.

***Eucephalus*** [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 298. 1840.  
aster

***Eucephalus engelmannii*** (D.C. Eaton) Greene [FNA20, HC2]

Pittonia. 3: 54. 1896.  
Engelmann's aster

*Aster engelmannii* (D.C. Eaton) A. Gray [HC]

***Eucephalus glaucescens*** (A. Gray) Greene [FNA20, HC2]

Pittonia. 3: 56. 1896.  
Klickitat aster

*Aster engelmannii* (D.C. Eaton) A. Gray var. *glaucescens* A. Gray  
*Aster glaucescens* (A. Gray) S.F. Blake [HC]

FNA20: "*Eucephalus glaucescens* is known from the vicinity of Mt. Adams in Klickitat, Skamania, and Yakima counties. Intermediates with *E. ledophyllum* have been reported."

***Eucephalus ledophyllum*** (A. Gray) Greene [FNA20, HC2]

Pittonia. 3: 55. 1896.

Cascade aster

*Aster ledophyllus* (A. Gray) A. Gray [HC]

var. ***ledophyllus*** [FNA20, HC2]

Pittonia. 3: 55.

Cascade aster

*Aster ledophyllus* (A. Gray) A. Gray var. *ledophyllus* [HC]

***Eucephalus paucicapitatus*** (B.L. Rob.) Greene [FNA20, HC2]

Pittonia. 3: 56. 1896.

Olympic Mountain aster

*Aster paucicapitatus* (B.L. Rob.) B.L. Rob. [HC]

***Eurybia*** [FNA20, HC2]

Dict. Sci. Nat. ed. 2. 16: 46. 1820.

aster

***Eurybia conspicua*** (Lindl.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 259. 1995.

showy aster, western showy aster, eastern showy wood-aster

*Aster conspicuus* Lindl. [HC]

***Eurybia integrifolia*** (Nutt.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 260. 1995.

thick stemmed aster

*Aster amplexifolius* Rydb.

*Aster integrifolius* Nutt. [HC]

FNA20: "Eurybia integrifolia is found in mountain ranges bordering the Basin and Range Province, from the Sierra Nevada and Cascade ranges in the west to the Rocky Mountains and Colorado Plateau in the east."

***Eurybia merita*** (A. Nelson) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 260. 1995.

arctic aster, Behring wood aster, Siberian aster, subalpine aster

*Aster meritus* A. Nelson

*Aster sibiricus* L. ssp. *meritus* (A. Nelson) G.W. Douglas [ILBC1]

*Aster sibiricus* L. var. *meritus* (A. Nelson) Raup [HC]

FNA20: "Eurybia sibirica has often been confused at its southern range limit with E. merita, from which it differs by its often more low-cespitose habit (versus more erect habit, but smaller individuals may be similar in this respect), usually more serrate leaves (versus subserrate to nearly entire), and subequal, foliaceous, purplish phyllaries (versus unequal, non-foliaceous, purple-margined). At the southern end of its range, near the Canada?United States border, E. sibirica is usually found at higher elevations than its congener, there at its northern limit. Aster sibiricus forma albinus Lepage is merely a color variant of the species and is not recognized here."

***Eurybia radulina*** (A. Gray) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 261. 1995.

rough leaved aster

*Aster radulinus* A. Gray [HC]

***Eurybia sibirica*** (L.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 261. 1995.

arctic aster, Behring wood aster, Siberian aster, Siberian wood-aster

*Aster sibiricus* L. [HC]

*Aster sibiricus* L. ssp. *sibiricus*

FNA20: "Eurybia sibirica has often been confused at its southern range limit with E. merita, from which it differs by its often more low-cespitose habit (versus more erect habit, but smaller individuals may be similar

in this respect), usually more serrate leaves (versus subserrate to nearly entire), and subequal, foliaceous, purplish phyllaries (versus unequal, non-foliaceous, purple-margined). At the southern end of its range, near the Canada?United States border, *E. sibirica* is usually found at higher elevations than its congener, there at its northern limit. *Aster sibiricus* forma *albinus* Lepage is merely a color variant of the species and is not recognized here."

***Euthamia*** [FNA20, HC2]

Dict. Sci. Nat. ed. 2. 37: 471. 1825.  
grass-leaved goldenrod

***Euthamia graminifolia*** (L.) Nutt. [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 325. 1840.  
fragrant goldenrod, grass leaved goldenrod

*Euthamia graminifolia* (L.) Nutt. var. *major* (Michx.) Moldenke

*Solidago graminifolia* (L.) Salisb. [HC]

*Solidago graminifolia* (L.) Salisb. var. *major* (Michx.) Fernald [HC]

WA report in Abrams and FNA20, however no voucher at WTU.

***Euthamia occidentalis*** Nutt. [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 326. 1840.  
western goldenrod, western goldentop

*Euthamia californica* Gand.

*Euthamia linearifolia* Gand.

*Solidago occidentalis* (Nutt.) Torr. & A. Gray [HC]

***Eutrochium*** [FNA21, HC2]

New Fl. 4: 78. 1838.  
Joe-pye weed

***Eutrochium maculatum*** (L.) E.E. Lamont [FNA21, HC2]

Sida. 21: 902. 2004.  
spotted Joe-pye weed

*Eupatoriadelphus maculatus* (L.) R.M. King & H. Rob.

*Eupatorium maculatum* L. [HC]

var. ***bruneri*** (A. Gray) E.E. Lamont [FNA21, HC2]

Sida. 21: 902. 2004.

joe-pye weed, joe-pyeweed

*Eupatorium maculatum* L. ssp. *bruneri* (A. Gray) G.W. Douglas

*Eupatorium maculatum* L. var. *bruneri* (A. Gray) Breitung [HC]

(Douglas et al. 1998) state probably introduced in BC

***Filago*** [FNA19, HC, HC2]

Sp. Pl. 2: 927, 1199. 1753; Gen. Pl. ed. 5, 397. 1754.  
filago

***Filago arvensis*** L. [HC, HC2]

Sp. Pl. 2: add. 1753

field cottonrose, cudweed, field filago, field cotton rose

*Logfia arvensis* (L.) Holub [FNA19]

*Oglifa arvensis* (L.) Cass.

FNA: "Logfia arvensis appears to be basal or nearly so in Logfia and Filagininae (J. D. Morefield 1992); only 2?4 epappose florets are present in most heads.....The earliest specimen confirmed from the flora area was from Bonner County, Idaho, in 1934."

***Filago vulgaris*** Lam. [FNA19, HC2]

Fl. Franç. 2: 61. 1779.

German filago

*Filago germanica* L., homonym (illegitimate)

voucher? only WA report in Atkinson & Sharpe (1993) some BC records of this from the Gulf Islands have been annot. to *F. pyramidata*

**Gaillardia** [FNA21, HC, HC2]

Observ. Phys. 29: 55. 1786 (as Gaillarda); Hist. Acad. Roy. Sci. Mém. Math. Phys. (Paris, 4to) 1786: 5. 1788.  
blanket-flower, gaillardia

**Gaillardia aristata** Pursh [FNA21, HC, HC2]

Fl. Amer. Sept. 2: 573. 1813.  
blanket flower, great flowered gaillardia

**Gaillardia xgrandiflora** Van Houtte [FNA21]

Ex Fl. des Serres, xiii. 1 t. 1183.  
blanketflower

FNA21: "Some horticultural gaillardias may be derived from hybrids (e.g., *Gaillardia xgrandiflora* van Houtte) involving *G. aristata* and some other species (probably *G. pulchella*). Such horticultural plants sometimes persist after cultivation or occur sporadically as waifs in places well beyond the "natural" ranges of the "parent" species; e.g., scattered localities in Arizona and California."

**Galinsoga** [FNA21, HC, HC2]

Fl. Peruv. Prodr. 110, plate 24. 1794.  
garden pest, quickweed

**Galinsoga parviflora** Cav. [FNA21, HC2]

Icon. 3: 41, plate 281. 1795.

**var. parviflora** [FNA21, HC2]

Icon. 3: 41, plate 281.  
small flowered galinsoga, gallant soldier

\* Canne, J.M. 1977. A revision of the genus *Galinsoga* (Compositae: Heliantheae). *Rhodora* 79: 319-389.

**Galinsoga quadriradiata** Ruiz & Pav. [FNA21, HC2]

Syst. Veg. Fl. Peruv. Chil. 1: 198. 1798.  
ciliate galinsoga, shaggy galinsoga, quickweed, shaggy soldier  
*Galinsoga ciliata* (Raf.) S.F. Blake [HC]

**Gamochoaeta** [FNA19, HC2]

Chlor. Andina. 1: 151. 1856.  
cudweed

**Gamochoaeta ustulata** (Nutt.) Holub [FNA19, HC2]

Folia Geobot. Phytotax. 11: 83. 1976.  
purple cudweed, spoon-leaf cudweed

*Gamochoaeta purpurea* (L.) Cabrera [FNA19], misapplied  
*Gnaphalium purpureum* L. var. *ustulatum* (Nutt.) B. Boivin

FNA Volume 19: "Gamochoaeta ustulata usually has been included in *G. purpurea*; it differs mostly in its longer duration, thicker and shorter stems, larger, more compact arrays of larger, brown heads, and aspects of phyllary morphology."

**Gnaphalium** [FNA19, HC, HC2]

Sp. Pl. 2: 850. 1753; Gen. Pl. ed. 5, 368. 1754.  
cudweed, everlasting  
(see also *Gamochoaeta*, *Pseudognaphalium*)

**Gnaphalium palustre** Nutt. [FNA19, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 403. 1841.  
lowland cudweed, western marsh cudweed

*Filaginella palustris* (Nutt.) Holub

*Gnaphalium heteroides* Klatt  
*Gnaphalium palustre* Nutt. var. *nanum* Jeps.

*Gnaphalium uliginosum* L. [FNA19, HC, HC2]

Sp. Pl. 2: 856. 1753.  
marsh cudweed

FNA19: "Gnaphalium uliginosum is native to Europe; it is not clear whether some or all of the North American plants may have been introduced into the flora."

*Grindelia* [FNA20, HC, HC2]

Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesamnten Naturk. 1: 259. 1807.  
grindelia, gumplant, gumweed, resinweed

*Grindelia hirsutula* Hook. & Arn. [FNA20, HC2]

Bot. Beechey Voy. 147. 1833.  
Columbia gumplant, Oregon gumplant, coastal gumweed, Columbia gumweed, Idaho gumweed, low gumweed, resinweed

*Grindelia arenicola* Steyerem.

*Grindelia columbiana* (Piper) Rydb. [HC]

*Grindelia integrifolia* DC. var. *macrophylla* (Greene) Cronquist [HC]

*Grindelia nana* Nutt. [HC]

*Grindelia nana* Nutt. ssp. *columbiana* Piper

*Grindelia nana* Nutt. ssp. *nana*

*Grindelia nana* Nutt. var. *discoidea* (Nutt.) A. Gray

*Grindelia nana* Nutt. var. *integerrima* (Rydb.) Steyerem.

*Grindelia nana* Nutt. var. *integrifolia* Nutt. [HC]

*Grindelia nana* Nutt. var. *nana* [HC]

*Grindelia squarrosa* (Pursh) Dunal var. *quasiperennis* Lunell [HC]

*Grindelia stricta* DC. ssp. *stricta*

*Grindelia stricta* DC. var. *stricta*

See Flora of North America, Volume 20 for comprehensive synonymy list for this species.

*Grindelia integrifolia* DC. [FNA20, HC, HC2]

Prodr. 5: 315. 1836.

Puget Sound gumplant, Puget Sound gumweed, Willamette Valley gumweed  
(see also *Grindelia hirsutula*)

*Grindelia integrifolia* DC. var. *integrifolia* [HC]

FNA20: "But for the stipitate-glandular apices of the phyllaries, plants of *Grindelia integrifolia* are very much like some plants treated here in *G. hirsutula*. Taxonomic status for plants that have been called *G. integrifolia* should be reconsidered."

*Grindelia squarrosa* (Pursh) Dunal [FNA20, HC, HC2]

Mém. Mus. Hist. Nat. 5: 50. 1819.

curlycup gumweed, serrate resinweed  
(see also *Grindelia hirsutula*)

*Grindelia squarrosa* (Pursh) Dunal var. *serrulata* (Rydb.) Steyerem. [HC]

*Grindelia squarrosa* (Pursh) Dunal var. *squarrosa* [HC]

FNA20: "*Grindelia squarrosa* is probably native to the Great Plains and, perhaps, Rocky Mountain areas; it is widely introduced in other areas. Some plants are intermediate between it and *G. hirsutula* (i.e., between *G. squarrosa* and *G. perennis*, which has been treated as a variety of *G. squarrosa*). Plants of *G. squarrosa* with relatively narrow leaf blades (lengths mostly 5-8 times widths), mostly from the western part of the range of the species, have been treated as *G. squarrosa* var. *serrulata*. G. L. Nesom (1990i) and others have treated discoid plants included here in *G. squarrosa* as distinct (as *G. aphanactis*, *G. nuda*, and/or *G. nuda* vars. *aphanactis* and *nuda*); Nesom reported cypselae to be dimorphic in heads of radiate plants and monomorphic in discoid plants and noted that populations with discoid plants occur mostly south and west of populations with radiate plants. According to Nesom, plants of *G. nuda* with stems usually reddish (versus sometimes greenish), lengths of blades of mid-cauline leaves 4-10 (versus

1.5?4) times widths, and cypselae  $\hat{A}\pm$  deeply furrowed (versus striate to shallowly furrowed) should be called *G. nuda* var. *aphanactis*."

**Guizotia** [FNA21, HC2]

Dict. Sci. Nat. ed. 2. 59: 237, 247, 248. 1829.

*Guizotia abyssinica* (L. f.) Cass. [FNA21, HC2]

Dict. Sci. Nat. ed. 2. 59: 248. 1829.

*Polymnia abyssinica* L. f.

FNA21: "In the flora area, *Guizotia abyssinica* has been recorded sporadically at widely scattered stations (evidently often from birdseed wastes); it may be persistently established at relatively few stations."

**Gutierrezia** [FNA20, HC, HC2]

Gen. Sp. Pl. 30. 1816.

matchbrush, matchweed, snakeweed

*Gutierrezia sarothrae* (Pursh) Britton & Rusby [FNA20, HC, HC2]

Trans. New York Acad. Sci. 7: 10. 1887.

kindlingweed, matchweed, broom snakeweed

FNA20: "*Gutierrezia sarothrae* is often abundant in overgrazed pastures."

**Helenium** [FNA21, HC, HC2]

Sp. Pl. 2: 886. 1753; Gen. Pl. ed. 5, 377. 1754.

sneezeweed

*Helenium autumnale* L. [FNA21, HC, HC2]

Sp. Pl. 2: 886. 1753.

common sneezeweed, large flowered sneezeweed, mountain sneezeweed

*Helenium autumnale* L. var. *autumnale*

*Helenium autumnale* L. var. *grandiflorum* Torr. & A. Gray [HC]

*Helenium autumnale* L. var. *montanum* (Nutt.) Fernald [HC]

\* Bierner, M.W. 1972. Taxonomy of *Helenium* sect. *Tetrodus* and a conspectus of North American *Helenium* (Compositae). *Brittonia* 24: 331-355.

**Helianthella** [FNA21, HC, HC2]

Fl. N. Amer. 2: 333. 1842.

helianthella, little-sunflower

*Helianthella uniflora* (Nutt.) Torr. & A. Gray [FNA21, HC, HC2]

Fl. N. Amer. 2: 334. 1842.

Rocky Mountain helianthella

var. *douglasii* (Torr. & A. Gray) W.A. Weber [FNA20, HC, HC2]

Fl. N. Amer. 2: 334.

Douglas helianthella, false sunflower

FNA20: "Two infraspecific taxa within *Helianthella uniflora* may be distinguished; they have been named at varietal rank. Variety *douglasii* has stems hirsute; involucre (15?)20?25(?30) mm diam.; outer phyllaries rarely elongated, margins ciliate, abaxial faces sparsely puberulent; ray laminae 30?40 mm; and  $2n = 30$ . It grows in grasslands in the northern Rocky Mountains and on the east side of the Cascade Range (B.C.; Idaho, Oreg., Wash.) at 300?2500 m where it flowers May?Jul." See Weber (1952)

\* Weber, W.A. 1952. The genus *Helianthella* (Compositae). *American Midland Naturalist* 48: 1-35.

**Helianthus** [FNA21, HC, HC2]

Sp. Pl. 2: 904. 1753; Gen. Pl. ed. 5, 386. 1754.

sunflower

*Helianthus annuus* L. [FNA21, HC, HC2]

Sp. Pl. 2: 904. 1753.

common sunflower

*Helianthus annuus* L. ssp. *lenticularis* (Douglas ex Lindl.) Cockerell

FNA21: "Helianthus annuus is widely distributed, including weedy, cultivated, and escaped plants. It is the only native North American species to become a major agronomic crop. Despite its considerable variability, attempts have failed to produce a widely adopted infraspecific system of classification. Forms with red-colored ray laminae, known from cultivation and occasionally seen escaped, trace their ancestry to a single original mutant plant. It hybridizes with many of the other annual species."

\* Clevenger, S. and C.B. Heiser Jr. 1963. *Helianthus laetiflorus* and *Helianthus rigidus*? hybrids or species? *Rhodora* 65: 121-133.

\* Heiser, C.B. 1949. Study in the evolution of the sunflower species *Helianthus annuus* and *Helianthus bolanderi*. *Univ. Calif. Publ. Bot.* 23: 157-208.

\* Heiser, C.B. 1969. The North American sunflowers (*Helianthus*). *Mem. Torrey Bot. Club* 22: 1-218.

*Helianthus ciliaris* DC. [FNA21, HC2]

*Prodr.* 5: 587. 1836.

*Helianthus cusickii* A. Gray [FNA21, HC, HC2]

*Proc. Amer. Acad. Arts.* 21: 413. 1886.

Cusick's sunflower, turniproot sunflower

*Helianthus grosseserratus* M. Martens [FNA21, HC, HC2]

*Index Seminum* (Louvain). 1839: unpag. 1839.

sawtooth sunflower

*Helianthus maximiliani* Schrad. [FNA21, HC2]

*Index Seminum* (Göttingen). 1834: unpag. 1835.

narrow leaved sunflower

*Helianthus maximilianii* Schrad. [HC]

\* 1959 *Mem. of the Torrey Bot. Cl., WA report*

*Helianthus nuttallii* Torr. & A. Gray [FNA21, HC, HC2]

*Fl. N. Amer.* 2: 324. 1842.

Nuttall's sunflower

ssp. *nuttallii* [FNA21, HC2]

*Fl. N. Amer.* 2: 324.

cordilleran sunflower, Nuttall's sunflower

*Helianthus nuttallii* Torr. & A. Gray var. *nuttallii* [HC]

*Helianthus petiolaris* Nutt. [FNA21, HC, HC2]

*J. Acad. Nat. Sci. Philadelphia.* 2: 115. 1821.

prairie sunflower

*Helianthus petiolaris* Nutt. var. *petiolaris*

ssp. *petiolaris* [FNA21, HC2]

*Helianthus tuberosus* L. [FNA21, HC, HC2]

*Sp. Pl.* 2: 905. 1753.

Jerusalem artichoke

*Heliopsis* [FNA21, HC, HC2]

*Syn. Pl.* 2: 473. 1807.

*Heliopsis helianthoides* (L.) Sweet [FNA21, HC, HC2]

*Hort. Brit.* 487. 1826.

var. *scabra* (Dunal) Fernald [FNA21, HC, HC2]

*Rhodora.* 44: 340. 1942.

western oxeye

*Heliopsis helianthoides* (L.) Sweet ssp. *occidentalis* T.R. Fisher

*Heliopsis helianthoides* (L.) Sweet var. *occidentalis* (T.R. Fisher) Steyerem.

voucher? only WA report Kz99 "pers com" BC report from 1904, as var. *scabra* (Douglas et al. 1989), surely = var. *occidentalis*. FNA21: "Variety *scabra* is reported as introduced in British Columbia, Newfoundland, Prince Edward Island, and perhaps Quebec (H. J. Scoggan 1978?1979, part 4). Varieties (subsp.) *scabra* and *occidentalis* intergrade so completely and intermediate plants are so numerous that it seems futile to draw taxonomic lines. In general, some plants traditionally treated as var. *scabra* (in the strict sense) have somewhat narrower leaf blades and longer petioles than most plants treated as var. *occidentalis*."

***Helminthotheca* [FNA19, HC2]**

Cat. Pl. Hort. Gott. 430. 1757.

***Helminthotheca echioides* (L.) Holub [FNA19, HC2]**

Folia Geobot. Phytotax. 8: 176. 1973.  
oxtongue

*Picris echioides* L.

FNA19 does not include WA within the range of this taxon, and there are currently no specimens from WA in any Pacific Northwest herbaria. For these reasons this taxon is considered excluded from WA until a specimen indicating its occurrence here is located.

***Hemizonella* [FNA21, HC2]**

Proc. Amer. Acad. Arts. 9: 189. 1874.

miniature tarweed

***Hemizonella minima* (A. Gray) A. Gray [FNA21, HC2]**

Proc. Amer. Acad. Arts. 9: 189. 1874.

smallhead tarplant, least tarweed, small-head tarweed, smallhead tarweed

*Hemizonia minima* A. Gray

*Madia minima* (A. Gray) D.D. Keck [HC]

FNA21: "Hemizonella minima is self-compatible, like most other tarweeds that are distributed widely in western North America."

***Heterotheca* [FNA20, HC2]**

Bull. Sci. Soc. Philom. Paris. 1817: 137. 1817.

camphorweed, goldaster

***Heterotheca oregona* (Nutt.) Shinnars [FNA20, HC2, OFF]**

Field & Lab. 19: 71. 1951.

Oregon goldenaster

*Chrysopsis oregona* (Nutt.) A. Gray [HC]

*Chrysopsis oregona* (Nutt.) A. Gray var. *oregona*

Taxonomy follows Oregon Flora Project (OFF) and Sundberg and Chambers (2000) in combining all of the varieties: "We treat this as a polymorphic sp. Semple et al. (1988) reports vars. *oregona* and *rudis* from OR, but these vars. have overlapping ranges in CA and distinctions between them are relatively minor."

\* 1988. *Heterotheca* sect. *Ammodia* (Compositae: Astereae): A multivariate study of *H. oregona* and specimens of Brewer's (golden)aster. Syst. Bot. 13: 547-558.

\* Semple, J.C., C. Leeder, C. Leuty, and L. Gray. 1988. *Heterotheca* Sect. *Ammodia* (Compositae: Astereae): a multivariate study of *H. oregona* and specimens of Brewer's (golden) aster. Systematic Botany 13: 547-558.

var. ***oregona*** [FNA20, HC2]

***Heterotheca villosa* (Pursh) Shinnars [FNA20, HC2]**

Field & Lab. 19: 71. 1951.

hairy goldaster

*Chrysopsis villosa* (Pursh) Nutt. ex DC. [HC]

var. ***foliosa*** (Nutt.) V.L. Harms [FNA20, HC2]

Wrightia. 4: 15. 1968.

leafy goldenaster

*Chrysopsis villosa* (Pursh) Nutt. ex DC. var. *foliosa* (Nutt.) Cronquist [HC]  
*Chrysopsis villosa* (Pursh) Nutt. ex DC. var. *foliosa* (Nutt.) D.C. Eaton, orthographic variant

Voucher? OR reports in Peck (1961) misapplied (Chambers and Sundberg 2000). FNA20: "Variety *foliosa* is most common at the base of the Front Range in Colorado and Wyoming; it occurs scattered across the northern part of its range in the mountains and western prairies. Plants that are glandular but otherwise like var. *foliosa* are presumed here to be hybrids with either var. *minor* or var. *nana*. Variety *foliosa* is most similar to var. *ballardii*."

\* WA report in 1996 Univ. of Waterloo Biology Series

var. ***foliosa*** (Nutt.) V.L. Harms [FNA20, HC2], misapplied

Wrightia. 4: 15. 1968.

leafy goldenaster

*Chrysopsis villosa* (Pursh) Nutt. ex DC. var. *foliosa* (Nutt.) Cronquist [HC]  
*Chrysopsis villosa* (Pursh) Nutt. ex DC. var. *foliosa* (Nutt.) D.C. Eaton, orthographic variant

Voucher? OR reports in Peck (1961) misapplied (Chambers and Sundberg 2000). FNA20: "Variety *foliosa* is most common at the base of the Front Range in Colorado and Wyoming; it occurs scattered across the northern part of its range in the mountains and western prairies. Plants that are glandular but otherwise like var. *foliosa* are presumed here to be hybrids with either var. *minor* or var. *nana*. Variety *foliosa* is most similar to var. *ballardii*."

\* WA report in 1996 Univ. of Waterloo Biology Series

var. ***minor*** (Hook.) Semple [FNA20, HC2]

Novon. 4: 54. 1994.

hairy goldenaster, hispid goldenaster

*Chrysopsis villosa* (Pursh) Nutt. ex DC. var. *hispida* (Hook.) A. Gray [HC]  
*Heterotheca villosa* (Pursh) Shinnery var. *hispida* (Hook.) V.L. Harms

FNA20: "Variety *minor* is distinguished by its usually narrowly to broadly oblanceolate distal cauline leaves (sometimes oblong or ovate) and moderately glandular and hispid-strigose indument. The leaf bases are usually narrowly to broadly cuneate or attenuate (rarely rounded). Distal leaf faces usually have about 10-50 hairs/mm<sup>2</sup> and about 4-20 glands/mm<sup>2</sup>. The variety is the most variable in the species and includes some local distinctive morphotypes that grade into other forms. Plants intermediate between this and all other varieties occur in areas where the ranges are sympatric, and they make infraspecific taxonomy of the species difficult. The variety has been incorrectly referred to as var. *hispida* (a later synonym) in most floras. The status of *Heterotheca barbata* (Rydberg) Semple (*Chrysopsis barbata* Rydberg), the Spokane goldenaster, is uncertain. J. C. Semple (1996) treated it as a separate species to draw attention to the problem; a detailed description based on the type and detailed illustrations were included. It is known from the type collection along the Spokane River Valley east of Spokane, Idaho, and two down-river, atypical collections (Benton and Spokane counties, Washington). It flowers in July (sometimes August). It is similar to *H. villosa* var. *minor*, but differs in having lanceolate-elliptic distal cauline leaves (34-38 × 8-9 mm) that are little reduced distally, long branches (each with one to a few large heads), and disc corollas with a few, very long hairs on the tube. Further work is needed to increase the number of specimens available for a detailed comparison with *H. villosa* var. *minor* in order to clarify whether *H. barbata* warrants species level recognition, should be included in *H. villosa* as a variety, or placed in synonymy under var. *minor*."

var. ***villosa*** [FNA20, HC2]

Field & Lab. 19: 71.

hairy goldaster, hairy goldenaster

*Chrysopsis villosa* (Pursh) Nutt. ex DC. var. *villosa* [HC]

\* WA report in 1996 Univ. of Waterloo Biology Series

***Hieracium*** [FNA19, HC, HC2]

Sp. Pl. 2: 799. 1753; Gen. Pl. ed. 5, 350. 1754.

hawkweed

***Hieracium albiflorum*** Hook. [FNA19, HC, HC2]

Fl. Bor.-Amer. 1: 298. 1833.

white flowered hawkweed, white hawkweed

*Hieracium atratum* Fr.

black hawkweed, polar hawkweed

identification suspect, only N Am locality in Greenland (Kz99); try keys in Clapham et al. (1987, p. 507-508); WA report in Biek (2000)

\* Clapham, A.R., T.G. Tutin and D.M. Moore. 1987. Flora of the British Isles, 3rd Ed. Cambridge Univ. Press, Cambridge, UK.

*Hieracium aurantiacum* L. [FNA19, HC, HC2]

Sp. Pl. 2: 801. 1753.

king devil, orange hawkweed, devil's paintbrush

*Hieracium caespitosum* Dumort. [FNA19, HC2]

Fl. Belg. 62. 1827.

yellow king devil, meadow hawkweed

*Hieracium pratense* Tausch [HC]

Found as a weed on the east and west side of the Cascades, first collected in 1969, and recently documented from northeastern Oregon (Dwire & Parks 2002).

\* Dwire, K. A., and C. G. Parks. 2002. Noteworthy collections, Oregon, *Hieracium caespitosum*. Madroño 49: 58.

*Hieracium flagellare* Willd. [FNA19, HC2]

Enum. Pl. suppl.: 54. 1814.

whip hawkweed

*Hieracium flagellare* Willd. var. *amauracron* (Missback & Zahn) Lepage [KZ99]

*Hieracium flagellare* Willd. var. *cernuiforme* (Naegeli & Peter) Lepage [KZ99]

*Hieracium* ×*flagellare* Willd. var. *flagellare* [KZ99]

*Hieracium flagellare* Willd. var. *pilosius* Lepage [KZ99]

FNA19: "The type of *Hieracium flagellare* may have resulted from a cross between plants of *H. caespitosum* and *H. pilosella* (A. Cronquist 1980)." Although generally treated as a hybrid, this plant is often found in the absence of both of its parents, and is a widespread weed in eastern North America (Lepage 1967). Recently collected in San Juan County.

\* Lepage, E. 1967. Étude de quelques hybrides chez nos épervières (*Hieracium*) adventices. Le Naturaliste Canadien 94: 609-619.

\* Schischkin, B. K., and E. G. Bobrov, eds. 2002. Flora of the USSR. Volume XXX. Compositae Genus *Hieracium*. Translated from Russian. Smithsonian Institution Libraries, Washington, D.C. Contributor A. L. Juxip. Plates A. E. Likas. 706 p.

*Hieracium* ×*floribundum* Wimm. & Grab. [HC2]

flowery hawkweed

Also written as *Hieracium floribundum*.

*Hieracium glomeratum* Froel. [HC2]

yellow devil hawkweed

*Hieracium lachenalii* C.C. Gmel. [HC2]

common hawkweed, English hawkweed, European hawkweed

*Hieracium vulgatum* Fr. [FNA19, HC], misapplied

FNA19: "The correct name for the species here called *Hieracium vulgatum* may be *H. lachenalii* C. C. Gmelin (E. Lepage 1971; E. G. Voss 1972?1996, vol. 3)." Weedy on the west side of the Cascades (Zika 2002), where first collected in 1966.

\* Ornduff, R. 1963. *Hieracium* revisited. Leaflets W. Botany 10: 38.

\* Zika, P. F. 2002. Noteworthy collections, Oregon and Washington. Madroño 49: 195-197.

*Hieracium longiberbe* Howell [FNA19, HC, HC2]

Fl. N.W. Amer. 395. 1901.

long bearded hawkweed

FNA19: "Hieracium longiberbe is known only from along the Columbia River."

*Hieracium maculatum* Sm. [HC2, Stace 1997]

mottled hawkweed

naturalized? only reseeding in gardens in Seattle area

*Hieracium murorum* L. [FNA19, HC2]

Sp. Pl. 2: 802. 1753.

wall hawkweed

recently collected in Pierce Co. (Biek 2000), where it was reported as *H. atratum* (Zika 2002)

\* **FMR** = Biek, D. 2000. Flora of Mt. Rainier National Park. Oregon State University Press, Corvallis.

\* Ornduff, R. 1963. *Hieracium* revisited. Leaflets W. Botany 10: 38.

\* Zika, P. F. 2002. Noteworthy collections, Oregon and Washington. *Madroño* 49: 195-197.

*Hieracium pilosella* L. [FNA19, HC, HC2]

Sp. Pl. 2: 800. 1753.

mouse ear hawkweed

*Hieracium pilosella* L. var. *nivea* Muell.Arg. [KZ99]

*Hieracium pilosella* L. var. *pilosella* [KZ99]

*Pilosella officinarum* F.W. Schultz & Sch. Bip.

Recently collected in Thurston Co. NWCB = herbarium of WA State Noxious Weed Control Board, Kent.

\* Bishop, G. F., and A. J. Davy. 1994. *Hieracium pilosella* L. (*Pilosella officinarum* F. Schultz & Schultz-Bip.). *J. Ecol.* 82: 195-210.

\* Roche, C. 1992. Mouse-ear hawkweed (*Hieracium pilosella* L.). PNW Cooperative Extension Publ. PNW409. Washington State Univ., Pullman.

*Hieracium piloselloides* Vill. [FNA19, HC2]

Prosp. Hist. Pl. Dauphiné. 34. 1779.

tall hawkweed

*Hieracium florentinum* All.

FNA19: "Plants called *Hieracium praealtum* Villars ex Gochnat (at least those called *H. praealtum* var. *decipiens* W. D. J. Koch) reputedly differ from members of *H. piloselloides* in having blades of their proximal leaves stellate-pubescent abaxially (M. L. Fernald 1950); such plants may be found in the flora and may merit taxonomic recognition."

*Hieracium sabaudum* L. [FNA19, HC2]

Sp. Pl. 2: 804. 1753.

savoy hawkweed

collected in Whatcom Co. in 2000; weed in e US.

*Hieracium scouleri* Hook. [FNA19, HC, HC2]

Fl. Bor.-Amer. 1: 298. 1833.

hound tongue hawkweed, Scouler's hawkweed, woolly weed

*Hieracium albertinum* Farr [HC]

*Hieracium chapacanum* Zahn

*Hieracium cusickii* Gand.

*Hieracium cynoglossoides* Arv.-Touv. [HC]

*Hieracium scouleri* Hook. var. *albertinum* (Farr) G.W. Douglas & G.A. Allen

*Hieracium scouleri* Hook. var. *griseum* A. Nelson

*Hieracium scouleri* Hook. var. *scouleri*

*Hieracium stoloniflorum* Waldst. & Kit. [HC2]

forked hawkweed

*Hieracium xstoloniflorum* Waldst. & Kit. var. *cayouetteanum* Lepage [KZ99]

*Hieracium xstoloniflorum* Waldst. & Kit. var. *laurentianum* Lepage [KZ99]

*Hieracium xstoloniflorum* Waldst. & Kit. var. *stoloniflorum* [KZ99]

A garden plant that escapes; recently collected in Chelan and San Juan Cos.

\* Lepage, E. 1967. Étude de quelques hybrides chez nos épervières (*Hieracium*) adventices. *Le Naturaliste Canadien* 94: 609-619.

***Hieracium triste*** Willd. ex Spreng. [FNA19, HC2]

Syst. Veg. 3: 640. 1826.

alpine hawkweed, slender hawkweed

*Hieracium gracile* Hook. [HC]

*Hieracium gracile* Hook. var. *densifloccosum* (Zahn) Cronquist

*Hieracium gracile* Hook. var. *detonsum* (A. Gray) A. Gray

*Hieracium gracile* Hook. var. *gracile*

*Hieracium triste* Willd. ex Spreng. var. *gracile* (Hook.) A. Gray

***Hieracium umbellatum*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 804. 1753.

narrowleaf hawkweed, umbellate hawkweed

*Hieracium canadense* Michx. [HC]

*Hieracium kalmii* L.

*Hieracium umbellatum* L. ssp. *umbellatum*

FNA19: "The circumscription of *Hieracium umbellatum* adopted here is supported by research done by others, especially G. A. Guppy (1978) and E. Lepage (1960). *Hieracium canadense* var. *kalmii* (Linnaeus) Scoggan, referable here, is an illegitimate name."

***Hulsea*** [FNA21, HC, HC2]

Pacif. Railr. Rep. 6(3): 77, plate 13. 1858.

alpinegold, hulsea

***Hulsea nana*** A. Gray [FNA21, HC, HC2]

Pacif. Railr. Rep. 6(3): 76, plate 13. 1858.

dwarf alpinegold, dwarf hulsea

*Hulsea nana* A. Gray var. *larsenii* A. Gray

FNA19: "Densely lanate or woolly plants of *Hulsea nana* are referable to var. *larsenii*. Such plants may occur in distinct populations but can be found together with sparsely lanate and strictly glandular plants. The distribution of lanate to woolly plants appears associated with higher levels of insolation."

\* Wilken, D.H. 1975. A systematic study of the genus *Hulsea* (Asteraceae). *Brittonia* 27: 228-244.

***Hymenopappus*** [FNA21, HC, HC2]

Hymenopappus. plate. 1788.

hymenopappus

***Hymenopappus filifolius*** Hook. [FNA21, HC, HC2]

Fl. Bor.-Amer. 1: 317. 1833.

Columbia cut-leaf, fineleaf hymenopappus

var. *filifolius* [FNA21, HC, HC2]

Columbia cutleaf

\* Turner, B.L. 1956. A cytotaxonomic study of the genus *Hymenopappus* (Compositae). *Rhodora* 58: 163-186, 208-242, 250-269, 295-308.

***Hypochaeris*** [FNA19, HC, HC2]

Sp. Pl. 2: 810. 1753; Gen. Pl. ed. 5, 352. 1754.

cats-ear

***Hypochaeris glabra*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 811. 1753.

smooth cat's ear, false dandelion

FNA19: "*Hypochaeris glabra* is usually distinguishable by its annual habit and relatively small size, slender and shallow roots, fine stems, often glabrous leaves, and beakless, truncate outer cypselae. Occasional specimens are larger and have induments characteristics of *H. radicata*; they can be distinguished by the

dimorphic cypselae."

*Hypochaeris radicata* L. [FNA19, HC, HC2]

Sp. Pl. 2: 811. 1753.

hairy cat's ear, rough cat's ear

FNA19: "Hypochaeris radicata is recognized by the coarse, perennial habit, stout roots, coarsely hirsute leaves and phyllaries, yellow corollas, and monomorphic, beaked cypselae. It is weedy and invasive in some areas."

*Inula* [FNA19, HC, HC2]

Sp. Pl. 2: 881. 1753; Gen. Pl. ed. 5, 375. 1754.

inula

*Inula helenium* L. [FNA19, HC, HC2]

Sp. Pl. 2: 881. 1753.

elecampane, inula

Chambers and Sundberg (2000) call this native, an error

*Ionactis* [FNA20, HC2]

Pittonia. 3: 245. 1897.

ankle-aster

*Ionactis stenomeris* (A. Gray) Greene [FNA20, HC2]

Pittonia. 3: 246. 1897.

Rocky Mountain ankle-aster, Rocky Mountain aster

*Aster stenomeris* A. Gray [HC]

*Iva* [FNA21, HC, HC2]

Sp. Pl. 2: 988. 1753; Gen. Pl. ed. 5, 426. 1754.

poverty-weed

(see also *Cyclachaena*)

*Iva axillaris* Pursh [FNA21, HC, HC2]

Fl. Amer. Sept. 2: 743. 1813.

deeproot, deer root, poverty weed

*Iva axillaris* Pursh ssp. *robustior* (Hook.) Bassett

*Jacobaea* [HC2]

ragwort

*Jacobaea maritima* (L.) Pelsler & Meijden [HC2]

silver ragwort

*Jacobaea maritima* (L.) Pelsler & Meijden × *Jacobaea vulgaris* Gaertn. [HC2]

*Jacobaea vulgaris* Gaertn. [HC2]

tansy ragwort

*Senecio jacobaea* L. [FNA20, HC]

FNA20: "Senecio jacobaea is a weed introduced from Europe and now well established in places of cool, damp summers. It is toxic to livestock and legally noxious in most states and provinces where it occurs. The Russian botanist E. Wiebe (2000) resuscitated Jacobaea for plants that are treated here as Senecio jacobaea, S. erucifolius, and S. cannabinifolius. Phylogenetic studies may confirm the utility of recognizing Jacobaea as a distinct genus; to do so here would be premature."

*Jaumea* [FNA21, HC, HC2]

Syn. Pl. 2: 397. 1807.

jaumea

*Jaumea carnosa* (Less.) A. Gray [FNA21, HC, HC2]

U.S. Expl. Exped. 17: 360. 1874.

fleshy jaumea, marsh jaumea

*Coinogyne carnos* Less.

***Lactuca*** [FNA19, HC, HC2]

Sp. Pl. 2: 795. 1753; Gen. Pl. ed. 5, 348. 1754.

lettuce

(see also *Mycelis*)

*Mulgedium* [FNA19]

***Lactuca biennis*** (Moench) Fernald [FNA19, HC, HC2]

Rhodora. 42: 300. 1940.

tall blue lettuce, wild blue lettuce

*Sonchus biennis* Moench

FNA19: "The type of *Lactuca terrae-novae* Fernald is probably conspecific with that of *L. biennis*. The type of *L. biennis* may be conspecific with that of *L. floridana*."

***Lactuca canadensis*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 796. 1753.

Canadian wild lettuce, Florida blue lettuce

***Lactuca ludoviciana*** (Nutt.) Riddell [FNA19, HC, HC2]

W. J. Med. Phys. Sci. 8: 491. 1835.

Louisiana lettuce, prairie lettuce, western lettuce

***Lactuca saligna*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 796. 1753.

least lettuce, willow lettuce

***Lactuca sativa*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 795. 1753.

garden lettuce

WA report by St. John (1963), is WTU voucher a wild plant?

***Lactuca scariola*** L. [FNA19, HC, HC2]

Cent. Pl. II. 29. 1756.

prickly lettuce

*Lactuca scariola* L. var. *integrata* Gren. & Godr.

*Lactuca scariola* L. var. *scariola*

***Lactuca tatarica*** (L.) C.A. Mey. [HC2]

blue lettuce

ssp. ***pulchella*** (Pursh) Stebbins [HC2]

blue lettuce

*Lactuca pulchella* (Pursh) DC. [HC]

*Lactuca tatarica* (L.) C.A. Mey. var. *pulchella* (Pursh) Breitung

*Mulgedium oblongifolium* (Nutt.) Reveal

*Mulgedium pulchellum* (Pursh) G. Don [FNA19]

FNA19: "The type of *Mulgedium pulchellum* may be conspecific with that of *M. tataricum* (Linnaeus) de Candolle, a Eurasian species. Or, if "perennial" plus "Fl. blue" constitutes sufficient description for valid publication of the name *Lactuca oblongifolia* Nuttall (1813), then a new combination in *Mulgedium* based on that name may be appropriate for what is here called *M. pulchellum*."

***Lactuca virosa*** L. [FNA19, HC2]

Sp. Pl. 2: 795. 1753.

great lettuce, tall lettuce, wild lettuce

Recently (2014) collected in Lewis County.

***Lagophylla*** [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 390. 1841.  
hareleaf, rabbitleaf

***Lagophylla ramosissima*** Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 391. 1841.  
slender hareleaf, common rabbitleaf

*Lagophylla ramosissima* Nutt. ssp. *ramosissima*

FNA21: "*Lagophylla ramosissima* occurs widely in dry, often disturbed or poor soils of the California Floristic Province, Great Basin, and Pacific Northwest. Plants with heads in glomerate arrays have been treated as *L. congesta* or *L. ramosissima* subsp. *congesta*; W. C. Thompson (1983, p. 21) concluded that *L. congesta* represents an "extreme morphological variant of *L. ramosissima*" unworthy of taxonomic recognition." Chambers and Sundberg (2000) question if ssp. *congesta* (Greene) D.D. Keck in CA is a good taxon

***Lapsana*** [FNA19, HC, HC2]

Sp. Pl. 2: 811. 1753; Gen. Pl. ed. 5, 353. 1754.  
nipplewort

***Lapsana communis*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 811. 1753.  
common nipplewort

FNA19: "*Lapsana communis* is widely distributed in North America. It is easily recognized by the abruptly constricted lyrate leaves with relatively large terminal lobes, heads of relatively small flowers with yellow corollas, keeled phyllaries, and epappose cypselae. It is aggressively weedy and often found in shady disturbed sites. The milky juice of *L. communis* is said to be soothing to sensitive skin, particularly on the nipples of nursing mothers."

***Lasthenia*** [FNA21, HC, HC2]

Opusc. Phytol. 3: 88. 1834.  
goldfields

***Lasthenia glaberrima*** DC. [FNA21, HC, HC2]

Prodr. 5: 664. 1836.  
smooth goldfields, smooth lasthenia

***Lasthenia maritima*** (A. Gray) M.C. Vasey [FNA21, HC2]

Madroño. 32: 139. 1985.  
maritime goldfields, seaside goldfields

*Baeria maritima* (A. Gray) A. Gray

*Baeria minor* (DC.) Ferris ssp. *maritima* (A. Gray) Ferris

*Lasthenia minor* (DC.) Ornduff var. *maritima* (A. Gray) Cronquist [HC]

FNA21: "*Lasthenia maritima* is a self-pollinating, "guano endemic" of seabird nesting grounds. It is typically found on offshore islands and rocks from the Farallon Islands, California, to the northern tip of Vancouver Island, British Columbia and rarely occurs on the mainland."

***Lasthenia minor*** (DC.) Ornduff [FNA21, HC, HC2]

Univ. Calif. Publ. Bot. 40: 80. 1966.  
coastal goldfields

*Baeria minor* (DC.) Ferris

FNA21 lists this as endemic to California, however Eugene Kozloff collected a plant in 1990 annotated to this name by Robert Ornduff. This determination was confirmed by D. Giblin in 2008 after comparison with *L. maritima* and *L. minor* specimens.

***Layia*** [FNA21, HC, HC2]

Prodr. 7: 294. 1838.  
layia, tidytips

***Layia glandulosa*** (Hook.) Hook. & Arn. [FNA21, HC, HC2]

Bot. Beechey Voy. 358. 1839.

white layia, white daisy tidytips

*Layia glandulosa* (Hook.) Hook. & Arn. ssp. *glandulosa*

*Layia glandulosa* (Hook.) Hook. & Arn. ssp. *lutea* D.D. Keck

FNA21: "Layia glandulosa occurs in deserts of western North America, extending to the Pacific coast in central and southern California. As treated here (provisionally) and previously, *L. glandulosa* corresponds to a paraphyletic group; molecular phylogenetic data have indicated that *L. discoidea* is most closely related to a subset of lineages in *L. glandulosa*, including yellow-rayed populations previously recognized as subsp. *lutea* or var. *lutea* (B. G. Baldwin, unpubl.). Report of *L. glandulosa* from British Columbia has not been confirmed."

***Leontodon*** [FNA19, HC, HC2]

Sp. Pl. 2: 798. 1753; Gen. Pl. ed. 5, 349. 1754.

hawkbit

*Leontodon autumnalis* L. [FNA19, HC, HC2]

Sp. Pl. 2: 798. 1753.

autumn hawkbit

*Leontodon autumnalis* L. ssp. *autumnalis*

FNA19: "Leontodon autumnalis is recognized by the usually branched stems with (1)2-5 heads, peduncles bracteate proximal to heads, non-beaked cypselae, and pappi wholly of plumose bristles. It is now established in eastern North America and is sporadic in the west. Specimens with coarsely hirsute phyllaries have been recognized as var. *pratensis*; intermediates occur and the characteristic does not seem to correlate with other characters." Stace (1997) notes distinctness of subspp. & vars. need study

*Leontodon hirtus* L.

Sp. Pl. 2: 798-799.

rough hawkbit

FNA19: "Leontodon hirtus has been reported from various locations in North America; the specimens appear to be assignable to *L. hispidus* Linnaeus."

*Leontodon saxatilis* Lam. [FNA19, HC2]

Fl. Franç. 2: 115. 1779.

hairy hawkbit

ssp. *saxatilis* [FNA19, HC2]

Fl. Franç. 2: 115.

lesser hawkbit

*Leontodon leysseri* (Wallr.) G. Beck

*Leontodon nudicaulis* Mérat [HC]

*Leontodon nudicaulis* Mérat ssp. *taraxacoides* (Vill.) Schinz & Thell. [HC]

*Leontodon taraxacoides* (Vill.) Mérat ssp. *taraxacoides*

*Lomatium nudicaulis* Mérat

Stace (1997) notes nom. illeg., as does Index Kewensis online.

***Leucanthemum*** [FNA19, HC2]

Gard. Dict. Abr. ed. 4. vol. 2. 1754.

daisy

*Leucanthemum maximum* (Ramond) DC. [FNA19]

Prodr. 6: 46. 1838.

Shasta daisy

(see also *Leucanthemum superbum*)

*Chrysanthemum maximum* Ramond [HC]

FNA19: "The name Shasta daisy of horticulture is associated also with *Leucanthemum xsuperbum* (Bergmans ex J. Ingram) Bergmans ex D. H. Kent, which is generally thought to have been derived from hybrids between *L. maximum* and *L. lacustre*. Cultivars of "Shasta daisy" number in the dozens, including "single," "double," "quill," and "shaggy" forms; they may be encountered as waifs or persisting from

abandoned plantings." Stace (1997) says British reports of *L. maximum* were all misapplied to *L. x superbum*, a fertile hybrid abundant in British gardens

*Leucanthemum xsuperbum* (Bergmans ex J.W. Ingram) D.H. Kent [FNA19, HC2]

Shasta daisy

voucher? WA report A. Jacobson (pers. comm.) Seattle area reseeding in gardens, truly naturalized? FNA19: "The name Shasta daisy of horticulture is associated also with *Leucanthemum xsuperbum* (Bergmans ex J. Ingram) Bergmans ex D. H. Kent, which is generally thought to have been derived from hybrids between *L. maximum* and *L. lacustre*. Cultivars of "Shasta daisy" number in the dozens, including "single," "double," "quill," and "shaggy" forms; they may be encountered as waifs or persisting from abandoned plantings."

*Leucanthemum vulgare* Lam. [FNA19, HC2]

Fl. Franç. 2: 137. 1779.

oxeye daisy

*Chrysanthemum leucanthemum* L. [HC]

*Chrysanthemum leucanthemum* L. var. *pinnatifidum* Lecoq & Lamotte

*Logfia* [FNA19, HC2]

Bull. Sci. Soc. Philom. Paris. 1819: 143. 1819 (as "genre ou sous-genre"). in F. Cuvier, Dict. Sci. Nat. ed. 2, 23: 564. 1822.

cottonrose, cottonweed

*Logfia gallica* (L.) Cosson & Germain [FNA19, HC2]

Ann. Sci. Nat., Bot., sér. 2. 20: 291. 1843.

daggerleaf cottonweed

*Logfia minima* (Sm.) Dumort. [FNA19, HC2]

Fl. Belg. 68. 1827.

little cottonrose, small cudweed

*Filago minima* (Sm.) Pers.

*Luina* [FNA20, HC, HC2]

Hooker's Icon. Pl. 12: 35, plate 1139. 1873.

luina

(see also *Cacaliopsis*, *Rainiera*)

*Luina hypoleuca* Benth. [FNA20, HC, HC2]

Hooker's Icon. Pl. 12: 36, plate 1139. 1873.

littleleaf luina, silverback luina, littleleaf silverback

*Lygodesmia* [FNA19, HC, HC2]

Edinburgh New Philos. J. 6: 311. 1829.

rush-pink, skeletonplant

(see also *Pleiacanthus*)

*Lygodesmia juncea* (Pursh) D. Don ex Hook. [FNA19, HC, HC2]

Fl. Bor.-Amer. 1: 295. 1833.

rush skeletonplant

FNA19: "*Lygodesmia juncea* is the most widespread species of the genus, occurring throughout the High Plains region of North America. It is easily distinguished by its bushy habit, greatly reduced cauline leaves, relatively small heads and involucre, and phyllaries lacking appendages. Mature cypselae are rarely found on this species, and the plants are presumably sterile and reproduce mainly by vegetative means. Many specimens have round galls to 10 mm diameter on the stems, produced by solitary wasps and apparently unique to this species."

*Madia* [FNA21, HC, HC2]

Sag. Stor. Nat. Chili. 136, 354. 1782.

madia, tarweed

(see also *Anisocarpus*, *Hemizonella*)

***Madia citriodora* Greene [FNA21, HC, HC2]**

Bull. Torrey Bot. Club. 9: 63. 1882.

lemon scented tarplant, lemon scented tarweed, lemon tarweed

***Madia elegans* D. Don ex Lindl. [FNA21, HC, HC2]**

Edwards's Bot. Reg. 17: plate 1458. 1831.

common madia, autumn showy tarweed

*Madia elegans* D. Don ex Lindl. ssp. *densiflora* (Greene) D.D. Keck

*Madia elegans* D. Don ex Lindl. ssp. *elegans*

*Madia elegans* D. Don ex Lindl. ssp. *vernalis* D.D. Keck

*Madia elegans* D. Don ex Lindl. var. *densifolia* (Greene) Jeps. [HC]

*Madia elegans* D. Don ex Lindl. var. *elegans* [HC]

FNA21: "Madia elegans occurs widely in California outside the deserts and in southwestern Oregon and locally in western Nevada and Washington. It is unusually variable in morphology, ecology, and phenology. Molecular data have indicated that D. D. Keck's (1959) infraspecific taxonomy for *M. elegans* needs revision."

***Madia exigua* (Sm.) A. Gray [FNA21, HC, HC2]**

Proc. Amer. Acad. Arts. 8: 391. 1872.

threadstem madia, little tarplant, little tarweed

FNA21: "Madia exigua occurs in seasonally dry situations in much of western North America outside the warm deserts. Morphologically, *M. exigua* is somewhat similar to *Hemizonella minima*, which (unlike *M. exigua*) has subumbellate arrays of heads and obcompressed, sparsely hairy ray cypselae."

***Madia glomerata* Hook. [FNA21, HC, HC2]**

Fl. Bor.-Amer. 2: 24. 1834.

mountain tarplant, cluster tarweed, mountain tarweed

***Madia gracilis* (Sm.) D.D. Keck [FNA21, HC, HC2]**

Madroño. 5: 169. 1940.

grassy tarplant, common tarweed, slender tarweed

*Madia gracilis* (Sm.) D.D. Keck ssp. *gracilis*

Hybridizes with *M. citriodora*, *M. sativa*

***Madia sativa* Molina [FNA21, HC, HC2]**

Sag. Stor. Nat. Chili. 136. 1782.

Chilean tarplant, coast tarweed

*Madia capitata* Nutt.

*Madia sativa* Molina ssp. *capitata* (Nutt.) Piper

*Madia sativa* Molina ssp. *sativa*

*Madia sativa* Molina var. *congesta* Torr. & A. Gray [HC]

*Madia sativa* Molina var. *sativa* [HC]

***Matricaria* [FNA19, HC, HC2]**

Sp. Pl. 2: 890. 1753; Gen. Pl. ed. 5, 380. 1754.

chamomile, matricaria, mayweed

(see also *Tripleurospermum*)

***Matricaria chamomilla* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 891. 1753.

wild chamomile, scented mayweed

*Matricaria recutita* L.

FNA19: "Although the name *Matricaria chamomilla* has been considered to be misapplied (e.g., S. Rauschert 1974; A. Cronquist 1994; E. G. Voss 1972?1996, vol. 3), W. L. Applequist (2002) argued convincingly that the name is indeed correctly applied to the taxon described here. Among the North American material, specimens with coronate ray cypselae (var. *chamomilla*), or wholly without coronas [var. *recutita* (Linnaeus) Grierson] have been encountered but none with fully coronate cypselae (var. *coronata* J. Gay ex Boissier), even though synonymy under this name includes *M. courrantiana*, reported

for Texas and New Mexico (specimens not seen). The varieties may not be worth recognizing (Appelquist; Q. O. N. Kay 1976) and are not treated formally here." Rauschert (1974) transferred this from *Matricaria* to *Chamomilla*

\* Rauschert, S. 1974. Nomenklatorische probleme in der gattung *Matricaria* L. *Folia Geobot. Taxonom.* 9: 249-260.

***Matricaria discoidea* DC. [FNA19, HC2]**

Prodr. 6: 50. 1838.

pineapple weed

*Chamomilla discoidea* (DC.) J. Gay ex A. Braun

*Chamomilla suaveolens* (Pursh) Rydb.

*Matricaria matricarioides* (Less.) Porter [HC], illegitimate name

*Santolina suaveolens* Pursh

FNA19: "*Matricaria discoidea* has been used as a medicinal and aromatic plant by Native American tribes (D. E. Moerman 1998). It also is considered a weed, and it is resistant to a photosystem II inhibitor herbicide in the United Kingdom ([www.weedscience.org](http://www.weedscience.org)). It is a northwestern North American native that has spread to eastern and northern North America and elsewhere (E. McClintock 1993b; E. G. Voss 1972?1996, vol. 3; A. Cronquist 1994). NatureServe ([www.natureserve.org](http://www.natureserve.org)) and Natural Resources Conservation Service ([plants.usda.gov](http://plants.usda.gov)) erroneously present *M. discoidea* as introduced on the continent. Its natural habitat is ill-defined because the species has become ruderal even in its native range. For discussion of the nomenclature of this taxon, see S. Rauschert (1974); K. N. Gandhi and R. D. Thomas (1991); Cronquist; and Voss. *Matricaria matricarioides* (Lessing) Porter cannot be applied to the American taxon; *M. matricarioides* was originally published as *Artemisia matricarioides* Lessing, a new name for *Tanacetum pauciflorum* Richardson (see S. Rauschert 1974), itself a synonym of *T. huronense* Nuttall. W. Greuter (pers. comm.), who accepts *M. discoidea*, considers Rauschert's treating *Artemisia matricarioides* as homotypic with *T. pauciflorum* as equivalent to a lectotype designation."

***Mauranthemum* [FNA19, HC2]**

*Taxon.* 44: 377. 1995.

***Mauranthemum paludosum* (Poir.) Vogt & Oberpr. [FNA19, HC2]**

*Taxon.* 44: 377. 1995.

annual marguerite

Waif collected once (1992) as a roadside weed in Friday Harbor, San Juan County, Washington, where it likely has not persisted. Also known as a waif in California.

***Microseris* [FNA19, HC, HC2]**

*Philos. Mag. Ann. Chem.* 11: 388. 1832.

microseris

(see also *Nothocalais*, *Uropappus*)

*Apargidium* [HC]

***Microseris bigelovii* (A. Gray) Sch. Bip. [FNA19, HC, HC2]**

*Jahresber. Pollichia.* 22?24: 308. 1866.

coast microseris, coastal silverpuffs

FNA19: "*Microseris bigelovii* is the most characteristically coastal of the annual taxa and the only one to include plants with obtuse, spatulate leaves (K. Bachmann et al. 1984). A statistical analysis of its morphologic variation was published by Bachmann (1992). It sometimes has been collected at inland sites at 500?600 m, where the cypselae may have been introduced by domestic animals. The northern populations near Victoria, British Columbia, and the San Juan Islands, Washington, are disjunct from the main range, which extends from Oregon to Santa Barbara County, California."

***Microseris borealis* (Bong.) Sch. Bip. [FNA19, HC2]**

*Jahresber. Pollichia.* 22?24: 310. 1866.

apargidium, bog microseris, northern silverpuffs

*Apargia borealis* Bong.

*Apargidium boreale* (Bong.) Torr. & A. Gray [HC]

*Scorzonella borealis* (Bong.) Greene

***Microseris laciniata*** (Hook.) Sch. Bip. [FNA19, HC, HC2]

Jahresber. Pollichia. 22?24: 309. 1866.  
cut-leaved microseris

ssp. ***laciniata*** [FNA19, HC2]

Jahresber. Pollichia. 22?24: 309.  
cutleaf microseris, cut leaved scorzonella

*Scorzonella laciniata* (Hook.) Sch. Bip. var. *laciniata*  
*Scorzonella laciniata* (Hook.) Sch. Bip. var. *pratensis* (Greene) Jeps.  
*Scorzonella procera* (A. Gray) Greene

FNA19: "Subspecies *laciniata* occurs principally away from the coast, in interior valleys and hills, rarely reaching high elevations. The width of the outer phyllaries is a convenient way to separate it from subsp. *leptosepala*, with which it intergrades in the Klamath Mountains and at various sites east of the Cascade Range."

ssp. ***leptosepala*** (Nutt.) K.L. Chambers [FNA19, HC2]

Contr. Dudley Herb. 5: 61. 1957.  
cut-leaved silverpuffs, cutleaf silverpuffs

*Microseris leptosepala* (Nutt.) A. Gray

FNA19: "Subspecies *leptosepala* is known from the Klamath Mountains of California and Oregon and rare northward."

***Microseris nutans*** (Hook.) Sch. Bip. [FNA19, HC, HC2]

Jahresber. Pollichia. 22?24: 309. 1866.  
nodding microseris, nodding scorzonella, nodding silverpuffs

*Microseris nutans* (Hook.) Sch. Bip. ssp. *nutans*  
*Scorzonella nutans* Hook.  
*Scorzonella nutans* Hook. var. *major* (A. Gray) M. Peck

Chambers and Sundberg (2000) say var. *major* is illegitimate

***Mycelis*** [FNA19, HC2]

Dict. Sci. Nat. ed. 2. 33: 483. 1824.  
mycelis

***Mycelis muralis*** (L.) Dumort. [FNA19, HC2]

Fl. Belg. 60. 1827.  
wall lettuce

*Lactuca muralis* (L.) Gaertn. [HC]

***Nabalus*** [HC2]

nabalus, rattlesnake-root

***Nabalus alatus*** Hook. [HC2]

Fl. Bor. -Amer. 1: 294, plate 102. 1833  
western rattlesnake root

*Prenanthes alata* (Hook.) D. Dietr. [FNA19, HC]  
*Prenanthes lessingii* Hultén

FNA19: "*Prenanthes alata* is recognized by its relatively small size, elongate and winged petioles, triangular-hastate leaf blades, heads in broad corymbiform arrays, and dark green, finely tomentulose phyllaries."

***Nestotus*** Urbatsch & Neubig [FNA20, HC2]

Sida. 21: 1650. 2005.  
mock goldenweed

***Nestotus stenophyllus*** (A. Gray) R.P. Roberts, Urbatsch & Neubig [FNA20, HC2]

Sida. 21: 1652. 2005.  
narrowleaf goldenweed

*Haplopappus stenophyllus* A. Gray [HC]  
*Stenotus stenophyllus* (A. Gray) Greene

***Nothocalais*** [FNA19, HC2]

Bull. Calif. Acad. Sci. 2: 54. 1886.  
false dandelion

***Nothocalais alpestris*** (A. Gray) K.L. Chambers [FNA19, HC2]

Contr. Dudley Herb. 5: 66. 1957.  
alpine lake agoseris

*Agoseris alpestris* (A. Gray) Greene

*Agoseris barbellulata* Greene

*Microseris alpestris* (A. Gray) Q. Jones ex Cronquist [HC]

***Nothocalais troximoides*** (A. Gray) Greene [FNA19, HC2]

Bull. Calif. Acad. Sci. 2: 55. 1886.  
weevil prairie dandelion, false agoseris

*Microseris troximoides* A. Gray [HC]

*Scorzonella troximoides* (A. Gray) Jeps.

***Onopordum*** [FNA19, HC, HC2]

Sp. Pl. 2: 827. 1753; Gen. Pl. ed. 5, 359. 1754.  
cotton-thistle

***Onopordum acanthium*** L. [FNA19, HC, HC2]

Sp. Pl. 2: 827. 1753.  
cotton thistle, Scotch thistle, Scots thistle

ssp. *acanthium* [FNA19, HC2]

***Oreostemma*** [FNA20, HC2]

Pittonia. 4: 224. 1900.  
aster, mountaincrown

***Oreostemma alpigenum*** (Torr. & A. Gray) Greene [FNA20, HC2]

Pittonia. 4: 224. 1900.

*Aster alpigenus* (Torr. & A. Gray) A. Gray [HC]

var. ***alpigenum*** [FNA20, HC2]

Pittonia. 4: 224.  
alpine aster, tundra mountaincrown

*Aster alpigenus* (Torr. & A. Gray) A. Gray ssp. *alpigenus*

*Aster alpigenus* (Torr. & A. Gray) A. Gray var. *alpigenus* [HC]

Chambers and Sundberg (2000) do not follow the generic splitting of *Aster* by Nesom (1994, 1997)

\* Nesom, G.L. 1994. Review of the taxonomy of *Aster* sensu lato (Asteraceae: Astereae), emphasizing the New World species. *Phytologia* 77: 141-297.

\* Nesom, G.L. 1997. Taxonomic adjustments in North American *Aster* sensu latissimo (Asteraceae: Astereae). *Phytologia* 82: 281-288.

***Packera*** [FNA20, HC2]

Bot. Not. 128: 520. 1976.  
butterweed, groundsel

***Packera bolanderi*** (A. Gray) W.A. Weber & Á. Löve [FNA20, HC2]

*Phytologia*. 49: 45. 1981.  
Bolander's groundsel

*Senecio bolanderi* A. Gray [HC]

var. ***bolanderi*** [FNA20, HC2]

*Phytologia*. 49: 45.

Bolander's groundsel, Bolander's ragwort

*Senecio bolanderi* A. Gray var. *bolanderi* [HC]

FNA20 does not list WA as within the range of this variety, nor are there any specimens of it at WTU. Chambers and Sundberg (2000) do not accept the generic splitting in *Senecio* by Barkley 1999, Trock and Barkley 1999)

\* Barkley, T. M. 1999. The segregates of *Senecio*, s.l., and *Cacalia*, s.l., in the Flora of North America north of Mexico. Sida 18: 661-672.

var. *harfordii* (Greenm.) Trock & T.M. Barkley [FNA20, HC2]

Sida. 18: 386. 1998.

Harford's ragwort

*Senecio bolanderi* A. Gray var. *harfordii* (Greenm.) T.M. Barkley [HC]

*Senecio harfordii* Greenm.

Perhaps not distinct from var. *bolanderi* (Chambers and Sundberg 2000), pubescence differences are inconstant in Cascade and Siskiyou Mts. of OR.

***Packera cana*** (Hook.) W.A. Weber & Á. Löve [FNA20, HC2]

Phytologia. 49: 46. 1981.

woolly groundsel

*Senecio canus* Hook. [HC]

*Senecio howellii* Greene

*Senecio purshianus* Nutt.

Intergrades with *S. macounii* in southern OR (Chambers and Sundberg 2000)

***Packera contermina*** (Greenm.) J.F. Bain [FNA20, HC2]

Novon. 9: 457. 1999.

dwarf arctic butterweed

***Packera cymbalaria*** (Pursh) W.A. Weber & Á. Löve [FNA20]

Phytologia. 49: 46. 1981.

northern butterweed, dwarf arctic groundsel, dwarf arctic ragwort

(see also *Packera contermina*)

*Senecio cymbalaria* Pursh

*Senecio resedifolius* Less.. [HC]

FNA20 does not list this species as occurring in WA. FNA20: "*Packera cymbalaria* occurs in three, disjunct regions: western Alaska eastward into western N.W.T. and south into northwestern British Columbia; Newfoundland and the Gaspé Peninsula, Quebec; and Siberia. Considerable morphologic overlap exists between western and eastern populations in North America; western populations have slightly different flavonoid chemistries and chromosome numbers. Western populations are either diploid or tetraploid; eastern populations are hexaploid. The correct name for this species may prove to be *Packera heterophylla* (Fischer) E. Wiebe, based on *Cineraria heterophylla* Fischer."

***Packera flettii*** (Wiegand) W.A. Weber & Á. Löve [FNA20, HC2]

Phytologia. 49: 46. 1981.

Flett's groundsel

*Senecio flettii* Wiegand [HC]

***Packera indecora*** (Greene) Á. Löve & D. Löve [FNA20, HC2]

Bot. Not. 128: 520. 1976.

rayless mountain butterweed, elegant groundsel, rayless mountain groundsel

*Senecio indecorus* Greene [HC]

***Packera macounii*** (Greene) W.A. Weber & Á. Löve [FNA20, HC2]

Phytologia. 49: 47. 1981.

Puget butterweed, long rayed groundsel, Macoun's groundsel, Siskiyou Mountain ragwort

*Senecio macounii* Greene [HC]

FNA20: "Packera macounii is similar in overall morphology to *P. cana*. Leaves of *P. macounii* are narrower and frequently revolute. It is often cited as being collected on serpentine soils; it is not restricted to them. *Senecio fastigiatus* Nuttall (1840) is a later homonym of *S. fastigiatus* Schweinitz ex Elliott (1823), a name of uncertain application." Chambers and Sundberg (2000) note this species is weakly separated from *S. canus* in sw OR

***Packera pauciflora* (Pursh) Á. Löve & D. Löve [FNA20, HC2]**

Bot. Not. 128: 520. 1976.

rayless alpine butterweed, rayless alpine groundsel

*Senecio pauciflorus* Pursh [HC]

FNA20: "Heads of *Packera pauciflora* are usually discoid. Its range and habitat overlap those of *P. indecora*; the two can be difficult to distinguish."

***Packera paupercula* (Michx.) Á. Löve & D. Löve [FNA20, HC2]**

Bot. Not. 128: 520. 1976.

Canadian butterweed, balsam groundsel

*Senecio pauperculus* Michx. [HC]

*Senecio pauperculus* Michx. var. *thompsoniensis* (Greenm.) B. Boivin [HC]

FNA20: "Ecologically and morphologically, *Packera paupercula* is the most variable species of the genus in North America. Some "phases" have been treated as separate species, subspecies, varieties, forms, and races. Variation within *P. paupercula* hints at some interesting evolutionary relationships; characteristics used to separate taxa overlap. Much of the morphologic variation in this species may be due to hybridization and introgression. I do not recognize any of the infraspecific taxa that have been proposed."

***Packera porteri* (Greene) C. Jeffrey [FNA20, HC2]**

Kew Bull. 47: 101. 1992.

Porter's groundsel

*Senecio porteri* Greene [HC]

FNA20: "Multiple collections of *Packera porteri* are known from Colorado; single collections are known from Oregon (1899; collector indicated few plants were seen) and Washington (1996)." Specimen at Kansas State University.

***Packera pseud aurea* (Rydb.) W.A. Weber & Á. Löve [FNA20, HC2]**

Phytologia. 49: 48. 1981.

streambank butterweed

*Senecio pseud aureus* Rydb. [HC]

var. ***pseud aurea* [FNA20, HC2]**

Phytologia. 49: 48.

streambank butterweed, falsegold groundsel

*Senecio pseud aureus* Rydb. ssp. *pseud aureus*

*Senecio pseud aureus* Rydb. var. *pseud aureus* [HC]

rayless plants are easy to confuse with *S. pauciflorus*

***Packera streptanthifolia* (Greene) W.A. Weber & Á. Löve [FNA20, HC2]**

Phytologia. 49: 48. 1981.

Rocky Mountain butterweed, cleftleaf groundsel, Rocky Mountain groundsel

*Packera cymbalarioides* W.A. Weber & A. Löve, invalidly published

*Senecio cymbalarioides* Nutt. var. *suksdorfii* (Greenm.) M. Peck

*Senecio leonardii* Rydb.

*Senecio streptanthifolius* Greene [HC]

*Senecio streptanthifolius* Greene var. *laetiflorus* (Greene) J.F. Bain

*Senecio streptanthifolius* Greene var. *wallowensis* J.F. Bain

FNA20: "*Packera streptanthifolia* is widespread and variable throughout the Western Cordillera. It includes weakly defined phases that have been treated as distinct species or as varieties. Characteristics used to delimit those taxa often overlap and are difficult to score; some "phases" grade into each other. Northern

populations are sometimes segregated as a distinct taxon (e.g., *Senecio streptanthifolia* var. *borealis*; J. F. Bain 1988)." Chambers and Sundberg (2000) follow Bain (1988) in recognizing varieties, but here we do not, following Douglas et al. (1998) and the species concept of Weber

\* Bain, J.F. 1988. Taxonomy of *Senecio streptanthifolius* Greene. *Rhodora* 90: 277-312.

***Packera subnuda* (DC.) Trock & T.M. Barkley [FNA20, HC2]**

Sida. 18: 635. 1999.

alpine meadow butterweed, few-leaved groundsel

*Packera buekii* Trock & T.M. Barkley

*Senecio aureus* L. var. *subnudus* (DC.) A. Gray

*Senecio cymbalarioides* Buek [HC]

*Senecio subnudus* DC.

var. ***subnuda*** [FNA20, HC2]

Sida. 18: 635.

cleftleaf groundsel

*Packera ovina* (Greene) J.F. Bain

*Senecio ovinus* Greene

FNA20: "Plants of *Packera subnuda* var. *subnuda* are scapiform and usually have a single head."

\* Trock, D.K. and T.M. Barkley. 1999. *Packera subnuda* comb. nov., a corrected name for *Packera buekii* (Asteraceae: Senecioneae). *Sida* 18: 635.

***Petasites*** [FNA20, HC, HC2]

Gard. Dict. Abr. ed. 4. vol. 3. 1754.

butterbur, coltsfoot

***Petasites frigidus* (L.) Fr.** [FNA20, HC, HC2]

Summa Veg. Scand. 182. 1845.

var. ***frigidus*** [FNA20, HC2]

Summa Veg. Scand. 182.

alpine butterbur, arctic butterbur, sweet coltsfoot

*Petasites frigidus* (L.) Fr. var. *nivalis* (Greene) Cronquist [HC]

Cherniawsky and Bayer (1998a,b,c) have shown that plants called var. *nivalis* are part of the natural variability of var. *frigidus*.

\* Cherniawsky, D. M. and R. J. Bayer. 1998a. Systematics of North American *Petasites* (Asteraceae: Senecioneae). I. Morphometric analysis. *Canadian Journal of Botany* 76: 23-36.

\* Cherniawsky, D. M. and R. J. Bayer. 1998b. Systematics of North American *Petasites* (Asteraceae: Senecioneae). II. Isozyme analysis and population genetic structure. *Canadian Journal of Botany* 76: 1476-1487.

\* Cherniawsky, D. M. and R. J. Bayer. 1998c. Systematics of North American *Petasites* (Asteraceae: Senecioneae). III. A taxonomic revision. *Canadian Journal of Botany* 76: 2061-2075.

var. ***palmatus*** (Aiton) Cronquist [FNA20, HC, HC2]

*Rhodora*. 48: 124. 1946.

western coltsfoot

*Nardosmia palmata* (Aiton) Hook.

*Petasites arcticus* A.E. Porsild

*Petasites frigidus* (L.) Fr. ssp. *arcticus* (A.E. Porsild) Cody

*Petasites palmatus* (Aiton) A. Gray

*Petasites palmatus* (Aiton) A. Gray ssp. *speciosus* (Nutt.) Toman

*Petasites speciosus* (Nutt.) Piper

*Tussilago palmata* Aiton

Vestigial hybrids with *P. sagittatus* are found in Kittitas Co. (Bogle 1961, 1968).

\* Bogle, A. L. 1961. A study of the genus *Petasites* in the Pacific Northwest, with special reference to *Petasites warrenii* St. John. Unpublished M.S. thesis, University of Washington, Seattle.

\* Bogle, A. L. 1968. Evidence for the hybrid origin of *Petasites warrenii* and *P. vitifolius*. *Rhodora* 70: 533-551.

var. *sagittatus* (Pursh) Cherniawsky & R.J. Bayer [FNA20, HC2]

Canad. J. Bot. 76: 2070. 1999.

arrowhead coltsfoot, arrowhead sweet coltsfoot, arrowleaf coltsfoot

*Petasites sagittatus* (Pursh) A. Gray [HC]

The taxonomy of this complex, including *Petasites frigidus* and *P. sagittatus*, is disputed. Cherniawsky and Bayer (1998a,b,c) have shown the group has diverged only recently, and proposed a series of varieties with broadly overlapping ranges. We prefer the classification of H&C and JPM, and maintain *P. sagittatus* as a full species.

- \* Cherniawsky, D. M. and R. J. Bayer. 1998a. Systematics of North American *Petasites* (Asteraceae: Senecioneae). I. Morphometric analysis. Canadian Journal of Botany 76: 23-36.
- \* Cherniawsky, D. M. and R. J. Bayer. 1998b. Systematics of North American *Petasites* (Asteraceae: Senecioneae). II. Isozyme analysis and population genetic structure. Canadian Journal of Botany 76: 1476-1487.
- \* Cherniawsky, D. M. and R. J. Bayer. 1998c. Systematics of North American *Petasites* (Asteraceae: Senecioneae). III. A taxonomic revision. Canadian Journal of Botany 76: 2061-2075.
- \* Cronquist, A. 1978. Compositae, Senecioneae. N. Am. Flora Ser. II. No. 10., pp. 174-179.

var. *xvitifolius* (Greene) Cherniawsky & R.J. Bayer [FNA20, HC2, KZ99]

Canad. J. Bot. 76: 2072. 1999.

hybrid coltsfoot, Wenatchee coltsfoot

*Petasites nivalis* Greene ssp. *vitifolius* (Greene) J. Toman

*Petasites trigonophyllus* Greene

*Petasites xvitifolius* Greene [HC]

*Petasites warrenii* H. St. John

FNA20: "*Petasites frigidus* var. *xvitifolius* often grows in association with one or both putative parents (*P. frigidus* var. *palmatum* and *P. frigidus* var. *sagittatus*)." Bogle (1961, 1968) produced this hybrid through artificial crosses.

- \* Bogle, A. L. 1961. A study of the genus *Petasites* in the Pacific Northwest, with special reference to *Petasites warrenii* St. John. Unpublished M.S. thesis, University of Washington, Seattle.
- \* Bogle, A. L. 1968. Evidence for the hybrid origin of *Petasites warrenii* and *P. vitifolius*. *Rhodora* 70: 533-551.
- \* Cherniawsky, D. M. and R. J. Bayer. 1998a. Systematics of North American *Petasites* (Asteraceae: Senecioneae). I. Morphometric analysis. Canadian Journal of Botany 76: 23-36.
- \* Cherniawsky, D. M. and R. J. Bayer. 1998b. Systematics of North American *Petasites* (Asteraceae: Senecioneae). II. Isozyme analysis and population genetic structure. Canadian Journal of Botany 76: 1476-1487.
- \* Cherniawsky, D. M. and R. J. Bayer. 1998c. Systematics of North American *Petasites* (Asteraceae: Senecioneae). III. A taxonomic revision. Canadian Journal of Botany 76: 2061-2075.
- \* Gleason, H. A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada, 2nd ed. The New York Botanical Garden, Bronx. 910 p.
- \* Toman, J. 1972. A taxonomic survey of the genera *Petasites* and *Endocellion*. *Folia Geobot. Phytotaxon.* 7: 381-406.

*Petasites japonicus* (Siebold & Zucc.) Maxim. [HC2, ILBC1]

Japanese coltsfoot

var. *giganteus* (F. Schmidt ex Trautv.) G. Nicholson [HC2]

Japanese sweet coltsfoot

*Petasites japonicus* (Siebold & Zucc.) Maxim. ssp. *giganteus* (F. Schmidt ex Trautv.) Kitam.

A large perennial herb persisting and slightly spreading at a long abandoned homestead, now forested, in Skagit Co. "NoCa" = National Park Service herbarium for North Cascades National Park, in Marblemount.

- \* Naas, D., R. Naas, and E. Burnett. 1990. A checklist of vascular plants of the North Cascades, Washington. North Cascades National Park, Sedro Woolley, WA. 57 p.
- \* Ohwi, J. 1984. Flora of Japan (in English). Smithsonian Institution, Washington, D.C.
- \* Toman, J. 1972. A taxonomic survey of the genera *Petasites* and *Endocellion*. *Folia Geobot. Phytotaxon.* 7: 381-406.

var. *japonicus*

Japanese sweet coltsfoot

Recently collected in Thurston Co. *Petasites hybridus* was reported for Washington by Kartesz, based on one of the 1998 *Petasites* papers by Cherniawsky and Bayer (1998a, b, c). However, none of those papers mention *Petasites hybridus* in Washington (they also fail to mention any adventive taxa in North America). A similar report of *Petasites hybridus* from British Columbia is rejected by Douglas et al. (1998, p. 408), with the suggestion that the reports were based on collections of introduced *Petasites japonicus*.

- \* Cherniawsky, D. M. and R. J. Bayer. 1998a. Systematics of North American *Petasites* (Asteraceae: Senecioneae). I. Morphometric analysis. *Canadian Journal of Botany* 76: 23-36.
- \* Cherniawsky, D. M. and R. J. Bayer. 1998b. Systematics of North American *Petasites* (Asteraceae: Senecioneae). II. Isozyme analysis and population genetic structure. *Canadian Journal of Botany* 76: 1476-1487.
- \* Cherniawsky, D. M. and R. J. Bayer. 1998c. Systematics of North American *Petasites* (Asteraceae: Senecioneae). III. A taxonomic revision. *Canadian Journal of Botany* 76: 2061-2075.
- \* <b>IFBC1</b> = Douglas, G. W., G. B. Straley, D. V. Meidinger, and J. Pojar (eds). 1998. *Illustrated Flora of British Columbia*, Volume 1: Gymnosperms and Dicotyledons (Aceraceae Through Asteraceae). B.C. Ministry of Environment, Lands & Parks and B.C. Ministry of Forests. Victoria. 436 p.

### ***Picris* [FNA19, HC2]**

Sp. Pl. 2: 792. 1753; Gen. Pl. ed. 5, 347. 1754.  
oxtongue, picris

#### ***Picris hieracioides* L. [FNA19, HC2]**

Sp. Pl. 2: 792. 1753.  
hawkweed oxtongue

*Picris hieracioides* L. ssp. *hieracioides*

reported by Invaders database, noxious in WA, any voucher?

### ***Pleiacanthus* [FNA19, HC2]**

Fl. Rocky Mts. 1069. 1917.  
skeletonweed

#### ***Pleiacanthus spinosus* (Nutt.) Rydb. [FNA19, HC2]**

Fl. Rocky Mts. 1069. 1917.  
thorny skeletonweed

*Lygodesmia spinosa* Nutt. [HC]

Collected once (2009) in Yakima County. Uncertain as to whether a relictual native stand or an introduction. Closest populations are in central Oregon and southern Idaho.

### ***Pseudognaphalium* [FNA19, HC2]**

Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1. Fl. Sist. Vyssh. Rast. 9: 33. 1950.  
cudweed

#### ***Pseudognaphalium californicum* (DC.) Anderb. [FNA19, HC2]**

Opera Bot. 104: 147. 1991.  
California cudweed, California everlasting, ladies tobacco, ladies' tobacco  
*Gnaphalium californicum* DC. [HC]

FNA19 does not show this species occurring in WA. Specimen at WTU from Grays Harbor County (1998).

#### ***Pseudognaphalium canescens* (DC.) Anderb. [FNA19]**

Opera Bot. 104: 147. 1991.  
Wright's rabbit-tobacco

FNA 19 shows the distribution of this species well west and south of WA.

#### ***Pseudognaphalium luteoalbum* (L.) Hilliard & B.L. Burt [FNA19, HC2]**

Bot. J. Linn. Soc. 82: 206. 1981.  
weedy cudweed, red-tip rabbit-tobacco, jersey rabbit tobacco

*Gnaphalium luteo-album* L. [HC], orthographic variant  
*Gnaphalium luteoalbum* L.

Hyphen removed from sp. epithet following ICBN Art. 60.9 (Greuter et al. 1994)

***Pseudognaphalium macounii* (Greene) Kartesz [FNA19, HC2]**

Synth. N. Amer. Fl. nomencl. innov. 30. 1999.

sticky cudweed, winded cudweed, Macoun's rabbit-tobacco, Macoun's rabbit tobacco

*Gnaphalium macounii* Greene

*Pseudognaphalium viscosum* (Kunth) Anderb. [FNA19], misapplied

FNA20: "Pseudognaphalium macounii is recognized by its stipitate-glandular, proximally glabrescent stems, bicolor and decurrent leaves, relatively large and many-flowered heads, and hyaline, shiny phyllaries." Reported in WA by Creso (1984); Chambers and Sundberg (2000) separate from viscosum but BC flora lumps them. WTU voucher needs check of identity.

***Pseudognaphalium stramineum* (Kunth) Anderb. [FNA19, HC2]**

Opera Bot. 104: 148. 1991.

cotton batting cudweed, cotton batting plant

*Gnaphalium chilense* Spreng. [HC]

*Gnaphalium stramineum* Kunth

*Pseudognaphalium stramineum* (Kunth) W.A. Weber, invalid name

FNA19 lists this species as occurring in WA. FNA19: "Pseudognaphalium stramineum is probably native from South America to western North America; it is adventive in sandy fields on the Atlantic coastal plain, where it flowers May?Aug."

***Pseudognaphalium thermale* (E.E. Nelson) G.L. Nesom [FNA19, HC2]**

Sida. 21: 781. 2004.

slender cudweed, northwestern rabbit-tobacco

*Gnaphalium canescens* DC. ssp. *thermale* (E.E. Nelson) Stebbins & D.J. Keil

*Gnaphalium microcephalum* Nutt. ssp. *thermale* (E.E. Nelson) G.W. Douglas

*Gnaphalium microcephalum* Nutt. var. *thermale* (E.E. Nelson) Cronquist [HC]

*Pseudognaphalium canescens* (DC.) Anderb. ssp. *thermale* (E.E. Nelson) Kartesz

*Pseudognaphalium microcephalum* (Nutt.) Anderb. [FNA19], misapplied

***Psilocarphus* [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 340. 1840.

woolly-heads, woolly-marbles

***Psilocarphus brevissimus* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 340. 1840.

dwarf woolly-marbles

**var. *brevissimus* [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 340.

dwarf woollyheads

*Psilocarphus globiferus* Nutt.

FNA19: "Variety brevissimus occupies nearly the full range of the genus (uncommon west of the Cascade Range); some occurrences toward the northeast appear to be recent introductions."

***Psilocarphus elatior* (A. Gray) A. Gray [FNA19, HC, HC2]**

Syn. Fl. N. Amer. ed. 2. 1: 448. 1886.

tall woollyheads

*Psilocarphus oregonus* Nutt. var. *elatior* A. Gray

perhaps best treated as a geographic subspecies of *P. brevissimus* (Chambers and Sundberg 2000). FNA19: "Psilocarphus elatior occurs west of the Cascade Range from California to Vancouver Island, British Columbia, and in scattered areas eastward (northwestern Montana, mountains surrounding the border area common to Oregon, Washington, and Idaho). Reports of *P. elatior* from Alberta and Saskatchewan were based on relatively erect forms of *P. brevissimus* var. *brevissimus*. *Psilocarphus elatior* has been of conservation concern in Canada (J. M. Illingworth and G. W. Douglas 1994). Where sympatric, *Psilocarphus elatior* tends to inhabit relatively dry or seasonally flooded sites in more mesic coastal or montane climates and *P. brevissimus* var. *brevissimus* occurs mainly in wetter, seasonally

inundated sites in semiarid climates. Some specimens appear to be intermediate; further study may show the two taxa to be better treated as varietally distinct. See also under *P. brevissimus* var. *multiflorus*."

***Psilocarphus oregonus* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 341. 1840.  
Oregon woollyheads

FNA19: "Psilocarphus oregonus occurs from west-central California through most of Oregon to southeastern Washington, western Idaho, and northern Nevada. Relatively narrow-leaved, montane forms of *P. tenellus* account for reports of *P. oregonus* from the southern Sierra Nevada to Baja California; further study may show these to be intermediates between the two taxa."

***Psilocarphus tenellus* Nutt. [FNA19, HC, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 341. 1840.  
slender woollyheads

*Psilocarphus tenellus* Nutt. var. *tenellus* [HC]

***Pyrocoma* [FNA20, HC2]**

Fl. Bor.-Amer. 1: 306, plate 107. 1833.  
goldenweed

***Pyrocoma carthamoides* Hook. [FNA20, HC2]**

Fl. Bor.-Amer. 1: 307, plate 107. 1803.  
large-flowered goldenweed

*Haplopappus carthamoides* (Hook.) A. Gray [HC]

**var. *carthamoides* [FNA20, HC2]**

Fl. Bor.-Amer. 1: 307, plate 107.  
Columbia goldenweed, rayless goldenweed

*Haplopappus carthamoides* (Hook.) Gray ssp. *carthamoides*

*Haplopappus carthamoides* (Hook.) A. Gray ssp. *rigidus* (Rydb.) H.M. Hall

*Haplopappus carthamoides* (Hook.) Gray var. *carthamoides* [HC]

FNA20: "Variety *carthamoides* is recognized by its relatively robust stems, large leaves and involucre, and overlapping, oblong to obovate phyllaries."

**var. *cusickii* (A. Gray) Kartesz & Gandhi [FNA20, HC2]**

Phytologia. 71: 60. 1991.  
narrowhead goldenweed

*Haplopappus carthamoides* (Hook.) A. Gray ssp. *cusickii* (A. Gray) H.M. Hall

*Haplopappus carthamoides* (Hook.) A. Gray var. *cusickii* A. Gray [HC]

FNA20: "Variety *cusickii* is recognized by its generally smaller size, and campanulate to turbinate involucre with loose, lanceolate phyllaries."

***Pyrocoma hirta* (A. Gray) Greene [FNA20, HC2]**

Erythea. 2: 69. 1894.  
hairy goldenweed, sticky goldenweed

*Haplopappus hirtus* A. Gray [HC]

*Haplopappus hirtus* A. Gray var. *hirtus* [HC]

**var. *sonchifolia* (Greene) Kartesz & Gandhi [FNA20, HC2]**

Phytologia. 71: 60. 1991.  
large sticky goldenweed

*Haplopappus hirtus* A. Gray ssp. *sonchifolius* (Greene) H.M. Hall

*Haplopappus hirtus* A. Gray var. *sonchifolius* (Greene) M. Peck [HC]

FNA20: "Variety *sonchifolia* is recognized by its wider leaves and its preference for moist habitats. More study is needed to determine the status of this taxon."

***Pyrocoma liatriformis* Greene [FNA20, HC2]**

Leafl. Bot. Observ. Crit. 2: 17. 1909.

Palouse goldenweed

*Haplopappus integrifolius* Porter ex A. Gray ssp. *liatrifolius* (Greene) H.M. Hall

*Haplopappus integrifolius* Porter ex A. Gray ssp. *scaberulus* (Greene) H.M. Hall

*Haplopappus liatrifolius* (Greene) H. St. John [HC]

*Haplopappus racemosus* (Nutt.) Torr. ssp. *liatrifolius* (Greene) D.D. Keck

FNA20: "Pyrocoma liatrifolius is one of the dominants of virgin Palouse prairies and appears to be threatened. It is recognized by its hirsute stems, leaves, and phyllaries, and the small, pedunculate heads."

***Pyrocoma scaberula* Greene [HC2]**

Leaflets of Botanical Observation and Criticism 2(1): 19.

palouse goldenweed

\* Bjork, C. R. and M. Darrach. 2009. An investigation of morphological evidence supports the resurrection of *Pyrocoma scaberula* (Asteraceae: Astereae). *Journal of the Botanical Research Institute of Texas* 3:231?238.

\* Smith, J.F., D.N. Perkins, C.R. Björk, and G. Glenne. 2010. Species Boundaries in *Pyrocoma liatrifolius* and *Pyrocoma scaberula* (Asteraceae) Based on AFLP Data. *Madroño*, 57(2):95-105.

***Rainiera* [FNA20, HC2]**

Pittonia. 3: 291. 1898.

rainiera

***Rainiera stricta* (Greene) Greene [FNA20, HC2]**

Pittonia. 3: 291. 1898.

tongue leaved luina, Rainiera, false silverback

*Luina stricta* (Greene) B.L. Rob. [HC]

\* Strother, J.L. 1978. Luina, Cacaliopsis, Rainiera. pp. 160-163, in *North American Flora*, ser. 2, pt. 10. New York Botanical Garden, Bronx, New York.

***Ratibida* [FNA21, HC, HC2]**

Fl. Ludov. 73. 1817.

prairie coneflower, Mexican-hat

***Ratibida columnifera* (Nutt.) Wootton & Standl. [FNA21, HC, HC2]**

Contr. U.S. Natl. Herb. 19: 706. 1915.

prairie coneflower, redspike Mexican-hat, Upright prairie coneflower

*Ratibida columnaris* (Sims) D. Don

*Rudbeckia columnifera* Nutt.

Reported from WA in IFBC. FNA21: "*Ratibida columnifera* is grown as an ornamental and is often included in wild flower plantings. Such activities may extend the geographic range of the species to roadsides and prairie-like habitats. Some authors have argued that *Ratibida columnaris* (Sims) D. Don is the correct name for this species; J. L. Reveal (1968) and E. L. Richards (1968) provided synoptic discussions of the issue."

***Rhaponticum* [HC2], conserved name**

hardheads, maral root

***Rhaponticum repens* (L.) Hidalgo [HC2]**

hardheads, Russian knapweed, Turkestan thistle

*Acroptilon repens* (L.) DC. [FNA19]

*Centaurea repens* L. [HC]

FNA19: "In most American floristic literature *Acroptilon* has been included within *Centaurea*, from which it differs by the subbasal rather than lateral attachment scars on the cypselae and the absence of sterile outer florets. The chromosome base number. = 13 is higher than that in most species of *Centaurea* in the strict sense. Molecular phylogenetic studies of the relationships of Cynareae genera (A. Susanna et al. 1995) support the segregation of *Acroptilon* from *Centaurea*."

\* Watson, A. K. 1980. The biology of Canadian weeds. 43. *Acroptilon* (*Centaurea*) *repens* (L.) DC. *Canad. J. Pl. Sci.* 60: 993?1004.

**Rigiopappus** [FNA20, HC, HC2]

Proc. Amer. Acad. Arts. 6: 548. 1865.

**Rigiopappus leptocladus** A. Gray [FNA20, HC, HC2]

Proc. Amer. Acad. Arts. 6: 548. 1865.  
bristlehead, false wireweed

**Rudbeckia** [FNA21, HC, HC2]

Sp. Pl. 2: 906. 1753; Gen. Pl. ed. 5, 387. 1754.  
coneflower, rudbeckia

**Rudbeckia alpicola** Piper [FNA21, HC2]

Erythea. 7: 173. 1899.  
or showy coneflower, Wenatchee Mountain, Washington

*Rudbeckia occidentalis* Nutt. var. *alpicola* (Piper) Cronquist [HC]

**Rudbeckia hirta** L. [FNA21, HC, HC2]

Sp. Pl. 2: 907. 1753.

var. *pulcherrima* Farw. [FNA21, HC, HC2]

Rep. (Annual) Michigan Acad. Sci. 6: 209. 1904.  
blackeyed Susan

**Rudbeckia laciniata** L. [FNA21, HC, HC2]

Sp. Pl. 2: 906. 1753.  
green-headed coneflower, tall coneflower

var. *ampla* (A. Nelson) Cronquist [FNA21, HC, HC2]

Vasc. Pl. Pacif. N.W. 5: 280. 1955.  
tall coneflower

*Rudbeckia ampla* A. Nelson

FNA21: "Cultivars of *Rudbeckia laciniata* are grown as ornamentals. The cultivar 'golden-glow' is widely planted and occasionally escapes cultivation."

**Rudbeckia occidentalis** Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 355. 1840.  
western chocolate come, western coneflower  
(see also *Rudbeckia alpicola*)

*Rudbeckia occidentalis* Nutt. var. *occidentalis* [HC]

Chambers and Sundberg (2000) note the vars. are not worth recognizing.

**Saussurea** [FNA19, HC, HC2]

Ann. Mus. Natl. Hist. Nat. 16: 156, 196, plates 10?13. 1810.  
saw-wort

**Saussurea americana** D.C. Eaton [FNA19, HC, HC2]

Bot. Gaz. 6: 283. 1881.  
American sawwort

**Senecio** [FNA20, HC, HC2]

Sp. Pl. 2: 866. 1753; Gen. Pl. ed. 5, 373. 1754.  
butterweed, groundsel, ragwort  
(see also *Jacobaea*, *Packera*)

**Senecio elmeri** Piper [FNA20, HC, HC2]

Erythea. 7: 173. 1899.  
Elmer's ragwort

**Senecio fremontii** Torr. & A. Gray [FNA20, HC, HC2]

Fl. N. Amer. 2: 445. 1843.  
dwarf mountain butterweed

*Senecio ductoris* Piper

var. **fremontii** [FNA20, HC, HC2]

Fl. N. Amer. 2: 445.

dwarf mountain groundsel

***Senecio hydrophiloides*** Rydb. [FNA20, HC2]

Mem. New York Bot. Gard. 1: 441. 1900.

sweet marsh butterweed, stout meadow groundsel

*Senecio foetidus* Howell [HC]

*Senecio foetidus* Howell var. *foetidus* [HC]

*Senecio foetidus* Howell var. *hydrophiloides* (Rydb.) T.M. Barkley ex Cronquist [HC]

*Senecio oreganus* Howell

Kz & BC have auth as: *S. foetidus* var. *hydrophiloides* (Rydb.) T. M. Barkley ex Cronquist; which is correct? Chambers and Sundberg (2000) note this is difficult to separate from *S. hydrophilus* in the herbarium, but ecologically is less tolerant of alkali than the next species. FNA20: "Plants of *Senecio hydrophiloides* from toward the western end of the range tend to have the heads more or less congested and radiate and stems loosely clustered; plants from toward the eastern edge tend to have heads loosely arrayed and radiate and stems single. The two forms have been recognized as weakly defined species (or varieties), the former as *Senecio foetidus* and the latter as *S. hydrophiloides*. They intergrade so completely that they are best treated as a single, variable taxon. The use of the epithet *foetidus* for the broadly conceived single species was based on a bibliographic misunderstanding; the correct epithet is *hydrophiloides* (T. M. Barkley 1978; A. Cronquist 1994). In 1900, Thomas Howell gave the name *Senecio oreganus* to a collection from Lake Labish, near Salem, Oregon. The area has seen much disturbance and development since Howell's time, and the plant appears to be extinct in the region. The collection is difficult to exclude from *S. hydrophiloides*, and the collection is here regarded as an odd outlier of *S. hydrophiloides*, which is known chiefly from east of the Cascade uplift. Howell's collection and therefore the name *S. oreganus* also have been treated within *S. sphaerocephalus* (T. M. Barkley 1978; A. Cronquist 1955); that attribution appears to be in error. The "type" materials are now in the herbarium of Oregon State University in Corvallis."

***Senecio hydrophilus*** Nutt. [FNA20, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 411. 1841.

alkali marsh butterweed, water groundsel, alkali marsh ragwort

*Senecio hydrophilus* Nutt. var. *pacifica* Greene

***Senecio integerrimus*** Nutt. [FNA20, HC, HC2]

Gen. N. Amer. Pl. 2: 165. 1818.

one-stemmed butterweed, western groundsel

var. **exaltatus** (Nutt.) Cronquist [FNA20, HC, HC2]

Leafl. W. Bot. 6: 48. 1950.

lambstongue groundsel, tall western groundsel

*Senecio integerrimus* Nutt. var. *vaseyi* (Greenm.) Cronquist [HC]

*Senecio vaseyi* Greenm.

FNA20: "Variety *exaltatus* is the most widespread and variable variety of the species. Eradiate plants of var. *exaltatus* have been recognized as var. *vaseyi*; there appears to be no populational integrity to the eradiate condition." Chambers and Sundberg (2000) note this is very similar to *S. hydrophiloides* and differs only in the pubescence

var. **ochroleucus** (A. Gray) Cronquist [FNA20, HC, HC2]

Leafl. W. Bot. 6: 48. 1950.

white western groundsel

*Senecio exaltatus* Nutt. ssp. *ochraceus* Piper

Chambers and Sundberg (2000) note the flower color cannot be determined on older herbarium sheets, but the cordate or sub-cordate leaves are unique

***Senecio lugens*** Richardson [FNA20, HC, HC2]

Narr. Journey Polar Sea. 748. 1823.

black-tipped groundsel

*Senecio integerrimus* Nutt. var. *lugens* (Richardson) B. Boivin

***Senecio neowebsteri*** S.F. Blake [FNA20, HC, HC2]

Leafl. W. Bot. 8: 143. 1957.

Olympic Mountain ragwort

***Senecio serra*** Hook. [FNA20, HC, HC2]

Fl. Bor.-Amer. 1: 333. 1834.

tall butterweed, butterweed groundsel

var. ***serra*** [FNA20, HC2]

Fl. Bor.-Amer. 1: 333.

tall butterweed, butterweed groundsel

*Senecio andinus* Nutt.

*Senecio lanceolatus* Torr. & A. Gray

*Senecio millikenii* Eastw.

*Senecio serra* Hook. var. *altior* Jeps.

*Senecio solidago* Rydb.

***Senecio sylvaticus*** L. [FNA20, HC, HC2]

Sp. Pl. 2: 868. 1753.

wood groundsel, woodland groundsel, woodland ragwort

FNA20: "Senecio sylvaticus is a Eurasian weed that favors cool, wet climates. It is well established in coastal areas of the Pacific Coast and in parts of Newfoundland and Quebec; elsewhere in the flora, it appears to be sporadic."

***Senecio triangularis*** Hook. [FNA20, HC, HC2]

Fl. Bor.-Amer. 1: 332, plate 115. 1834.

arrowleaf groundsel, arrowleaf ragwort

*Senecio triangularis* Hook. var. *angustifolius* G.N. Jones [HC]

FNA20: "Plants of *Senecio triangularis* with narrow, subentire leaves that taper to the petioles are occasionally encountered in acid bogs in Oregon and Washington and less frequently elsewhere. They are regarded as edaphic variants; they have been recognized as var. *angustifolius*." Var. *angustifolius* of southern OR & CA is distinct (Chambers and Sundberg, 2000).

var. ***triangularis*** [HC, HC2]

***Senecio viscosus*** L. [FNA20, HC2]

Sp. Pl. 2: 868. 1753.

sticky ragwort

FNA 20: "Senecio viscosus is a smelly, Eurasian weed now widely scattered in areas of cool damp climates, often as a casual waif. The viscid hairs trap wind-blown particles of sand, dust, and soot, which give the surfaces varying textures and colors."

***Senecio vulgaris*** L. [FNA20, HC, HC2]

Sp. Pl. 2: 867. 1753.

common groundsel, old man in the spring

***Sericocarpus*** [FNA20, HC2]

Gen. Sp. Aster. 10, 148. 1832.

white-topped aster

***Sericocarpus oregonensis*** Nutt. [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 302. 1840.

Oregon white topped aster

*Aster oregonensis* (Nutt.) Cronquist [HC]

ssp. ***oregonensis*** [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 302.

Oregon white topped aster

*Aster oregonensis* (Nutt.) Cronquist ssp. *oregonensis*  
*Sericocarpus oregonensis* Nutt. var. *oregonensis*

***Sericocarpus rigidus* Lindl. [FNA20, HC2]**

Fl. Bor. Amer. 2: 14. 1834.

Columbian white-topped aster, Columbian whitetop aster, rigid white topped aster

*Aster curtus* Cronquist [HC]

***Silybum* [FNA19, HC, HC2]**

Fam. Pl. 2: 116, 605. 1763.

milk-thistle

***Silybum marianum* (L.) Gaertn. [FNA19, HC, HC2]**

Fruct. Sem. Pl. 2: 378. 1791.

milk thistle

***Solidago* [FNA20, HC, HC2]**

Sp. Pl. 2: 878. 1753; Gen. Pl. ed. 5, 374. 1754.

goldenrod

(see also *Euthamia*)

***Solidago elongata* Nutt. [FNA20, HC2]**

Trans. Amer. Philos. Soc., n. s. 7: 327. 1841.

Cascade Canada goldenrod, West Coast goldenrod

*Solidago canadensis* L. ssp. *elongata* (Nutt.) D.D. Keck

*Solidago lepida* DC. var. *caurina* (Piper) M. Peck

*Solidago lepida* DC. var. *elongata* (Nutt.) Fernald

FNA20: "This species can be similar to *S. lepida*, which usually has much larger distal cauline leaves."

***Solidago lepida* DC. [FNA20, HC2]**

Prodr. 5: 339. 1836.

western Canada goldenrod

*Solidago canadensis* L. var. *lepida* (DC.) Cronquist

*Solidago canadensis* L. var. *subserrata* (DC.) Cronquist [HC]

**var. *lepida* [FNA20, HC2]**

In A. P. de Candolle and A. L. P. P. de Candolle, Prodr. 5: 339.

western Canada goldenrod

FNA20: "Variety *lepida* can be difficult to distinguish from *Solidago elongata* in the Cascades and coastal areas of southern British Columbia and Washington. Involucre height increases with ploidy level."

**var. *salebrosa* (Piper) Semple [FNA20, HC2]**

Sida. 20: 1611. 2003.

Canada goldenrod, meadow goldenrod, Rocky Mountains Canada goldenrod

*Solidago canadensis* L. ssp. *salebrosa* (Piper) D.D. Keck

*Solidago canadensis* L. var. *salebrosa* (Piper) M.E. Jones [HC]

*Solidago gigantea* Aiton [FNA20, HC, HC2], misapplied

FNA20: "Variety *salebrosa* strongly resembles *Solidago canadensis*, and is found throughout most of the Rocky Mountains in the United States and adjacent Canada. It has been included in *S. canadensis* by many authors (e.g., A. Cronquist 1994). In extreme forms the array is broader than tall with long, arching proximal branches. Hairier plants can be similar in appearance to *S. altissima*; the latter is usually not glandular and is much hairier. Glabrate plants of var. *salebrosa* can be difficult to distinguish from hexaploid *S. gigantea* near and in the mountains from Alberta south to New Mexico. Glabrate plants in the mountains often treated as *S. gigantea* are glandular and belong in *S. lepida* var. *salebrosa*. Small-headed diploids found in the Rocky Mountains from southern British Columbia to Colorado are usually sparsely glandular and could be confused with short-array forms of *S. elongata*." Check WTU colls for specimens of *S. altissima*, reported N to BC by Semple (1993)

- \* Semple, J.C. J.G. Chmielewski, and R.A. Brammall. 1990. A multivariate morphometric study of *Solidago nemoralis* (Compositae: Astereae) and comparison with *S. californica* and *S. sparsiflora*. Canadian Journal of Botany 68: 2070-2082.

***Solidago missouriensis* Nutt. [FNA20, HC, HC2]**

J. Acad. Nat. Sci. Philadelphia. 7: 32. 1834.

Missouri goldenrod

*Solidago missouriensis* Nutt. var. *extraria* A. Gray [HC]

*Solidago missouriensis* Nutt. var. *fasciculata* Holz. [HC]

*Solidago missouriensis* Nutt. var. *missouriensis* [HC]

*Solidago missouriensis* Nutt. var. *tolmieana* (A. Gray) Cronquist [HC]

FNA20: "*Solidago missouriensis* was often introduced along railroad lines farther east. It is a highly variable species. In the east, it can be similar to *S. juncea* and is not always easily distinguished where ranges overlap. In the west, it can be similar to smaller plants of *S. spectabilis*. It is distinguished from the related species by its usually 3-nerved proximal leaves and the usually thin, elongate rhizomes. Across the prairies the species is known to be diploid only ( $2n = 18$ ). In the Rocky Mountains, tetraploids ( $2n = 36$ ) are common, the diploids infrequent. A number of varieties have been described. Shorter, often larger-headed plants (tetraploids when known) from the Rocky Mountains have been treated as var. *missouriensis* (including var. *extraria*). Taller, more leafy-stemmed plants, mostly from the eastern half of the range, but occasionally west to Washington, have been treated as var. *fasciculata*. Plants from Arizona, Colorado, and New Mexico with long, linear leaves have been treated as var. *tenuissima*. Larger-headed plants with narrow bracts from prairies west of the Cascades in Oregon and Washington have been treated as var. *tolmieana*. A. Cronquist (1994) opted not to recognize varieties, noting that all appeared to grade continuously into each other. A detailed study of the species is needed."

***Solidago multiradiata* Aiton [FNA20, HC, HC2]**

Hort. Kew. 3: 218. 1789.

northern goldenrod, Rocky Mountain goldenrod

*Solidago multiradiata* Aiton ssp. *scopulorum* (A. Gray) W.A. Weber

*Solidago multiradiata* Aiton var. *scopulorum* A. Gray [HC]

FNA20: "*Solidago multiradiata* is the North American species most closely related to *S. virgaurea*, the type species of the genus, native to mostly arctic and alpine regions of Eurasia. Plants of *S. multiradiata* from the Rocky Mountains have been treated as var. *scopulorum*; they differ so little from those of other parts of the range that recognition of the variety without further support does not appear justified."

***Solidago simplex* Kunth [FNA20, HC2]**

Nov. Gen. Sp. 4(fol.): 81. 1818; 4(qto.): 103. 1820.

sticky goldenrod

var. *nana* (A. Gray) G.S. Ringius [FNA20, HC2]

Phytologia. 70: 397. 1991.

dwarf goldenrod

*Solidago spathulata* DC. var. *nana* (A. Gray) Cronquist [HC]

var. *simplex* [FNA20, HC2]

In A. von Humboldt et al., Nov. Gen. Sp. 4(fol.): 81. 1818; 4(qto.): 103.

sticky goldenrod

*Solidago decumbens* Greene

*Solidago spathulata* DC. ssp. *glutinosa* (Nutt.) D.D. Keck

*Solidago spathulata* DC. var. *neomexicana* (A. Gray) Cronquist [HC]

FNA20: "Variety *simplex* is found in western North America and is disjunct along the shores of the upper Great Lakes and in southern Quebec."

***Soliva* [FNA19, HC2]**

Fl. Peruv. Prodr. 113, plate 24. 1794.

burrweed

***Soliva sessilis* Ruiz & Pav. [FNA19, HC2]**

Syst. Veg. Fl. Peruv. Chil. 113, plate 24. 1798.

lawn burrweed, common soliva, prickly soliva

*Soliva pterosperma* (Juss.) Less.

**Sonchus** [FNA19, HC, HC2]

Sp. Pl. 2: 793. 1753; Gen. Pl. ed. 5, 347. 1754.  
sow-thistle

*Sonchus arvensis* L. [FNA19, HC, HC2]

Sp. Pl. 2: 793. 1753.  
field sow-thistle, perennial sow-thistle

ssp. *arvensis* [FNA19, HC2]

field sow-thistle, corn sow thistle, perennial sow thistle

*Sonchus arvensis* L. var. *arvensis*

ssp. *uliginosus* (M. Bieb.) Nyman [FNA19, HC2]

Consp. Fl. Eur. 433. 1879.  
field sow-thistle, marsh sow thistle, wet ground sow thistle

*Sonchus arvensis* L. var. *glabrescens* Günther

*Sonchus uliginosus* M. Bieb. [HC]

Stace (1997) notes this may not be distinct from var. *arvensis*, and the vars. are not recognized in Jeps. Man., but they are provisionally accepted here, following Chambers and Sundberg (2000), and Douglas et al. (1998)

*Sonchus asper* (L.) Hill [FNA19, HC, HC2]

Herb. Brit. 1: 47. 1769.  
prickly sow thistle, spiny leaf sow thistle

*Sonchus oleraceus* L. var. *asper* L.

ssp. *asper* [HC2]

*Sonchus oleraceus* L. [FNA19, HC, HC2]

Sp. Pl. 2: 794. 1753.  
common sow thistle

**Stenotus** [FNA20, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 334. 1840.  
mock goldenweed

*Stenotus lanuginosus* (A. Gray) Greene [FNA20, HC2]

Erythea. 2: 72. 1894.  
woolly goldenweed

*Haplopappus lanuginosus* A. Gray [HC]

var. *lanuginosus* [FNA20, HC2]

Erythea. 2: 72.  
woolly goldenweed, woolly stenotus

*Haplopappus lanuginosus* Gray var. *lanuginosus* [HC]

**Stephanomeria** [FNA19, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 427. 1841.  
wirelettuce

*Stephanomeria exigua* Nutt. [FNA19, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 428. 1841.  
small wirelettuce

ssp. *coronaria* (Greene) Gottlieb [FNA19, HC2]

Madroño. 21: 474. 1972.

*Stephanomeria paniculata* Nutt. [FNA19, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 428. 1841.  
stiff branched stephanomeria, stiff branched wirelettuce

***Stephanomeria tenuifolia* (Raf.) H.M. Hall [FNA19, HC, HC2]**

Univ. Calif. Publ. Bot. 3: 256. 1907.  
wire lettuce, narrowleaf stephanomeria

*Stephanomeria minor* (Hook.) Nutt. var. *minor*

*Stephanomeria tenuifolia* (Raf.) H.M. Hall var. *myrioclada* (D.C. Eaton) Cronquist [HC]

*Stephanomeria tenuifolia* (Raf.) H.M. Hall var. *tenuifolia* [HC]

FNA19: "Stephanomeria tenuifolia is distributed over an immense region and is the most widespread species of the genus. It shows remarkable variability in the form and dimensions of its stems and branches. Plants described as *S. myrioclada*, from the northeasternmost corner of Nevada, present an architecture of relatively numerous, almost threadlike, densely crowded stems (1.5-4 dm) and branches with an irregularly dichotomous pattern. Continuous variation occurs from this form to another in the same region and elsewhere in which the stems are longer (3-7 dm), sparingly branched, and flexuous. The extreme variability in vegetative architecture may be adaptive and deserves further study."

***Symphotrichum* [FNA20, HC2]**

Gen. Sp. Aster. 9, 135. 1832.  
aster

***Symphotrichum xamethystinum* (Nutt.) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 294. 1995.  
amethyst aster, hybrid aster

*Aster amethystinus* Nutt.

FNA20: "Symphotrichum xamethystinum is the F 1 hybrid between *S. ericoides* and *S. novae-angliae*, encountered sometimes throughout the area where the two parental species co-occur. It is morphologically intermediate; it has non-spiny, sparsely stipitate-glandular phyllaries and rose-violet rays in mid-sized heads. Forma *leucerythros* Bemis and forma *leucos* Bemis have been described within this hybrid and may represent recombinants or normal population color variants."

***Symphotrichum ascendens* (Lindl.) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 276. 1995.  
intermountain aster, long leaved aster, long-leaved aster, western American aster, western aster

*Aster adscendens* Lindl.

*Aster ascendens* Lindl.

*Aster chilensis* Nees ssp. *adscendens* (Lindl.) Cronquist [HC]

*Aster adscendens* orth. error in Abrams FNA20: "Symphotrichum ascendens is widely distributed in the Great Basin. It is an allopolyploid derived from the hybrid between *S. spathulatum* ( $x = 8$ ) and *S. falcatum* ( $x = 5$ ). Chromosome numbers differ markedly in their geographic distribution,  $2n = 26$  prevailing in the southwestern part of the range, and  $2n = 52$  in the northeastern part (G. A. Allen 1985) Backcrosses to both parental species or hybrids with related taxa are sometimes seen where the ranges overlap."

***Symphotrichum boreale* (Torr. & A. Gray) Á. Löve & D. Löve [FNA20, HC2]**

Taxon. 31: 358. 1982.  
northern bog aster, rush aster, slender white aster

*Aster borealis* (Torr. & A. Gray) Provancher

*Aster junciformis* Rydb. [HC]

*Aster laxiflorus* Lindl. var. *borealis* Torr. & A. Gray

***Symphotrichum bracteolatum* (Nutt.) G.L. Nesom [HC2, JPM2]**

Phytologia 77(3): 276. 1994 [1995]  
bracted aster, Eaton's aster, Oregon aster

*Aster eatonii* (A. Gray) Howell [HC]

*Symphotrichum eatonii* (A. Gray) G.L. Nesom [FNA20]

Jepson 2nd: "The name *S. bracteolatum* has nomenclatural priority over *S. eatonii* (Brummitt 2011 Taxon 60:230)."

***Symphyotrichum campestre*** (Nutt.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 276. 1995.

western meadow aster, Western meadow aster

*Aster campestris* Nutt. [HC]

*Aster campestris* Nutt. var. *bloomeri* (A. Gray) A. Gray [HC]

*Aster campestris* Nutt. var. *campestris* [HC]

*Symphyotrichum campestre* (Nutt.) G.L. Nesom var. *bloomeri* (A. Gray) G.L. Nesom

*Symphyotrichum campestre* (Nutt.) G.L. Nesom var. *campestre*

***Symphyotrichum chilense*** (Nees) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 277. 1995.

common California aster, Pacific aster

(see also *Symphyotrichum ascendens*, *Symphyotrichum hallii*)

*Aster chilensis* Nees [HC]

*Aster chilensis* Nees ssp. *chilensis* [HC]

*Aster chilensis* Nees var. *chilensis*

*Symphyotrichum chilense* (Nees) G.L. Nesom var. *chilense*

FNA20: "*Symphyotrichum chilense* is restricted to coastal habitats from southwestern British Columbia to central California. It is almost entirely coastal in Oregon, Washington, and southern British Columbia, where it is mainly hexaploid ( $2n = 48$ ). In Oregon, where it is sympatric with *S. subspicatum*, the latter is mainly duodecaploid ( $2n = 96$ ). The distinction does not hold in British Columbia, however, where *S. subspicatum* is both  $2n = 48$  and  $96$ , and where *S. chilense* is less common (G. A. Allen 1984). The species was erroneously thought by Nees to occur in Chile. The plants named *Aster chilensis* var. *medius* Jepson are hybrids of *S. chilense* and *S. lentum*."

***Symphyotrichum ciliatum*** (Ledeb.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 277. 1995.

alkali American aster, rayless alkali aster, rayless annual aster

*Aster brachyactis* S.F. Blake [HC]

***Symphyotrichum x columbianum*** (Piper) G.L. Nesom [FNA20, HC2]

hybrid aster

*Aster columbianus* Piper

***Symphyotrichum ericoides*** (L.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 280. 1995.

heath-leaved aster, tufted white prairie aster

var. ***pansum*** (S.F. Blake) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 280. 1995.

little gray aster, tufted white prairie aster, white heath aster

*Aster ericoides* L. ssp. *pansus* (S.F. Blake) A.G. Jones

*Aster ericoides* L. var. *pansus* (S.F. Blake) B. Boivin

*Aster pansus* (S.F. Blake) Cronquist [HC]

***Symphyotrichum falcatum*** (Lindl.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 281. 1995.

rough white prairie aster, western heath aster

*Aster falcatus* Lindl. [HC]

*Aster falcatus* Lindl. var. *crassulus* (Rydb.) Cronquist

*Symphyotrichum falcatum* (Lindl.) G.L. Nesom var. *commutatum* (Torr. & A. Gray) G.L. Nesom [FNA20]

*Symphyotrichum falcatum* (Lindl.) G.L. Nesom var. *crassulum* (Rydb.) G.L. Nesom

*Symphyotrichum falcatum* (Lindl.) G.L. Nesom var. *falcatum* [FNA20]

see *Rhodora* 1933; WA voucher?, OR reports misapplied; var. *falcatus* status in WA?

***Symphyotrichum foliaceum*** (Lindl. ex DC.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 282. 1995.

alpine leafybract aster, Canby's leafybract aster, Cusick's American aster, Cusick's aster, Henderson's aster, Kootenai aster, leafy aster, leafy-bracted aster, Parry's aster

*Aster cusickii* A. Gray  
*Aster foliaceus* Lindl. ex DC. [HC]  
*Aster foliaceus* Lindl. ex DC. var. *apricus* A. Gray [HC]  
*Aster foliaceus* Lindl. ex DC. var. *canbyi* A. Gray [HC]  
*Aster foliaceus* Lindl. var. *cusickii* (A. Gray) Cronquist [HC]  
*Aster foliaceus* Lindl. ex DC. var. *foliaceus* [HC]  
*Aster foliaceus* Lindl. ex DC. var. *frondeus* A. Gray  
*Aster foliaceus* Lindl. ex DC. var. *lyallii* (A. Gray) Cronquist [HC]  
*Aster foliaceus* Lindl. ex DC. var. *parryi* (D.C. Eaton) A. Gray [HC]  
*Aster hendersonii* Fernald  
*Symphotrichum cusickii* (A. Gray) G.L. Nesom [FNA20]  
*Symphotrichum foliaceum* (Lindl. ex DC.) G.L. Nesom var. *apricum* (A. Gray) G.L. Nesom [FNA20]  
*Symphotrichum foliaceum* (Lindl. ex DC.) G.L. Nesom var. *canbyi* (A. Gray) G.L. Nesom [FNA20]  
*Symphotrichum foliaceum* (Lindl. ex DC.) G.L. Nesom var. *foliaceum* [FNA20]  
*Symphotrichum foliaceum* (Lindl. ex DC.) G.L. Nesom var. *parryi* (D.C. Eaton) G.L. Nesom [FNA20]  
*Symphotrichum hendersonii* (Fernald) G.L. Nesom [FNA20]

***Symphotrichum frondosum* (Nutt.) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 282. 1995.  
alkali aster, short rayed aster, short-rayed alkali aster

*Aster frondosus* (Nutt.) Torr. & A. Gray [HC]  
*Brachyactis frondosa* (Nutt.) A. Gray

***Symphotrichum hallii* (A. Gray) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 283. 1995.  
Hall's aster

*Aster chilensis* Nees ssp. *hallii* (A. Gray) Cronquist [HC]  
*Aster hallii* A. Gray

FNA20: "*Symphotrichum hallii* is restricted to open habitats of the Puget Trough of western Washington and the Willamette Valley of western Oregon, with outlying stations in the Columbia Gorge and central Washington. Some of the polyploid races appear to be allopolyploids involving the sympatric *S. subspicatum*, with larger leaves and fewer, larger heads with violet rays."

***Symphotrichum jessicae* (Piper) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 283. 1995.  
Jessica's aster, Palouse aster

*Aster jessicae* Piper [HC]

***Symphotrichum laeve* (L.) Á. Löve & D. Löve [FNA20, HC2]**

Taxon. 31: 359. 1982.  
Geyer's aster, smooth aster

*Aster laevis* L. [HC]

var. ***geyeri* (A. Gray) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 284. 1995.  
smooth aster

*Aster geyeri* (A. Gray) Howell  
*Aster laevis* L. var. *geyeri* A. Gray [HC]

***Symphotrichum lanceolatum* (Willd.) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 284. 1995.  
marsh aster, western willow aster

var. ***hesperium* (A. Gray) G.L. Nesom [FNA20, HC2]**

Phytologia. 77: 284. 1995.  
lance-leaved aster, panicked aster, white panicked aster

*Aster hesperius* A. Gray [HC]

FNA20: "This variety has been treated mostly as a distinct species in floras. Character ranges overlap considerably with var. *lanceolatum*, and it is often difficult to distinguish the two entities where their

distributions overlap. In areas of sympatry, the two taxa hybridize to form septaploid plants ( $2n = 56$ )."

*Symphotrichum novae-angliae* (L.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 287. 1995.

New England aster

*Aster novae-angliae* L. [HC]

FNA20: "*Symphotrichum novae-angliae* is escaped from cultivation and introduced in Montana, Oregon, Utah, Washington, and Wyoming, and has been reported as an ephemeral escape in British Columbia. It possibly escaped from cultivation elsewhere. The Michaelmas daisy is widely sold in the horticultural trade, where cultivars have been developed. Forms have been described that correspond to color genetic variants within natural populations {*Aster novae-angliae* forma *roseus* (Desfontaines) Britton; *A. novae-angliae* forma *geneseensis* House}; they are not recognized here. *Symphotrichum novae-angliae* resembles *Canadanthus modestus*, but the ranges of the two do not overlap, and the latter has sparsely hairy cypselae with dark ribs. *Symphotrichum novae-angliae* hybridizes with *S. ericoides*, forming the F 1 intersectional hybrid *S. xamethystinum*."

*Symphotrichum pilosum* (Willd.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 289. 1995.

hairy aster

*Aster pilosus* Willd. [HC]

var. *pilosum* [FNA20, HC2]

*Aster pilosus* Willd. var. *pilosus* [HC]

*Symphotrichum spathulatum* (Lindl.) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 291. 1995.

western aster, western mountain aster, Western mountain aster

*Aster occidentalis* (Nutt.) Torr. & A. Gray [HC]

*Aster occidentalis* (Nutt.) Torr. & A. Gray var. *intermedius* A. Gray [HC]

*Aster occidentalis* (Nutt.) Torr. & A. Gray var. *occidentalis* [HC]

*Aster spathulatus* Lindl. var. *spathulatus*

*Aster vallicola* Greene

*Symphotrichum spathulatum* (Lindl.) G.L. Nesom var. *intermedium* (A. Gray) G.L. Nesom [FNA20]

*Symphotrichum spathulatum* (Lindl.) G.L. Nesom var. *spathulatum* [FNA20]

*Symphotrichum spathulatum* (Lindl.) G.L. Nesom var. *yosemitanum* (A. Gray) G.L. Nesom [FNA20]

*Symphotrichum subspicatum* (Nees) G.L. Nesom [FNA20, HC2]

Phytologia. 77: 293. 1995.

Douglas' aster, Douglas's aster

*Aster bulteri* Rydb.

*Aster douglasii* Lindl.

*Aster maccallae* Rydb.

*Aster subspicatus* Nees [HC]

*Aster subspicatus* Nees var. *grayi* (Suksd.) Cronquist

*Aster subspicatus* Nees var. *subspicatus*

*Symphotrichum subspicatum* (Nees) G.L. Nesom var. *grayi* (Suksd.) G.L. Nesom

*Symphotrichum subspicatum* (Nees) G.L. Nesom var. *subspicatum*

See FNA Volume 20 for description of taxonomic boundaries for this species. FNA20: "*Symphotrichum subspicatum* is a weedy, highly polyploid species, probably of allopolyploid derivation from different combinations of species including *S. chilense*, *S. eatonii*, *S. foliaceum*, *S. laeve*, and *S. spathulatum*. Hybrids with *S. hallii* are known from western Oregon. The species passes into *S. foliaceum* in southeastern Alaska."

*Tanacetum* [FNA19, HC, HC2]

Sp. Pl. 2: 843. 1753; Gen. Pl. ed. 5, 366. 1754.

tansy

(see also *Artemisia*)

*Tanacetum balsamita* L. [FNA19, HC2]

Sp. Pl. 2: 845. 1753.

costMary

*Balsamita major* Desf.

*Chrysanthemum balsamita* (L.) Baillon [HC]

***Tanacetum bipinnatum* (L.) Sch. Bip. [FNA19, HC2]**

Tanacetum. 48. 1844.

camphor tansy, dune tansy

*Tanacetum bipinnatum* (L.) Sch. Bip. ssp. *huronense* (Nutt.) Breitung

*Tanacetum camphoratum* Less.

*Tanacetum douglasii* DC. [HC]

FNA19: "The circumscription of *Tanacetum bipinnatum* adopted here includes not only *T. huronense* (see E. Hultén 1941?1950, vol. 10, 1968) but *T. camphoratum* and *T. douglasii* as well (see D. W. Kyhos and P. H. Raven 1982; C. J. Mickelson and H. H. Iltis 1966). Subspecies *bipinnatum* has been distinguished from subsp. *huronense* by having heads borne singly or 2?4 together versus (1?)3?12(?20+) in corymbiform arrays, phyllary margins dark brown versus pale brown, and laminae of ray corollas mostly 3?7 mm versus 1?3 mm. Relatively low plants, 10?20(?40 cm) from dune habitats along the southern shore of Lake Athabasca, Saskatchewan, with mostly 1?4, lanate cauline leaves and 1(?2) heads per flowering stem have been called *T. huronense* var. *floccosum*."

***Tanacetum parthenium* (L.) Sch. Bip. [FNA19, HC2]**

Tanacetum. 55. 1844.

featherfew, feverfew

*Chrysanthemum parthenium* (L.) Bernh. [HC]

***Tanacetum vulgare* L. [FNA19, HC, HC2]**

Sp. Pl. 2: 844. 1753.

common tansy

FNA20: "*Tanacetum vulgare* escapes from and/or persists after cultivation. In the flora area, it is naturalized mostly in the northeastern and Pacific Coast states and provinces and sporadically elsewhere."

***Taraxacum* [FNA19, HC, HC2]**

Prim. Fl. Holsat. 56. 1780.

dandelion

***Taraxacum ceratophorum* (Ledeb.) DC. [FNA19, HC, HC2]**

Prodr. 7: 146. 1838.

horned dandelion

*Taraxacum eriophorum* Rydb. [HC]

*Taraxacum officinale* F.H. Wigg. ssp. *ceratophorum* (Ledeb.) Schinz ex Thell.

*Taraxacum paucisquamosum* M. Peck

*Taraxacum sibiricum* Dahlst.

FNA19: "*Taraxacum ceratophorum* is the most widespread native dandelion in North America, ranging from the low Arctic and boreal zone to the western Cordilleras, in the montane and alpine zones. This complex has been subdivided into many microspecies in North America, most of which appear unworthy of recognition." See Douglas et al. (1998) for review of taxonomic treatments, complicated by apomixis, polyploidy, and hybridization

***Taraxacum erythrospermum* Andr. ex Besser [FNA19, HC2]**

Enum. Pl. 75. 1822.

red-seeded dandelion

*Taraxacum laevigatum* (Willd.) DC. [HC]

*Taraxacum laevigatum* (Willd.) DC. var. *erythrospermum* (Andr. ex Besser) J. Weiss

*Taraxacum officinale* F.H. Wigg. var. *erythrospermum* (Andr. ex Besser) Bab.

*Taraxacum scanicum* Dahlst.

FNA19: "Early leaves of *Taraxacum erythrospermum* sometimes may be broadly winged along the midvein, making distinction from *T. officinale* difficult; usually, its later leaves become more deeply lobed

with time. The name *Taraxacum laevigatum* has been used for *L. erythrospermum* in North America, following H. Handel-Mazzetti (1907). L. H. Shinnars (1949) questioned that usage. The name is listed in the index of *Flora Europaea* (A. J. Richards and P. D. Sell 1973) as an unassigned synonym; it could be related to three different entities of sect. *Spectabilia*. And, it is not mentioned by other modern students of the group. Therefore, (1) given that the North American entity has not been identified with a particular Eurasian taxon; (2) to avoid using a microspecies name such as *T. scanicum*; and (3) despite the lack of typification of the name, I am using *T. erythrospermum* as a place holder until nomenclatural issues are resolved. This clearly associates the taxon with the section to which it belongs."

***Taraxacum officinale* F.H. Wigg. [FNA19, HC, HC2]**

Prim. Fl. Holsat. 56. 1780.  
common dandelion

*Taraxacum officinale* F.H. Wigg. ssp. *vulgare* (Lam.) Schinz & R. Keller

Following Stebbins (Jeps. Man.) and Chambers and Sundberg (2000), we do not recognize *T. laevigatum*

***Tetradymia* [FNA20, HC, HC2]**

Prodr. 6: 440. 1838.  
horse-brush

***Tetradymia canescens* DC. [FNA20, HC, HC2]**

Prodr. 6: 440. 1838.  
gray horsebrush, spineless horsebrush

*Tetradymia inermis* Nutt.

***Tonestus* [FNA20, HC2]**

Bot. Gaz. 37: 262. 1904.  
serpentweed

***Tonestus lyallii* (A. Gray) A. Nelson [FNA20, HC2]**

Bot. Gaz. 37: 262. 1904.  
Lyll's goldenweed, Lyll's serpentweed

*Haplopappus lyallii* A. Gray [HC]

FNA20: "*Tonestus lyallii* is widespread in the central Rocky Mountains and ranges of the Pacific Northwest, and is known in the Great Basin from collections in the Ruby Mountains in Elko County, Nevada. Populations documented from the Coast Range in Siskiyou and Trinity counties, California, are disjunct from those in Oregon and Washington by more than 700 km."

***Townsendia* [FNA20, HC, HC2]**

Fl. Bor.-Amer. 2: 16, plate 119. 1834.  
townsend daisy, townsendia

***Townsendia florifer* (Hook.) A. Gray [FNA20, HC, HC2]**

Proc. Amer. Acad. Arts. 16: 84. 1880.  
showy Townsend-daisy, showy townsendia

*Townsendia florifer* (Hook.) A. Gray var. *florifer*

*Townsendia florifera* (Hook.) A. Gray var. *watsonii* (A. Gray) Cronquist, orthographic variant

*Townsendia florifera* is used in the Intermountain Flora, and treated as an orthographic error by Chambers and Sundberg (2000)

\* Beaman, J.H. 1957. The systematics and evolution of *Townsendia* (Compositae). Contributions Gray Herbarium 183: 1-151.

***Tragopogon* [FNA19, HC, HC2]**

Sp. Pl. 2: 789. 1753; Gen. Pl. ed. 5, 346. 1754.  
goatsbeard, salsify

***Tragopogon dubius* Scop. [FNA19, HC, HC2]**

Fl. Carniol. ed. 2. 2: 95. 1772.  
meadow goatsbeard, yellow salsify

FNA19: "Tragopogon dubius is naturalized across much of North America. It typically grows in sites drier than those where *T. pratensis* is found."

*Tragopogon floccosus* Waldst. & Kit. [HC2]

Descriptiones et Icones Plantarum Rariorum Hungariae 2: 116, t. 112.  
woolly goatsbeard

*Tragopogon mirus* Ownbey [FNA19, HC, HC2]

Amer. J. Bot. 37: 497. 1950.  
remarkable goatsbeard

FNA19: "Tragopogon mirus is allotetraploid, formed from *T. dubius* and *T. porrifolius*. It originated (probably repeatedly) in the United States (eastern Washington, adjacent Idaho, and near Flagstaff, Arizona). F1 hybrids between *T. dubius* and *T. porrifolius* resemble *T. mirus* but are less robust, have low pollen stainability, and set few, if any, seeds. Tragopogon mirus does not occur in Europe, but *T. dubius* and *T. porrifolius* may occasionally hybridize there when sympatric."

*Tragopogon miscellus* Ownbey [FNA19, HC, HC2]

Amer. J. Bot. 37: 498. 1950.  
hybrid goatsbeard

FNA19: "Tragopogon mirus is allotetraploid, formed from *T. dubius* and *T. porrifolius*. It originated (probably repeatedly) in the United States (eastern Washington, adjacent Idaho, and near Flagstaff, Arizona). F1 hybrids between *T. dubius* and *T. porrifolius* resemble *T. mirus* but are less robust, have low pollen stainability, and set few, if any, seeds. Tragopogon mirus does not occur in Europe, but *T. dubius* and *T. porrifolius* may occasionally hybridize there when sympatric."

*Tragopogon porrifolius* L. [FNA19, HC, HC2]

Sp. Pl. 2: 789. 1753.  
oyster plant, purple salsify

FNA19: "Tragopogon porrifolius is occasionally cultivated in Europe and naturalized across much of North America. It grows typically in sites drier than those of *T. pratensis* and in sites shadier and/or moister than those of *T. dubius*. As currently circumscribed, it may not be monophyletic, and nomenclatural changes for the populations here may be required. In North America, *T. porrifolius* hybridizes with both *T. dubius* and *T. pratensis* (= *T. xneohybridus* Farwell, described from North America, and *T. xmirabilis* Rouy, described from Europe)."

*Tragopogon pratensis* L. [FNA19, HC, HC2]

Sp. Pl. 2: 789. 1753.  
jack go to bed at noon, meadow salsify

*Tragopogon pratensis* L. ssp. *pratensis*

FNA19: "Tragopogon pratensis is naturalized across much of North America. The circumscription and infraspecific taxonomy of *T. pratensis* in Europe are debated, and the name *T. pratensis* may prove to be inaccurately assigned to the introduced populations in North America." ssp. taxonomy needs more study, using key in Stace (1997)

*Tripleurospermum* [FNA19, HC2]

Tanacetum. 31. 1844.  
mayweed

*Tripleurospermum inodorum* (L.) Sch. Bip. [FNA19, HC2]

Tanacetum. 32. 1844.  
false chamomile, false mayweed, scentless mayweed

*Matricaria inodora* L. [HC]

*Matricaria maritima* L. ssp. *inodora* (L.) Soó

*Matricaria perforata* Mérat

*Tripleurospermum maritimum* (L.) W.D.J. Koch ssp. *inodorum* (L.) Applequist

*Tripleurospermum perforatum* (Mérat) M. Lainz

FNA19: "Tripleurospermum inodorum has been classified as a noxious weed (class C) in the state of Washington and is considered invasive in other states (it is resistant to some herbicides); it is a weed of cereals in western Canada. W. L. Applequist (2002) has shown that the name *Matricaria inodora* is not a

superfluous new name for *M. chamomilla* as earlier stated by S. Rauschert (1974). Therefore, the appropriate name under *Tripleurospermum* is *T. inodorum*. She also considered its type to belong in *T. maritimum* and formally recognized it there as subsp. *inodorum*, on the basis of hybridization with other *T. maritimum* subspecies (A. Vaarama 1953); on the same basis, however, Hämet-Ahti maintained the species distinction between *T. inodorum* and *T. maritimum*, while making *T. phaeocephalum* a subspecies of the latter. Q. O. N. Kay (1994), in a more extensive review of the literature and of hybridization data, also maintained *T. inodorum* and *T. maritimum* as distinct species, a conclusion followed here. From the standpoint of weed science, taxonomic merging of *T. inodorum* and *T. maritimum* has the inconvenience of grouping under a single specific name taxa that have different physiologies, ecologies, weed potentials, and, possibly, reactions to weed control measures. The name *Matricaria inodora* var. *agrestis* Weiss was not validly published."

\* Kay, Q. O. N. 1994. Biological flora of the British Isles: *Tripleurospermum inodorum* (L.) Schultz Bip. (*Matricaria inodora* L., *Matricaria maritima* auct. p.p. non L., *Matricaria perforata* Merat, *Tripleurospermum perforatum* (Merat) Wagenitz, *Tripleurospermum maritimum* (L.) Schultz Bip. p.p. non L.). *J. Ecol.* 82: 681-698.

*Tripleurospermum maritimum* (L.) W.D.J. Koch [FNA19], misapplied

Syn. Fl. Germ. Helv. ed. 2. 1026. 1845.

scentless chamomile, scentless mayweed, sea mayweed  
(see also *Tripleurospermum inodorum*)

*Chamomilla maritima* (L.) Rydb.

*Matricaria maritima* L. [HC]

*Tripleurospermum maritimum* (L.) W.D.J. Koch [FNA19]

Syn. Fl. Germ. Helv. ed. 2. 1026. 1845.

scentless chamomile, scentless mayweed, sea mayweed  
(see also *Tripleurospermum inodorum*)

*Chamomilla maritima* (L.) Rydb.

*Matricaria maritima* L. [HC]

ssp. *maritimum* [FNA19]

Syn. Fl. Germ. Helv. ed. 2. 1026.

(see also *Tripleurospermum inodorum*)

*Matricaria maritima* L. var. *maritima*

WA reports from San Juan Co. Atkinson & Sharpe (1993), and King Co. (Jacobson pers. comm.) vouchers? Based on FNA19, it is likely that this taxon does not occur in WA: "Specimens examined from inland North America that had been attributed to *Tripleurospermum maritimum* subsp. *maritimum* were all *T. inodorum*. The identity of the plant called *T. maritimum* in St. Pierre and Miquelon is uncertain; I did not have access to the voucher specimens and some plants so labeled in maritime eastern Canada were in fact *T. inodorum*. I am uncertain as to whether or not this taxon persists in northeastern North America. Some specimens identified to this taxon, even on the coast, may be *T. inodorum* individuals that have become multi-stemmed through damage or via other mechanisms, particularly on sand dunes. Such specimens are difficult to classify as annual or perennial if the taproot is not dug out, and the lack of cypselae may prevent positive identification."

*Tussilago* [FNA20, HC, HC2]

Sp. Pl. 2: 865. 1753; Gen. Pl. ed. 5, 372. 1754.

coltsfoot

*Tussilago farfara* L. [FNA20, HC, HC2]

Sp. Pl. 2: 865. 1753.

coltsfoot

FNA20: "Flowering heads of *Tussilago farfara* close at night (laminae of ray corollas arch and roll inward). The species is becoming an invasive weed in some areas."

*Uropappus* [FNA19, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 424. 1841.

silverpuffs

*Uropappus lindleyi* (DC.) Nutt. [FNA19, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 425. 1841.  
linearleaf microseris, silver puffs, Lindley's false silverpuffs

*Microseris lindleyi* (DC.) A. Gray [HC]  
*Microseris linearifolia* (Nutt.) Schultz Bipontinus  
*Uropappus linearifolius* Nutt.

FNA19: "Uropappus lindleyi was placed in Microseris (K. L. Chambers 1955) because of two allotetraploid species formed by hybridization with annual members of that genus. A number of morphologic features, including narrow, acuminate leaves with villous-ciliate margins, erect heads, relatively long outer phyllaries, cypselae often short-beaked, and pappi of white, lustrous scales suggest a connection with Nothocalaïs, especially N. troximoides. Phylogenetic studies of chloroplast DNA variation (R. K. Jansen et al. 1991b; J. Whitton et al. 1995) link Uropappus with Nothocalaïs and Agoseris as a sister clade to Microseris. Consequently, Jansen et al. separated Uropappus from Microseris and placed the two allotetraploid species in Stebbinsoseris."

- \* Chambers, K. L. 1964. Nomenclature of *Microseris lindleyi*. Leafl. W. Bot. 10: 106?108.
- \* Jansen, R. K., R. S. Wallace, K.-J. Kim, and K. L. Chambers. 1991. Systematic implications of chloroplast DNA variation in the subtribe Microseridinae (Asteraceae: Lactuceae). American Journal of Botany 78: 1015-1027.

### **Wyethia** [FNA21, HC, HC2]

J. Acad. Nat. Sci. Philadelphia. 7: 39, plate 5. 1834.  
mule's-ears, wyethia

#### **Wyethia amplexicaulis** (Nutt.) Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 352. 1840.  
northern mule's ears, smooth dwarf sunflower

#### **Wyethia angustifolia** (DC.) Nutt. [FNA21, HC, HC2]

Trans. Amer. Philos. Soc., n. s. 7: 352. 1840.  
California compassplant, narrow leaved mule's ears, narrowleaf wyethia

*Alarconia angustifolia* DC.

*Wyethia angustifolia* (DC.) Nutt. var. *angustifolia*

*Wyethia angustifolia* (DC.) Nutt. var. *foliosa* (Congdon) H.M. Hall

Vars. are not worth recognition (Weber 1946, Chambers and Sundberg (2000)).

- \* Weber, W.A. 1946. A taxonomic and cytological study of the genus *Wyethia*, family Compositae, with notes on the related genus *Balsamorhiza*. American Midland Naturalist 35: 400-452.

### **Xanthium** [FNA21, HC, HC2]

Sp. Pl. 2: 987. 1753; Gen. Pl. ed. 5, 424. 1754.  
cocklebur

#### **Xanthium spinosum** L. [FNA21, HC, HC2]

Sp. Pl. 2: 987. 1753.  
spiny clotbur, spiny cockleburr

*Xanthium ambrosioides* Hook. & Arn.

*Xanthium spinosum* L. var. *inerme* Bel

FNA21: "Some authors have contended that *Xanthium spinosum* originated in South America and is introduced and/or naturalized everywhere else that it is found." Considered native to California in Jepson Manual (1993).

#### **Xanthium strumarium** L. [FNA21, HC, HC2]

Sp. Pl. 2: 987. 1753.  
Canada cocklebur, common cocklebur

*Xanthium strumarium* L. var. *canadense* (Mill.) Torr. & A. Gray [HC]

*Xanthium strumarium* L. var. *glabratum* (DC.) Cronquist [HC]

*Xanthium strumarium* L. var. *oviforme* (Wallr.) M. Peck

*Xanthium strumarium* L. var. *pensylvanicum* (Wallr.) M. Peck

*Xanthium strumarium* L. var. *strumarium*

*Xanthium strumarium* L. var. *wootonii* (Cockerell) W.C. Martin & C.R. Hutchins, invalidly published

Vars. only weakly separated, following Jeps. Man. not worth recognition, "populations show founder effects" FNA21: "Recognition of a dozen or more taxa (treated as species, subspecies, varieties, and/or forms) has been proposed for plants treated together here as *Xanthium strumarium*. Bases for the various taxa mostly involved subtle differences in the burs."

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## Balsaminaceae [HC, HC2] Touch-Me-Not Family

**Synonyms:** (none)

**References:** (none)

### *Impatiens* [HC, HC2]

balsam, jewelweed, touch-me-not

#### *Impatiens aurella* Rydb. [HC, HC2]

Bulletin of the Torrey Botanical Club 28: 34.  
varied jewelweed

*Impatiens aurella* Rydb. f. *badia* H. St. John

*Impatiens aurella* Rydb. f. *coccinea* H. St. John

#### *Impatiens balfourii* Hook. f. [HC2]

kashmir balsam

#### *Impatiens capensis* Meerb. [HC, HC2]

Afbeeldingen van zeldzaame Gewassen. Plate 10.  
spotted jewelweed

*Impatiens capensis* Meerb. f. *albiflora* (E.L.Rand & Redfield) Fernald & B.G.Schub.

*Impatiens capensis* Meerb. f. *citrina* (Weath.) Fernald & B.G.Schub.

*Impatiens capensis* Meerb. f. *immaculata* (Weath.) Fernald & B.G.Schub.

*Impatiens capensis* Meerb. f. *peasei* (A.H.Moore ex Weath.) Fernald & B.G.Schub.

*Impatiens capensis* Meerb. f. *platymeris* (Weath.) Fernald & B.G.Schub.

Rapidly spreading introduction, restricted to west of the Cascades (Zika 2006b); often confused with native *I. aurella* east of the Cascades.

\* Ornduff, R. 1966. *Impatiens capensis* in Oregon: native or naturalized? Leaflets of Western Botany 10: 317-319.

\* Zika, P. F. 2006b. The status of *Impatiens capensis* (Balsaminaceae) on the Pacific Northwest coast. Journal of the Torrey Botanical Society 133(4): 593-600.

\* Zika, P. F. 2006c. Lectotypification of the names of two color forms of *Impatiens capensis* (Balsaminaceae). Rhodora 108: 62-64.

#### *Impatiens ecornuta* Gerry Moore, Zika, & Rushworth [HC2]

Novon 22:60?61.  
spurless jewelweed

*Impatiens ecalcarata* Blank. [HC]

\* Novon 22:60?61.

#### *Impatiens glandulifera* Royle [HC, HC2]

Ill. Bot. Himalaya Mts t. 28, fig. 2.  
policeman's helmet

*Impatiens glandulifera* Royle f. *pallidiflora* (Hook. f.) Weath.

#### *Impatiens noli-tangere* L. [HC, HC2]

Sp. Pl. 2: 938.  
boreal jewelweed, or western touch-me-not

*Impatiens occidentalis* Rydb.

\* Zika, P. F., J. L. Reveal, and C. Jarvis. 2008. (1818) Proposal to conserve the name *Impatiens noli-tangere*

(Balsaminaceae) with a conserved type. Taxon 57: 650-651.

***Impatiens xpacifica* Zika [HC2]**

Novon 16: 443-448. Figure 1.  
Pacific jewelweed

Recently described hybrid from low elevations in western Oregon and Washington; often mistaken for the parents or for *I. noli-tangere*.

- \* Ornduff, R. 1967. Hybridization and regional variation in Pacific Northwestern *Impatiens* (Balsaminaceae). *Brittonia* 19: 122-128.
- \* Zika, P. F. 2006a. *Impatiens xpacifica* (Balsaminaceae), a new hybrid jewelweed from the Pacific Northwest coast of North America. *Novon* 16: 443-448.

***Impatiens parviflora* DC. [HC2]**

Prodr. 1: 687  
small-flowered jewelweed, small-flowered touch-me-not

Recently (2016) collected in King County along Novelty Hill Road.

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## Berberidaceae [FNA3, HC, HC2] Barberry Family

**Synonyms:** (none)

**References:** (none)

***Achlys* [FNA3, HC, HC2]**

Syst. Nat. 2: 35. 1821.  
deerfoot, vanillaleaf

***Achlys californica* Fukuda & H.G. Baker [FNA3, HC2]**

Taxon. 19: 341. 1970.  
deer's-foot

Not included in H&C. FNA3: "Triploid plants have been reported from one locality in central Washington and from a site in northwestern California."

***Achlys triphylla* (Sm.) DC. [FNA3, HC, HC2]**

Syst. Nat. 2: 35. 1821.  
deerfoot, sweet-after-death, vanillaleaf  
(see also *Achlys californica*)

*Leontice triphylla* Sm.

***Berberis* [FNA3, HC, HC2]**

Sp. Pl. 1: 330. 1753; Gen. Pl. ed. 5, 153, 1754.  
barberry, mahonia, Oregon-grape

***Berberis darwinii* Hook. [FNA3, HC2]**

Icon. Pl. 7: 672. 1844.  
darwin's barberry

Native to southern South America. FNA3: "*Berberis darwinii* only rarely escapes from cultivation. It is resistant to infection by *Puccinia graminis*."

***Berberis julianae* C.K. Schneid. [HC2]**

***Berberis thunbergii* DC. [FNA3, HC2]**

Syst. Nat. 2: 19. 1821.  
Japanese barberry

FNA3: "The U.S. Department of Agriculture lists *Berberis thunbergii* as resistant to infection by *Puccinia graminis*, and the species is widely grown as an ornamental in the United States. Preliminary tests carried out by Agriculture Canada, however, suggest that some strains may be susceptible to *Puccinia graminis*"

infection, and cultivation of *B. thunbergii* is illegal in Canada."

***Berberis vulgaris* L. [FNA3, HC2]**

Sp. Pl. 1: 330. 1753.

common barberry, European barberry

Native to Eurasia. Not included in H&C. FNA3: "During the eighteenth and nineteenth centuries, *Berberis vulgaris* was very commonly cultivated in North America for thorn hedges and as a source of jam and yellow dye. It frequently escaped from cultivation and became naturalized over a wide area of eastern North America. It is susceptible to infection by *Puccinia graminis*. As the most important alternate host of this fungus, it has been the subject of vigorous eradication programs, and it is now infrequent or absent in many areas where it was once frequent (A. P. Roelfs 1982)."

***Mahonia* [HC2]**

***Mahonia aquifolium* (Pursh) Nutt.**

holly-leaf Oregon-grape, shining Oregongrape, tall Oregongrape

*Berberis aquifolium* Pursh [FNA3, HC, HC2]

*Berberis aquifolium* Pursh var. *aquifolium* [JPM]

*Berberis nutkana*

*Odostemon aquifolium* (Pursh) Rydb.

\* Yu, Chih-Chieh, Chung, Kuo-Fang. 2017. Taxon 66(6):1371-1392(22).

***Mahonia nervosa* (Pursh) Nutt.**

Cascade Oregon-grape, dull Oregongrape

*Berberis nervosa* Pursh [FNA3, HC, HC2]

*Berberis nervosa* Pursh var. *mendocinensis* Roof

*Mahonia nervosa* (Pursh) Nutt. var. *mendocinensis* (Roof) Roof

*Odostemon nervosus* (Pursh) Rydb.

\* Yu, Chih-Chieh, Chung, Kuo-Fang. 2017. Taxon 66(6):1371-1392(22).

***Mahonia repens* (Lindl.) G. Don**

creeping Oregon-grape

*Berberis aquifolium* Pursh var. *repens* (Lindl.) Scoggan [JPM]

*Berberis aquifolium* Pursh f. *repens* (Lindl.) B. Boivin

*Berberis nana*

*Berberis repens* Lindl. [FNA3, HC, HC2]

*Berberis sonnei* (Abrams) McMinn

*Mahonia sonnei* Abrams

*Odostemon repens* (Lindl.) Cockerell

\* Yu, Chih-Chieh, Chung, Kuo-Fang. 2017. Taxon 66(6):1371-1392(22).

***Vancouveria* [FNA3, HC, HC2]**

inside-out-flower

***Vancouveria hexandra* (Hook.) C. Morren & Decne. [FNA3, HC, HC2]**

Ann. Sci. Nat. Bot., sér. 2, 2: 351.

white inside-out-flower

*Epimedium hexandrum* Hook.

*Vancouveria brevicula* Greene

*Vancouveria picta* Greene

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## **Betulaceae [FNA3, HC, HC2] Birch Family**

**Synonyms:** (none)

All accepted taxa by the sources are noted as [FNA3][H&C] etc., KZ synonyms are not noted, added synonyms to KZ

list are indicated by [VPBC1+][JPM+] etc.

**References:** (none)

***Alnus*** [FNA3, HC, HC2]

Gard. Dict. Abr., ed. 4. 1754.  
alder

***Alnus incana*** (L.) Moench [FNA3, HC, HC2]

Methodus. 424. 1794.  
mountain alder

ssp. ***tenuifolia*** (Nutt.) Breitung [FNA3, HC2]

Amer. Midl. Naturalist. 58: 25. 1957.  
mountain alder

*Alnus incana* (L.) Moench var. *occidentalis* (Dippel) C.L. Hitchc. [HC]

*Alnus incana* (L.) Moench var. *virescens* S. Watson

*Alnus occidentalis* Dippel

*Alnus xpurpusii* Callier

*Alnus rugosa* (Du Roi) Spreng. var. *occidentalis* (Dippel) C.L. Hitchc.

*Alnus tenuifolia* Nutt. [VPBC1]

*Alnus tenuifolia* Nutt. var. *occidentalis* (Dippel) Collier [VPBC, VPBC]

FNA3: "Alnus incana subsp. tenuifolia is somewhat more treelike than the eastern A . incana subsp. rugosa , from which it also differs in leaf shape, leaf margins, and other characters. It is a frequent component of streamside vegetation throughout the Rocky Mountains and other mountainous parts of western North America. Native Americans used alnus incana subsp. tenuifolia medicinally for pains in the lungs or hips, for scrofula, as a laxative, and as a diuretic for gonorrhea (D. E. Moerman 1986)."

***Alnus rhombifolia*** Nutt. [FNA3, HC, HC2]

N. Amer. Sylv. 1: 49. 1842.  
California alder, white alder

*Alnus rhombifolia* Nutt. var. *bernardina* Munz & I.M. Johnst.

FNA3: "Alnus rhombifolia is the common alder throughout the dry Mediterranean climatic zone of coastal western United States. Mexican populations are not known, but because A . rhombifolia has been collected as far south as San Diego, California, it should be expected in adjacent Baja California. Native Americans used various parts of Alnus rhombifolia medicinally for diarrhea, consumption, and burns, as a blood purifier, an emetic, and a wash for babies with skin diseases, and to facilitate childbirth (D. E. Moerman 1986)."

***Alnus rubra*** Bong. [FNA3, HC, HC2]

Mém. Acad. Sci. St.-Pétersbourg. Sér. 6, Sci. Math. 2: 162. 1833.  
Oregon alder, red alder

*Alnus oregona* Nutt.

*Alnus oregona* Nutt. var. *pinnatisecta* Sarker

*Alnus rubra* Bong. var. *pinnatisecta* Sarker

FNA3: "Alnus rubra is the largest alder in North America north of Mexico; it often forms extensive stands along streams and on low-lying flood plains in the Pacific Northwest. The strongly revolute margins of its leaf blades make it easily distinguished from all of the other alders in the flora. It is an important commercial tree; the wood is used to make inexpensive furniture, small wooden items, and paper pulp. Native Americans used various parts of plants of Alnus rubra medicinally as a purgative, an emetic, for aching bones, headaches, coughs, biliousness, stomach problems, scrofula sores, tuberculosis, asthma, and eczema, and as a general panacea (D. E. Moerman 1986)."

***Alnus viridis*** (Chaix) DC. [FNA3, HC2]

Fl. France, ed. 3. 3: 304. 1805.  
green alder, mountain alder

ssp. ***fruticosa*** (Rupr.) Nyman [FNA3, HC2]

Consp. Fl. Eur. 672. 1881.  
Siberian alder

*Alnus fruticosa* Rupr.  
*Alnus viridis* (Chaix) DC. var. *fruticosa* (Rupr.) Regel

Not included in H&C FNA3: "This primarily subarctic Asian subspecies has long been mistaken in western North America for *Alnus viridis* subsp. *crispa*, which it closely resembles, or for subsp. *sinuata* (J. J. Furlow 1983b). It can be separated from the former by its larger and more coarsely toothed leaves, and from the latter by its much thicker, mostly single-toothed leaf blades."

ssp. ***sinuata*** (Regel) A. Löve & D. Löve [FNA3, HC2]

Univ. Colorado Stud., Ser. Biol. 17: 20. 1965.  
mountain alder, Sitka alder

*Alnus alnobetula* (Ehrh.) K. Koch  
*Alnus crispa* (Aiton) Pursh ssp. *laciniata* Hultén [VPBC1]  
*Alnus crispa* (Aiton) Pursh ssp. *sinuata* (Regel) Hultén [VPBC1]  
*Alnus sinuata* (Regel) Rydb. [HC]  
*Alnus sitchensis* (Regel) Sarg.  
*Alnus viridis* (Chaix) DC. var. *sinuata* Regel  
*Duschekia sinuata* (Regel) Pouzar

FNA3: "*Alnus viridis* subsp. *sinuata* is one of the first successional taxa to appear in the northwestern mountains following disruption of the mature vegetation. It often forms dense thickets on avalanche and talus slopes. Sitka alder differs from the two previous subspecies in its paper-thin, light or yellowish green, doubly serrate leaves. The Bella Coola used *Alnus viridis* subsp. *sinuata* medicinally although D. E. Moerman (1986) did not specify the nature of the remedies."

***Betula*** [FNA3, HC, HC2]

Sp. Pl. 2: 982. 1753; Gen. Pl. ed. 5, 433, 1754.  
birch

***Betula glandulosa*** Michx. [FNA3, HC, HC2]

Fl. Bor.-Amer. 2: 180. 1803.  
dwarf birch, resin birch, swamp birch  
(see also *Betula pumila*)

*Betula crenata* Rydb. ex B.T. Butler  
*Betula glandulosa* Michx. var. *glandulosa* [HC]

FNA3: "*Betula glandulosa* is the characteristic dwarf birch of upland habitats throughout much of the mountainous west, occurring as well in dry open areas across the north. Where their ranges meet, *B. glandulosa* intergrades with both *B. pumila* Linnaeus and *B. nana* Linnaeus subsp. *exilis* (Sukaczew) Hultén, creating a confusing complex of intermediate forms." KZ taxon for this species is *Betula nana*, Arctic Dwarf Birch and included synonyms *B. glandulosa* var. *siberica*, *B. michauxii*, *B. nana* ssp. *exilis*, *B. nana* var. *siberica*, *B. exilis*, and *B. glandulosa* var. *hallii* - all of these names have probably been misapplied.

***Betula occidentalis*** Hook. [FNA3, HC, HC2]

Fl. Bor.-Amer. 2: 155. 1838.  
red birch, river birch, water birch

*Betula beeniana* A. Nelson  
*Betula fontinalis* Sarg.  
*Betula fontinalis* Sarg. var. *inopina* (Jeps.) Jeps.  
*Betula microphylla* Bunge var. *fontinalis* (Sarg.) M.E. Jones  
*Betula occidentalis* Hook. var. *fecunda* Fernald  
*Betula occidentalis* Hook. var. *inopina* (Jeps.) C.L. Hitchc. [HC]  
*Betula occidentalis* Hook. var. *occidentalis* [HC]  
*Betula papyrifera* Marshall ssp. *occidentalis* (Hook.) Hultén  
*Betula papyrifera* Marshall var. *occidentalis* (Hook.) Sarg.

FNA3: "*Betula occidentalis* is a common, streamside, shrubby birch throughout much of the Rocky

Mountains, extending eastward to northwestern Ontario. It has been widely known by the later name *B. fontinalis* because of questions concerning the legitimacy of Hooker's epithet (J. R. Dugle 1966). Recent changes to the International Code of Botanical Nomenclature (W. Greuter et al. 1994) have clarified the situation, however, and the consensus now is that the earlier name is correct. E. Hultén (1968) believed that the species in Alaska that has been called *B. occidentalis* consists of an extensive hybrid swarm between *B. neolaskana* (as *B. resinifera*) and *B. glandulosa*. The studies of J. R. Dugle (1966) do not support a hybrid origin of *B. occidentalis* in other parts of its range. Additional study will be needed to resolve this problem, both in Alaska and southward."

***Betula papyrifera* Marshall [FNA3, HC, HC2]**

Arbust. Amer. 19. 1785.  
canoe birch, paper birch, western paper birch, white birch  
(see also *Betula utahensis*)

*Betula alba* L. var. *commutata* Regel

*Betula montanensis*

*Betula papyrifera* Marshall var. *commutata* (Regel) Fernald [HC]

FNA3: "Variants having more or less close, dark brown bark (*B. papyrifera* var. *commutata*) occur locally throughout the wide range of this species; this characteristic appears to be largely environmentally caused. *Betula* × *sandbergii* Britton is a fairly common hybrid, occurring where the ranges of the parents (*B. papyrifera* Marshall and *B. pumila* Linnaeus) come into contact. In most vegetative features it is intermediate between the parental conditions (K. E. Clausen 1963; C. O. Rosendahl 1928)."

***Betula pendula* Roth [FNA3, HC2]**

Tent. Fl. Germ. 1: 405. 1788.  
European weeping birch

*Betula verrucosa* Ehrh.

Native to Eurasia. Not included in H&C. FNA3: "The Eurasian weeping birch (*Betula pendula*) is extensively cultivated throughout the temperate range of the flora, and it has been known to persist or to become locally naturalized in several areas, particularly in the Northeast. In vegetative features it resembles *B. populifolia* Marshall, to which it is closely allied; it can easily be distinguished from the latter by its peeling bark, as well as by its mostly pubescent leaves with somewhat shorter, acuminate apices."

***Betula populifolia* Marshall [FNA3, HC2]**

Arbust. Amer. 19. 1785.

***Betula pubescens* Ehrh. [FNA3, HC2]**

Beitr. Naturk. 5: 160. 1790.

ssp. *pubescens* [FNA3, HC2]

***Betula pumila* L. [FNA3, HC2]**

Mant. Pl. 124. 1767.  
bog birch, dwarf birch, swamp birch

*Betula borealis* Spach

*Betula glandulifera* (Regel) B.T. Butler

*Betula glandulosa* Michx. var. *glandulifera* (Regel) Gleason

*Betula glandulosa* Michx. var. *hallii* (Howell) C.L. Hitchc. [HC, VPBC]

*Betula hallii* Howell

*Betula nana* L. var. *glandulifera* (Regel) B. Boivin

*Betula pubescens* Ehrh. ssp. *borealis* (Spach) A. Löve & D. Löve

*Betula pumila* L. f. *hallii* (Howell) Brayshaw [VPBC, VPBC]

*Betula pumila* L. var. *glabra* Regel

*Betula pumila* L. var. *glandulifera* Regel [VPBC1, KZ99, FNA3]

*Betula pumila* L. var. *renifolia* Fernald

FNA3: "*Betula pumila* is sometimes treated (in part) as a variety of *B. glandulosa* Michaux, to which it is related at a subgeneric or sectional level. On the basis of morphology, however, it forms a cohesive and distinct entity (J. J. Furlow 1984). The two main varieties into which *B. pumila* is often divided (a more southern *B. pumila* var. *pumila*, with mostly pubescent, glandless leaves, and a more northern *B. pumila* var. *glandulifera*, with less pubescent, gland-bearing leaves) may represent geographic races; these are

not well marked, however, and they do not hold up well when the complex is examined as a whole."

***Betula xutahensis* Britton [FNA3, HC2]**

Bull. Torrey Bot. Club 31(3): 165.

*Betula andrewsii* A. Nelson

*Betula xcommixta* Sarg.

*Betula papyrifera* Marshall var. *subcordata* (Rydb.) Sarg. [HC]

*Betula piperi* Britton [HC]

FNA3: "Betula x utahensis Britton (= B. occidentalis Hooker x B. papyrifera Marshall) is a common hybrid marked by intermediate characteristics." H&C treats B. papyrifera var. subcordata and B. x piperi as separate species

***Corylus* [FNA3, HC, HC2]**

Sp. Pl. 2: 998. 1753; Gen. Pl. ed. 5, 433, 1754.

filbert, hazelnut

***Corylus avellana* L. [FNA3, HC2]**

Sp. Pl. 2: 998. 1753.

common filbert, European hazelnut

Native to Europe. Not included in H&C. FNA3: "Corylus avellana is widely grown as an ornamental shrub in temperate North America, and it sometimes persists following cultivation, although it seldom becomes established. Corylus avellana is similar to C. americana in habit, leaves, and fruit characteristics, although it becomes much larger. If fruits are present, the two species can be distinguished by the involucre, which is shorter than the nut in C. avellana. The best technical character for separating these species in the absence of fruits is the length of the peduncles of the staminate catkins (which are formed during the summer prior to the season of blooming)."

***Corylus cornuta* Marshall [FNA3, HC, HC2]**

Arbust. Amer. 37. 1785.

beaked hazelnut

**ssp. *californica* (A. DC.) A.E. Murray [FNA3, HC2]**

Kalmia. 12: 19. 1982.

California hazel

*Corylus californica* (A. DC.) Rose

*Corylus cornuta* Marshall var. *californica* (A. DC.) Sharp

*Corylus cornuta* Marshall var. *glandulosa* B. Boivin

*Corylus rostrata* Aiton var. *californica* A. DC.

*Corylus rostrata* Aiton var. *tracyi* Jeps.

FNA3: "The California hazel (*Corylus cornuta* subsp. *californica*) is most often treated as a variety of the northern *C. cornuta*. The two may not be very closely related, however, differing conspicuously in habit, leaf shape, pubescence, the presence of glandular hairs, form and size of the involucre, habitat, phytogeography, and various other features (J. N. Rose 1895; J. S. Drumke 1965). A thorough taxonomic study of this group should be undertaken."

**ssp. *cornuta* [FNA3, HC2]**

beaked hazel

*Corylus cornuta* Marshall var. *cornuta* [IFBC]

*Corylus cornuta* Marshall var. *megaphylla* Vict. & J. Rouss.

*Corylus rostrata* Aiton

Not included in H&C. FNA3: "Like *Corylus americana* Walter, the beaked hazel (*C. cornuta* subsp. *cornuta*) is a weedy shrub and is sometimes considered a pest in carefully managed northern forests. The fruits are similar to those of *C. americana*, except that the surrounding bracts are connate into a long, narrow, tubular beak. Vegetative individuals of *C. cornuta* subsp. *cornuta* can be distinguished from *C. americana* by the absence of glandular hairs on the petioles and young twigs."

## Bignoniaceae [HC2] Trumpet Creeper Family

**Synonyms:** (none)

**References:** (none)

### *Catalpa* [HC2]

catalpa

#### *Catalpa bignonioides* Walter [HC2]

Fl. Carol. 64.

#### *Catalpa speciosa* (Warder) Warder ex Engelm. [HC2]

Bot. Gaz. 5(1): 1-3.

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## Boraginaceae [Draft FNA, HC, HC2] Borage Family

**Synonyms:** (none)

Taxonomy follows recent molecular studies: Weigend, M., Federico Luebert, Marc Gottschling, Thomas L.P., Couvreur, Hartmut H. Hilger and James S. Miller. 2013. From capsules to nutlets? phylogenetic relationships in the Boraginales. *Cladistics* (2013) 1?11. Nazaire, M., and L Hufford. 2012. A Broad Phylogenetic Analysis of Boraginaceae: Implications for the Relationships of *Mertensia*. *Systematic Botany* 37(3): pp. 758?783.

**References:** (none)

### *Adelinia* [HC2]

Adeline's hound's tongue

#### *Adelinia grandis* (Douglas ex Lehm.) J. I. Cohen [HC2]

*Systematic Botany* 40(2): 617.

grand hound's tongue, Pacific hound's tongue

*Cynoglossum grande* Douglas ex Lehm. [HC]

\* *Syst. Bot.* 40(2): 617.

### *Amsinckia* [HC, HC2]

amsinckia, fiddleneck, tarweed

#### *Amsinckia intermedia* Fisch. & C.A. Mey. [HC, HC2]

fireweed fiddleneck, Menzie's fiddleneck, rancher's fiddleneck, small-flowered fiddleneck

*Amsinckia intermedia* Fisch. & C.A. Mey. var. *intermedia*

*Amsinckia menziesii* (Lehm.) A. Nelson & J.F. Macbr. var. *intermedia* (Fisch. & C.A. Mey.) Ganders [JPM]

taxonomy follows F.R. Ganders in Jeps

#### *Amsinckia lycopsoides* Lehm. [HC, HC2]

bugloss fiddleneck, tarweed fiddleneck

\* Ray and Chisaki. 1957. *American Journal of Botany* 44: 529-554.

#### *Amsinckia menziesii* (Lehm.) A. Nelson & J.F. Macbr. [HC, HC2]

harvest fiddleneck, rigid fiddleneck, rancher's fireweed

*Amsinckia menziesii* (Lehm.) A. Nelson & J.F. Macbr. var. *menziesii* [JPM]

*Amsinckia micrantha* Suksd.

Jeps notes 100+ named variants, self-pollinated, that can grow together and remain distinct locally but intergrade elsewhere

#### *Amsinckia retrorsa* Suksd. [HC, HC2]

harvest fiddleneck, rigid fiddleneck

***Amsinckia spectabilis*** Fisch. & C.A. Mey. [HC, HC2]

seaside amsinckia

*Amsinckia scouleri* I.M. Johnst.

var. ***spectabilis*** [HC2, JPM]

woolly breeches, Scouler's fiddleneck, seaside fiddleneck

*A. spectabilis* var. *microcarpa* (Greene) Jeps. & Hoover is listed as a syn. of *A. spectabilis* by Kz99, but the var. is a CA coastal plant, and the name is misapplied by Kz99, acc. to Jeps.

***Amsinckia tessellata*** A. Gray [HC, HC2]

tessellate fiddleneck

var. ***tessellata*** [HC2, JPM]

tessellate fiddleneck

***Anchusa*** [HC, HC2]

alkanet, anchusa, bugloss

***Anchusa azurea*** Mill. [HC, HC2]

Italian alkanet, Italian bugloss

the on-line Kew Index suggests the correct name for this may be *Anchusa italica* Retz.; here we follow Stace (1997) in using *A. azurea*

var. ***azurea*** [HC2]

***Anchusa officinalis*** L. [HC, HC2]

common alkanet, common bugloss

***Asperugo*** [HC, HC2]

catchweed, madwort

***Asperugo procumbens*** L. [HC, HC2]

catchweed, madwort

***Borago*** [HC, HC2]

borage

***Borago officinalis*** L. [HC, HC2]

Sp. Pl. 1: 137.

borage, common borage

Recently collected in San Juan and King Counties.

***Buglossoides*** [HC2]

gromwell

***Buglossoides arvensis*** (L.) I.M. Johnst. [HC2]

corn gromwell, field gromwell

***Lithospermum arvense*** L. [HC]

\* Baker 1961. *Rhodora* 63: 229-235.

\* Johnston, I.M. 1952. Studies in the Boraginaceae, XXIII. A survey of the genus *Lithospermum*. *Journal of the Arnold Arboretum* 33: 299-366.

***Cryptantha*** [HC, HC2]

cryptantha, white forget-me-not

(see also *Greeneocharis*)

***Cryptantha affinis*** (A. Gray) Greene [HC, HC2]

*Pittonia* 1(7): 119.

common cryptantha, slender cryptantha, quill cat's eye

*Krynitzkia affinis* A. Gray

- \* Higgins, L.C. 1971. A revision of *Cryptantha* subgenus *Oreocarya*. Brigham Young University Sci. Bull., Biol. Series 13(4): 1-63
- \* Johnston, I.M. 1925. The North American species of *Cryptantha*. Contrib. Gray Herbarium 74: 3-114.
- \* Payson, E.B. 1927. A monograph of the section *Oreocarya* of *Cryptantha*. Ann. Missouri Bot. Garden 14: 211-358.

***Cryptantha ambigua*** (A. Gray) Greene [HC, HC2]

Pittonia 1(7): 113.  
obscure cryptantha, wilke's cryptantha, basin cat's eye

***Cryptantha fendleri*** (A. Gray) Greene [HC, HC2]

Pittonia 1(7): 120.  
Fendler's cryptantha, sand dune cat's eye  
"rare with us" [H&C], perhaps deserving to be considered rare in WA.

***Cryptantha flaccida*** (Douglas ex Lehm.) Greene [HC, HC2]

Pittonia 1(7): 115.  
flaccid cryptantha, weakstem cat's eye

***Cryptantha gracilis*** Osterh. [HC2, JPM]

Bull. Torrey Bot. Club 30(4): 236.  
narrow-stem cryptantha

***Cryptantha grandiflora*** Rydb. [Draft FNA, HC2]

Bull. Torrey Bot. Club 36(12): 679?680.  
large-flowered cryptantha  
(see also *Cryptantha intermedia*)

*Cryptantha intermedia* (A. Gray) Greene var. *grandiflora* (Rydb.) Cronquist [HC]

***Cryptantha intermedia*** (A. Gray) Greene [HC, HC2]

Pittonia 1(7): 114.  
common cryptantha, Clearwater cat's eye  
(see also *Cryptantha grandiflora*)

*Cryptantha fragilis* M. Peck

var. ***hendersonii*** (A. Nelson) Jeps. & Hoover [HC, HC2]

*Cryptantha hendersonii* (A. Nelson) Piper ex J.C. Nelson

***Cryptantha pterocarya*** (Torr.) Greene [HC, HC2, JPM]

Pittonia 1(7): 120.  
wingnut cryptantha  
Taxonomy follows Jepson.

var. ***pterocarya*** [HC2]

***Cryptantha rostellata*** (Greene) Greene [HC, HC2]

Pittonia 1(7): 116.  
beaked cryptantha

*Cryptantha rostellata* (Greene) Greene var. *spithamea* (I.M. Johnst.) Jeps.

***Cryptantha scoparia*** A. Nelson [HC, HC2]

Botanical Gazette 54(2): 144-145.  
desert cryptantha, pinyon desert cat's eye

Possibly misapplied to WA. Jepson implies it is native to the Mojave Desert of CA, but possibly a synonym of *C. nevadensis* Nelson & Kenn.

***Cryptantha simulans*** Greene [HC, HC2]

Pittonia 5(26B): 54.  
pinewoods cryptantha, pinewoods cat's eye

***Cryptantha torreyana*** (A. Gray) Greene [HC, HC2, JPM]

Pittonia 1(7): 118.

Torrey's cryptantha, Torrey's cat's eye  
*Cryptantha torreyana* (A. Gray) Greene var. *pumila* (A. Heller) I.M. Johnst.  
Similar to *C. ambigua*, and they intergrade; taxonomy follows Jepson.  
var. ***torreyana*** [HC2]

***Cryptantha watsonii*** (A. Gray) Greene [HC, HC2]  
Pittonia 1(7): 120.  
Watson's cryptantha, Watson's cat's eye  
"rare with us" (H&C) and possible belongs on the WA rare plant list

***Cynoglossum*** [HC, HC2]  
hound's-tongue  
(see also *Adelinia*)  
***Cynoglossum officinale*** L. [HC, HC2]  
Sp. Pl. 1: 134.  
gypsy flower, common hound's tongue

***Echium*** [HC, HC2]  
viper's bugloss  
***Echium vulgare*** L. [HC, HC2]  
Sp. Pl. 1: 139.  
common viper's bugloss  
\* Bramwell 1972. *Lagascalia* 2: 37-115

***Eritrichium*** [HC, HC2]  
eritrichium, alpine forget-me-not, false forget-me-not  
***Eritrichium argenteum*** W. Wight [Draft FNA, HC2]  
Bull. Torrey Bot. Club 29(6): 411?412.  
pale alpine forget-me-not  
\* Wight, W.F. 1902. The genus *Eritrichium* in North America. *Bulletin of the Torrey Botanical Club* 29: 407-414.

***Greeneocharis*** [HC2]  
Greeneocharis  
***Greeneocharis circumscissa*** (Hook. & Arn.) Rydb. [HC2]  
cushion cryptantha, matted cryptantha  
*Cryptantha circumscissa* (Hook. & Arn.) I.M. Johnst. [HC, JPM]  
Taxonomy follows Intermountain Flora and Jeps in not recognizing varieties.  
var. ***circumscissa*** [HC2]  
*Cryptantha circumscissa* (Hook. & Arn.) I.M. Johnst. var. *circumscissa*  
*Cryptantha circumscissa* (Hook. & Arn.) I.M. Johnst. var. *hispida* (J.F. Macbr.) I.M. Johnst.  
*Greeneocharis circumscissa* (Hook. & Arn.) Rydb. var. *circumscissa* [Abrams]

***Gruvelia*** [HC2]  
little combseed, little pectocarya  
***Gruvelia pusilla*** A. DC. [Draft FNA, HC2]  
Prodr. [A. P. de Candolle] 10: 119.  
little gruvelia  
*Pectocarya pusilla* (A. DC.) A. Gray [HC]  
Recorded from Klickitat and Chelan Cos., possibly rare in WA?

***Hackelia*** [HC, HC2]

wild forget-me-not, hackelia, stickseed

***Hackelia americana*** (A. Gray) Fernald [HC2]

nodding stickseed

*Hackelia deflexa* (Wahlenb.) Opiz ssp. *americana* (A. Gray) Á. Löve & D. Löve

*Hackelia deflexa* (Wahlenb.) Opiz var. *americana* (A. Gray) Fernald & I.M. Johnst. [HC]

*Lappula deflexa* (Wahlenb.) Garcke ssp. *americana* (A. Gray) Hultén

***Hackelia ciliata*** (Douglas ex Lehm.) I.M. Johnst. [HC, HC2]

Contributions from the Gray Herbarium of Harvard University 68: 46.

Okanogan stickseed

\* Gentry, J.L. and R.L. Carr. 1976. A revision of the genus *Hackelia* (Boraginaceae) in North America north of México. Mem New York Bot Gard 26:121?227.

***Hackelia cinerea*** (Piper) I.M. Johnst. [HC, HC2]

gray stickseed

\* Gentry, J.L. and R.L. Carr. 1976. A revision of the genus *Hackelia* (Boraginaceae) in North America north of México. Mem New York Bot Gard 26:121?227.

***Hackelia diffusa*** (Lehm.) I.M. Johnst. [HC, HC2]

diffuse stickseed

var. ***arida*** (Piper) R.L. Carr [HC2]

Mem. New York Bot. Gard. 26(1): 190.

sagebrush stickseed, steppe stickseed

*Hackelia arida* (Piper) I.M. Johnst. [HC]

Taxonomy follows Gentry and Carr (1976).

\* Gentry, J.L. and R.L. Carr. 1976. A revision of the genus *Hackelia* (Boraginaceae) in North America north of México. Mem New York Bot Gard 26:121?227.

var. ***cottonii*** (Piper) R.L. Carr [HC2]

Mem. New York Bot. Gard. 26(1): 192.

Cotton's stickseed

Taxonomy follows Gentry and Carr (1976).

\* Gentry, J.L. and R.L. Carr. 1976. A revision of the genus *Hackelia* (Boraginaceae) in North America north of México. Mem New York Bot Gard 26:121?227.

var. ***diffusa*** [HC2]

Contr. Gray Herb. 68: 48.

diffuse stickseed

*Hackelia saxatilis* (Piper) Brand

Taxonomy follows Gentry and Carr (1976).

\* Gentry, J.L. and R.L. Carr. 1976. A revision of the genus *Hackelia* (Boraginaceae) in North America north of México. Mem New York Bot Gard 26:121?227.

***Hackelia floribunda*** (Lehm.) I.M. Johnst. [HC, HC2]

Contr. Gray Herb. 68: 46.

manyflowered stickseed

Seldom collected in our area (H&C), perhaps appropriate on WA rare plant list.

***Hackelia hispida*** (A. Gray) I.M. Johnst. [HC, HC2]

rough stickseed

var. ***disjuncta*** R.L. Carr [HC2]

Mem. New York Bot. Gard. 26(1): 180-181, f. 16.

sagebrush stickseed

\* Gentry, J.L. and R.L. Carr. 1976. A revision of the genus *Hackelia* (Boraginaceae) in North America north of México. Mem New York Bot Gard 26:121?227.

var. *hispida* [HC2]

Contr. Gray Herb. 68: 46.  
rough stickseed

*Hackelia micrantha* (Eastw.) J.L. Gentry [HC, HC2]

Madroño 21(7): 490.  
meadow forget-me-not, blue stickseed

*Hackelia jessicae* (McGregor) Brand

*Hackelia taylorii* Harrod, Malmquist & R.L. Carr [HC2]

Journal of the Botanical Research Institute of Texas 7(2): 652-657, f. 4.  
Taylor's stickseed

\* JBRIT: 7(2): 652-657.

*Hackelia venusta* (Piper) H. St. John [HC, HC2]

Research Studies of the State College of Washington 1(2): 104.  
lesser showy stickseed

*Lappula* [HC, HC2]

stickseed

*Lappula fremontii* (Torr.) Greene [HC2]

Fremont's stickseed

var. *fremontii* [HC2]

Fl. N.W. Amer. 5: 480.

*Lappula longispina* [HC2], unpublished name

long-spined stickseed

*Lappula montana* Greene [HC2]

montane stickseed

*Lappula occidentalis* (S. Watson) Greene [HC2]

western stickseed

Taxonomy follows Jepson Manual.

*Lappula squarrosa* (Retz.) Dumort. [HC2, JPM2]

Fl. Lit. Inch. 1: 25.  
bristly sheepburr, bristly stickseed, common stickseed, European stickseed, bristly-fruited tickweed

*Lappula echinata* Gilib. [HC]

*Lithospermum* [HC, HC2]

gromwell, stoneseed  
(see also *Buglossoides*)

*Lithospermum incisum* Lehm. [HC, HC2]

fringed stoneseed

*Lithospermum ruderales* Douglas ex Lehm. [HC, HC2]

Nov. Stirp. Pug. 2: 28.  
western gromwell, Columbian puccoon, western stoneseed

*Lycopsis* [HC2]

bugloss, small bugloss

*Lycopsis arvensis* L. [HC2]

Sp. Pl. 1: 139.  
annual bugloss, European bugloss, small bugloss

*Anchusa arvensis* (L.) M. Bieb. [JPM]

\* Greuter 1965. Candollea 20: 192-210

**Mertensia** [HC, HC2]

bluebells, lungwort, mertensia

**Mertensia brachycalyx** Piper [HC2]

short-sepaled bluebells

**Mertensia ciliata** (E. James ex Torr.) G. Don [HC, HC2]

Gen. Hist. 4: 372.

streamside bluebells

**Mertensia longiflora** Greene [HC, HC2]

Pittonia 3(18A): 261.

trumpet bluebells, long-flowered lungwort

\* Milek 1988. Ph.D. thesis University of Northern Colorado

\* Strachan 1988 PhD thesis Univ. Montana

\* Williams, L.O. 1937. A monograph of the genus *Mertensia* in North America. Ann. Missouri Bot. Garden 24: 17-159.

**Mertensia oblongifolia** (Nutt.) G. Don [HC, HC2]

languid lady, leafy lungwort

*Mertensia oblongifolia* (Nutt.) G. Don var. *oblongifolia* [JPM]

*Mertensia perplexa* Rydb. [HC]

*Mertensia viridis* (A. Nelson) A. Nelson [HC]

*Mertensia cusickii* Piper (including *Mertensia toiyabensis* J.F. Macbr.) and *Mertensia viridis* (A. Nelson) A. Nelson are not taxonomic synonyms of *M. oblongifolia*, as suggested by Kz99.

**Mertensia paniculata** (Aiton) G. Don [HC, HC2]

paniculate bluebells, tall bluebells

var. **borealis** (J.F. Macbr.) L.O. Williams [HC, HC2, JPM]

Ann. Missouri Bot. Gard. 24(1): 49.

tall lungwort

(see also *Mertensia brachycalyx*)

var. **paniculata** [HC, HC2, JPM]

Gen. Hist. 4: 318.

panicled lungwort

**Mertensia platyphylla** A. Heller [HC, HC2]

Bull. Torrey Bot. Club 26(10): 548-549.

broadleaved bluebells, western bluebells

*Mertensia platyphylla* A. Heller var. *platyphylla*

*Mertensia platyphylla* A. Heller var. *subcordata* (Greene) L.O. Williams

**Mertensia umbratilis** Greenm. [HC, HC2]

Erythea 7(11): 118-119.

shade bluebells, shade lungwort

Treated by Hitchcock et al. (1959) as *M. oblongifolia* × *paniculata*

**Myosotis** [HC, HC2]

forget-me-not, scorpion-grass

**Myosotis arvensis** (L.) Hill [HC, HC2]

Veg. Syst. 7: 55.

mouse ear, rough forget-me-not, field scorpiongrass

**Myosotis asiatica** (Vesterg.) Schischk. & Serg. [IFBC]

Jahrb. Konigl. Bot. Gart. Berlin 9: 2272.

Asian forget-me-not

(see also *Myosotis sylvatica*)

*Myosotis sylvatica* Ehrh. ex Hoffm. var. *alpestris* (F.W. Schmidt) Koch [HC]

This species is not known to occur in Washington. The specimens at WWB are misidentified (one is likely *M. sylvatica*, the other is *Hackelia micrantha*).

\* <b>Davis 1952</b> = Davis, R. J. 1952. Flora of Idaho. W. C. Brown Co., Dubeque, Iowa.

***Myosotis asiatica* (Vestergr.) Schischk. & Serg. [IFBC], misapplied**

Jahrb. Konigl. Bot. Gart. Berlin 9: 2272.

Asian forget-me-not

(see also *Myosotis sylvatica*)

*Myosotis sylvatica* Ehrh. ex Hoffm. var. *alpestris* (F.W. Schmidt) Koch [HC]

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***Myosotis discolor* Pers. [HC, HC2]**

Syst. Veg. (ed. 15) 190 [1798].

yellow and blue scorpiongrass, yellow scorpiongrass

*Myosotis versicolor* (Pers.) Sm.

***Myosotis latifolia* Poir. [HC2]**

broad-leaved forget-me-not

Reported naturalized by Buckingham et al. (1995) and Atkinson and Sharpe (1993), possibly confused with *M. sylvatica*. No vouchers from WA currently exist at herbaria included in the PNW Consortium. This taxon is considered excluded until a voucher from WA is located.

***Myosotis laxa* Lehm. [HC, HC2]**

bay forget-me-not, small forget-me-not

***Myosotis micrantha* Pall. ex Lehm. [HC, HC2]**

blue scorpion-grass

***Myosotis scorpioides* L. [HC, HC2]**

Sp. Pl. 1: 131.

common forget-me-not, true forget-me-not, water forget-me-not

*Myosotis palustris* (L.) Hill

***Myosotis sylvatica* Ehrh. ex Hoffm. [HC, HC2, Stace 1997]**

Deut. Fl. 1: 61.

wood forget-me-not

*Myosotis alpestris* F.W. Schmidt [Davis 1952, HC2], misapplied

*Myosotis asiatica* (Vestergr.) Schischk. & Serg. [IFBC], misapplied

This is the common garden escape, often confused with *M. arvensis* (Stace 1997).

\* <b>Davis 1952</b> = Davis, R. J. 1952. Flora of Idaho. W. C. Brown Co., Dubeque, Iowa.

***Myosotis verna* Nutt. [HC, HC2]**

Gen. N. Amer. Pl. 2: Add.

spring forget-me-not, early scorpiongrass, spring scorpiongrass, white scorpiongrass

*Myosotis macrosperma* Engelm. [Peck], misapplied

*Myosotis virginica* (L.) B.S.P. [Abrams]

***Oreocarya glomerata* (Pursh) Greene**

buttecandle, cockscomb oreocarya, Sheldon's oreocarya

*Cryptantha celosioides* (Eastw.) Payson [HC, HC2]

*Cryptantha sheldonii* (Brand) Payson

*Oreocarya celosioides* Eastw.

*Oreocarya sheldonii* Brand

***Oreocarya leucophaea* (Douglas ex Lehm.) Greene**

gray cat's eye

*Cryptantha leucophaea* (Douglas ex Lehm.) Payson [HC, HC2]

***Oreocarya spiculifera* Piper**

Snake River cryptantha, Snake River cat's eye

*Cryptantha interrupta* (Greene) Payson [HC], misapplied

*Cryptantha spiculifera* (Piper) Payson [HC2]

*C. interrupta* was cited for WA in Hitchcock et al. (1959), and rescinded in Cronquist et al. (1984) when he reevaluated the distinctness of *C. spiculifera*

***Oreocarya thompsonii*** (I.M. Johnst.) Abrams

Thompson's cat's eye

*Cryptantha thompsonii* I.M. Johnst. [HC, HC2]

***Pectocarya*** [HC, HC2]

combseed, pectocarya

(see also *Gruvelia*)

***Pectocarya penicillata*** (Hook. & Arn.) A. DC. [HC2, IFBC]

Prodr. 10: 120.

shortleaf combseed, winged pectocarya

*Pectocarya linearis* (Ruiz & Pav.) DC. var. *penicillata* (Hook. & Arn.) M.E. Jones [HC]

***Pectocarya setosa*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 12: 81.

bristly combseed

Possibly rare in WA?

***Pentaglottis*** [HC2]

alkanet

***Pentaglottis sempervirens*** (L.) Tausch ex L.H. Bailey [HC2, IFBC]

Flora 12: 643.

green alkanet

*Anchusa sempervirens* L.

Recently collected in several western Washington counties.

***Plagiobothrys*** [HC, HC2]

plagiobothrys, popcorn-flower

***Plagiobothrys cognatus*** (Greene) I.M. Johnst. [HC2, JPM]

*Allocarya cognata* Greene

***Plagiobothrys cusickii*** (Greene) I.M. Johnst. [HC2, JPM]

matted popcorn flower

*Allocarya cusickii* Greene

*Plagiobothrys scouleri* (Hook. & Arn.) I.M. Johnst. var. *cusickii* (Greene) Higgins

*Plagiobothrys scouleri* (Hook. & Arn.) I.M. Johnst. var. *penicillatus* (Greene) Cronquist [HC]

***Plagiobothrys figuratus*** (Piper) I.M. Johnst. ex M. Peck [HC, HC2]

fragrant plagiobothrys

*Allocarya figurata* Piper [Abrams]

***Plagiobothrys figuratus*** (Piper) I.M. Johnst. ex M. Peck var. *figuratus* [HC2]

fragrant popcorn flower

*Plagiobothrys figuratus* (Piper) I.M. Johnst. ex M. Peck ssp. *figuratus*

*Plagiobothrys hirtus* (Greene) I.M. Johnst. var. *figuratus* (Piper) I.M. Johnst.

Taxonomy follows Chambers (1989)

\* Chambers, K.L. 1989. Madroño 36: 281

\* Higgins 1974. Great Basin Naturalist 34: 161-166

\* Johnston, I.M. 1923. Studies in the Boraginaceae. 4. A synopsis and redefinition of *Plagiobothrys*. Contributions of the

Gray Herbarium 68: 57-80.

- \* Johnston, I.M. 1932. Studies in the Boraginaceae. IX. The Allocarya section of *Plagiobothrys* in the western United States. Contributions of the Arnold Arboretum 3: 5-82.
- \* Piper, C.V. 1920. A study of *Allocarya*. Contributions of the U.S. National Herbarium 22: 79-113.

***Plagiobothrys hispidulus*** (Greene) I.M. Johnst. [HC2, JPM]

harsh plagiobothrys  
(see also *Plagiobothrys cognatus*, *Plagiobothrys cusickii*)

*Allocarya hispidula* Greene

*Plagiobothrys scouleri* (Hook. & Arn.) I.M. Johnst. var. *hispidulus* (Greene) Dorn

***Plagiobothrys leptocladus*** (Greene) I.M. Johnst. [HC, HC2]

Contr. Arnold Arbor. 3: 38.  
alkali popcorn flower, slender branched popcorn flower

***Plagiobothrys nothofulvus*** (A. Gray) A. Gray [HC, HC2]

rusty popcorn flower

***Plagiobothrys scouleri*** (Hook. & Arn.) I.M. Johnst. [HC, HC2]

Scouler's popcorn flower  
(see also *Plagiobothrys cognatus*, *Plagiobothrys cusickii*, *Plagiobothrys hispidulus*)

*Allocarya granulata* Piper

*Allocarya scouleri* (Hook. & Arn.) Greene

*Plagiobothrys granulatus* (Piper) I.M. Johnst.

*Plagiobothrys scouleri* (Hook. & Arn.) I.M. Johnst. var. *scouleri* [HC]

***Plagiobothrys stipitatus*** (Greene) I.M. Johnst. [HC2, JPM]

Contr. Gray Herb. 68: 77.  
stipitate popcorn flower

Reported as an escape from cultivation on Olympic Penin. (Buckingham et al. 1995), voucher?

***Plagiobothrys tenellus*** (Nutt. ex Hook.) A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 20: 283.  
Pacific popcorn flower, slender popcorn flower  
*Plagiobothrys asper* Greene

***Pulmonaria***

***Pulmonaria ovalis*** Bast.

Suppl. Essai Fl. Maine-et-Loire 44.  
oval lungwort

*Pulmonaria mollis* Guep.

Reported from Lake Dawn, Little River, Clallam Co., as a garden relic (Buckingham et al. 1995), voucher?  
(check Olympic National Park).

***Symphytum*** [HC, HC2]

comfrey

***Symphytum asperum*** Lepech. [HC, HC2]

Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876--77: 296 (Gen. Sp. Musc. 2: 1114).  
prickly comfrey, rough comfrey  
(see also *Symphytum uplandicum*)

*Symphytum asperrimum* Donn ex Sims

***Symphytum grandiflorum*** DC. [Stace 1997]

Prodr. (DC.) 10: 40.  
creeping comfrey

*Symphytum ibericum* Steven ex Bieb.

Persisting decades at one site in King Co. as a garden relic in a now forested site.

*Symphytum officinale* L. [HC, HC2]

Sp. Pl. 1: 136.  
common comfrey

*Symphytum orientale* L. [Stace 1997]

Sp. Pl. 1: 136.  
white comfrey

Recently collected reseeding in gardens in King Co., probably not naturalized.

*Symphytum xuplandicum* Nyman [HC2, Stace 1997]

Syll. Fl. Eur. 80.  
hybrid comfrey

This is the common escaped garden comfrey in western WA.

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## Brassicaceae [FNA7, HC2] Mustard Family

### Synonyms:

Cruciferae [HC]

EDITING IN PROCESS. ANY NAME THAT LACKS A REFERENCE TO FNA7 SHOULD BE CONSIDERED UNEDITED AT THIS TIME. (Cruciferae [H&C]) Our taxonomy and nomenclature follows the treatments of Flora of North America Vol. 7 (2010) and Rollins (1993a, 1993b, 1993c), unless otherwise noted. Many of the authorities for the combinations in those treatments disagree with those used in H&C.

### References:

- \* <b>Rollins 1993a</b> = Rollins, R. C. 1993a. The Cruciferae of Continental North America. Stanford Univ. Press, Stanford, CA. 976 p.
- \* <b>Rollins 1993b</b> = Rollins, R. C. 1993b. Brassicaceae [Cruciferae], mustard family. In: Hickman, J. C., ed. 1993. The Jepson Manual: Higher Plants of California. Univ. of California Press, Berkeley.
- \* <b>Rollins 1993c</b> = Rollins, R. C. 1993c. New taxa and names in the Cruciferae of California. Harvard Papers in Botany 4: 43-48.

### *Alliaria* [FNA7, HC, HC2]

Enum. 161. 1759.  
garlic mustard

*Alliaria petiolata* (M. Bieb.) Cavara & Grande [FNA7, HC2]

Bull. Orto Bot. Regia Univ. Napoli. 3: 418. 1913.  
garlic mustard

*Alliaria officinalis* Andr. ex M. Bieb. [HC]

Collected in several localities in King Co.

### *Alyssum* [FNA7, HC, HC2]

Sp. Pl. 2: 650. 1753; Gen. Pl. ed. 5, 293. 1754.  
alyssum

*Alyssum alyssoides* (L.) L. [FNA7, HC, HC2]

Syst. Nat. ed. 10. 2: 1130. 1759.  
small alison, madwort, pale alyssum madwort

*Alyssum desertorum* Stapf [FNA7, HC, HC2]

Denkschr. Kaiserl. Akad. Wiss., Wien. Math.-Naturwiss. Kl. 51: 302. 1886.  
desert alyssum

*Alyssum murale* Waldst. & Kit. [FNA7, HC2]

Descr. Icon. Pl. Hung. 1: 5. 1799.  
yellowtuft

Known in Washington from single specimen at WS collected in 1985 from Chelan County irrigation ditch.

***Arabidopsis*** [FNA7, HC, HC2]

Fl. Sachsen. 1: 538. 1842.

[name conserved]

mouse-ear cress, thale cress

***Arabidopsis kamchatica*** (Fisch. ex DC.) K. Shimizu & Kudoh [HC2]

lyreleaved cress, kamchatka rockcress, lyre-leaved rockcress, western rockcress  
(= *Arabidopsis halleri* ssp. *gemmifera* x *Arabidopsis lyrata* ssp. *petraea*)

*Arabidopsis lyrata* (L.) O?Kane & Al-Shehbaz ssp. *kamchatica* (Fisch. ex DC.) O?Kane & Al-Shehbaz  
[FNA7]

*Arabis kamchatica* (Fisch. ex DC.) Ledeb. [KZ99]

*Arabis lyrata* L. var. *kamchatica* Fisch. ex DC. [HC]

*Arabis lyrata* L. var. *occidentalis* S. Watson

FNA7: "G. A. Mulligan (1996) treated subsp. *kamchatica* as a species of *Arabis*; R. C. Rollins (1993) treated it as a variety of *A. lyrata*."

***Arabidopsis thaliana*** (L.) Heynh. [FNA7, HC, HC2]

Fl. Sachsen. 1: 538. 1842.

mouse-ear cress, thalecress

Heynhold made the combination in 1842, Abrams uses the superfluous 1913 combination published by Britton; H&C uses the superfluous 1866 combination published by Schur.

***Arabis*** [FNA7, HC, HC2]

Sp. Pl. 2: 664. 1753; Gen. Pl. ed. 5, 298. 1754.

rockcress

(see also *Arabidopsis*, *Boechera*, *Turritis*)

***Arabis alpina*** L. [FNA7, HC2]

Sp. Pl. 2: 664. 1753.

***Arabis caucasica*** Willd. [FNA7, HC2]

Enum. Pl., Suppl. 45. 1814.

***Arabis crucisetosa*** Constance & Rollins [FNA7, HC, HC2]

Proc. Biol. Soc. Wash. 49: 147. 1936.

crosshaired rockcress

FNA7: "*Arabis crucisetosa* is known from Idaho, Lewis, and Nez Perce counties in Idaho, from Wallowa County in Oregon, and from Asotin County in Washington."

***Arabis eschscholtziana*** Andr. [FNA7, HC2]

Fl. Altaica. 3: 25. 1831.

hairy rockcress, Pacific coast rockcress

*Arabis hirsuta* (L.) Scop. [HC], misapplied

*Arabis hirsuta* (L.) Scop. var. *eschscholtziana* (Andr.) Rollins [HC]

*Arabis hirsuta* (L.) Scop. var. *glabrata* Torr. & A. Gray [HC]

FNA7: "G. A. Mulligan (1996) recognized *Arabis eschscholtziana* as a distinct species; R. C. Rollins (1941, 1993) treated it as a variety of *A. hirsuta*. As discussed under *A. pycnocarpa*, *A. hirsuta* does not occur in North America, and the characters separating all three species (see key to species), as well as the different ploidy levels, support Mulligan's conclusion. Both M. Hopkins (1937) and R. C. Rollins (1941, 1993) recognized the glabrous or subglabrate forms native to North America as a distinct variety, var. *glabrata*; G. A. Mulligan (1996) did not accord such forms any taxonomic status. Glabrous and subglabrate forms occur in both *Arabis eschscholtziana* and *A. pycnocarpa* and sometimes even within a population that has moderately to densely pubescent forms. I support Mulligan's view in not recognizing the glabrous forms as an infraspecific taxon."

***Arabis furcata*** S. Watson [FNA7, HC, HC2]

Proc. Amer. Acad. Arts. 17: 362. 1882.

Cascade rockcress, Columbia Gorge rockcress, fork-haired rockcress

*Arabis furcata* S. Watson var. *furcata* [KZ99]  
*Arabis suksdorfii* Howell

Although accepted by Rollins (1993b), *A. furcata* var. *olympica*, a Washington endemic, is known only from the type collection, which apparently was from a single depauperate and anomalous plant and may be synonymous with *A. hirsuta* var. *glabrata* (VPPN2; Buckingham et al. 1995). FNA7: "*Arabis furcata* is known in Washington from Chelan, Kittitas, Klickitat, Okanogan, Skamania, and Yakima counties, and in Oregon from Clackamas, Hood River, Multnomah, and Wasco counties."

***Arabis nuttallii*** (Kuntze) B.L. Rob. [FNA7, HC, HC2]

Syn. Fl. N. Amer. 1(1,1): 160. 1895.

Nuttall's rockcress

*Arabis bridgeri* M.E. Jones

*Arabis macella* Piper [Abrams]

*Erysimum nuttallii* Kuntze

***Arabis olympica*** Piper [FNA7, HC2]

Contr. U.S. Natl. Herb. 16: 208. 1913.

Olympics rockcress

*Arabis furcata* S. Watson var. *olympica* (Piper) Rollins [Rollins 1993a]

FNA7: "*Arabis olympica*, which is known from two collections, J. B. Flett s.n. (holotype, US; isotype, WS) and N. Buckingham 1577 (WS) that were made from Jefferson and Clallam counties, respectively, was reduced by R. C. Rollins (1936, 1941, 1993) to a variety of *A. furcata*. An examination of the type collections of both species reveals that they are distinct. Although the fruits and seeds of *A. olympica* are not fully mature, they are clearly different in width and orientation from those of *A. furcata* at the same developmental stage. The striking differences in fruit width and orientation, stem indument, and seed and flower size support their maintenance as distinct species. Although both species grow in Washington, the range of *A. olympica* seems to be restricted to Clallam and Jefferson counties and is disjunct from Chelan, Kittitas, and Yakima counties, where *A. furcata* grows."

***Armoracia*** B. Mey. & Scherbius [FNA7, HC2]

Oekon. Fl. Wetterau. 2: 426. 1800.

horseradish

***Armoracia rusticana*** P. Gaertn., B. Mey. & Scherb. [FNA7, HC2]

Oekon. Fl. Wetterau. 2: 426. 1800.

horseradish

*Rorippa armoracia* (L.) A.S. Hitchc. [HC]

***Athysanus*** [FNA7, HC, HC2]

Bull. Calif. Acad. Sci. 1: 72. 1885.

athysanus, sandweed

***Athysanus pusillus*** (Hook.) Greene [FNA7, HC, HC2]

Bull. Calif. Acad. Sci. 1: 72. 1885.

sandweed

*Athysanus pusillus* (Hook.) Greene var. *glabrior* S. Watson

*Thysanocarpus oblongifolius* Nutt.

*Thysanocarpus pusillus* Hook.

***Aubrieta*** [FNA7, HC2]

Fam. Pl. 2: 420. 1763.

***Aubrieta deltoidea*** (L.) DC. [FNA7, HC2]

Syst. Nat. 2: 294. 1821.

***Barbarea*** [FNA7, HC, HC2]

Hortus Kew. 4: 109. 1812.

[name conserved]

wintercress

***Barbarea orthoceras*** Ledeb. [FNA7, HC, HC2]

Index Seminum (Dorpat). 2. 1824.  
American wintercress rocket, yellow rocket

*Barbarea americana* Rydb. [Abrams]  
*Barbarea orthoceras* Ledeb. var. *dolichocarpa* Fernald [Peck]  
*Barbarea stricta* Andr. [FNA7], misapplied  
*Campe orthoceras* (Ledeb.) A. Heller

***Barbarea verna*** (Mill.) Asch. [FNA7, HC, HC2]

Fl. Brandenb. 1: 36. 1860.  
Belle Isle cress, landcress, early yellow rocket, scurvygrass, early wintercress

*Barbarea praecox* (Sm.) R. Br.  
*Campe verna* (Mill.) A. Heller  
*Erysimum praecox* Sm.  
*Erysimum vernum* Mill.

***Barbarea vulgaris*** W.T. Aiton [FNA7, HC, HC2]

Hortus Kew. 4: 109. 1812.  
yellow rocket, bitter wintercress

*Barbarea arcuata* (Opiz ex C. Presl) Rchb.  
*Barbarea vulgaris* W.T. Aiton var. *arcuata* (Opiz ex C. Presl) Fr.  
*Barbarea vulgaris* W.T. Aiton var. *brachycarpa* Rouy & Foucaud [Peck]  
*Erysimum arcuatum* Opiz ex C. Presl  
*Erysimum barbarea* L.

See Rollins 1993 for information regarding authorship for this name (Aiton in R. Br.).

***Berteroa*** [FNA7, HC, HC2]

Mém. Mus. Hist. Nat. 7: 232: 290. 1821.  
berteroa

***Berteroa incana*** (L.) DC. [FNA7, HC, HC2]

Syst. Nat. 2: 291. 1821.  
hoary alyssum  
*Alyssum incanum* L.

***Boechera*** [FNA7, HC2]

Bot. Not. 128: 513. 1976.  
rockcress

***Boechera atrorubens*** (Suksd. ex Greene) Windham & Al-Shehbaz [FNA7, HC2]

Harvard Pap. Bot. 11: 64. 2006.  
black-flowered rockcress

*Arabis atrorubens* Suksd. ex Greene [Abrams]  
*Arabis sparsiflora* Nutt. var. *atrorubens* (Suksd. ex Greene) Rollins [HC]

FNA7: "Boechera atrorubens is often treated as a variety of *B. sparsiflora* (e.g., R. C. Rollins 1993), it is readily separated from that species by having proximal stems sparsely (versus densely) pubescent with much smaller (0.15 versus 1.5 mm) trichomes. The two taxa rarely grow in proximity and, in areas where they are sympatric, *B. atrorubens* is further distinguished by its narrower (1.5-2 versus 2-5 mm) petals that are dark reddish purple to indigo (versus lavender or white)."

***Boechera calderi*** (G.A. Mulligan) Windham & Al-Shehbaz [FNA7, HC2]

Harvard Pap. Bot. 11: 259. 2007.  
Calder's rockcress

*Arabis calderi* G.A. Mulligan

FNA7: "Morphological evidence suggests that *Boechera calderi* is an apomictic species that arose through hybridization between *B. lyallii* and *B. stricta* (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed

comparison)."

***Boecheera cascadensis*** Windham & Al-Shehbaz [FNA7, HC2]

Harvard Pap. Bot. 11: 260. 2007.  
Cascades rockcress

*Arabis microphylla* Nutt. var. *thompsonii* Rollins [KZ99]

FNA7: "Morphological evidence suggests that *Boecheera cascadensis* is an apomictic species that arose through hybridization between *B. microphylla* and *B. paupercula* (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed comparison). It is known from two collections: the type specimens from Kittitas County, Washington, and a more recent collection from Baker County, Oregon."

***Boecheera cusickii*** (S. Watson) Al-Shehbaz [FNA7, HC2]

Novon. 13: 384. 2003.  
Cusick's rockcress

*Arabis cusickii* S. Watson [HC]

FNA7: "Peripheral populations of *Boecheera cusickii* in south-central Idaho and northern Nevada have a higher proportion of branched hairs, possibly resulting from hybridization with *B. sparsiflora*."

***Boecheera divaricarpa*** (A. Nelson) Á. Löve & D. Löve [FNA7, HC2]

Bot. Not. 128: 513. 1976.  
spreadingpod rockcress

*Arabis* × *divaricarpa* A. Nelson [HC, Rollins 1993a]  
*Arabis divaricarpa* A. Nels. var. *divaricarpa* [VPPNW2]

FNA7: "The name *Arabis* (*Boecheera*) *divaricarpa* has been applied to nearly every hybrid containing a genome derived from *B. stricta*. This presents a serious barrier to understanding the evolution of *Boecheera* and also is contrary to the International Code of Botanical Nomenclature, because some names usually placed in synonymy (i.e., *B. grahamii* and *B. brachycarpa*) have priority at species level (M. D. Windham and I. A. Al-Shehbaz 2007b). To address this problem, we treat the following as distinct species: *B. acutina*, *B. grahamii* (= *B. brachycarpa* of R. D. Dorn 2001), and *B. pratincola* (all considered synonyms of *A. divaricarpa* by R. C. Rollins 1993), and *B. calderi*, *B. elkoensis*, and *B. quebecensis* (taxa described after 1993). Detailed comparison among these taxa are provided by Windham and Al-Shehbaz (2007, 2007b). The narrow concept of *B. divaricarpa* advocated here encompasses apomictic triploid populations containing three distinct genomes, one each derived from *B. retrofracta*, *B. sparsiflora*, and *B. stricta*. If the species is defined more broadly, the name *B. grahamii* has priority."

\* Rollins 1983. Am. J. Bot. 70: 625-634 discusses hybrid status.

***Boecheera drepanoloba*** (Greene) Windham & Al-Shehbaz [FNA7, HC2]

Harvard Pap. Bot. 11: 263. 2007.

*Arabis drepanoloba* Greene  
*Arabis drummondii* A. Gray var. *oreophila* (Rydb.) M. Hopkins  
*Arabis lemmonii* S. Watson var. *drepanoloba* (Greene) Rollins [HC]  
*Arabis oreophila* Rydb.

FNA7: "Morphological evidence suggests that *Boecheera drepanoloba* is an apomictic species that arose through hybridization between *B. lemmonii* and *B. stricta* (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed comparison)."

***Boecheera grahamii*** (Lehm.) Windham & Al-Shehbaz [FNA7, HC2]

Harvard Pap. Bot. 12: 241. 2007.  
Graham's rockcress

*Arabis dacotica* Greene

Listed in FNA7 as occurring in WA. FNA7: "Morphological evidence suggests that *Boecheera grahamii* is an apomictic species that arose through hybridization between *B. collinsii* and *B. stricta*. Previous authors have assigned these specimens to *Arabis* (*Boecheera*) *divaricarpa* (see M. D. Windham and I. A. Al-Shehbaz 2007b for detailed comparison); if these taxa are treated as conspecific, the name *B. grahamii* has priority."

***Boecheera lemmonii*** (S. Watson) W.A. Weber [FNA7, HC2]

Phytologia. 51: 370. 1982.

Lemmon's rockcress

(see also *Boechea drepanoloba*, *Boechea paddoensis*)

*Arabis lemmonii* S. Watson [HC, Peck]

*Arabis lemmonii* S. Watson var. *lemmonii* [HC]

FNA7: "Boechea lemmonii is easily recognized by its combination of secund fruits, mat-forming habit, purplish sepals, and obovate-oblongate cauline leaves. Both sexual and apomictic collections are known; further study is needed to determine whether they truly are conspecific. The taxa traditionally treated as *Arabis* (*Boechea*) *lemmonii* vars. *depauperata*, *drepanoloba*, and *paddoensis* are apomictic hybrids here recognized as distinct species (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed comparison)."

***Boechea lyallii* (S. Watson) Dorn [FNA7, HC2]**

Vasc. Pl. Wyoming ed. 3. 376. 2001.

Lyall's rockcress, murray's rockcress

*Arabis lyallii* S. Watson [HC]

*Arabis lyallii* S. Watson var. *lyallii* [KZ99]

*Arabis murrayi* G.A. Mulligan

FNA7: "Completely glabrous individuals of *B. lyallii* are sometimes confused with *B. davidsonii*, but they are easily distinguished by the absence of persistent leaf bases on caudex branches, erect and appressed (versus ascending) fruits, and biseriate to sub-biseriate (versus uniseriate) seeds. Both sexual and apomictic collections are known; further study is needed to determine whether they truly are conspecific."

\* Mulligan, G. A. 1995. Synopsis of the genus *Arabis* (Brassicaceae) in Canada, Alaska and Greenland. *Rhodora* 97: 109-163.

***Boechea microphylla* (Nutt.) Dorn [FNA7, HC2]**

Vasc. Pl. Wyoming ed. 3. 376. 2001.

littleleaf rockcress, small-leaved rockcress

*Arabis microphylla* Nutt. [HC]

*Arabis microphylla* Nutt. var. *microphylla* [HC]

FNA7: "Boechea microphylla is recognizable by its minute (0.05-0.1 mm), 4-8-rayed leaf trichomes, mat-forming habit, simple and 2-rayed trichomes on stems proximally, and ascending fruits. Both sexual and apomictic collections are known; further study is needed to determine whether they truly are conspecific. The taxa traditionally treated as *Arabis* (*Boechea*) *microphylla* vars. *macounii* and *thompsonii* are here recognized as *B. macounii* and *B. cascadenis*, respectively (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed comparison)."

***Boechea paddoensis* (Rollins) Windham & Al-Shehbaz [FNA7, HC2]**

Harvard Pap. Bot. 11: 268. 2007.

Mt. Adams rockcress

*Arabis lemmonii* S. Watson var. *paddoensis* Rollins [HC]

FNA7: "Morphological evidence suggests that *Boechea paddoensis* is an apomictic species that arose through hybridization between *B. lemmonii* and *B. lyallii* (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed comparison). *Boechea paddoensis* is known only from the mountains of central Washington and northeastern Oregon."

***Boechea pauciflora* (Nutt.) Windham & Al-Shehbaz [FNA7, HC2]**

Harvard Pap. Bot. 11: 268. 2007.

Columbia rockcress, few-flowered rockcress, small-flowered rockcress

*Arabis sparsiflora* Nutt. var. *columbiana* (Macoun) Rollins [HC]

*Arabis sparsiflora* Nutt. var. *subvillosa* (S. Watson) Rollins [HC]

*Boechea holboellii* (Hornem.) Á. Löve & D. Löve [FNA7], misapplied

Check which accepted taxa occur in StateProvince.

*Boechea pinetorum* (Tidestr.) Windham & Al-Shehbaz [FNA7, HC2], misapplied

FNA7: "Morphological evidence suggests that *Boechea pauciflora* is an apomictic species that arose through hybridization between *B. retrofracta* and *B. sparsiflora*. Specimens of *B. pauciflora* are commonly

identified as *Arabis holboellii* var. *pinetorum* (= *B. pinetorum*), a superficially similar species restricted to the northern Sierra Nevada and southern Cascade Range (see M. D. Windham and I. A. 2007 for detailed comparison). *Arabis elegans* A. Nelson (1900), not Tineo & Lojaccono (1886) is an illegitimate name, sometimes found in synonymy with *Boechea pauciflora*. "Most authors (e.g., R. C. Rollins 1993; R. D. Dorn 2001; S. L. Welsh et al. 2003; N. H. Holmgren 2005b) have treated *Boechea pinetorum* as a variety of *Arabis* (*Boechea*) *holboellii*. Under this guise, the name has been applied to a vast array of plants collected throughout western North America. This includes a diversity of sexual diploids plus nearly every hybrid containing a genome from *B. retrofracta*. Based on re-examination of the type collection, we have adopted a much narrower concept of the species. Morphological evidence suggests that *B. pinetorum* is an apomictic triploid hybrid containing three different genomes, derived from *B. rectissima*, *B. retrofracta*, and *B. sparsiflora*. Plants closely resembling the type of *B. pinetorum* are confined to the northern Sierra Nevada and adjacent southern Cascades. The majority of collections previously associated with the epithet *pinetorum* represent *B. pauciflora* (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed comparison)."

***Boechea paupercula* (Greene) Windham & Al-Shehbaz [FNA7, HC2]**

Harvard Pap. Bot. 11: 75. 2006.

*Arabis lyallii* S. Watson var. *nubigena* (J.F. Macbr. & Payson) Rollins

FNA7: "*Boechea paupercula* is usually subsumed under *Arabis* (*Boechea*) *lyallii* but is amply distinct (see M. D. Windham and I. A. Al-Shehbaz 2006 for detailed comparison)."

***Boechea pendulocarpa* (A. Nelson) Windham & Al-Shehbaz [FNA7, HC2]**

Harvard Pap. Bot. 11: 77. 2006.

danglepod rockcress

*Arabis holboellii* Hornem. var. *pendulocarpa* (A. Nelson) Rollins [HC]

*Boechea holboellii* (Hornem.) Á. Löve & D. Löve [FNA7], misapplied

Check which accepted taxa occur in StateProvince.

FNA7: "Though often treated as a variety of *Arabis* (*Boechea*) *holboellii* (e.g., R. C. Rollins 1993), *B. pendulocarpa* is easily distinguished from that species by having simple and 2-4-rayed (versus 4-8-rayed) trichomes proximally on stems, cauline leaves without auricles, fruiting pedicels gently (versus sharply) recurved, and shorter (2-)2.5-3.8 (versus 3.5-6.5) cm, non-secund fruits. The two taxa have allopatric distributions, with *B. pendulocarpa* found in the mountains of western North America and *B. holboellii* apparently confined to Greenland. Recent use of the name *A. (Boechea) exilis* for this taxon (e.g., G. A. Mulligan 1996; R. D. Dorn 2001; N. H. Holmgren 2005b) is based on misinterpretation of the type (M. D. Windham and I. A. Al-Shehbaz 2006)."

***Boechea polyantha* (Greene) Windham & Al-Shehbaz [FNA7, HC2]**

Harvard Pap. Bot. 11: 78. 2006.

***Boechea puberula* (Nutt.) Dorn [FNA7, HC2]**

Brittonia. 55: 3. 2003.

Blue Mountain rockcress, hoary rockcress

*Arabis puberula* Nutt. [HC]

FNA8 does not include WA within the distribution of this species. FNA8: "*Boechea puberula* is a diploid species that appears to intergrade with both *B. retrofracta* and *B. subpinnatifida*. The glabrous-fruited specimens discussed by R. C. Rollins (1993) represent apomictic hybrids with other species, primarily *B. pendulocarpa*."

***Boechea retrofracta* (Graham) Á. Löve & D. Löve [FNA7, HC2]**

Taxon. 31: 125. 1982.

*Arabis exilis* A. Nelson [ILBC2]

*Arabis holboellii* Hornem. var. *retrofracta* (Graham) Rydb. [HC]

*Arabis holboellii* Hornem. var. *secunda* (Howell) Jeps. [ILBC2]

*Arabis retrofracta* Graham

*Arabis secunda* Howell [Abrams]

*Boechea holboellii* (Hornem.) Á. Löve & D. Löve [FNA7], misapplied

Check which accepted taxa occur in StateProvince.

FNA7: "Though often treated as a variety of *Arabis* (*Boechea*) *holboellii* (e.g., R. C. Rollins 1993; G. A.

Mulligan 1996; N. H. Holmgren 2005b), *B. retrofracta* is easily distinguished from that species by having narrower (0.9-1.8 versus 2-2.5 mm), mostly non-secund fruits that are almost always appressed to rachises. The two taxa have allopatric distributions, with *B. retrofracta* found on the North American continent (mostly west of the Great Plains) and *B. holboellii* apparently confined to Greenland. *Boechera retrofracta* has formed hybrids with at least 12 other species. Besides differing in macromorphological characters, all those hybrids are distinct from *B. retrofracta* in the strict sense in having wider (20-30 versus 13-16 Åµm), spheroid pollen grains with asymmetric colpi. *Arabis kochii* Blankinship is an illegitimate name, sometimes found in synonymy with *Boechera retrofracta*."

***Boechera sparsiflora* (Nutt.) Dorn [FNA7, HC2]**

Vasc. Pl. Wyoming ed. 3. 376. 2001.  
elegant rockcress, slender rockcress  
(see also *Boechera atrorubens*, *Boechera pauciflora*)

*Arabis arcoidea* A. Nelson  
*Arabis campyoloba* Greene [Abrams]  
*Arabis peramoena* Greene  
*Arabis polytricha* Greene  
*Arabis sparsiflora* Nutt. [HC]  
*Arabis sparsiflora* Nutt. var. *peramoena* (Greene) Rollins  
*Arabis sparsiflora* Nutt. var. *sparsiflora* [HC]

FNA7: "As circumscribed by R. C. Rollins (1993), *Boechera sparsiflora* included six varieties encompassing three sexual diploids and a number of apomictic hybrids. The most distinctive of those elements are recognized here as the separate species *B. arcuata*, *B. atrorubens*, *B. californica*, and *B. pauciflora*. The narrow circumscription of *B. sparsiflora* adopted here includes only sexual diploids. It is distinguished from other taxa previously assigned to it by having proximal stems densely pubescent with predominantly simple (some 2-rayed) trichomes to 1.5 mm, usually glabrous distal stems, and ascending fruiting pedicels with spreading, usually simple trichomes (rarely glabrous)."

***Boechera stricta* (Graham) Al-Shehbaz [FNA7, HC2]**

Novon. 13: 389. 2003.  
Canadian rockcress, Drummond's rockcress

*Arabis albertina* Greene  
*Arabis connexa* Greene  
*Arabis drummondii* A. Gray [HC]

FNA7: "*Arabis drummondii* is the correct name for this species in that genus; the epithet *stricta* has priority in *Boechera*. This very distinctive species is easily recognized by having basal leaves with branched trichomes, all sessile and 2-rayed (malpighiaceous). It is also the most promiscuous, having formed apomictic hybrids with at least 15 other species of *Boechera*."

***Boechera suffrutescens* (S. Watson) Dorn [FNA7, HC2]**

Brittonia. 55: 3. 2003.  
woody rockcress

*Arabis suffrutescens* S. Watson [HC]

FNA7: "*Boechera suffrutescens* is recognizable by its prominently suffrutescens habit and wide (greater than 3 mm), reflexed fruits. Both sexual and apomictic collections are known; further study is needed to determine whether they truly are conspecific. The taxon previously known as *Arabis suffrutescens* var. *horizontalis* appears to be of hybrid origin; it is treated here as a distinct species (see M. D. Windham and I. A. Al-Shehbaz 2007 for detailed comparison)."

***Brassica* [FNA7, HC, HC2]**

Sp. Pl. 2: 666. 1753; Gen. Pl. ed. 5, 299. 1754.  
cabbage, mustard  
(see also *Sinapis*)

***Brassica juncea* (L.) Czern. [FNA7, HC, HC2]**

Consp. Pl. Charcov. 8. 1859.  
Chinese, Indian, brown mustard, leaf mustard

*Brassica japonica* (Thunb.) Siebold ex Miq.  
*Brassica juncea* (L.) Czern. var. *crispifolia* L.H. Bailey [VPPNW2]  
*Brassica juncea* (L.) Czern. var. *juncea* [VPPNW2]  
*Sinapis juncea* L.

Czernov published this combination in January 1859, making superfluous the same combination by Cosson, published post-August 1859. FNA7: "Brassica juncea is cultivated in North America primarily as a vegetable and condiment, and is currently being developed as an oilseed crop in western Canada. Its greatest diversity of forms occurs in Asia, where the species is widely cultivated as a vegetable and as an oilseed crop (I. A. Al-Shehbaz 1985). Two main variants are distinguished on the basis of seed color: oriental mustard is yellow-seeded, and brown or Indian mustard is brown-seeded. The species is an allotetraploid derived from hybridization between *B. nigra* (n = 8) and *B. rapa* (n = 10). Its center of origin is uncertain but is most likely the Middle East, with possibly independent multiple origins within overlapping ranges of the putative parental taxa (S. I. Warwick and A. Francis 1994)."

*Brassica napus* L. [FNA7, HC2]

Sp. Pl. 2: 666. 1753.  
rape, winter rape, rapeseed

*Brassica napobrassica* (L.) Mill.

Known in Washington mostly from old collections in Bingen, Klickitat Co. FNA7: "Brassica napus is both a crop and a sporadically occurring naturalized weed in North America, grown in two forms recognized by some as subspecies. Subspecies *napus* (rape, rapeseed, or canola) is an annual with slender roots widely cultivated as an oil crop and is the most commonly naturalized. Subspecies *rapifera* Metzger [= subsp. *napobrassica* (Linnaeus) Hanelt] (rutabaga, swede, or Swedish turnip) is a biennial with fleshy roots that rarely escapes from cultivation. Brassica napus is an allotetraploid derived from hybridization between the *B. oleracea* complex (n = 9) and *B. rapa* (n = 10). Its center of origin is uncertain but likely Mediterranean Europe, with molecular data supporting evidence of multiple independent origins between the parental taxa *B. oleracea* and *B. rapa* and its related n = 9 species (Song K. et al. 1993). Specimens from West Virginia have not been observed."

*Brassica nigra* (L.) W.D.J. Koch [FNA7, HC, HC2]

Deutschl. Fl. ed. 3. 4: 713. 1833.  
black mustard

*Sinapis nigra* L.

FNA7: "Brassica nigra is widely cultivated as a condiment mustard. It is also a cosmopolitan weed especially common in the valleys of California (R. C. Rollins 1993)."

*Brassica oleracea* L. [FNA7, HC2]

Sp. Pl. 2: 667. 1753.  
cabbage, wild cabbage

*Brassica oleracea* L. var. *oleracea* [Stace 1997]

Reported from Olympic Peninsula (Buckingham et al. 1995). FNA7: "Brassica oleracea is widely cultivated worldwide as a vegetable crop, and its various forms are generally recognized as varieties instead of subspecies; these include var. *acephala* de Candolle (kale and collards), var. *botrytis* Linnaeus (cauliflower), var. *capitata* Linnaeus (cabbage), var. *gemmifera* Zenk (Brussels sprouts), var. *gongyloides* Linnaeus (kohlrabi), and var. *italica* Plenck (broccoli). It also occurs sporadically as a weedy escape from cultivation and seems unlikely to persist for long periods of time. It is reported to be naturalized on coastal cliffs (maritime slopes) in the northern Central Coastal Region and the central and southern North Coastal Region in California (Marin, San Francisco, San Mateo, Santa Barbara, and Ventura counties) (J. T. Howell et al. 1958; Howell 1970; H. G. Baker 1972; R. C. Rollins 1993b)."

*Brassica rapa* L. [FNA7, HC2]

Sp. Pl. 2: 666. 1753.  
common mustard, field mustard, wild turnip

*Brassica campestris* L. [HC]

*Brassica rapa* L. ssp. *campestris* (L.) Clapham [Stace 1997]

*Brassica rapa* L. var. *rapa* [KZ99]

**Cakile** [FNA7, HC, HC2]

Gard. Dict. Abr. ed. 4. vol. 1. 1754.  
searocket

**Cakile edentula** (Bigelow) Hook. [FNA7, HC, HC2]

Fl. Bor.-Amer. 1: 59. 1830.  
American searocket

var. **edentula** [FNA7, HC2, KZ99]

*Cakile edentula* (Bigelow) Hook. var. *californica* (A. Heller) Fernald [Peck]

We accept the subspecies but not the varieties of Rollins (1993b); *C. edentula*, dispersed by the sea, moved 2000 miles, from its point of introduction in San Francisco, to Kodiak Island, Alaska, in 50 years (Barbour & Rodman 1970).

**Cakile maritima** Scop. [FNA7, HC, HC2]

Fl. Carniol. ed. 2. 2: 35. 1772.  
European sea rocket

*Bunias cakile* L.

Ours is the subspecies *maritima*. FNA7: "Subspecies *maritima* is naturalized in Pacific North America (M. G. Barbour and J. E. Rodman 1970); it is also reported on the eastern shores of Chesapeake Bay, Maryland."

- \* Barbour, M. G. and J. E. Rodman. 1970. Saga of the West Coast sea-rockets: *Cakile edentula* ssp. *californica* and *C. maritima*. *Rhodora* 72: 370-386.
- \* Rodman, J. E. 1974. Systematics and evolution of the genus *Cakile* (Cruciferae). *Contr. Gray Herb.* 205: 3-146.
- \* Rodman, J. E. 1980. Population variation and hybridization in sea-rockets (*Cakile*, Cruciferae): Seed glucosinolate characters. *Amer. J. Bot.* 67: 1145-1159.

ssp. **maritima** [FNA7, HC2]

Fl. Carniol. ed. 2. 2: 35.  
European sea rocket

**Camelina** [FNA7, HC, HC2]

Stirp. Austr. Fasc. 1: 17. 1762.  
falseflax

**Camelina microcarpa** Andr. ex DC. [FNA7, HC, HC2]

Syst. Nat. 2: 517. 1821.  
hairy false flax, littlepod false flax

*Camelina sativa* (L.) Crantz ssp. *microcarpa* (Andr. ex DC.) Em. Schmid

**Camelina sativa** (L.) Crantz [FNA7, HC, HC2]

Stirp. Austr. Fasc. 1: 17. 1762.  
false flax, gold-of-pleasure

*Camelina sativa* (L.) Crantz ssp. *sativa* [KZ99]

Reported from western Washington by Abrams. FNA7 does not include WA within the known distribution of this species in North America. Until specimens are located indicating otherwise, this species is considered excluded in WA. FNA7: "R. L. McGregor (1985) indicated that *Camelina sativa* is no longer established in North America; we tend to agree because we have not seen any collections made within the past 40 years."

**Capsella** [FNA7, HC, HC2]

Pfl.-Gatt. 85. 1792.  
[name conserved]  
shepherd's-purse

**Capsella bursa-pastoris** (L.) Medik. [FNA7, HC, HC2]

Pfl.-Gatt. 85. 1792.  
shepherd's-purse

*Capsella rubella* Reut.

FNA7: "According to M. Coquillat (1951), *Capsella bursa-pastoris* is the second most common weed on earth, after *Polygonum aviculare*."

\* Coquillat, M. 1951. Sur les plantes les plus communes à la surface du globe. Bull. Mens. Soc. Linn. Lyon 20: 165-170.

***Cardamine* [FNA7, HC, HC2]**

Sp. Pl. 2: 654. 1753; Gen. Pl. ed. 5, 295. 1754.  
bittercress, toothwort

***Cardamine angulata* Hook. [FNA7, HC, HC2]**

Fl. Bor.-Amer. 1: 44. 1829.  
angled bittercress, seaside bittercress

*Cardamine angulata* Hook. var. *alba* Torr. & A. Gray  
*Cardamine angulata* Hook. var. *hirsuta* O.E. Schulz  
*Cardamine angulata* Hook. var. *pentaphylla* O.E. Schulz  
*Dentaria grandiflora* Raf.

***Cardamine bellidifolia* L. [FNA7, HC, HC2]**

Sp. Pl. 2: 654. 1753.  
alpine bittercress

*Cardamine bellidifolia* L. var. *bellidifolia* [HC]  
*Cardamine bellidifolia* L. var. *pachyphylla* Coville & Leiberg [HC]

***Cardamine breweri* S. Watson [FNA7, HC, HC2]**

Proc. Amer. Acad. Arts. 10: 339. 1875.  
Brewer's bittercress, round bittercress

*Cardamine breweri* S. Watson var. *breweri* [HC]  
*Cardamine breweri* S. Watson var. *leibergii* (Holz.) C.L. Hitchc. [HC]  
*Cardamine breweri* S. Watson var. *orbicularis* (Greene) Detling [HC]  
*Cardamine breweri* S. Watson var. *oregana* (Piper) Detling  
*Cardamine callosicrenata* Piper  
*Cardamine foliacea* Greene  
*Cardamine oregana* Piper

***Cardamine cordifolia* A. Gray [FNA7, HC, HC2]**

Mem. Amer. Acad. Arts, n. s. 4: 8. 1849.  
heart-leaved bittercress, large mountain bittercress, Lyall's bittercress

*Cardamine cordifolia* A. Gray var. *cordifolia* [HC]  
*Cardamine cordifolia* A. Gray var. *lyallii* (S. Watson) A. Nelson & J.F. Macbr. [HC]  
*Cardamine lyallii* S. Watson

FNA7: "*Cardamine cordifolia* is highly variable in leaf morphology, especially in leaf width, depth of the cordate base, and indumentum. This variation occurs throughout the species range and is rather weakly or not at all correlated with geography. In the absence of a detailed biosystematic study over the entire species range, we follow N. H. Holmgren (2005b) in not recognizing any infraspecific taxa, instead of accepting the three rather poorly defined varieties recognized by R. C. Rollins (1993)."

***Cardamine corymbosa* Hook. f. [HC2]**

New Zealand bittercress

A greenhouse and landscaping weed, known from recent collections in Jefferson and King Counties.

***Cardamine flexuosa* With. [FNA7, HC2]**

Arr. Brit. Pl. ed. 3. 3: 578. 1796.  
wavy bittercress

*Cardamine flexuosa* With. ssp. *debilis* O.E. Schulz  
*Cardamine flexuosa* With. var. *debilis* (O.E. Schulz) T.Y. Cheo & R.C. Fang  
*Cardamine hirsuta* L. ssp. *flexuosa* (With.) F.B. Forbes & Hemsl.  
*Cardamine scutata* Thunb. ssp. *flexuosa* (With.) H. Hara

Easily mistaken for native *C. pensylvanica*. FNA7: "According to J. Lihová et al. (2006), the populations referred to *Cardamine flexuosa* in North America comprise two taxa of different polyploid origins and evolutionary histories: tetraploid *C. flexuosa* (2n = 32), native to Europe, and the octoploid taxon informally called "Asian *C. flexuosa*" (2n = 64), native to eastern Asia. For the latter, the name *C. flexuosa* subsp. *debilis* can be used. Nevertheless, these two taxa should be recognized at species level and the correct name for the Asian species should be sought. Based on available data, both taxa occupy the same habitats in North America, but the Asian taxon is much more widespread. The occurrence of European *C. flexuosa* was, until now, confirmed only for Washington, where both taxa have been recorded. More detailed studies of the North American distributions of both these weeds are needed."

*Cardamine hirsuta* L. [FNA7, HC2]

Sp. Pl. 2: 655. 1753.  
hairy bittercress

Common weed in lowland western Washington, easily mistaken for native *C. oligosperma*.

*Cardamine nuttallii* Greene [FNA7, HC2]

Bull. Calif. Acad. Sci. 2: 389. 1887.  
beautiful bittercress, beautiful bittercress, Nuttall's toothwort, slender toothwort

*Cardamine nuttallii* Greene var. *covilleana* (O.E. Schulz) Rollins  
*Cardamine nuttallii* Greene var. *dissecta* (O.E. Schulz) Rollins  
*Cardamine nuttallii* Greene var. *gemmata* (Greene) Rollins [KZ99]  
*Cardamine nuttallii* Greene var. *nuttallii* [Rollins 1993a]  
*Cardamine pulcherrima* Greene [HC]  
*Cardamine pulcherrima* Greene var. *pulcherrima* [HC]  
*Cardamine pulcherrima* Greene var. *tenella* (Pursh) C.L. Hitchc. [HC]  
*Cardamine quercetorum* Howell  
*Dentaria tenella* Pursh var. *pulcherrima* (Greene) Detling [Peck]

FNA7: "The infraspecific taxonomy of *Cardamine nuttallii* has been based almost entirely on the division and margin of rhizomal leaves. The treatments by O. E. Schulz (1903), L. E. Detling (1937), and R. C. Rollins (1993), though utilizing the same characters, varied considerably, especially in the application of names to varieties. The absence of rhizomal leaves on most specimens makes varietal determination an almost impossible task. Furthermore, leaf morphology is so highly variable that it is not useful for formally recognizing some of the other variants in the species. We therefore prefer to not subdivide the species."

- \* Detling, L. E. 1936. The genus *Dentaria* in the Pacific states. *American Journal of Botany* 23: 570-576.
- \* Detling, L. E. 1937. The Pacific coast species of *Cardamine*. *American Journal of Botany* 24: 70-76.
- \* Rollins 1993a = Rollins, R. C. 1993a. *The Cruciferae of Continental North America*. Stanford Univ. Press, Stanford, CA. 976 p.

*Cardamine occidentalis* (S. Watson) Howell [FNA7, HC, HC2]

Fl. N.W. Amer. 50. 1897.  
western bittercress

*Cardamine neglecta* Greene  
*Cardamine pratensis* L. ssp. *occidentalis* S. Watson

Washington reports and specimens (WTU) called *Cardamine penduliflora* appear to be *Cardamine occidentalis*. They lack the diagnostic long petals and prolonged fruit beak of *C. penduliflora*, a western Oregon endemic.

*Cardamine occulta* Hornem. [HC2]

wood bittercress

Recently established in landscaping in King County, WA. Also known from Vancouver, BC, and as a greenhouse weed in Corvallis, OR. Often confused with or synonymized under *C. flexuosa*, a polyploid native to western Asia derived from *C. amara* x *C. hirsuta*. By contrast, *C. occulta* is apparently a polyploid derived from *C. amara* x *C. parviflora* and a third unknown species. The name *Cardamine debilis* has been misapplied to *C. occulta* in North America.

*Cardamine oligosperma* Nutt. [FNA7, HC, HC2]

Fl. N. Amer. 1: 85. 1838.

few-seeded bittercress, little western bittercress  
(see also *Cardamine umbellata*)

*Cardamine oligosperma* Nutt. var. *oligosperma* [HC]

This is the low-elevation form, vastly outnumbered by *C. hirsuta* in western Washington.

***Cardamine penduliflora* O.E. Schulz [FNA7, HC, HC2]**

Bot. Jahrb. Syst. 32: 538. 1903.

Willamette Valley bittercress

(see also *Cardamine occidentalis*)

WTU specimens originally identified as *Cardamine penduliflora* have been examined and determined to be *Cardamine occidentalis*. These specimens lack the diagnostic long petals and prolonged fruit beak of *C. penduliflora*, a Willamette Valley, Oregon endemic. Duplicate specimens of those at WTU are at WS but have not been annotated as of June, 2013.

***Cardamine pensylvanica* Muhl. ex Willd. [FNA7, HC, HC2]**

Sp. Pl. 3: 486. 1801.

Pennsylvania bittercress, quaker bittercress

*Cardamine flexuosa* With. ssp. *pensylvanica* (Muhl. ex Willd.) O.E. Schulz

*Cardamine hirsuta* L. var. *pensylvanica* (Muhl. ex Willd.) P.W. Graff

*Dracamine pensylvanica* (Muhl. ex Willd.) Nieuwl.

***Cardamine pratensis* L. [FNA7, HC2]**

Sp. Pl. 2: 656. 1753.

cuckoo flower, cuckooflower

*Cardamine pratensis* L. var. *pratensis* [Rollins 1993a]

FNA7: "The taxonomy of *Cardamine pratensis* in North America requires further detailed study. Most, if not all, populations of this species were introduced from Europe. Some specimens resemble the European *C. dentata* Schultes (high polyploid, characterized by all leaves, including distalmost, pinnate with petiolate and sometimes deciduous leaflets) and these populations might be native."

\* **<b>IFBC2</b>** = Douglas, G. W., G. B. Straley, D. V. Meidinger, and J. Pojar (eds). 1998. Illustrated Flora of British Columbia, Volume 2: Dicotyledons (Balsaminaceae Through Cucurbitaceae). B.C. Ministry of Environment, Lands & Parks and B.C. Ministry of Forests. Victoria. 401 p.

\* **<b>Rollins 1993a</b>** = Rollins, R. C. 1993a. The Cruciferae of Continental North America. Stanford Univ. Press, Stanford, CA. 976 p.

***Cardamine umbellata* Greene [FNA7, HC2]**

Pittonia. 3: 154. 1897.

Siberian bittercress, umbellate bittercress

*Cardamine oligosperma* Nutt. var. *kamtschatica* (Regel) Detling [HC]

FNA7: "Recent molecular data (J. Lihová et al. 2006) indicate that *Cardamine umbellata*, often treated as a variety of *C. oligosperma*, represents a distinct lineage more closely related to taxa from New Zealand; this does not exclude *C. oligosperma* as one of the possible parents of this polyploid."

\* Lihová, J., K. Marhold, H. Kudoh, and M. Koch. 2006. Worldwide phylogeny and biogeography of *Cardamine flexuosa* (Brassicaceae) and its relatives. Amer. J. Bot. 93: 1206-1221.

***Caulanthus* [FNA7, HC, HC2]**

Botany (Fortieth Parallel). 27, plate 3. 1871.

wild cabbage, caulanthus

***Caulanthus lasiophyllus* (Hook. & Arn.) Payson [FNA7, HC2]**

Ann. Missouri Bot. Gard. 9: 303. 1923.

California mustard, cutleaf thelypody, coast range western-cabbage

*Caulanthus lasiophyllus* (Hook. & Arn.) Payson var. *lasiophyllus* [Rollins 1993a]

*Guillenia lasiophylla* (Hook. & Arn.) Greene [JPM]

*Thelypodium lasiophyllum* (Hook. & Arn.) Greene [HC]

*Thelypodium lasiophyllum* (Hook. & Arn.) Greene var. *inalienum* B.L. Rob. [Abrams]

*Thelypodium lasiophyllum* (Hook. & Arn.) Greene var. *utahense* (Rydb.) Jeps. [Abrams]

FNA7: "Caulanthus lasiophyllus is highly variable in flower size, leaf morphology, fruit morphology (length, width, curvature, presence or absence of indumentum) and orientation, number of ovules per ovary, and plant height. This species is badly in need of thorough studies at both populational and molecular levels, and it is very likely that some varieties recognized by E. B. Payson (1923), such as var. *rigidus*, may well represent distinct species or subspecies." Last collections made in Washington in the 1940s, are held at PSM, and need verification.

***Chorispora*** [FNA7, HC, HC2]

Mém. Mus. Hist. Nat. 7: 237. 1821.

[name conserved]

chorispora, blue mustard

***Chorispora tenella*** (Pall.) DC. [FNA7, HC, HC2]

Syst. Nat. 2: 435. 1821.

crossflower, blue mustard

*Chorisporum tenellum* (Pall.) R. Br.

*Raphanus tenellus* Pall.

***Cochlearia*** [FNA7, HC, HC2]

Sp. Pl. 2: 647. 1753; Gen. Pl. ed. 5, 292. 1754.

scurvygrass, spoonwort

***Cochlearia groenlandica*** L. [FNA7, HC2]

Sp. Pl. 2: 647. 1753.

scurvy-grass, Danish scurvygrass, spoonwort

*Cochlearia arctica* Schltld. ex DC.

*Cochlearia fenestrata* R. Br.

*Cochlearia officinalis* L. [HC], misapplied

*Cochlearia officinalis* L. ssp. *oblongifolia* (DC.) Hultén [VPPNW2]

*Cochlearia officinalis* L. var. *arctica* (D.F.K. Schltld. ex DC.) Gelert

FNA7: "R. C. Rollins (1993) treated the North American plants with  $2n = 14$  as members of *Cochlearia officinalis*. That species is a strictly European tetraploid with  $2n = 24$ . In our opinion, plants of the arctic and subarctic *C. groenlandica* complex represent an evolutionary lineage with  $x = 7$ , which is entirely distinct from that including the European *C. officinalis* and its relatives with  $x = 6$ . The systematic relationships of the  $x = 7$  group to the  $2n = 14$  Icelandic plants of the *C. pyrenaica* complex are still unresolved. The North American plants are extremely variable in flower size, petal shape, and fruit shape and size. They are much in need of detailed cytological, morphological, and molecular studies. *Cochlearia groenlandica* is known in California from nesting areas on off-shore rocks in Del Norte County; in Oregon it occurs on ocean bluffs in Coos and Curry counties (A. Liston, pers. comm.). It appears to be naturally occurring in both states."

***Conringia*** [FNA7, HC, HC2]

Enum. 160. 1759.

hare's-ear mustard

***Conringia orientalis*** (L.) Dumort. [FNA7, HC, HC2]

Fl. Belg. 123. 1827.

hare's-ear mustard, treacle mustard

***Cusickiella*** [FNA7, HC2]

J. Jap. Bot. 63: 68. 1988.

cusickiella

***Cusickiella douglasii*** (A. Gray) Rollins [FNA7, HC2]

J. Jap. Bot. 63: 69. 1988.

alkali false whitlow-grass, Douglas' whitlow-grass

*Draba douglasii* A. Gray [HC]

Difficult to distinguish from *Draba*.

***Descurainia*** [FNA7, HC, HC2]

Hist. Nat. Îles Canaries. 3(2,3): 72. 1836.

[name conserved]

tansymustard

***Descurainia incana*** (Bernh. ex Fisch. & C.A. Mey.) Dorn [FNA7, HC2, JPM]

Vasc. Pl. Wyoming. 296. 1988.

mountain tansymustard

(see also *Descurainia incisa*)

*Descurainia richardsonii* O.E. Schulz [HC]

*Descurainia richardsonii* O.E. Schulz var. *macrosperma* O.E. Schulz [HC]

*Descurainia richardsonii* O.E. Schulz var. *richardsonii* [HC]

***Descurainia incisa*** (Engelm. ex A. Gray) Britton [FNA7, HC2]

Mem. Torrey Bot. Club. 5: 173. 1894.

ssp. ***incisa*** [FNA7, HC2]

Mem. Torrey Bot. Club. 5: 173

cut-leaved tansymustard

*Descurainia incana* (Bernh. ex Fisch. & C.A. Mey.) Dorn ssp. *incisa* (Engelm. ex A. Gray) Kartesz & Gandhi [KZ99]

*Descurainia incana* (Bernh. ex Fisch. & C.A. Mey.) Dorn ssp. *viscosa* (Rydb.) Kartesz & Gandhi [KZ99]

*Descurainia incisa* (Engelm. ex A. Gray) Britton ssp. *viscosa* (Rydb.) Rollins

*Descurainia richardsonii* O.E. Schulz ssp. *incisa* (Engelm. ex A. Gray) Detling [Abrams]

*Descurainia richardsonii* O.E. Schulz ssp. *viscosa* (Rydb.) Detling [Peck]

*Descurainia richardsonii* O.E. Schulz var. *sonnei* (B.L. Rob.) C.L. Hitchc. [HC]

*Descurainia richardsonii* O.E. Schulz var. *viscosa* (Rydb.) M. Peck [HC]

Here we follow the treatment in FNA that recognizes two subspecies - *incisa* and *paysonii*, the latter of which is out of our area. FNA authors describe *D. incisa* as being highly variable in almost all features, likely the result of hybridization with other members of the genus with which it shares a common range.

***Descurainia longepedicellata*** (E. Fourn.) O.E. Schulz [FNA7, HC2]

Pflanzenr. 86[IV,105]: 324. 1924. (as *longepedicellata*).

mountain tansymustard, narrow tansymustard, sticky tansymustard

*Descurainia incisa* (Engelm. ex A. Gray) Britton ssp. *filipes* (A. Gray) Rollins [Rollins 1993a]

*Descurainia pinnata* (Walter) Britton ssp. *filipes* (A. Gray) Detling [KZ99]

*Descurainia pinnata* Britton var. *filipes* (A. Gray) M. Peck [HC]

FNA7: " L. E. Detling (1939) treated *Descurainia longepedicellata* as subsp. *filipes* of *D. pinnata*, whereas R. C. Rollins (1993) and N. H. Holmgren (2005b) treated it as a subspecies and variety, respectively, of *D. incisa*. Molecular data, both nuclear and plastidic (B. E. Goodson 2007), place the three taxa in different, well-supported clades. R. C. Rollins (1993) and N. H. Holmgren (2005b) reported  $2n = 28$  and  $42$  for *Descurainia longepedicellata* (as *D. pinnata* var. *filipes*), but these counts are not vouchered. Rollins indicated that the taxon range extends into California and New Mexico; we have not seen material from those states. *Descurainia longepedicellata* resembles *D. incisa* subsp. *paysonii* in having long fruiting pedicels and linear leaf lobes with entire margins. The latter is easily distinguished by being canescent (versus not canescent) and having fruits strongly curved inward (versus straight). Because the two taxa are not closely related (B. E. Goodson 2007), the similarities in fruiting pedicels and distalmost leaf segments represent convergence."

***Descurainia nelsonii*** (Rydb.) Al-Shehbaz & Goodson [FNA7, HC2]

Harvard Pap. Bot. 12: 422. 2007.

Nelson's tansymustard, sagebrush tansymustard

*Descurainia pinnata* (Walter) Britton ssp. *nelsonii* (Rydb.) Detling [Rollins 1993a]

*Descurainia pinnata* Britton var. *nelsonii* (Rydb.) M. Peck [HC]

FNA7: " *Descurainia nelsonii* was treated by L. E. Detling (1939) and R. C. Rollins (1993) as a subspecies

of *D. pinnata*, but the latter in the sense of these authors is not monophyletic, comprising instead either four or two unrelated species, respectively. ITS molecular data (B. E. Goodson 2007) suggest that *D. nelsonii* is most closely related to *D. longepedicellata* and *D. paradisa*. It can be distinguished from the latter species by its linear fruits with cuneate tips; *D. paradisa* has obovoid fruits with rounded tips. *Descurainia nelsonii* resembles *D. pinnata* subsp. *brachycarpa* in the orientation of fruiting pedicels and in having short styles (to 0.3 mm) and small seeds (to 1 × 0.5 mm). It differs in being branched (versus simple) at base and in having smaller flowers (petals 0.7-1 versus 1.5-2.6 mm), fewer ovules (6-12 versus 16-40) per ovary, linear (versus subclavate) fruits, and uniseriate (versus biseriate) seeds."

***Descurainia pinnata*** (Walter) Britton [FNA7, HC, HC2]

Mem. Torrey Bot. Club. 5: 173. 1894.

western tansymustard

(see also *Descurainia longepedicellata*, *Descurainia nelsonii*)

ssp. ***brachycarpa*** (Richardson) Detling [FNA7, HC2]

Amer. Midl. Naturalist. 22: 509. 1939.

shortpod tansymustard, western tansymustard

*Descurainia brachycarpa* (Richardson) O.E. Schulz

*Descurainia pinnata* Britton var. *brachycarpa* (Richardson) Fernald [HC]

*Descurainia pinnata* Britton var. *intermedia* (Rydb.) C.L. Hitchc. [HC]

We are tentatively following the taxonomy of Rollins (1993b) in *Descurainia*, although many of the infraspecific taxa are poorly defined and controversial.

***Descurainia sophia*** (L.) Webb ex Prantl [FNA7, HC, HC2]

Nat. Pflanzenfam. 55(III,2): 192. 1891.

flixweed

Rollins (1993b) treats this authorship as Webb in Engler & Prantl, here we follow the authorship Webb ex Prantl as does Stace (1997) and Wisskirchen & Haeupler (1998)

\* Wisskirchen, R., and H. Haeupler, Eds. 1998. Standardliste der Farn- und Blütenpflanzen Deutschlands (mit Chromosomenatlas von Focke Albers). Verlag Eugen Ulmer, Stuttgart, Germany. 766 p. [A synonymized list of ferns and flowering plants of Germany, with chromosome atlas by F Albers; in German]

***Diplotaxis*** [FNA7, HC, HC2]

Mém. Mus. Hist. Nat. 7: 243. 1821.

wall rocket

***Diplotaxis tenuifolia*** (L.) DC. [FNA7, HC2]

Syst. Nat. 2: 632. 1821.

slimleaf wall rocket

***Draba*** [FNA7, HC, HC2]

Sp. Pl. 2: 642. 1753; Gen. Pl. ed. 5, 291. 1754.

draba, whitlow-grass, whitlow-wort

(see also *Cusickiella*)

***Draba albertina*** Greene [FNA7, HC2]

Pittonia. 4: 312. 1901.

Alaska draba, slender whitlow-grass

*Draba crassifolia* Graham var. *albertina* (Greene) O.E. Schulz

*Draba crassifolia* Graham var. *nevadensis* C.L. Hitchc.

*Draba stenoloba* Ledeb. var. *nana* (O.E. Schulz) C.L. Hitchc. [HC]

***Draba aurea*** Vahl ex Hornem. [FNA7, HC, HC2]

Fors. Oecon. Plantel. ed. 2. 599. 1806.

golden draba whitlow-grass

*Draba aurea* Vahl ex Hornem. var. *aurea* [VPPNW2]

*Draba aurea* Vahl ex Hornem. var. *aureiformis* (Rydb.) O.E. Schulz

*Draba aurea* Vahl ex Hornem. var. *leiocarpa* (Payson & H. St. John) C.L. Hitchc. [VPPNW2]

FNA7: "Draba aurea is extremely variable in plant size, number of cauline leaves, number of bracteate

flowers, style length, and fruit size, shape, orientation, twisting, and indumentum. Much of the variation in the number of bracts, style length, fruit twisting, and growth habit occurs in Greenland, where the type specimen was collected and where the species is found near sea level. The highly deviant chromosome counts (e.g.,  $2n = 40 + 1$ , 64, 82) listed by R. C. Rollins (1993) and S. I. Warwick and I. A. Al-Shehbaz (2006) are mostly unvouchered and have to be disregarded; counts of  $2n = \text{ca. } 80$  have been re-assigned to *Draba glabella*. Published (G. A. Mulligan 2002) and unpublished counts made by Mulligan and M. D. Windham from Alaska, British Columbia, Colorado, Quebec, Utah, and Yukon indicate that the most common chromosome number of *D. aurea* is  $2n = 74$  (or 72). This suggests that the species is an allopolyploid (hexaploid or higher), incorporating genomes from both euploid and aneuploid lineages (M. A. Beilstein and Windham 2003). Detailed cytological and molecular studies are much needed to fully understand this widely distributed and highly variable species."

***Draba aureola* S. Watson [FNA7, HC, HC2]**

Bot. California. 2: 430. 1880.

alpine whitlow-grass, great alpine whitlow-grass, Mt. Lassen draba whitlow-grass

*Draba aureola* S. Watson var. *paniculata* L.F. Hend.

***Draba borealis* DC. [FNA7, HC2, Rollins 1993a]**

Syst. Nat. 2: 342. 1821.

boreal whitlow-grass, northern whitlow-grass

Reported by Naas et al. (1990) from the North Cascades. However, not to be expected in WA based on range description in Rollins, 1993. FNA7: "*Draba borealis* is highly variable in leaf and stem indumentum, leaf shape and margin, number of cauline leaves, and fruit shape, size, and twisting. North American plants yielded decaploid chromosome counts; octoploid populations were reported from the Russian Far East. This suggests that more than one taxon is present, and the species is much in need of detailed molecular, cytogenetic, and morphological study. In the absence of flowers, *Draba borealis* is occasionally confused with some forms of *D. aurea*. The latter usually has proximally bracteate (versus ebracteate) racemes, generally longer styles [0.5-1.5 (-1.7) versus 0.2-0.6(-0.8) mm], and more ovules [28-38(-44) versus 16-28(-30)] per ovary. *Draba borealis* occasionally is confused with *D. glabella*, but the latter has pectinate-stellate trichomes on abaxial leaf blade surfaces. R. C. Rollins (1993) indicated that *D. borealis* occurs in Colorado, but we have not seen any material from the United States outside of Alaska."

***Draba cana* Rydb. [FNA7, HC2]**

Bull. Torrey Bot. Club. 29: 241. 1902.

lance-leaved draba

*Draba breweri* S. Watson var. *cana* (Rydb.) Rollins

*Draba lanceolata* Royle [HC], misapplied

Listed in FNA7 as occurring in WA but no specimens from WA currently known. FNA7: "The limits of *Draba cana* have long been confused, and the species was treated as a synonym of the Himalayan *D. lanceolata* Royle (M. L. Fernald 1934; C. L. Hitchcock 1941) or as a variety of the western North American *D. breweri* (R. C. Rollins 1993). However, G. A. Mulligan (1971) clearly demonstrated that all three are distinct and should be maintained."

***Draba crassifolia* Graham [FNA7, HC, HC2]**

Edinburgh New Philos. J. 7: 182. 1829.

Rocky Mountain draba, thick-leaved draba, snowbed whitlow-grass

*Draba crassifolia* Graham var. *parryi* (Rydb.) O.E. Schulz

*Draba parryi* Rydb.

FNA7: "M. D. Windham (2004) presented morphological and chromosomal data suggesting that *Draba crassifolia* is an allopolyploid produced by hybridization between *D. albertina* and *D. fladnizensis*. Although the species is distinctive in large part, some individuals can be difficult to place and there is evidence of rare backcrossing (Windham, unpubl.)."

***Draba densifolia* Nutt. [FNA7, HC, HC2]**

Fl. N. Amer. 1: 104. 1838.

Nuttall's draba, dense-leaf whitlow-grass

*Draba caeruleomontana* Payson & H. St. John [Abrams]

*Draba caeruleomontana* Payson & H. St. John var. *piperi* Payson & H. St. John

*Draba nelsonii* J.F. Macbr. & Payson [Abrams]  
*Draba pectinata* (S. Watson) Rydb.  
*Draba sphaerula* J.F. Macbr. & Payson [Abrams]

***Draba incerta* Payson [FNA7, HC, HC2]**

Amer. J. Bot. 4: 261. 1917.  
whitlow-wort, Yellowstone draba whitlow-wort

*Draba exalata* E. Ekman  
*Draba incerta* Payson var. *incerta* [Rollins 1993a]  
*Draba incerta* Payson var. *laevicapsula* (Payson) Payson & H. St. John  
*Draba incerta* Payson var. *peasei* (Fernald) Rollins  
*Draba laevicapsula* Payson  
*Draba peasei* Fernald

***Draba juvenilis* Kom. [FNA7, HC2]**

Repert. Spec. Nov. Regni Veg. 13: 167. 1914.  
long-stalk whitlow-grass

*Draba longipes* Raup [Rollins 1993a]

Reported as disjunct in Olympic Mountains (Buckingham et al. 1995). Should check herbarium at OLYM to see whether a specimen exists. However, Rollins (1993) does not include WA within the range of this species, nor does FNA7 (2010). This species is considered excluded from Washington until specimens are located to demonstrate otherwise. FNA7: "Although *Draba kananaskis* and *D. longipes* have often been treated as distinct species, we find no basis for maintaining them. Both exhibit variations in petal color (white to pale yellow) and leaf trichomes (short-stalked to sessile) characteristic of *D. juvenilis* from the Russian Far East. Perhaps most importantly, all three are octoploids ( $2n = 64$ ) with  $x = 8$ . We conclude that *D. kananaskis* is nothing more than a minor variant of *D. juvenilis* and it is treated herein, for the first time, as a synonym of that species. *Draba juvenilis* is occasionally confused with *D. borealis*, which also has stalked, cruciform trichomes with unbranched rays. Typical *D. juvenilis* is easily distinguished from that species by having narrower (2-3 mm) fruits that are glabrous (rarely pubescent) and untwisted, and 0-2 (or 3)-leaved stems. By contrast, *D. borealis* has wider (2.5-4.5 mm) fruits that are usually pubescent and/or twisted (rarely neither) and (2 or) 3-7(-12)-leaved stems."

***Draba lonchocarpa* Rydb. [FNA7, HC, HC2]**

Mem. New York Bot. Gard. 1: 181. 1900.  
lancefruit draba, lancefruit draba whitlow-wort

*Draba lonchocarpa* Rydb. var. *denudata* O.E. Schulz  
*Draba lonchocarpa* Rydb. var. *exigua* O.E. Schulz [HC]  
*Draba lonchocarpa* Rydb. var. *lonchocarpa* [HC, Rollins 1993a]  
*Draba lonchocarpa* Rydb. var. *semitonsa* Payson & H. St. John  
*Draba lonchocarpa* Rydb. var. *vestita* O.E. Schulz  
*Draba nivalis* Lilj. ssp. *lonchocarpa* (Rydb.) Hultén  
*Draba nivalis* Lilj. var. *denudata* (O.E. Schulz) C.L. Hitchc.  
*Draba nivalis* Lilj. var. *elongata* S. Watson [Peck]  
*Draba nivalis* Lilj. var. *exigua* (O.E. Schulz) C.L. Hitchc.

FNA7: "*Draba lonchocarpa* is a highly variable species within which O. E. Schulz (1927), G. A. Mulligan (1974), and R. C. Rollins (1993) recognized three to five varieties. By contrast, C. L. Hitchcock (1941) united it with *D. nivalis* and recognized six varieties (see 68. *D. nivalis* for differences). Some of the infraspecific taxa of *D. lonchocarpa* are based on trivial characteristics and are listed in the synonymy above without further comment. The most problematic are briefly discussed below. Authors recognizing var. *vestita* claim that it differs from var. *lonchocarpa* by having pubescent (versus glabrous) stems and pedicels, 1- or 2-leaved (versus 0 or 1-leaved) scapes, and fruits appressed (versus not appressed) to the rachises. These characteristics do not appear to be strongly correlated. A case in point is the holotype sheet of var. *semitonsa*, which includes plants with puberulent or glabrous fruits, as well as with pubescent and glabrous stems that are 0-4-leaved. Leafless and densely pubescent scapes are found in Trelease 3913 (MO), whereas completely glabrous, 0-2-leaved stems, and fully appressed fruits are found in Calder 5617a (DAO). Other exceptions can be cited, though the vast majority of the plants examined have leafless, glabrous scapes. An examination of the type collections of var. *thompsonii*, Thompson 9512 (holotype, UC; isotypes, DS, GH, MO, NY, RSA, US), clearly shows that the taxon usually has oblong to

lanceolate fruits 2-3.2 mm wide, as opposed to linear fruits less than 2 mm wide in var. *lonchocarpa*. Indeed, a casual observation would immediately justify the recognition of var. *thompsonii*. Both fruit types can be found in plants of the same population (e.g., the RSA isotype) or even on the same plant (e.g., Thompson 10816, MO). Furthermore, fruits to 2.5 mm wide occur sporadically in various parts of the species range. For these reasons, and in the absence of a comprehensive study of the species, we choose to not recognize var. *thompsonii* at present."

***Draba nemorosa* L. [FNA7, HC, HC2]**

Sp. Pl. 2: 643. 1753.  
woods draba, woodland whitlow-grass

*Draba dictyota* Greene  
*Draba nemoralis* Ehrh.  
*Draba nemorosa* L. var. *leiocarpa* Lindblom  
*Tomostima nemorosa* (L.) Lunell

***Draba novolympica* Payson & H. St. John [FNA7, HC2]**

Proc. Biol. Soc. Wash. 43: 113. 1930.  
draba, Payson's whitlow-grass draba

*Draba paysonii* J.F. Macbr. var. *treleasei* (O.E. Schulz) C.L. Hitchc. [HC]

FNA7: "*Draba novolympica* is the same taxon that C. L. Hitchcock (1941) and R. C. Rollins (1993) called *D. paysonii* var. *treleasei*, and G. A. Mulligan (2002) called *D. paysonii*. The two are amply distinct and should be recognized as separate species. *Draba novolympica* is easily distinguished from *D. paysonii* by having fruit valves pubescent with 2-6-rayed (occasionally some simple) trichomes 0.05-0.4 mm, sepals 1.5-2.5 mm, petals 2-3.5(-4) × 1.5-2 mm, fruits (2.5-)3-4(-5) × 1.5-3.5 mm, styles 0.2-0.6(-0.8) mm, and ovules 1.2-1.8 × 0.8-1.1 mm. By contrast, *D. paysonii* has fruit valves pubescent with simple and 2-rayed (some 4- or 5-rayed) trichomes (0.2-)0.4-1 mm, sepals 2.8-3.5 mm, petals (4-)5-6 × (1.5-)2-3 mm, fruits (5-)6-9 × (3-)3.5-5 mm, styles (0.6-)0.8-1.2 mm, and ovules 1.7-2.2 × 1-1.4 mm. Both R. C. Rollins (1993) and N. H. Holmgren (2005b) indicated that *Draba novolympica* (as *D. paysonii* var. *treleasei*) occurs in Alaska and Yukon, but we have not seen any material from there, and it is likely that their records were based on misidentified plants. Previous reports of *D. paysonii* from Canada (e.g., G. A. Mulligan 1971b) pertain instead to *D. novolympica*."

***Draba oligosperma* Hook. [FNA7, HC, HC2]**

Fl. Bor.-Amer. 1: 51. 1830.  
few-seeded draba whitlow-grass

*Draba oligosperma* Hook. var. *andina* Nutt.  
*Draba oligosperma* Hook. var. *microcarpa* Blank.  
*Draba oligosperma* Hook. var. *oligosperma* [HC]  
*Draba subsessilis* S. Watson [Abrams]

Rollins (1993): This species reproduces by agamospermy, which largely explains morphological variation among populations. Historically such variation received sub-specific ranking, but it seems best to leave the deviants undesignated taxonomically. FNA7: "*Draba oligosperma* is a highly variable and widespread species that has been shown to be apomictic (G. A. Mulligan and J. N. Findlay 1970; Mulligan 1972). It has been divided into species and infraspecific taxa by previous authors; the variation is continuous in every character; there are no clear geographical and morphological patterns that support its division. For characteristics separating *D. oligosperma* from the closely related *D. pectinipila*, see 80. *D. pectinipila*. *Draba andina* (Nuttall) A. Nelson (1899), not Philippi (1858) is an illegitimate name, sometimes found in synonymy under *D. oligosperma*."

***Draba platycarpa* Torr. & A. Gray [FNA7, HC2]**

Fl. N. Amer. 1: 108. 1838.  
broad-pod whitlow-grass

*Draba cuneifolia* Nutt. ex Torr. & A. Gray var. *platycarpa* (Torr. & A. Gray) S. Watson [HC]  
*Draba viperensis* H. St. John

Abrams says the authority is Nuttall in Torrey & A. Gray. FNA7: "*Draba platycarpa* is occasionally treated as a variety of *D. cuneifolia*, but is amply distinct from that species (R. L. Hartman et al. 1975)."

***Draba praealta* Greene [FNA7, HC, HC2]**

Pittonia. 3: 306. 1898.  
draba, tall whitlow-grass draba

*Draba cascadiensis* Payson & H. St. John [Abrams]  
*Draba columbiana* Rydb.  
*Draba dolichopoda* O.E. Schulz  
*Draba lonchocarpa* Rydb. var. *daseycarpa* O.E. Schulz  
*Draba yellowstonensis* A. Nelson

***Draba reptans* (Lam.) Fernald [FNA7, HC, HC2]**

Rhodora. 36: 368. 1934.  
Carolina whitlow-grass

*Arabis reptans* Lam.  
*Draba reptans* (Lam.) Fernald ssp. *stellifera* (O.E. Schulz) Abrams [Abrams]  
*Draba reptans* (Lam.) Fernald var. *micrantha* (Nutt.) Fernald [Abrams]  
*Draba reptans* (Lam.) Fernald var. *reptans* [HC]  
*Draba reptans* (Lam.) Fernald var. *stellifera* (O.E. Schulz) C.L. Hitchc. [HC]  
*Tomostima caroliniana* (Walter) Raf.

FNA7: "Draba reptans is often confused with *D. cuneifolia*, but the two are easily separated. The rachises and pedicels of *D. reptans* are usually glabrous (rarely with a few isolated trichomes); those of *D. cuneifolia* are always densely pubescent. Interestingly, both species show parallel variations in chromosome number; it is currently unclear whether this variation is real or the result of misidentified specimens and/or erroneous counts."

***Draba ruaxes* Payson & H. St. John [FNA7, HC2]**

Proc. Biol. Soc. Wash. 43: 117. 1930.  
coast mountain whitlow-grass draba

*Draba ventosa* A. Gray var. *ruaxes* (Payson & H. St. John) C.L. Hitchc. [HC]

FNA7: "C. L. Hitchcock (1941) treated *Draba ruaxes* as a variety of *D. ventosa*; as demonstrated by G. A. Mulligan (1971b), the two are quite distinct. *Draba ruaxes* is an outcrossing hexaploid with well-formed anthers and pollen, and abundant, simple trichomes on leaves, stems, sepals, and fruits. By contrast, *D. ventosa* is an apomictic triploid with abortive anthers and/or pollen, and no simple trichomes anywhere on the plant."

***Draba stenoloba* Ledeb. [FNA7, HC, HC2]**

Fl. Ross. 1: 154. 1841.  
Alaska whitlow-grass  
(see also *Draba albertina*)

*Draba acinacis* H. St. John  
*Draba hirta* L. var. *siliquosa* Cham. & Schldl.  
*Draba nemorosa* L. var. *stenoloba* (Ledeb.) M.E. Jones [HC]  
*Draba stenoloba* Ledeb. var. *oligantha* (Greene) O.E. Schulz  
*Draba stenoloba* Ledeb. var. *stenoloba* [HC, Rollins 1993a]

FNA7: "Draba stenoloba is occasionally confused with *D. albertina*, but is easily recognized by having exclusively 2-4-rayed (versus mostly simple) trichomes on stems proximally. It is rarely encountered and apparently confined to the Pacific Northwest. In contrast, *D. albertina* is common and widespread in the mountains of western North America."

***Draba taylori* G.A. Mulligan & Al-Shehbaz [HC2], orthographic variant**

Taylor's draba

Occurrence in Washington based on 1933 collection of Fiker in Okanogan County.

***Draba thompsonii* (C.L. Hitchc.) G.A. Mulligan & Al-Shehbaz [HC2]**

Thompson's draba

*Draba lonchocarpa* Rydb. var. *thompsonii* (C.L. Hitchc.) Rollins [HC]  
*Draba nivalis* Lilj. var. *thompsonii* C.L. Hitchc.

***Draba verna* L. [FNA7, HC, HC2]**

Sp. Pl. 2: 642. 1753.

spring whitlow-grass

*Draba verna* L. var. *aestivalis* Lej. [Peck]

*Draba verna* L. var. *boerhaavii* H.C. Hall [HC]

*Draba verna* L. var. *verna* [HC]

*Erophila verna* (L.) DC. ssp. *spathulata* Walters

*Erophila verna* (L.) DC. var. *praecox* (Steven) Diklic [Stace 1997]

*Erophila verna* (L.) DC. var. *verna* [Stace 1997]

Autogamy and aneuploidy lead to establishment of many uniform and slightly differing populations, which Rollins (1993b) does not recognize taxonomically. FNA7: "Draba verna represents a highly variable and taxonomically difficult complex within which species, subspecies, varieties, and forms have been named (O. E. Schulz 1927); only those synonyms pertaining to North America are listed above. Most of the taxonomic difficulties are the results of dispoloidy, autogamy, and hybridization. The morphological extremes are connected by intermediate forms in every conceivable character. Furthermore, there appears to be no correlation between morphology, cytology, geography, and ecology to support the division of this complex into meaningful taxa. A complex cytological picture was presented by Ø. Winge (1940), including the highest count of  $2n = 94$ , which has not been confirmed by subsequent botanists. *Erophila vulgaris* de Candolle is an illegitimate name for *Draba verna*."

\* Wisskirchen, R., and H. Haeupler, Eds. 1998. Standardliste der Farn- und Blütenpflanzen Deutschlands (mit Chromosomenatlas von Focke Albers). Verlag Eugen Ulmer, Stuttgart, Germany. 766 p. [A synonymized list of ferns and flowering plants of Germany, with chromosome atlas by F Albers; in German]

### ***Eruca*** [FNA7, HC, HC2]

Gard. Dict. Abr., ed. 4. vol. 1. 1754.

garden-rocket, rocket-salad

*Eruca vesicaria* (L.) Cav. [FNA7, HC2]

Descr. Pl. 426. 1802.

ssp. *sativa* (Mill.) Thell. [FNA7, HC2]

Ill. Fl. Mitt.-Eur. 4: 201. 1918.

garden rocket

*Brassica eruca* L.

*Eruca sativa* Mill. [HC]

P. Miller coined *E. sativa* in 1754, preceeding Garsault's *E. sativa* in 1767. FNA7: "Subspecies *sativa*, widely naturalized and cultivated, was first introduced as a weed in North America in Flathead County, Montana, in 1898, with additional reports from 1900 to the 1920s as a seed contaminant of alfalfa fields in the United States. Subspecies *vesicaria* and *pinnatifida* (Desfontaines) Emberger & Maire are endemic to Spain and North Africa and have escaped from cultivation in Europe; they seem not to have become adventive in North America (R. C. Rollins 1993). Recent molecular studies by S. I. Warwick and L. D. Black (1993) support the treatment of subsp. *vesicaria* and its presumed derivative subsp. *sativa* as a single species; subsp. *pinnatifida* is maintained as *Eruca pinnatifida* (Desfontaines) Pomel. The earliest cultivation of subsp. *sativa* dates back to the ancient Romans and Greeks. It is currently grown in Europe and North America as a salad plant and in Asia for cooking oil and as food for animals. The oil is also used as an industrial lubricant and for cosmetic and medicinal purposes (I. A. Al-Shehbaz 1985). The seed cake and the entire plant are used as fodder for domestic animals. The oil is high in erucic acid and glucosinolates and is known to cause various skin allergies."

### ***Erucastrum*** [FNA7, HC, HC2]

Fl. Sicul. 92. 1826.

dog mustard

*Erucastrum gallicum* (Willd.) O.E. Schulz [FNA7, HC, HC2]

Bot. Jahrb. Syst. 54(Beibl. 119): 56. 1916.

dog mustard, hairy rocket

*Erucastrum pollichii* Schimp. & Spenner

*Sisymbrium gallicum* Willd.

FNA7: "A European native, *Erucastrum gallicum* was first recorded for North America from Massachusetts

and Wisconsin (see J. O. Luken et al. 1993 for history of introduction and spread). It is naturalized in all the provinces of Canada and in parts of the United States, particularly the Midwest. It is an allopolyploid, with the  $n = 7$  component from *Diplotaxis erucoides*/ *D. cossoniana* and  $n = 8$  from the *E. nasturtii* complex (S. I. Warwick and L. D. Black 1993). I have not seen specimens from Maryland."

***Erysimum*** [FNA7, HC, HC2]

Sp. Pl. 2: 660. 1753; Gen. Pl. ed. 5, 296. 1754.

wallflower

***Erysimum arenicola*** S. Watson [FNA7, HC, HC2]

Proc. Amer. Acad. Arts. 26: 124. 1891.

sand-dwelling wallflower

*Cheiranthus arenicola* (S. Watson) Greene

*Erysimum arenicola* S. Watson var. *arenicola* [HC]

*Erysimum arenicola* S. Watson var. *torulosum* (Piper) C.L. Hitchc. [HC]

*Erysimum torulosum* Piper

FNA7: "*Erysimum arenicola* is distributed at the higher elevations of northern Oregon northward into the Olympic and Cascade mountains in Washington and Vancouver Island. Both G. B. Rossbach (1958) and R. C. Rollins (1993) recognized *Erysimum arenicola* as a distinct species. It is closely related to *E. perenne* and both can be easily distinguished from *E. capitatum*, with which they hybridize where their ranges meet, by the strongly torulose (versus not torulose) fruits and the longer styles 1.5-5.5 versus 0.2-2.5(-3) mm."

***Erysimum capitatum*** (Douglas ex Hook.) Greene [FNA7, HC2, Peck]

Fl. Francisc. 269. 1891.

*Erysimum asperum* (Nutt.) DC. [FNA7, HC, HC2], misapplied

var. ***capitatum*** [FNA7, HC2]

Fl. Francisc. 2: 269-270.

prairie rocket, rough wallflower

*Cheiranthus angustatus* Greene

*Erysimum asperum* (Nutt.) DC. var. *capitatum* (Douglas ex Hook.) B. Boivin

*Erysimum asperum* (Nutt.) DC. var. *elatum* (Nutt.) Torr.

FNA7: "Although its overall distribution is extensive, var. *capitatum* has been collected only sporadically outside the main range in western Idaho, western Nevada, and the Pacific states. There is some local differentiation in California that has been recognized formally. For example, some populations in the Mohave desert in Kern, Los Angeles, and San Bernardino counties, as well as disjunct ones in eastern San Luis Obispo County, differ from typical var. *capitatum* by having yellow petals, fruits to 3.3 mm wide, and seeds to 4 × 2 mm; these were recognized by G. B. Rossbach (1958) and R. C. Rollins (1993) as var. *bealianum*. Variety *angustatum*, which is highly localized in Contra Costa County and was recognized by both Rossbach and Rollins, differs from typical var. *capitatum* by having elongated (versus not elongated) woody caudices, 4-angled (versus latiseptate) fruits, and much-branched (versus moderately-branched or simple) fruiting racemes."

***Erysimum cheiranthoides*** L. [FNA7, HC, HC2]

Sp. Pl. 2: 661. 1753.

treacle mustard, wormseed wallflower

*Cheiranthus cheiranthoides* (L.) A. Heller

*Cheirnia cheiranthoides* (L.) Link

***Erysimum cheiri*** (L.) Crantz [FNA7, HC2]

Cl. Crucif. Emend. 116. 1769.

Aegean wallflower

*Cheiranthus cheiri* L. [Flora Europaea]

***Erysimum inconspicuum*** (S. Watson) MacMill. [FNA7, HC, HC2]

Metasp. Minnesota Valley. 268. 1892.

prairie rocket, small-flowered rocket, small-flowered rocket, small wallflower

*Erysimum inconspicuum* (S. Watson) MacMill. var. *inconspicuum* [Rollins 1993a]

***Erysimum occidentale*** (S. Watson) B.L. Rob. [FNA7, HC, HC2]

Syn. Fl. N. Amer. 1(1,1): 144. 1895.  
pale wallflower, western wallflower

*Cheiranthus occidentalis* S. Watson  
*Cheirinia occidentalis* (S. Watson) Tidestr.

FNA7: "Erysimum occidentale is restricted to sand deposits along or near the Columbia River and its tributaries. It is distributed in Gilliam, Hood River, Morrow, Sherman, and Umatilla counties in Oregon, and in Franklin, Grant, Kittitas, Klickitat, Lincoln, Walla Walla, and Yakima counties in Washington."

***Erysimum repandum*** L. [FNA7, HC, HC2]

Demonstr. Pl. 17. 1753.  
spreading wallflower

*Cheirinia repanda* (L.) Link

***Euclidium*** [FNA7, HC, HC2]

Hortus Kew. 4: 74. 1812.  
[name conserved]  
euclidium

***Euclidium syriacum*** (L.) W.T. Aiton [FNA7, HC, HC2]

Hortus Kew. 4: 74. 1812.  
euclidium, Syrian mustard

*Anastatica syriaca* L.  
*Bunias syriaca* (L.) M. Bieb.

***Hesperis*** [FNA7, HC, HC2]

Sp. Pl. 2: 663. 1753; Gen. Pl. ed. 5, 297. 1754.  
rocket

***Hesperis matronalis*** L. [FNA7, HC, HC2]

Sp. Pl. 2: 663. 1753.  
mother-of-the-evening, dame's rocket, dame's violet

***Hirschfeldia*** [FNA7, HC2]

Methodus. 264. 1794.  
shortpod mustard

***Hirschfeldia incana*** (L.) Lagr.-Foss. [FNA7, HC2]

Fl. Tarn Garonne. 19. 1847.  
Mediterranean hoary mustard, short-podded mustard, summer mustard

*Sinapis incana* L.

***Hornungia*** [FNA7, HC2]

Deutschl. Fl. 1: 33. 1837.

*Hutchinsia* [HC]

***Hornungia procumbens*** (L.) Hayek [FNA7, HC2]

Repert. Spec. Nov. Regni Veg. Beih. 30: 480. 1925.  
hutchinsia, prostrate hutchinsia, ovalpurse

*Bursa procumbens* (L.) Kuntze  
*Capsella procumbens* (L.) Fr.  
*Hutchinsia procumbens* (L.) Desv. [HC, Rollins 1993a]  
*Hymenolobus procumbens* (L.) Nutt. ex Torr. & A. Gray  
*Lepidium procumbens* L.  
*Noccaea procumbens* (L.) Rchb.  
*Thlaspi procumbens* (L.) Wallr.

FNA7: "Hornungia procumbens is highly variable, especially in fruit size and shape, number of seeds per fruit, indumentum, plant size, and shape and number of leaf divisions. Many of its morphological extremes

were recognized at specific and infraspecific ranks, and more than 40 synonyms exist."

***Idahoa*** [FNA7, HC, HC2]

Bot. Gaz. 56: 474. 1913.  
scalepod

***Idahoa scapigera*** (Hook.) A. Nelson & J.F. Macbr. [FNA7, HC, HC2]

Bot. Gaz. 56: 474. 1913.  
flatpod, scalepod

*Platyspermum scapigerum* Hook.

***Isatis*** [FNA7, HC, HC2]

Sp. Pl. 2: 670. 1753; Gen. Pl. ed. 5, 301. 1754.  
woad

***Isatis tinctoria*** L. [FNA7, HC, HC2]

Sp. Pl. 2: 670. 1753.  
Dyer's woad

FNA7: "*Isatis tinctoria* has been cultivated since ancient times as a source of a blue dye (woad) obtained by fermenting the ground leaves and proximal portions of the plant."

***Lepidium*** [FNA7, HC, HC2]

Sp. Pl. 2: 643. 1753; Gen. Pl. ed. 5, 291. 1754.  
hoarycress, peppergrass, pepperweed

*Cardaria* [HC]

*Coronopus* [HC]

***Lepidium appelianum*** Al-Shehbaz [FNA7, HC2]

Novon. 12: 7. 2002.  
globepodded hoarycress, whitetop  
*Cardaria pubescens* (C.A. Mey.) Jarm. [HC]  
*Cardaria pubescens* (C.A. Mey.) Jarm. var. *elongata* Rollins [Peck]  
*Hymenophysa pubescens* C.A. Mey.

FNA7: "*Lepidium appelianum* has become a noxious weed in most of its range in North America."

***Lepidium campestre*** (L.) W.T. Aiton [FNA7, HC, HC2]

Hortus Kew. 4: 88. 1812.  
field cress, field peppergrass pepperwort

*Neolepia campestre* (L.) W.A. Weber  
*Thlaspi campestre* L.

***Lepidium chalepense*** L. [FNA7, HC2]

Cent. Pl. II. 23. 1756.  
chialapa hoarycress, lens-podded hoarycress, Asian white-top  
*Cardaria chalapensis* (L.) Hand.-Maz. [HC], orthographic variant  
*Cardaria chalepensis* (L.) Hand.-Mazz.  
*Cardaria draba* (L.) Desv. ssp. *chalapensis* (L.) O.E. Schulz [ILBC2], orthographic variant  
*Cardaria draba* (L.) Desv. var. *repens* (Schrenk) O.E. Schulz [VPPNW2]  
*Lepidium draba* L. ssp. *chalapensis* (L.) Thell. [Stace 1997]  
*Lepidium repens* (Schrenk) Boiss. [Abrams]

FNA7: "From the synonymy above, it is evident that the disposition of *Lepidium chalepense* has varied: more than one species (e.g., R. C. Rollins 1940; G. A. Mulligan and C. Frankton 1962), one species (e.g., Rollins 1993), a variety of *Lepidium* (*Cardaria*) *draba* (N. H. Holmgren 2005b), or a synonym of the latter species (C. L. Hitchcock 1936). In our opinion, the differences in fruit morphology and chromosome number justify its recognition as a distinct species."

***Lepidium densiflorum*** Schrad. [FNA7, HC, HC2]

Index Seminum (Göttingen). 1832: 4. 1832.

common peppergrass, elongate peppergrass, hairy-fruited peppergrass, large-fruited peppergrass, prairie peppergrass

*Lepidium densiflorum* Schrad. var. *densiflorum* [HC, Rollins 1993a]

*Lepidium densiflorum* Schrad. var. *elongatum* (Rydb.) Thell. [HC, Rollins 1993a]

*Lepidium densiflorum* Schrad. var. *macrocarpum* G.A. Mulligan [HC, Rollins 1993a]

*Lepidium densiflorum* Schrad. var. *pubicarpum* (A. Nelson) Thell. [HC, Rollins 1993a]

*Lepidium elongatum* Rydb.

*Lepidium neglectum* Thell.

*Lepidium pubicarpum* A. Nelson

FNA: "North American records of *Lepidium apetalum* Willdenow mostly represent misidentifications of *L. densiflorum*. The latter has obovate fruits widest beyond the middle, whereas *L. apetalum* has elliptic fruits widest at the middle. The number and limits of the varieties recognized in *Lepidium densiflorum*, as well as the characters used to delimit them, vary among authors (A. Thellung 1906; C. L. Hitchcock 1936; G. A. Mulligan 1961; R. C. Rollins 1993; N. H. Holmgren 2005b). The variation almost always does not correlate with geography, and the recognition of varieties in this species is neither practical nor very useful. All of those authors admitted that these varieties are "very weak at best" (Rollins, p. 554). Of them, perhaps var. *pubicarpum* (including var. *elongatum*) might merit recognition. It is distributed in almost all of the Mountain and Pacific states and is distinguished from the other varieties solely by the presence of trichomes or minute papillae on the fruit valves. The density of these trichomes ranges from moderate and covering the entire valve surface to very sparse and represented by individual papillate trichomes restricted to the valve margin. Furthermore, the length of these trichomes may vary from ca. 0.01 to 0.3 mm. In some species (e.g., *L. dictyotum*) both glabrous- and pubescent-fruited forms occur, yet none of the above authors gave formal recognition to both forms. It is not known if both glabrous and puberulent fruits occur within the same population in *L. densiflorum*. The species is autogamous, but nothing is known about the rates of gene flow between and within populations." Rollins, 1993: "The original area of *L. densiflorum* sens. lat. is impossible to know because of its weedy tendencies. Many of the localities where it now occurs are probably outside of its native range." The varieties of *L. densiflorum* are poorly defined and may not be taxonomically distinct.

***Lepidium dictyotum* A. Gray [FNA7, HC, HC2]**

Proc. Amer. Acad. Arts. 7: 329. 1868.

alkali peppergrass, veiny peppergrass

*Lepidium dictyotum* A. Gray var. *dictyotum* [HC, Rollins 1993a]

***Lepidium didymum* L. [FNA7, HC2]**

Syst. Nat. ed. 12. 2: 433. 1767; Mant Pl. 1: 92. 1767.

lesser swinecress, lesser wartcress

*Coronopus didymus* (L.) Sm. [HC]

***Lepidium draba* L. [FNA7, HC2]**

Sp. Pl. 2: 645. 1753.

heart-podded hoarycress, hoary pepperwort

*Cardaria draba* (L.) Desv. [HC]

*Cardaria draba* (L.) Desv. ssp. *draba* [ILBC2]

*Lepidium draba* L. ssp. *draba* [Stace 1997]

***Lepidium heterophyllum* Benth. [FNA7, HC, HC2]**

Cat. Pl. Pyrénées. 95. 1826.

Smith's pepperwort

Naturalized in western Washington; overlooked due to its similarity to *L. campestre*.

***Lepidium latifolium* L. [FNA7, HC, HC2]**

Sp. Pl. 2: 644. 1753.

dittander, broad-leaved peppergrass, broad-leaved pepperwort

*Cardaria latifolia* (L.) Spach

***Lepidium nitidum* Nutt. [FNA7, HC, HC2]**

Fl. N. Amer. 1: 116. 1838.

shining peppergrass

*Lepidium leiocarpum* Hook. & Arn.  
*Lepidium nitidum* Nutt. var. *howellii* C.L. Hitchc.  
*Lepidium nitidum* Nutt. var. *nitidum* [Rollins 1993a]  
*Lepidium nitidum* Nutt. var. *oreganum* (Howell ex Greene) C.L. Hitchc.

*Lepidium oblongum* Small [FNA7, HC2]

Fl. S.E. U.S. 468, 1331. 1903.

*Lepidium oxycarpum* Torr. & A. Gray [FNA7, HC, HC2]

Fl. N. Amer. 1: 116. 1838.

forked pepperwort, sharpfruted pepperwort

*Nasturtium oxycarpum* (Torr. & A. Gray) Kuntze

FNA7: "*Lepidium oxycarpum* apparently did not persist in British Columbia following its introduction there over 110 years ago (G. A. Mulligan 2002b). That record is based on Macoun s.n. (GH, MO, NY, US), which was collected on 31 May 1893 from the vicinity of Victoria, Vancouver Island." Rollins, 1993: "Apparently introduced to southern Vancouver Island. It was collected in the vicinity of Victoria, British Columbia in 1893, but we have not seen any recent collections".

*Lepidium perfoliatum* L. [FNA7, HC, HC2]

Sp. Pl. 2: 643. 1753.

clasping-leaved peppergrass, round-leaved peppergrass, yellow-flowered peppergrass, clasping peppergrass pepperwort

*Nasturtium perfoliatum* (L.) Besser

*Lepidium ramosissimum* A. Nelson [FNA7, HC, HC2]

Bull. Torrey Bot. Club. 26: 124. 1899.

branched peppergrass, dull peppergrass

*Lepidium ramosissimum* A. Nelson var. *bourgeauanum* (Thell.) Rollins

*Lepidium ramosissimum* A. Nelson var. *ramosissimum*

FNA7: "As noted by R. C. Rollins (1993, p. 581), the varieties of *Lepidium ramosissimum* are "weak at best." They are based largely on the branching habit and, most importantly, on the presence versus absence of trichomes on the fruit valve. In some collections (e.g., Scoggan 4233, GH; Boivin et al., 13221, GH), both puberulent- and glabrous-fruited forms occur. It is almost certain that the same situation exists not only in other populations of this species, but in other North American *Lepidium*. It is also clear that some populations might consist entirely of one of the two forms, but it is highly unlikely that this variation has any geographical basis. Therefore, we believe that the separation of varieties solely on the basis of presence or absence of the fruit trichomes is taxonomically meaningless."

*Lepidium ruderale* L. [FNA7, HC, HC2]

Sp. Pl. 2: 645. 1753.

narrow-leaved pepperwort, roadside pepperwort

*Lepidium texanum* Buckley [Abrams]

Reported in WA by Naas et al. (1990), however there are no vouchers to support this sighting. H&C list it as occurring in the Portland area, and FNA7 does not include WA within the known distribution of this species. Until vouchers are located indicating the presence of this species in WA it is considered excluded from the flora.

*Lepidium sativum* L. [FNA7, HC, HC2]

Sp. Pl. 2: 644. 1753.

garden cress pepperwort

FNA7: "*Lepidium sativum* is cultivated as a salad green and is sporadically naturalized, though never as an aggressive weed. It is seldom collected.."

*Lepidium strictum* (S. Watson) Rattan [FNA7, HC, HC2]

Syn. Fl. N. Amer. 1(1,1): 129. 1895.

upright peppergrass

Recently collected (May 2016) at Port Townsend, Jefferson County, Washington. Also known as an historical waif near Portland, Oregon. More common in California.

***Lepidium virginicum*** L. [FNA7, HC, HC2]

Sp. Pl. 2: 645. 1753.

tall pepperweed

ssp. ***menziesii*** (DC.) Thell. [FNA7, HC2]

Mitt. Bot. Mus. Univ. Zürich. 28: 230. 1906.

coastal peppergrass, hairy peppergrass, Idaho peppergrass, Menzies' peppergrass, tall peppergrass, tall western peppergrass

*Lepidium bernardinum* Abrams

*Lepidium hirsutum* Rydb.

*Lepidium idahoense* A. Heller [Abrams]

*Lepidium menziesii* DC. [Abrams]

*Lepidium virginicum* L. var. *medium* (Greene) C.L. Hitchc. [HC]

*Lepidium virginicum* L. var. *menziesii* (DC.) C.L. Hitchc. [HC]

*Lepidium virginicum* L. var. *pubescens* (Greene) Thell. [HC]

*Lepidium virginicum* L. var. *robinsonii* (Thell.) C.L. Hitchc.

ssp. ***virginicum*** [FNA7, HC2]

Sp. Pl. 2: 645.

*Lepidium virginicum* L. var. *linearifolium* Farw.

*Lepidium virginicum* L. var. *virginicum* [HC]

***Lobularia*** [FNA7, HC, HC2]

J. Bot. Agric. 3: 162. 1815.

[name conserved]

sweet alyssum

***Lobularia maritima*** (L.) Desv. [FNA7, HC, HC2]

J. Bot. Agric. 3: 162. 1815.

sweet alison, sweet alyssum

*Alyssum maritimum* (L.) Lam.

*Clypeola maritima* L.

*Koniga maritima* (L.) R. Br. [Abrams]

\* Borgen, L. 1987. *Lobularia* (Cruciferae). A biosystematic study with special reference to the Macaronesian region. *Opera Bot.* 91: 1-96.

***Lunaria*** [FNA7, HC, HC2]

Sp. Pl. 2: 653. 1753; Gen. Pl. ed. 5, 294. 1754.

honesty

***Lunaria annua*** L. [FNA7, HC, HC2]

Sp. Pl. 2: 653. 1753.

honesty, money plant

*Lunaria biennis* Moench

*Lunaria inodora* Lam.

FNA7: "Lunaria annua is cultivated for its attractive flowers but especially for the infructescences, which are used in dry bouquets after removal of the fruit valves and seeds."

***Matthiola*** [FNA7, HC2]

Hortus Kew. 4: 119. 1812. (as *Mathiola*), name and orthography conserved.

***Matthiola incana*** (L.) W.T. Aiton [FNA7, HC2]

Hortus Kew. 4: 119. 1812. (as *Mathiola*).

***Matthiola longipetala*** (Vent.) DC. [FNA7, HC2]

Syst. Nat. 2: 174. 1821.

***Microthlaspi*** [FNA7, HC2]

Feddes Repert. 84: 452. 1973.

claspleaf pennycress, perfoliate pennycress

*Microthlaspi perfoliatum* (L.) F.K. Mey. [FNA7, HC2]

Feddes Repert. 84: 453. 1973.

perfoliate pennycress

*Thlaspi perfoliatum* L. [HC]

***Nasturtium*** [FNA7, HC2]

Hortus Kew. 4: 110. 1812.

watercress

*Nasturtium microphyllum* Boenn. ex Rchb. [FNA7, HC2]

Fl. Germ. Excurs. 683. 1832.

onerow watercress

Recently collected in Klickitat County (2012).

*Nasturtium officinale* W.T. Aiton [FNA7, HC2]

Hortus Kew. 4: 110. 1812.

watercress

*Rorippa nasturtium-aquaticum* (L.) Hayek [HC]

*Sisymbrium nasturtium-aquaticum* L.

The similar *Rorippa microphylla* (Boenn.) Hyl. ex Á. Löve & D. Löve may be present but overlooked in WA

***Neslia*** [FNA7, HC, HC2]

J. Bot. Agric. 3: 162. 1815.

[name conserved]

*Neslia paniculata* (L.) Desv. [FNA7, HC, HC2]

J. Bot. Agric. 3: 162. 1815.

ball mustard

*Myagrum paniculatum* L.

***Noccaea*** [FNA7, HC2]

Suppl. Meth. 89. 1802.

pennycress

*Noccaea fendleri* (A. Gray) Holub [FNA7, HC2]

Preslia. 70: 108. 1998.

wild candytuft, Fendler's pennycress

*Thlaspi fendleri* A. Gray [HC]

ssp. ***glauca*** (A. Nelson) Al-Shehbaz & M. Koch [FNA7, HC2]

Syst. Bot. 29: 382. 2004.

wild candytuft

*Thlaspi cochleariforme* DC. [VPPNW2]

*Thlaspi fendleri* A. Gray var. *glaucum* (A. Nelson) C.L. Hitchc. [HC]

*Thlaspi fendleri* A. Gray var. *hesperium* (Payson) C.L. Hitchc. [VPPNW2]

*Thlaspi glaucum* (A. Nelson) A. Nelson [Abrams]

*Thlaspi montanum* L. var. *montanum* [Rollins 1993a]

FNA7: "Subspecies *glauca*, which is the most morphologically variable and most widespread North American taxon in *Noccaea*, corresponds to *Thlaspi montanum* var. *montanum* in the sense of P. K. Holmgren (1971) and R. C. Rollins (1993). As indicated above, that variety is a strictly European taxon."

***Phoenicaulis*** [FNA7, HC, HC2]

Fl. N. Amer. 1: 89. 1838.

daggerpod

*Phoenicaulis cheiranthoides* Nutt. [FNA7, HC, HC2]

Fl. N. Amer. 1: 89. 1838.  
daggerpod

*Arabis pedicellata* A. Nelson  
*Parrya cheiranthoides* (Nutt.) Jeps.  
*Phoenicaulis cheiranthoides* Nutt. ssp. *glabra* (Jeps.) Abrams [Abrams]  
*Phoenicaulis cheiranthoides* Nutt. ssp. *heiranthoides* [Abrams]  
*Phoenicaulis cheiranthoides* Nutt. ssp. *lanuginosa* (S. Watson) Abrams [Abrams]  
*Phoenicaulis cheiranthoides* Nutt. var. *cheiranthoides* [VPPNW2]  
*Phoenicaulis cheiranthoides* Nutt. var. *lanuginosa* (S. Watson) Rollins [VPPNW2]  
*Phoenicaulis pedicellata* (A. Nelson) A. Heller

***Physaria* [FNA7, HC, HC2]**

Gen. Amer. Bor. 1: 162. 1848.  
bladderpod, double bladderpod, twinpod

*Lesquerella* [HC]

***Physaria alpestris* Suksd. [FNA7, HC, HC2]**

W. Amer. Sci. 15: 58. 1906.  
alpine twinpod, Washington twinpod  
*Lesquerella alpestris* (Suksd.) G.A. Mulligan

***Physaria didymocarpa* (Hook.) A. Gray [FNA7, HC, HC2]**

Gen. Amer. Bor. 1: 162. 1848.  
common twinpod

ssp. ***didymocarpa* [FNA7, HC2]**

Gen. Amer. Bor. 1: 162.  
common twinpod

*Physaria didymocarpa* (Hook.) A. Gray var. *didymocarpa* [HC]

***Physaria douglasii* (S. Watson) O?Kane & Al-Shehbaz [FNA7, HC2]**

Novon. 12: 322. 2002.  
Columbia bladderpod, Douglas' bladderpod

*Lesquerella douglasii* S. Watson [HC]

ssp. ***douglasii* [FNA7, HC2]**

Novon. 12: 322.  
Douglas's bladderpod

ssp. ***tuplashensis* (Rollins, K.A. Beck & Caplow) O?Kane & Al-Shehbaz [FNA7, HC2]**

Novon. 12: 322. 2002.  
white bluffs bladderpod, White Bluffs bladderpod

*Lesquerella tuplashensis* Rollins, K. A. Beck & Caplow

FNA7: "It is possible that subsp. *tuplashensis* is simply an ecotype, or that its phenotype is in response to its severe habitat on the White Bluffs of the Columbia River."

***Physaria geyeri* (Hook.) A. Gray [FNA7, HC, HC2]**

Gen. Amer. Bor. 1: 162. 1848.  
Geyer's twinpod

*Coulterina geyeri* (Hook.) Kuntze  
*Lesquerella geyeri* (Hook.) G.A. Mulligan  
*Vesicaria geyeri* Hook.

ssp. ***geyeri* [FNA7, HC2]**

Gen. Amer. Bor. 1: 162.  
double bladderpod, Geyer's twinpod bladderpod, Geyer's twinpod

*Physaria geyeri* (Hook.) A. Gray var. *geyeri* [HC]

***Physaria occidentalis* (S. Watson) O?Kane & Al-Shehbaz [FNA7, HC2]**

Novon. 12: 326. 2002.  
western bladderpod

*Lesquerella occidentalis* (S. Watson) S. Watson [HC]

ssp. ***occidentalis*** [FNA7, HC2]

Novon. 12: 326.  
western bladderpod

*Lesquerella cusickii* M.E. Jones [Abrams]

*Lesquerella occidentalis* (S. Watson) S. Watson ssp. *cusickii* (M.E. Jones) Maguire & A.H. Holmgren

*Lesquerella occidentalis* (S. Watson) S. Watson ssp. *occidentalis*

*Lesquerella occidentalis* (S. Watson) S. Watson var. *cusickii* (M.E. Jones) C.L. Hitchc. [HC]

*Lesquerella occidentalis* (S. Watson) S. Watson var. *occidentalis* [HC]

this species reported in WA by KZ99, based on "personal communication," but no specimens have been seen

***Physaria oregona*** S. Watson [FNA7, HC2]

Proc. Amer. Acad. Arts. 17: 363. 1882.  
Oregon twinpod

*Coulterina oregona* (S. Watson) Kuntze

*Lesquerella oregona* (S. Watson) G.A. Mulligan

*Physaria oregana* S. Watson [HC], orthographic variant

Note that H&C misspell the specific epithet - the correct spelling is "oregona", as listed here.

***Polyctenium*** [FNA7, HC, HC2]

Leafl. Bot. Observ. Crit. 2: 219. 1912.  
combleaf

***Polyctenium fremontii*** (S. Watson) Greene [FNA7, HC, HC2]

Leafl. Bot. Observ. Crit. 2: 219. 1912.  
combleaf

*Smelowskia fremontii* S. Watson

FNA7: "Polyctenium fremontii is highly variable in fruit size and the compactness of the fruiting raceme, but in habit, flower size and color, leaf morphology, indumentum, fruiting pedicel length and orientation, number of ovules per ovary, and basically every other aspect of the plants, it is quite constant. If one examines only the types of those two taxa and that of *P. fremontii*, it seems that perhaps two or three taxa might be recognized. Upon careful study of extensive material, one realizes that only one taxon, instead of three or more, is represented. The alleged differences between *P. fremontii* and *P. williamsiae* in characters other than fruit morphology do not hold. As for fruit size, it was said to be 2-4 × 2-2.5 mm in *P. williamsiae* and (4-)6-13(-20) × 1-2 mm in *P. fremontii*. Fruit lengths in material annotated by Rollins as *P. fremontii* are 2-7 mm in Tiehm 8108 and 3.5-11 mm in Ertter 5726, both at GH. Furthermore, the compactness of the infructescence can be equally variable, and in the holotype of var. *confertum* there are 12-15 pedicels along 1 cm in the middle of the rachis, whereas in Ertter 5726 (GH) there are 6-12. On one sheet, Schoolcraft 1287 (GH), compact and lax racemes and relatively short (3 mm) and longer (7 mm) fruits are represented. The variation in fruit length and width depends largely upon the number of ovules maturing into seeds, and in plants with very short fruits, including the type collection of *P. williamsiae*, none of the ovules matured into seeds, whereas in those with longest and narrowest fruits almost all ovules matured into seeds. Regardless of how long the fruit is or how many ovules mature into seeds, the ovule number is fairly constant throughout the range of the species. In my opinion, except for the type species of *Polyctenium*, all of the other taxa recognized in this genus do not represent biologically distinct entities. To my knowledge, *Polyctenium fremontii* is known from counties in California (Lassen, Modoc, Mono, Siskiyou), Idaho (Gooding), Nevada (Churchill, Douglas, Humboldt, Lyon, Mineral, Washoe), and Oregon (Crook, Deschutes, Harney, Klamath, Lake, Malheur)."

***Raphanus*** [FNA7, HC, HC2]

Sp. Pl. 2: 669. 1753; Gen. Pl. ed. 5, 300. 1754.  
radish

*Raphanus raphanistrum* L. [FNA7, HC, HC2]

Sp. Pl. 1: 669. 1753.

jointed charlock, wild radish

FNA7: "North American representatives of *Raphanus raphanistrum* are referable to subsp. *raphanistrum*. Four other subspecies are restricted to Europe."

*Raphanus sativus* L. [FNA7, HC, HC2]

Sp. Pl. 2: 669. 1753.

garden radish

FNA7: "*Raphanus sativus* is an important crop plant that is cultivated and/or weedy in most temperate regions worldwide. It is unknown as a wild plant, but suggested to be derived from *R. raphanistrum* subsp. *landra*, which is endemic to the Mediterranean region (L. J. Lewis-Jones et al. 1982)."

*Rorippa* [FNA7, HC, HC2]

Fl. Carniol. 520. 1760.

yellowcress

(see also *Armoracia*, *Nasturtium*)

*Rorippa austriaca* (Crantz) Besser [FNA7, HC2]

Enum. Pl. 103. 1821. (as *Roripa*).

Austrian yellowcress field-cress

*Camelina austriacum* (Crantz) Pers.

*Cochlearia austriaca* (Crantz) Ledeb.

*Myagrum austriacum* (Crantz) Jacq.

*Nasturtium austriacum* Crantz

We use the earlier combination by Besser (1822), not that of Spach (1838) found in Abrams. This species is classified as a noxious weed in WA, however few supporting specimens have been seen. Some reports (KZ99; a *R. Old pers. comm.*) may be based on *Rorippa* × *armoracoides* (Tausch) Fuss, the hybrid between *R. austriaca* and *R. sylvestris* (L.) Besser, which has been called *Rorippa prostrata* (Bergeret) Schinz & Thell. in the North American literature.

*Rorippa columbiae* (S. Watson) Howell [FNA7, HC2]

Fl. N.W. Amer. 40. 1897. (as *Roripa*).

Columbia yellowcress cress

*Nasturtium columbiae* (S. Watson) Suksd.

*Nasturtium sinuatum* Nutt. var. *columbiae* S. Watson

*Radicula columbiae* (S. Watson) Greene

*Rorippa calycina* (Engelm.) Rydb. var. *columbiae* (S. Watson) Rollins [HC]

*Rorippa sinuata* (Nutt.) Hitchc. var. *columbiae* (S. Watson) Howell

*Rorippa curvipes* Greene [FNA7, HC2]

Pittonia. 3: 97. 1896. (as *Roripa*).

blunt-leaved yellowcress, truncate yellowcress

*Rorippa curvipes* Greene var. *curvipes*

*Rorippa curvipes* Greene var. *truncata* (Jeps.) Rollins

*Rorippa obtusa* (Nutt.) Britton [HC], misapplied

*Rorippa teres* (Michx.) Stuckey [FNA7], misapplied

Reported in WA by Stuckey (1972)

\* Stuckey, R. 1972. Taxonomy and distribution of the genus *Rorippa* (Cruciferae) in North America. *Sida* 4: 279-430.

*Rorippa curvisiliqua* (Hook.) Bessey ex Britton [FNA7, HC, HC2]

Mem. Torrey Bot. Club. 5: 169. 1894.

western yellowcress

*Nasturtium curvisiliqua* (Hook.) Nutt.

*Rorippa curvisiliqua* (Hook.) Bessey ex Britton var. *curvisiliqua* [HC]

*Rorippa curvisiliqua* (Hook.) Bessey ex Britton var. *lyrata* (Nutt.) C.L. Hitchc. [HC]

*Rorippa curvisiliqua* (Hook.) Bessey ex Britton var. *nuttallii* (S. Watson) Stuckey [KZ99]

*Rorippa curvisiliqua* (Hook.) Bessey ex Britton var. *orientalis* Stuckey [KZ99]  
*Rorippa curvisiliqua* (Hook.) Bessey ex Britton var. *procumbens* Stuckey [KZ99]  
*Sisymbrium curvisiliqua* Hook.

FNA7: "Rorippa curvisiliqua is a highly variable species divided artificially by R. L. Stuckey (1972) into seven varieties. They were only reluctantly recognized by R. C. Rollins (1993) and N. H. Holmgren (2005b), though these authors felt, and I concur, that it is impossible to determine any of them reliably. A collection from New Brunswick, Blaney s.n. (DAO, MO, NBM, UNB), Northumberland County, 2 Sep 2004, was most likely introduced by migratory birds."

***Rorippa palustris* (L.) Besser [FNA7, HC2]**

Enum. Pl. 27. 1821. (as Roripa).  
hispid yellowcress, marsh yellowcress

*Rorippa islandica* (Oeder ex Murray) Borbás [HC], misapplied  
*Rorippa islandica* (Oeder ex Murray) Borbás var. *feraldii* Butters & Abbe [Peck]  
*Rorippa palustris* (L.) Besser var. *palustris* [Rollins 1993a]

Currently we do not recognize the poorly defined varieties of *Rorippa palustris*.

**ssp. *hispid* (Desv.) Jonsell [FNA7, HC2, KZ99]**

Symb. Bot. Upsal. 19(2): 159. 1968.

*Rorippa islandica* (Oeder ex Murray) Borbás var. *hispid* (Desv.) Butters & Abbe [HC]  
*Rorippa palustris* (L.) Besser var. *hispid* (Desv.) Rydb. [JPM]

**ssp. *palustris* [FNA7, HC2]**

*Rorippa islandica* (Oeder ex Murray) Borbás var. *glabrata* (Lunell) Butters & Abbe [HC]  
*Rorippa islandica* (Oeder ex Murray) Borbás var. *occidentale* (Wats.) Butters & Abbe [HC], orthographic variant  
*Rorippa islandica* (Oeder ex Murray) Borbás var. *occidentalis* (S. Watson) Butters & Abbe  
*Rorippa palustris* (L.) Besser ssp. *feraldiana* (Butters & Abbe) Jonsell [KZ99]  
*Rorippa palustris* (L.) Besser ssp. *occidentalis* (S. Watson) Abrams [KZ99]  
*Rorippa palustris* (L.) Besser var. *feraldiana* (Butters & Abbe) Stuckey [Rollins 1993a]  
*Rorippa palustris* (L.) Besser var. *occidentalis* (S. Watson) Rollins [JPM]

***Rorippa sinuata* (Nutt.) Hitchc. [FNA7, HC, HC2]**

Key Spring Fl. Manhattan. 18. 1894. (as Roripa).  
spreading yellowcress

***Rorippa sylvestris* (L.) Besser [FNA7, HC, HC2]**

Enum. Pl. 27. 1821. (as Roripa).  
creeping yellowcress

***Rorippa tenerrima* Greene [FNA7, HC2]**

Erythea. 3: 46. 1895. (as Roripa).  
Modoc yellowcress  
(see also *Rorippa curvipes*)

***Sandbergia* [FNA7, HC2]**

Leafl. Bot. Observ. Crit. 2: 136. 1911.

***Sandbergia perplexa* (L.F. Hend.) Al-Shehbaz [FNA7, HC2]**

Harvard Pap. Bot. 12: 426. 2007.  
puzzling halimolobos

*Halimolobos perplexa* (L.F. Hend.) Rollins [HC], orthographic variant  
*Halimolobos perplexa* (L.F. Hend.) Rollins var. *lemhiensis* C.L. Hitchc. [HC], orthographic variant  
*Halimolobos perplexa* (L.F. Hend.) Rollins var. *perplexa* [HC, Rollins 1993a], orthographic variant  
*Sisymbrium perplexum* L.F. Hend.  
*Sophia perplexa* (L.F. Hend.) Rydb.

See WNHP Rare Plant list for details on this species. FNA7: "I have seen limited material of var. *lemhiensis*, and all the differences given by R. C. Rollins (1993) to separate it from var. *perplexa* (e.g., style and pedicel length, density of indumentum) are quantitative characters that show continuous,

uncorrelated variation. *Sandbergia perplexa* is known from counties in Idaho (Adams, Butte, Custer, Idaho, Lemhi, Valley), Montana (Beaverhead), and Washington (Douglas)."

***Sandbergia whitedii* (Piper) Greene [FNA7, HC2]**

Leafl. Bot. Observ. Crit. 2: 137. 1911.

fissurewort, whited's halimolobos fissurewort

*Arabis whitedii* Piper

*Halimolobos whitedii* (Piper) Rollins [HC, Rollins 1993a]

FNA7: "In Washington state, *Sandbergia whitedii* appears to be restricted to Chelan, Douglas, Grant, Kittitas, Lincoln, and Okanogan counties."

***Sinapis* [FNA7, HC2]**

Sp. Pl. 2: 668. 1753; Gen. Pl. ed. 5, 299. 1754.

mustard

***Sinapis alba* L. [FNA7, HC2]**

Sp. Pl. 2: 668. 1753.

white mustard

*Brassica hirta* Moench [HC]

***Sinapis arvensis* L. [FNA7, HC2]**

Sp. Pl. 2: 668. 1753.

charlock, corn mustard, wild mustard

*Brassica arvensis* Rabenh., homonym (illegitimate)

*Brassica kaber* (DC.) L.C. Wheeler [HC]

*Brassica kaber* (DC.) L.C. Wheeler var. *pinnatifida* (Stokes) L.C. Wheeler [Peck]

*Brassica sinapistrum* Boiss.

*Sinapis kaber* DC.

FNA7: "Infraspecific taxa have been recognized in *Sinapis arvensis* on the basis of minor variation in fruit and basal leaf morphology, but the species is extremely variable, and none of the variants is recognized here. *Sinapis arvensis* is one of the most widespread and abundant weeds of cultivated grain fields in North America, causing crop losses and acting as host for viruses and fungi that also attack some cruciferous vegetable crops (G. A. Mulligan and L. G. Bailey 1975; I. A. Al-Shehbaz 1985; R. C. Rollins and Al-Shehbaz 1986). It is generally considered a native of Eurasia and is thought to have been introduced into the New World by European settlers about 400 years ago. Recent archaeological and ethnobotanical studies (H. A. Jacobson et al. 1988) indicate that it (as *Brassica kaber*) grew in the northeastern United States as early as 8000 years ago and suggest that it originally had a semi-circumboreal distribution."

\* Jacobson, H. A., J. B. Peterson, and D. E. Putnam. 1988. Evidence of pre-Columbian *Brassica* in the northeastern United States. *Rhodora* 90: 355-362.

***Sisymbrium* [FNA7, HC, HC2]**

Sp. Pl. 2: 657. 1753; Gen. Pl. ed. 5, 296. 1754.

hedgemustard, tumbledustard

*Schoenocrambe* [HC]

***Sisymbrium altissimum* L. [FNA7, HC, HC2]**

Sp. Pl. 2: 659. 1753.

Jim Hill mustard, tumble mustard, tall rocket

***Sisymbrium linifolium* (Nutt.) Nutt. [FNA7, HC2]**

Fl. N. Amer. 1: 91. 1838.

lava cress, rush mustard, flax-leaved plainsmustard, Salmon River plainsmustard

*Erysimum glaberrimum* Hook. & Arn.

*Nasturtium linifolium* Nutt.

*Schoenocrambe linifolia* (Nutt.) Greene [HC]

FNA7: "N. H. Holmgren (2005b) recognized *Sisymbrium linifolium* and others (see 86. *Hesperidanthus*) in *Schoenocrambe* even though the molecular evidence (S. I. Warwick et al. 2002) overwhelmingly shows

that the latter is nested within *Sisymbrium*, whereas the species of *Hesperidanthus* are not closely related. Indeed, I. A. Al-Shehbaz et al. (2006) placed *Hesperidanthus* and *Sisymbrium* in different tribes. This is an example where the superficial resemblances in fruit morphology are the result of convergence and can easily mislead to erroneous taxonomy."

*Sisymbrium loeselii* L. [FNA7, HC, HC2]

Cent. Pl. I. 18. 1755.

false london rocket, Loesel's tumbledustard

*Sisymbrium officinale* (L.) Scop. [FNA7, HC, HC2]

Fl. Carniol. ed. 2. 2: 26. 1772.

hedge mustard

*Erysimum officinale* L.

*Sisymbrium officinale* (L.) Scop. var. *leiocarpum* DC. [VPPNW2]

*Sisymbrium officinale* (L.) Scop. var. *officinale* [VPPNW2]

*Sisymbrium orientale* L. [FNA7, HC2]

Cent. Pl. II. 24. 1756.

Indian hedgemustard

*Smelowskia* [FNA7, HC, HC2]

Icon. Pl. 2: 17, plate 151. 1830.

[name conserved]

smelowskia

*Smelowskia americana* Rydb. [FNA7, HC2]

Bull. Torrey Bot. Club. 29: 239. 1902.

alpine smelowskia, Siberian smelowskia

*Smelowskia calycina* (Stephan) C.A. Mey. var. *americana* (Regel & Herder) W.H. Drury & Rollins [HC]

FNA7: "Both R. C. Rollins (1993) and N. H. Holmgren (2005b) listed  $2n = 44$  for *Smelowskia americana* (as *S. calycina* var. *americana*), but no such number is known for any species of the genus (*S. I. Warwick* and I. A. Al-Shehbaz 2006). It is most likely that the first two authors erred in reporting  $2n = 22$  for the species. The latter count is likely to represent a dysploid reduction of tetraploid populations based on  $x = 6$ . Previous North American authors (e.g., W. H. Drury Jr. and R. C. Rollins 1952; Rollins 1993; N. H. Holmgren 2005b) believed that the central Asian *Smelowskia calycina* and the North American plants also attributed to it are conspecific. *S. I. Warwick* et al. (2004b) clearly demonstrated that they are different species. The North American plants, *S. americana*, are easily distinguished from *S. calycina* by having readily caducous instead of persistent calyces. As recognized by Rollins (1993), the North American *S. calycina* represented three distinct taxa (*S. americana*, *S. media*, *S. porsildii*) none of which belongs to that species."

*Smelowskia ovalis* M.E. Jones [FNA7, HC, HC2]

Proc. Calif. Acad. Sci. ser. 2. 5: 624. 1895.

short-fruited smelowskia

*Smelowskia ovalis* M.E. Jones var. *ovalis*

FNA7: "*Smelowskia ovalis* appears to be rare in Oregon, common at Mt. Lassen (Shasta County, California), and widespread at high elevations in Washington."

*Streptanthella* [FNA7, HC, HC2]

Fl. Rocky Mts. 364, 1062. 1917.

streptanthella

*Streptanthella longirostris* (S. Watson) Rydb. [FNA7, HC, HC2]

Fl. Rocky Mts. 364. 1917.

long-beaked fiddle mustard, streptanthella

*Streptanthella longirostris* (S. Watson) Rydb. var. *derelicta* J.T. Howell [Abrams]

FNA7: "*Streptanthella longirostris* is most widely distributed in southern California, Nevada, and southern and central Utah, and appears to be restricted elsewhere: Colorado (Mesa, Montezuma, Montrose, San Miguel), Idaho (Butte), Montana (Carbon), New Mexico (San Juan), Washington (Franklin, Grant), and

Wyoming (Fremont, Natrona, Sweetwater, Uinta)."

***Strigosella*** [FNA7, HC2]

Diagn. Pl. Orient. 3(1): 22. 1854.

***Strigosella africana*** (L.) Botsch. [FNA7, HC2]

Bot. Zhurn. (Moscow & Leningrad). 57: 1038. 1972.

African adder's-mouth, African adder's-mouth malcolmia

***Malcolmia africana*** (L.) W.T. Aiton [HC]

Reported for WA by the invaders database at Univ. Montana, no specimens seen (KZ99). No specimens known from WA at WTU or WS. This species is considered excluded until specimens are located.

***Subularia*** [FNA7, HC, HC2]

Sp. Pl. 2: 642. 1753; Gen. Pl. ed. 5, 290. 1754.

awwort

***Subularia aquatica*** L. [FNA7, HC, HC2]

Sp. Pl. 2: 642. 1753.

ssp. ***americana*** G.A. Mulligan & Calder [FNA7, HC2]

Rhodora. 66: 132, plate 1295, fig. 1. 1964.

awwort

*Subularia aquatica* L. var. *americana* (G.A. Mulligan & Calder) B. Boivin [KZ99]

FNA7: "Subspecies *americana* appears to be the sole representative of *Subularia* in North America. It differs from subsp. *aquatica*, which is restricted to northern Europe and Russia, by having persistent (versus caducous) sepals, fruiting pedicels ascending at 30-50° (versus 50-90°) angles, and broadly ellipsoid to broadly obovoid (versus ellipsoid) fruits. G. A. Mulligan and J. A. Calder (1964) indicated that plants slightly intermediate between the two subspecies grow sporadically in North America, and it is not known whether they represent hybrids."

***Teesdalia*** [FNA7, HC, HC2]

Hortus Kew. 4: 83. 1812.

shepherd's cress

***Teesdalia nudicaulis*** (L.) W.T. Aiton [FNA7, HC, HC2]

Hortus Kew. 4: 83. 1812.

shepherd's cress

***Iberis nudicaulis*** L.

here we follow Rollins (1993b) and use (L.) R. Brown in W. T. Aiton as the authority, not (L.) Ait. f. as in KZ99

***Thelypodium*** [FNA7, HC, HC2]

Gen. Pl. 11: 876. 1839.

thelypody

(see also *Caulanthus*)

***Thelypodium howellii*** S. Watson [FNA7, HC, HC2]

Proc. Amer. Acad. Arts. 21: 445. 1886.

Howell's thelypody

ssp. ***howellii*** [FNA7, HC2]

Proc. Amer. Acad. Arts. 21: 445.

Howell's thelypody

***Thelypodium integrifolium*** (Nutt.) Endl. [FNA7, HC, HC2]

Repert. Bot. Syst. 1: 172. 1842.

entire-leaved thelypody

ssp. ***integrifolium*** [FNA7, HC2]

entire-leaved thelypody

*Pleurophragma lilacinum* (Greene) Rydb.  
*Thelypodium lilacinum* Greene  
*Thelypodium lilacinum* Greene var. *subumbellatum* Payson

***Thelypodium laciniatum*** (Hook.) Endl. [FNA7, HC, HC2]

Repert. Bot. Syst. 1: 172. 1842.  
cut-leaf thelypody, thick-leaved thelypody  
(see also *Thelypodium milleflorum*)

*Thelypodium laciniatum* (Hook.) Endl. var. *laciniatum* [HC]  
*Thelypodium laciniatum* (Hook.) Endl. var. *streptanthoides* (Leiberg ex Piper) Payson [HC]

***Thelypodium milleflorum*** A. Nelson [FNA7, HC2]

Bot. Gaz. 52: 263. 1911.  
many flowered thelypody

*Thelypodium laciniatum* (Hook.) Endl. var. *milleflorum* (A. Nelson) Payson [HC]

***Thelypodium sagittatum*** (Nutt.) Endl. [FNA7, HC, HC2]

Repert. Bot. Syst. 1: 172. 1842.  
slender thelypody

ssp. ***sagittatum*** [FNA7, HC2]

In W. G. Walpers, Repert. Bot. Syst. 1: 172.  
sagittate thelypody, slender thelypody

***Thlaspi*** [FNA7, HC, HC2]

Sp. Pl. 2: 645. 1753; Gen. Pl. ed. 5, 292. 1754.  
pennycress  
(see also *Microthlaspi*, *Noccaea*)

***Thlaspi arvense*** L. [FNA7, HC, HC2]

Sp. Pl. 2: 646. 1753.  
fanweed, field pennycress

*Teruncius arvensis* (L.) Lunell

FNA7: "Thlaspi arvense is a cosmopolitan weed of Eurasian origin."

\* Best, K. F. and G. K. McIntyre. 1975. The biology of Canadian weeds. 9. *Thlaspi arvense* L. Canad. J. Pl. Sci. 55: 279-292.

***Thysanocarpus*** [FNA7, HC, HC2]

Fl. Bor.-Amer. 1: 69, plate 18, fig. A. 1830.  
fringedpod, lacepod

***Thysanocarpus curvipes*** Hook. [FNA7, HC, HC2]

Fl. Bor.-Amer. 1: 69, plate 18, fig. A. 1830.  
sand fringedpod, lacepod

*Thysanocarpus curvipes* Hook. var. *elegans* (Fisch. & C.A. Mey.) B.L. Rob. [Peck]

*Thysanocarpus curvipes* Hook. var. *longistylus* Jeps. [Abrams]

FNA7: "Thysanocarpus curvipes is the most widespread and variable species in the genus. Variants have been named as varieties or species, but they grade into each other imperceptibly. Notable among these are var. *elegans*, a form with incised or perforate fruit wings, and var. *eradiatus*, a form with rayless, entire wings. Some of these may be the result of hybridization with other taxa. For instance, var. *elegans* has large fruits and occurs in the vicinity of *T. radians*, the largest-fruited member of the genus. Furthermore, fruits of var. *elegans* often have pointed hairs like those usually found on fruits of *T. radians*; such hairs are not found on fruits of any other members of the genus. *Thysanocarpus curvipes* includes both diploid and tetraploid populations (M. D. Windham, unpubl.), but these do not appear to segregate into recognizable groups. Although the variation in *T. curvipes* is considerable, its great complexity prevents recognition of infraspecific taxa at this time."

***Turritis*** [FNA7, HC2]

Sp. Pl. 2: 666. 1753; Gen. Pl. ed. 5, 298. 1754.

towermustard

***Turrilis glabra* L.** [FNA7, HC2]

Sp. Pl. 2: 666. 1753.

tower mustard

*Arabis glabra* (L.) Bernh. [HC]

*Arabis glabra* (L.) Bernh. var. *furcatipilis* M. Hopkins

*Arabis glabra* (L.) Bernh. var. *glabra* [ILBC2]

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## Buddlejaceae (see Scrophulariaceae)

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## Cabombaceae [FNA3, HC2] Watershield Family

**Synonyms:** (none)

H&C includes *Brasenia* in Nymphaeaceae

**References:** (none)

***Brasenia*** [FNA3, HC, HC2]

Gen. Pl. 1: 372. 1789 - Water-shield [for Christoph Brasen.,. 1738.

water-shield, water-target

***Brasenia schreberi*** J.F. Gmel. [FNA3, HC, HC2]

Syst. Nat. 1: 853. 1791.

watershield

***Cabomba*** [FNA3, HC2]

Hist. Pl. Guiane. 321. 1775.

***Cabomba caroliniana*** A. Gray [FNA3, HC2]

Ann. Lyceum Nat. Hist. New York. 4: 47. 1837.

fanwort

*Cabomba caroliniana* A. Gray var. *caroliniana* [KZ99]

*Cabomba caroliniana* A. Gray var. *pulcherrima* R.M. Harper

Not in H&C.

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## Cactaceae [FNA4, HC, HC2] Cactus Family

**Synonyms:** (none)

**References:**

- \* Butterworth, C. A., J. H. Conta Sanchez, and R. S. Wallace. 2002. Molecular systematics of tribe Cactaceae (Cactaceae: Cactoideae): a phylogeny based on rp/16 intron sequence variation. *Systematic Botany* 27: 257-270.
- \* Heil, K. D., B. Armstrong, and D. Schleser. 1981. A review of the genus *Pediocactus*. *Cactus and Succulent Journal* (Los Angeles) 53: 17-39.
- \* Hochstätter, F. 1995. The Genera *Pediocactus*, *Navajoa*, *Toumeyia*, Cactaceae, revised. Mannheim.
- \* Nyffeler, R. 2002. Phylogenetic relationships in the cactus family (Cactaceae) based on evidence from trn/matK and trnL-trnF sequences. *American Journal of Botany* 89: 312-326.

***Opuntia*** [FNA4, HC, HC2]

Gard. Dict. Abr., ed. 4. vol. 2. 1754.  
pricklypear cactus

***Opuntia columbiana*** Griffiths [FNA4, HC2]

Bull. Torrey Bot. Club. 43: 523. 1916 (as species).  
Columbia prickly pear

*Opuntia erinacea* Engelm. & J.M. Bigelow var. *columbiana* (Griffiths) L.D. Benson [KZ99]

*Opuntia polyacantha* Haw. [FNA4, HC, HC2], misapplied

*Opuntia polyacantha* Haw. var. *polyacantha* [FNA4, HC2], misapplied

Taxonomy follows FNA. The plants of southeastern Washington were called (in H&C) *O. polyacantha*, a species whose range FNA interprets as no closer than southern Idaho and Alberta. See H&C for a discussion of spine characters in the complex.

***Opuntia fragilis*** (Nutt.) Haw. [FNA4, HC, HC2]

Suppl. Pl. Succ. 82. 1819.  
brittle prickly-pear, little prickly-pear

*Opuntia fragilis* (Nutt.) Haw. var. *brachyarthro* (Engelm. & J.M. Bigelow) J.M. Coult. [KZ99]

*Opuntia fragilis* (Nutt.) Haw. var. *fragilis* [KZ99]

Found on islands in Puget Sound and also wide-ranging east of the Cascades, as far as the Great Lakes.

\* Benson, L. D. 1982. Cacti of the United States and Canada. Stanford.

***Pediocactus*** [FNA4, HC, HC2]

Ill. Fl. N. U.S. ed. 2. 2: 569, fig. 2983. 1913.  
ball cactus

***Pediocactus nigrispinus*** (Hochstätter) Hochstätter [FNA4, HC2]

Succulenta (Netherlands). 71: 99. 1992.  
snowball cactus

*Pediocactus simpsonii* (Engelm.) Britton & Rose [FNA4, HC, HC2], misapplied

*Pediocactus simpsonii* var. *robustior* is the name H&C applies to the taxon found in Washington. FNA Volume 4 treats this taxon as not occurring in Washington, therefore the name *P. simpsonii* var. *robustior* is considered misapplied to plants in Washington.

ssp. ***nigrispinus*** [HC2]

dark-spine ball cactus

*Pediocactus simpsonii* (Englemann) Britton & Rose var. *nigrispinus* Hochstätter

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## Callitrichaceae (see Plantaginaceae)

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## Calycanthaceae [FNA3] Sweetshrub Family

**Synonyms:** (none)

Not present in WA. See Excluded Taxa list for sole representative of this family attributed to the state.

**References:** (none)

***Calycanthus*** [FNA3]

Syst. Nat. ed. 10. 2: 1066. 1759.

*Calycanthus occidentalis* Hook. & Arn. [FNA3]

Bot. Beechey Voy. 340, plate 84. 1841.

California spicebush, western sweetshrub

*Butneria occidentalis* (Hook. & Arn.) Greene

The report from Klickitat County is based on a cultivated specimen collected by Suksdorf from his garden at Bingen (voucher at WS). The report from Seattle (FNA3) is based a garden escapee (Frank Callahan, pers. comm.) According to FNA3, "*Calycanthus occidentalis* grows in the northern Coast Range, the southern Cascades Range, and the western Sierra Nevada." It occurs only as far north as Jackson County, Oregon (voucher at OSC).

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## Campanulaceae [HC, HC2] Bellflower Family

**Synonyms:** (none)

**References:** (none)

### *Campanula* [HC, HC2]

bellflower, harebell

#### *Campanula aparinoides* Pursh

marsh bellflower

*Campanula aparinoides* Pursh var. *grandiflora* Holz.

*Campanula aparinoides* Pursh var. *uliginosa* (Rydb.) Gleason

*Campanula uliginosa* Rydb.

This taxa not in any of our regional floras. It is in Gleason and Cronquist as an E. NA species. Wa record based on Torrey, 1940. Occurrence in Wa. must be questioned.

#### *Campanula glomerata* L. [HC2]

clustered bellflower

#### *Campanula lasiocarpa* Cham. [HC, HC2]

Linnaea 4: 39.

Alaska bellflower, Alaska harebell

*Campanula lasiocarpa* Cham. ssp. *latisepala* (Hultén) Hultén

#### *Campanula medium* L. [HC, HC2]

Canterbury bells

#### *Campanula parryi* A. Gray [HC, HC2]

Parry's bellflower, Parry's harebell

#### var. *idahoensis* McVaugh [HC, HC2]

Bull. Torrey Bot. Club 69(3): 241-243.

Parry's harebell

#### *Campanula persicifolia* L. [HC, HC2]

Sp. Pl. 1: 164.

peach-leaf bellflower

*Campanula persicifolia* L. var. *alba* hort.

#### *Campanula piperi* Howell [HC, HC2]

Fl. N.W. Amer. 4: 409.

Olympic bellflower

#### *Campanula rapunculooides* L. [HC, HC2]

Sp. Pl. 1: 165.

creeping bellflower, rover harebell

#### *Campanula rotundifolia* L. [HC, HC2]

Sp. Pl. 1: 163.

bluebell-of-scotland

Historically, a vast array of infraspecific taxa have been published for *C. rotundifolia*, too many to list here. Recognition of these infraspecific taxa has largely been abandoned in North America.

***Campanula scabrella*** Engelm. [HC, HC2]

Bot. Gaz. 6(7): 237-238.

rough bellflower, rough harebell

***Campanula scouleri*** Hook. ex A. DC. [HC, HC2]

Monogr. Campan. 312.

pale bellflower

***Downingia*** [HC, HC2]

downingia

***Downingia bacigalupii*** Weiler [HC2]

Bach's downingia

***Downingia elegans*** (Douglas ex Lindl.) Torr. [HC, HC2]

U.S. Expl. Exped. 17(2): 375.

common downingia

*Downingia elegans* (Douglas ex Lindl.) Torr. var. *brachypetala* (Gand.) McVaugh [KZ99]

*Downingia elegans* (Douglas ex Lindl.) Torr. var. *corymbosa* (A. DC.) A. Gray

*Downingia elegans* (Douglas ex Lindl.) Torr. var. *elegans* [KZ99]

***Downingia pulcherrima*** M. Peck [HC2]

showy downingia

***Downingia willamettensis*** M. Peck [HC2]

Willamette downingia

*Downingia yina* Applegate var. *major* McVaugh [HC]

***Githopsis*** [HC, HC2]

blue-cup

***Githopsis specularioides*** Nutt. [HC, HC2]

Trans. Amer. Philos. Soc., n.s., 8: 258 [1842].

common bluecup

*Githopsis calycina* Benth.

*Githopsis specularioides* Nutt. var. *hirsuta* Nutt.

***Heterocodon*** [HC, HC2]

heterocodon

***Heterocodon rariflorus*** Nutt. [HC2]

western pearlflower

*Heterocodon rariflorum* Nutt. [HC], orthographic variant

*Specularia rariflora* (Nutt.) McVaugh

***Howellia*** [HC, HC2]

water howellia

***Howellia aquatilis*** A. Gray [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 15(1): 43-44.

water Howellwort

***Jasione*** [HC2]

sheep's bit

***Jasione montana*** L. [HC2]

mountain sheep's bit

**Lobelia** [HC, HC2]

lobelia

**Lobelia dortmanna** L. [HC, HC2]

Sp. Pl. 2: 929.  
water lobelia

**Lobelia erinus** L. [HC2]

trailing lobelia

**Lobelia kalmii** L. [HC, HC2]

Sp. Pl. 2: 930.  
brook lobelia

**Phyteuma** [HC2]

**Phyteuma scorzonerifolium** Vill. [HC2]

Hist. Pl. Dauphiné 2: 519.

Single collection in 2012 from Mt. Baker-Snoqualmie National Forest in King County, WA.

**Triodanis** [HC, HC2]

Venus's looking-glass

**Triodanis perfoliata** (L.) Nieuwl. [HC, HC2]

Amer. Midl. Naturalist 3(7): 192.  
clasping-leaf Venus'-looking-glass

*Legousia perfoliata* (L.) Britton  
*Specularia perfoliata* (L.) A. DC.

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## Cannabaceae [FNA3, HC2] Hemp Family

**Synonyms:** (none)

FNA3: "Genera in Cannabaceae have sometimes been included in Moraceae (H. A. Gleason 1968); M. L. Fernald (1950) placed them in a separate family, Cannabinaceae. Cannabaceae are wind pollinated. They are indigenous to the temperate Northern Hemisphere, widely cultivated, often introduced, and often ruderal."

**References:**

\* Sytsma et al. 2002 Amer. J. Bot. 89:1531?1546.

**Cannabis** [FNA3, HC, HC2]

Sp. Pl. 2: 1027. 1753; Gen. Pl. ed. 5, 453, 1754.  
cannabis, hemp, marijuana

**Cannabis sativa** L. [FNA3, HC, HC2]

Sp. Pl. 2: 1027. 1753.  
hemp, marihuana

Under Moraceae in H&C.

**Celtis** [FNA3, HC, HC2]

Sp. Pl. 2: 1043. 1753; Gen. Pl. ed. 5, 467, 1754.  
hackberry

**Celtis reticulata** Torr. [FNA3, HC, HC2]

Ann. Lyceum Nat. Hist. New York. 2: 247. 1828.  
netleaf hackberry

*Celtis douglasii* Planch.

*Celtis laevigata* Willd. var. *reticulata* (Torr.) L.D. Benson [KZ99]

*Celtis occidentalis* L. var. *reticulata* (Torr.) Sarg.

***Humulus*** [FNA3, HC, HC2]

Sp. Pl. 2: 1028. 1753; Gen. Pl. ed. 5, 453, 1754.  
hop

***Humulus lupulus*** L. [FNA3, HC, HC2]

Sp. Pl. 2: 1028. 1753.

var. *lupuloides* E. Small [FNA3, HC2]

Syst. Bot. 3: 63. 1978.

var. *neomexicanus* A. Nelson & Cockerell [FNA3, HC2]

Proc. Biol. Soc. Wash. 16: 45. 1903.

hops

Under Moraceae in H&C

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## Caprifoliaceae [HC, HC2] Honeysuckle Family

**Synonyms:** (none)

**References:** (none)

***Lonicera*** [HC, HC2]

honeysuckle

***Lonicera xbella*** Zabel [HC2]

showy fly honeysuckle

***Lonicera cauriana*** Fernald [HC2]

Rhodora 27(313): 10?11.

bluefly honeysuckle, sweet-berry honeysuckle

*Lonicera caerulea* L. var. *cauriana* (Fernald) B. Boivin [KZ99]

Type for *L. caerulea* var. *cauriana* a Suksdorf collection.

***Lonicera ciliosa*** (Pursh) Poir. ex DC. [HC, HC2]

Prodr. 4: 333.

orange honeysuckle

***Lonicera conjugialis*** Kellogg [HC, HC2]

Proceedings of the California Academy of Sciences 2: 67-69, f. 15.

purple-flower honeysuckle

***Lonicera etrusca*** Santi [HC, HC2]

Viaggio al Montamiata...Pisa 113, pl. 1.

Etruscan honeysuckle

Native to the Mediterranean.

***Lonicera hispidula*** (Lindl.) Douglas ex Torr. & A. Gray [HC, HC2, JPM2]

Fl. N. Amer. 2(1): 8.

hairy honeysuckle

*Lonicera hispidula* (Lindl.) Dougl. ex Torr. & Gray var. *californica* Jeps. [JPM]

***Lonicera involucrata*** (Richardson) Banks ex Spreng. [HC, HC2, VPBC1]

bearberry honeysuckle, black twin-berry

*Distegia involucrata* (Richardson) Cockerell

*Xylosteon involucratum* Richardson

var. ***involucrata*** [HC, HC2, JPM2]

Syst. Veg. 1: 759.  
bearberry, black twin-berry, twinberry

*Lonicera involucrata* (Richardson) Banks ex Spreng. var. *flavescens* (Dippel) Rehder

*Lonicera japonica* Thunb. [HC2, JPM2]

Systema Vegetabilium.  
Japanese honeysuckle

*Lonicera maackii* (Rupr.) Herder [HC2]

Amur honeysuckle

*Lonicera periclymenum* L. [HC2]

Sp. Pl. 1: 173.  
woodbine

*Lonicera pileata* Oliv. [HC2]

*Lonicera tatarica* L. [HC2]

Sp. Pl. 1: 173-174.  
Tartarian honeysuckle

Reported by Curtis Bjork as becoming common in E. Washington along the Spokane R. Fred Weinmann reports the hybrid *L. X bella* persists at Juanita Bay Park in Kirkland WA.

*Lonicera utahensis* S. Watson [HC, HC2]

United States Geological Exploration [sic] of the Fortieth Parallel. Botany 133.  
Rocky Mountain honeysuckle, Utah honeysuckle

*Lonicera ebractulata*

*Lonicera xylosteum* L. [HC2]

European fly honeysuckle

***Symphoricarpos*** [HC, HC2]

snowberry

***Symphoricarpos albus*** (L.) S.F. Blake [HC, HC2]

common snowberry

var. ***albus*** [HC, HC2]

Rhodora 16(187): 118.  
common snowberry

*Symphoricarpos albus* (L.) S.F. Blake var. *pauciflorus* (W.J. Rob. ex A. Gray) S.F. Blake  
*Symphoricarpos pauciflorus* W.J. Rob. ex A. Gray  
*Symphoricarpos racemosus* Michx.

var. ***albus*** [HC, HC2], misapplied

Rhodora 16(187): 118.  
common snowberry

*Symphoricarpos albus* (L.) S.F. Blake var. *pauciflorus* (W.J. Rob. ex A. Gray) S.F. Blake  
*Symphoricarpos pauciflorus* W.J. Rob. ex A. Gray  
*Symphoricarpos racemosus* Michx.

var. ***laevigatus*** (Fernald) S.F. Blake [HC, HC2, JPM2]

Rhodora 16(187): 119.  
common snowberry

*Symphoricarpos albus* (L.) S.F. Blake ssp. *laevigatus* (Fernald) Hultén  
*Symphoricarpos rivularis* Suksd.

***Symphoricarpos mollis*** Nutt. [HC, HC2]

Fl. N. Amer. 2(1): 4.  
creeping snowberry

var. ***hesperius*** (G.N. Jones) Cronquist [HC, HC2]

Vasc. Pl. Pacific N.W. 4: 465.

creeping snowberry, spreading snowberry

*Symphoricarpos hesperius* G.N. Jones

*Symphoricarpos mollis* Nutt. ssp. *hesperius* (G.N. Jones) Abrams ex Ferris

H&C recognize the variety *hesperius*, as does the draft FNA treatment. The Jepson Manual 2nd Edition does not recognize infraspecific taxa for this species.

***Symphoricarpos occidentalis*** Hook. [HC, HC2]

Fl. Bor.-Amer. 1: 285.

western snowberry, wolfberry

***Symphoricarpos rotundifolius*** A. Gray [HC2]

mountain snowberry

var. ***vaccinioides*** (Rydb.) A. Nelson [HC2]

mountain snowberry

*Symphoricarpos rotundifolius* A. Gray var. *vaccinioides* (Rydb.) A. Nelson [Draft FNA, JPM2], orthographic variant

Here we follow the recent treatments in the Jepson Manual, 2nd edition and the upcoming treatment in FNA. Draft FNA: "*Symphoricarpos rotundifolius*, according to the broadest circumscription (accepted here), is a widespread and variable complex comprising four relatively well distinguished varieties. Indument characters have often been relied upon in the circumscription of taxa. However, the presence and morphology of trichomes varies within all four varieties of *S. rotundifolius*, and the geographic distributions of indument types are complicated and overlapping. Corolla morphology offers more reliable features. Intermediate specimens not classifiable to variety, even in flower, do exist. A few specimens have been identified, based on morphological intermediacy, as possible hybrids between *S. rotundifolius* varieties and other sympatric species, including *S. albus*, *S. longifolius*, and *S. mollis*. Variety *vaccinioides* is very often labeled *Symphoricarpos oreophilus* var. *utahensis* in herbaria and in floristic literature; however, the type of the latter name is referable to *S. rotundifolius* var. *oreophilus*."

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## Caryophyllaceae [FNA5, HC, HC2] Pink Family

**Synonyms:** (none)

The treatment here follows Flora of North America, Volume 5.

**References:** (none)

***Agrostemma*** [FNA5, HC, HC2]

Sp. Pl. 1: 435. 1753. Gen. Pl. ed. 5, 198. 1754.

corn campion, corncockle

***Agrostemma githago*** L. [FNA5, HC, HC2]

Sp. Pl. 1: 435. 1753.

common corncockle

*Lynchnis githago* (L.) Scop.

var. *githago* [FNA5, HC2]

***Arenaria*** [FNA5, HC, HC2]

Sp. Pl. 1: 423. 1753. Gen. Pl. ed. 5, 193. 1754.

sandwort

(see also *Cherleria*, *Eremogone*, *Moehringia*, *Sabulina*)

***Arenaria paludicola*** B.L. Rob. [FNA5, HC, HC2]

Proc. Amer. Acad. Arts. 29: 298. 1894.

marsh sandwort

*Alsine palustris* Kellogg  
*Minuartia paludicola* (B.L. Rob.) House

Extirpated in WA, WDNR [KZ]. FNA: "Arenaria paludicola is federally listed as endangered, and now is known only from a few sites in San Luis Obispo County; urban development and resultant habitat conversion have impacted it significantly. Historical collections of *A. paludicola* are known from other areas of the California coast and from Washington."

***Arenaria serpyllifolia* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 423. 1753.  
thyme-leaf sandwort

**var. *serpyllifolia* [FNA5, HC2]**

Sp. Pl. 1: 423.  
thyme-leaf sandwort

*Arenaria serpyllifolia* L. ssp. *serpyllifolia* [FMR]

FNA shows *A. serpyllifolia* var. *tenuior* is not reported from WA, but states it "is to be expected elsewhere" than the states listed.

***Atocion* [HC2]**

catchfly

***Atocion armeria* (L.) Raf. [HC2]**

sweet William catchfly

*Silene armeria* L. [FNA5, HC]

FNA5: "The long-tubular, clavate calyx enclosing the unusually long carpophore helps to distinguish *Silene armeria*. It is an occasional and adventive garden escape."

***Cardionema* [FNA5, HC, HC2]**

Prodr. 3: 372. 1828.  
sandmat

***Cardionema ramosissima* (Weinm.) A. Nelson & J.F. Macbr. [FNA5, HC, HC2]**

Bot. Gaz. 56: 473. 1913.  
sandcarpet, sandmat

*Cardionema ramosissimum* (Weinm.) A. Nelson & J.F. Macbr., orthographic variant  
*Loeflingia ramosissima* Weinm.

***Cerastium* [FNA5, HC, HC2]**

Sp. Pl. 1: 437. 1753. Gen. Pl. ed. 5. 199. 1754.  
cerastium, chickweed, mouse-ear chickweed  
(see also *Dichodon*)

***Cerastium arvense* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 438. 1753.  
starry cerastium, field chickweed, field mouse-ear chickweed

**ssp. *strictum* Gaudin [FNA5, HC2]**

Fl. Helv. 3: 245. 1828.  
field chickweed

H&C (1973) & JPM (1993) do not provide description of ssp. *strictum*. See FNA Volume 5 for extensive description of *C. arvense* ssp. *strictum* regarding plasticity of growth, distribution, and lack of interfertility with *C. arvense* ssp. *arvense*, and *C. beeringianum*.

***Cerastium beeringianum* Cham. & Schltld. [FNA5, HC, HC2]**

Linnaea. 1: 62. 1826.  
alpine chickweed

*Cerastium alpinum* L. var. *beeringianum* Regel

*Cerastium alpinum* L. var. *capillare* (Fernald & Wiegand) B. Boivin

*Cerastium beeringianum* Cham. & Schltld. ssp. *beeringianum* [KZ99]

*Cerastium beeringianum* Cham. & Schltld. ssp. *earlei* (Rydb.) Hultén [KZ99]  
*Cerastium beeringianum* Cham. & Schltld. var. *capillare* Fernald & Wiegand [JPM]  
*Cerastium beeringianum* Cham. & Schltld. var. *glabratum* Hultén  
*Cerastium beeringianum* Cham. & Schltld. var. *grandiflorum* Hultén  
*Cerastium beeringianum* Cham. & Schltld. [HC], orthographic variant  
*Cerastium buffumiae* A. Nelson  
*Cerastium earlei* Rydb.  
*Cerastium fischerianum* Ser. ex DC. var. *beeringianum* (Cham. & Schltld.) Hultén  
*Cerastium pilosum* Greene, homonym (illegitimate)  
*Cerastium pulchellum* Rydb.  
*Cerastium scammariae* Polunin  
*Cerastium variabile* Goodd.  
*Cerastium vulgatum* L. var. *beeringianum* (Cham. & Schltld.) Fenzl

Rare in WA; difficult to distinguish from dwarf mountain forms of *C. arvense*. FNA5: "Cerastium beeringianum is distinguished from *C. alpinum* by the absence of the long, silvery, flexuous, translucent, glistening hairs of that species. Cerastium beeringianum's pubescence consists of straight, strigose, multicellular, somewhat fuscous hairs of several lengths, many of those in the mid and distal stem and inflorescence being glandular and viscid. The nodes and the leaves, at least in the mid and distal stem, typically have long, strigose, eglandular, fuscous hairs; those on the adaxial surface of the leaf being appressed, and those on the nodes retrorse. However, plants from the many small, isolated populations on the mountains of western North America show a great deal of variation. Some of these populations tend to be subglabrous, lacking most of the long hairs normally found on this species. Others are small, delicate plants with slender divaricate pedicels and smaller capsules and seeds. Though names have been given to several of these variants, they frequently intergrade, and much of the variation is greatly influenced by the environment."

*Cerastium brachypetalum* Pers. [FNA5, HC2]

Syn. Pl. 1: 520. 1805.  
gray chickweed, gray mouse ear

*Cerastium brachypetalum* Pers. ssp. *brachypetalum*  
*Cerastium brachypetalum* Pers. var. *tauricum* (Spreng.) Murbeck  
*Cerastium tauricum* Spreng.

Recently collected in Asotin Co. FNA5:"The wholly herbaceous bracts of *Cerastium brachypetalum* distinguish it from *C. fontanum* subsp. *vulgare*, *C. semidecandrum*, and *C. pumilum*; the ciliate petal and filament bases distinguish it from *C. diffusum* and *C. glomeratum*. *Cerastium brachypetalum* differs from all those species in the long, silvery hairs that give it a grayish appearance. In Europe *C. brachypetalum* is more variable and eight subspecies have been recognized, two of which?subsp. *brachypetalum* and subsp. *tauricum*?occur in North America. However, they differ only in the absence or presence of glandular hairs, an insufficient distinction for recognition at the subspecific level."

*Cerastium brachypodum* (Engelm. ex A. Gray) B.L. Rob. [FNA5, HC2]

Mem. Torrey Bot. Club 5. (Sig. 10): 150. 27 Apr 1894.  
short-stalk mouse-ear chickweed

*Cerastium adsurgens* Greene  
*Cerastium brachypodum* (Engelm. ex A. Gray) B.L. Rob. var. *compactum* B.L. Rob.  
*Cerastium nutans* Raf. var. *brachypodum* Engelm. ex A. Gray

*Cerastium brachypodum* is closely related to *C. nutans*, and has been reported from WA in Fernald (1950) and Kz99. A specimen was recently collected from Lincoln County, confirming its presence in the state. Not differentiated from *C. nutans* in HC.

*Cerastium dichotomum* L. [FNA5, HC2]

Sp. Pl. 1: 438. 1753.  
dry chickweed

*Cerastium siculum* Guss. [HC], misapplied

FNA5: "Cerastium dichotomum is a rare weed of arable land and roadsides."

*Cerastium fontanum* Baumg. [FNA5, HC2]

Enum. Stirp. Transsilv. 1: 425. 1816.  
common mouse-ear chickweed

*spp. vulgare* (Hartm.) Greuter & Burdet [FNA5, HC2]

Willdenowia. 12: 37. 1982.  
common chickweed, mouse-ear chickweed

*Cerastium caespitosum* Gilib.  
*Cerastium fontanum* Baumg. ssp. *triviale* (Link) J alas  
*Cerastium triviale* Link  
*Cerastium vulgare* Hartm.  
*Cerastium vulgatum* L. [HC]  
*Cerastium vulgatum* L. var. *hirsutum* Fr.

*Cerastium glomeratum* Thuill. [FNA5, HC2]

Fl. Env. Paris, ed. 2. 226. 1799.  
sticky mouse-ear chickweed

*Cerastium acutatum* Suksd.  
*Cerastium fulvum* Raf.  
*Cerastium viscosum* L. [HC]

HC name misapplied [JPM]

*Cerastium nutans* Raf. [FNA5, HC, HC2]

Précis Découv. Somiol. 36. 1814.  
nodding mouse-ear chickweed

var. *nutans* [FNA5, HC2]

Précis Découv. Somiol. 36.  
nodding chickweed

*Cerastium longipedunculatum* Muhl. ex Britton  
*Cerastium nutans* Raf. var. *occidentale* B. Boivin

*Cerastium brachypodum* is closely related to *C. nutans*, and is reported from WA in Fernald (1950) and Kz99, but no supporting vouchers have been found.

*Cerastium pumilum* Curtis [FNA5, HC2]

Fl. Londin. 2(6,69): plate 30. 1794.  
dwarf chickweed, dwarf mouse ear

*Cerastium glutinosum* Fr.  
*Cerastium pumilum* Curtis ssp. *glutinosum* (Fr.) J alas

Recently collected in several counties (Zika 2002). A good key to the introduced species can be found in Stace (1997).

\* <b>Stace 1997</b> = Stace, C. 1997. New Flora of the British Isles. Second Edition. Cambridge University Press, Cambridge, UK. 1130 p.

\* Zika, P. F. 2002. Noteworthy collections, Oregon and Washington. Madroño 49: 195-197.

*Cerastium semidecandrum* L. [FNA5, HC, HC2]

Sp. Pl. 1: 438. 1753.  
little chickweed, little mouse ear

Widespread on beaches and riverbanks, often overlooked

*Cerastium tomentosum* L. [FNA5, HC2]

Sp. Pl. 1: 440. 1753.  
snow-in-summer

*Cherleria* [HC2]

sandwort

*Cherleria biflora* (L.) A. J. Moore & Dillenb. [HC2]

two-flowered sandwort

*Minuartia biflora* (L.) Schinz & Thell. [FNA5]

***Cherleria obtusiloba*** (Rydb.) A. J. Moore & Dillenb. [HC2]

alpine sandwort

*Arenaria obtusiloba* (Rydb.) Fernald [HC]

*Minuartia obtusiloba* (Rydb.) House [FNA5]

***Corrigiola*** [FNA5, HC, HC2]

Sp. Pl. 1: 271. 1753. Gen. Pl. ed. 5, 132. 1754.

strapwort

*Corrigiola litoralis* L. [FNA5, HC, HC2]

Sp. Pl. 1: 271. 1753.

ssp. *litoralis* [FNA5, HC2]

Sp. Pl. 1: 271. Gen. Pl. ed. 5, 132. 1754.

strapwort

Collected in Cowlitz County in 2013.

***Dianthus*** [FNA5, HC, HC2]

Sp. Pl. 1: 409. 1753. Gen. Pl. ed. 5, 191. 1754.

pink

*Dianthus armeria* L. [FNA5, HC, HC2]

Sp. Pl. 1: 410. 1753.

deptford pink

ssp. *armeria* [FNA5, HC2]

*Dianthus barbatus* L. [FNA5, HC, HC2]

Sp. Pl. 1: 409. 1753.

sweet William

ssp. *barbatus* [FNA5, HC2]

*Dianthus deltoides* L. [FNA5, HC, HC2]

Sp. Pl. 1: 411. 1753.

maiden pink

ssp. *deltoides* [FNA5, HC2]

***Dichodon*** [HC2]

mouse-ear chickweed

*Dichodon viscidum* (M. Bieb.) Holub [HC2]

doubtful mouse-ear chickweed

*Cerastium anomalum* Waldst. & Kit.

*Cerastium dubium* (Bastard) Guépin [FNA5, HC]

*Stellaria dubia* Bastard

Shildneck, P. and A. G. Jones. 1986. *Cerastium dubium* (Caryophyllaceae) new for the eastern half of North America (a comparison with sympatric *Cerastium* species, including cytological data). *Castanea* 51: 49-55.

***Eremogone*** [FNA5, HC2]

Vers. Darstell. Alsin. 13, unnumbered plate. 1833.

sandwort

*Eremogone aculeata* (S. Watson) Ikonn. [FNA5, HC2]

Novosti Sist. Vyssh. Rast. 10: 139. 1973.

needle-leaf sandwort, prickly sandwort

*Arenaria aculeata* S. Watson [HC]

*Arenaria fendleri* A. Gray var. *aculeata* (S. Watson) S.L. Welsh

*Arenaria pumicola* Coville & Leiberger var. *californica* Maguire

[FNA lists *Eremogone aculeata* as present in Washington. WTU has specimens from OR, ID, and MT but none from WA. Examination of specimens from closely related taxa for possible misidentifications is warranted.

***Eremogone capillaris* (Poir.) Fenzl [FNA5, HC2]**

Vers. Darstell. Alsin. 37. 1833.

mountain sandwort, thread-leaved sandwort

*Arenaria capillaris* Poir. [HC]

var. ***americana* (Maguire) R.L. Hartm. & Rabeler [FNA5, HC2]**

Sida. 21: 239. 2004.

fescue sandwort, thread-leaved sandwort

*Arenaria capillaris* Poir. ssp. *americana* Maguire [KZ99]

*Arenaria capillaris* Poir. var. *americana* (Maguire) R.J. Davis [HC]

*Eremogone americana* (Maguire) Ikonn.

*Arenaria nardifolia* [misapplied, HC]

***Eremogone congesta* (Nutt.) Ikonn. [FNA5, HC2]**

Novosti Syst. Vyssh. Rast. 10: 139. 1973.

ballhead sandwort, capitate sandwort

*Arenaria congesta* Nutt. [HC]

var. ***cephaloidea* (Rydb.) R.L. Hartm. & Rabeler [FNA5, HC2]**

Sida. 21: 239. 2004.

ballhead sandwort, sharptip sandwort

*Arenaria cephaloidea* Rydb.

*Arenaria congesta* Nutt. var. *cephaloidea* (Rydb.) Maguire [HC]

var. ***congesta* [FNA5, HC2]**

Novosti Syst. Vyssh. Rast. 10: 139.

ballhead sandwort

*Arenaria congesta* Nutt. var. *congesta* [HC]

var. ***prolifera* (Maguire) R.L. Hartm. & Rabeler [FNA5, HC2]**

Sida. 21: 239. 2004.

ballhead sandwort

*Arenaria congesta* Nutt. var. *glandulifera* Maguire [HC]

*Arenaria congesta* Nutt. var. *prolifera* Maguire [HC]

***Eremogone franklinii* (Douglas ex Hook.) R.L. Hartm. & Rabeler [FNA5, HC2]**

Sida. 21: 240. 2004.

*Arenaria franklinii* Douglas ex Hook. [HC]

var. ***franklinii* [FNA5, HC2]**

Sida. 21: 240.

Franklin's sandwort

*Arenaria franklinii* Douglas ex Hook. var. *franklinii* [HC]

var. ***thompsonii* (M. Peck) R.L. Hartm. & Rabeler [FNA5, HC2]**

Sida. 21: 240. 2004.

Thompson's sandwort

*Arenaria franklinii* Douglas ex Hook. var. *thompsonii* M. Peck [HC]

Variety *thompsonii*, at one time known only from the type (Gilliam County, Oregon), was documented in the 1980s in Benton County, Washington.

***Gypsophila* [FNA5, HC, HC2]**

Sp. Pl. 1: 406. 1753. Gen. Pl. ed. 5, 191. 1754.

baby's-breath

*Gypsophila paniculata* L. [FNA5, HC, HC2]

Sp. Pl. 1: 407. 1753.

baby's breath

State Listed Noxious Weed

***Herniaria*** [FNA5, HC2]

Sp. Pl. 1: 218. 1753. Gen. Pl. ed. 5, 103. 1754.

rupturewort

*Herniaria hirsuta* L. [FNA5, HC2]

Sp. Pl. 1: 218. 1753.

hairy rupturewort

Recently (2016) collected in Spokane and Pierce counties, WA.

var. *cinerea* (DC.) Loret & Barrandon [FNA5, HC2]

Fl. Montpellier. 243. 1876.

***Holosteum*** [FNA5, HC, HC2]

Sp. Pl. 1: 88. 1753. Gen. Pl. ed. 5, 39. 1754.

jagged chickweed

*Holosteum umbellatum* L. [FNA5, HC, HC2]

Sp. Pl. 1: 88. 1753.

jagged-chickweed

FNA5: "The first collection from the western United States was made in 1926 and the species has since spread to various disturbed sites in the Pacific Northwest. Several plants in two recent collections from Oregon (e.g., Joyal 463, OSC) are infected with an ovary smut (*Microbotryum* sp.), the first evidence of such infection on *Holosteum* in North America known to us."

ssp. *umbellatum* [FNA5, HC2]

***Honckenya*** [FNA5, HC2]

Neues Mag. Aerzte. 5: 206. 1783.

sea purslane, seabeach sandwort

*Honkenya* [HC], orthographic variant

***Honckenya peploides*** (L.) Ehrh. [FNA5, HC2]

Neues Mag. Aerzte. 5: 206. 1783.

*Honkenya peploides* L. [HC], orthographic variant

ssp. ***major*** (Hook.) Hultén [FNA5, HC2]

Fl. Aleut. Isl. 171. 1937.

sea purslane

*Arenaria peploides* L. ssp. *major* (Hook.) Calder & Roy L. Taylor

*Arenaria peploides* L. var. *major* Hook.

*Arenaria peploides* L. var. *maxima* Fernald

*Arenaria peploides* L. var. *oblongifolia* (Torr. & A. Gray) S. Watson

*Honckenya oblongifolia* Torr. & A. Gray

*Honckenya peploides* (L.) Ehrh. var. *major* (Hook.) Abrams

***Lepyrodiclis*** [FNA5, HC2]

Gen. Pl. 13: 966. 1840.

false jagged-chickweed

*Lepyrodiclis holosteoides* (C.A. Mey.) Fenzl ex Fisch. & C.A. Mey. [FNA5, HC2]

Enum. Pl. Nov. 1: 93, 110. 1841.

False jagged-chickweed

*Gouffeia holosteoides* C.A. Mey.

**Loeflingia** [FNA5, HC, HC2]

Sp. Pl. 1: 35. 1753. Gen. Pl. ed. 5, 22. 1754.  
loeflingia, pygmyleaf

**Loeflingia squarrosa** Nutt. [FNA5, HC, HC2]

Fl. N. Amer. 1: 174. 1838.  
spreading pygmyleaf

*Loeflingia pusilla* Curran

*Loeflingia squarrosa* Nutt. ssp. *artemisiarum* Barneby & Twisselm.

*Loeflingia squarrosa* Nutt. ssp. *cactorum* Barneby & Twisselm.

*Loeflingia squarrosa* Nutt. ssp. *texana* (Hook.) Barneby & Twisselm.

*Loeflingia squarrosa* Nutt. var. *artemisiarum* (Barneby & Twisselm.) Dorn

*Loeflingia texana* Hook.

Rare, WNDR. FNA5 (Hartman and Rabeler): "R. C. Barneby and E. C. Twisselmann (1970) recognized four subspecies of *Loeflingia squarrosa*, for the most part allopatric. After a reevaluation of the characters used in their key, we feel that those entities are best regarded as geographical races of the species. This is justified largely by both the overlap in expressions of and the lack of correlation of the characters."

**Lychnis** [HC, HC2]

campion  
(see also *Silene*)

**Lychnis coronaria** (L.) Desr. [HC, HC2]

rose campion

*Agrostemma coronaria* L.

*Silene coronaria* (L.) Clairville [FNA5]

FNA5: "Silene coronaria is commonly cultivated and occasionally escapes."

**Moehringia** [FNA5, HC2]

Sp. Pl. 1: 359. 1753. Gen. Pl. ed. 5, 170. 1754.  
sandwort

**Moehringia lateriflora** (L.) Fenzl [FNA5, HC2]

Vers. Darstell. Alsin. 18, 38. 1833.  
blunt-leaf sandwort, bluntnose sandwort

*Arenaria lateriflora* L. [HC]

*Arenaria lateriflora* L. var. *angustifolia* H. St. John

*Arenaria lateriflora* L. var. *lateriflora*

*Arenaria lateriflora* L. var. *taylorae* H. St. John

*Arenaria lateriflora* L. var. *tenuicaulis* Blank.

FNA5: "Four varieties of *Moehringia lateriflora* have been described based on variation in leaf width and pubescence; they have been little used, and the variation appears not to be correlated with geography."

**Moehringia macrophylla** (Hook.) Fenzl [FNA5, HC2]

Vers. Darstell. Alsin. 18, 38. 1833.  
large-leaf sandwort

*Arenaria macrophylla* Hook. [HC]

**Moenchia** [FNA5, HC2]

Neues Mag. Aerzte. 5: 203. 1783.  
[name conserved]  
upright chickweed

**Moenchia erecta** (L.) P. Gaertn., B. Mey. & Scherbius [FNA5, HC2]

Oekon. Fl. Wetterau. 1: 219. 1799.  
upright chickweed

*Sagina erecta* L.

*ssp. erecta* [FNA5, HC2]

***Myosoton*** [FNA5, HC2]

Methodus. 225. 1794.  
water chickweed

***Myosoton aquaticum*** (L.) Moench [FNA5, HC2]

Methodus. 225. 1794.  
giant chickweed, water chickweed

*Alsine aquatica* (L.) Britton

*Cerastium aquaticum* L.

*Stellaria aquatica* (L.) Scop. [HC]

Not in H&C. Known only from a collection in Spokane County in 1929.

***Polycarpon*** [FNA5, HC2]

Syst. Nat. ed. 10. 2: 859, 881, 1360. 1759. (as *Polycarpa*), 881, 1360. 1759.  
manyseed

***Polycarpon tetraphyllum*** (L.) L. [FNA5, HC2]

Syst. Nat. ed. 10. 2: 881. 1759.  
fourleaf manyseed

***ssp. tetraphyllum*** [FNA5, HC2]

fourleaf manyseed

Recently collected (2016) in the Ballard neighborhood in north Seattle, where well established as a weed along a several hundred meter stretch of road side. Also known from southwest British Columbia and western Oregon.

***Pseudostellaria*** [FNA5, HC2]

Nat. Pflanzenfam., ed. 2. 16c: 318. 1934.  
starwort

***Pseudostellaria jamesiana*** (Torr.) W.A. Weber & R.L. Hartm. [FNA5, HC2]

Phytologia. 44: 314. 1979.  
sticky-starwort

*Alsine glutinosa* A. Heller

*Arenaria jamesiana* (Torr.) Shinners

*Stellaria jamesiana* Torr. [HC]

***Sabulina*** [HC2]

sandwort

***Sabulina basaltica*** B.S. Legler [HC2], unpublished name

PhytoKeys 81: 79-102.  
basalt sandwort, Olympic sandwort

*Arenaria rossii* R. Br. ex Richardson [HC], misapplied

*Arenaria rossii* R. Br. ex Richardson var. *rossii* [HC], misapplied

*Minuartia elegans* (Cham. & Schltld.) Schischk. [FNA5], misapplied

*Minuartia rossii* (R. Br. ex Richardson) Graebn. [FNA5], misapplied

***Sabulina elegans*** (R. Br. ex Richardson) Dillenb. & Kadereit, misapplied

elegant stitchwort

(see also *Sabulina basaltica*, *Sabulina sororia*)

*Alsinanthe elegans* (Cham. & Schltld.) Á. Löve & D. Löve

*Arenaria elegans* Cham. & Schltld.

*Arenaria rossii* R. Br. ex Richardson ssp. *columbiana* (Raup) Maguire

*Arenaria rossii* R. Br. ex Richardson ssp. *elegans* (Cham. & Schltld.) Maguire

*Arenaria rossii* R. Br. ex Richardson var. *columbiana* Raup

*Arenaria rossii* R. Br. ex Richardson var. *elegans* (Cham. & Schltld.) S.L. Welsh

*Minuartia elegans* (Cham. & Schltld.) Schischk. [FNA5]  
*Minuartia rossii* (R. Br. ex Richardson) Graebn. ssp. *elegans* (Cham. & Schltld.) Rebristaya  
*Minuartia rossii* (R. Br. ex Richardson) Graebn. var. *elegans* (Cham. & Schltld.) Hultén

FNA5: "*Minuartia elegans* is a part of the *M. rossii* complex (S. J. Wolf et al. 1979), and is an amphi-Beringian species. The plants are tufted and are known in the flora area only from northwestern Canada and Alaska. Reports from the Pacific Northwest and southern Rocky Mountains likely are referable to *M. austromontana*." WTU specimens from Twin Sisters and the Olympics are definitely *M. elegans*, which is easily distinguished from *M. austromontana* by the presence of petals that are of equal and slightly greater length than the sepals. *M. austromontana* lacks or has only rudimentary petals, and has been collected frequently in Idaho and Montana. To date, no collections from Washington are known for *M. austromontana*.

***Sabulina elegans* (R. Br. ex Richardson) Dillenb. & Kadereit**

elegant stitchwort  
(see also *Sabulina basaltica*, *Sabulina sororia*)

*Alsinnanthe elegans* (Cham. & Schltld.) Á. Löve & D. Löve  
*Arenaria elegans* Cham. & Schltld.  
*Arenaria rossii* R. Br. ex Richardson ssp. *columbiana* (Raup) Maguire  
*Arenaria rossii* R. Br. ex Richardson ssp. *elegans* (Cham. & Schltld.) Maguire  
*Arenaria rossii* R. Br. ex Richardson var. *columbiana* Raup  
*Arenaria rossii* R. Br. ex Richardson var. *elegans* (Cham. & Schltld.) S.L. Welsh  
*Minuartia elegans* (Cham. & Schltld.) Schischk. [FNA5]  
*Minuartia rossii* (R. Br. ex Richardson) Graebn. ssp. *elegans* (Cham. & Schltld.) Rebristaya  
*Minuartia rossii* (R. Br. ex Richardson) Graebn. var. *elegans* (Cham. & Schltld.) Hultén

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***Sabulina macra* (A. Nelson & J.F. Macbr.) Dillenb. & Kadereit [HC2]**

slender sandwort, slender stitchwort

*Alsinoopsis tenella* (J. Gay) A. Heller  
*Arenaria macra* A. Nelson & J.F. Macbr.  
*Arenaria stricta* Michx. [HC]  
*Arenaria stricta* Michx. ssp. *macra* (A. Nelson & J.F. Macbr.) Maguire  
*Arenaria stricta* Michx. var. *puberulenta* (M. Peck) C.L. Hitchc. [HC]  
*Greniera tenella* J. Gay  
*Minuartia tenella* (J. Gay) Mattf. [FNA5]

Not in HC

***Sabulina nuttallii* (Pax) Dillenb. & Kadereit [HC2]**

Nuttall's sandwort

*Arenaria nuttallii* Pax [HC]  
*Minuartia nuttallii* (Pax) Briquet [FNA5]  
*Minuopsis nuttallii* (Pax) W.A. Weber

**var. *fragilis* (Maguire & A.H. Holmgren) Dillenb. & Kadereit [HC2]**

brittle sandwort, brittle stichwort

*Arenaria nuttallii* Pax ssp. *fragilis* Maguire & A.H. Holmgren  
*Arenaria nuttallii* Pax var. *fragilis* (Maguire & A.H. Holmgren) C.L. Hitchc. [HC]  
*Minuartia nuttallii* (Pax) Briquet ssp. *fragilis* (Maguire & A.H. Holmgren) McNeill  
*Minuartia nuttallii* (Pax) Briquet var. *fragilis* (Maguire & A.H. Holmgren) Rabeler & R.L. Hartm. [FNA5]

Rare in WA, WDNR; Not in WA, HC

var. *nuttallii* [HC2]

Nuttall's sandwort

*Arenaria nuttallii* Pax var. *nuttallii* [HC]

*Arenaria pungens* Nutt., homonym (illegitimate)

*Minuartia nuttallii* (Pax) Briq. ssp. *nuttallii*

*Minuartia nuttallii* (Pax) Briquet var. *nuttallii* [FNA5]

*Minuopsis pungens* (Nutt.) Mattf.

***Sabulina pusilla*** (S. Watson) Dillenb. & Kadereit [HC2]

annual sandwort, dwarf sandwort, dwarf stitchwort

*Alsinosia pusilla* (S. Watson) Rydb.

*Arenaria pusilla* S. Watson [HC]

*Minuartia pusilla* (S. Watson) Mattf. [FNA5]

***Sabulina rubella*** (Wahlenb.) Dillenb. & Kadereit [HC2]

boreal stitchwort

*Alsine rubella* Wahlenb.

*Arenaria hirta* (Wormskjöld) Hartm. var. *rubella* (Wahlenb.) Hartm.

*Arenaria propinqua* Richardson

*Arenaria rubella* (Wahlenb.) Sm. [HC]

*Arenaria verna* L. var. *propinqua* (Richardson) Fernald

*Arenaria verna* L. var. *pubescens* (Cham. & Schltdl.) Fernald

*Arenaria verna* L. var. *rubella* (Wahlenb.) S. Watson

*Minuartia rubella* (Wahlenb.) Hiern [FNA5]

*Tryphane rubella* (Wahlenb.) Rchb.

FNA5: "We follow Ö. Nilsson (2001) in not recognizing infraspecific taxa that have been described based at least partly on pubescence. Variety *propinqua* has been applied to glabrous plants, which occur infrequently and sporadically throughout the range of the species. Where they do occur they are often intermixed with sparsely stipitate-glandular plants. This glabrous variety is rarely encountered in western North America."

***Sabulina sororia*** B.S. Legler [HC2], unpublished name

Phytokeys 81: 79-102.

Twin Sisters sandwort

*Arenaria rossii* R. Br. ex Richardson [HC], misapplied

*Arenaria rossii* R. Br. ex Richardson var. *rossii* [HC], misapplied

*Minuartia elegans* (Cham. & Schltdl.) Schischk. [FNA5], misapplied

*Minuartia rossii* (R. Br. ex Richardson) Graebn. [FNA5], misapplied

***Sagina*** [FNA5, HC, HC2]

Sp. Pl. 1: 128. 1753. Gen. Pl. ed. 5, 62. 1754.

pearlwort

***Sagina apetala*** Ard. [FNA5, HC, HC2]

Animadv. Bot. Spec. Alt. 2: 22, fig. 1. 1764.

annual pearlwort

*Sagina apetala* Ard. var. *barbata* Fenzl ex Ledeb.

***Sagina decumbens*** (Elliott) Torr. & A. Gray [FNA5, HC2]

Fl. N. Amer. 1: 177. 1838.

western pearlwort

ssp. ***occidentalis*** (S. Watson) G.E. Crow [FNA5, HC2]

Rhodora. 80: 68. 1978.

western pearlwort

*Sagina occidentalis* S. Watson [HC]

FNA5: "Except by geography, subsp. *occidentalis* is very difficult to distinguish from subsp. *decumbens*. In plants of subsp. *occidentalis* the sepals tend to be more orbiculate and the capsules,

prior to dehiscence, tend to be more globose. Extremely variable, subsp. *decumbens* generally can be recognized on the basis of presence of tuberculate seeds (60% frequency) and 80% have a combination of tuberculate seeds and glandular-pubescent pedicels and calyx bases. But when seeds are smooth, seeing the reticulate ridge pattern requires high magnification, and while SEM readily clarifies the differences, its use is hardly practical. Subspecies *decumbens* has a greater tendency to possess purple sepal tips or sepal margins, and purplish coloration frequently at the nodes."

***Sagina maxima*** A. Gray [FNA5, HC2]

Mem. Amer. Acad. Arts, n. s. 6: 382. 1858.

stick-stemmed pearlwort

ssp. ***crassicaulis*** (S. Watson) G.E. Crow [FNA5, HC2]

Rhodora. 80: 79. 1978.

stick-stemmed pearlwort

*Sagina crassicaulis* S. Watson [HC]

No varietal distinction of *S. crassicaulis* in HC

ssp. ***maxima*** [FNA5, HC2]

*Sagina crassicaulis* S. Watson var. *litoralis* (Hultén) Hultén

*Sagina litoralis* Hultén

FNA5 reports this taxon from Washington.

***Sagina procumbens*** L. [FNA5, HC, HC2]

Sp. Pl. 1: 128. 1753.

bird-eye pearlwort

*Sagina procumbens* L. var. *compacta* Lange

***Sagina saginoides*** (L.) H. Karsten [FNA5, HC, HC2]

Deut. Fl. 539. 1882.

alpine pearlwort

*Sagina linnaei* C. Presl

*Sagina micrantha* (Bunge) Fernald

*Sagina saginoides* (L.) H. Karsten var. *hesperia* Fernald

*Spergula saginoides* L.

***Saponaria*** [FNA5, HC, HC2]

Sp. Pl. 1: 408. 1753. Gen. Pl. ed. 5, 191. 1754.

soapwort

***Saponaria ocymoides*** L. [FNA5, HC2]

Sp. Pl. 1: 409. 1753.

rock soapwort

***Saponaria officinalis*** L. [FNA5, HC, HC2]

Sp. Pl. 1: 408. 1753.

bouncing-bet

***Scleranthus*** [FNA5, HC, HC2]

Sp. Pl. 1: 406. 1753. (as *Schleranthus*); Gen. Pl. ed. 5, 190. 1754.

knawel

***Scleranthus annuus*** L. [FNA5, HC, HC2]

Sp. Pl. 1: 406. 1753.

annual knawel

ssp. *annuus* [FNA5, HC2]

***Silene*** [FNA5, HC, HC2]

Sp. Pl. 1: 416. 1753. Gen. Pl. ed. 5, 193. 1754.

[name conserved]

campion, catchfly, wild pink, silene

(see also *Atocion*)

***Silene acaulis* (L.) Jacq. [FNA5, HC, HC2]**

Enum. Stirp. Vindob. 78, 242. 1762.  
moss campion

*Cucubalus acaulis* L.

*Silene acaulis* (L.) Jacq. ssp. *exscapa* (All.) DC.

*Silene acaulis* (L.) Jacq. var. *exscapa* (All.) DC. [HC]

*Silene acaulis* (L.) Jacq. var. *subacaulescens* (F.N. Williams) Fernald & H. St. John [HC]

*Silene exscapa* All.

*Xamilensis acaulis* (L.) Tzvelev

FNA5: "Silene acaulis is a variable species, and most workers have recognized infraspecific taxa in North America: subsp. acaulis (subsp. exscapa and subsp. arctica), which is predominantly arctic; and subsp. subacaulescens, which extends down the Rocky Mountains from Alaska to Arizona and New Mexico. In subsp. acaulis, the leaves are flat and short and the flowers are subsessile and smaller in size. Subspecies subacaulescens is typically a larger, less-compact plant with longer, narrower leaves and larger, pedunculate flowers. However, in many populations, these two variants are poorly differentiated, and in others both occur together, connected by intermediates. Silene acaulis is widely distributed in arctic and alpine Europe."

***Silene antirrhina* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 419. 1753.  
sleepy catchfly

FNA5: "The ... varieties and forms of Silene antirrhina ... were named on the basis of stature and flower color, but none appear to be worthy of recognition. The species is very plastic, being greatly affected by moisture, exposure, and nutrients."

***Silene bernardina* S. Watson [FNA5, HC2]**

Proc. Amer. Acad. Arts. 24: 82. 1889.  
Palmer's catchfly

*Silene bernardina* S. Watson ssp. *bernardina* [KZ99]

*Silene bernardina* S. Watson var. *maguirei* Bocquet [KZ99]

*Silene bernardina* S. Watson var. *rigidula* (B.L. Rob.) Tiehm [KZ99]

*Silene bernardina* S. Watson var. *sierrae* (C.L. Hitchc. & Maguire) Bocquet [KZ99]

*Silene shockleyi* S. Watson

Collected in Kittitas and Yakima Cos. by A. Kruckeberg, and reported by J. K. Morton in his treatment of Silene for Flora of North America. Closely related to Silene oregana and S. sargentii. Not in H&C - see JPM for a key to species. FNA5: "Silene bernardina is the earliest valid name for this species. Watson had previously (1875) named it S. montana, and that name was taken up by C. L. Hitchcock and B. Maguire (1947), who cited S. bernardina as a subspecies of S. montana. Unfortunately, the epithet montana is pre-occupied in Silene by S. montana Arrondeau (1863), an unrelated European species. The situation was further complicated by Watson in 1877, when he used the name Lychnis montana for another unrelated species now transferred to Silene and called S. hitchguirei. Silene bernardina varies in leaf width, pubescence, and flower color. The broader-leaved and more sparsely pubescent forms have been referred to subsp. bernardina, and the more-common, narrower-leaved, more-densely pubescent, and viscid forms have been referred to subsp. maguirei. Some forms of Silene bernardina can be difficult to distinguish from S. verecunda, S. sargentii, and S. oregana. Silene verecunda differs in its smaller, clavate calyx and in its petals being only shortly two-lobed. Silene sargentii is a small, densely caespitose, high-alpine species with very narrow, linear leaves (1-2 mm wide), shortly two-lobed petals, and seeds with much larger papillae around the margins. In S. oregana the petals are larger (two times the calyx) and deeply divided into many very narrow segments; the claw and the filaments are glabrous; the leaves, particularly the basal ones, are broader; and the inflorescences are narrower, with the more numerous flowers arranged on short, ascending branches; also, the calyx lobes are ovate and obtuse instead of lanceolate and acute."

\* Bari, E. A. 1973. Cytological studies in the genus Silene

\* Bouquet, G. 1969. Revision Physolychnidium (Silene sect. Physolychnis). Phanerogamarum Monographiae 1: 342. Cramer, Lehre.

\* Hitchcock, C. L. and B. Maguire. 1947. A revision of the North American species of Silene. Univ. Wash. pubs. in Biol. 13: 1-73.

- \* Maguire, B. 1950. Studies in the Caryophyllaceae. IV. A synopsis of the North American species of the subfamily Silenoideae. *Rhodora* 52: 233-245.
- \* *New Phytol.* 72: 833-838.
- \* Oxelman, B. 1997. Chloroplast rps 16 in the phylogeny of the tribe Sileneae (Caryophyllaceae). *Pl. Syst. Evol.* 206: 393-410.

*Silene conica* L. [FNA5, HC, HC2]

Sp. Pl. 1: 418. 1753.

sand catchfly

*Silene coniflora* Nees ex DC. [FNA5], misapplied

H&C Info: *Silene conica* Known from a 1906 collection on Whidbey Island, and also reported by Gaines and Swan (1972). J. K. Morton, in his draft treatment of the genus *Silene* for FNA, notes that reports of *Silene coniflora* (as its synonym, *S. multinervia* S. Watson) for WA (see Piper 1906; Abrams, Kz99) are based on a specimen of *S. conica*.

- \* Gaines, X. M., and D. G. Swan. 1972. Weeds of eastern Washington and adjacent areas. Camp-Na-Bor-Lee Assoc., Inc., Spokane.
- \* Piper, C. V. 1906. Flora of the State of Washington. Contributions from the U. S. National Herbarium, Volume 11. Government Printing Office, Washington, D. C. 637 p.

*ssp. conica* [FNA5, HC2]

*Silene conoidea* L. [FNA5, HC, HC2]

Sp. Pl. 1: 418. 1753.

conoid catchfly

FNA5: "Similar to *Silene conica* but larger in all its parts, *S. conoidea* is a rare adventive weed with showy flowers and inflated fruiting calyces."

*Silene csereii* Baumg. [FNA5, HC2]

Enum. Stirp. Transsilv. 3: 345. 1816. (as *cserei*).

biennial campion

*Silene cserei* Baumg. [HC], orthographic variant

FNA5: "Often confused with *Silene vulgaris*, *S. csereii* may be readily separated by the long, racemose primary branches of its inflorescence, the elliptic calyx that is constricted at both ends, tightly enclosing the capsule and lacking obvious reticulate venation, and the purple filaments."

*Silene dichotoma* Ehrh. [FNA5, HC, HC2]

Beitr. Naturk. 7: 143. 1792.

forked catchfly

*ssp. dichotoma* [FNA5, HC2]

*Silene dioica* (L.) Clairville [FNA5, HC2]

Man. Herbor. Suisse. 146. 1811.

red catchfly

*Lychnis dioica* L. [HC]

FNA5: "*Silene dioica* is closely related to *S. latifolia* and completely interfertile with it. The two species hybridize wherever they grow in close proximity, and the offspring (*S. Âhampeana* Meusel & K. Werner) usually have pale pink flowers. *Silene dioica* and *S. latifolia* are difficult to separate in herbarium material unless flower color has been noted. The characters that distinguish *S. dioica* are the usually dense, long, and soft pubescence covering at least the distal portion of the plant; the broad, almost globose, thin, and brittle capsule with revolute teeth; and the softer, thinner, usually broader leaves. Occasionally, double-flowered plants are encountered as garden escapes."

*Silene douglasii* Hook. [FNA5, HC, HC2]

Fl. Bor.-Amer. 1: 88. 1830.

Douglas's silene

var. *douglasii* [FNA5, HC, HC2]

Fl. Bor.-Amer. 1: 88.

Douglas's catchfly

*Silene douglasii* Hook. var. *monantha* (S. Watson) B.L. Rob. [HC]

var. ***rupinae*** Kephart & Sturgeon [FNA5, HC2]

Madroño. 40: 96, fig. 2. 1993.

Douglas's catchfly

***Silene flos-cuculi*** (L.) Clairville [FNA5, HC2]

Man. Herbor. Suisse. 146. 1811.

ragged-robin

*Lychnis flos-cuculi* L.

ssp. ***flos-cuculi*** [HC2]

*Silene floscuculi* (L.) Clairville ssp. *floscuculi* [FNA5], orthographic variant

***Silene gallica*** L. [FNA5, HC, HC2]

Sp. Pl. 1: 417. 1753.

[name conserved]

windmill-pink

***Silene latifolia*** Poir. [FNA5, HC2]

Voy. Barbarie. 2: 165. 1789.

white campion

*Lychnis alba* Mill. [HC]

*Silene alba* (Mill.) E.H.L. Krause

*Silene latifolia* Poir. ssp. *alba* (Mill.) Greuter & Burdet

Noxious Weed

***Silene menziesii*** Hook. [FNA5, HC, HC2]

Fl. Bor.-Amer. 1: 90, plate 30. 1830.

Menzies' catchfly

*Silene menziesii* Hook. var. *menziesii* [HC]

*Silene menziesii* Hook. var. *viscosa* (Greene) C.L. Hitchc. & Maguire [HC]

FNA5: "Silene menziesii is quite variable in the extent to which the inflorescence is developed and in its pubescence. This, coupled with the functionally dioecious nature of the species, has spawned a plethora of names, none of which appear to warrant recognition."

***Silene noctiflora*** L. [FNA5, HC, HC2]

Sp. Pl. 1: 419. 1753.

night-flowering catchfly

*Melandrium noctiflorum* (L.) Fr.

FNA5: "Silene noctiflora is sometimes confused with *S. latifolia*, but they are very different species. *Silene noctiflora* differs in having perfect flowers with long, very narrow calyx teeth and an elliptic, fruiting calyx that is narrow at the mouth and constricted around the capsule base. It also has three styles and a capsule that dehisces by six teeth; *S. latifolia* has (four or) five styles and a capsule that dehisces by five bifid teeth. The flowers of *S. noctiflora*, as its name indicates, are nocturnal and moth-pollinated."

***Silene oregana*** S. Watson [FNA5, HC, HC2]

Proc. Amer. Acad. Arts. 10: 343. 1875.

Oregon catchfly

*Silene filisecta* M. Peck

*Silene gormanii* Howell

FNA5: "The creamy white lacinate petals are the best field (and herbarium) guide to distinguishing this species from *Silene parryi* and *S. scouleri*, both of which have 2-4-lobed petals that are usually dingy cream to greenish or purple tinged."

***Silene paradoxa*** L. [HC2]

***Silene parryi*** (S. Watson) C.L. Hitchc. & Maguire [FNA5, HC, HC2]

Revis. N. Amer. Silene. 36. 1947.

Parry's silene

*Silene douglasii* Hook. var. *macounii* (S. Watson) B.L. Rob.

*Silene macounii* S. Watson

FNA5: "Silene parryi is very similar to *S. douglasii*, but the latter is normally eglandular with a characteristic short, gray, retrorse pubescence. The two species may hybridize, accounting for the occurrence of populations of *S. douglasii* with some glandular pubescence in the inflorescence. *Silene parryi* is closely related also to *S. scouleri*, but the latter is normally readily distinguished by its pink flowers; taller stature; long, narrow, many-flowered inflorescences; and fusiform fruiting calyces that are constricted around the carpophore. However, some depauperate specimens of *S. scouleri* from montane habitats are difficult to place. Also, small plants of *S. parryi* from alpine habitats can easily be mistaken for *S. grayi*. The anthers of *S. parryi* are often smutted with *Microbotryum violaceum* (Persoon) G. Deml & Oberwinker [= *Ustilago violacea* (Persoon) Roussel], e.g., in the type collection of *S. tetonensis*."

***Silene repens* Patrin ex Pers. [FNA5, HC, HC2]**

Syn. Pl. 1: 500. 1805.

campion, pink catchfly, creeping silene

*Silene repens* Patrin ex Pers. ssp. *australis* C.L. Hitchc. & Maguire [KZ99]

*Silene repens* Patrin ex Pers. ssp. *purpurata* (Greene) C.L. Hitchc. & Maguire [KZ99]

*Silene repens* Patrin ex Pers. ssp. *repens* [KZ99]

Reported for WA from Lake Chelan, Kammerer 111 (MO), by J. K. Morton in the draft FNA treatment. FNA5: "Three subspecies have been recognized within *Silene repens* on the basis of stature and the development of purple pigment in the calyx. Northern populations in the flora area have been referred to subsp. *purpurata* because of the unusually heavy pigment of the calyx, while the disjunct populations in the central Rocky Mountains have been recognized as subsp. *australis*. However, both of these forms occur among collections from Eurasia that have been referred to subsp. *repens*. When material from populations of subsp. *purpurata* was grown farther south, it took on the appearance of subsp. *australis*, suggesting that the differences are under environmental influence."

***Silene sargentii* S. Watson [FNA5]**

Proc. Amer. Acad. Arts. 14: 290. 1879.

Sargent's catchfly

(see also *Silene douglasii* var. *rupinae*)

*Silene lacustris* Eastw.

*Silene watsonii* B.L. Rob.

Thought to be known from a single collection in Tumwater Canyon, Chelan Co., in 1954, specimen identified by J. K. Morton. Recent examination of the specimen resulted in it being identified as *Silene douglasii* var. *rupinae*.

\* Showers, M. A. T. 1987. A systematic study of *Silene suksdorfii*, *S. grayi* and *S. sargentii* (Caryophyllaceae). Madrono 34: 29-40.

***Silene scouleri* Hook. [FNA5, HC, HC2]**

Fl. Bor.-Amer. 1: 88. 1830.

ssp. ***hallii*** (S. Watson) C.L. Hitchc. & Maguire [FNA5, HC2]

Revis. N. Amer. Silene. 26. 1947.

Hall's catchfly

*Silene hallii* S. Watson

FNA includes WA within the distribution of *S. scouleri* ssp. *hallii*. FNA5: "The main center of distribution of subsp. *hallii* is Colorado, but plants referable to or approaching this subspecies occur along the Rocky Mountains from New Mexico to southern British Columbia and Alberta."

ssp. ***scouleri*** [FNA5, HC2]

Fl. Bor.-Amer. 1: 88.

Scouler's silene

*Silene scouleri* Hook. var. *pacifica* (Eastw.) C.L. Hitchc. [HC]

*Silene scouleri* Hook. var. *scouleri* [HC]

***Silene seelyi*** C.V. Morton & J.W. Thomp. [FNA5, HC, HC2]

Torrey. 33: 70. 1933.

Seely's silene

*Anotites seelyi* (C.V. Morton & J.W. Thomp.) W.A. Weber

Rare.

***Silene spaldingii*** S. Watson [FNA5, HC, HC2]

Proc. Amer. Acad. Arts. 10: 344. 1875.

Spalding's silene

Rare.

***Silene suksdorfii*** B.L. Rob. [FNA5, HC, HC2]

Bot. Gaz. 16: 44, plate 6, figs. 9-11. 1891.

Cascade catchfly

FNA5: "*Silene suksdorfii* appears to be closely related to *S. parryi* but differs in its broadly winged seeds, smaller size, cespitose habit, and the prominent purple-septate hairs of the calyx, although the latter occasionally are present in *S. parryi*. It is very similar to, and in Idaho appears to intergrade with, another alpine species, *S. sargentii*, which has linear leaves and lacks the purple septa in the hairs and the broad wing on the seeds. It is similar also to *S. hitchguirei*; see discussion under that species."

***Silene vulgaris*** (Moench) Garcke [FNA5, HC2]

Fl. N. Mitt.-Deutschland, ed. 9. 46. 1869.

bladder campion

*Silene cucubalus* Wibel [HC]

*Silene inflata* Sm.

*Silene latifolia* Rendle & Britten var. *pubescens* (DC.) Farw.

FNA5: "*Silene vulgaris* is less variable in North America than in its native Europe, where five subspecies are recognized on the basis of capsule size, petal color, leaf shape, and habit. All North American material appears to belong to subsp. *vulgaris*, although a few collections from sandy habitats tend to have unusually narrow leaves. Similar plants from Europe have been named var. *litoralis* (Ruprecht) Jalas and subsp. *angustifolia* Hayek."

***Spergula*** [FNA5, HC, HC2]

Sp. Pl. 1: 440. 1753. Gen. Pl. ed. 5, 199. 1754.

spurry

***Spergula arvensis*** L. [FNA5, HC, HC2]

Sp. Pl. 1: 440. 1753.

corn spurry

*Spergula arvensis* L. var. *sativa* (Boenn.) Rchb. [FMR]

FNA5: "*Spergula arvensis* is often a significant weed in sandy crop lands, but it is sometimes used as a forage crop in areas with poor, sandy soils; it was intentionally introduced to Crawford County, Michigan, in 1888 (O. Clute and O. Palmer 1893)."

\* New, J. K. 1961. Biological flora of the British Isles. *Spergula arvensis* L. (*S. sativa* Boenn., *S. vulgaris* Boenn.). J. Ecol. 49: 205-215.

***Spergularia*** [FNA5, HC, HC2]

Fl. ech. 94. 1819.

[name conserved]

sandspurry

***Spergularia bocconei*** (Scheele) Graebn. [HC, HC2]

Bocconi's sandspurry

*Spergularia bocconi* (Scheele) Graebn. [FNA5], orthographic variant

*Spergularia bocconii* (Scheele) Graebn. [HC], orthographic variant

***Spergularia canadensis*** (Pers.) G. Don [FNA5, HC, HC2]

Gen. Hist. 1: 426. 1831.

Canada sandspurry

var. ***occidentalis*** R. Rossbach [FNA5, HC2]

Rhodora. 42: 116. 1940.

Canadian sandspurry

***Spergularia diandra*** (Guss.) Heldr. [FNA5, HC, HC2]

Pl. Atticae. unnumbered. 1851.

alkali sandspurry

*Spergularia salsuginea* Fenzl

***Spergularia macrotheca*** (Hornem.) Heynh. [FNA5, HC, HC2]

Alph. Aufz. Gew. 689. 1846.

beach sandspurry

var. ***macrotheca*** [FNA5, HC2]

Alph. Aufz. Gew. 689.

beach sandspurry

***Spergularia rubra*** (L.) J. Presl & C. Presl [FNA5, HC, HC2]

Fl. ech. 94. 1819.

red sandspurry

*Arenaria rubra* L.

FNA5: "*Spergularia rubra* was collected in 1901 on ballast in Alabama (Mohr, DS), the only record in the southeastern United States. It is the most widely distributed *Spergularia* species found outside of saline areas in the flora and has been in North America since at least the 1860s."

***Spergularia salina*** J. Presl & C. Presl [FNA5, HC2]

Fl. ech. 95. 1819.

saltmarsh sandspurry

*Spergularia marina* (L.) Griseb. [HC]

*Spergularia marina* (L.) Griseb. var. *tenuis* (Greene) R. Rossbach

*Spergularia salina* J. Presl & C. Presl var. *tenuis* (Greene) Jeps.

FNA5: "While *Spergularia salina* may be native in coastal areas and some inland saline sites in much of the cited range, populations in the Great Lakes region are introduced where, as in *S. media*, highway and sidewalk salt runoff has created favorable habitats. Variety *tenuis* has been distinguished from var. *salina* by some authors as follows: cyme crowded versus lax, sepals 1.6-3.8 mm versus 2.4-5 mm, mature capsules 3-4.4 mm versus 3.6-6.4 mm, respectively. Due to the extreme overlap in morphologic features as well as geographic ranges, var. *tenuis* is not recognized here. The name *Spergularia marina* var. *leiosperma* (Kindberg) Gurke has been applied to plants with smooth seeds but, as pointed out by R. P. Rossbach (1940), separation of plants with smooth versus papillose seeds is not practical. Some authors believe that the correct name for this species is *Spergularia marina*."

***Stellaria*** [FNA5, HC, HC2]

Sp. Pl. 1: 421. 1753. Gen. Pl. ed. 5, 193. 1754.

chickweed, starwort, stitchwort

(see also *Myosoton*, *Pseudostellaria*)

***Stellaria alsine*** Grimm [FNA5, HC, HC2]

Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 3(app.): 313. 1767.

bog stitchwort

FNA5: "*Stellaria alsine* is presumed to be native in eastern North America but has been introduced elsewhere in North America and Chile."

***Stellaria borealis*** Bigelow [FNA5, HC2]

Fl. Boston., ed. 2. 182. 1824.

ssp. ***borealis*** [FNA5, HC2]

Fl. Boston., ed. 2. 182.

boreal starwort

New taxon

ssp. *sitchana* (Steud.) Piper & Beattie [FNA5, HC2]

Fl. N.W. Coast. 147. 1915.

boreal starwort

*Stellaria calycantha* (Ledeb.) Bong. var. *bongardiana* (Fernald) Fernald [HC]

*Stellaria calycantha* (Ledeb.) Bong. var. *sitchana* (Steud.) Fernald [HC]

FNA5: "Subspecies *sitchana* is sturdier than subsp. *borealis* and is readily distinguished by its leaf blades, which are narrowly lanceolate and widest at the base, and by its narrowly triangular, 3-veined sepals. It is a western taxon associated mainly with the slopes of the Coast Ranges and the Rocky Mountains. On the eastern side of its range and in the Aleutian Islands it tends to intergrade with subsp. *borealis*."

*Stellaria calycantha* (Ledeb.) Bong. [FNA5, HC, HC2]

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 127. 1833.

northern bog starwort

(see also *Stellaria borealis*)

*Stellaria calycantha* (Ledeb.) Bong. var. *calycantha* [HC]

*Stellaria simcoei* (Howell) C.L. Hitchc. [HC]

*Stellaria crispa* Cham. & Schtdl. [FNA5, HC, HC2]

Linnaea. 1: 51. 1826.

crisped starwort

*Alsine crispa* (Cham. & Schtdl.) Holz.

*Stellaria borealis* Bigelow var. *crispa* (Cham. & Schtdl.) Fenzl ex Torr. & A. Gray

*Stellaria graminea* L. [FNA5, HC, HC2]

Sp. Pl. 1: 422. 1753.

grass-leaf starwort

*Alsine graminea* (L.) Britton

FNA5: "In Europe, both diploid and tetraploid cytotypes of *Stellaria graminea* occur with occasional triploid hybrids. Only the tetraploid form has been found in North America, except for a triploid colony in Newfoundland. This species is often confused with *S. longifolia* but differs in its stems, which are very angular, glabrous, and not scabrid; the narrowly triangular leaves on the flowering stems; the smooth leaf margins; the stiff, triangular, prominently 3-veined sepals; and the larger, rugulose seeds. The sterile overwintering shoots of *Stellaria graminea* have broader elliptic to elliptic-lanceolate leaf blades measuring 5-15 × 1.5-4 mm. They are broadest near the middle. This state of the plant has been named var. *latifolia* Petermann. Usually *S. graminea* has perfect flowers but occasionally plants that are entirely staminate-sterile are encountered. The flowers in these are partially fertile depending on the occurrence of cross- pollination."

*Stellaria humifusa* Rottb. [FNA5, HC, HC2]

Skr. Kiøbenhavnse Selsk. Laerd. Elsk. 10: 447, plate 4, fig. 14. 1770.

saltmarsh starwort

*Alsine humifusa* (Rottb.) Britton

*Stellaria humifusa* Rottb. var. *marginata* Fenzl

*Stellaria humifusa* Rottb. var. *oblongifolia* Fenzl

*Stellaria humifusa* Rottb. var. *suberecta* B. Boivin

FNA5: "*Stellaria humifusa* is often confused with *S. crassifolia*, but has thicker stems and fleshy leaves that wrinkle and tend to turn brownish when dried. Also, in *S. crassifolia* the long pedicels are very slender and sharply angled below the capsule."

*Stellaria longifolia* Muhl. ex Willd. [FNA5, HC, HC2]

Enum. Pl. 479. 1809.

long-leaved starwort

*Stellaria longipes* Goldie [FNA5, HC, HC2]

Edinburgh Philos. J. 6: 327. 1822.

longstalk starwort

ssp. **longipes** [FNA5, HC2]

Edinburgh Philos. J. 6: 327.

Goldie's starwort

*Stellaria longipes* Goldie var. *altocaulis* (Hultén) C.L. Hitchc. [HC]

*Stellaria longipes* Goldie var. *longipes* [HC, JPM]

**Stellaria media** (L.) Vill. [FNA5, HC, HC2]

Hist. Pl. Dauphiné. 3: 615. 1789.

common chickweed

*Alsine media* L.

*Stellaria apetala* Ucria ex Roem.

*Stellaria media* (L.) Vill. var. *procera* Klatt & Richter

**Stellaria neglecta** Weihe ex Bluff & Fingerh. [FNA5, HC2]

Comp. Fl. German. 1: 560. 1825.

greater chickweed

*Alsine neglecta* (Weihe) Á. Löve & D. Löve

*Stellaria media* (L.) Vill. ssp. *neglecta* (Weihe) Gremli

FNA5: "Formerly, *Stellaria neglecta* was rare in North America, but during the last ten to 15 years it has spread rapidly and become weedy. It is very like larger forms of *S. media* (see note under that species), but usually differs in having larger flowers, sepals, and seeds; having a larger number of stamens; and having seeds with acute conic tubercles. Flowers are self-compatible but usually are pollinated by flies."

**Stellaria nitens** Nutt. [FNA5, HC, HC2]

Fl. N. Amer. 1: 185. 1838.

shiny starwort

*Stellaria praecox* A. Nelson

**Stellaria obtusa** Engelm. [FNA5, HC, HC2]

Bot. Gaz. 7: 5. 1882.

blunt-sepaled starwort

*Alsine obtusa* (Engelm.) Rose

*Alsine viridula* Piper

*Alsine washingtoniana* (B.L. Rob.) A. Heller

*Stellaria viridula* (Piper) St. John

*Stellaria washingtoniana* B.L. Rob.

**Stellaria pallida** (Dumort.) Crépin [FNA5, HC2]

Man. Fl. Belgique, ed. 2. 19. 1866.

lesser chickweed

*Alsine pallida* Dumort.

*Stellaria boraeana* Jordan

*Stellaria media* (L.) Vill. ssp. *pallida* (Dumort.) Asch. & Graebn.

FNA5: "*Stellaria pallida* is automatically self-pollinated and often cleistogamous. It usually can be distinguished from apetalous forms of *S. media* by its smaller size, yellowish green color, its small sepals and small, pale seeds. Also the base and tip of the sepals occasionally are dark-red pigmented."

**Stellaria umbellata** Turcz. [FNA5, HC, HC2]

Bull. Soc. Imp. Naturalistes Moscou. 15: 173. 1842.

umbrella starwort

*Alsine baicalensis* Coville

*Stellaria gonomischa* B. Boivin

*Stellaria weberi* B. Boivin

\* Boivin, B. 1956. *Stellaria* sectio *Umbellatae* Schischkin (Caryophyllaceae). Svensk Bot. Tidskr. 50: 113-114.

**Vaccaria** [FNA5, HC, HC2]

Gen. Pl. 3. 1776.

cowcockle, cowherb

*Vaccaria hispanica* (Mill.) Rauschert [FNA5, HC2]

Feddes Repert. 73: 52. 1966.

cowcockle

*Saponaria vaccaria* L.

*Vaccaria segetalis* (Necker) Garcke ex Asch. [HC]

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## Celastraceae [HC, HC2] Bittersweet Family

### Synonyms:

Parnassiaceae (Grass of Parnassus Family)

References: (none)

### *Euonymus* [HC, HC2]

wahoo

*Euonymus europaeus* L. [FNA12, HC2]

Sp. Pl. 1: 197.

European spindle tree

*Euonymus fortunei* (Turcz.) Hand.-Maz. [HC2]

*Euonymus occidentalis* Nutt. ex Torr. [HC, HC2]

Pacif. Railr. Rep. 4(5): 74.

burning bush, western wahoo

var. *occidentalis* [HC2, JPM]

In Pacif. Railr. Rep. iv. 74.

western wahoo

No variety given in H&C

### *Parnassia* [HC, HC2]

grass-of-parnassus

*Parnassia cirrata* Piper [HC2]

Cascade grass-of-parnassus

var. *intermedia* (Rydb.) P.K. Holmgren & N.H. Holmgren [HC2, JPM2]

In A. Cronquist et al., Intermount. Fl. 3(A): 61.

Cascade Grass-of-Parnassus

*Parnassia fimbriata* K.D. Koenig var. *hoodiana* C.L. Hitchc. [HC]

*Parnassia fimbriata* K.D. Koenig var. *intermedia* (Rydb.) C.L. Hitchc. [HC]

*Parnassia intermedia* Rydb.

*Parnassia fimbriata* K.D. Koenig [HC, HC2, JPM2]

Ann. Bot. (König & Sims) 1: 391.

fringed Grass-of-Parnassus, fringed grass of parnassus

(see also *Parnassia cirrata*)

*Parnassia fimbriata* K.D. Koenig var. *fimbriata* [HC]

*Parnassia kotzebuei* Cham. ex Spreng. [HC, HC2, IFBC]

Syst. Veg. 1: 951.

Kotzebue's Grass-of-Parnassus

*Parnassia kotzebuei* Cham. ex Spreng. var. *pumila* C.L. Hitchc. & Ownbey [HC]

*Parnassia palustris* L. [HC, HC2, JPM]

Sp. Pl. 1: 273.

Grass-of-Parnassus, northern grass-of-parnassus

*Parnassia multisetata* (Ledeb.) Fernald

*Parnassia palustris* L. ssp. *neogaea* (Fernald) Hultén

*Parnassia palustris* L. var. *montanensis* (Fernald & Rydb. ex Rydb.) C.L. Hitchc. [HC]

*Parnassia palustris* L. var. *neogaea* Fernald [WNHP]

*Parnassia palustris* L. var. *tenuis* Wahlenb. [KZ99]

The Jepson Manual, 2nd Edition and Illustrated Flora of British Columbia both synonymize all infraspecific taxa for this species. H&C recognize various infraspecific taxa, of which var. *neogaea* is tracked as a rare plant by the Washington Natural Heritage Program. Until a contemporary treatment supports the taxonomy of this species described by H&C, the treatment here follows Jepson and Illustrated Flora B.C.

***Parnassia parviflora* DC. [HC, HC2, JPM]**

Prodr. 1: 320.

small-flowered Grass-of-Parnassus

*Parnassia palustris* L. var. *parviflora* (DC.) B. Boivin [KZ99]

***Paxistima* [HC2]**

*Pachistima* [HC], orthographic variant

***Paxistima myrsinites* (Pursh) Raf. [HC2, IFBC, JPM]**

Sylva Tellur. 42.

Oregon boxleaf

*Ilex myrsinites* Pursh

*Myginda myrtifolia* Nutt.

*Oreophila myrtifolia* (Nutt.) Torr. & A. Gray

*Pachistima myrsinites* Raf. [HC], orthographic variant

*Paxistima myrsinites* (Pursh) Raf. ssp. *mexicana* Navaro & W.H. Blackwell

*Pachistima* in H&C

\* Wheeler, L. C. 1943. History and orthography of the celastraceous genus "*Pachystima*" Rafinesque. Amer. Midl. Naturalist 29: 792?795.

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## Ceratophyllaceae [FNA3, HC, HC2] Hornwort Family

**Synonyms:** (none)

FNA3: "Useful in identification of species of *Ceratophyllum* are leaf-forking characteristics. Leaves with no forking are "0-order"; they consist only of a primary segment. Those forking once are "1st-order"; their ultimate segments are secondary. Those in which at least one secondary segment forks are "2d-order"; their ultimate segments are tertiary. Those in which at least one tertiary segment forks are "3d-order"; their ultimate segments are quaternary. Those in which at least one quaternary segment forks are "4th order.""

**References:** (none)

***Ceratophyllum* [FNA3, HC, HC2]**

Sp. Pl. 2: 992. 1753; Gen. Pl. ed. 5, 428, 1754.

coontail, hornwort

***Ceratophyllum demersum* L. [FNA3, HC, HC2]**

Sp. Pl. 2: 992. 1753.

coon's-tail

*Ceratophyllum apiculatum* Cham.

FNA3: "Specimens of *Ceratophyllum demersum* with short basal spines or tubercles have been misidentified as *C. submersum* Linnaeus, a species not known in the New World despite reports to the contrary. *Ceratophyllum demersum* is the most common species of *Ceratophyllum* in North America and

also the least likely to be found with fruit, its reproduction being primarily asexual. Predominantly low leaf order is, therefore, the most reliable means of identifying this species. Noted for its prolific growth, *Ceratophyllum demersum* occasionally has attained status as a serious weed."

***Ceratophyllum echinatum*** A. Gray [FNA3, HC2]

Ann. Lyceum Nat. Hist. New York. 4: 49. 1837.  
spineless hornwort

*Ceratophyllum demersum* L. var. *echinatum* (A. Gray) A. Gray  
*Ceratophyllum submersum* L. var. *echinatum* (A. Gray) Wilmot-Dear

FNA3: "Principally an eastern North American species--and the only species of its genus endemic to North America-- *Ceratophyllum echinatum* is disjunct in the Pacific Northwest as a result of repeated Pleistocene glaciation. The habitats of *C. echinatum* are typically more acidic (avg. pH 6.6) than those of *C. demersum* (avg. pH 7.4). The two species only rarely coexist. *Ceratophyllum echinatum* also thrives in cooler, clearer, and more oligotrophic water than *C. demersum* and often is found in more ephemeral sites, such as shrub swamps (e.g., with *Cephalanthus occidentalis* ) and beaver ponds. This species, relatively uncommon, is fast disappearing from much of its range because of habitat alteration or destruction and the introduction of nonindigenous species; steps should be taken to secure its conservation. Unlike *Ceratophyllum demersum* , *C. echinatum* does not attain status as a serious weed."

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## Chenopodiaceae (see Amaranthaceae)

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### Cleomaceae [FNA7, HC2] Spiderflower Family

**Synonyms:** (none)

**References:** (none)

***Peritoma*** [FNA7, HC2]

Prodr. 1: 23. 1824.  
beeplant, cleome, spiderflower

***Peritoma lutea*** (Hook.) Raf. [FNA7, HC2]

Sylva Tellur. 112. 1838.  
yellow bee plant

*Cleome lutea* Hook. [HC]  
*Cleome lutea* Hook. var. *lutea* [KZ99]

***Peritoma serrulata*** (Pursh) DC. [FNA7, HC2]

Prodr. 1: 237. 1824. (as *serrulatum*).  
guaco Rocky Mountain bee-plant, Rocky Mountain beeplant, guaco, stinkweed  
*Cleome serrulata* Pursh [HC]

***Polanisia*** [FNA7, HC, HC2]

Amer. J. Sci. 1: 37. 1819.  
clammyweed

***Polanisia dodecandra*** (L.) DC. [FNA7, HC2]

Prodr. 1: 242. 1824.

spp. ***trachysperma*** (Torr. & A. Gray) Iltis [FNA7, HC2, KZ99]

Rhodora. 68: 47. 1966.  
western clammyweed, sandyseed, clammy weed

*Polanisia dodecandra* (L.) DC. var. *trachysperma* (Torr. & A. Gray) Iltis

*Polanisia trachysperma* Torr. & A. Gray [HC]

FNA7 includes Washington in the distribution of this taxon, indicating that specimens from Washington have been examined and verified. Which herbaria hold these specimens is not known at this time.

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## Comandraceae (see Santalaceae)

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## Compositae (see Asteraceae)

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## Convolvulaceae [HC, HC2] Morning-Glory Family

### Synonyms:

Cuscutaceae [HC] (Dodder Family)

Cuscutaceae is a monophyletic clade within Convolvulaceae, and for this reason has been subsumed within the latter family. There is no consensus among regional floristic resources on the treatment of *Calystegia* and *Convolvulus* as distinct genera. Morphological differences distinguishing the genera have included stigmatic lobe shape (linear and acute-tipped in *Convolvulus*; oblong and blunt-tipped, flat in *Calystegia*) and number of capsular locules (one in *Calystegia*, two in *Convolvulus*). Recent molecular studies indicate that *Calystegia* is nested within *Convolvulus* (Stefanovic, Krueger, and Olmstead, 2002). Recognition of *Calystegia* at the rank of genus makes *Convolvulus* paraphyletic, a situation that is avoided here.

### References:

- \* Stefanovi?, S., D.F. Austin and R.G. Olmstead. 2003. Classification of Convolvulaceae: A Phylogenetic Approach. *Systematic Botany* 28(4): 791-806.
- \* Stefanovi?, S., L. Krueger, and R. G. Olmstead. 2002. Monophyly of the Convolvulaceae and circumscription of their major lineages based on DNA sequences of multiple chloroplast loci. *American Journal of Botany* 89:1510?1522.

### *Calystegia* [HC2]

bindweed, morning-glory

#### *Calystegia atriplicifolia* Hallier f. [HC2]

night-blooming morning-glory

#### ssp. *atriplicifolia* [HC2, KZ99]

night-blooming morning-glory

*Convolvulus nyctagineus* Greene [HC]

#### *Calystegia sepium* (L.) R. Br. [HC2, JPM]

Prodromus Florae Novae Hollandiae.

hedge bindweed

*Convolvulus sepium* L. [HC, ILBC2]

Molecular data indicate that *Calystegia* is a monophyletic clade within *Convolvulus*, so some taxonomists opt to retain the combinations used for *Calystegia*. The Jepson Flora Project has chosen to treat *Calystegia* as a genus distinct from *Convolvulus*. *Illustrated Flora of British Columbia* is the most contemporary regional flora, and like H&C it uses *Convolvulus sepium*. Note that H&C (1973) is incorrect by listing *C. silvatica* as a synonym of *C. sepium*. The name *Convolvulus silvatica* has never been validly published.

- \* Stefanovi?, S., D.F. Austin and R.G. Olmstead. 2003. Classification of Convolvulaceae: A Phylogenetic Approach. *Systematic Botany* 28(4): 791-806.

\* Stefanovi?, S., L. Krueger, and R. G. Olmstead. 2002. Monophyly of the Convolvulaceae and circumscription of their major lineages based on DNA sequences of multiple chloroplast loci. *American Journal of Botany* 89:1510?1522.

ssp. ***angulata*** Brummitt [HC2, KZ99]

Kew Bull. 35(2): 328

hedge bindweed, lady's nightcap

*Calystegia sepium* (L.) R. Br. var. *angulata* (Brummitt) N.H. Holmgren [IMF]

*Convolvulus repens* L.

*Convolvulus sepium* L. var. *repens* (L.) A. Gray

***Calystegia silvatica*** (Kit.) Griseb. [HC2]

shortstalk false bindweed

*Calystegia sepium* (L.) R.Br. ssp. *silvatica* (Kit.) Batt. [Stace 1997]

*Convolvulus silvaticus* Kit.

Note, that H&C (1973) is incorrect by stating that *Convolvulus silvatica* is a synonym of *C. sepium*. The combination *C. silvatica* has never been validly published.

ssp. ***disjuncta*** Brummitt [HC2]

***Calystegia soldanella*** (L.) R. Br. [HC2]

seashore false bindweed, beach morning glory, beach morning-glory, seaside morning-glory

*Calystegia soldanella* (L.) Roem. & Schult. [KZ99], invalid name

*Convolvulus soldanella* L. [HC]

***Convolvulus*** [HC, HC2]

bindweed

(see also *Calystegia*)

***Convolvulus arvensis*** L. [HC, HC2, ILBC2]

Sp. Pl. 153.

field bindweed

*Convolvulus ambigens* House

Noxious weed.

***Cuscuta*** [HC, HC2]

coral-vine, dodder, love-tangle

***Cuscuta approximata*** Bab. [HC, HC2, JPM2]

alfalfa dodder

var. ***approximata*** [HC2]

***Cuscuta californica*** Hook. & Arn. [HC, HC2]

California dodder, chaparral dodder

var. ***californica*** [Draft FNA, HC2]

Bot. Beechey Voy. 364.

California dodder

***Cuscuta campestris*** Yunck. [Draft FNA, HC2]

Mem. Torrey Bot. Club 18(2): 138.

field dodder

*Cuscuta pentagona* Engelm. var. *calycina* Engelm. [HC]

***Cuscuta cephalanthi*** Engelm. [HC, HC2]

*American Journal of Science, and Arts* 43(2): 336-337, pl. 6, f. 1-6.

buttonbush dodder

***Cuscuta denticulata*** Engelm. [HC, HC2]

*Amer. Naturalist* 9(6): 348.

desert dodder

*Cuscuta epilinum* Weihe [Draft FNA]

Archiv Apoth. 8: 50.

flax dodder

Not in H&C.

*Cuscuta epithymum* Murray [HC, HC2]

clover dodder, common dodder, thyme dodder

var. *epithymum* [Draft FNA, HC2]

Syst. Veg. (ed. 14) 140.

clover dodder, thyme dodder

Note that H&C use this combination with authorship by Linnaeus (L.), which is considered invalidly published.

*Cuscuta indecora* Choisy [HC, HC2]

inelegant dodder, large-seeded dodder

var. *indecora* [HC2]

*Cuscuta indecora* Choisy var. *neuropetala* (Engelm.) Hitchc. [HC]

*Cuscuta occidentalis* Millsp. [HC, HC2]

Publ. Field Columbian Mus., Bot. Ser. 5: 204.

western dodder

*Cuscuta californica* Hook. & Arn. var. *breviflora* Engelm. [KZ99]

*Cuscuta pacifica* Costea & M.A.R. Wright [HC2]

Systematic Botany, 34(4):787?795.

salt marsh dodder

*Cuscuta salina* Engelm. [HC, HC2], misapplied

*Cuscuta salina* Engelm. var. *major* Yunck. [KZ99], misapplied

*Cuscuta salina* Engelm. var. *salina* [KZ99], misapplied

*Cuscuta subinclusa* Durand & Hilg. var. *abbreviata* Engelm.

\* Costea, M., M.R. Wright, and S. Stefanovi?. 2009. Untangling the systematics of salt marsh dodders: *Cuscuta pacifica*, a new segregate species from *Cuscuta salina* (Convolvulaceae). Systematic Botany 34(4): 787?795.

var. *pacifica* [HC2]

*Cuscuta pentagona* Engelm. [Draft FNA, HC, HC2]

Amer. J. Sci. Arts 43(2): 340-341, pl. 6, f. 22-24.

field dodder, five-angled dodder

(see also *Cuscuta campestris*)

*Cuscuta arvensis* Beyr. ex Engelm.

*Cuscuta pentagona* Engelm. var. *pentagona* [HC]

*Cuscuta plattensis* A. Nelson [Draft FNA, HC2]

Bulletin of the Torrey Botanical Club 26(3): 131-132.

prairie dodder

Not in H&C; Presence in Washington based on report in Yuncker (1921) referencing Suksdorf collection: Washington, Klickitat Co., Suksdorf 2852. Location of that voucher is currently unknown (pers. comm. Mihai Costea).

\* Revision of the North American and West Indian species of *Cuscuta*. Illinois Biol. Monogr.6: 93-231.

*Cuscuta suksdorfii* Yunck. [HC, HC2]

Mem. Torrey Bot. Club 18(2): 167.

mountain dodder

*Cuscuta suksdorfii* Yunck. var. *suksdorfii* [KZ99]

## Cornaceae [HC, HC2] Dogwood Family

**Synonyms:** (none)

**References:** (none)

### *Cornus* [HC, HC2]

dogwood

#### *Cornus canadensis* L. [HC, HC2]

bunchberry, dwarf cornel, puddingberry  
(see also *Cornus unalaschkensis*)

#### *Cornus canadensis* L. [HC, HC2], misapplied

bunchberry, dwarf cornel, puddingberry  
(see also *Cornus unalaschkensis*)

#### *Cornus nuttallii* Audubon [HC, HC2]

Ornithological Biography 4: 482.  
mountain dogwood, Nuttall's dogwood, Pacific dogwood, western flowering dogwood

#### *Cornus occidentalis* (Torr. & A. Gray) Coville [HC2]

creek dogwood, western red osier

*Cornus sericea* L. ssp. *occidentalis* (Torr. & A. Gray) Fosberg [JPM]  
*Cornus stolonifera* Michx. var. *occidentalis* (Torr. & A. Gray) C.L. Hitchc. [HC]

The subspecies need study, they may not be distinct.

#### *Cornus stolonifera* Michx. [HC, HC2, ILBC2]

red-osier dogwood  
(see also *Cornus occidentalis*)

*Cornus sericea* L., Ambiguous  
*Cornus sericea* L. ssp. *sericea* [JPM]  
*Cornus stolonifera* Michx. var. *stolonifera* [HC]

#### *Cornus unalaschkensis* Ledeb. [HC2, IFBC]

Flora Rossica 2: 378.  
western bunchberry

Murrell (1994) does not report *Cornus canadensis* from Washington, but it or hybrids with it have been collected in northern Idaho and on our northern border with BC, and it should be sought in WA.

\* Murrell, Z. E. 1994. Dwarf dogwoods: intermediacy and the morphological landscape. *Systematic Botany* 19: 539-556.

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## Crassulaceae [FNA8, HC, HC2] Stonecrop Family

**Synonyms:** (none)

**References:** (none)

### *Crassula* [FNA8, HC2]

Sp. Pl. 1: 282. 1753; Gen. Pl. ed. 5, 136. 1754.  
pygmy-weed

*Tillaea* [HC]

#### *Crassula aquatica* (L.) Schönland [FNA8, HC2]

Nat. Pflanzenfam. 51[III,2a]: 37. 1890.  
wrinkle-seed pygmyweed, water pygmy weed

*Crassula saginoides* (Maxim.) M. Bywater & Wickens [KZ99]

*Crassula vaillantii* (Willd.) Roth., misapplied  
*Hydrophila vaillantii* House  
*Tillaea angustifolia* Nutt. var. *bolanderi* S. Watson  
*Tillaea aquatica* L. [HC]  
*Tillaea bolanderi* (S. Watson) Greene  
*Tillaea drummondii* Torr. & A. Gray var. *bolanderi* (S. Watson) Jeps.  
*Tillaea vaillantii* A. Gray, invalid name  
*Tillaeastrum pringlei* Rose

FNA8: "The typical form of *Crassula aquatica*, with very short fruiting pedicels, grows chiefly in coastal salt marsh. It is rare and widely scattered in Alaska and Canada (W. J. Cody 1954), scarcely more common southward. M. Bywater and G. E. Wickens (1984) separated *C. saginoides* by pedicels elongate in fruit, sometimes to ca. 2 cm. It grows mostly inland and sometimes to 3000 meters, but from the specimens that they annotated, the ranges are not distinct. N. L. Britton and J. N. Rose (1905) and W. L. Jepson (1923-1925) have separated it, at least varietally, under other names, but most authors have included it without comment or at most have called it doubtfully distinct. I call it merely a phase of *C. aquatica* not needing a formal name (R. V. Moran 1992b). A typical strand plant is depicted in the lower left corner of the illustration panel on this page."

***Crassula connata* (Ruiz & Pav.) A. Berger [FNA8, HC2]**

Nat. Pflanzenfam. ed. 2. 18a: 389. 1930.  
pygmy weed

*Crassula connata* (Ruiz & Pav.) A. Berger var. *subsimplex* (S. Watson) M. Bywater & Wickens [JPM2]  
*Crassula erecta* (Hook. & Arn.) A. Berger  
*Tillaea connata* Ruiz & Pav.  
*Tillaea erecta* Hook. & Arn.  
*Tillaea leptosepala* Benth.

Not in H&C. FNA8: "M. Bywater and G. E. Wickens (1984) proposed five varieties, four partly in the flora area, where they have largely overlapping ranges and overlapping characteristics. Further, some supposed differences probably result from local and year-to-year rainfall differences. Although probably having some genetic basis, these varieties seem too poorly defined to be useful (R. V. Moran 1992b). S. L. Hatch et al. (1990) were first to report *Crassula connata* in Texas, from a 1968 collection (F. B. Jones 7292), suggesting that it may be a recent arrival there. It was first discovered in British Columbia and Washington in 1977 (A. Ceska and O. Ceska 1980) and is treated as a rare native species by the heritage program in British Columbia and the Washington Natural Heritage Program, where it has a habitat typical of other southern disjunct natives (A. Ceska, pers. comm.)."

***Crassula solieri* (Gay) F. Meigen [FNA8, HC2]**

Bot. Jahrb. Syst. 17: 239. 1893.  
smooth-seed pygmyweed  
(see also *Crassula aquatica*)

*Tillaea solieri* Gay

Recently (2017) collected along Columbia River in central WA.

***Crassula tillaea* Lester-Garl. [FNA8, HC2]**

Fl. Jersey. 87. 1903.  
mossy stonecrop

*Tillaea muscosa* L.

FNA8: "First found in California in 1925 (J. T. Howell 1942), *Crassula tillaea* is now widespread and locally common, often mingling with *C. connata*. It has been spreading northward, being first found in Oregon in 1984 (D. H. Wagner 1991), in Washington in 1999 (A. L. Jacobson et al. 2001), and in British Columbia in 2002 (P. F. Zika 2002); it has not yet been found growing with *C. connata* in this part of its range (A. Ceska, pers. comm.)."

***Hylotelephium* [FNA8]**

Bot. Mag. (Tokyo). 90: 46, figs. 1-3. 1977.

***Hylotelephium telephium* (L.) H. Ohba [FNA8]**

Bot. Mag. (Tokyo). 90: 53. 1977.  
live-forever, witches'-moneybags live-forever, vit-toujours, witches'-moneybags

*Sedum purpureum* (L.) Schult.  
*Sedum telephium* L.

Not in H&C; KZ record based on Clausen, R.T. 1975

### **Rhodiola** [FNA8, HC2]

Sp. Pl. 2: 1035. 1753; Gen. Pl. ed. 5, 457. 1754.  
roseroot

### **Rhodiola integrifolia** Raf. [FNA8, HC2]

Atlantic J. 1: 146. 1832.  
king's crown, midsummer-men, roseroot

*Sedum integrifolium* (Raf.) A. Nelson

### ssp. **integrifolia** [FNA8, HC2]

Atlantic J. 1(4): 146.  
King's crown, roseroot

*Sedum alaskanum* (Rose) Rose ex Hutch.

*Sedum roseum* (L.) Scop. ssp. *integrifolium* (Raf.) Hultén [JPM], orthographic variant

FNA8: "The plants treated here as *Rhodiola integrifolia* and *R. rosea* are part of a difficult polymorphic complex of arctic to cool-temperate North America and Eurasia and of high mountains southward. Some authors have included them all in *R. rosea* [or *Sedum rosea* (Linnaeus) Scopoli], often with subspecies or varieties; N. L. Britton and J. N. Rose (1905) earlier divided them into two to several species. For this complex C. H. Uhl (1952) cited six published chromosome counts from Greenland through Eurasia to Japan, all  $n = 11$  or  $2n = 22$ ; he found the same numbers in seven collections from northeastern North America (all these *Rhodiola rosea* proper). From Eurasia, according to R. L. Taylor and G. A. Mulligan (1968), races with  $2n = 16$  and  $33$  also are known. On the other hand, for endemics in Minnesota and New York and for five plants from New Mexico and California, Uhl found  $n = 18$  or  $2n = 36$ , and Taylor and Mulligan likewise found  $2n = 36$  in plants of Moresby Island, British Columbia. With the support of five more counts, but with none for the large area of Oregon and Wyoming to the Bering Sea, R. T. Clausen (1975) separated the 36-chromosome plants as *Sedum integrifolium*. More counts of  $2n = 36$  have since appeared, including one from Sutwick Island, off the Alaska Peninsula (Á. Löve 1979). In middle North America, *Rhodiola integrifolia* and *R. rosea* are geographically distinct. The local endemic subsp. *leedyi* of the former grows in Minnesota, midway between the western subspecies of *R. integrifolia* and the eastern *R. rosea*, and grows in New York state within 100 km of *R. rosea*. Otherwise, the ranges of the two species are over 2000 km apart in the south and nearly 3000 km in the north. *Rhodiola integrifolia* also is the prevailing plant in eastern Asia, where it has been named *Sedum atropurpureum* N. S. Turczaninow (E. Hultén 1941-1950, vol. 5), and *R. rosea* seems to extend (although not verified by chromosome counts) from eastern Asia to far-western Alaska, on the coast of the Bering Sea. Although saying that *Sedum integrifolium* differs from *S. rosea* in many ways besides the chromosome number, R. T. Clausen (1975) found few absolute distinctions. His best key characters were those used here, petal width of staminate flowers, largely supported by flower color. Although questions remain unanswered, it seems best for now to follow Clausen in keeping the two species for North America. Over its broad range, *Rhodiola integrifolia* is quite variable (e.g., see E. Hultén 1941-1950, vol. 5). R. T. Clausen (1975) noted that in some populations pistillate plants outnumber staminate; in others staminate may be six times as many as pistillate. He distinguished two outlying endemics as subspp. *leedyi* and *neomexicana*, also kept as subspecies here. He also proposed subsp. *procer[a]* for tall robust plants of Colorado, New Mexico, and (less typical) California, all within the range of subsp. *integrifolia* and all with the same chromosome number. Some of his plants look remarkably different from the usual dwarf forms of subsp. *integrifolia* that grow at the same high elevations. He did not include in subsp. *procer[a]* (and apparently did not see alive) the tall plants often found inland in Alaska and northwestern Canada, which would be *Sedum frigidum* Rydberg according to Hultén. Thus the racial situation is much more complex than the naming of only two peripheral subspecies might suggest."

### **Sedum** [FNA8, HC, HC2]

Sp. Pl. 1: 430. 1753; Gen. Pl. ed. 5, 197. 1754.  
stonecrop  
(see also *Rhodiola*)

*Sedum acre* L. [FNA8, HC, HC2]

Sp. Pl. 1: 432. 1753.  
mossy stonecrop

*Sedum elrodii* M.E. Jones

*Sedum album* L. [FNA8, HC2]

Sp. Pl. 1: 432. 1753.  
white stonecrop

FNA8: "Sedum album was first reported as naturalized in the United States in 1934."

*Sedum brevifolium* DC. [HC2]

Soc. Agr. Dept. Seine 11: 79.  
short-leaved stonecrop

Recently collected in King County, where fully naturalized on a montane rocky bald north of Interstate 90 east of North Bend. The bald is adjacent to rock climbing routes, suggesting propagules may have arrived with climbers. The plants form reproducing populations across a several hectare area of balds and rock faces.

*Sedum divergens* S. Watson [FNA8, HC, HC2]

Proc. Amer. Acad. Arts. 17: 372. 1882.  
Pacific stonecrop, spreading stonecrop

*Amerosedum divergens* (S. Watson) Á. Löve & D. Löve

FNA8: "Leaves of *Sedum divergens* are close-set, thick, and turgid. This species occurs in scattered and disjunct populations from the coastal mountains of Alaska (D. F. Murray 1980) and British Columbia to the northern Cascade Mountains and Olympic Mountains of Washington; Lake Peak, Josephine County, Oregon; and Klamath Mountains near Mount Robson in Alberta and British Columbia."

*Sedum forsterianum* Sm. [HC2]

Engl. Bot. 26: t. 1802. [1 Oct 1807-1 Apr 1808].  
Forster's stonecrop

*Sedum lanceolatum* Torr. [FNA8, HC, HC2]

Ann. Lyceum Nat. Hist. New York. 2: 205. 1827.  
lance-leaved stonecrop  
(see also *Sedum rupicola*)

*Amerosedum nesioticum* (G.N. Jones) Á. Löve & D. Löve

*Sedum lanceolatum* Torr. ssp. *lanceolatum* [KZ99]

*Sedum lanceolatum* Torr. ssp. *nesioticum* (G.N. Jones) R.T. Clausen [KZ99]

*Sedum lanceolatum* Torr. var. *lanceolatum* [FNA8, HC]

*Sedum lanceolatum* Torr. var. *nesioticum* (G.N. Jones) C.L. Hitchc. [FNA8, HC]

*Sedum nesioticum* G.N. Jones

*Sedum stenopetalum* Pursh var. *subalpinum* Fröd.

*Sedum leibergii* Britton [FNA8, HC, HC2]

N. Amer. Fl. 22: 73. 1905.  
Leiberg's stonecrop

*Amerosedum leibergii* (Britton) Á. Löve & D. Löve

*Sedum divaricatum* S. Watson

*Sedum oreganum* Nutt. [FNA8, HC, HC2]

Fl. N. Amer. 1: 559. 1840.  
Oregon stonecrop

*Gormania oregana* (Nutt.) Britton

*Sedum oreganum* Nutt. ssp. *oreganum* [KZ99]

*Sedum oreganum* Nutt. ssp. *tenue* R.T. Clausen

*Sedum oreganum* Nutt. var. *oreganum* [FNA8]  
*Sedum oreganum* Nutt. var. *tenue* (R.T. Clausen) H. Ohba [FNA8]

***Sedum rupicola*** G.N. Jones [FNA8, HC2]

Res. Stud. State Coll. Wash. 2: 125. 1931.  
lance-leaved stonecrop

*Sedum lanceolatum* Torr. var. *rupicola* (G.N. Jones) C.L. Hitchc., orthographic variant  
*Sedum lanceolatum* Torr. var. *rupiculum* (Jones) Hitchc. [HC]

FNA8: "The leaves of *Sedum rupicola* detach very easily and the fallen ones sprout and produce plantlets from their bases. R. T. Clausen (1975) considered *S. rupicola* to be most closely related to *S. lanceolatum*. He recognized it as a species because, although it sometimes grows sympatrically with *S. lanceolatum*, the two do not hybridize, and because *S. rupicola* flowers a week earlier and grows in soils of higher pH than does *S. lanceolatum*. The general morphological differences are: in *S. rupiculum* leaves of sterile shoots are ovate and detach easily, sepals have obtuse apices, petals have minutely mucronate tips (0.1 mm), and nectaries are deep yellow; in *S. lanceolatum* leaves of sterile shoots are linear-lanceolate and do not detach easily, sepals have acute apices, petal apices are long-acuminate (0.8 mm), and nectaries are pale yellow."

***Sedum spathulifolium*** Hook. [FNA8, HC, HC2]

Fl. Bor.-Amer. 1: 227. 1832.  
broadleaf stonecrop, spatula-leaf stonecrop

*Sedum pruinosum* Britton  
*Sedum spathulifolium* Hook. ssp. *pruinum* (Britton) R.T. Clausen & C.H. Uhl  
*Sedum spathulifolium* Hook. ssp. *spathulifolium* [KZ99]  
*Sedum spathulifolium* Hook. var. *pruinum* (Britton) B. Boivin [FNA8]  
*Sedum spathulifolium* Hook. var. *spathulifolium* [FNA8]

***Sedum stenopetalum*** Pursh [FNA8, HC, HC2]

Fl. Amer. Sept. 1: 324. 1813.  
wormleaf stonecrop

*Amerosedum stenopetalum* (Pursh) Á. Löve & D. Löve  
*Sedum douglasii* Hook.

ssp. ***stenopetalum*** [HC2, KZ99]  
wormleaf stonecrop

*Sedum monanthum* Suksd.  
*Sedum stenopetalum* Pursh ssp. *monanthum* (Suksd.) R.T. Clausen [KZ99]  
*Sedum stenopetalum* Pursh var. *monanthum* (Suksd.) H. Ohba [FNA8]  
*Sedum stenopetalum* Pursh var. *stenopetalum* [FNA8]

***Sedum thartii*** L.P. Hébert [HC2]

Sporadically naturalized on road cuts and other disturbed areas in western Washington and southwestern B.C. FNA8: "Most naturalized records of *S. rupestre* in North America have been incorrectly named *S. reflexum*." Gallo and Zika (2014) determined that the names *Sedum rupestre* and *S. reflexum* are misapplied to North American plants; our plants can be assigned to *Sedum thartii* and *S. forsterianum*.

\* Gallo, L. and P.F. Zika. 2014. A taxonomic study of *Sedum* series *Rupestria* (Crassulaceae) naturalized in North America. *Phytotaxa* 175(1): 19-28.

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## Crossosomataceae [HC2] Rockflower Family

**Synonyms:** (none)

**References:** (none)

***Glossopetalon*** [HC, HC2]

green-bush

***Glossopetalon spinescens*** A. Gray [HC2]

Nevada greasewood, spiny green-bush

var. ***aridum*** M.E. Jones [HC2, JPM2]

Contr. W. Bot. 8: 28.

spiny green-bush

*Glossopetalon nevadense* A. Gray [HC]

*Glossopetalon nevadense* A. Gray var. *stipuliferum* (H. St. John) C.L. Hitchc.

*Glossopetalon stipuliferum* H. St. John

H&C does not list for WA.

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## Cruciferae (see Brassicaceae)

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## Cucurbitaceae [HC, HC2] Cucumber Family

**Synonyms:** (none)

**References:** (none)

***Bryonia*** [HC2]

bryony

*Bryonia alba* L. [HC2, Stace 1997]

Sp. Pl. 2: 1012.

white bryony

Not in H&C; listed as noxious by state of WA. Curtis Bjork has confirmed that it is not only present, but is becoming quite a pest: "It's killing *Crataegus* all over the Palouse and has been aggressively spreading for decades. In some places it grows so robustly, it resembles pictures those monster nonnative vines in the SE states, like kudzu and *Lonicera japonica*."

***Citrullus*** [HC2]

*Citrullus lanatus* (Thunb.) Matsum. & Nakai [HC2, JPM2]

Catalogus Seminum et Sporarum in Horto Botanico Universitatis Imperialis Tokyoensis per annos 1915 et 1916 lectorum Imperialis Tokyoensis 30, no. 854.

watermelon

Uncommon as a casual introduction in disturbed areas in Washington. At this time (2012) documented populations do not appear to be self-sustaining.

***Cucurbita*** [HC2]

*Cucurbita pepo* L. [HC2]

***Echinocystis*** [HC, HC2]

balsam apple, wild cucumber

*Echinocystis lobata* (Michx.) Torr. & A. Gray [HC, HC2]

Fl. N. Amer. 1(3): 542.

wild cucumber

***Marah*** [HC, HC2]

bigroot, manroot

*Marah oregana* (Torr. & A. Gray) Howell [HC2]  
A Flora of Northwest America 2: 239.  
coastal manroot

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## Cuscutaceae (see Convolvulaceae)

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## Dipsacaceae [HC, HC2] Teasel Family

**Synonyms:** (none)

**References:** (none)

*Dipsacus* [HC, HC2]  
teasel

*Dipsacus fullonum* L. [HC2, JPM2]  
Sp. Pl. 1: 97.  
fuller's teasel

*Dipsacus fullonum* L. ssp. *sylvestris* (Huds.) Clapham

*Knautia* [HC, HC2]  
scabiosa

*Knautia arvensis* (L.) Coult. [HC, HC2]  
Mém. Dipsac., 41.  
Bluebuttons

*Scabiosa arvensis* L.

Currently (2012) one known specimen from Western Washington University collected in 1969 in Port Angeles.

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## Droseraceae [HC, HC2] Sundew Family

**Synonyms:** (none)

**References:** (none)

*Dionaea* [HC2]

*Dionaea muscipula* J. Ellis [Gray's Manual, HC2]  
The St James's Chronicle; or the British Evening Post No. 1172: [p. 4].  
Venus fly trap

Not in H&C; intentionally planted in various locations over the years by carnivorous plant enthusiasts.  
Reported and collected by Fred Weinmann and Peter Zika.

*Drosera* [HC, HC2]  
sundew

*Drosera anglica* Huds. [HC, HC2]  
Flora Anglica, Editio Altera 135.  
English sundew, giant sundew

*Drosera longifolia* L.

***Drosera xobovata*** Mert. & W. Koch [HC2]

***Drosera rotundifolia*** L. [HC, HC2]

Sp. Pl. 1: 281.

round-leaf sundew

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## Ehretiaceae [Draft FNA, HC2] Ehretia Family

**Synonyms:** (none)

Formerly included within a broadly defined Boraginaceae. See citations under Boraginaceae treatment.

**References:** (none)

***Tiquilia*** [HC2]

crinklemat

***Tiquilia nuttallii*** (Hook.) A.T. Richardson [HC2, JPM]

Sida 6(3): 236.

coldenia, rosette crinklemat, rosette tequilia

*Coldenia nuttallii* Hook. [HC]

\* Richardson, A. 1976. Reinstatement of the genus *Tiquilia* (Boraginaceae, Ehretioideae) and description of 4 new species. *Sida* 6: 235-240.

\* Richardson, A. 1977. Monograph of the genus *Tiquilia* (*Coldenia*, sensu lato), Boraginaceae: Ehretioideae. *Rhodora* 79: 467-572.

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## Elaeagnaceae [HC, HC2] Oleaster Family

**Synonyms:** (none)

**References:** (none)

***Elaeagnus*** [HC, HC2]

elaeanus

***Elaeagnus angustifolia*** L. [HC, HC2]

Sp. Pl. 1: 121.

Russian-olive

***Elaeagnus commutata*** Bernh. ex Rydb. [HC, HC2]

Flora of the Rocky Mountains 582.

American silver-berry, wolfberry

*Elaeagnus argentea* Pursh, homonym (illegitimate)

***Elaeagnus umbellata*** Thunb. [HC2, Stace 1997]

Syst. Veg., ed. 14 (J. A. Murray). 164. [May-Jun 1784].

autumn olive

***Shepherdia*** [HC, HC2]

buffalo-berry

***Shepherdia canadensis*** (L.) Nutt. [HC, HC2]

Gen. N. Amer. Pl. 2: 240.

russet buffalo-berry, soapberry, soopolallie

## Elatinaceae [HC, HC2] Waterwort Family

**Synonyms:** (none)

**References:**

- \* Tucker, G.C. 1986. The genera of Elatinaceae in the southeastern United States. *Journal of the Arnold Arboretum* 67: 471-483.

### *Bergia* [HC, HC2]

bergia

#### *Bergia texana* (Hook.) Seub. ex Walp. [HC, HC2]

Repertorium Botanices Systematicae. 1: 285.

Texas bergia

*Elatine brachysperma* A. Gray; shortseed waterwort, or short-fruited waterwort, has been reported from WA by Abrams and KZ99, but no specimens have been found

### *Elatine* [HC, HC2]

mud-purslane, waterwort

#### *Elatine californica* A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 13: 361, 364.

California waterwort

*Elatine williamsii* Rydb.

#### *Elatine chilensis* Gay [HC2, JPM]

Chilena 1: 286. [1846].

Chilean waterwort

*Elatine americana* (Pursh) Arn. [Abrams, Peck, HC], misapplied

*Elatine triandra* Schkuhr [Abrams, Peck, HC], misapplied

The author is Claude Gay, not Gray as in KZ99. *Elatine rubella* Rydb., redstem waterwort, three-flowered waterwort, three-stamen waterwort, is reported from WA by KZ99, based on a collection from Usk, cited in Abrams as *E. triandra* (Kreager 367 WTU, 1902). That collection is *E. chilensis*

- \* Tucker, G. C. 1993. Elatinaceae, In: Hickman, J. C., ed. 1993. *The Jepson Manual: Higher Plants of California*. Univ. of California Press, Berkeley.

- \* Tucker, G.C. 1986. The genera of Elatinaceae in the southeastern United States. *Journal of the Arnold Arboretum* 67: 471-483.

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## Empetraceae (see Ericaceae)

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## Ericaceae [FNA8, HC, HC2] Heath Family

**Synonyms:**

Empetraceae [HC] (Crowberry Family)

Monotropaceae (Indian-Pipe Family)

Pyrolaceae (Wintergreen Family)

FNA8: "The closest relatives of the broadly defined Ericaceae are Clethraceae and Cyrillaceae. Some phylogenies show Cyrillaceae as sister to Ericaceae; other analyses have Clethraceae and Cyrillaceae as closest relatives to

each other, together forming the sister group to Ericaceae. Monotropa and related genera (genera 5-12 of this treatment), and Pyrola and related genera (genera 1-4 of this treatment) have been treated as families Monotropaceae and Pyrolaceae. Not all botanists agreed with this, as summarized by G. H. M. Lawrence (1951): "Many botanists (including Hutchinson) have held the view that the Pyrolaceae are not sufficiently distinct from the Ericaceae to be treated as a separate family." Differences in habit, floral features, and pollen have helped maintain family status for Pyrolaceae and Monotropaceae in regional floras. Molecular and morphological analyses (K. A. Kron et al. 2002) show these lineages embedded within Ericaceae. Similarly, Empetraceae has been demonstrated to be nested within Ericaceae and is here included in the Ericaceae. Studies in the last several decades, especially since 1990 including molecular data, have resulted in rearrangements of generic limits in the Ericaceae. These are discussed under the various genera; for the reader's convenience they are summarized here. *Ledum* is included in *Rhododendron*; *Leiophyllum* and *Loiseleuria* are included in *Kalmia*; and *Hypopitys* is included in *Monotropa*. *Arctous* is separated from the much larger *Arctostaphylos*, to which it is inferred to form a sister clade. *Eubotrys* is segregated from *Leucothoe*, with which it has often been combined. *Vaccinium* is treated in a broad sense, to include segregates such as *Oxycoccus*; although *Vaccinium* is decidedly polymorphic, this seems a workable approach until generic limits in the *Vaccinieae* Reichenbach are better understood."

#### References:

- \* Judd, W. S. and K. A. Kron. 1993. Circumscription of Ericaceae (Ericales) as determined by preliminary cladistic analyses based on morphological, anatomical, and embryological features. *Brittonia* 45: 99-114.
- \* Kron, K. A. et al. 2002. Phylogenetic classification of Ericaceae: Molecular and morphological evidence. *Bot. Rev.* (Lancaster) 68: 335-423.

#### *Allotropia* [FNA8, HC, HC2]

Pacif. Railr. Rep. 6(3): 81. 1858.  
candystick, sugarstick

#### *Allotropia virgata* Torr. & A. Gray [FNA8, HC, HC2]

Pacif. Railr. Rep. 6(3): 80, 81. 1858.  
candystick, sugarstick

#### *Andromeda* [FNA8, HC, HC2]

Sp. Pl. 1: 393. 1753; Gen. Pl. ed. 5, 186. 1754.  
bog-rosemary, moorwort

#### *Andromeda polifolia* L. [FNA8, HC, HC2]

Sp. Pl. 1: 393. 1753.

#### var. *polifolia* [FNA8, HC2]

Sp. Pl. 1: 393.  
bog rosemary

*Andromeda polifolia* L. var. *concolor* B. Boivin

FNA8: "Variety *polifolia* is circumpolar in its distribution. In North America it occurs in the northwest arctic from Alaska to the west coast of Greenland, south as far as northern Washington and Idaho, eastward in boreal forests to Hudson Bay, James Bay, and northern Labrador. Plants with the leaves not glaucous abaxially, rather than glaucous, have been distinguished as var. *concolor* (type from Kodiak Island, Alaska); such plants appear in scattered locations throughout the species range. A diminutive, narrow-leaved northern form, var. *acerosa* Hartman, was described from northern Europe, and specimens fitting that description occur in the extreme northern coastal areas of Alaska, Northwest Territories, Nunavut, Quebec, and Yukon."

#### *Arbutus* [FNA8, HC, HC2]

Sp. Pl. 1: 395. 1753; Gen. Pl. ed. 5, 187. 1754.  
madroña, madrone, madroño

#### *Arbutus menziesii* Pursh [FNA8, HC, HC2]

Fl. Amer. Sept. 1: 282. 1813.  
Pacific madrona, Pacific madrone

*Arbutus procera* Douglas ex Lindl.

*Arbutus unedo* L. [HC2]

***Arctostaphylos*** [FNA8, HC, HC2]

Fam. Pl. 2: 165. 1763.

bearberry, manzanita

***Arctostaphylos columbiana*** Piper [FNA8, HC, HC2]

Fl. N.W. Coast. 279. 1915.

bristly manzanita

*Arctostaphylos tomentosa* (Pursh) Lindl. [FNA8], misapplied

FNA8: "*Arctostaphylos columbiana* is widespread near the coast from northern California to southern British Columbia; it extends inland along the Columbia River Gorge in Oregon and Washington, and inland in Oregon to the western base of the Cascades. Some variation in twig indument occurs in the prominence of longer, stiff hairs, and in the degree of glandulosity. Some plants along the immediate coast of northern California into Oregon lack the longer hairs and have been distinguished as var. *tracyi*. Hybrids with *A. uva-ursi* are low shrubs (0.5-1 m) with intermediate vegetative characters. Referred to as *A. xmedia* Piper, these hybrids have been reported from British Columbia, California, Oregon, and Washington."

***Arctostaphylos xmedia*** Greene [FNA8, HC, HC2], misapplied

Pittonia 2: 171.

medium manzanita

***Arctostaphylos xmedia*** Greene [FNA8, HC, HC2]

Pittonia 2: 171.

medium manzanita

***Arctostaphylos nevadensis*** A. Gray [FNA8, HC, HC2]

Syn. Fl. N. Amer. 2: 27. 1878.

kinnikinnick, pinemat manzanita

ssp. ***nevadensis*** [FNA8, HC2]

In A. Gray et al., Syn. Fl. N. Amer. 2: 27.

pinemat manzanita

FNA8: "Subspecies *nevadensis* occurs from the North Coast Ranges of California (Del Norte and Humboldt counties) and the Sierra Nevada through the Cascades of Oregon to the Wenatchee Mountains of central Washington. It hybridizes with *Arctostaphylos patula*. Some botanists have assumed *A. parvifolia* Howell is of hybrid origin of *A. nevadensis* × *A. glandulosa*."

***Arctostaphylos nevadensis*** A. Gray × ***Arctostaphylos patula*** Greene

***Arctostaphylos patula*** Greene [FNA8, HC, HC2]

Pittonia. 2: 171. 1891.

green-leaf manzanita

*Arctostaphylos acutifolia* Eastw.

*Arctostaphylos parryana* Lemmon var. *pinetorum* (Rollins) Wiesel. & B. Schreib.

*Arctostaphylos patula* Greene ssp. *platyphylla* (A. Gray) P.V. Wells

*Arctostaphylos patula* Greene var. *coalescens* W. Knight

*Arctostaphylos platyphylla* (Bray) Kuntze

FNA8: "*Arctostaphylos patula* is abundant and widespread in western North America as a dominant in montane chaparral, pine forest gaps, and high-elevation arid-steppe and canyon-land environments. Populations throughout western North America are characterized by twigs and inflorescence parts covered with relatively short hairs tipped with golden glands. In the central to northern Sierra Nevada, mixed with the widespread form are individuals that are eglandular and have a cover of relatively short, whitish hairs on the stems and inflorescences. Similarly, throughout most of its range, *A. patula* is nonsprouting after fire, and in areas characterized by winter snow cover it layers and creates broad, low mounds. In much of California, it typically sprouts after fires from obscure and flattened burls, forming circles of erect sprouts."

***Arctostaphylos uva-ursi*** (L.) Spreng. [FNA8, HC, HC2]

Syst. Veg. 2: 287. 1825.

red bearberry, kinnikinnick

*Arbutus uva-ursi* L.

FNA8: "Arctostaphylos uva-ursi exhibits great variation in indument associated with the young twigs. Most of this variation has historically been separated into subspecies, except that a recent analysis of the group suggested environmentally-based variation in these characters (T. J. Rosatti 1987b). This is the most widely distributed of all Arctostaphylos species and is the only one found outside of North America. Two ploidy levels are common, and populations sometimes contain both diploids and tetraploids. More work on this widespread species will likely elucidate its variation in morphology and ploidy. Intraspecific taxa may well be recognized once these patterns are further assessed. A form with somewhat puberulent and larger leaves has been described as Arctostaphylos xmedia Greene. It occurs along the northern California coast and in Oregon and Washington. It is assumed to be a hybrid between A. uva-ursi and A. columbiana. Similarly, in the Rocky Mountains in areas with both A. uva-ursi and A. patula, hybrids have been called A. coloradensis Rollins."

**Calluna** [FNA8, HC2]

Trans. Linn. Soc. London. 6: 317. 1802.  
Scotch heather

*Calluna vulgaris* (L.) Hull [FNA8, HC2]

Brit. Fl. ed. 2. 114. 1808.

**Cassiope** [FNA8, HC, HC2]

Edinburgh New Philos. J. 17: 157. 1834.  
moss-heather, mountain-heather  
(see also *Harrimanella*)

*Cassiope lycopodioides* (Pall.) D. Don [FNA8, HC2]

Edinburgh New Philos. J. 17: 158. 1834.  
club-moss mountain-heather, clubmoss mountain-heather

*Andromeda lycopodioides* Pall.

Rare; Location in Washington found after publication of H&C (1973). FNA8: "Subspecies *crispilosa* was based on a collection from the Queen Charlotte Islands, British Columbia. The only distinction that the authors drew between it and subsp. *lycopodioides* was that subsp. *crispilosa* has one to three crisped apical hairs on the leaves. Their claim that subsp. *lycopodioides* has entirely glabrous leaves is not supported. All specimens of *Cassiope lycopodioides* that I have seen have curled hairs on the leaf apices of at least the young leaves. The hairs appear to be fugacious. However, subsp. *crispilosa* does differ from subsp. *lycopodioides* in several features. It lacks the hyaline leaf margin as well as the adaxial surface and abaxial leaf base pubescence. In addition, the stems are thicker, and the pedicels and corollas are longer. This insular material warrants further investigation."

*Cassiope mertensiana* (Bong.) G. Don [FNA8, HC, HC2]

Gen. Hist. 3: 829. 1834.  
Mertens's moss-heather

*Andromeda mertensiana* Bong.

ssp. *mertensiana* [FNA8, HC2]

Gen. Hist. 3: 829.  
Mertens' mountain heather, western moss heather

*Andromeda cupressina* Hook.

*Cassiope mertensiana* (Bong.) G. Don var. *mertensiana* [HC]

*Cassiope tetragona* (L.) D. Don [FNA8, HC, HC2]

Edinburgh New Philos. J. 17: 158. 1834.  
four-angled moss-heather

ssp. *saximontana* (Small) A.E. Porsild [FNA8, HC2]

Canad. Field-Naturalist. 54: 68. 1940.  
four-angled mountain heather, white arctic mountain heather

*Cassiope saximontana* Small

*Cassiope tetragona* (L.) D. Don var. *saximontana* (Small) C.L. Hitchc. [HC]

***Chimaphila*** [FNA8, HC, HC2]

Fl. Amer. Sept. 1: 279, 300. 1813.  
pipsissewa, prince's-pine

***Chimaphila menziesii*** (R. Br.) Spreng. [FNA8, HC, HC2]

Syst. Veg. 2: 317. 1825.  
little prince's-pine

*Pyrola menziesii* R. Br.

***Chimaphila umbellata*** (L.) W.P.C. Barton [FNA8, HC, HC2]

Veg. Mater. Med. U.S. 1: 17. 1817.  
common prince's-pine

*Pyrola umbellata* L.

ssp. ***umbellata*** [FNA8, HC2]

Veg. Mater. Med. U.S. 1: 17. 1.  
Pipsissewa, common prince's-pine

*Chimaphila acuta* Rydb.

*Chimaphila occidentalis* Rydb.

*Chimaphila umbellata* (L.) W.P.C. Barton ssp. *acuta* (Rydb.) Hultén

*Chimaphila umbellata* (L.) W.P.C. Barton ssp. *cisatlantica* (S.F. Blake) Hultén

*Chimaphila umbellata* (L.) W.P.C. Barton ssp. *occidentalis* (Rydb.) Hultén [KZ99]

*Chimaphila umbellata* (L.) W.P.C. Barton var. *acuta* (Rydb.) S.F. Blake

*Chimaphila umbellata* (L.) W.P.C. Barton var. *occidentalis* (Rydb.) S.F. Blake [HC]

FNA8: "*Chimaphila umbellata* is morphologically variable across its extensive range. Six subspecies have been recognized widely in the literature: subsp. *acuta* in the southwestern United States, subsp. *cisatlantica* in eastern North America, subsp. *domingensis* (S. F. Blake) Dorr in Hispaniola, subsp. *mexicana* (de Candolle) Hultén in Mexico, and subsp. *umbellata* in Eurasia. S. F. Blake (1917), in discussing the complex, stated, "...while the differential characters brought forward for their specific separation are confined to differences in size, in the prominence of the venation, the shape of the sepals, the direction of the pedicels, and the rotundity of the stem, characters which are not only rather obscure but at best are merely comparative, and are shown by the material examined to be by no means absolutely constant." Hiroshi Takahashi (1987), who did not consider subsp. *domingensis*, found broad overlap in most morphologic characters used to distinguish the subspecies. Extreme forms of the spectrum of morphologic expression may be distinctive; variation among the taxa appears to be clinal. Only subsp. *domingensis*, which is geographically isolated on Hispaniola and has glabrous peduncles and pedicels, glabrous filaments, and relatively small leaves, appears to be sufficiently distinct from the rest of the species to warrant recognition (L. J. Dorr 1995). It also has rugulate pollen; other taxa included here within subsp. *umbellata* have psilate pollen (Takahashi 1986b)."

***Elliottia*** [FNA8, HC2]

Sketch Bot. S. Carolina. 1: 448. 1817.

*Cladothamnus* [HC]

***Elliottia pyroliflora*** (Bong.) Brim & P.F. Stevens [FNA8, HC2]

J. Arnold Arbor. 59: 336. 1978.  
copperbush

*Cladothamnus pyrolaeiflorus* Bong. [HC], orthographic variant

*Cladothamnus pyroliflorus* Bong. [HC]

*Leiophyllum pyroliflorum* (Bong.) Dippel

Some resources list this species as *E. pyroliflorus*, an orthographic variant with incongruent gender endings between the genus and specific epithets.

***Empetrum*** [FNA8, HC, HC2]

Sp. Pl. 2: 1022. 1753; Gen. Pl. ed. 5, 447. 1754.  
crowberry

***Empetrum nigrum*** L. [FNA8, HC, HC2]

Sp. Pl. 2: 1022. 1753.  
crowberry

*Empetrum nigrum* L. ssp. *hermaphroditum* (Hagerup) Böcher [KZ99]  
*Empetrum nigrum* L. ssp. *nigrum* [KZ99]

**Gaultheria** [FNA8, HC, HC2]

Sp. Pl. 1: 395. 1753; Gen. Pl. ed. 5, 187. 1754.  
gaultheria, salal, wintergreen

**Gaultheria hispidula** (L.) Muhl. ex Bigelow [FNA8, HC, HC2]

Fl. Boston. (ed. 2). 165. 1824.  
creeping-snowberry

*Chiogenes hispidula* (L.) Torr. & A. Gray  
*Vaccinium hispidulum* Michx., invalid name

Rare in WA.

**Gaultheria humifusa** (Graham) Rydb. [FNA8, HC, HC2]

Mem. New York Bot. Gard. 1: 300. 1900.  
alpine wintergreen

*Gaultheria myrsinites* Hook.  
*Vaccinium humifusum* Graham

**Gaultheria ovatifolia** A. Gray [FNA8, HC, HC2]

Proc. Amer. Acad. Arts. 19: 85. 1883.  
western teaberry, slender wintergreen

**Gaultheria shallon** Pursh [FNA8, HC, HC2]

Fl. Amer. Sept. 1: 283, plate 12. 1813.  
salal

**Harrimanella** [FNA8, HC2]

Proc. Wash. Acad. Sci. 3: 570, figs. 62, 66. 1901.  
harrimanella, moss-heather, mossplant

**Harrimanella stelleriana** (Pall.) Coville [FNA8, HC2]

Proc. Wash. Acad. Sci. 3: 574. 1901.  
Alaska bell-heather, Alaska bellheather, alpine heather, Alaskan moss-heather, Alaskan mountain-heather

*Andromeda stelleriana* Pall.  
*Cassiope stelleriana* (Pall.) DC. [HC]

**Hemitomes** [FNA8, HC, HC2]

Pacif. Railr. Rep. 6(3): 80, plate 12. 1858.  
gnome-plant

**Hemitomes congestum** A. Gray [FNA8, HC, HC2]

Pacif. Railr. Rep. 6(3): 80, plate 12. 1858.  
coneplant, gnome-plant

*Hemitomes spicatum* Greene  
*Newberrya congesta* Torr.  
*Newberrya longiloba* Small  
*Newberrya spicata* A. Gray

**Kalmia** [FNA8, HC, HC2]

Sp. Pl. 1: 391. 1753; Gen. Pl. ed. 5, 185. 1754.  
azalea, laurel

*Loiseleuria* [HC]

**Kalmia microphylla** (Hook.) A. Heller [FNA8, HC, HC2]

Bull. Torrey Bot. Club. 25: 581. 1898.

western bog laurel

*Kalmia polifolia* Wengen. [FNA8], misapplied

var. **microphylla** [FNA8, HC2]

Bull. Torrey Bot. Club 25(11): 581.  
alpine-laurel, bog laurel

*Kalmia polifolia* Wengen. ssp. *microphylla* (Hook.) Calder & Roy L. Taylor  
*Kalmia polifolia* Wengen. var. *microphylla* (Hook.) Hall

FNA8: "Kalmia microphylla is highly variable and has been treated as two species (J. K. Small 1914), two subspecies (R. L. Taylor and B. MacBryde 1978), or two varieties (J. E. Ebinger 1974). A flavonoid study (S. Liu 1993) indicated that the Pacific lowland (from Washington to Alaska) var. occidentalis populations are hardly separable from the alpine var. microphylla populations. The flavonoid data cited in support of combining K. microphylla and K. occidentalis are unpublished and impossible to judge. In any case, one would not expect varieties to necessarily differ chemically; the morphological and ecological differences seem sufficient. The two varieties of Kalmia microphylla are generally distinct; var. microphylla is common in alpine meadows of western North America from California through the Rocky Mountains into northern Canada and Alaska. The elevations at which it is found range from an average 2500 meters (1500-3500 m) in California to an average 1700 meters (900-2200 m) in Alberta, British Columbia, and Washington. Variety occidentalis, in contrast, is always encountered growing below 900 meters, being common in coastal areas and islands off the coast of Alaska and British Columbia. These two varieties are known to hybridize (J. E. Ebinger 1974), and the hybrids are highly fertile and set large quantities of viable seed (R. A. Jaynes 1988)."

var. **occidentalis** (Small) Ebinger [FNA8, HC2]

Rhodora. 76: 340. 1974.  
Western swamp laurel

*Kalmia occidentalis* Small [HC]

*Kalmia polifolia* Wengen. ssp. *occidentalis* (Small) Abrams

FNA8: "Kalmia microphylla is highly variable and has been treated as two species (J. K. Small 1914), two subspecies (R. L. Taylor and B. MacBryde 1978), or two varieties (J. E. Ebinger 1974). A flavonoid study (S. Liu 1993) indicated that the Pacific lowland (from Washington to Alaska) var. occidentalis populations are hardly separable from the alpine var. microphylla populations. The flavonoid data cited in support of combining K. microphylla and K. occidentalis are unpublished and impossible to judge. In any case, one would not expect varieties to necessarily differ chemically; the morphological and ecological differences seem sufficient. The two varieties of Kalmia microphylla are generally distinct; var. microphylla is common in alpine meadows of western North America from California through the Rocky Mountains into northern Canada and Alaska. The elevations at which it is found range from an average 2500 meters (1500-3500 m) in California to an average 1700 meters (900-2200 m) in Alberta, British Columbia, and Washington. Variety occidentalis, in contrast, is always encountered growing below 900 meters, being common in coastal areas and islands off the coast of Alaska and British Columbia. These two varieties are known to hybridize (J. E. Ebinger 1974), and the hybrids are highly fertile and set large quantities of viable seed (R. A. Jaynes 1988). Variety occidentalis and Kalmia polifolia are strikingly similar. Both have the same general habit and size and are very similar in most morphological characteristics. These taxa are easily separated by the revolute leaf margins and small stalked glands along the leaf midrib in K. polifolia, which are lacking in var. occidentalis (J. E. Ebinger 1974). Hybrids between them are sterile (R. A. Jaynes 1988)."

***Kalmia procumbens*** (L.) Gift & Kron [FNA8, HC2]

Nordic J. Bot. 26: 47. 2008.  
alpine-azalea, alpine azalea, trailing azalea

*Azalea procumbens* L.

*Chamaecistus procumbens* (L.) Kuntze

*Loiseleuria procumbens* (L.) Desv. [HC]

FNA8: "Kalmia procumbens is the only species of the genus that is not endemic to North America. An attractive dwarf shrub, it is sometimes cultivated in rock gardens. The inclusion here of Kalmia procumbens and K. buxifolia, traditionally treated as the monotypic genera Loiseleuria and Leiophyllum, is in keeping with the results of recent morphological and molecular phylogenetic studies. P. F. Stevens et al. (2004)

also included *Leiophyllum* and *Loiseleuria* within an expanded *Kalmia*. These two species have evolved deeply cleft corollas with nearly separate petals, and thus lost the characteristic pockets of *Kalmia*; otherwise they are typical for the genus."

### ***Moneses*** [FNA8, HC2]

Nat. Arr. Brit. Pl. 2: 396, 403. 1821.  
wood nymph, one-flowered wintergreen

#### ***Moneses uniflora*** (L.) A. Gray [FNA8, HC2]

Manual. 273. 1848.  
single-delight

*Moneses reticulata* Nutt.

*Moneses uniflora* (L.) A. Gray ssp. *reticulata* (Nutt.) Calder & Roy L. Taylor

*Moneses uniflora* (L.) A. Gray var. *reticulata* (Nutt.) S.F. Blake

*Pyrola uniflora* L. [HC]

FNA8: "Most chromosome counts are  $2n = 26$ ; there are reports of  $2n = 22, 24,$  and  $32$  (Å. Löve and D. Löve 1975b). The veracity of the latter reports has not been confirmed. *Moneses uniflora* has been used by different Native American tribes as a dermatological aid, cold remedy, throat aid, and analgesic (D. E. Moerman 1998)."

### ***Monotropa*** [FNA8, HC, HC2]

Sp. Pl. 1: 387. 1753; Gen. Pl. ed. 5, 183. 1754.

#### ***Monotropa hypopitys*** L. [FNA8, HC2]

Sp. Pl. 1: 387. 1753.  
many-flower Indian-pipe

*Hipopitys fimbriata* (A. Gray) Howell

*Hipopitys lanuginosa* (Michx.) Raf.

*Hipopitys monotropa* Crantz

*Hypopitys americana* (DC.) Small

*Hypopitys monotropa* Crantz [HC]

*Monotropa hypopitys* L. ssp. *lanuginosa* (Michx.) H. Hara

*Monotropa latisquama* (Rydb.) Hultén

#### ***Monotropa uniflora*** L. [FNA8, HC, HC2]

Sp. Pl. 1: 387. 1753.  
one-flower Indian-pipe

*Monotropa brittonii* Small

*Monotropa morisoniana* Michx.

### ***Orthilia*** [FNA8, HC2]

Autik. Bot. 103. 1840.  
one-sided wintergreen

#### ***Orthilia secunda*** (L.) House [FNA8, HC2]

Amer. Midl. Naturalist. 7: 134. 1921.  
one-sided pyrola, sidebells

*Orthilia secunda* (L.) House ssp. *obtusata* (Turcz.) Böcher

*Pyrola secunda* L. [HC]

*Pyrola secunda* L. ssp. *obtusata* (Turcz.) Hultén

*Pyrola secunda* L. var. *obtusata* Turcz. [HC]

*Pyrola secunda* L. var. *secunda* [HC]

FNA8: "Plants in open, alpine and arctic habitats often have leaf blades orbiculate to orbiculate-ovate, 10-20 mm, apices obtuse, anthers ca. 1 mm, and styles 3-4.5 mm, and have been called *Orthilia secunda* subsp. *obtusata*. E. Haber (1972) concluded that these characters vary too freely among populations to warrant distinction."

### ***Phyllodoce*** [FNA8, HC, HC2]

Parad. Lond. 1: plate 36. 1806.  
mountain-heath

***Phyllodoce empetriformis* (Sm.) D. Don [FNA8, HC, HC2]**

Edinburgh New Philos. J. 17: 160. 1834.  
pink mountain-heath

*Menziesia empetriformis* Sm.

FNA8: "Hybrids between *Phyllodoce empetriformis* and *P. glanduliflora* are encountered occasionally where the two species occur together. The hybrids, *P. xintermedia* (Hooker) Rydberg, consisting largely of first-generation crosses (F1 progeny), have a decidedly intermediate floral morphology, combining glandular, mostly nonciliate sepals more than 3 mm long and pinkish, cylindrical to ovoid corollas."

***Phyllodoce glanduliflora* (Hook.) Coville [FNA8, HC, HC2]**

Mazama. 1: 196. 1897.  
yellow mountain-heath

*Menziesia glanduliflora* Hook.

*Phyllodoce aleutica* (Spreng.) A. Heller ssp. *glanduliflora* (Hook.) Hultén

FNA8: "*Phyllodoce glanduliflora* hybridizes with *P. aleutica* and with *P. empetriformis*."

***Phyllodoce xintermedia* (Hook.) Rydb. [FNA8, HC, HC2]**

New Fl. & Silva 12: 210.

*Phyllodoce hybrida* Rydb.

FNA8: "Hybrids between *Phyllodoce empetriformis* and *P. glanduliflora* are encountered occasionally where the two species occur together. The hybrids, *P. xintermedia* (Hooker) Rydberg, consisting largely of first-generation crosses (F1 progeny), have a decidedly intermediate floral morphology, combining glandular, mostly nonciliate sepals more than 3 mm long and pinkish, cylindrical to ovoid corollas."

***Pityopus* [FNA8, HC, HC2]**

N. Amer. Fl. 29: 16. 1914.  
pine-foot, pityopus

***Pityopus californicus* (Eastw.) H.F. Copel. [FNA8, HC2]**

Madroño. 3: 155. 1935.  
California pinefoot

*Monotropa californica* Eastw.

*Pityopus californica* (Eastw.) H.F. Copel. [HC], orthographic variant

*Pityopus oregonus* Small

Rare. Note that the species name is misspelled in H&C (*P. californica*, a combination that has never been published).

***Pleurospora* [FNA8, HC, HC2]**

Proc. Amer. Acad. Arts. 7: 369. 1868.  
fringed-pinesap, Sierra-sap

***Pleurospora fimbriolata* A. Gray [FNA8, HC, HC2]**

Proc. Amer. Acad. Arts. 7: 369. 1868.  
fringed pinesap

*Pleurospora densa* Small

*Pleurospora longipetala* Howell

***Pterospora* [FNA8, HC, HC2]**

Gen. N. Amer. Pl. 1: 269. 1818.  
Albany-beechdrops, pinedrops

***Pterospora andromedea* Nutt. [FNA8, HC, HC2]**

Gen. N. Amer. Pl. 1: 269. 1818.  
woodland pinedrops

**Pyrola** [FNA8, HC, HC2]

Sp. Pl. 1: 396. 1753; Gen. Pl. ed. 5, 188. 1754.  
pyrola, shinleaf, wintergreen  
(see also *Moneses*, *Orthilia*)

**Pyrola aphylla** Sm. [HC, HC2]

leafless wintergreen

**Pyrola asarifolia** Michx. [FNA8, HC, HC2]

Fl. Bor.-Amer. 1: 251. 1803.  
common pink wintergreen, liver-leaf wintergreen

ssp. **asarifolia** [FNA8, HC2]

Fl. Bor.-Amer. 1: 251.  
pink pyrola

*Pyrola asarifolia* Michx. var. *asarifolia* [HC]

*Pyrola asarifolia* Michx. var. *purpurea* (Bunge) Fernald [HC]

*Pyrola californica* Krísa

*Pyrola elata* Nutt.

*Pyrola uliginosa* Torr. & A. Gray

FNA8: "Regional variation in *Pyrola asarifolia* in North America was examined by E. Haber (1983) using morphological and flavonoid data. Despite finding some longitudinal geographic differentiation, he concluded that most earlier-recognized segregates of the *P. asarifolia* complex were best included within a single, polymorphic species, with the large-bracted, denticulate-leaved, Pacific Northwest and northern Rocky Mountains element (subsp. *bracteata*) distinguishable from the relatively short-bracted, crenate-leaved, transcontinental element (subsp. *asarifolia*). Included within his concept of the latter subspecies were Asian plants referred to *P. incarnata* (de Candolle) Freyn. A more comprehensive study of the Asian element (Haber and Hiroshi Takahashi 1988) led to the conclusion that this vicariad was sufficiently distinct to warrant recognition as *P. asarifolia* subsp. *incarnata* (de Candolle) Haber & Hir. Takahashi; it is distinguished from the North American subspecies by its narrower sepals. Takahashi (1993) found differences also in the seeds of the two subspecies."

ssp. **bracteata** (Hook.) Haber [FNA8, HC2]

Syst. Bot. 8: 298. 1983.  
pink pyrola

*Pyrola asarifolia* Michx. var. *bracteata* (Hook.) Jeps.

*Pyrola bracteata* Hook.

FNA8: "Regional variation in *Pyrola asarifolia* in North America was examined by E. Haber (1983) using morphological and flavonoid data. Despite finding some longitudinal geographic differentiation, he concluded that most earlier-recognized segregates of the *P. asarifolia* complex were best included within a single, polymorphic species, with the large-bracted, denticulate-leaved, Pacific Northwest and northern Rocky Mountains element (subsp. *bracteata*) distinguishable from the relatively short-bracted, crenate-leaved, transcontinental element (subsp. *asarifolia*). Included within his concept of the latter subspecies were Asian plants referred to *P. incarnata* (de Candolle) Freyn. A more comprehensive study of the Asian element (Haber and Hiroshi Takahashi 1988) led to the conclusion that this vicariad was sufficiently distinct to warrant recognition as *P. asarifolia* subsp. *incarnata* (de Candolle) Haber & Hir. Takahashi; it is distinguished from the North American subspecies by its narrower sepals. Takahashi (1993) found differences also in the seeds of the two subspecies."

**Pyrola chlorantha** Sw. [FNA8, HC, HC2]

Kongl. Svenska Vetensk. Akad. Nya Handl. 31: 190, plate 5. 1810.  
green-flower wintergreen

*Pyrola oxypetala* Aust. ex A. Gray

*Pyrola virens* Schweigg.

*Pyrola virens* Schweigg. var. *convoluta* (W.P.C. Barton) Fernald

FNA8: "E. Haber (1993) interpreted some herbarium specimens with intermediate morphologies and abnormal pollen as putative hybrids between *Pyrola chlorantha* and *P. minor*, and between *P. chlorantha* and *P. picta*. Leafless forms of *P. chlorantha* can be distinguished reliably from those of *P. picta* by the size

and shape of the calyx lobes."

***Pyrola dentata* Sm. [HC, HC2]**

toothleaf pyrola

*Pyrola dentata* Sm. var. *integra* A. Gray  
*Pyrola picta* Sm. ssp. *dentata* (Sm.) Piper  
*Pyrola picta* Sm. ssp. *integra* (A. Gray) Piper  
*Pyrola picta* Sm. var. *dentata* (Sm.) Dorn

***Pyrola elliptica* Nutt. [FNA8, HC, HC2]**

Gen. N. Amer. Pl. 1: 273. 1818.  
white wintergreen

***Pyrola minor* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 396. 1753.  
lesser wintergreen, snowline wintergreen

*Pyrola conferta* Fisch. ex Cham. & Schlecht.  
*Pyrola minor* L. var. *parviflora* B. Boivin

FNA8: "Pyrola minor and P. asarifolia are broadly sympatric in North America. Scattered hybrids between these species have been reported, mostly from the area of sympatry (E. Haber 1984). Haber (1993) found herbarium evidence for at least one case of hybridization between P. minor and P. chlorantha. T. W. Böcher (1961) discussed hybrids between P. minor and P. grandiflora from western Greenland. The straight style and actinomorphic corolla of Pyrola minor have been interpreted as paedomorphic conditions (J. V. Freudenstein 1999b). Among three northern European species of Pyrola studied by J. T. Knudsen and J. M. Olesen (1993), the shifts in floral morphology in P. minor were found to be associated with a significantly higher capacity for self-pollination."

***Pyrola picta* Sm. [FNA8, HC, HC2]**

Cycl. 29: Pyrola no. 8. 1814.  
white-vein wintergreen

*Pyrola conardiana* Andres  
*Pyrola paradoxa* Andres  
*Pyrola septentrionalis* Andres

FNA8: "E. Haber (1987) concluded that Pyrola picta, P. aphylla, and P. dentata are morphotypes of a single, highly variable species, a finding consistent with seed morphology data compiled by Hiroshi Takahashi (1993). Leafless scapes frequently are found attached to rhizomes bearing leafy shoots (W. H. Camp 1940; Haber 1987). Putative hybrids between P. picta and P. chlorantha have been reported at three locations in the western United States (Haber 1993). Cladistic analyses of molecular and morphologic data suggest that P. picta is sister to P. chlorantha (J. V. Freudenstein 1999b), which also occasionally is leafless."

\* Haber, E. 1987. Variability, distribution, and systematics of Pyrola picta s.l. (Ericaceae) in western North America. Syst. Bot. 12: 324-335.

***Rhododendron* [FNA8, HC, HC2]**

Sp. Pl. 1: 392. 1753; Gen. Pl. ed. 5, 185. 1754.  
azalea, Labrador-tea, menziesia, rhododendron

*Ledum* [HC]  
*Menziesia* [FNA8, HC]

***Rhododendron albiflorum* Hook. [FNA8, HC, HC2]**

Fl. Bor.-Amer. 2: 43, plate 133. 1834.  
white rhododendron

*Azaleastrum albiflorum* (Hook.) Rydb.  
*Rhododendron albiflorum* Hook. var. *warrenii* (A. Nelson) M.A. Lane

FNA8: "Rhododendron albiflorum is especially distinctive due to its axillary, white, somewhat pendulous, and nearly actinomorphic flowers, and it is placed in the monotypic subg. Candidastrum (Sleumer) Philipson & Philipson (W. R. Philipson and M. N. Philipson 1986). It is occasionally used as an ornamental.

The disjunct population in Colorado has somewhat smaller calyx lobes and corollas and shorter stamens; it is sometimes recognized as var. *warrenii* (M. A. Lane et al. 1993). This variety is not recognized here because of the extent of morphological overlap between that population and those of the Pacific Northwest."

***Rhododendron columbianum* (Piper) Harmaja [FNA8, HC2]**

Ann. Bot. Fenn. 27: 203. 1990.

mt. Labrador tea, smooth Labrador tea, western Labrador tea

*Ledum glandulosum* Nutt. [HC]

*Ledum glandulosum* Nutt. ssp. *australe* C.L. Hitchc.

*Ledum glandulosum* Nutt. ssp. *columbianum* (Piper) C.L. Hitchc.

*Ledum glandulosum* Nutt. ssp. *olivaceum* C.L. Hitchc.

*Ledum glandulosum* Nutt. var. *californicum* (Kellogg) C.L. Hitchc.

*Ledum glandulosum* Nutt. var. *columbianum* (Piper) C.L. Hitchc. [HC]

*Ledum glandulosum* Nutt. var. *glandulosum* [HC]

*Rhododendron neoglandulosum* Harmaja

FNA8: "Rhododendron *groenlandicum*, *R. columbianum*, and *R. tomentosum* customarily have been placed in the genus *Ledum*. *Ledum* is here considered to be a subsection of *Rhododendron* subg. *Rhododendron* (as subsect. *Ledum*), a placement supported by the presence in these species of comparable complex, multicellular, glandular, peltate scales and phylogenetic analyses of morphological and molecular data. The glandular scales of species of subsect. *Ledum* lack the radiating, broad-rimmed fringe-cells found in some members of subg. *Rhododendron* (and characteristic of *R. minus* and *R. lapponicum*) but are essentially identical to those of species of subsect. *Edgeworthia*, e.g., *R. pendulum* (see K. A. Kron and W. S. Judd 1990). More than 500 species of subg. *Rhododendron* occur in tropical and temperate eastern Asia (J. Cullen 1980; D. F. Chamberlain et al. 1996)."

***Rhododendron groenlandicum* (Oeder) Kron & Judd [FNA8, HC2]**

Syst. Bot. 15: 67. 1990.

rusty Labrador-tea, bog Labrador tea

*Ledum groenlandicum* Oeder [HC]

FNA8: "Rhododendron *groenlandicum*, *R. columbianum*, and *R. tomentosum* customarily have been placed in the genus *Ledum*. *Ledum* is here considered to be a subsection of *Rhododendron* subg. *Rhododendron* (as subsect. *Ledum*), a placement supported by the presence in these species of comparable complex, multicellular, glandular, peltate scales and phylogenetic analyses of morphological and molecular data. The glandular scales of species of subsect. *Ledum* lack the radiating, broad-rimmed fringe-cells found in some members of subg. *Rhododendron* (and characteristic of *R. minus* and *R. lapponicum*) but are essentially identical to those of species of subsect. *Edgeworthia*, e.g., *R. pendulum* (see K. A. Kron and W. S. Judd 1990). More than 500 species of subg. *Rhododendron* occur in tropical and temperate eastern Asia (J. Cullen 1980; D. F. Chamberlain et al. 1996)."

***Rhododendron macrophyllum* D. Don ex G. Don [FNA8, HC, HC2]**

Gen. Hist. 3: 843. 1834.

California rhododendron, Pacific rhododendron

*Rhododendron californicum* Hook.

FNA8: "Rhododendron *macrophyllum*, *R. maximum*, and *R. catawbiense* represent subg. *Hymenanthes* (Blume) K. Koch in North America; the subgenus is represented by hundreds of species in temperate eastern Asia and is characterized by its branched, eglandular hairs (D. F. Chamberlain 1982). These showy plants are frequently used as ornamentals."

***Rhododendron menziesii* Craven [HC2]**

Blumea 56(1): 34. (16 Mar 2011).

false azalea, fool's-huckleberry

*Menziesia ferruginea* Sm. ssp. *ferruginea*

*Menziesia ferruginea* Sm. ssp. *glabella* (A. Gray) Calder & Roy L. Taylor

*Menziesia ferruginea* Sm. var. *ferruginea* [HC]

*Menziesia ferruginea* Sm. var. *glabella* (A. Gray) M. Peck [HC]

*Menziesia glabella* A. Gray

FNA8: "Two infraspecific taxa have been recognized and are still in use in some floras. Neither chemical (B. A. Bohm et al. 1984) nor morphological (J. C. Hickman and M. P. Johnson 1969) analyses have unequivocally supported the recognition of these infraspecific taxa. Character differences between var. ferruginea of coastal areas and the Cascade Mountains and var. glabella of the Rocky Mountains are most noticeable between specimens from the extremes of their ranges. Heterogeneity in character states is seen throughout the geographic range of *Menziesia ferruginea* and intermediate specimens are noticeable, particularly in the more southerly Cascade portion of the range."

#### **Vaccinium** [FNA8, HC, HC2]

Sp. Pl. 1: 349. 1753; Gen. Pl. ed. 5, 166. 1754.  
bilberry, blueberry, cranberry, huckleberry

#### **Vaccinium caespitosum** Michx. [HC2]

dwarf bilberry, dwarf huckleberry

*Vaccinium arbuscula* (A. Gray) Merriam

*Vaccinium caespitosum* Michx. [FNA8, HC], orthographic variant

*Vaccinium caespitosum* Michx. var. *angustifolium* A. Gray

*Vaccinium caespitosum* Michx. var. *arbusculum* A. Gray

*Vaccinium caespitosum* Michx. var. *caespitosum* [KZ99]

*Vaccinium caespitosum* Michx. var. *cuneifolium* Nutt.

*Vaccinium caespitosum* Michx. var. *paludicola* (Camp) Hultén [KZ99]

*Vaccinium geminiflorum* Kunth

*Vaccinium nivictum* Camp

*Vaccinium paludicola* Camp

#### **Vaccinium corymbosum** L. [FNA8, HC2]

Sp. Pl. 1: 350. 1753.  
high-bush blueberry

*Cyanococcus amoenus* (Aiton) Small

*Cyanococcus atrococcus* (A. Gray) Small

*Cyanococcus corymbosus* (L.) Rydb.

*Vaccinium amoenum* Aiton

FNA8: "Every morphological variant of the high-bush blueberry has been named formally at one time or another. At least 25 such taxa have been raised to specific rank; none is distinct throughout its putative range nor has the properties normally associated with biological species, including *Vaccinium atrococcus* and *V. elliottii*. See S. P. Vander Kloet (1980) for a complete list of synonyms. Feral populations readily become established wherever cultivars have been planted, e.g., Britain, British Columbia, Japan, Missouri, The Netherlands, New Zealand, Washington, and Wisconsin."

\* Vander Kloet, S. P. 1980. The taxonomy of the highbush blueberry, *Vaccinium corymbosum*. *Canad. J. Bot.* 58: 1187-1201. Vander Kloet, S. P. 1980b. Erratum: The taxonomy of the highbush blueberry, *Vaccinium corymbosum*. *Canad. J. Bot.* 58: 2028-2029.

#### **Vaccinium deliciosum** Piper [FNA8, HC, HC2]

Mazama. 2: 103. 1901.

Cascade blueberry, Rainier blueberry, blueleaf huckleberry

FNA8: "*Vaccinium deliciosum* produces especially flavorful berries. Research at the University of Idaho and Washington State University identified 31 aromatic flavor compounds in the fruits. Despite its outstanding flavor and large fruit size, it is harvested less than is *V. membranaceum* because it has a smaller range and is less abundant there than its black-fruited congener. Also, like *V. membranaceum*, *V. deliciosum* is native at higher elevations and can be difficult to grow at low elevations. Although rhizomatous, *V. deliciosum* has a dense root system and transplants easily."

#### **Vaccinium macrocarpon** Aiton [FNA8, HC, HC2]

Hort. Kew. 2: 13, plate 7. 1789.

cultivated cranberry, large cranberry

*Oxycoccus macrocarpus* (Aiton) Pers., invalid name

FNA8: "*Vaccinium macrocarpon* is introduced and escaping elsewhere (British Columbia, Oregon, Washington) with respect to its normal range in eastern North America."

- \* Bruederle, L. P., M. S. Hagan, and J. M. Dignan. 1996. Genetic variation in natural populations of the large cranberry, *Vaccinium macrocarpon* Ait. (Ericaceae). Bull. Torrey Bot. Club 123: 41-47.
- \* Ogle, D. W. 1984. Phytogeography of *Vaccinium macrocarpon* Aiton in the southern United States. Virginia J. Sci. 35: 31-47.
- \* Upton, R., ed. 2002. Cranberry Fruit: *Vaccinium macrocarpon* Aiton. Standards of Analysis, Quality Control, and Therapeutics. Santa Cruz.

***Vaccinium membranaceum* Douglas ex Torr. [FNA8, HC, HC2]**

U.S. Expl. Exped. 17: 377. 1874.

square-twig blueberry, tall huckleberry, thin-leaved huckleberry

*Vaccinium coccineum* Piper

*Vaccinium globulare* Rydb. [HC]

*Vaccinium macrophyllum* Piper

*Vaccinium membranaceum* Douglas ex Torr. var. *rigidum* (Hook.) Fernald

FNA8: "Vaccinium membranaceum is, by far, the most widely commercially utilized western huckleberry for fruit and is harvested extensively from the wild. This species served as an especially important source of food for native peoples throughout western North America, and the dried berries were used for winter food and trade."

***Vaccinium myrtilloides* Michx. [FNA8, HC2]**

Fl. Bor.-Amer. 1: 234. 1803.

velvet-leaf blueberry

*Cyanococcus canadensis* (Kalm ex Richardson) Rydb.

*Vaccinium angustifolium* Aiton var. *myrtilloides* (Michx.) House

*Vaccinium canadense* Kalm ex Richardson

Rare. Not observed in the Pacific Northwest at the time H&C (1973) was published.

***Vaccinium myrtilus* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 349. 1753.

dwarf blueberry, low blueberry

*Vaccinium myrtilus* L. ssp. *oreophilum* (Rydb.) Á. Löve, D. Löve & B.M. Kapoor

*Vaccinium myrtilus* L. var. *oreophilum* (Rydb.) Dorn [KZ99]

*Vaccinium oreophilum* Rydb.

FNA8: "Vaccinium myrtilus fruits are popular in Europe and are known to possess antioxidants and other compounds beneficial to vascular health. Berries in Europe are extensively harvested from wild stands. In North America, the fruits were used by the Kootenai, Carrier, Shuswap, and other native tribes. The small plant and fruit sizes create challenges for commercialization in North America."

\* Albert, T., O. Raspe, and A. L. Jacquemart. 2003. Clonal structure in *Vaccinium myrtilus* L. revealed by RAPD and AFLP markers. Int. J. Pl. Sci. 164: 649-655.

\* Upton, R., ed. 2001. Bilberry Fruit: *Vaccinium myrtilus* L. Standards of Analysis, Quality Control, and Therapeutics. Santa Cruz.

***Vaccinium ovalifolium* Sm. [FNA8, HC, HC2]**

Cycl. 36: Vaccinium no. 2. 1817.

Alaska blueberry, oval-leaf blueberry

*Vaccinium alaskaense* Howell [HC]

***Vaccinium ovatum* Pursh [FNA8, HC, HC2]**

Fl. Amer. Sept. 1: 290. 1813.

evergreen huckleberry

*Vaccinium ovatum* Pursh var. *saporosum* Jeps.

***Vaccinium oxycoccos* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 351. 1753.

small cranberry

*Oxycoccus hagerupii* Á. Löve & D. Löve

*Oxycoccus intermedius* (A. Gray) Rydb.

*Oxycoccus microcarpus* Turczaninow ex Rupr.

*Oxycoccus oxycoccus* (L.) Adolphi  
*Oxycoccus oxycoccus* (L.) MacMill.  
*Vaccinium microcarpum* (Turczaninow ex Rupr.) Schmalhausen  
*Vaccinium oxycoccus* L. ssp. *microphyllum* (Lange) Feilberg  
*Vaccinium oxycoccus* L. var. *intermedium* A. Gray  
*Vaccinium oxycoccus* L. var. *microphyllum* (Lange) J. Rouss. & Raymond  
*Vaccinium oxycoccus* L. var. *ovalifolium* Michx.

FNA8: "Vaccinium oxycoccus is interruptedly circumboreal (absent from the Canadian Arctic Archipelago, including Baffin Island) extending southward in North America to California in the Cascade Range and to West Virginia in the Appalachian Mountains. In Europe, some chromosome races of *Vaccinium oxycoccus* have been given specific rank (S. P. Vander Kloet 1983) at one time or another; unfortunately, hexaploids cannot be differentiated consistently from diploids or tetraploids using morphological features such as leaf indumentum or bract size. On most vines, especially north of 50° north latitude, the leafy portion of the fertile shoot fails to develop, giving the illusion that *Vaccinium oxycoccus* has an inflorescence comprising a short rachis bearing flowers on a slender pedicel."

\* Mahy, G. et al. 2000. Allozyme evidence for genetic autopolyploidy and high genetic diversity in the tetraploid cranberry, *Vaccinium oxycoccus* (Ericaceae). *Amer. J. Bot.* 87: 1882-1889.

***Vaccinium parvifolium* Sm. [FNA8, HC, HC2]**

Cycl. 36: *Vaccinium* no. 3. 1817.  
red huckleberry

FNA8: "The red, waxy fruits of *Vaccinium parvifolium* were popular with all coastal Indian tribes and remain so with recreational pickers. The berries are somewhat sour but make excellent pastries and preserves. Commercial use of *V. parvifolium* is limited; vigorous growth, ease of harvest, and site adaptability provide opportunities."

***Vaccinium scoparium* Leiberg ex Coville [FNA8, HC, HC2]**

Contr. U.S. Natl. Herb. 5: 103. 1897.  
grouseberry

*Vaccinium erythrococtum* Rydb.  
*Vaccinium myrtillus* L. var. *microphyllum* Hook.

FNA8: "The soft, tart, bright red berries of *Vaccinium scoparium*, to 6 mm diameter, have fair to good flavor and were gathered and eaten raw by the Kootenay, Okanogan, Shuswap, and other Indian tribes. Harvesting was probably done using wooden or fish-bone combs. Small fruit size, low yields, and difficult harvesting make commercial prospects for *V. scoparium* questionable."

***Vaccinium uliginosum* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 350. 1753.  
bog bilberry, bog blueberry

*Vaccinium gaultherioides* Bigelow  
*Vaccinium occidentale* A. Gray [HC]  
*Vaccinium uliginosum* L. ssp. *alpinum* (Bigelow) Hultén  
*Vaccinium uliginosum* L. ssp. *microphyllum* Lange  
*Vaccinium uliginosum* L. ssp. *occidentale* (A. Gray) Hultén  
*Vaccinium uliginosum* L. ssp. *pedris* (Harshberger) S.B. Young  
*Vaccinium uliginosum* L. ssp. *pubescens* (Wormsk. ex Horneman) S.B. Young  
*Vaccinium uliginosum* L. var. *salicinum* (Cham.) Hultén

FNA8: "Vaccinium uliginosum is transcontinental in North America between 60° and 70° north latitude; farther north it is rare, especially in the Queen Elizabeth Islands. To the southwest, it is found as far as northern California and northwestern Utah. The summits of the White Mountains of New Hampshire form its southernmost limit in eastern North America. This wide-ranging plant shows considerable variation, notably in floral morphology. Subspecies have been recognized (cf. S. B. Young 1970); a review of morphological variation by H. J. Warr (1981) did not support the distinctiveness of infraspecific taxa."

## Euphorbiaceae [HC, HC2] Spurge Family

**Synonyms:** (none)

**References:** (none)

### **Croton** [HC2]

croton

*Eremocarpus* [HC]

#### **Croton setigerus** Hook.

doveweed, turkey mullein, fish poison

*Croton setigerus* Hook. [HC2, JPM2], orthographic variant

*Eremocarpus setigerus* (Hook.) Benth. [HC]

### **Euphorbia** [HC, HC2]

euphorbia, sandmat, spurge

*Euphorbia agraria* M. Bieb. [HC2]

Fl. Taur.-Caucas. 1: 375.

urban spurge

*Euphorbia amygdaloides* L. [HC2]

*Euphorbia characias* L. [HC2]

*Euphorbia cyparissias* L. [HC, HC2]

Sp. Pl. 1: 461.

cypress spurge

*Euphorbia epithymoides* L. [HC2]

***Euphorbia glyptosperma*** Engelm. [HC, HC2]

Rep. U.S. Mex. Bound. 2(1): 187.

rib seed sandmat, corrugate seeded spurge, ridge seeded spurge

*Chamaesyce glyptosperma* (Engelm.) Small [KZ99, JPM]

Here we follow Voss (1985) and Cronquist (1991), including *Chamaesyce* as a subgenus within *Euphorbia*, as their flowers and fruits are essentially the same.

*Euphorbia helioscopia* L. [HC, HC2]

Sp. Pl. 1: 459.

mad woman's milk, summer spurge, sun spurge, wart spurge, wartweed

*Euphorbia lathyris* L. [HC2, IFBC]

Sp. Pl. 1: 457.

mole plant, gopher plant, caper spurge

*Euphorbia lathyrus* L. [HC], orthographic variant

Misspelled *Euphorbia lathyrus* in H&C.

*Euphorbia maculata* L. [HC, HC2]

Sp. Pl. 1: 455.

sandmat, milk spurge, spotted spurge

*Chamaesyce maculata* (L.) Small [KZ99]

*Euphorbia supina* Raf. [HC]

*Euphorbia myrsinites* L. [HC2]

Sp. Pl. 461.

broad leaved glaucous spurge, myrtle spurge

*Euphorbia oblongata* Griseb. [HC2, Stace 1997]

Spic. Fl. Rumel. 1: 136.

balkan spurge, egg leaf spurge

*Euphorbia peplus* L. [HC, HC2]

Sp. Pl. 1: 456.  
petty spurge

*Euphorbia platyphyllos* L. [HC2, Stace 1997]

Sp. Pl. 1: 460.  
broad leaved spurge

Recently collected in King Co. - perhaps in mounting backlog at WTU.

*Euphorbia segetalis* L. [HC2]

*Euphorbia serpyllifolia* Pers. [FNA, HC2]

Syn. Pl. 2: 14. 1806.  
thyme leaved spurge

*Euphorbia serpyllifolia* Pers. [HC], orthographic variant

ssp. *serpyllifolia* [FNA, HC2]

*Chamaesyce serpyllifolia* (Pers.) Small ssp. *serpyllifolia* [KZ99, JPM]  
*Euphorbia serpyllifolia* Pers. ssp. *serpyllifolia*, orthographic variant

*Euphorbia serrulata* Thuill. [HC2, Stace 1997]

Fl. Env. Paris (ed. 2) 2: 237.  
upright spurge

*Euphorbia stricta* L.

*Euphorbia spathulata* Lam. [HC, HC2]

Encycl. 2(2): 428.  
reticulate seeded spurge, spatulate leaved spurge, warty spurge

*Euphorbia virgata* Waldst. & Kit. [FNA, HC2]

Descr. Icon. Pl. Hung. 2: 176?177, pl. 162.  
wolf's milk, leafy spurge

Draft FNA: "Euphorbia virgata is native to Europe and temperate Asia. The species is here treated as the widespread, weedy, "leafy spurge"• that is a pest plant across much of the northern flora area. Euphorbia virgata is similarly widespread and weedy across much of its native range in Europe and Asia, whereas the true E. esula is much more restricted in range and is never as pervasive and weedy as E. virgata in either its native range or in the flora area."

*Mercurialis* [HC2]

*Mercurialis annua* L. [HC2]

annual mercury

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## Fabaceae [HC2, IFBC, JPM, JPM2] Pea Family

**Synonyms:**

Leguminosae [HC]

**References:** (none)

*Acmispon* [HC2]

deervetch, lotus

*Acmispon americanus* (Nutt.) Rydb. [HC2]

Spanish-clover

*Lotus americanus* (Nutt.) Bisch., homonym (illegitimate)

*Lotus purshiana* (Benth.) Clements & Clements [HC], orthographic variant  
*Lotus purshianus* Clem. & E.G. Clem.

var. **americanus** [Draft FNA, HC2]

Bull. Torrey Bot. Club 40(2): 45.  
Spanish-clover, American bird's-foot trefoil

*Lotus purshianus* Clem. & E.G. Clem. var. *glaber* (Nutt.) Munz  
*Lotus unifoliolatus* (Hook.) Benth. var. *unifoliolatus*

**Acmispon denticulatus** (Drew) Sokoloff [Draft FNA, HC2]

Annales Botanici Fennici 37(2): 130.  
river-bar bird's-foot-trefoil

*Hosackia denticulata* Drew  
*Lotus denticulatus* (Drew) Greene [HC]

**Acmispon nevadensis** (S. Watson) Brouillet [HC2]

Nevada deervetch

*Lotus nevadensis* (S. Watson) Greene [HC]

var. **nevadensis** [HC2]

J. Bot. Res. Inst. Texas 2(1): 391.  
Nevada deervetch

*Hosackia decumbens* Benth.  
*Lotus douglasii* Greene

*Lotus nevadensis* (S. Watson) Greene var. *douglasii* (Greene) Ottley [HC]

**Acmispon parviflorus** (Benth.) D.D. Sokoloff [Draft FNA, HC2]

Annales Botanici Fennici 37(2): 129.  
short-flower bird's-foot-trefoil

*Hosackia parviflora* Benth.  
*Lotus micranthus* Benth. [HC]

**Alhagi** [HC, HC2]

camel-thorn

**Alhagi maurorum** Medik. [HC2, JPM2]

Vorles. Churpfälz. Phys.-Öcon. Ges. 2: 397.  
camelthorn

*Alhagi camelorum* Fisch. [HC]  
*Alhagi pseudalhagi* (M. Bieb.) Desv. ex B. Keller & Shap. [JPM]

Hitchcock et al. Part 3 discusses the occurrence of *Alhagi camelorum* Fisch. escaped in Grant Co. .

**Amorpha** [HC2]

false indigo

**Amorpha fruticosa** L. [HC2, JPM]

Sp. Pl. 2: 713.  
false indigo-bush

*Amorpha angustifolia* (Pursh) F.E. Boynton

*Amorpha bushii* Rydb.

*Amorpha croceolanata* P. Watson

*Amorpha curtissii* Rydb.

*Amorpha dewinkeleri* Small

*Amorpha occidentalis* Abrams

*Amorpha tennesseensis* Shuttlew. ex Kunze

*Amorpha virgata* Small

Not in H&C.

***Astragalus*** [HC, HC2]

locoweed, milk-vetch, poison-vetch, rattle-pod

***Astragalus agrestis*** Douglas ex G. Don [HC, HC2]

Gen. Hist. 2: 258.

cock's-head, field milk vetch, purple milk vetch

*Astragalus danicus* Retz. var. *dasyglottis* (Fisch. ex DC.) B. Boivin

*Astragalus dasyglottis* Fisch. ex DC.

*Astragalus goniatus* Nutt. ex Torr. & A. Gray

*Astragalus hypoglottis* Hook., homonym (illegitimate)

***Astragalus alpinus*** L. [HC, HC2]

alpine milk-vetch, purple milk-vetch

*Atelophragma alpinum* (L.) Rydb.

var. ***alpinus*** [HC2, IFBC]

Sp. Pl. 2: 760.

alpine milk-vetch

*Astragalus alpinus* L. ssp. *alaskanus* Hultén

*Astragalus alpinus* L. ssp. *arcticus* (Bunge) Hultén

*Astragalus astragalinus* (Hook.) Á. Löve & D. Löve

No vars. named in H&C.

***Astragalus arrectus*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 8: 289-290.

hanging pod milk-vetch, Palouse milk-vetch

*Astragalus palousensis* Piper

Rare

***Astragalus arthurii*** M.E. Jones [HC2]

Contr. W. Bot. 8: 20-21.

Arthur's milk-vetch, waha milk-vetch

Rare

***Astragalus asotinensis*** Björk & Fishbein [HC2]

Novon 16(3): 299-303, f. 1.

Asotin milk-vetch

Published in 2006 - not in any contemporary regional floras as of 2009.

\* Novon 16(3): 299-303, f. 1. 2006.

***Astragalus australis*** (L.) Lam. [HC2]

subarctic milk-vetch

var. ***cottonii*** (M.E. Jones) S.L. Welsh [Draft FNA, HC2]

Great Basin Naturalist 58(1): 48.

Cotton's milk-vetch, Cotton's milkvetch

*Astragalus australis* (L.) Lam. var. *olympicus* Isely

*Astragalus cottonii* M.E. Jones [HC]

Endemic to Olympic Mountains of Washington. FNA treats var. *olympicus* as a synonym of var. *cottonii*.

***Astragalus beckwithii*** Torr. & A. Gray [HC, HC2]

Beckwith's milk-vetch

var. ***weiserensis*** M.E. Jones [HC, HC2]

Zoë 5(3): 47-48.

Beckwith's milk-vetch

*Astragalus weiserensis* (M.E. Jones) Abrams

***Astragalus canadensis*** L. [HC, HC2]

Canada milk-vetch

var. ***brevidens*** (Gand.) Barneby [HC, HC2]

Leafl. W. Bot. 4(9): 238.

Canada milk-vetch

*Astragalus brevidens* (Gand.) Rydb.

var. ***canadensis*** [HC2, IFBC]

Sp. Pl. 2: 757.

Canada milk-vetch

HC does not include this variety for WA. The revised Flora of the PNW extends the distribution to northeast WA, and the draft FNA treatment lists WA in the distribution.

var. ***mortonii*** (Nutt.) S. Watson [HC, HC2]

Botany Fortieth Parallel 68.

Morton's Canadian milkvetch

*Astragalus mortonii* Nutt.

***Astragalus caricinus*** (M.E. Jones) Barneby [HC, HC2]

Amer. Midl. Naturalist 55(2): 502.

buckwheat milk-vetch

*Astragalus lyallii* A. Gray var. *caricinus* M.E. Jones

***Astragalus cicer*** L. [HC, HC2]

Sp. Pl. 2: 757.

chickpea milk-vetch

Curtis Bjork reports that *A. cicer* is quite a bad weed along the Winchester Wasteway and in scattered Palouse locations.

***Astragalus collinus*** (Hook.) Douglas ex G. Don [HC, HC2]

hill milk-vetch, hillside milk-vetch

var. ***collinus*** [HC, HC2]

Gen. Hist. 2: 256.

hillside milk-vetch

***Astragalus columbianus*** Barneby [HC, HC2]

Memoirs of the New York Botanical Garden 13: 649-650.

Columbian milk-vetch

Endemic to Washington.

***Astragalus conjunctus*** S. Watson [HC, HC2]

basalt milk-vetch, stiff milk-vetch

var. ***rickardii*** S.L. Welsh, K.A. Beck & F. Caplow [HC2]

Great Basin Naturalist 57(4): 354.

stiff milk-vetch

HC does not list any vars. for *A. conjunctus*; occurrence in Wa. needs to be checked; KZ report based on Great Basin Naturalist 1997

***Astragalus cusickii*** A. Gray [HC, HC2]

Cusick's milk-vetch

var. ***cusickii*** [HC, HC2]

Proc. Amer. Acad. Arts 13: 370.

Cusick's milk vetch

Rare.

***Astragalus diaphanus*** Douglas [HC, HC2]

Fl. Bor.-Amer. 1(3): 151.

transparent milk-vetch, John Day milk vetch

*Astragalus diaphanus* Douglas var. *diaphanus*  
*Astragalus diaphanus* Douglas var. *diurnus* (S. Watson) Barneby ex M. Peck  
Extirpated from WA.

***Astragalus eucosmus*** B.L. Rob. [HC, HC2]  
elegant milk-vetch

***Astragalus falcatus*** Lam. [HC, HC2]  
Encycl. 1(1): 310.  
Russian-sickle

***Astragalus filipes*** Torr. ex A. Gray [HC, HC2]  
Proc. Amer. Acad. Arts 6: 226.  
basalt milk-vetch

*Astragalus filipes* Torr. ex A. Gray var. *residuus* Jeps.  
*Astragalus macgregorii* (Rydb.) Tidestr.  
*Astragalus stenophyllus* Torr. & A. Gray  
*Astragalus stenophyllus* Torr. & A. Gray var. *filipes* (Torr. ex A. Gray) Tidestr.

***Astragalus geyeri*** A. Gray [HC, HC2]  
Geyer's milk-vetch

var. ***geyeri*** [HC2, JPM]  
Proc. Amer. Acad. Arts 6: 214.  
Geyer's milk-vetch  
Rare; HC does not include any varieties.

***Astragalus hoodianus*** Howell [HC, HC2]  
Erythea 1(5): 111.  
Hood River milk-vetch

*Astragalus conjunctus* S. Watson var. *oxytropidoides* M.E. Jones  
*Astragalus reventus* A. Gray var. *oxytropidoides* (M.E. Jones) C.L. Hitchc.  
*Cnemidophacos knowlesianus* Rydb.

***Astragalus howellii*** A. Gray [HC, HC2]  
Proc. Amer. Acad. Arts 15(1): 46-47.  
Howell's milk-vetch

***Astragalus inflexus*** Douglas [HC, HC2]  
Fl. Bor.-Amer. 1: 151.  
bent milk-vetch, hairy milk-vetch

***Astragalus kentrophyta*** A. Gray [HC, HC2]  
kentrophyta, thistle milk-vetch

var. ***douglasii*** Barneby [HC, HC2]  
Mem. New York Bot. Gard. 13: 364-365.  
thistle milk vetch  
*Astragalus kentrophyta* A. Gray ssp. *douglasii* (Barneby) W.A. Weber  
extirpated from Wa.

***Astragalus laxmannii*** Jacq. [HC2]  
standing milk-vetch

var. ***robustior*** (Hook.) Barneby & S.L. Welsh [HC2, IFBC]  
standing milk-vetch  
*Astragalus adsurgens* Pall. ssp. *robustior* (Hook.) S.L. Welsh  
*Astragalus adsurgens* Pall. var. *robustior* Hook.  
*Astragalus striatus* Nutt.  
*Astragalus sulphurescens* Rydb.

***Astragalus leibergii*** M.E. Jones [HC, HC2]

Proc. Calif. Acad. Sci., ser. 2, 5(18): 663-664.

Leiberg's milk-vetch

*Astragalus arrectus* A. Gray var. *leibergii* (M.E. Jones) M.E. Jones

***Astragalus lentiginosus*** Douglas ex Hook. [HC, HC2]

freckled milk-vetch, specklepod milk-vetch

var. ***lentiginosus*** [HC, HC2]

Fl. Bor.-Amer. 1(3): 151.

freckled milk-vetch, specklepod milk-vetch

*Astragalus lentiginosus* Douglas var. *carinatus* M.E. Jones

***Astragalus lyallii*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 6: 195.

Lyall's milk-vetch

***Astragalus microcystis*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 6: 220.

lesser-bladder milk-vetch

Rare.

***Astragalus misellus*** S. Watson [HC, HC2]

pauper milk-vetch

var. ***pauper*** Barneby [HC, HC2]

Mem. New York Bot. Gard. 13: 458, map 52.

pauper milk-vetch

*Astragalus howellii* A. Gray var. *pauper* (Barneby) Isely

Rare.

***Astragalus miser*** Douglas ex Hook. [HC, HC2]

weedy milk-vetch

***Astragalus miser*** Douglas ex Hook. [HC, HC2], misapplied

weedy milk-vetch

var. ***miser*** [HC, HC2]

Fl. Bor.-Amer. 1(3): 152.

weedy milk-vetch

*Astragalus strigosus* J.M. Coult. & Fisher

var. ***serotinus*** (A. Gray) Barneby [HC, HC2]

(A. Gray ex Cooper) Barneby.

weedy milk-vetch

*Astragalus decumbens* (Nutt. ex Torr. & A. Gray) A. Gray var. *serotinus* (A. Gray) M.E. Jones

*Astragalus serotinus* A. Gray ex Cooper

***Astragalus pulsiferae*** A. Gray [HC, HC2]

Ames's milk-vetch

var. ***pulsiferae*** [JPM]

Proc. Amer. Acad. Arts 10: 69.

ames milk-vetch

Not in HC.

\* Memoirs of the New York Botanical Garden 13:970-972 (1964).

var. ***suksdorfii*** (Howell) Barneby [HC, HC2, JPM]

Aliso 4(1): 131.

ames milk-vetch

Rare.

***Astragalus purshii*** Douglas [HC, HC2]

Pursh's milk-vetch, woollypod milk-vetch

var. **glareosus** (Douglas) Barneby [HC, HC2]

Amer. Midl. Naturalist 37(2): 503.  
woolly-pod milk-vetch

*Astragalus glareosus* Douglas

*Astragalus ventosus* Suksd. ex Rydb., invalidly published, nomen nudum

var. **purshii** [HC, HC2]

woolly-pod milk-vetch

*Astragalus incurvus* (Rydb.) Abrams

*Astragalus purshii* Douglas var. *interior* M.E. Jones

var. **tinctus** M.E. Jones [HC, HC2]

Zoë 4(3): 269.

woolly-pod milk-vetch

*Astragalus candelarius* E. Sheld.

*Astragalus leucolobus* S. Watson ex M.E. Jones ssp. *consectus* (E. Sheld.) Abrams

*Astragalus purshii* Douglas var. *longilobus* M.E. Jones

***Astragalus reventiformis*** (Rydb.) Barneby [HC, HC2]

Amer. Midl. Naturalist 55(2): 492.

Yakima milk-vetch

*Astragalus reventus* A. Gray var. *canbyi* M.E. Jones

*Cnemidophacos reventiformis* Rydb.

***Astragalus reventus*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 15(1): 40.

longleaf milk-vetch, Blue Mt.milk-vetch

***Astragalus riparius*** Barneby [HC, HC2]

American Midland Naturalist 55(2): 490-491.

Piper's milk-vetch

Rare.

***Astragalus robbinsii*** (Oakes) A. Gray [HC, HC2]

Robbins's milk-vetch

var. **minor** (Hook.) Barneby [HC, HC2]

Mem. New York Bot. Gard. 13: 124-125.

Robbin's milk-vetch

*Astragalus collieri* (Rydb.) A.E. Porsild

*Astragalus robbinsii* (Oakes) A. Gray var. *blakei* (Eggl.) Barneby ex Gleason

***Astragalus sclerocarpus*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 6: 225.

stalked-pod milk-vetch, woody-pod milk-vetch

***Astragalus sheldonii*** (Rydb.) Barneby [HC, HC2]

Amer. Midl. Naturalist 55(2): 489.

Sheldon's milk-vetch

*Astragalus conjunctus* S. Watson var. *sheldonii* (Rydb.) M. Peck

*Astragalus reventus* A. Gray var. *sheldonii* (Rydb.) C.L. Hitchc.

***Astragalus sinuatus*** Piper [HC, HC2], misapplied

Bulletin of the Torrey Botanical Club 28(1): 40.

whited milk-vetch

Rare

***Astragalus sinuatus*** Piper [HC, HC2]

Bulletin of the Torrey Botanical Club 28(1): 40.

whited milk-vetch

Rare

***Astragalus spaldingii*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 6: 524.  
Spalding's milk-vetch

***Astragalus speirocarpus*** A. Gray [HC, HC2], misapplied

Proc. Amer. Acad. Arts 6: 225.  
curve-pod milk-vetch, medic milk-vetch, spiral-pod milk-vetch

***Astragalus speirocarpus*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 6: 225.  
curve-pod milk-vetch, medic milk-vetch, spiral-pod milk-vetch

***Astragalus succumbens*** Douglas [HC, HC2]

Rep. Colorado Riv. Bot. 10.  
crouching milk-vetch, sprawling milk-vetch

***Astragalus tenellus*** Pursh [Draft FNA, HC, HC2]

Fl. Amer. Sept. 2: 473.  
pulse milkvetch

***Astragalus tweedyi*** Canby [HC, HC2]

Bot. Gaz. 15: 150.  
Tweedy's milk-vetch

***Astragalus whitneyi*** A. Gray [HC, HC2]

balloon milk-vetch

var. ***sonneanus*** (Greene) Jeps. [HC, HC2]

Fl. Calif. 2(4): 347-348.  
balloon milk-vetch

*Astragalus whitneyi* A. Gray ssp. *hookerianus* (Torr. & A. Gray) Abrams

***Caragana*** [HC2]

pea-tree

***Caragana arborescens*** Lam. [HC2, JPM2]

Encyclopédie Méthodique, Botanique 1(2): 615.  
Siberian peashrub

Not in H&C.

***Cicer*** [HC2]

***Cicer arietinum*** L. [HC2, Stace 1997]

Sp. Pl. 2: 738.  
chick-pea

Not in H&C. Need to check on whether it is naturalized in WA.

***Colutea*** [HC2]

bladder-senna

***Colutea arborescens*** L. [HC2, Stace 1997]

Sp. Pl. 2: 723.  
bladder-sennas

Not in H&C. Reported for E. Washington by Curtis Bjork: "locally spread in Spokane, especially along the Spokane River, along with *Lonicera tatarica*."

***Cytisus*** [HC, HC2]

broom  
(see also *Genista*)

*Cytisus multiflorus* (Aiton) Sweet [HC, HC2]  
Hort. Brit. 112.  
portuguese broom, white Spanish broom

*Cytisus scoparius* (L.) Link [HC, HC2]  
Enum. Hort. Berol. Alt. 2: 241.  
Scot's broom

**Dalea** [HC2]  
prairie-clover

*Petalostemon* [HC]

**Dalea ornata** (Douglas ex Hook.) Eaton & Wright [HC2, JPM]  
Man. Bot. (ed. 8) 219.  
Blue Mountain prairie-clover

*Petalostemon ornatum* Dougl. ex Hook. [HC]  
H&C name used is *Petalostemon ornatum*.

**Galega** [HC2]  
goat's rue

*Galega officinalis* L. [HC2, Stace 1997]  
Species Plantarum 2: 714.  
professor-weed

**Genista** [HC2]  
broom, greenwood

*Genista canariensis* L. [HC2, JPM]  
Sp. Pl. 2: 709-710.  
canary-broom

*Cytisus canariensis* (L.) Kuntze  
*Cytisus xracemosus* Hort.-Cf. Marnock, misapplied  
*Teline canariensis* (L.) Webb & Berthel.

Not in H&C

*Genista monspessulana* (L.) L.A.S. Johnson [HC2, JPM]  
Contr. New South Wales Natl. Herb. 3: 98.  
French-broom

*Cytisus monspessulanus* L. [HC]  
*Teline monspessulana* (L.) K. Koch

*Genista tinctoria* L. [HC2, Stace 1997]  
Sp. Pl. 2: 710.  
Dyer's greenweed

*Genista multibracteata* Tausch  
*Genista patula* M. Bieb.

This species is not treated in either JPM, H&C or BC floras. USDA Plants lists as "present" in WA with reference to Richard Old, personal communication.

**Gleditsia** [HC2]

*Gleditsia triacanthos* L. [HC2, JPM2]  
Sp. Pl. 2: 1056-1057.  
honey locust

*Gleditsia triacanthos* L. var. *inermis* (L.) C.K. Schneid.

**Glycyrrhiza** [HC, HC2]

licorice

***Glycyrrhiza lepidota*** Pursh [HC, HC2]

Fl. Amer. Sept. 2: 480 [1813].  
American licorice, wild licorice

*Glycyrrhiza glutinosa* Nutt.

*Glycyrrhiza lepidota* Pursh var. *glutinosa* (Nutt.) S. Watson [HC]

*Glycyrrhiza lepidota* Pursh var. *lepidota* [HC]

***Hedysarum*** [HC, HC2]

hedysarum, sweetvetch

***Hedysarum boreale*** Nutt. [HC, HC2]

northern hedysarum  
(see also *Hedysarum occidentale*)

var. ***boreale*** [HC, HC2]

(see also *Hedysarum occidentale*)

*Hedysarum boreale* Nutt. var. *cinerascens* (Rydb.) Rollins [HC]

var. ***mackenzii*** (Richardson) C.L. Hitchc. [HC, HC2]

Mackenzie's northern sweetvetch  
(see also *Hedysarum occidentale*)

*Hedysarum boreale* Nutt. ssp. *mackenziei* (Richardson) S.L. Welsh

*Hedysarum boreale* Nutt. var. *mackenziei* (Richardson) C.L. Hitchc.

*Hedysarum mackenziei* Richardson

WA report based on checklist by Naas et al. 1990, but not reported in H&C for WA. Draft treatment in Flora of North America lists WA within the range of this taxon, but no specimens at WTU. Uncertain as to presence of specimens at WS. Henderson and Piper both labeled collections they made from the Olympic Mountains as *H. boreale*, however examination of the specimens by D. Giblin in 2009 showed that they are *H. occidentale*.

***Hedysarum occidentale*** Greene [HC, HC2]

Pittonia 3(13): 19.  
western sweet-vetch

var. ***occidentale*** [Draft FNA, HC2]

Pittonia 3(13): 19.  
western sweet-vetch

*Hedysarum uintahense* A. Nelson

***Hedysarum sulphurescens*** Rydb. [HC, HC2]

Bull. Torrey Bot. Club 24(5): 251.  
yellow sweet-vetch

***Hosackia*** [HC2]

birdsfoot-trefoil, deervetch, lotus

***Hosackia crassifolia*** Benth. [HC2]

big deervetch  
(see also *Hosackia rosea*)

*Lotus crassifolius* (Benth.) Greene [HC]

var. ***crassifolia*** [HC2]

big deervetch

*Lotus crassifolius* (Benth.) Greene var. *crassifolius* [HC]

***Hosackia gracilis*** Benth. [HC2]

seaside bird's-foot-trefoil

*Lotus formosissimus* Greene [HC]

***Hosackia pinnata*** (Hook.) Abrams [HC2]

meadow bird's-foot-trefoil, meadow deervetch

*Lotus pinnatus* Hook. [HC]

***Hosackia rosea*** Eastw. [HC2]

rosy bird's-foot-trefoil

*Lotus aboriginus* Jeps. [JPM]

*Lotus crassifolius* (Benth.) Greene var. *subglaber* (Ottley) C.L. Hitchc. [HC]

*Lotus stipularis* (Benth.) Greene var. *subglaber* Ottley

***Laburnum*** [HC2]

golden-chain tree

***Laburnum anagyroidis*** Medik. [HC2]

golden chain-tree

*Laburnum anagyroides* Medik. [IFBC], orthographic variant

Not in H&C. Technically the correct spelling for the species name is *anagyroidis* (see explanation at IPNI).

***Ladeania*** [HC2]

scurf-pea

*Laedeania*, orthographic variant

***Ladeania lanceolata*** (Pursh) A.N. Egan & Reveal [HC2]

wild lemonweed, lance-leaf scurf pea, scurf-pea

*Laedeania lanceolata* (Pursh) A.N. Egan & Reveal [JPM2], orthographic variant

*Psoralea lanceolata* Pursh [HC]

*Psoralea lanceolata* Pursh ssp. *scabra* (Nutt.) Piper

*Psoralea lanceolata* Pursh var. *purshii* (Vail) Piper

*Psoralea lanceolata* Pursh var. *stenophylla* (Rydb.) Toft & S.L. Welsh

*Psoralea lanceolata* Pursh var. *stenostachys* (Rydb.) S.L. Welsh

*Psoralea scabra* Nutt.

*Psoralea stenostachys* Rydb.

*Psoralidium lanceolatum* (Pursh) Rydb. [IMF]

*Psoralidium lanceolatum* (Pursh) Rydb. var. *stenophyllum* (Rydb.) S.L. Welsh

*Psoralidium lanceolatum* (Pursh) Rydb. var. *stenostachys* (Rydb.) S.L. Welsh

*Psoralidium stenophyllum* (Rydb.) Rydb.

***Lathyrus*** [HC, HC2]

peavine, sweet-pea, vetchling

***Lathyrus angulatus*** L. [HC2]

angled peavine

***Lathyrus aphaca*** L. [HC, HC2]

Sp. Pl. 2: 729.

yellow vetchling

***Lathyrus holochlorus*** (Piper) C.L. Hitchc. [HC, HC2]

thin-leaf vetchling

H&C does not list for WA

***Lathyrus japonicus*** Willd. [HC, HC2, JPM]

beach pea

*Lathyrus japonicus* Willd. ssp. *maritimus* (L.) P.W. Ball

*Lathyrus japonicus* Willd. var. *glaber* (Ser.) Fernald

*Lathyrus japonicus* Willd. var. *maritimus* (L.) Kartesz & Gandhi [IFBC]

*Lathyrus maritimus* (L.) Bigelow

*Lathyrus maritimus* (L.) Bigelow var. *glaber* (Ser.) Eames

*Pisum maritimum* L.

*Pisum maritimum* L. var. *glaber* Ser.

***Lathyrus lanszwertii*** Kellogg [HC, HC2]  
Nevada peavine, thick-leaved peavine

var. ***aridus*** (Piper) Jeps. [HC, HC2, JPM]  
Fl. Calif. 2(4): 389-390.  
pinewoods peavine

var. ***bijugatus*** (T.G. White) Broich [HC2]  
drypark pea

*Lathyrus bijugatus* T.G. White [HC, IFBC]  
*Lathyrus bijugatus* T.G. White var. *sandbergii* T.G. White

var. ***lanszwertii*** [HC, HC2, JPM]  
Proc. Calif. Acad. Sci. 2: 150.  
thick-leaved peavine

***Lathyrus latifolius*** L. [HC, HC2]

Sp. Pl. 2: 733.  
everlasting-pea

*Lathyrus latifolius* L. var. *splendens* Groenland & Rümpler

***Lathyrus littoralis*** (Nutt.) Endl. ex Walp. [HC, HC2]

Repert. Bot. Syst. 1(4): 722.  
beach peavine, silky beach vetchling

***Lathyrus nevadensis*** S. Watson [HC, HC2]

Sierra peavine

var. ***cusickii*** (S. Watson) Broich [HC2]  
Cusick's pea

*Lathyrus cusickii* S. Watson  
*Lathyrus nevadensis* S. Watson ssp. *cusickii* (S. Watson) C.L. Hitchc. [HC]

var. ***nevadensis*** [HC2, JPM]

Proc. Amer. Acad. Arts 11: 133-135.  
Sierra pea

*Lathyrus lanceolatus* Howell

*Lathyrus nevadensis* S. Watson ssp. *lanceolatus* (Howell) C.L. Hitchc. [HC]

*Lathyrus nevadensis* S. Watson ssp. *nevadensis* [HC]

*Lathyrus nevadensis* S. Watson var. *nuttallii* (S. Watson) C.L. Hitchc.

*Lathyrus nevadensis* S. Watson var. *pilosellus* (M. Peck) C.L. Hitchc. [HC, IFBC]

*Lathyrus nevadensis* S. Watson var. *puniceus* C.L. Hitchc. [HC]

*Lathyrus nuttallii* S. Watson

var. ***parkeri*** (H. St. John) C.L. Hitchc. [HC, HC2]

Revis. N. Amer. Lathyrus 45.

***Lathyrus nissolia*** L. [HC2, Stace 1997]

Sp. Pl. 2: 729.  
yard pea

Not in HC; presence in WA based on 1921 report in Rhodora. Unlikely that this species persists in the flora. Until further specimen data suggests that it is naturalized, this species will be considered excluded.

***Lathyrus ochroleucus*** Hook. [HC, HC2]

Fl. Bor.-Amer. 1(3): 159.  
cream pea

***Lathyrus palustris*** L. [HC, HC2]

Sp. Pl. 2: 733-734.  
marsh pea

*Lathyrus palustris* L. ssp. *pilosus* (Cham.) Hultén

*Lathyrus palustris* L. var. *linearifolius* Ser.  
*Lathyrus palustris* L. var. *macranthus* (T.G. White) Fernald  
*Lathyrus palustris* L. var. *meridionalis* Butters & H. St. John  
*Lathyrus palustris* L. var. *myrtifolius* (Muhl. ex Willd.) A. Gray  
*Lathyrus palustris* L. var. *pilosus* (Cham.) Ledeb.  
*Lathyrus palustris* L. var. *retusus* Fernald & H. St. John

***Lathyrus pauciflorus*** Fernald [HC, HC2]

few-flowered peavine

var. ***pauciflorus*** [HC, HC2]

Bot. Gaz. 19(8): 335.

few-flowered pea

*Lathyrus pauciflorus* Fernald ssp. *pauciflorus* [HC]

*Lathyrus pauciflorus* Fernald var. *tenuior* (Piper) H. St. John

***Lathyrus polyphyllus*** Nutt. [HC, HC2]

Fl. N. Amer. 1(2): 274.

leafy pea

***Lathyrus pratensis*** L. [HC, HC2]

Sp. Pl. 2: 733.

meadow vetchling

H&C: "rarely escaped".

***Lathyrus sphaericus*** Retz. [HC, HC2]

Observ. Bot. 3: 39.

grass pea

No specimens at WTU; one record from BC; reported in H&C from OR. Does not appear that this species is an established element in the WA flora.

***Lathyrus sylvestris*** L. [HC, HC2]

Sp. Pl. 2: 733.

narrow-leaf pea

***Lathyrus torreyi*** A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 7(2): 337.

Torrey's pea

***Lathyrus tuberosus*** L. [HC, HC2]

Sp. Pl. 2: 732-733.

earth-nut pea

***Lathyrus vestitus*** Nutt. [HC, HC2]

var. ***ochropetalus*** (Piper) Isely [HC2, JPM2]

Madroño 39(2): 96.

Pacific peavine

*Lathyrus ochropetalus* Piper

*Lathyrus peckii* Piper

*Lathyrus vestitus* Nutt. ssp. *ochropetalus* (Piper) C.L. Hitchc. [HC]

## **Lens**

***Lens culinaris*** Medik. [KZ99]

Vorles. Churpfälz. Phys.-Öcon. Ges. 2: 361.

lentil

*Ervum lens* L.

*Lens esculenta* Moench

Not in H&C. WA report based on personal communication with Richard Old. This species is best considered a waif and not an established part of the flora. Until shown otherwise, this species is considered excluded.

**Lotus** [HC, HC2]

lotus, trefoil

(see also *Acmispon*, *Hosackia*)

***Lotus corniculatus* L.** [HC, HC2]

Sp. Pl. 2: 775-776.

garden bird's-foot-trefoil

(see also *Lotus tenuis*, *Lotus uliginosus*)

*Lotus corniculatus* L. var. *arvensis* (Pers.) Ser.

***Lotus tenuis* Waldst. & Kit. ex Willd.** [Draft FNA, HC2]

Enum. Pl. 2: 797.

narrow-leaved trefoil

*Lotus corniculatus* L. var. *tenuifolius* L.

Draft FNA: "The name *Lotus glaber* Miller, recently used in the literature for this taxon, is a rejected name."

***Lotus uliginosus* Schkuhr** [HC2, JPM]

Handb. 2: 412, plate 211 [upper right center].

big lotus, big trefoil, large trefoil

*Lotus pedunculatus* Cav. [KZ99]

Not in H&C. Draft FNA: "The name *Lotus pedunculatus* Cavanilles has been misapplied to specimens of *L. uliginosus* in North America."

**Lupinus** [HC, HC2]

lupine

***Lupinus albicaulis* Douglas ex Hook.** [HC, HC2]

Fl. Bor.-Amer. 1(4): 165.

sicklekeel lupine

Subspecific taxa of this species have been described, however there is no consensus at this time as to whether they should be recognized. Here we follow the treatment by H&C.

***Lupinus arboreus* Sims** [HC, HC2]

Bot. Mag. 18: pl. 682.

tree lupine, yellow-bush lupine

***Lupinus arbustus* Douglas ex Lindl.** [HC2]

silvery lupine, spurred lupine

*Lupinus amniculi-putori* C.P. Sm.

*Lupinus arbustus* Douglas ex Lindl. ssp. *arbustus*

*Lupinus arbustus* Douglas ex Lindl. ssp. *calcaratus* (Kellogg) D.B. Dunn

*Lupinus arbustus* Douglas ex Lindl. ssp. *neolaxiflorus* D.B. Dunn [IFBC]

*Lupinus arbustus* Douglas ex Lindl. ssp. *pseudoparviflorus* (Rydb.) D.B. Dunn [IFBC]

*Lupinus arbustus* Douglas ex Lindl. ssp. *silvicola* (A. Heller) D.B. Dunn

*Lupinus arbustus* Douglas ex Lindl. var. *calcaratus* (Kellogg) S.L. Welsh

*Lupinus arbustus* Douglas ex Lindl. var. *montanus* (Howell) D.B. Dunn

*Lupinus argenteus* Pursh var. *laxiflorus* (Douglas ex Lindl.) Dorn [IFBC]

*Lupinus argenteus* Pursh var. *stenophyllus* (Rydb.) R.J. Davis [HC]

*Lupinus argenteus* Pursh var. *tenellus* (Douglas ex G. Don) D.B. Dunn

*Lupinus calcaratus* Kellogg

*Lupinus caudatus* Kellogg var. *submanens* C.P. Sm.

*Lupinus laxiflorus* Douglas ex Lindl. [HC]

*Lupinus laxiflorus* Douglas ex Lindl. var. *arbustus* (Douglas ex Lindl.) M.E. Jones

*Lupinus laxiflorus* Douglas ex Lindl. var. *calcaratus* (Kellogg) C.P. Sm. [HC]

*Lupinus laxiflorus* Douglas ex Lindl. var. *cognatus* C.P. Sm.

*Lupinus laxiflorus* Douglas ex Lindl. var. *elmerianus* C.P. Sm.

*Lupinus laxiflorus* Douglas ex Lindl. var. *laxiflorus* [HC]

*Lupinus laxiflorus* Douglas ex Lindl. var. *lyleanus* C.P. Sm.

*Lupinus laxiflorus* Douglas ex Lindl. var. *pseudoparviflorus* (Rydb.) C.P. Sm. & H. St. John [HC]

*Lupinus laxiflorus* Douglas ex Lindl. var. *silvicola* (A. Heller) C.P. Sm.  
*Lupinus laxispicatus* Rydb.  
*Lupinus mucronulatus* Howell var. *umatillensis* C.P. Sm.  
*Lupinus wenachensis* Eastw.  
*Lupinus yakimensis* C.P. Sm.

***Lupinus argenteus*** Pursh [HC, HC2]

silvery lupine  
(see also *Lupinus arbustus*)

var. ***argenteus*** [HC, HC2, IFBC, JPM]

Fl. Amer. Sept. 2: 468 [1813].  
silvery lupine

Circumscription of *Lupinus argenteus* is challenging, as evidenced by the number of infraspecific taxa that have been described. Until a more contemporary treatment for the *Lupinus* taxa that occur in WA becomes available the approach taken here is to follow the most recent local treatment (IFBC, 1999). H&C does not include WA within the range of this taxon, but both Jepson Manual and Illustrated Flora B.C. do.

var. ***holosericeus*** (Nutt.) Barneby [HC2]

Intermount. Fl. 3(B): 245.

*Lupinus holosericeus* Nutt. [HC]  
*Lupinus lacuum-trinitatum* C.P. Sm.  
*Lupinus multicincinnus* C.P. Sm.  
*Lupinus summae* C.P. Sm.

***Lupinus bicolor*** Lindl. [HC, HC2, JPM]

small-flower lupine, two-color lupine

*Lupinus bicolor* Lindl. ssp. *bicolor* [IFBC]  
*Lupinus hirsutulus* Greene  
*Lupinus micranthus* Douglas [HC], homonym (illegitimate)  
*Lupinus micranthus* Douglas var. *bicolor* (Lindl.) S. Watson  
*Lupinus polycarpus* Greene [KZ99]  
*Lupinus strigulosus* Gand.

***Lupinus latifolius*** Lindl. ex J. Agardh [HC, HC2]

broadleaf lupine

var. ***latifolius*** [HC, HC2]

Syn. Gen. Lupini 18.  
broadleaf lupine, Suksdorf's lupine

*Lupinus latifolius* Lindl. ex J. Agardh ssp. *latifolius* [KZ99]  
*Lupinus latifolius* Lindl. ex J. Agardh var. *thompsonianus* (C.P. Sm.) C.L. Hitchc. [HC]  
*Lupinus rivularis* Douglas ex Lindl. var. *latifolius* (Lindl. ex J. Agardh) S. Watson  
*Lupinus sericeus* Pursh var. *thompsonianus* C.P. Sm.

var. ***subalpinus*** (Piper & B.L. Rob.) C.P. Sm. [HC, HC2]

Bull. Torrey Bot. Club 51(7): 308.  
broadleaf lupine

*Lupinus arcticus* S. Watson ssp. *subalpinus* (Piper & B.L. Rob.) D.B. Dunn [KZ99]

***Lupinus lepidus*** Douglas ex Lindl. [HC, HC2]

prairie lupine

var. ***aridus*** (Douglas ex Lindl.) Jeps. [HC, HC2]

Fl. Calif. 2(3): 268.  
prairie lupine

*Lupinus aridus* Douglas ssp. *aridus* [KZ99]

var. ***cusickii*** (S. Watson) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 315.

elegant lupine

*Lupinus aridus* Douglas var. *cusickii* (S. Watson) C.P. Sm.

*Lupinus longivallis* C.P. Sm.

H&C report this taxon from Okanogan County, WA.

var. **lepidus** [HC, HC2]

Bot. Reg. 14: pl. 1149.

Pacific lupine

*Lupinus lepidus* Douglas ex Lindl. ssp. *lepidus*

*Lupinus minimus* Douglas ex Hook. [KZ99]

var. **lobbii** (S. Watson) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 315.

elegant lupine

*Lupinus lyallii* A. Gray var. *lyallii* [KZ99]

*Lupinus lyallii* A. Gray var. *macroflorus* B.J. Cox [KZ99]

*Lupinus sellulus* Kellogg var. *lobbii* (S. Watson) B.J. Cox

var. **utahensis** (S. Watson) C.L. Hitchc. [HC, HC2]

***Lupinus leucophyllus*** Douglas ex Lindl. [HC, HC2, IFBC]

Bot. Reg. 13: pl. 1124.

velvet lupine

var. **leucophyllus** [HC, HC2, KZ99]

velvet lupine

*Lupinus cyaneus* Rydb.

*Lupinus enodatus* C.P. Sm.

*Lupinus forslingii* C.P. Sm.

*Lupinus holosericeus* Nutt. var. *amblyophyllus* B.L. Rob.

*Lupinus leucophyllus* Douglas ex Lindl. ssp. *leucophyllus*

*Lupinus leucophyllus* Douglas ex Lindl. var. *belliae* C.P. Sm. [KZ99]

*Lupinus leucophyllus* Douglas ex Lindl. var. *plumosus* (Douglas ex Lindl.) B.L. Rob.

*Lupinus leucophyllus* Douglas ex Lindl. var. *retrorsus* (L.F. Hend.) C.P. Sm.

*Lupinus macrostachys* Rydb.

*Lupinus plumosus* Douglas ex Lindl.

*Lupinus retrorsus* L.F. Hend.

var. **tenuispicus** (A. Nelson) C.P. Sm. [HC, HC2]

Bull. Torrey Bot. Club 51(7): 306

velvet lupine

*Lupinus erectus* L.F. Hend.

*Lupinus leucophyllus* Douglas ex Lindl. ssp. *erectus* (L.F. Hend.) Harmon [KZ99]

*Lupinus tenuispicus* A. Nelson

***Lupinus littoralis*** Douglas [HC, HC2]

Bot. Reg. 14: pl. 1198.

seashore lupine

var. **littoralis** [HC2]

***Lupinus microcarpus*** Sims [HC, HC2]

chick lupine

var. **microcarpus** [HC, HC2]

Bot. Mag. 50: pl. 2413.

chick lupine

*Lupinus microcarpus* Sims ssp. *scopulorum* (C.P. Sm.) C.P. Sm.

*Lupinus microcarpus* Sims var. *scopulorum* Sm. [HC]

*Lupinus subvexus* C.P. Sm. [KZ99]

***Lupinus nootkatensis*** Donn ex Sims [HC2]

Nootka lupine

*Lupinus nootkatensis* Donn ex Sims var. *nootkatensis* [IFBC]

***Lupinus oregonus*** A. Heller [HC2, OFP]

Muhlenbergia 7(8): 89-91, f. 14.

Oregon lupine

var. ***kincaidii*** C.P. Sm. [HC2]

Bull. Torrey Bot. Club 51(7): 305.

Kincaid's lupine, sulphur lupine

*Lupinus sulphureus* Douglas ex Hook. ssp. *kincaidii* (C.P. Sm.) L.L.I. Phillips

*Lupinus sulphureus* Douglas ex Hook. var. *kincaidii* (C.P. Sm.) C.L. Hitchc. [HC]

Recent phylogenetic studies (completed but unpublished as of December, 2009) show that *L. oregonus* and *L. sulphureus* are not closely related.

***Lupinus pachylobus*** Greene [HC2, JPM2]

Pittonia 1(4): 65?66.

big-pod lupine

Collected in San Juan County in 2006. Originally identified as *L. bicolor*. Native to California.

***Lupinus polyphyllus*** Lindl. [HC, HC2]

bigleaf lupine, large-leaved lupine

var. ***burkei*** (S. Watson) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 321.

large-leaved lupine, many-leaved lupine

*Lupinus burkei* S. Watson ssp. *burkei* [KZ99]

var. ***humicola*** (A. Nelson) Barneby [HC2]

Wyeth's lupine

*Lupinus arcticus* S. Watson var. *humicola* (A. Nelson) C.P. Sm.

*Lupinus humicola* A. Nelson

*Lupinus rydbergii* Blank.

*Lupinus wyethii* S. Watson [HC]

var. ***pallidipes*** (A. Heller) C.P. Sm. [HC, HC2, KZ99]

Contr. Dudley Herb. 1(1): 47.

large-leaved lupine

*Lupinus pallidipes* A. Heller

var. ***polyphyllus*** [HC, HC2, KZ99]

Bot. Reg. 13: pl. 1096.

large-leaved lupine

*Lupinus matanusensis* C.P. Sm.

*Lupinus pseudopolyphyllus* C.P. Sm.

*Lupinus stationis* C.P. Sm.

var. ***prunophilus*** (M.E. Jones) L.L.I. Phillips [HC, HC2]

Res. Stud. State Coll. Wash. 23(3): 180.

large-leaved lupine

*Lupinus arcticus* S. Watson var. *prunophilus* (M.E. Jones) C.P. Sm.

*Lupinus prunophilus* M.E. Jones [KZ99]

*Lupinus wyethii* S. Watson var. *prunophilus* (M.E. Jones) C.P. Sm.

***Lupinus pusillus*** Pursh [HC, HC2]

low lupine, rusty lupine

var. ***intermontanus*** (A. Heller) C.P. Sm. [HC, HC2]

Bull. Torrey Bot. Club 46(10): 408.

low lupine, rusty lupine

*Lupinus intermontanus* A. Heller

*Lupinus pusillus* Pursh ssp. *intermontanus* (A. Heller) D.B. Dunn [KZ99]

***Lupinus rivularis*** Douglas ex Lindl. [HC, HC2]

Edwards's Bot. Reg. 19: pl. 1595.

river-bank lupine

*Lupinus amphibius* Suksd. [KZ99]

*Lupinus lignipes* A. Heller

***Lupinus sabinianus*** Douglas ex Lindl. [HC2]

Edwards's Bot. Reg. 17: pl. 1435.

Sabin's lupine

*Lupinus sabinii* Douglas ex Hook. [HC, WNHP]

*Lupinus sericeus* Pursh ssp. *sabinei* (Dougl. ex Hook.) L. Phillips

H&C use the name *L. sabinii*, however *L. sabinianus* was published before that name giving it priority.

***Lupinus saxosus*** Howell [HC, HC2]

Erythea 1(5): 110.

rock lupine

*Lupinus polyphyllus* Lindl. var. *saxosus* (Howell) Barneby

*Lupinus saxosus* Howell var. *saxosus* [KZ99]

*Lupinus saxosus* Howell var. *subsericeus* (B.L. Rob. ex Piper) C.P. Sm. [KZ99]

*Lupinus subsericeus* B.L. Rob. ex Piper

***Lupinus sericeus*** Pursh [HC, HC2]

silky lupine

var. ***asotinensis*** (L.L. Phillips) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 327.

Asotin silk lupine

*Lupinus garfieldensis* C.P. Sm.

*Lupinus sericeus* Pursh ssp. *asotinensis* L.L. Phillips

var. ***sericeus*** [HC, HC2]

Fl. Amer. Sept. 2: 468 [1813].

silky lupine

*Lupinus alpicola* L.F. Hend. ex Piper [KZ99]

*Lupinus buckinghamii* C.P. Sm.

*Lupinus fikeranus* C.P. Sm.

*Lupinus flavicaulis* Rydb.

*Lupinus flexuosus* Lindl. ex J. Agardh

*Lupinus huilcoflorus* C.P. Sm.

*Lupinus ramosus* E.E. Nelson

*Lupinus sericeus* Pursh ssp. *sericeus*

*Lupinus sericeus* Pursh var. *fikeranus* (C.P. Sm.) C.L. Hitchc. [HC]

*Lupinus sericeus* Pursh var. *flexuosus* (Lindl. ex J. Agardh) C.P. Sm. [KZ99]

*Lupinus sericeus* Pursh var. *subflexuosus* H. St. John & Warren

*Lupinus spiraeaphilus* C.P. Sm.

*Lupinus tuckerianus* C.P. Sm.

***Lupinus sulphureus*** Douglas ex Hook. [HC, HC2]

sulfur lupine

(see also *Lupinus oreganus*)

var. ***subsaccatus*** (Suksd.) C.L. Hitchc. [HC, HC2]

Bingen lupine

*Lupinus bingenensis* Suksd.

*Lupinus bingenensis* Suksd. var. *albus* Suksd.

*Lupinus bingenensis* Suksd. var. *bingenensis*  
*Lupinus bingenensis* Suksd. var. *dubius* C.P. Sm.  
*Lupinus bingenensis* Suksd. var. *roseus* Suksd.  
*Lupinus bingenensis* Suksd. var. *subsaccatus* Suksd. [IFBC]  
*Lupinus leucopsis* J. Agardh var. *bingenensis* (Suksd.) C.P. Sm.  
*Lupinus leucopsis* J. Agardh var. *dubius* (C.P. Sm.) C.P. Sm.  
*Lupinus leucopsis* J. Agardh var. *hendersonianus* C.P. Sm.  
*Lupinus leucopsis* J. Agardh var. *shermanensis* C.P. Sm.  
*Lupinus sulphureus* Douglas ex Hook. ssp. *subsaccatus* (Suksd.) L. Phillips

var. ***sulphureus*** [HC, HC2]

sulphur lupine

*Lupinus sulphureus* Dougl. ex Hook. ssp. *sulphureus*  
*Lupinus sulphureus* Dougl. ex Hook. var. *applegateanus* C.P. Sm.  
*Lupinus sulphureus* Dougl. ex Hook. var. *echleranus* C.P. Sm.

***Medicago*** [HC, HC2]

alfalfa, bur-clover, medic

***Medicago arabica*** (L.) Huds. [HC, HC2]

Fl. Angl. 288.  
spotted medic

*Medicago arabica* (L.) Huds. ssp. *inermis* Ricker [HC]

***Medicago lupulina*** L. [HC, HC2]

Fl. Carniol. (ed. 2) 2: 88.  
hop clover, black medic

*Medicago lupulina* L. var. *cupaniana* (Guss.) Boiss.  
*Medicago lupulina* L. var. *glandulosa* Neilr.

***Medicago minima*** (L.) Bartal. [HC, HC2]

Catalogo delle piante ... alla citta' di Siena.  
burr medick

*Medicago minima* (L.) Bartal. var. *compacta* Neyraut  
*Medicago minima* (L.) Bartal. var. *longiseta* DC.  
*Medicago minima* (L.) Bartal. var. *pubescens* Webb

***Medicago polymorpha*** L. [HC2, IFBC]

Fl. Carniol. (ed. 2) 2: 89.  
toothed medick

*Medicago apiculata* Willd.  
*Medicago hispida* Gaertn. [HC]  
*Medicago hispida* Gaertn. var. *apiculata* (Willd.) Burnat  
*Medicago hispida* Gaertn. var. *confinis* (W.D.J. Koch) Burnat  
*Medicago polymorpha* L. var. *brevispina* (Benth.) Heyn  
*Medicago polymorpha* L. var. *ciliaris* (Ser.) Shinnery  
*Medicago polymorpha* L. var. *polygyra* (Urb.) Shinnery  
*Medicago polymorpha* L. var. *tricycla* (Gren. & Godr.) Shinnery  
*Medicago polymorpha* L. var. *vulgaris* (Benth.) Shinnery

***Medicago sativa*** L. [HC, HC2]

Sp. Pl. 2: 778-779.  
alfalfa, lucerne

ssp. ***falcata*** (L.) Arcang. [HC2, KZ99]

*Medicago falcata* L. [HC]

ssp. ***sativa*** [HC2, KZ99]

ssp. ***x varia*** (Martyn) Arcang. [HC2]

*Medicago xvaria* Martyn

**Melilotus** [HC, HC2]

melilot, sweet-clover

*Melilotus albus* Medik. [HC2]

Vorles. Churpfälz. Phys.-Öcon. Ges. 2: 382.  
white sweet-clover

*Melilotus alba* Medik. [HC], orthographic variant  
*Melilotus albus* Medik. var. *annuus* H.S. Coe

*Melilotus indicus* (L.) All. [HC2, JPM]

Fl. Pedem. 1: 308.  
small flowered yellow sweet clover, Indian sweet-clover

*Melilotus indica* (L.) All. [HC], orthographic variant  
H&C uses the combination *M. indica* L.

*Melilotus officinalis* (L.) Lam. [HC, HC2]

Reise Russ. Reich. 3: 537.  
yellow sweet-clover

**Onobrychis** [HC, HC2]

sainfoin

*Onobrychis viciifolia* Scop. [HC2]

Fl. Carniol. (ed. 2) 2: 76.  
holy-clover, saintfoin, sandfain

*Hedysarum onobrychis* L.  
*Onobrychis sativa* Lam.  
*Onobrychis viciaefolia* Scop. [HC], orthographic variant  
Note orthographic variant in H&C "viciaefolia".

**Ononis** [HC, HC2]

*Ononis spinosa* L. [HC2]

restharrow

ssp. *maritima* (Dumort.) P. Fourn. [FNA Draft, HC2]  
common restharrow

*Ononis repens* L. [HC]

**Oxytropis** [HC, HC2]

crazyweed, locoweed, oxytrope

*Oxytropis borealis* DC. [HC2]

sticky crazyweed

var. *viscida* (Nutt.) S.L. Welsh [HC2, IFBC]  
Great Basin Naturalist 50(4): 358 [1991].  
sticky crazyweed

*Aragallus viscidulus* Rydb.  
*Aragallus viscidulus* Rydb. var. *depressus* Rydb.  
*Oxytropis gaspensis* Fernald & S.L. Kelsey  
*Oxytropis ixodes* Butters & Abbe  
*Oxytropis leucantha* (Pall.) Pers. var. *depressus* (Rydb.) B. Boivin, orthographic variant  
*Oxytropis leucantha* (Pall.) Pers. var. *gaspensis* (Fernald & S.L. Kelsey) B. Boivin  
*Oxytropis leucantha* (Pall.) Pers. var. *ixodes* (Butters & Abbe) B. Boivin  
*Oxytropis leucantha* (Pall.) Pers. var. *magnifica* B. Boivin  
*Oxytropis leucantha* (Pall.) Pers. var. *viscida* (Nutt.) B. Boivin  
*Oxytropis viscida* Nutt. [HC]

***Oxytropis campestris*** (L.) DC. [HC, HC2]

field locoweed, yellow locoweed

var. ***columbiana*** (H. St. John) Barneby [HC, HC2]

Leafl. W. Bot. 6(5): 111.

slender crazyweed

*Oxytropis columbiana* H. St. John

var. ***cusickii*** (Greenm.) Barneby [HC, HC2]

Leafl. W. Bot. 6(5): 111.

slender crazyweed

*Oxytropis alpicola* (Rydb.) M.E. Jones

*Oxytropis campestris* (L.) DC. var. *rydbergii* (A. Nelson) R.J. Davis

*Oxytropis cusickii* Greenm.

*Oxytropis rydbergii* A. Nelson

var. ***spicata*** Hook. [HC2]

yellow-flower locoweed

*Oxytropis campestris* (L.) DC. ssp. *gracilis* (A. Nelson) Hultén

*Oxytropis campestris* (L.) DC. var. *cervinus* (Greene) B. Boivin

*Oxytropis campestris* (L.) DC. var. *gracilis* (A. Nelson) Barneby [HC]

*Oxytropis gracilis* (A. Nelson) K. Schum.

*Oxytropis luteola* (Greene) Piper & Beattie

*Oxytropis monticola* A. Gray [KZ99]

*Oxytropis sericea* Nutt. var. *spicata* (Hook.) Barneby [HC]

*Oxytropis villosa* (Rydb.) K. Schum.

var. ***wanapum*** Joyal [HC2]

Great Basin Naturalist 50(4): 373-376, f. 1-2 [1991].

wanapum crazyweed

Not in H&C, rare.

***Oxytropis deflexa*** (Pall.) DC. [HC, HC2]

pendent-pod crazyweed

var. ***sericea*** Torr. & A. Gray [HC, HC2]

Fl. N. Amer. 1(2): 342.

pendant-pod crazyweed

*Oxytropis deflexa* (Pall.) DC. ssp. *sericea* (Torr. & A. Gray) Cody

*Oxytropis deflexa* (Pall.) DC. var. *parviflora* B. Boivin

***Pisum*** [HC, HC2]

*Pisum sativum* L. [HC, HC2, JPM2]

Sp. Pl. 2: 727.

garden pea

var. *arvense* (L.) Poir. [HC2]

var. *sativum* [HC2]

***Pueraria*** [HC2]

*Pueraria montana* (Lour.) Merr. [HC2]

kudzu

var. *lobata* (Willd.) Maesen & S.M. Almeida ex Sanjappa & Predeep [HC2]

***Robinia*** [HC, HC2]

locust

*Robinia hispida* L. [HC2, JPM]

Mant. Pl. 1: 101-102.

bristly locust

Not in H&C.

*Robinia pseudoacacia* L. [HC2]

Sp. Pl. 2: 722.

black locust

*Robinia pseudo-acacia* L. [HC], orthographic variant

*Robinia pseudoacacia* L. var. *pyramidalis* (Pépin) C.K. Schneid.

*Robinia pseudoacacia* L. var. *rectissima* (L.) Raber

*Rupertia* [HC2]

scurfpea, California tea

*Rupertia physodes* (Douglas ex Hook.) J.W. Grimes [HC2, IFBC]

Memoirs of the New York Botanical Garden 61: 53.

California-tea

*Psoralea physodes* Douglas ex Hook. [HC]

*Securigera* [HC2]

crown vetch

*Securigera varia* (L.) Lassen [Draft FNA, HC2]

Svensk Bot. Tidskr. 83: 86.

purple crown-vetch, crown vetch

*Coronilla varia* L. [HC]

*Spartium* [HC2]

Spanish broom

*Spartium junceum* L. [HC2, JPM2]

Sp. Pl. 2: 708.

Spanish-broom

*Sphaerophysa* [HC2]

Austrian peaweed, swainsona

*Sphaerophysa salsula* (Pall.) DC. [HC2, JPM]

Prodr. 2: 271.

red bladder-vetch

*Phaca salsula* Pall.

*Swainsona salsula* (Pall.) Taub. [HC]

Noxious.

*Thermopsis* [HC, HC2]

buck-bean, golden-banner, golden-pea, thermopsis

*Thermopsis gracilis* Howell [HC2]

Erythea 1: 109.

slender goldenbanner

*Thermopsis montana* Nutt. var. *venosa* (Eastw.) Jeps. [HC]

FNA draft treatment for *Thermopsis* shows that this taxon as treated by H&C (*T. montana* var *venosa*) does not occur in WA, but rather ranges only from CA to OR.

*Thermopsis montana* Nutt. [HC, HC2]

mountain buck-bean, mountain golden-banner, mountain golden-pea, mountain thermopsis  
(see also *Thermopsis gracilis*)

var. *montana* [HC, HC2]

Fl. N. Amer. 1(3): 388.

Hitchcock's thermopsis, mountain thermopsis

*Thermopsis macrophylla* Hook. & Arn. var. *hitchcockii* Isely

*Thermopsis montana* Nutt. var. *hitchcockii* (Isely) M.G. Mendenh.

*Thermopsis rhombifolia* (Nutt. ex Pursh) Richardson var. *montana* (Nutt.) Isely

\* Phytologia 76: 384. 1994.

var. ***ovata*** (B.L. Rob. ex Piper) H. St. John [HC, HC2]

Torrey 41(4): 112.

slender goldenbanner

*Thermopsis gracilis* Howell var. *ovata* (B.L. Rob. ex Piper) M.G. Mendenh.

*Thermopsis rhombifolia* (Nutt. ex Pursh) Richardson var. *ovata* (B.L. Rob. ex Piper) Isely

### ***Trifolium*** [HC, HC2]

clover, trefoil

#### ***Trifolium albopurpureum*** Torr. & A. Gray [HC2, JPM2]

Rancheria clover, rancheria clover

*Trifolium albopurpureum* Torr. & A. Gray var. *albopurpureum* [JPM]

*Trifolium albopurpureum* Torr. & A. Gray var. *neolagopus* (Lojac.) McDermott

*Trifolium columbianum* Greene

*Trifolium columbianum* Greene var. *argillorum* Jeps.

*Trifolium helleri* P.B. Kenn.

*Trifolium macraei* Hook. & Arn. var. *albopurpureum* (Torr. & A. Gray) Greene [HC]

*Trifolium neolagopus* Lojac.

*Trifolium olivaceum* Greene var. *columbianum* (Greene) Jeps.

*Trifolium olivaceum* Greene var. *griseum* Jeps.

#### ***Trifolium arvense*** L. [HC, HC2]

Sp. Pl. 2: 769.

rabbit-foot clover, hare's foot

#### ***Trifolium aureum*** Pollich [HC2, IFBC]

Hist. Pl. Palat. 2: 344

golden clover, greater hop clover, yellow clover

*Trifolium agrarium* L. [HC], rejected name

#### ***Trifolium bifidum*** A. Gray [HC, HC2]

Proc. Calif. Acad. Sci. 3(6): 102-103.

notch-leaf clover, pinole clover

var. ***decipiens*** Greene [HC, HC2]

#### ***Trifolium campestre*** Schreb. [HC2, IFBC]

Deutschl. Fl. 1: 16.

hop clover

*Trifolium procumbens* L. [HC], rejected name

#### ***Trifolium cernuum*** Brot. [HC2]

nodding clover

Recently collected (May 2016) at Fort Worden, Jefferson County, Washington. Also known from one recent collection in Linn County, Oregon, and from California.

#### ***Trifolium ciliolatum*** Benth. [HC, HC2]

Pl. Hartw. 304 [1849].

foothill clover, tree clover

#### ***Trifolium cyathiferum*** Lindl. [HC, HC2]

Bot. Reg. 13: pl. 1070.

bowl clover, cup clover

#### ***Trifolium depauperatum*** Desv. [HC, HC2]

poverty clover

var. **depauperatum** [HC2, IFBC]

J. Bot. Agric. 4: 69.

poverty clover

*Trifolium depauperatum* Desv. var. *laciniatum* (Greene) Jeps.

**Trifolium dichotomum** Hook. & Arn. [HC2, JPM2]

branched Indian clover

*Trifolium albopurpureum* Torr. & A. Gray var. *dichotomum* (Hook. & Arn.) Isely [JPM]

*Trifolium dichotomum* Hook. & Arn. var. *turbinatum* Jeps.

*Trifolium macraei* Hook. & Arn. var. *dichotomum* (Hook. & Arn.) W.H. Brewer ex S. Watson [HC]

*Trifolium petrophilum* Greene ex A. Heller

**Trifolium douglasii** House [HC, HC2]

Botanical Gazette 41(5): 335.

Douglas' clover

**Trifolium dubium** Sibth. [HC, HC2]

Fl. Oxon. 231.

least hop clover, suckling clover

**Trifolium eriocephalum** Nutt. [HC, HC2]

woolly-head clover

var. **arcuatum** McDermott [HC2]

woolly-head clover

*Trifolium arcuatum* Piper

*Trifolium eriocephalum* Nutt. ssp. *arcuatum* (Piper) J.M. Gillett [KZ99]

*Trifolium eriocephalum* Nutt. var. *piperi* J.S. Martin [HC]

var. **eriocephalum** [HC, HC2]

Fl. N. Amer. 1(2): 313.

woolly-head clover

*Trifolium eriocephalum* Nutt. ssp. *eriocephalum* [KZ99]

*Trifolium eriocephalum* Nutt. var. *butleri* Jeps.

**Trifolium fragiferum** L. [HC, HC2]

Sp. Pl. 2: 772.

strawberry clover

*Trifolium fragiferum* L. ssp. *bonannii* (C. Presl) Soják

**Trifolium fucatum** Lindl. [HC, HC2]

Edwards's Bot. Reg. pl. 1883.

sour clover

*Trifolium flavulum* Greene

*Trifolium fucatum* Lindl. var. *gambelii* (Nutt.) Jeps.

*Trifolium fucatum* Lindl. var. *virescens* (Greene) Jeps.

*Trifolium gambelii* Nutt.

Collected once in WA (Seattle) in 1892. Probably best considered a waif and not part of the flora.

**Trifolium glomeratum** L. [HC2, JPM2]

Species Plantarum 2: 770.

clustered clover

Recently collected in Skagit and Jefferson Counties.

**Trifolium gracilentum** Torr. & A. Gray [HC, HC2]

slender clover

*Trifolium gracilentum* Torr. & A. Gray var. *gracilentum* [JPM]

*Trifolium gracilentum* Torr. & A. Gray var. *inconspicuum* Fernald

*Trifolium hirtum* All. [HC2]

Auctuarium ad Floram Pedemontanam.

rose clover

Collected for first time in Washington in 2017 (Klickitat County).

*Trifolium hybridum* L. [HC, HC2]

Sp. Pl. 2: 766-767.

Alsike clover

*Trifolium elegans* Savi

*Trifolium hybridum* L. ssp. *elegans* (Savi) Asch. & Graebn.

*Trifolium hybridum* L. var. *elegans* (Savi) Boiss.

*Trifolium hybridum* L. var. *pratense* Rabenh.

*Trifolium incarnatum* L. [HC, HC2]

Sp. Pl. 2: 769.

crimson clover

*Trifolium incarnatum* L. var. *elatius* Gibelli & Belli

*Trifolium latifolium* (Hook.) Greene [HC, HC2]

Pittonia 3(17B): 223.

twin clover

*Trifolium aitonii* Rydb.

*Trifolium howellii* S. Watson var. *latifolium* (Hook.) McDermott

*Trifolium longipes* Nutt. var. *latifolium* Hook.

*Trifolium orbiculatum* B.P. Kenn. & McDermott

*Trifolium longipes* Nutt. [HC, HC2]

long-stalked clover

var. *longipes* [HC, HC2]

Fl. N. Amer. 1(2): 314.

long-stalked clover

*Trifolium longipes* Nutt. ssp. *longipes* [KZ99]

var. *multiovulatum* (L.F. Hend.) C.L. Hitchc. [HC, HC2]

Fl. Pacific Northwest 277.

long-stalked clover

*Trifolium caurinum* Piper

*Trifolium covillei* House

*Trifolium longipes* Nutt. ssp. *caurinum* (Piper) J.M. Gillett [KZ99]

*Trifolium oreganum* Howell var. *multiovulatum* L.F. Hend.

*Trifolium rusbyi* Greene ssp. *caurinum* (Piper) D. Heller & Zohary

var. *multipedunculatum* (P.B. Kenn.) J.S. Martin ex Isely [HC2]

Brittonia 32(1): 56.

long-stalked clover

*Trifolium longipes* Nutt. ssp. *multipedunculatum* (P.B. Kenn.) J.M. Gillett

*Trifolium multipedunculatum* P.B. Kenn. [HC]

*Trifolium rusbyi* Greene ssp. *multipedunculatum* (P.B. Kenn.) D. Heller & Zohary

var. *reflexum* A. Nelson [HC, HC2]

First Rep. Fl. Wyoming 94.

long-stalked clover

*Trifolium longipes* Nutt. ssp. *reflexum* (A. Nelson) J.M. Gillett [KZ99]

*Trifolium oreganum* Howell var. *rydbergii* (Greene) McDermott

*Trifolium rusbyi* Greene ssp. *reflexum* (A. Nelson) D. Heller & Zohary

*Trifolium rydbergii* Greene

*Trifolium macrocephalum* (Pursh) Poir. [HC, HC2]

Encycl., Suppl. 5(1): 336.

big-head clover, large-head clover

*Lupinaster macrocephalus* Pursh

*Trifolium macrocephalum* (Pursh) Poir. var. *caeruleomontanum* H. St. John

***Trifolium microcephalum*** Pursh [HC, HC2]

Fl. Amer. Sept. 2: 478 [1813].

small-head clover

***Trifolium microdon*** Hook. & Arn. [HC, HC2]

Bot. Misc. 3: 180.

thimble clover, Valparaiso clover

*Trifolium microdon* Hook. & Arn. var. *pilosum* Eastw.

***Trifolium oliganthum*** Steud. [HC, HC2]

Nomencl. Bot. (ed. 2) 2(12-13): 707.

few-flowered clover

*Trifolium pauciflorum* Nutt.

*Trifolium variegatum* Nutt. var. *pauciflorum* (Nutt.) McDermott

***Trifolium plumosum*** Douglas ex. Hook. [HC, HC2]

plumed clover

var. ***amplifolium*** J.S. Martin [HC, HC2]

Bull. Torrey Bot. Club 73(4): 369.

plumed clover

*Trifolium plumosum* Douglas ex. Hook. ssp. *amplifolium* (J.S. Martin) J.M. Gillett [KZ99]

H&C does not show WA. Occurrence needs to be checked.

var. ***plumosum*** [HC, HC2]

Fl. Bor.-Amer. 1(3): 130-131, pl. 49.

plumed clover

*Trifolium plumosum* Douglas ex. Hook. ssp. *plumosum*

***Trifolium pratense*** L. [HC, HC2]

Sp. Pl. 2: 768.

red clover

*Trifolium pratense* L. var. *frigidum* Gaudin

*Trifolium pratense* L. var. *sativum* (Schreb.) Cincovic

***Trifolium repens*** L. [HC, HC2]

Sp. Pl. 2: 767.

Dutch clover, white clover

***Trifolium resupinatum*** L. [HC2, JPM2]

Sp. Pl. 2: 771.

reversed clover

Not in H&C; PLANTS record based on St. John 1963; needs to be checked.

***Trifolium retusum*** L. [HC2, JPM2]

Demonstrationes Plantarum 21.

teasel clover

Known from recent collections in San Juan County (1992), Skagit County (2012), and Jefferson County (2016).

***Trifolium striatum*** L. [HC, HC2]

Sp. Pl. 2: 770.

knotted clover

Recently (2016, 2017) found in Jefferson and San Juan counties.

***Trifolium subterraneum*** L. [HC, HC2]

Sp. Pl. 2: 767.  
burrowing clover

*Trifolium suffocatum* L. [HC2]  
suffocated clover

Recently collected (May 2016) from Port Townsend, Jefferson County. Otherwise known in North America only from recent collections in Monterey County, CA. A distinctive small annual clover, nearly caespitose, with sessile flowering heads forming a dense cushion at summit of taproot.

*Trifolium thompsonii* C.V. Morton [HC, HC2]  
J. Wash. Acad. Sci. 23: 270.  
Thompson's clover

*Trifolium variegatum* Nutt. [HC, HC2]  
Fl. N. Amer. 1(2): 317.  
white-tip clover

*Trifolium appendiculatum* Lojac.  
*Trifolium geminiflorum* Greene  
*Trifolium melananthum* Hook. & Arn.  
*Trifolium polyodon* Greene  
*Trifolium trilobatum* Jeps.

*Trifolium vesiculosum* Savi [HC2, JPM]  
Fl. Pis. 2: 165.  
arrow-leaf clover

Not in H&C.

*Trifolium willdenovii* Spreng. [HC2, IFBC, JPM]  
Syst. Veg. 3: 208.  
sand clover, springbank clover, tomcat clover

*Trifolium tridentatum* Lindl. [HC]  
*Trifolium tridentatum* Lindl. var. *aciculare* (Nutt.) McDermott  
T. willdenovii was published in 1826, T. tridentatum in 1827.

*Trifolium wormskioldii* Lehm. [HC2]  
Sem. Hort. Bot. Hamburg. 17.  
cow clover, salt marsh clover

*Lupinaster wormskioldii* (Lehm.) C. Presl  
*Trifolium fendleri* Greene  
*Trifolium fimbriatum* Lindl.  
*Trifolium heterodon* Torr. & A. Gray  
*Trifolium involucreatum* Ortega var. *fendleri* (Greene) McDermott  
*Trifolium involucreatum* Ortega var. *fimbriatum* (Lindl.) McDermott  
*Trifolium involucreatum* Ortega var. *heterodon* (Torr. & A. Gray) S. Watson  
*Trifolium involucreatum* Ortega var. *kennedianum* McDermott  
*Trifolium kennedianum* (McDermott) A. Nelson & J.F. Macbr.  
*Trifolium spinulosum* Douglas ex Hook.  
*Trifolium willdenowii* Spreng. var. *fimbriatum* (Lindl.) Ewan, orthographic variant  
*Trifolium willdenowii* Spreng. var. *kennedianum* (McDermott) Ewan, orthographic variant  
*Trifolium wormskioldii* Lehm. var. *fimbriatum* (Lindl.) Jeps.  
*Trifolium wormskioldii* Lehm. var. *kennedianum* (McDermott) Jeps.  
*Trifolium wormskjoldii* Lehm. [HC], orthographic variant

Note orthographic variant in H&C (wormskjoldii).

*Ulex* [HC, HC2]  
furze, gorse

*Ulex europaeus* L. [HC, HC2]  
Sp. Pl. 2: 741.

common gorse

**Vicia** [HC, HC2]

vetch

**Vicia americana** Muhl. ex Willd. [HC, HC2]

American vetch

var. **americana** [HC2, JPM]

Sp. Pl. (ed. 4) 3(2): 1096.

American vetch

*Vicia americana* Muhl. ex Willd. ssp. *americana* [KZ99]

*Vicia americana* Muhl. ex Willd. ssp. *oregana* (Nutt.) Abrams

*Vicia americana* Muhl. ex Willd. var. *oregana* (Nutt.) A. Nelson

*Vicia americana* Muhl. ex Willd. var. *truncata* (Nutt.) W.H. Brewer [HC]

*Vicia americana* Muhl. ex Willd. var. *villosa* (Kellogg) F.J. Herm. [HC]

*Vicia californica* Greene

*Vicia californica* Greene var. *madrensis* Jeps.

*Vicia oregana* Nutt.

*Vicia sparsifolia* Nutt. ex Torr. & A. Gray var. *truncata* (Nutt.) S. Watson

**Vicia cracca** L. [HC, HC2]

Sp. Pl. 2: 735.

cat peas, tinegrass, bird vetch, tufted vetch

*Vicia cracca* L. ssp. *cracca* [KZ99]

*Vicia cracca* L. ssp. *grossheimii* (Ekutim.) Hashimov, invalidly published

*Vicia cracca* L. ssp. *tenuifolia* (Roth) Bonnier & Layens [KZ99]

*Vicia cracca* L. var. *angustissima* Neilr.

*Vicia cracca* L. var. *tenuifolia* (Roth) Beck

*Vicia semicineta* Greene

*Vicia tenuifolia* Roth

**Vicia hirsuta** (L.) Gray [HC, HC2]

Nat. Arr. Brit. Pl. 2: 614-615.

hairy vetch, tiny vetch

**Vicia lathyroides** L. [HC2, IFBC]

Sp. Pl. 2: 736.

spring vetch

Not in H&C; reported by Isely, 1998.

**Vicia lutea** L. [HC2]

Sp. Pl. 2: 736.

yellow vetch

A locally common weed along the Larry Scott Trail in Port Townsend, Jefferson County.

**Vicia nigricans** Hook. & Arn. [HC2]

giant vetch

var. **gigantea** (Hook.) Broich [HC2]

giant vetch

*Vicia gigantea* Hook. [HC]

*Vicia nigricans* Hook. & Arn. ssp. *gigantea* (Hook.) Lassetter & C.R. Gunn [IFBC]

**Vicia pannonica** Crantz [HC, HC2, JPM2]

Hungarian vetch

**Vicia sativa** L. [HC, HC2]

tare, common vetch

var. **angustifolia** (L.) Wahlenb. [HC, HC2]

Fl. Carpat. Princ. 218.

tare, common vetch

*Vicia angustifolia* L.

*Vicia angustifolia* L. var. *segetalis* (Thuill.) W.D.J. Koch

*Vicia angustifolia* L. var. *uncinata* (Desv.) Rouy

*Vicia sativa* L. ssp. *nigra* (L.) Ehrh. [KZ99]

*Vicia sativa* L. var. *nigra* L.

*Vicia sativa* L. var. *segetalis* (Thuill.) Ser.

var. *sativa* [HC, HC2]

Sp. Pl. 2: 736.

common vetch

*Vicia sativa* L. ssp. *sativa* [KZ99]

*Vicia sativa* L. var. *linearis* Lange

*Vicia tetrasperma* (L.) Schreb. [HC, HC2]

Spic. Fl. Lips. 26.

slender vetch

*Vicia tetrasperma* (L.) Schreb. var. *tenuissima* Druce

*Vicia villosa* Roth [HC, HC2]

hairy vetch, winter vetch, woolly vetch

var. *glabrescens* W.D.J. Koch [HC2]

hairy vetch, winter vetch, woolly vetch

*Vicia dasycarpa* Ten.

*Vicia villosa* Roth ssp. *varia* (Host) Corb. [JPM2]

H&C does not name any subspecific taxa for *V. villosa*.

var. *villosa* [HC2]

smooth tare, lentil vetch, slender vetch

*Vicia villosa* Roth ssp. *villosa* [JPM2]

H&C does not name any subspecific taxa for *V. villosa*.

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## Fagaceae [FNA3, HC, HC2] Beech Family

**Synonyms:** (none)

**References:** (none)

***Castanea*** [FNA3, HC2]

Gard. Dict. Abr., ed. 4. 1754.

*Castanea sativa* Mill. [HC2, Stace 1997]

Gard. Dict. (ed. 8) no. 1.

Spanish walnut, sweet walnut

Listed as naturalized in WA by Arthur Lee Jacobson.

***Chrysolepis*** [FNA3, HC2]

Bot. Not. 2(1): 117. 1948.

chinquapin

***Chrysolepis chrysophylla*** (Douglas ex Hook.) Hjelmq. [FNA3, HC2]

Bot. Not. Suppl. 2(1): 117. 1948.

giant chinquapin, golden chinquapin

*Castanopsis chrysophylla* (Douglas ex Hook.) A. DC. [HC]

var. *chrysophylla* [FNA3, HC2]  
Bot. Not. Suppl. 2(1): 117.  
chinquapin

**Quercus** [FNA3, HC, HC2]

Sp. Pl. 2: 994. 1753; Gen. Pl. ed. 5, 431, 1754.  
oak

*Quercus cerris* L.  
Sp. Pl. 997.  
Turkish oak

Arthur Jacobson reports as naturalized in the Seattle area. This species is considered excluded until specimens have been collected to support this.

**Quercus garryana** Douglas ex Hook. [FNA3, HC, HC2]

Fl. Bor.-Amer. 2: 159. 1840.  
Garry oak, Oregon white oak

var. *garryana* [FNA3, HC2]  
Fl. Bor.-Amer. 2: 159.  
Garry oak, Oregon white oak

*Quercus palustris* Münchh. [FNA3, HC2]

Hausvater. 5(1): 253. 1770.

*Quercus robur* L. [FNA3, HC2]

Sp. Pl. 2: 996. 1753.  
British oak, English oak

Arthur Lee Jacobson reports as commonly naturalized in Seattle area.

*Quercus rubra* L. [FNA3, HC2]

Sp. Pl. 2: 996. 1753.  
red oak

Arthur Lee Jacobson reports as reseeding in Seattle area.

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## Fumariaceae (see Papaveraceae)

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## Garryaceae [HC, HC2] Silktassel Family

**Synonyms:** (none)

**References:** (none)

**Aucuba** [HC2]

*Aucuba japonica* Thunb. [HC2]

**Garrya** [HC, HC2]

silk-tassel

**Garrya fremontii** Torr. [HC, HC2]

Pacif. Railr. Rep. 4(5): 136.  
Fremont's silk tassel bearbrush

*Garrya fremontii* Torr. var. *laxa* Eastw.

## Gentianaceae [HC, HC2] Gentian Family

**Synonyms:** (none)

**References:** (none)

### ***Centaurium*** [HC, HC2]

centaury  
(see also *Zeltnera*)

#### ***Centaurium erythraea*** Rafn [HC2, JPM2]

Danm. Holst. Fl. 2: 75-77.  
common centaury, European centaury

*Centaurium umbellatum* Gilib. [HC], invalidly published

#### ***Centaurium pulchellum*** (Sw.) Hayek ex Hand.-Mazz., Stadlm., Janch. & Faltis [Draft FNA, HC2]

Oesterr. Bot. Z. 56: 70.  
branching centaury, lesser centaury

### ***Comastoma*** [HC2]

#### ***Comastoma tenellum*** (Rottb.) Toyok. [HC2, JPM2]

Botanical Magazine 74(874): 198.  
Lapland gentian, Samiland gentian, slender gentian

*Gentiana tenella* Rottb. [HC]

*Gentianella tenella* (Rottb.) Börner

*Gentianella tenella* (Rottb.) Börner ssp. *tenella* [JPM]

Two specimens collected in 1987 in Okanogan County are housed at Western Washington University Herbarium.

### ***Frasera*** [HC, HC2]

frasera

#### ***Frasera albicaulis*** Griseb. [HC, HC2]

##### var. ***albicaulis*** [HC, HC2]

Fl. Bor.-Amer. 2(8): 67, pl. 154.  
white-stemmed frasera

*Frasera albicaulis* Griseb. ssp. *albicaulis* [KZ99, IMF4]  
*Swertia albicaulis* (Griseb.) Kuntze ssp. *albicaulis* [JPM]

##### var. ***columbiana*** (H. St. John) C.L. Hitchc. [HC, HC2]

Fl. Bor.-Amer. 2(8): 67, pl. 154.  
Columbia frasera

*Frasera albicaulis* Griseb. ssp. *columbiana* (St. John) Hitchc.

Near Columbia River in Klickitat and Yakima counties in WA.

#### ***Frasera fastigiata*** (Pursh) A. Heller [HC, HC2]

Bulletin of the Torrey Botanical Club 24(6): 312.  
clustered frasera, Umpqua green-gentian

*Swertia fastigiata* Pursh [JPM], orthographic variant

#### ***Frasera speciosa*** Douglas ex Griseb. [HC, HC2]

Fl. Bor.-Amer. 2(8): 66-67, pl. 153.  
elkweed, giant frasera, monument plant

*Swertia radiata* (Kellogg) Kuntze [JPM]

##### var. ***speciosa*** [HC2]

**Gentiana** [HC, HC2]

gentian

(see also *Comastoma*, *Gentianella*)

**Gentiana affinis** Griseb. [HC, HC2]

Fl. Bor.-Amer. 2(8): 56-57.

pleated gentian, prairie gentian, Rocky Mtn. gentian

*Gentiana affinis* Griseb. ssp. *ovata* A. Gray [JPM]

**Gentiana calycosa** Griseb. [HC, HC2]

Fl. Bor.-Amer. 2(8): 58-59, pl. 146.

explorer's gentian, mt. bog gentian

*Gentiana calycosa* ssp. *calycosa*

*Gentiana calycosa* ssp. *obtusiloba* (Rydb.) C.L. Hitchc.

*Gentiana calycosa* ssp. *xantha* A. Nels.

*Gentiana calycosa* Griseb. var. *asepala* (Maguire) C.L. Hitchc. [HC]

*Gentiana calycosa* Griseb. var. *calycosa* [HC]

*Gentiana calycosa* Griseb. var. *obtusiloba* (Rydb.) C.L. Hitchc. [HC]

\* Kartesz, J. T. 2003. A Synonymized Checklist and Atlas with Biological Attributes for the Vascular Flora of the United States, Canada, and Greenland. Second Edition. In: Kartesz, J. T., and C.A. Meacham. Synthesis of the North American Flora, CD-ROM Version 2.0. Published by J. T. Kartesz & Phylosystems Corporation, Chapel Hill, NC.

**Gentiana douglasiana** Bong. [HC, HC2]

Mém. Acad. Imp. Sci. Saint Pétersbourg (Sér. 7) 2(2): 156, pl. 6.

swamp gentian

**Gentiana glauca** Pall. [HC, HC2]

Fl. Ross. 2: 104, pl. 93, f. 4.

glaucous gentian

*Dasystephana glauca* (Pall.) Rydb.

*Gentianodes glauca* (Pall.) Á. Löve & D. Löve

\* Kartesz, J. T. 2003. A Synonymized Checklist and Atlas with Biological Attributes for the Vascular Flora of the United States, Canada, and Greenland. Second Edition. In: Kartesz, J. T., and C.A. Meacham. Synthesis of the North American Flora, CD-ROM Version 2.0. Published by J. T. Kartesz & Phylosystems Corporation, Chapel Hill, NC.

**Gentiana sceptrum** Griseb. [HC, HC2]

King's gentian, staff gentian

**Gentianella** [HC2]

gentian

**Gentianella amarella** (L.) Börner [HC2, IMF4]

northern gentian

*Gentiana amarella* L. [HC]

var. **acuta** (Michx.) Herder [HC2]

felwort, northern gentian

*Gentianella amarella* (L.) Börner ssp. *acuta* (Michx.) J.M. Gillett [JPM]

**Swertia** [HC, HC2]

swertia

**Swertia perennis** L. [HC, HC2]

Sp. Pl. 1: 226.

also felwort, alpine bog swertia

*Swertia perennis* ssp. *obtusata* (Ledeb.) Ledeb.:Griseb.

\* Kartesz, J. T. 2003. A Synonymized Checklist and Atlas with Biological Attributes for the Vascular Flora of the United States, Canada, and Greenland. Second Edition. In: Kartesz, J. T., and C.A. Meacham. Synthesis of the North American Flora, CD-ROM Version 2.0. Published by J. T. Kartesz & Phylosystems Corporation, Chapel Hill, NC.

**Zeltnera** [HC2]

centaury

**Zeltnera exaltata** (Griseb.) G. Mans. [HC2, JPM2]

Taxon 53(3): 731.

desert centaury, tall centaury

*Centaurium exaltatum* (Griseb.) W. Wight ex Piper [HC]

**Zeltnera muehlenbergii** (Griseb.) G. Mans. [HC2, JPM2]

Taxon 53(3): 731-732.

Muhlenberg's centaury, Muhlenberg's centaury

*Centaurium muehlenbergii* (Griseb.) W. Wight ex Piper

*Centaurium muehlenbergii* (Griseb.) W. Wight ex Piper var. *albiflorum* Suks.

*Centaurium muhlenbergii* (Griseb.) W. Wight ex Piper [HC], orthographic variant

In the Pacific states this form merges with the branched, short-pedicillate "European" form [IMF4].

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## Geraniaceae [HC, HC2] Geranium Family

**Synonyms:** (none)

**References:** (none)

**Erodium** [HC, HC2]

alfilaria, crane's-bill, filaree, stork's-bill

**Erodium botrys** (Cav.) Bertol. [HC2]

Amoen. Ital. 35.

longbeak stork's bill

Single collection (2013) from Klickitat County.

**Erodium cicutarium** (L.) L'Hér. ex Aiton [HC, HC2]

Hort. Kew. 2: 414.

common stork's bill

ssp. *cutarium* [HC2]

**Erodium moschatum** (L.) L'Hér. [HC, HC2]

greenstem filaree

An occasional waif in Washington, more common in western Oregon and California.

**Geranium** [HC, HC2]

crane's-bill, geranium

**Geranium bicknellii** Britton [HC, HC2]

Bull. Torrey Bot. Club 24(2): 92-93

northern crane's-bill

*Geranium nemorale* Suksd.

**Geranium carolinianum** L. [HC, HC2]

Sp. Pl. 2: 682.

Carolina geranium

*Geranium carolinianum* L. var. *carolinianum* [KZ99]

*Geranium carolinianum* L. var. *sphaerospermum* (Fernald) Breitung [KZ99]

*Geranium sphaerospermum* Fernald

**Geranium columbinum** L. [HC, HC2]

Sp. Pl. 2: 682.

long-stalk crane's-bill

*Geranium dissectum* L. [HC, HC2]

Cent. Pl. 1 21.

cut-leaf crane's-bill

*Geranium laxum* Hanks

*Geranium ibericum* Cav.

Diss. 4: 209.

montane crane's-bill, Spanish crane's-bill, montane geranium, Spanish geranium

*Geranium montanum* Hablitz ex Pall.

First collection in Washington (2018) from Kitsap County.

*Geranium lucidum* L. [HC, HC2, Stace 1997]

Sp. Pl. 682.

shining cranes-bill

*Geranium molle* L. [HC, HC2]

Sp. Pl. 2: 682.

dovefoot geranium

*Geranium oregonum* Howell [HC, HC2]

A Flora of Northwest America 1: 106-107.

sticky geranium, western geranium

*Geranium albiflorum* Hook. var. *incisum* Torr. & Gray [KZ99]

*Geranium incisum* Nutt.

*Geranium xoxonianum* Yeo [HC2]

(= *Geranium endressii* x *Geranium versicolor*)

*Geranium purpureum* Vill. [HC2]

Hist. Pl. Dauphiné 1: 272.

purple geranium

Several collections from Klickitat County (1911, 1962, 1992), and recently (2018) from King County. Easily confused with *G. robertianum*, so possibly more widespread than the collecting record indicates.

*Geranium pusillum* L. [HC, HC2]

Syst. Nat. (ed. 10) 2: 1144.

small-flower crane's-bill

*Geranium pyrenaicum* Burm. f. [HC2]

Spec. Bot. Geran. 27?28.

hedgerow cranesbill

ssp. *pyrenaicum* [FNA, HC2]

*Geranium richardsonii* Fisch. & Trautv. [HC, HC2]

white crane's-bill, white geranium

*Geranium robertianum* L. [HC, HC2]

Sp. Pl. 2: 681-682.

stinky bob, herb robert

*Geranium rotundifolium* L. [HC2]

Sp. Pl. 2: 683.

round-leaved geranium

Collected once (2016) in King County in wastelot.

*Geranium viscosissimum* Fisch. & C.A. Mey. [HC, HC2, JPM2]

Index Sem. (St. Petersburg) 11: Suppl. 18.

sticky purple crane's-bill, sticky purple geranium

## Grossulariaceae [FNA8, HC, HC2] Currant Family

**Synonyms:** (none)

FNA8: "Weigend, M. 2007. Grossulariaceae. In: K. Kubitzki et al., eds. 1990+. The Families and Genera of Vascular Plants. 9+ vols. Berlin etc. Vol. 9, pp. 168-176."

**References:** (none)

### **Ribes** [FNA8, HC, HC2]

Sp. Pl. 1: 200. 1753; Gen. Pl. ed. 5, 94. 1754.  
currant, gooseberry

#### **Ribes acerifolium** Howell [FNA8, HC2]

Erythea. 3: 34. 1895.  
maple-leaf currant

*Ribes howellii* Greene [HC], rejected name

FNA8: "<i>Ribes acerifolium</i> K. Koch (1869), which was believed to block the use of <i>R. acerifolium</i> Howell, was not validly published. Consequently, the name <i>R. howellii</i> Greene, proposed as a substitute name, is superfluous; it appears in many floras and on many herbarium specimens."

#### **Ribes aureum** Pursh [FNA8, HC, HC2]

Fl. Amer. Sept. 1: 164. 1813.  
golden currant

##### var. **aureum** [FNA8, HC2]

Fl. Amer. Sept. 1: 164.  
golden currant

*Chrysobotrya aurea* (Pursh) Rydb.

FNA8: "Ribes aureum was introduced into cultivation in Europe early in the nineteenth century (F. V. Coville 1903). It is a major host of pinyon blister rust in Arizona, Colorado, and Utah, and of pinyon leaf rust in New Mexico (E. P. Van Arsdel and B. W. Geils 2004). Ribes aureum is a variable complex and the varieties may seem to intergrade. In California, var. aureum occurs in sagebrush scrub or coniferous forests at higher elevations (800-2600 m) than var. gracillimum; the sepals of var. aureum are longer than those of var. gracillimum (5-8 mm versus 3-4 mm), and its hypanthium is noticeably shorter relative to the sepals. Leaves of var. aureum are more highly lobed and are sparsely glandular in the Pacific Northwest and less lobed and more densely glandular in the southwest (H. D. Hammond, pers. comm.). In most of its range, var. villosum is so conspicuously villous as to be unmistakable; in the west some plants with strikingly long hypanthia are scarcely villous."

#### **Ribes bracteosum** Douglas [FNA8, HC, HC2]

Fl. Bor.-Amer. 1: 233. 1832.  
California black currant, stink currant

FNA8: "Ribes bracteosum occurs along the Pacific Coast from southeastern Alaska to northern California. Its thin leaves have a sweetish, disagreeable odor and the conspicuous bracts bear acicular, mostly persistent processes near the base along the slightly winged, stipular margins."

#### **Ribes cereum** Douglas [FNA8, HC, HC2]

Trans. Hort. Soc. London. 7: 512. 1830.  
wax currant

##### var. **cereum** [FNA8, HC, HC2]

Trans. Hort. Soc. London 7(4): 512-514.  
wax currant

*Ribes cereum* Douglas var. *inebrians* (Lindl.) C.L. Hitchc. [HC]

*Ribes cereum* Douglas var. *pedicellare* A. Gray

*Ribes inebrians* Lindl.

*Ribes reniforme* Nutt.

*Ribes viscidulum* A. Berger

var. **colubrinum** C.L. Hitchc. [FNA8, HC, HC2]

Vasc. Pl. Pacif. N.W. 3: 69, plate [p. 72], fig. s.n. [upper right center]. 1961.  
squaw currant, wax currant

***Ribes divaricatum*** Douglas [FNA8, HC, HC2]

Trans. Hort. Soc. London. 7: 515. 1830.  
coast black gooseberry, straggly gooseberry

*Grossularia divaricata* (Douglas) Coville & Britton

var. **divaricatum** [FNA8, HC2]

Trans. Hort. Soc. London. 7: 515.  
coast black gooseberry

*Ribes divaricatum* Douglas var. *glabriflorum* Koehne

*Ribes divaricatum* Douglas var. *rigidum* M. Peck

*Ribes suksdorfii* A. Heller

***Ribes hudsonianum*** Richardson [FNA8, HC, HC2]

Narr. Journey Polar Sea (ed. 2). 734. 1823.  
Hudson Bay currant, northern black currant, western black currant

*Ribes hudsonianum* Richardson var. *hudsonianum* [HC]

*Ribes hudsonianum* Richardson var. *petiolare* (Douglas) Janczewski [HC]

*Ribes petiolare* Douglas

FNA8: "Plants of *Ribes hudsonianum* with leaf blades that are pubescent abaxially and mostly lack sessile glands, and have ovaries with sessile glands, have been recognized as var. *hudsonianum*; those with leaf blades that are shaggy-hairy abaxially and sessile-glandular, and have ovaries lacking such glands, have been named var. *petiolare*. Variety *hudsonianum* has a more northern distribution; var. *petiolare* is western. Where their ranges overlap, for instance in Saskatoon, pubescence density varies continuously and does not correlate with presence or absence of glands (V. L. Harms, pers. comm.). *Ribes hudsonianum* is a major host of blister rust; in early literature it is referred to as *R. petiolare* (E. P. Van Arsdel and B. W. Geils 2004). It has a strong, sweetish, unpleasant odor, and bears its leaves on long shoots."

***Ribes inerme*** Rydb. [FNA8, HC, HC2]

Mem. New York Bot. Gard. 1: 202. 1900.

*Grossularia inermis* (Rydb.) Coville & Britton

var. **inerme** [FNA8, HC2]

Mem. New York Bot. Gard. 1: 202.  
white-stemmed gooseberry, whitestem gooseberry

*Grossularia inermis* (Rydb.) Coville & Britton var. *pubescens* A. Berger

*Ribes divaricatum* Douglas var. *inerme* (Rydb.) McMinn

*Ribes inerme* Rydb. var. *subarmatum* M. Peck

*Ribes valicola* Greene ex Rydb.

***Ribes lacustre*** (Pers.) Poir. [FNA8, HC, HC2]

Encycl., Suppl. 2: 856. 1812.  
swamp currant, bristly black gooseberry, swamp gooseberry

*Limnobotrya lacustris* (Pers.) Rydb.

*Ribes lacustre* (Pers.) Poir. var. *parvulum* A. Gray

*Ribes oxycanthoides* L. var. *lacustre* Pers.

FNA8: "The petals and stamens are inserted on the rim of the pink nectary disc in *Ribes lacustre*."

***Ribes laxiflorum*** Pursh [FNA8, HC, HC2]

Fl. Amer. Sept. 2: 731. 1813.  
trailing black currant

*Ribes coloradense* Coville

FNA8: "*Ribes laxiflorum* flowers have stamens with reddish filaments."

***Ribes lobbii*** A. Gray [FNA8, HC, HC2]

Amer. Naturalist. 10: 274. 1876.

gummy gooseberry, Lobb's gooseberry, Oregon gooseberry

*Grossularia lobbii* (A. Gray) Coville & Britton

FNA8: "Ribes lobbii occurs in mountains from southwestern British Columbia to northwestern California. It is unusual in having anthers that are warty or capitate-papillate with red glands abaxially."

***Ribes montigenum*** McClatchie [FNA8, HC, HC2]

Erythea. 5: 38. 1897.

alpine prickly currant, mountain gooseberry, western prickly gooseberry

*Limnobotrya montigena* (McClatchie) Rydb.

*Ribes lacustre* (Pers.) Poir. var. *molle* A. Gray

*Ribes lentum* (M.E. Jones) Coville & Rose

*Ribes nubigenum* McClatchie

FNA8: "The lobed, yellowish, pinkish, or red nectary discs and purplish red filaments of *Ribes montigenum* are striking."

***Ribes nigrum*** L. [FNA8, HC, HC2]

Sp. Pl. 1: 201. 1753.

cultivated black currant

FNA8: "Ribes nigrum is the source of the cultivated black currant. It has a strong, unpleasant odor."

***Ribes niveum*** Lindl. [FNA8, HC, HC2]

Edwards's Bot. Reg. 20: plate 1692. 1834.

Snake River gooseberry, snow gooseberry

***Ribes oxycanthoides*** L. [FNA8, HC, HC2]

Sp. Pl. 1: 201. 1753.

Canada gooseberry

var. ***cognatum*** (Greene) Morin [FNA8, HC2]

J. Bot. Res. Inst. Texas. 1: 1015. 2007.

northern gooseberry, umatilla gooseberry, Umatilla gooseberry

*Grossularia cognata* (Greene) Coville & Britton

*Ribes cognatum* Greene [HC]

*Ribes oxycanthoides* L. ssp. *cognatum* (Greene) Q.P. Sinnott

var. ***irriguum*** (Douglas) Jancz. [FNA8, HC2]

Mém. Soc. Phys. Genève. 35: 388. 1907.

Idaho gooseberry

*Grossularia irrigua* (Douglas) Coville & Britton

*Grossularia nonscripta* A. Berger

*Ribes divaricatum* Douglas var. *irriguum* (Douglas) A. Gray

*Ribes irriguum* Douglas [HC]

*Ribes leucoderme* A. Heller

*Ribes nonscripta* (A. Berger) Standl.

*Ribes oxycanthoides* L. ssp. *irriguum* (Douglas) Q.P. Sinnott [ILBC]

*Ribes oxycanthoides* L. var. *leucoderme* (A. Heller) Jancz.

***Ribes rubrum*** L. [FNA8, HC2]

Sp. Pl. 1: 200. 1753.

northern red currant

*Ribes rubrum* L. var. *sativum* Rchb.

*Ribes sativum* (Rchb.) Syme [HC]

*Ribes sylvestre* (Lam.) Mertens & Koch

*Ribes vulgare* Lam.

FNA8: "The leaves of *Ribes rubrum* are rather thick. Cultivated red currants may have originated from a cross between *R. rubrum* and *R. spicatum* E. Robson, a rare species native in northern Britain (R. Mabey

1996). Many of the state and province records of occurrence may be the result of repeated escape from cultivation rather than true naturalization."

***Ribes sanguineum* Pursh [FNA8, HC, HC2]**

Fl. Amer. Sept. 1: 164. 1813.

blood currant, red currant, redflower currant

**var. *sanguineum* [FNA8, HC2]**

Fl. Amer. Sept. 1: 164 [1813].

redflowering currant

*Ribes sanguineum* Pursh var. *deductum* Jeps.

*Ribes sanguineum* Pursh var. *melanocarpum* (Greene) Jeps.

FNA8: "Ribes sanguineum is widely cultivated. It begins to bloom very early in the season, providing a nectar source for pollinators when little else is available."

***Ribes triste* Pall. [FNA8, HC, HC2]**

Nova Acta Acad. Sci. Imp. Petrop. Hist. Acad. 10: 378. 1797.

American red currant, swamp red currant, wild red currant

*Ribes rubrum* L. var. *alaskanum* (A. Berger) B. Boivin

*Ribes rubrum* L. var. *propinquum* (Turcz.) Trautv. & C.A. Mey.

*Ribes triste* Pall. var. *albinervium* (Michx.) Fernald

***Ribes velutinum* Greene [FNA8, HC, HC2]**

Bull. Calif. Acad. Sci. 1: 83. 1885.

desert gooseberry, Goodding's gooseberry

*Grossularia velutina* (Greene) Coville & Britton

*Ribes gooddingii* M. Peck

*Ribes velutinum* Greene var. *glanduliferum* (A. Heller) Jeps.

*Ribes velutinum* Greene var. *gooddingii* (M. Peck) C.L. Hitchc. [HC]

*Ribes velutinum* Greene var. *velutinum* [HC]

***Ribes viscosissimum* Pursh [FNA8, HC, HC2]**

Fl. Amer. Sept. 1: 163. 1813.

Hall's sticky currant, mountain currant

*Ribes viscosissimum* Pursh var. *hallii* (Janczewski) Janczewski [HC]

*Ribes viscosissimum* Pursh var. *viscosissimum* [HC]

FNA8: "All parts of *Ribes viscosissimum* are very fragrant. Its leaves are thick and rough. Plants with glabrous or sparsely stipitate-glandular ovaries have been recognized as var. *hallii* and are found only in California and Oregon. Plants with strongly stipitate-glandular and softly pubescent ovaries are var. *viscosissimum* and are more widespread. W. C. Martin and C. R. Hutchins (1980) indicated that *R. viscosissimum* is to be expected in New Mexico; no occurrence there has been confirmed."

***Ribes watsonianum* Koehne [FNA8, HC, HC2]**

Deut. Dendrol. 197. 1893.

Mount Adams gooseberry, spring gooseberry, watsnson gooseberry

*Grossularia watsoniana* (Koehne) Coville & Britton

FNA8: "*Ribes watsonianum* occurs in the Cascade Range of Oregon, Washington, and British Columbia, and in Alberta. Analysis of combined datasets of ITS, ETS, psbA-trnH, and chloroplast restriction sites placed *R. watsonianum* as sister to sect. *Grossularia* (L. M. Schultheis and M. J. Donoghue 2004)."

***Ribes wolfii* Rothr. [FNA8, HC, HC2]**

Amer. Naturalist. 8: 358. 1874.

Winaha currant, wolf's currant

*Ribes mogollonicum* Greene

FNA8: "*Ribes mogollonicum* is included here in *R. wolfii* because the two taxa, morphologically, seem to overlap completely. A. E. Senters and D. E. Soltis (2003) placed *R. mogollonicum* near *R. viscosissimum* and *R. erythrocarpum*."

## Haloragaceae [HC, HC2] Water Milfoil Family

### Synonyms:

Haloragidaceae [Abrams], orthographic variant

### References:

\* Aiken, S.G. 1981. A conspectus of *Myriophyllum* (Haloragaceae) in North America. *Brittonia* 33: 57-69.

### *Myriophyllum* [HC, HC2]

water-milfoil

#### *Myriophyllum aquaticum* (Vell.) Verdc. [HC2, JPM]

parrot's feather, water feather, South American water milfoil

*Myriophyllum brasiliense* Cambess. [HC]

*Myriophyllum proserpinacoides* Gillies ex Hook. & Arn.

#### *Myriophyllum heterophyllum* Michx. [Draft FNA, HC2]

Fl. Bor.-Amer. 2: 191.

two-leaf milfoil, various-leaved water-milfoil

Washington populations believed to result from introductions from northeastern U.S. (Thum et al., 2011).

\* Thum, R. A., M. P. Zuellig, M. E. Moody, C. Vossbrinck, and R. L. Johnson. 2011. Molecular markers reconstruct the invasion history of variable leaf watermilfoil (*Myriophyllum heterophyllum*) and distinguish it from closely related species. *Biol. Invasions* 13: 1687-1709.

#### *Myriophyllum hippuroides* Nutt. ex Torr. & A. Gray [HC, HC2]

western milfoil, western water milfoil

#### *Myriophyllum pinnatum* (Walter) Britton, Sterns & Poggenb. [HC2]

Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York 19.

cutleaf water-milfoil

Collected once (2004) in Washington in Thurston County.

#### *Myriophyllum quitense* Kunth [HC2, ILBC3]

Andean water milfoil, waterwort water milfoil

*Myriophyllum elatinooides* Gaudich. [HC]

\* Ceska, A, and O. Ceska. 1986. Notes on *Myriophyllum* (Haloragaceae) in the Far East: the identity of *Myriophyllum sibiricum* Komarov. *Taxon* 35: 95-100.

\* Ceska, O., A. Ceska, and P. D. Warrington. 1986. *Myriophyllum quitense* and *Myriophyllum ussuriense* (Haloragaceae) in British Columbia, Canada. *Brittonia* 38: 73-81.

#### *Myriophyllum sibiricum* Kom. [HC2, ILBC3]

American milfoil, northern milfoil, Siberian water milfoil

*Myriophyllum exalbescens* Fernald [Abrams, Peck]

*Myriophyllum spicatum* L. var. *exalbescens* (Fernald) Jeps. [HC]

here we follow the taxonomy of Ceska & Ceska (1986), treating *M. exalbescens* as a synonym of *M. sibiricum*

\* Ceska, A, and O. Ceska. 1986. Notes on *Myriophyllum* (Haloragaceae) in the Far East: the identity of *Myriophyllum sibiricum* Komarov. *Taxon* 35: 95-100.

#### *Myriophyllum spicatum* L. [HC, HC2, JPM]

Eurasian water milfoil, spiked water milfoil  
(see also *Myriophyllum sibiricum*)

*Myriophyllum spicatum* L. var. *spicatum* [HC]

#### *Myriophyllum spicatum* L. × *Myriophyllum sibiricum* Kom.

hybrid Eurasian milfoil

\* Moody, M. L. and D. H. Les. 2007b. Geographic distribution and genetic composition of invasive hybrid watermilfoil

(*Myriophyllum spicatum* x *M. sibiricum*) populations in North America. *Biol. Invasions* 9: 559?570.

***Myriophyllum ussuriense* (Regel) Maxim. [HC2]**

terrestrial water milfoil, Ussurian milfoil

*Myriophyllum verticillatum* L. var. *ussuriense* Regel

recently collected in Wahkiakum Co. (Christy et al. 2001)

\* Ceska, O., A. Ceska, and P. D. Warrington. 1986. *Myriophyllum quitense* and *Myriophyllum ussuriense* (Haloragaceae) in British Columbia, Canada. *Brittonia* 38: 73-81.

\* Christy, J. A., O. Ceska, and A. Ceska. 2001. Noteworthy collections. Washington. *Myriophyllum ussuriense*. *Madroño* 47: 213.

***Myriophyllum verticillatum* L. [HC2, JPM]**

verticillate milfoil, whorled water milfoil

*Myriophyllum verticillatum* L. var. *pectinatum* Wallr. [Peck]

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## Haloragidaceae (see Haloragaceae)

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## Heliotropiaceae [Draft FNA, HC2] Heliotrope Family

**Synonyms:** (none)

Recent molecular evidence indicates that Heliotropiaceae is distinct from Boraginaceae, the family in which it was formerly placed.

**References:** (none)

***Heliotropium* [HC, HC2]**

heliotrope

***Heliotropium curassavicum* L. [HC, HC2, JPM]**

Sp. Pl. 1: 130.

salt heliotrope, seaside heliotrope

Jepson Manual does not recognize vars.

var. *obovatum* DC. [HC, HC2]

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## Hippocastanaceae (see Sapindaceae)

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## Hippuridaceae (see Plantaginaceae)

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## Hydrangeaceae [HC, HC2] Hydrangea Family

**Synonyms:** (none)

**References:** (none)

***Philadelphus*** [HC, HC2]

mockorange, syringa

***Philadelphus lewisii*** Pursh [HC, HC2]

Fl. Amer. Sept. 1: 329 [1813].

Columbian mock orange, Lewis' mock orange, Piper's mock orange, Zeller's mock orange

*Philadelphus confusus* Piper

*Philadelphus trichothecus* S.Y. Hu

*Philadelphus zelleri* S.Y. Hu

***Whipplea*** [HC, HC2]

whipplevine, yerba de selva

***Whipplea modesta*** Torr. [HC, HC2]

4(5): 90-91, pl. 7.

modesty

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## Hydrophyllaceae [Draft FNA, HC, HC2] Waterleaf Family

**Synonyms:** (none)

Placed in Boraginaceae by APG III system. We follow recent molecular studies showing Hydrophyllaceae as separate from Boraginaceae (see citations under Boraginaceae).

**References:** (none)

***Hesperochiron*** [HC, HC2]

hesperochiron

***Hesperochiron californicus*** (Benth.) S. Watson [HC, HC2]

Botany Fortieth Parallel 281.

California monkey-fiddle

***Hesperochiron pumilus*** (Douglas ex Griseb.) Porter [HC, HC2]

Rep. U.S. Geol. Geogr. Surv. Territ. 1872: 778.

dwarf monkey-fiddle

*Hesperochiron villosulus* (Greene) Suksd.

***Hydrophyllum*** [HC, HC2]

waterleaf

***Hydrophyllum capitatum*** Douglas ex Benth. [HC, HC2]

wool breeches, ballhead waterleaf

var. ***capitatum*** [HC, HC2]

Trans. Linn. Soc. London 17: 273.

wool breeches, ballhead waterleaf

var. ***thompsonii*** (M. Peck) Constance [HC, HC2]

Amer. Midl. Naturalist 27(3): 726.

wool breeches, ballhead waterleaf

***Hydrophyllum fendleri*** (A. Gray) A. Heller [HC, HC2]

Fendler's waterleaf

var. ***albifrons*** (A. Heller) J.F. Macbr. [HC, HC2]

Contr. Gray Herb. 49: 23.

Fendler's waterleaf

*Hydrophyllum congestum* Wiegand

var. *fendleri* [HC, HC2]

Pl. World 1(2): 23.

Fendler's waterleaf

*Hydrophyllum tenuipes* A. Heller [HC, HC2]

Bull. Torrey Bot. Club 25(11): 582.

Pacific waterleaf

*Hydrophyllum viridulum* G.N. Jones

*Nemophila* [HC, HC2]

nemophila

*Nemophila breviflora* A. Gray [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 10: 315.

Great Basin baby-blue-eyes

*Nemophila kirtleyi* L.F. Hend. [HC, HC2]

Bulletin of the Torrey Botanical Club 27(5): 350-351.

Snake Canyon baby-blue-eyes

*Nemophila maculata* Benth. ex Lindl.

J. Hort. Soc. London 3: 319?320, f. [p. 320].

baby blue eyes, five-spot

Recently (2017) collected as a waif in King County.

*Nemophila menziesii* Hook. & Arn. [HC, HC2]

baby blue-eyes

var. *menziesii* [HC2]

Bot. Beechey Voy. 152.

baby blue-eyes

*Nemophila parviflora* Douglas ex Benth. [HC, HC2]

small-flowered nemophila

var. *austinae* (Eastw.) Brand [HC, HC2]

Pflanzenr. IV. 251(Heft 54): 55.

small-flowered nemophila

var. *parviflora* [HC, HC2]

Trans. Linn. Soc. London 17: 275.

small-flowered nemophila

*Nemophila pedunculata* Douglas ex Benth. [HC, HC2]

Trans. Linn. Soc. London 17: 275.

meadow baby-blue-eyes, spreading nemophila

*Phacelia* [HC, HC2]

phacelia

*Phacelia bolanderi* A. Gray [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 10: 322.

Bolander's phacelia, Bolander's scorpion-weed

*Phacelia franklinii* (R. Br.) A. Gray [HC, HC2]

Manual (ed. 2) 329.

Franklin's scorpion-weed

*Phacelia glandulifera* Piper [HC, HC2]

Contr. U.S. Natl. Herb. 11: 472.

sticky phacelia, glandular-hair scorpion-weed

*Phacelia hastata* Douglas ex Lehm. [HC, HC2]

silverleaf phacelia, whiteleaf phacelia

var. *compacta* (Brand) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 163.  
silverleaf phacelia, whiteleaf phacelia

var. ***hastata*** [HC, HC2]

Nov. Stirp. Pug. 2: 20-21.  
silverleaf phacelia, whiteleaf phacelia

*Phacelia hastata* Douglas ex Lehm. var. *leucophylla* (Torr.) Cronquist [HC]

var. ***leptosepala*** (Rydb.) Cronquist [HC, HC2]

narrow-sepal scorpion-weed

*Phacelia leptosepala* Rydb.

***Phacelia heterophylla*** Pursh [HC, HC2]

varileaf phacelia, virgate phacelia  
(see also *Phacelia mutabilis*)

var. ***heterophylla*** [HC, HC2]

Fl. Amer. Sept. 1: 140 [1813].  
varileaf phacelia

*Phacelia heterophylla* Pursh ssp. *heterophylla* [KZ99]

*Phacelia heterophylla* Pursh var. *typica* Dundas

*Phacelia sericea* (Graham) A. Gray var. *biennis* (A. Nelson) Brand

var. ***virgata*** (Greene) Dorn [HC2]

varileaf phacelia

*Phacelia heterophylla* Pursh ssp. *virgata* (Greene) Heckard [JPM]

The Oregon State University Herbarium has several collections of this taxon from just south of the WA border, especially from northeast OR. It is possible that this taxon is present in southeast WA.

***Phacelia humilis*** Torr. & A. Gray [HC, HC2]

low phacelia

var. ***humilis*** [HC2, JPM]

Pacif. Railr. Rep. 2: 122.  
low phacelia

***Phacelia lenta*** Piper [HC2]

Bulletin of the Torrey Botanical Club 28(1): 44.  
sticky scorpion-weed

Not in H&C; WA endemic.

\* Rhodora 62(740): 205-222.

***Phacelia linearis*** (Pursh) Holz. [HC, HC2]

Contributions from the United States National Herbarium 3(4): 242.  
thread-leaf scorpion-weed

***Phacelia minutissima*** L.F. Hend. [HC, HC2]

Bull. Torrey Bot. Club 27(6): 351.  
least phacelia, dwarf scorpion-weed

***Phacelia mutabilis*** Greene [HC2, JPM2]

Erythea 4(3): 55-56.  
changeable scorpion-weed

*Phacelia californica* Cham. var. *jacintensis* Dundas

*Phacelia heterophylla* Pursh var. *griseophylla* (Brand) J.F. Macbr.

*Phacelia heterophylla* Pursh var. *pseudohispida* (Brand) Cronquist [HC]

***Phacelia nemoralis*** Greene [HC, HC2]

shade phacelia, woodland phacelia

var. ***oregonensis*** (Heckard) Walden & R. Patt. [HC2]

woodland phacelia

*Phacelia nemoralis* Greene ssp. *oregonensis* Heckard [HC]

***Phacelia procera*** A. Gray [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 10: 323.  
tall scorpion-weed

***Phacelia ramosissima*** Douglas ex Lehm. [HC, HC2]

branched phacelia

var. ***ramosissima*** [HC2, JPM]

Nov. Stirp. Pug. 2: 21.  
branched phacelia

***Phacelia sericea*** (Graham) A. Gray [HC, HC2]

silky phacelia

var. ***sericea*** [HC, HC2]

Fl. N. Amer. 1(2): 343.  
silky phacelia

*Phacelia sericea* (Graham) A. Gray ssp. *sericea* [KZ99]

*Phacelia sericea* (Graham) A. Gray var. *caespitosa* Brand

***Phacelia tetramera*** J.T. Howell [HC, HC2]

Leaflets of Western Botany 4(1): 16.  
dwarf phacelia, four-part yellow scorpion-weed

H&C is incorrect by stating that this species does not occur in WA.

***Romanzoffia*** [HC, HC2]

mistmaiden, romanzoffia

***Romanzoffia sitchensis*** Bong. [HC, HC2]

Mém. Acad. Imp. Sci. St.-Petersbourg, Sér. 6, Sci. Math. 2(2): 158-159, pl. 4.  
Sitka mistmaiden

*Romanzoffia sitchensis* Bong. f. *suksdorfii* (Greene) Brand

***Romanzoffia tracyi*** Jeps. [HC, HC2]

A Flora of California 3: 296.  
Tracy's mistmaiden

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## Hypericaceae [HC, HC2] St. John's Wort Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

***Hypericum*** [HC, HC2]

St. John's-wort

***Hypericum anagalloides*** Cham. & Schltdl. [HC, HC2]

Linnaea 3(2): 127.  
bog John's-wort, creeping St. John's-wort, tinker's penny

***Hypericum androsaemum*** L. [HC2, IFBC]

Sp. Pl. 2: 784.  
tutsan

recently collected in King Co., not in H&C

***Hypericum boreale*** (Britton) E.P. Bicknell [HC2, IFBC]

Bull. Torrey Bot. Club 22(5): 213.  
northern St. John's-wort  
recently collected in Pacific Co., not in H&C

*Hypericum calycinum* L. [HC2]  
Mantissa Plantarum 1: 106.  
rose-of-sharon

*Hypericum canadense* L. [GC, HC2]  
Sp. Pl. 2: 785.  
Canadian St. John's-wort  
Recently collected in Pacific Co., not in H&C

*Hypericum ellipticum* Hook. [GC, HC2]  
Fl. Bor.-Amer. 1(3): 110-111.  
pale St. John's-wort  
recently collected in Pacific Co., not in H&C

*Hypericum maculatum* Crantz [HC2]  
spotted St. John's-wort, streaked St. John's-wort  
*ssp. obtusiusculum* (Tourlet) Hayek [HC2, IFBC]  
Sched. Fl. Stiriac. 23-24: 27.  
dotted John's-wort, imperforate St. John's-wort  
Recently collected in King Co., not in H&C

*Hypericum majus* (A. Gray) Britton [HC, HC2]  
Memoirs of the Torrey Botanical Club 5(15): 225.  
greater Canadian St. John's-wort  
*Hypericum canadense* L. var. *majus* A. Gray  
Inland populations are native, coastal populations associated with cranberry agriculture are introduced.

*Hypericum mutilum* L. [HC2, IFBC]  
Sp. Pl. 2: 787.  
dwarf St. John's-wort  
Recently collected in Skagit Co.

*Hypericum perforatum* L. [HC, HC2, IFBC]  
Sp. Pl. 2: 785.  
common St. John's-wort, Klamath weed  
*ssp. perforatum* [HC2]

*Hypericum scouleri* Hook. [HC2]  
Norton's St. John's-wort, Scouler's St. John's-wort, western John's-wort  
*Hypericum formosum* Kunth var. *nortoniae* (M.E. Jones) C.L. Hitchc. [VPPNW, HC]  
*Hypericum formosum* Kunth var. *scouleri* (Hook.) J.M. Coult. [VPPNW, HC]  
*Hypericum scouleri* Hook. *ssp. nortoniae* (M.E. Jones) J.M. Gillett [IFBC]  
*Hypericum scouleri* Hook. *ssp. scouleri* [IFBC]

*Hypericum tetrapterum* Fr. [HC2]  
Novitiae Florae Suecicae 236.  
square-stalked St. John's Wort

***Triadenum*** [HC2]  
marsh

*Triadenum fraseri* (Spach) Gleason [HC2, IFBC]  
Phytologia 2(8): 289. (incorrectly citing "Hypericum fraseri" as the basionym ).  
marsh St. John's-wort  
Recently collected in Pacific Co.

## Juglandaceae [FNA3, HC2] Walnut Family

**Synonyms:** (none)

**References:** (none)

### *Juglans* [FNA3, HC2]

Sp. Pl. 2: 997. 1753; Gen. Pl. ed. 5, 431, 1754.  
walnut

#### *Juglans ailantifolia* Carrière [HC2]

Japanese walnut

Naturalized populations documented in Skamania and Skagit counties. Also frequently naturalized in the lower Fraser River valley of southwest British Columbia. Easily confused with *Juglans cinerea*.

#### *Juglans hindsii* Jeps. ex R.E. Sm. [FNA3, HC2]

Univ. Calif. Agric. Exp. Sta. Bull. 203: 27. 1909.  
northern California walnut

Plants from one site in Yakima County that appear to be associated with homestead. Report of plants spreading from original planting. Also documented spreading downstream from an old homestead and naturalizing along Rock Creek in Klickitat County.

#### *Juglans nigra* L. [FNA3, HC2]

Sp. Pl. 2: 997. 1753.  
black walnut

#### *Juglans regia* L. [HC2, JPM2]

Sp. Pl. 2: 997.  
English walnut

Reported as naturalized in WA by AJ and Naas, Naas, and Burnett.

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## Labiatae (see Lamiaceae)

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## Lamiaceae [HC2] Mint Family

**Synonyms:**

Labiatae [HC]

**References:** (none)

### *Agastache* [HC, HC2]

agastache, giant-hyssop, horse-mint

#### *Agastache foeniculum* (Pursh) Kuntze [IFBC]

Revis. Gen. Pl. 2: 511.  
blue giant-hyssop

*Agastache anethiodora* (Nutt.) Britton

Not in H&C; WA record based on Gray's Manual 1950.

#### *Agastache occidentalis* (Piper) A. Heller [HC, HC2]

Muhlenbergia; a journal of botany 1(1): 4.  
western giant-hyssop

#### *Agastache urticifolia* (Benth.) Kuntze [HC, HC2]

nettle-leaf giant-hyssop

var. *urticifolia* [HC2]

Revis. Gen. Pl. 2: 511.

nettle-leaf giant-hyssop

**Ajuga** [HC, HC2]

bugle

*Ajuga reptans* L. [HC, HC2]

Sp. Pl. 2: 561.

carpet bugle

**Ballota** [HC2]

*Ballota nigra* L. [HC2]

ssp. *foetida* (Vis.) Hayek [HC2, Stace 1997]

Prodromus Florae Peninsulae Balcanicae 2.

black horehound

recently collected in King Co. (Jacobson et al. 2001)

\* Jacobson, A. L., F. C. Weinmann, and P. F. Zika. 2001. Noteworthy collections. Washington. Madroño 48: 213-214.

**Clinopodium** [HC2]

clinopodium

*Clinopodium douglasii* (Benth.) Kuntze [HC2, IFBC]

Revisio Generum Plantarum 2: 515.

Oregon-tea

*Micromeria chamissonis* (Benth.) Greene

*Satureja chamissonis* (Benth.) Briq.

*Satureja douglasii* (Benth.) Briq. [HC]

*Clinopodium vulgare* L. [HC2, IFBC]

Sp. Pl. 2: 587-588.

wild basil

*Satureja vulgaris* (L.) Fritsch

Not in H&C.

**Dracocephalum** [HC, HC2]

dragonhead

*Dracocephalum parviflorum* Nutt. [HC, HC2]

Gen. N. Amer. Pl. 2: 35.

American dragonhead

**Galeopsis** [HC, HC2]

hemp nettle

*Galeopsis bifida* Boenn. [HC2, Stace 1997]

Prodr. Fl. Monast. Westphal. 178.

bifid hemp nettle

Recently (2011) collected in Kittitas County.

*Galeopsis tetrahit* L. [HC, HC2]

Sp. Pl. 2: 579-580

common hemp nettle

var. *tetrahit* [HC2]

**Glechoma** [HC2]

ground ivy

*Glecoma* [HC], orthographic variant

*Glechoma hederacea* L. [HC2]

Sp. Pl. 2: 578.

field balm, creeping Charlie, gill over the ground, groundivy

*Glecoma hederacea* L. [HC], orthographic variant

Note that H&C use the spelling "Glecoma", which is invalid.

**Hyssopus** [HC2]

hyssop

*Hyssopus officinalis* L. [HC2]

**Lallemantia** [HC2]

lallemantia

*Lallemantia peltata* (L.) Fisch. & C.A. Mey. [HC2]

lion's heart

*Dracocephalum peltatum* L.

Recently collected (2015) in Asotin County.

**Lamiastrum** [HC2]

yellow archangel

*Lamiastrum galeobdolon* (L.) Ehrend. & Polatschek [HC2, Stace 1997]

Oesterr. Bot. Z. 113: 108.

yellow archangel

*Lamium galeobdolon* (L.) L.

Not in H&C; naturalized in Seattle area.

*ssp. argentatum* (Smejkal) Stace [HC2]

**Lamium** [HC, HC2]

dead-nettle, henbit

*Lamium album* L. [HC2]

*Lamium amplexicaule* L. [HC, HC2]

Sp. Pl. 2: 579.

common dead-nettle, giraffehead

*Lamium hybridum* Vill. [HC2, Stace 1997]

Hist. Pl. Dauphiné 1: 251.

cutleaf dead-nettle

Not in H&C.

*Lamium maculatum* L. [HC, HC2]

Sp. Pl. (ed. 2) 2: 809.

spotted hen-nettle, spotted henbit

*Lamium purpureum* L. [HC, HC2]

Sp. Pl. 2: 579.

red dead-nettle, henbit

*Lamium purpureum* L. var. *purpureum*

**Lavandula** [HC2]

*Lavandula xintermedia* Emeric ex Loisel. [HC2]

*Lavandula stoechas* L. [HC2]

**Leonurus** [HC, HC2]

motherwort

*Leonurus cardiaca* L. [HC, HC2, Stace 1997]

Sp. Pl. 2: 584.

motherwort, Lion's tail

*Leonurus cardiaca* L. ssp. *cardiaca* [Stace 1997]

**Lycopus** [HC, HC2]

bugleweed, water-horehound

*Lycopus americanus* Muhl. ex W.P.C. Bartr. [HC, HC2]

Fl. Philadelph. Prodr. 15.

cut-leaf water-horehound

(see also *Lycopus europaeus*)

*Lycopus asper* Greene [HC, HC2]

Pittonia 3(19C): 339.

rough water-horehound

*Lycopus europaeus* L. [HC2]

European water-horehound

Well established in the Puget Trough, where first collected in Seattle in 1935. Also known from northeast Washington (Stevens County), southwest and south-central British Columbia, the lower Columbia River of Oregon, and eastern North America. Previously confused with *Lycopus americanus*; *L. europaeus* has longer calyces (2.7-4 mm) with longer teeth (1.6-2.5 mm), and more conspicuously pubescent lower leaf surfaces especially along the veins.

*Lycopus uniflorus* Michx. [HC, HC2]

Fl. Bor.-Amer. 1: 14.

northern bugleweed

*Lycopus uniflorus* Michx. var. *uniflorus*

*Lycopus virginicus* L. var. *pauciflorus* Benth.

**Marrubium** [HC, HC2]

horehound

*Marrubium vulgare* L. [HC, HC2]

Sp. Pl. 2: 583.

white horehound

**Melissa** [HC, HC2]

balm

*Melissa officinalis* L. [HC, HC2]

Sp. Pl. 2: 592.

lemonbalm

**Mentha** [HC, HC2]

mint

*Mentha aquatica* L. [HC2, IFBC]

Sp. Pl. 2: 576.

bergamot mint, water mint

*Mentha canadensis* L. [HC2]

*Mentha arvensis* L. [HC], misapplied

*Mentha arvensis* L. var. *canadensis* (L.) Kuntze

*Mentha arvensis* L. var. *glabrata* (Benth.) Fernald [HC]

*Mentha ×piperita* L. [HC, HC2]

Sp. Pl. 2: 576-577.

peppermint

*Mentha aquatica* L. var. *crispa* (L.) Benth.

*Mentha crispa* L.

*Mentha ×piperata* L.

Not in HC

*Mentha pulegium* L. [HC, HC2]

Species Plantarum 2: 577.

pennyroyal

*Mentha spicata* L. [HC, HC2]

Sp. Pl. 2: 576.

spearmint

*Mentha suaveolens* Ehrh. [HC2, IFBC]

Beitr. Naturk. 7: 249-150.

apple mint

*Mentha ×rotundifolia* (L.) Huds. [HC, HC2], misapplied

*Mentha ×villosa* Huds. [HC2, IFBC]

Fl. Angl. ed. 2: 250.

foxtail mint

*Mentha alopecuroides* Hull [HC]

*Mentha ×villosa* Huds. var. *alopecuroides* (Hull) Briq.

**Monarda** [HC, HC2]

monarda

*Monarda didyma* L. [Gray's Manual, HC, HC2]

Sp. Pl. 1: 22.

scarlet beebalm, Oswego tea

Sparingly escaped in WA - one record at WTU dating back to 1949. Does not appear to be an established part of the flora, so is currently considered to be excluded.

*Monarda fistulosa* L. [HC, HC2]

wild bergamot

var. *mentifolia* (Graham) Fernald [HC, HC2]

**Monardella** [HC, HC2]

monardella

*Monardella odoratissima* Benth. [HC, HC2]

mountain monardella

ssp. *discolor* (Greene) Epling [HC2, KZ99]

mountain monardella

*Madronella nervosa* (Greene) Greene

*Monardella discolor* Greene

*Monardella nervosa* Greene

*Monardella odoratissima* Benth. var. *discolor* (Greene) H. St. John [HC]

ssp. *odoratissima* [HC2, KZ99]

mountain monardella

*Monardella odoratissima* Benth. var. *odoratissima* [HC]

**Nepeta** [HC, HC2]

*Nepeta cataria* L. [HC, HC2]

Sp. Pl. 2: 570.  
catnip

**Origanum** [HC, HC2]

wild marjoram

*Origanum vulgare* L. [HC, HC2]

Sp. Pl. 2: 590.  
wild marjoram

**Perilla** [HC2]

*Perilla frutescens* (L.) Britton [HC2]

var. *frutescens* [HC2]

**Perovskia** [HC2]

*Perovskia atriplicifolia* Benth. [HC2]

**Physostegia** [HC, HC2]

physostegia

*Physostegia parviflora* Nutt. ex A. Gray [HC, HC2]

Syn. Fl. N. Amer. 2(1): 383.  
purple dragonhead, western false dragonhead

**Prunella** [HC, HC2]

all-heal, self-heal

*Prunella vulgaris* L. [HC, HC2]

var. *lanceolata* (W.P.C. Barton) Fernald [HC, HC2]

Rhodora 15(178): 183.  
heal-all, self-heal

*Prunella vulgaris* L. ssp. *lanceolata* (W.P.C. Barton) Hultén [KZ99], invalid name

var. *vulgaris* [HC, HC2]

Sp. Pl. 2: 600.  
heal-all, self-heal

*Prunella vulgaris* L. ssp. *vulgaris* [KZ99]

**Salvia** [HC, HC2]

sage

*Salvia aethiopsis* L. [HC, HC2]

Sp. Pl. 1: 27.  
African sage  
Noxious

*Salvia dorrii* (Kellogg) Abrams [HC, HC2]

gray ball sage

var. *incana* (Benth.) Strachan [HC2, JPM]

Brittonia 35(2): 170.  
fleshy sage, gray-ball sage

*Salvia carnosa* Douglas ex Greene

*Salvia dorrii* (Kellogg) Abrams ssp. *carnosa* (Douglas ex Greene) Abrams

*Salvia dorrii* (Kellogg) Abrams var. *carnosa* (Douglas ex Greene) Cronquist [HC]

*Salvia glutinosa* L. [KZ99]

Sp. Pl. 26.  
sticky sage

PLANTS database shows WA as the only place this species occurs in North America. Occurrence is based on a reference in the 5-volume Vascular Plants of the Pacific Northwest. In the absence of specimens to confirm this occurrence, and no other reports of this species occurring in WA, *S. glutinosa* is considered excluded in WA.

*Salvia nemorosa* L. [HC2]

Balkan clary

Known from one recent (2013) collection in King County, where a lawn weed, and likely also from Stevens County (Noxious Weed Control Board reports). More common in south-central British Columbia and western Montana.

*Salvia officinalis* L. [HC, HC2]

Sp. Pl. 1: 23.

kitchen sage

Considered excluded until specimens are located confirming its presence in WA.

*Salvia pratensis* L. [HC, HC2]

meadow clary, prairie-meadow sage

Noxious weed. Over-reported from our area; most collections are misidentifications of other species, especially *Salvia nemorosa*.

*Salvia sclarea* L. [HC, HC2]

Sp. Pl. 1: 27.

cleareye

Considered noxious in WA.

*Salvia virgata* Jacq. [HC2]

wand sage

Known from an old Suksdorf collection (1920) from the edge of an alfalfa field in Klickitat County. Also locally established in Idaho County, Idaho.

*Scutellaria* [HC, HC2]

skullcap

*Scutellaria angustifolia* Pursh [HC, HC2]

ssp. *angustifolia* [HC2, IFBC]

Fl. Amer. Sept. 2: 412 [1813].

narrow-leaved skullcap

*Scutellaria veronicifolia* Rydb.

ssp. *micrantha* Olmstead [HC2, IFBC]

Contr. Univ. Michigan Herb. 17: 240.

small-flowering narrow-leaved skullcap

*Scutellaria antirrhinoides* Benth. [HC, HC2]

snapdragon skullcap

WS had five specimens under this name that were incorrectly identified (four specimens were *S. angustifolia* ssp. *angustifolia* and one was *S. galericulata*). Specimens annotated by R. Olmstead and D. Giblin 12/2007. Probably not in Wa.; KZ refers to VP4 for Wa. record but it is in error; HC does not report for Wa.

*Scutellaria galericulata* L. [HC, HC2]

Sp. Pl. 2: 599.

hooded skullcap, marsh skullcapp

*Scutellaria lateriflora* L. [HC, HC2]

Sp. Pl. 2: 598-599.

madweed, mad-dog skullcap

*Scutellaria lateriflora* L. var. *lateriflora*

**Stachys** [HC, HC2]

betony, hedge-nettle, woundwort

**Stachys arvensis** (L.) L. [HC2, IFBC]

Sp. Pl. (ed. 2) 2: 814.

field hedge-nettle, staggerweed

**Stachys byzantina** K. Koch [HC2]

**Stachys cooleyae** A. Heller [HC, HC2]

Bull. Torrey Bot. Club 26(1): 590-591.

Cooley's hedge-nettle

*Stachys chamissonis* Benth. var. *cooleyae* (A. Heller) G.A. Mulligan & D.B. Munro [KZ99]

**Stachys mexicana** Benth. [HC, HC2]

Labiata. Gen. Spec. 541.

Mexican hedge-nettle

**Stachys pilosa** Nutt. [HC2]

marsh betony, swamp hedge-nettle

var. **pilosa** [HC2]

marsh betony, swamp hedge-nettle

*Stachys palustris* L. [HC], misapplied

*Stachys palustris* L. var. *homotricha* Fernald

*Stachys palustris* L. var. *pilosa* (Nutt.) Fernald [HC]

**Stachys rigida** Nutt. ex Benth. [HC, HC2]

rigid hedge-nettle

*Stachys rigida* Nutt. ex Benth. var. *rigida*

**Teucrium** [HC, HC2]

germander, wood sage

**Teucrium canadense** L. [HC, HC2]

western germander

var. **occidentale** (A. Gray) E.M. McClint. & Epling [HC, HC2]

Brittonia 5(5): 499.

Germander

*Teucrium boreale* E.P. Bicknell

*Teucrium canadense* L. ssp. *occidentale* (A. Gray) W.A. Weber

*Teucrium canadense* L. ssp. *viscidum* (Piper) Roy L. Taylor & MacBryde

*Teucrium canadense* L. var. *boreale* (E.P. Bicknell) Shinnars

*Teucrium occidentale* A. Gray

**Thymus** [HC, HC2]

thyme

**Thymus praecox** Opiz

**Thymus pulegioides** L. [HC2, KZ99]

Sp. Pl. 2: 592.

lemon thyme

*Thymus serpyllum* L. ssp. *chamaedrys* (Fr.) ?elak.

*Thymus serpyllum* L. var. *albus* hort.

Not in H&C. No records indicating that it is established in the flora - most likely a waif near cultivated, urban settings. Will be considered excluded until records suggest otherwise.

**Thymus serpyllum** L. [HC, HC2]

**Trichostema** [HC, HC2]

blue-curls, trichostema

***Trichostema lanceolatum*** Benth. [HC, HC2]

Labiata. Gen. Spec. 659.  
vinegar weed

Possibly extirpated from WA.

***Trichostema oblongum*** Benth. [HC, HC2]

Labiata. Gen. Spec. 659.  
mountain bluecurls

***Ziziphora*** [HC2]

*Acinos*

***Ziziphora acinos*** (L.) Melnikov [HC2]

basil-thyme

*Acinos arvensis* (Lam.) Dandy [IFBC]

*Satureja acinos* (L.) Scheele [HC]

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## Lauraceae [FNA3, HC2] Laurel Family

**Synonyms:** (none)

**References:** (none)

***Umbellularia*** [FNA3, HC2]

N. Amer. Sylv. 1: 87. 1842.  
California bay, California laurel

***Umbellularia californica*** (Hook. & Arn.) Nutt. [FNA3, HC2]

N. Amer. Sylv. 1: 87. 1842.  
California bay

Escaping cultivation in Pierce County.

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## Leguminosae (see Fabaceae)

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## Leitneriaceae (see Simaroubaceae)

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## Lentibulariaceae [HC, HC2] Bladderwort Family

**Synonyms:** (none)

**References:** (none)

***Pinguicula*** [HC, HC2]

butterwort

***Pinguicula vulgaris*** L. [HC, HC2]

Sp. Pl. 1: 17.  
common butterwort

ssp. **macroceras** (Link) Calder & Roy L. Taylor [HC2, JPM]  
common butterwort

*Pinguicula macroceras* Link var. *macroceras* [KZ99]  
*Pinguicula vulgaris* L. var. *macroceras* (Link) Herder

**Utricularia** [HC, HC2]  
bladderwort

**Utricularia gibba** L. [HC, HC2]

Sp. Pl. 1: 18.  
humped bladderwort, swollen-spurred bladderwort

*Utricularia fibrosa* Walter [Abrams]

Treated as "probably alien" in CA (JPM) but considered native in BC (BCIL3) and OR.

**Utricularia inflata** Walter [HC2]

Fl. Carol. 64.  
swollen bladderwort

**Utricularia intermedia** Hayne [HC, HC2]

J. Bot. (Schrader) 1(1): 18.  
flat-leaved bladderwort, mountain bladderwort

**Utricularia minor** L. [HC, HC2]

Sp. Pl. 1: 18.  
lesser bladderwort

**Utricularia ochroleuca** R.W. Hartm. [HC2, IFBC]

Bot. Not. 1857: 30.  
dwarf bladderwort

*Utricularia occidentalis* A. Gray [Abrams]

the taxonomy is disputed; we follow Crow & Hellquist (2000) and treat this as a hybrid

\* Ceska, A. and M. A. Bell. 1973. *Utricularia* (Lentibulariaceae) in the Pacific Northwest. *Madroño* 22: 74-84.

**Utricularia vulgaris** L. [HC, HC2, JPM]

common bladderwort, greater bladderwort

ssp. **macrorhiza** (Leconte) R.T. Clausen [Crow & Hellquist 2000, HC2]

Cornell Univ. Agric. Exp. Sta. Mem. 291: 9.  
bladderwort, common bladderwort, greater bladderwort

*Utricularia macrorhiza* Leconte [JPM2]

*Utricularia vulgaris* L. var. *americana* A. Gray

The taxonomy is disputed, minor differences in spur shape separate European plants (ssp. *vulgaris*) from North American plants (ssp. *macrorhiza*), see JPM, Crow & Hellquist (2000) and Taylor (1989) for opposing points of view.

\* Taylor, P. 1994. The genus *Utricularia* - a taxonomic monograph. *Kew Bulletin Additional Series* 14. Royal Botanic Gardens, Kew.

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## Limnanthaceae [FNA7, HC, HC2] Meadowfoam Family

**Synonyms:** (none)

**References:** (none)

**Floerkea** [FNA7, HC, HC2]

Ges. Naturf. Freunde Berlin Neue Schriften. 3: 448. 1801.

false-mermaid

**Floerkea proserpinacoides** Willd. [FNA7, HC, HC2]

Ges. Naturf. Freunde Berlin Neue Schriften. 3: 449. 1801.

false mermaidweed

*Floerkea occidentalis* Rydb.

FNA7: " A flower of *F. proserpinacoides* is the logo for the Flora of North America project."

**Limnanthes** [FNA7, HC, HC2]

London Edinburgh Philos. Mag. & J. Sci. 3: 71. 1833.

[name conserved]

meadow-foam

**Limnanthes alba** Hartw. ex Benth. [FNA7, HC2]

Pl. Hartw. 301. 1849.

white meadowfoam

Recently (2017) collected in Cowlitz County.

ssp. *alba*

**Limnanthes douglasii** R. Br. [FNA7, HC, HC2]

London Edinburgh Philos. Mag. & J. Sci. 3: 71. 1833. (as douglassii).

Douglas's meadow-foam

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## Linaceae [HC, HC2] Flax Family

**Synonyms:** (none)

**References:** (none)

**Linum** [HC, HC2]

flax

(see also *Sclerolimon*)

**Linum lewisii** Pursh [HC2]

wild blue flax

*Adenolinum lewisii* (Pursh) Á. Löve & D. Löve

var. **lewisii** [HC2, JPM]

Fl. Amer. Sept. 1: 210 [1813].

wild blue flax

*Linum perenne* L. ssp. *lewisii* (Pursh) Hultén

*Linum perenne* L. var. *lewisii* (Pursh) Eaton & J. Wright [HC]

**Linum perenne** L. [HC, HC2]

blue garden flax

(see also *Linum lewisii*)

*Linum perenne* L. var. *perenne* [HC]

**Linum rigidum** Pursh [HC, HC2]

yellow flax, large-flowered yellow flax

**Linum usitatissimum** L. [HC, HC2]

Sp. Pl. 1: 277.

linseed

*Linum humile* Mill.

**Sclerolinon** [HC2]

hard flax

**Sclerolinon digynum** (A. Gray) C.M. Rogers [HC2, JPM2]

Madroño 18(6): 182.

northwestern yellow-flax

*Linum digynum* A. Gray [HC]

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## Linderniaceae [HC2] False Pimpernel Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

**Lindernia** [HC, HC2]

false-pimpernel, lindernia

**Lindernia dubia** (L.) Pennell [HC, HC2, JPM2]

false pimpernel

*Lindernia anagallidea* (Michx.) Pennell [HC]

*Lindernia dubia* (L.) Pennell var. *anagallidea* (Michx.) Cooperr. [JPM]

*Lindernia dubia* (L.) Pennell var. *dubia* [JPM]

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## Linnaeaceae [HC2] Twin Flower Family

**Synonyms:** (none)

**References:** (none)

**Linnaea** [HC, HC2]

twinflower

**Linnaea borealis** L. [HC, HC2]

ssp. **longiflora** (Torr.) Hultén [HC2, KZ99, VPBC1]

American twinflower, longtube twinflower

*Linnaea americana* Forbes

*Linnaea borealis* L. ssp. *americana* (Forbes) Hultén ex R.T. Clausen [KZ99]

*Linnaea borealis* L. var. *americana* (Forbes) Rehder

*Linnaea borealis* L. var. *longiflora* Torr. [HC, JPM2]

Some authorities (H&C and PBC1) consider *L. borealis* ssp. *longiflora* and *L. borealis* ssp. *borealis* as the only distinct subspecies of twinflower in America, with *L. borealis* ssp. *americana* synonymous with *L. borealis* ssp. *longiflora*

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## Loasaceae [HC, HC2] Blazingstar Family

**Synonyms:** (none)

**References:** (none)

***Mentzelia*** [HC, HC2]

blazing-star, mentzelia

***Mentzelia albicaulis*** (Douglas ex Hook.) Douglas ex Torr. & A. Gray [HC, HC2]

Fl. N. Amer. 1(3): 534.

white-stem blazingstar

***Mentzelia dispersa*** S. Watson [HC, HC2]

Proc. Amer. Acad. Arts 11: 115, 137.

bushy blazing star

*Mentzelia dispersa* S. Watson var. *compacta* (A. Nelson) J.F. Macbr. [KZ99]

*Mentzelia dispersa* S. Watson var. *dispersa* [KZ99]

*Mentzelia dispersa* S. Watson var. *latifolia* (Rydb.) J.F. Macbr. [KZ99]

***Mentzelia laevicaulis*** (Douglas) Torr. & A. Gray [HC, HC2]

giant blazing-star

*Nuttallia laevicaulis* (Douglas) Greene

var. ***laevicaulis*** [HC, HC2]

Fl. N. Amer. 1(3): 535.

blazing star mentzelia, common blazing star

*Mentzelia laevicaulis* (Douglas) Torr. & A. Gray var. *acuminata* (Rydb.) A. Nelson & J.F. Macbr.

var. ***parviflora*** (Douglas ex Hook.) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 455.

blazing star mentzelia, common blazing star

*Mentzelia brandegeei* S. Watson

*Mentzelia douglasii* H. St. John

***Mentzelia montana*** (Davidson) Davidson [HC2]

mountain blazing-star

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## Lythraceae [HC, HC2] Loosestrife Family

**Synonyms:** (none)

**References:** (none)

***Ammannia*** [HC, HC2]

ammannia, redstem, tooth-cup

***Ammannia coccinea*** Rottb. [Draft FNA, HC, HC2]

Pl. Horti Univ. Rar. Progr. (Hafn.), 7.

valley redstem

Recently (2014) collected in King County at a restoration site where a large population is established.

***Ammannia robusta*** Heer & Regel [HC2, IFBC]

Index Seminum [Zuerich] adn. 1.

western ammania, grand redstem

*Ammannia coccinea* Rottb. ssp. *robusta* (Heer & Regel) Koehne

***Lythrum*** [HC, HC2]

loosestrife

***Lythrum hyssopifolia*** L. [HC, HC2]

Sp. Pl. 1: 447.  
hyssop loosestrife

*Lythrum portula* (L.) D.A. Webb [HC2, JPM]

Feddes Repertorium 74(1-2): 13.  
spatula-leaf loosestrife

*Peplis portula* L.

Not in H&C but is common in wetlands.

*Lythrum salicaria* L. [HC, HC2]

Sp. Pl. 1: 446.  
purple loosestrife, long purples

***Rotala*** [HC, HC2]

rotala, toothcup

***Rotala ramosior*** (L.) Koehne [HC, HC2]

Fl. Bras. 13(2): 194.  
lowland toothcup

*Rotala catholica* (Cham. & Schltld.) van Leeuwen

*Rotala dentifera* (A. Gray) Koehne

*Rotala ramosior* (L.) Koehne var. *interior* Fernald & Griscom

*Rotala ramosior* (L.) Koehne var. *typica* Fernald & Griscom

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## Malvaceae [HC, HC2] Mallow Family

**Synonyms:** (none)

**References:** (none)

***Abutilon*** [HC2]

Indian mallow

*Abutilon theophrasti* Medik. [HC2, JPM]

Malvenfam. 28.  
velvetleaf

Not in H&C; KZ lists as noxious; need to check on occurrence in WA.

***Alcea*** [HC2]

hollyhock

*Alcea rosea* L. [HC2, JPM2]

Sp. Pl. 2: 687.  
hollyhock

*Althaea rosea* (L.) Cav.

Not in H&C; KZ record based on personal communication with Richard Old; AJ says it reseeds from garden sources in Seattle area.

***Gossypium*** [HC2]

*Gossypium hirsutum* L. [HC2]

cotton

***Hibiscus*** [HC, HC2]

rosemallow

*Hibiscus moscheutos* L. [HC2, JPM]

Sp. Pl. 2: 693.  
crimson-eyed rosemallow

*Hibiscus trionum* L. [HC, HC2]

Sp. Pl. 2: 697.  
flower-of-an-hour

*Trionum trionum* (L.) Wooton & Standl.

H&C does not list from WA; WA record by KZ is from Richard Old personal communication. This species is considered excluded until specimens are located that indicate that it is established in the flora here in Washington.

***Iliamna*** [HC, HC2]

globemallow

***Iliamna longisepala*** (Torr.) Wiggins [HC, HC2]

Leaf. Bot. Observ. Crit. 1(15): 206.  
long-sepal globemallow

Rare in Washington.

***Iliamna rivularis*** (Douglas) Greene [HC, HC2]

streambank globemallow

*Iliamna rivularis* (Douglas) Greene var. *diversa* (A. Nelson) Wiggins [HC]

*Iliamna rivularis* (Douglas) Greene var. *rivularis* [HC]

*Sphaeralcea rivularis* (Douglas) Torr.

***Malva*** [HC, HC2]

cheeses, cheeseweed, mallow

***Malva moschata*** L. [HC, HC2]

Sp. Pl. 2: 690.  
musk mallow

***Malva neglecta*** Wallr. [HC, HC2]

Sylloge Plantarum Novarum 1: 140-142.  
dwarf mallow

*Malva rotundifolia* L., misapplied

***Malva parviflora*** L. [HC, HC2]

Demonstr. Pl. 18.  
cheeseweed, alkali mallow, small-whorl mallow

AJ lists as waif; need to check whether it is naturalized in WA.

***Malva pusilla*** Sm. [HC2]

low mallow

***Malva sylvestris*** L. [HC, HC2]

Sp. Pl. 2: 689.  
common mallow, high mallow

***Malva verticillata*** L. [HC2]

***Malvella*** [HC2]

alkali-mallow

***Malvella leprosa*** (Ortega) Krapov. [HC2, JPM]

Bonplandia (Corrientes) 3(5): 59.  
alkali-mallow

*Sida hederacea* (Douglas ex Hook.) Torr. ex A. Gray [HC]

*Sida leprosa* (Ortega) K. Schum. var. *hederacea* (Douglas) K. Schum. ex Clement

***Sidalcea*** [HC, HC2]

checker-mallow, sidalcea

*Sidalcea campestris* Greene [HC, HC2]

Bulletin of the California Academy of Sciences 1(3): 76-77.  
meadow checker-mallow, meadow sidalcea

*Sidalcea asplenifolia* Greene  
*Sidalcea sylvestris* A. Nelson

Native only to the Willamette Valley area (Multnomah and Washington to Benton and Linn counties). WA specimens were collected by Piper in late 1800s near Seattle. These specimens are considered likely introductions. Piper and Beattie's 1915 "Flora of the Northwest Coast contains this note for *S. campestris*: "In moist meadows, Willamette Valley, Oregon. *S. asplenifolia* Greene found at Seattle in hay meadows is apparently the same and perhaps was introduced with grass seed." The lack of specimens for this species from WA over the last 100 years strongly suggests that it is likely not part of the contemporary flora. The draft treatment for this species in the Flora of North America also does not consider it present in WA.

*Sidalcea hendersonii* S. Watson [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 23(2): 262.  
Henderson's checker-mallow

*Sidalcea hirtipes* C.L. Hitchc. [HC, HC2]

Perenn. Sp. Sidalcea 42-44, map 2.  
bristly-stem checker-mallow

Rare in Washington.

*Sidalcea nelsoniana* Piper [HC, HC2]

Proc. Biol. Soc. Wash. 32(12): 41.  
Nelson's checker-mallow

Known from Cowlitz and Lewis counties.

*Sidalcea oregana* (Nutt. ex Torr. & A. Gray) A. Gray [HC, HC2]

Oregon checker-mallow

var. *calva* C.L. Hitchc. [HC, HC2]

Perenn. Sp. Sidalcea 61, map 3.  
Oregon checkermallow

Listed as rare by WNHP.

var. *oregana* [FNA12, HC, HC2]

Memoirs of the American Academy of Arts and Science, new series 4(1): 20.  
Oregon checkermallow

*Sidalcea oregana* (Nutt. ex Torr. & A. Gray) A. Gray ssp. *oregana*

*Sidalcea oregana* (Nutt. ex Torr. & A. Gray) A. Gray var. *maxima* (M. Peck) C.L. Hitchc. [HC]

*Sidalcea oregana* (Nutt. ex Torr. & A. Gray) A. Gray var. *procera* C.L. Hitchc. [HC]

FNA12: "Subspecies *oregana* is variable; it intergrades with subsp. *spicata* and *Sidalcea setosa*. C. L. Hitchcock (1957) accepted five varieties within the typical subspecies; morphological intergrades exist. A case can be made for recognition of var. *calva* C. L. Hitchcock, which has been listed as endangered both federally and in Washington, where it is endemic. These plants are generally robust, sparsely appressed-hairy with four-rayed hairs, the leaves are generally nearly glabrous and fleshy-textured, and the calyx lobes are subglabrous and ciliate. Found in the Wenatchee Mountains, an area of high endemism, var. *calva* does not appear to be much different from other, nearly glabrous populations elsewhere; it appears to be the only variety with a chromosome count of  $2n = 60$ . This treatment does not accept both subspecies and varieties within *Sidalcea*; therefore, it has been placed here into synonymy with the wide-ranging, variable typical subspecies. Subspecies *oregana* can generally be distinguished from the other subspecies by its more-open inflorescences that are elongated in fruit, its multistemmed clumps as much as 30 cm in diameter, its generally stellate-hairy to glabrescent stem bases, its generally uniformly stellate-hairy calyces, its somewhat reticulate-roughened mericarps, and its bracts that are generally equal to or shorter than the young flower buds. Subspecies *oregana* appears to be the source of commonly sold cultivars. It has been

listed as sensitive in Montana and as rare in British Columbia."

***Sidalcea virgata*** Howell [HC, HC2]

Fl. N.W. Amer. 1: 101.  
virgate checkerbloom

*Sidalcea malviflora* (DC.) A. Gray ex Benth. ssp. *virgata* (Howell) C.L. Hitchc. [KZ99]  
*Sidalcea malviflora* (DC.) A. Gray ex Benth. var. *virgata* (Howell) Dimling

Extirpated from Washington according to WNHP. One specimen (Ed Alverson, 1987) at WTU from a population in Thurston County. Otherwise only known from Oregon.

***Sphaeralcea*** [HC, HC2]

globe-mallow

***Sphaeralcea grossulariifolia*** (Hook. & Arn.) Rydb. [HC, HC2]

Bull. Torrey Bot. Club 40(2): 58.  
gooseberry-leaved globemallow

*Sphaeralcea grossulariaefolia* (Hook. & Arn.) Rydb. [HC], orthographic variant  
*Sphaeralcea grossulariifolia* (Hook. & Arn.) Rydb. ssp. *grossulariifolia* [KZ99]  
*Sphaeralcea grossulariifolia* (Hook. & Arn.) Rydb. var. *moorei* S.L. Welsh

***Sphaeralcea munroana*** (Douglas ex Lindl.) Spach [HC, HC2]

Proc. Amer. Acad. Arts 22(2): 292.  
Munro's globemallow, white-stemmed globemallow

*Sphaeralcea munroana* (Douglas ex Lindl.) Spach ssp. *munroana* [JPM]

***Tilia*** [HC2]

small-leaved linden

***Tilia cordata*** Mill. [HC2]

small-leaved linden

***Tilia platyphyllos*** Scop. [HC2]

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## Mazaceae [HC2] Mazus Family

**Synonyms:** (none)

**References:**

\* Kew Bulletin vol. 66: 5?48 (2011).

***Mazus*** [HC, HC2]

mazus

***Mazus pumilus*** (Burm. f.) Steenis [Draft FNA, HC2]

Japanese mazus

var. *pumilus* [HC2]

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## Menyanthaceae [HC, HC2] Buck-Bean Family

**Synonyms:** (none)

**References:** (none)

***Menyanthes*** [HC, HC2]

bogbean, buckbean

***Menyanthes trifoliata* L. [HC, HC2]**

buck-bean

*Menyanthes trifoliata* L. var. *minor* Raf.

***Nephrrophyllidium* [HC, HC2]**

deer-cabbage

*Fauria*, homonym (illegitimate)

***Nephrrophyllidium crista-galli* (Menzies ex Hook.) Gilg [HC, HC2]**

Nat. Pflanzenfam. 4(2): 106.

deer cabbage, deer-cabbage

*Fauria crista-galli* (Menzies ex Hook.) Makino [IFBC]

ssp. ***crista-galli* [HC, HC2]**

***Nymphoides* [HC2]**

floating-heart

***Nymphoides peltata* (S.G. Gmel.) Kuntze [HC2, JPM2]**

Revis. Gen. Pl. 2: 429.

yellow floatingheart

Not in H&C.

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## **Molluginaceae [FNA4, HC2] Carpetweed Family**

**Synonyms:** (none)

**References:**

- \* Boetsch, J. R. 2002. The Aizoaceae and Molluginaceae of the southeastern United States. *Castanea* 67: 42-53.
- \* Bogle, A. L. 1970. The genera of Molluginaceae and Aizoaceae in the southeastern United States. *J. Arnold Arb.* 51: 431-462.
- \* Chase, M. W., et al. 1993. Phylogenetics of seed plants: An analysis of nucleotide sequences from the plastid gene *rbcL*. *Ann. Missouri Bot. Gard.* 80: 528-580.

***Mollugo* [FNA4, HC, HC2]**

Sp. Pl. 1: 89. 1753; Gen. Pl. ed. 5, 39. 1754.

carpetweed

***Mollugo verticillata* L. [FNA4, HC, HC2]**

Sp. Pl. 1: 89. 1753.

carpetweed, green carpetweed

FNA4: "Some authors consider *Mollugo verticillata* a native of the New World tropics that spread northward into subtropical and temperate regions (M. L. Fernald 1950; H. A. Gleason and A. Cronquist 1991). If so, the species apparently spread very rapidly, because herbarium specimens exist from Ohio in 1828, Michigan in 1837, and Maine in 1837. J. Chapman et al. (1974) presented archaeological evidence of pre-Columbian presence of *M. verticillata* at a site in Tennessee. Morphology and anatomy of the species are well studied. T. Holm (1911) investigated anisophyly in *Mollugo verticillata* and stated that the leaves are not "pseudo-verticillate," as described by some earlier authors, but are truly opposite. M. A. Payne (1933, 1935) conducted morphologic and anatomic analyses of the leaf, stem, root, flower, and seed of the species. Pollen morphology was examined by N. Mitroiu (1971). Several subspecific taxa have been described for *Mollugo verticillata*, but these are poorly understood; attempts to subdivide the species in North America for this treatment failed. The species is extremely morphologically variable, especially with regard to leaf shape, overall size, and habit. There seem to be no direct correlations between habitat type and morphology. *Mollugo verticillata* possesses intermediate C3-C4 photosynthetic pathway

characteristics, such as well- defined bundle-sheaths with numerous C4-like chloroplasts, distinct palisade and spongy parenchyma as in C3 plants, and intermediate light to dark ratios of CO<sub>2</sub> evolution, which have made the species of particular interest in studies of the evolution and biochemistry of both photosynthetic pathways (R. A. Kennedy et al. 1980)."

- \* Payne, M. A. 1933. Morphology and anatomy of *Mollugo verticillata* L. Univ. Kansas Sci. Bull. 21: 399-419.
- \* Payne, M. A. 1935. The flower and seed of *Mollugo verticillata*. Univ. Kansas Sci. Bull. 22: 5-25.

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## Monotropaceae (see Ericaceae)

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## Montiaceae [HC2] Miner's Lettuce Family

**Synonyms:** (none)

**References:**

- \* Taxon 59 (1): 227-240. February 2010.

### *Calandrinia* [FNA4, HC, HC2]

Nov. Gen. Sp. 6: 77, plate 526. 1823.  
calandrinia

#### *Calandrinia ciliata* (Ruiz & Pav.) DC. [FNA4, HC, HC2]

Prodr. 3: 359. 1828.  
fringed redmaids, redmaids

*Calandrinia caulescens* Kunth

*Calandrinia ciliata* (Ruiz & Pav.) DC. var. *menziesii* (Hook.) J.F. Macbr. [VPPNW2]

*Calandrinia micrantha* Schldl.

*Talinum ciliatum* Ruiz & Pav.

- \* Hershkovitz, M. A. 1993a. Revised circumscriptions and subgeneric taxonomies of *Calandrinia* and *Montiopsis* with notes on phylogeny of the portulacaceous alliance. Ann. Missouri Bot. Garden 80: 333-365.
- \* Hershkovitz, M. A. 1993b. Leaf morphology of *Calandrinia* and *Montiopsis* (Portulacaceae). Ann. Missouri Bot. Garden 80: 366-396.

### *Calyptridium* [HC, HC2]

calyptridium, pussypaws

#### *Calyptridium roseum* S. Watson [HC, HC2, JPM2]

Botany (Fortieth Parallel), 44, plate 6, figs. 6-8. 1871  
rosy pussypaws

*Cistanthe rosea* (S. Watson) Hershk. [FNA4]

Jepson Manual, 2nd Edition and Oregon Flora Project place this taxon in *Calyptridium*. "Because of my (Peter Zika) own biases I have changed the accepted taxon of this genus to *Calyptridium* instead of the KZ accepted name of *Cistanthe*- more extensive research may support *Cistanthe* as the genus."

#### *Calyptridium umbellatum* (Torr.) Greene [HC2, JPM2]

Bull. Torrey Bot. Club 13: 144.  
pussypaws

*Calyptridium umbellatum* (Torr.) Greene var. *caudiciferum* (A. Gray) Jeps. [VPBC4, JPM]

*Calyptridium umbellatum* (Torr.) Greene var. *umbellatum*

*Cistanthe umbellata* (Torr.) Hershk. [FNA4]

*Cistanthe umbellata* (Torr.) Hershk. var. *caudicifera* (A. Gray) Kartesz & Gandhi [KZ99]

*Cistanthe umbellata* (Torr.) Hershk. var. *umbellata* [KZ99]

*Spraguea umbellata* Torr. [HC]

*Spraguea umbellata* Torr. var. *caudicifera* A. Gray [HC]  
*Spraguea umbellata* Torr. var. *umbellata* [HC]

**Claytonia** [FNA4, HC, HC2]

Sp. Pl. 1: 204. 1753; Gen. Pl. ed. 5, 96. 1754.  
claytonia, miner's lettuce, springbeauty

**Claytonia arenicola** L.F. Hend. [FNA4, HC2]

Bull. Torrey Bot. Club. 22: 49. 1895.  
sand montia, sand springbeauty montia

*Montia arenicola* (L.F. Hend.) Howell [HC]

\* Chambers, K. L. 1993. Claytonia, In: Hickman, J. C., Ed. The Jepson Manual. Higher Plants of California. Univ. of California Press, Berkeley. Pp. 898-900.

**Claytonia cordifolia** S. Watson [FNA4, HC2]

Proc. Amer. Acad. Arts. 17: 365. 1882.  
broadleaf springbeauty, heart-leaf springbeauty

*Claytonia sibirica* L. var. *cordifolia* (S. Watson) R.J. Davis

*Montia cordifolia* (S. Watson) Pax & K. Hoffm. [HC]

\* Miller, J. M. and K. L. Chambers. 1984. Cytogeographic patterns and relationships in the Claytonia sibirica complex (Portulacaceae). Systematic Botany 9: 266-271.

**Claytonia exigua** Douglas ex Torr. & A. Gray [FNA4, HC2]

Fl. N. Amer. 1: 200. 1838.  
pale claytonia

ssp. **exigua** [FNA4, HC2]

Fl. N. Amer. 1: 200.  
Claytonia, pale springbeauty Claytonia

*Montia spathulata* (Douglas) Howell [HC]

\* Chambers, K. L. 1993. Claytonia, In: Hickman, J. C., Ed. The Jepson Manual. Higher Plants of California. Univ. of California Press, Berkeley. Pp. 898-900.

ssp. **glauca** (Nutt. ex Torr. & A. Gray) John M. Mill. & K.L. Chambers [FNA4, HC2]

Novon. 3: 272. 1993.  
pallid Claytonia

*Claytonia parviflora* Hook. var. *glauca* Nutt. ex Torr. & A. Gray

*Montia perfoliata* (Donn ex Willd.) Howell ssp. *glauca* (Nutt. ex Torr. & A. Gray) Ferris

\* Miller, J. M. and K. L. Chambers. 1993. Nomenclatural changes and new taxa in Claytonia (Portulacaceae) in western North America. Novon 3: 268-273.

**Claytonia lanceolata** Pursh [FNA4, HC, HC2]

Fl. Amer. Sept. 1: 175, plate 3. 1814.  
lanceleaf springbeauty  
(see also *Claytonia multiscapa*)

*Claytonia caroliniana* Michx. var. *piersonii* (Munz & I.M. Johnst.) B. Boivin

*Claytonia lanceolata* Pursh ssp. *chrysantha* (Greene) Ferris

*Claytonia lanceolata* Pursh var. *chrysantha* (Greene) C.L. Hitchc. [HC]

*Claytonia lanceolata* Pursh var. *idahoensis* R.J. Davis

*Claytonia lanceolata* Pursh var. *lanceolata* [HC]

*Claytonia lanceolata* Pursh var. *piersonii* Munz & I.M. Johnst.

*Claytonia sessilifolia* (Torr.) Henshaw

Taxonomy follows FNA, with the varieties in H&C split among two species, Claytonia lanceolata s. str. and C. multiscapa. FNA5: "Some differences of opinion exist regarding the relationships of Claytonia lanceolata and C. rosea. The work of D. K. Halleck and D. Wiens (1966) and J. S. Shelly et al. (1998) provides ample justification for their recognition as distinct species."

\* Douglas, G. W. and R. J. Taylor. 1972. The biosystematics, chemotaxonomy, and ecology of Claytonia lanceolata in

- western Washington. *Canad. Journal of Botany* 50: 2177-2187.
- \* Halleck, D. K. and D. Wiens. 1966. Taxonomic status of *Claytonia rosea* and *C. lanceolata* (Portulacaceae). *Ann. Missouri Bot. Gard.* 53: 205-212.
  - \* Shelly, J. S., P. Lesica, P. G. Wolf, P. S. Soltis, and D. E. Soltis. 1998. Systematic studies and conservation status of *Claytonia lanceolata* var. *flava* (Portulacaceae). *Madroño* 45: 64-74.
  - \* Stewart, D. and D. Wiens. 1971. Chromosome races in *Claytonia lanceolata* (Portulacaceae). *American Journal of Botany* 58: 41-47.

***Claytonia megarhiza* (A. Gray) Parry ex S. Watson [FNA4, HC, HC2]**

Smithsonian Misc. Collect. 258: 118. 1878 (as megarrhiza).  
fell-fields Claytonia

*Claytonia arctica* Adams var. *megarhiza* A. Gray  
*Claytonia megarhiza* (A. Gray) Parry ex S. Watson var. *bellidifolia* (Rydb.) C.L. Hitchc. [HC]  
*Claytonia megarhiza* (A. Gray) Parry ex S. Watson var. *megarhiza* [HC]  
*Claytonia megarhiza* (A. Gray) Parry ex S. Watson var. *nivalis* (English) C.L. Hitchc. [HC]

***Claytonia multiscapa* Rydb. [FNA4, HC2]**

Fl. Rocky Mts. 263, 1061. 1917.  
Rydberg's springbeauty

- \* McNeill, J. 1972. New taxa of *Claytonia* section *Claytonia* (Portulacaceae). *Canad. J. Bot.* 50: 1895-1898.
- \* Shelly, J. S., P. Lesica, P. G. Wolf, P. S. Soltis, and D. E. Soltis. 1998. Systematic studies and conservation status of *Claytonia lanceolata* var. *flava* (Portulacaceae). *Madroño* 45: 64-74.

**ssp. *pacifica* (McNeill) John M. Mill. & K.L. Chambers [HC2]**

Syst. Bot. Monogr. 78: 59.  
Pacific lanceleaf springbeauty

*Claytonia lanceolata* Pursh var. *pacifica* McNeill [KZ99]

Plants called *Claytonia lanceolata* var. *pacifica* (McNeill 1972) have been tracked as a rare taxon by the Washington Natural Heritage Program.

- \* Syst. Bot. Monographs 78. 2006.

***Claytonia parviflora* Douglas ex Hook. [FNA4, HC2]**

Fl. Bor.-Amer. 1: 225, plate 73. 1832.  
Indian lettuce

*Claytonia parviflora* Douglas ex Hook. ssp. *grandiflora* John M. Mill. & K.L. Chambers [FNA4]  
*Claytonia parviflora* Douglas ex Hook. ssp. *parviflora* [FNA4]  
*Claytonia parviflora* Douglas ex Hook. ssp. *utahensis* (Rydb.) John M. Mill. & K.L. Chambers [FNA4]  
*Claytonia parviflora* Douglas ex Hook. ssp. *viridis* (Davidson) John M. Mill. & K.L. Chambers [FNA4]  
*Claytonia perfoliata* Donn ex Willd. var. *parviflora* (Douglas ex Hook.) Torr.  
*Montia perfoliata* (Donn ex Willd.) Howell var. *parviflora* (Douglas ex Hook.) Jeps.

- \* Miller, J. M. and K. L. Chambers. 1993. Nomenclatural changes and new taxa in *Claytonia* (Portulacaceae) in western North America. *Novon* 3: 268-273.

***Claytonia perfoliata* Donn ex Willd. [FNA4, HC2, VPBC4]**

Sp. Pl. 2: 1186. 1798.  
intermountain miners lettuce  
(see also *Claytonia parviflora*, *Claytonia rubra*)

*Claytonia perfoliata* Donn ex Willd. ssp. *intermontana* John M. Mill. & K.L. Chambers [FNA4]  
*Claytonia perfoliata* Donn ex Willd. ssp. *mexicana* (Rydb.) John M. Mill. & K.L. Chambers [FNA4]  
*Claytonia perfoliata* Donn ex Willd. ssp. *perfoliata* [FNA4]  
*Montia perfoliata* (Donn ex Willd.) Howell [HC]

- \* Miller, J. M. and K. L. Chambers. 1993. Nomenclatural changes and new taxa in *Claytonia* (Portulacaceae) in western North America. *Novon* 3: 268-273.

***Claytonia rubra* (Howell) Tidestr. [FNA4, HC2]**

Contr. U.S. Natl. Herb. 25: 188. 1925.  
cushion miner's lettuce, erubescens lettuce, red miners lettuce

*Claytonia parviflora* Douglas ex Hook. var. *depressa* A. Gray

*Claytonia perfoliata* Donn ex Willd. var. *depressa* (A. Gray) Poelln.  
*Claytonia rubra* (Howell) Tidestr. ssp. *depressa* (A. Gray) John M. Mill. & K.L. Chambers [FNA4]  
*Claytonia rubra* (Howell) Tidestr. ssp. *rubra* [FNA4]  
*Montia perfoliata* (Donn ex Willd.) Howell var. *depressa* (A. Gray) Jeps.  
*Montia rubra* Howell

\* Miller, J. M. and K. L. Chambers. 1993. Nomenclatural changes and new taxa in *Claytonia* (Portulacaceae) in western North America. *Novon* 3: 268-273.

***Claytonia sibirica* L. [FNA4, HC2]**

Sp. Pl. 1: 204. 1753.  
candy flower, Siberian springbeauty

*Claytonia heterophylla* (Torr. & A. Gray) Swanson [KZ99]  
*Claytonia sibirica* L. var. *bulbifera* A. Gray [KZ99]  
*Claytonia sibirica* L. var. *heterophylla* (Torr. & A. Gray) A. Gray  
*Claytonia sibirica* L. var. *sibirica* [KZ99]  
*Montia sibirica* (L.) Howell [HC]  
*Montia sibirica* (L.) Howell var. *bulbifera* (A. Gray) B.L. Rob. [HC]  
*Montia sibirica* (L.) Howell var. *heterophylla* (Torr. & A. Gray) B.L. Rob. [HC]  
*Montia sibirica* (L.) Howell var. *sibirica* [HC]

***Claytonia umbellata* S. Watson [FNA4, HC, HC2]**

Botany (Fortieth Parallel). 43, plate 6, figs. 4, 5. 1871.  
Great Basin springbeauty

Recently collected in the Wenatchee Mts.

***Claytonia washingtoniana* (Suksd.) Suksd. [FNA4, HC2]**

Werdenda. 1: 10. 1923.  
Lake Washington *Claytonia*

*Montia washingtoniana* Suksd.

Fertile annual hybrid of *Claytonia sibirica* and *C.perfoliata* (Fellows 1971). Declining in western Washington due to loss of habitat and competition with weeds.

\* Fellows, C. E. 1971. A Cytotaxonomic Study of the Origin of *Claytonia washingtoniana*. Unpublished M. S. thesis, Humboldt State College.

***Lewisia* [FNA4, HC, HC2]**

Fl. Amer. Sept. 2: 360. 1814.  
bitterroot, lewisia  
(see also *Lewisioopsis*)

***Lewisia columbiana* (Howell ex A. Gray) B.L. Rob. [FNA4, HC, HC2]**

Syn. Fl. N. Amer. 1: 269. 1897.  
Columbia lewisia

*Calandrinia columbiana* Howell ex A. Gray  
*Oreobroma columbianum* (Howell ex A. Gray) Howell  
*Talinum denticulatum* Poelln.

**var. *columbiana* [FNA4, HC, HC2]**

In A. Gray et al., Syn. Fl. N. Amer. 1: 269.  
Columbia lewisia

FNA reports *Lewisia columbiana* var. *wallowensis* C. L. Hitchc. from northwestern Washington, a surprising new location for the variety, and one that needs confirmation.

**var. *rupicola* (English) C.L. Hitchc. [FNA4, HC, HC2]**

Vasc. Pl. Pacif. N.W. 2: 232. 1964.  
Columbia lewisia

*Lewisia columbiana* (Howell ex A. Gray) B.L. Rob. ssp. *rupicola* (English) Ferris  
*Lewisia rupicola* English

FNA4: "B. Mathew (1989b) noted that the cultivated *Lewisia columbiana* "'Rosea' is this variety. B. L. Davidson (2000) noted that the United States populations have pink to magenta petals, whereas the British Columbia populations have white to pale pink petals characteristic of the other varieties. Mathew questioned the assignment of the British Columbia plants to this variety."

\* Davidson, B. L. 2000. *Lewisias*. Timber Press, Portland. 236 p.

\* Mathew, B. 1989. *The Genus Lewisia*. The Royal Botanic Gardens, Kew, London. 151 p.

var. ***wallowensis*** C.L. Hitchc. [FNA4, HC, HC2]

Vasc. Pl. Pacif. N.W. 2: 232, fig. s.n. 1964.

*Lewisia columbiana* (Howell ex A. Gray) B.L. Rob. ssp. *wallowensis* (C.L. Hitchc.) J.E. Hohn ex B. Mathew

FNA4: "Both B. L. Davidson (2000) and B. Mathew (1989b) questioned whether the Montana plants should be classified as var. *wallowensis* or var. *columbiana*."

***Lewisia cotyledon*** (S. Watson) B.L. Rob. [FNA4, HC, HC2]

Syn. Fl. N. Amer. 1: 268. 1897.

Siskiyou lewisia

Recently (2017) observed growing in the Goat Rocks Wilderness Area. Originally reported in 1st edition Flora PNW as having been transplanted there. Apparently still persisting.

var. *cotyledon* [FNA4, HC2]

***Lewisia nevadensis*** (A. Gray) B.L. Rob. [FNA4, HC2]

Syn. Fl. N. Amer. 1: 268. 1897.

Nevada bitterroot

*Calandrinia nevadensis* A. Gray

*Claytonia grayana* Kuntze

*Lewisia bernardina* Davidson

*Lewisia pygmaea* (A. Gray) B.L. Rob. var. *nevadensis* (A. Gray) Fosberg [HC]

*Oreobroma nevadensis* (A. Gray) Howell

FNA4: "*Lewisia nevadensis* represents one extreme of the *L. pygmaea* complex (see discussion under 13. *L. pygmaea*). Questionable geographic occurrences reflect plants that have one or more features otherwise suggestive of *L. pygmaea* (e.g., more elongate roots, truncate and/or toothed sepals, and colored petals); such intermediates also occur in the range of "typical" *L. nevadensis* (relatively robust plants with napiform roots, solitary flowers, acute sepals with entire margins, and white petals). Uncertainty respecting the affinity of specimens prevails in those from Arizona, Colorado, Idaho, and Wyoming. There are no supporting specimens from Wyoming. The floral symmetry of *Lewisia nevadensis* may be somewhat elliptical, the two outer sepals and the remaining petals imbricate and opposite the sepals, giving the flowers a pinched appearance, a feature also reported for *L. oppositifolia*."

\* Dempster, L. T. 1990. A new name combination in *Lewisia* (Portulacaceae). *Phytologia* 68: 169-170.

***Lewisia pygmaea*** (A. Gray) B.L. Rob. [FNA4, HC, HC2]

Syn. Fl. N. Amer. 1: 268. 1897.

least, alpine lewisia, dwarf lewisia

(see also *Lewisia nevadensis*)

*Calandrinia grayi* Britton

*Calandrinia pygmaea* (A. Gray) A. Gray

*Lewisia exarticulata* H. St. John

*Lewisia glandulosa* (Rydb.) Clay

*Lewisia minima* (A. Nelson) A. Nelson

*Lewisia pygmaea* (A. Gray) B.L. Rob. var. *pygmaea* [HC]

*Lewisia pygmaeum* (A. Gray) B.L. Rob. var. *aridorum* Bartlett

*Oreobroma aridorum* (Bartlett) A. Heller

*Oreobroma pygmaeum* (A. Gray) Howell

*Talinum pygmaeum* A. Gray

FNA4: "The circumscription and diagnosis of *Lewisia pygmaea* is problematic because of morphologic variability, intermediacy, and/or hybridization with *L. nevadensis* (see L. T. Dempster 1990). In the range of

typical forms of *L. nevadensis* (see discussion under 11. *L. nevadensis*), one or more forms of *L. pygmaea* will also occur, but at higher elevations. Segregates of *L. pygmaea* recognized elsewhere as species include *L. glandulosa*, which occurs in rocky substrates above 3000 m in the central and southern Sierra Nevada and is characterized by elongate, sinuous taproots (L. T. Dempster 1990); and *L. sierrae*, which occurs in moist flats above 2400 m in the central Sierra Nevada and includes diminutive plants with irregularly eglandular-toothed (occasionally entire) sepals (B. Mathew 1989b). Dempster postulated that the variable and widely distributed *L. pygmaea* represents a hybrid species derived from *L. nevadensis* and *L. glandulosa*."

\* Dempster, L. T. 1990. A new name combination in *Lewisia* (Portulacaceae). *Phytologia* 68: 169-170.

***Lewisia rediviva*** Pursh [FNA4, HC, HC2]

Fl. Amer. Sept. 2: 368. 1814.  
bitterroot

var. ***rediviva*** [FNA4, HC2]

Fl. Amer. Sept. 2: 368.  
bitterroot

*Lewisia alba* Kellogg

***Lewisia triphylla*** (S. Watson) B.L. Rob. [FNA4, HC, HC2]

Syn. Fl. N. Amer. 1: 269. 1897.  
three leaf bitterroot, three leaf lewisia

*Claytonia triphylla* S. Watson  
*Erocallis triphylla* (S. Watson) Rydb.  
*Oreobroma triphylla* (S. Watson) Howell

***Lewisiopsis*** [HC2]

lewisia

***Lewisiopsis tweedyi*** (A. Gray) Govaerts [HC2]

World Checkl. Seed Pl. 3(1): 21.  
Tweedy's lewisia

*Calandrinia tweedyi* A. Gray  
*Cistanthe tweedyi* (A. Gray) Hershk. [FNA4]  
*Lewisia tweedyi* (A. Gray) B.L. Rob. [HC]

FNA discusses the unsettled flux in generic assignments in Portulacaceae, and places this species in the genus *Cistanthe*, while noting the arrangement is equivocal, and it may belong in its own genus.

\* Hershkovitz, M. A. 1992. Leaf morphology of *Cistanthe tweedyi* (nee *Lewisia tweedyi*; Portulacaceae). *Systematic Botany* 17: 220-238.

\* Hershkovitz, M.A. 2006. *Gayana Bot.* 63(1): 13-74.

***Montia*** [FNA4, HC, HC2]

Sp. Pl. 1: 87. 1753; Gen. Pl. ed. 5, 38. 1754.  
water chickweed, montia  
(see also *Claytonia*)

***Montia chamissoi*** (Ledeb. ex Spreng.) Greene [FNA4, HC, HC2]

Fl. Francisc. 180. 1891 (as *chamissonis*).  
Chamisso's montia, water montia

*Claytonia chamissoi* Ledeb. ex Spreng.  
*Crunocallis chamissoi* (Ledeb. ex Spreng.) Rydb.

There are a number of generic segregates that are not accepted by FNA. Relationships between the *Montia* species are still not well understood (Carolin 1993).

\* Carolin, R. C. 1993. Portulacaceae, In: K. Kubitzki et al., eds. 1990+. *The Families and Genera of Vascular Plants*. 4+ vols. Berlin, Vol. 2, p. 544-555.

***Montia dichotoma*** (Nutt.) Howell [FNA4, HC, HC2]

*Erythea*. 1: 36. 1893.

dwarf montia

*Claytonia dichotoma* Nutt.

*Montiastrum dichotomum* (Nutt.) Rydb.

***Montia diffusa*** (Nutt.) Greene [FNA4, HC, HC2]

Fl. Francisc. 181. 1891.

spreading candyflower, branching montia

*Claytonia diffusa* Nutt.

*Limnalsine diffusa* (Nutt.) Rydb.

Rare in Washington and Oregon. Some populations increase following fire.

***Montia fontana*** L. [FNA4, HC, HC2]

Sp. Pl. 1: 87. 1753.

water blinks, water chickweed

*Claytonia hallii* A. Gray

*Montia clara* Ö. Nilsson

*Montia fontana* L. ssp. *fontana* [KZ99]

*Montia fontana* L. var. *lamprosperma* (Cham.) Fenzl [HC]

*Montia fontana* L. var. *tenerrima* (A. Gray) Fernald & Wiegand [HC]

*Montia funstonii* Rydb.

*Montia hallii* (A. Gray) Greene

*Montia minor* C.C. Gmel.

FNA4: "Montia fontana displays a multitude of forms varying in stature, leaf shape, and seed size. Segregate species, varieties, and subspecies have been named. Based on my study of worldwide collections of the species, much variation in *M. fontana* is attributable to phenotypic differentiation of ramets produced by local environmental conditions and unrelated to genetic variation. Until macromolecular or other studies shed light on the variation in *M. fontana*, it seems pointless to recognize infraspecific taxa or segregate species."

\* Moore, D. M. 1963. The subspecies of *Montia fontana* L. Bot. Not. 116: 16-30.

\* Walters, S. M. 1953. *Montia fontana* L. *Watsonia* 3: 1-6.

***Montia howellii*** S. Watson [FNA4, HC, HC2]

Proc. Amer. Acad. Arts. 18: 191. 1883.

Howell's montia

*Claytonia howellii* (S. Watson) Piper

*Maxia howellii* (S. Watson) Ö. Nilsson

*Montiastrum howellii* (S. Watson) Rydb.

An inconspicuous prostrate winter annual, flowering in March and April.

***Montia linearis*** (Douglas ex Hook.) Greene [FNA4, HC, HC2]

Fl. Francisc. 181. 1891.

lineleaf Indian lettuce, narrow-leafed montia

*Claytonia linearis* Douglas ex Hook.

FNA4: "Montia linearis is a highly uniform species."

***Montia parvifolia*** (Moc. ex DC.) Greene [FNA4, HC, HC2]

Fl. Francisc. 181. 1891.

streambank springbeauty

*Claytonia parvifolia* DC.

*Montia parvifolia* (Moc. ex DC.) Greene ssp. *flagellaris* (Bong.) Ferris [KZ99]

*Montia parvifolia* (Moc. ex DC.) Greene ssp. *parvifolia* [KZ99]

*Montia parvifolia* (Moc. ex DC.) Greene var. *flagellaris* (Bong.) C.L. Hitchc. [HC]

*Montia parvifolia* (Moc. ex DC.) Greene var. *parvifolia* [HC]

*Naiocrene parvifolia* (DC.) Rydb.

FNA4: "Montia parvifolia is a variable diploid and tetraploid species. Plants with larger flowers, leaves, and seeds have been treated as var. *flagellaris* (Bongard) C. L. Hitchcock or as the separate species *M.*

sweetseri Henderson. Because the complex has not been studied using modern methods, and the variation observed in herbarium specimens has no correlated geographical base, I adopt the position of K. L. Chambers (1993) and do not recognize the two above-mentioned taxa at this time. I equate the species situation here to that of *M. fontana* and choose not to recognize infraspecific taxa."

***Phemeranthus*** [FNA4, HC2]

Specchio Sci. 1: 86. 1814.

fameflower

***Phemeranthus sediformis*** (Poelln.) Kiger [FNA4, HC2]

Novon. 11: 320. 2001.

Okanogan fameflower

*Talinum okanoganense* English [HC]

*Talinum sediforme* Poelln. [VPBC4]

*Talinum wayae* Eastw.

Poorly studied and similar to *Phemeranthus spinescens*, needs more study and collections. Generic taxonomy tentatively follows FNA, based on a series of recent morphological and molecular papers.

- \* Applequist, W. L. and R. S. Wallace. 2001. Phylogeny of the portulacaceous cohort based on ndhf sequence data. *Systematic Botany* 26: 406-419.
- \* Carolin, R. 1987. A review of the family Portulacaceae. *Austral. J. Bot.* 35: 383-412.
- \* Carolin, R. C. 1993. Portulacaceae, In: K. Kubitzki et al., eds. 1990+. *The Families and Genera of Vascular Plants*. 4+ vols. Berlin, Vol. 2, p. 544-555.
- \* Hershkovitz, M. A. 1993a. Revised circumscriptions and subgeneric taxonomies of *Calandrinia* and *Montiopsis* with notes on phylogeny of the portulacaceous alliance. *Ann. Missouri Bot. Garden* 80: 333-365.
- \* Hershkovitz, M. A., and E. A. Zimmer. 1997. On the evolutionary origins of the cacti. *Taxon* 46: 217-232.
- \* Hershkovitz, M. A., and E. A. Zimmer. 2000. Ribosomal DNA evidence and disjunctions of western North America Portulacaceae. *Molecular Phylogenetics and Evolution* 15: 419-439.

***Phemeranthus spinescens*** (Torr.) Hershk. [FNA4, HC2]

*Taxon*. 46: 222. 1997.

spinescent fameflower, spiny fameflower

*Talinum spinescens* Torr. [HC]

Taxonomy follows FNA.

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## Moraceae [FNA3, HC, HC2] Mulberry Family

**Synonyms:** (none)

**References:** (none)

***Fatoua*** [FNA3]

Voy. Uranie, Bot. 12: 509. 1830.

***Fatoua villosa*** (Thunb.) Nakai [FNA3]

Bot. Mag. (Tokyo). 4: 516. 1927.

hairy crabweed

Not in H&C and not in WA per FNA. PLANTS database shows occurrence in WA based on personal communication with Richard Old. Until voucher specimens are located indicating that this species is established in the WA flora it is considered excluded.

***Maclura*** [FNA3, HC, HC2]

Gen. N. Amer. Pl. 2: 233. 1818, name conserved - Osage-orange, bois. 1763.

osage orange

***Maclura pomifera*** C.K. Schneid. [FNA3, HC, HC2]

Ill. Handb. Laubholzk. 1: 806. 1906.

osage-orange

*Ioxylon aurantiacum* (Nutt.) Raf.  
*Ioxylon pomiferum* Raf., orthographic variant  
*Maclura aurantiaca* Nutt.

FNA does not show this species occurring in WA, but Hitchcock collected it in Asotin County in 1959. Consideration should be given as to whether this species is established in the WA flora.

**Morus** [FNA3, HC, HC2]

Sp. Pl. 2: 986. 1753; Gen. Pl. ed. 5, 424, 1754.  
mulberry

**Morus alba** L. [FNA3, HC, HC2]

Sp. Pl. 2: 986. 1753.  
white mulberry

*Morus alba* L. var. *tatarica* (L.) Ser.  
*Morus tatarica* L.

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## Myricaceae [FNA3, HC, HC2] Bayberry Family

**Synonyms:** (none)

**References:** (none)

**Morella** [HC2]

bayberry, wax myrtle

**Morella californica** (Cham.) Wilbur [HC2, JPM2]

Pacific bayberry

*Gale californica* (Cham.) Greene  
*Myrica californica* Cham. [FNA3, HC]

FNA3: "On any one branchlet, staminate inflorescences are borne proximal to bisexual inflorescences; the most distal inflorescences may be completely pistillate. It is quite common for two or three pistillate or bisexual flowers to occur per bract and for the ovaries to fuse to form a syncarp. In the fruiting condition this can usually be detected by counting the number of style branches (two per ovary, therefore four for a syncarp derived from two fused ovaries). Many specimens apparently do not produce any wax, in which case the fruits appear purple-black rather than white."

**Myrica** [FNA3, HC, HC2]

Sp. Pl. 2: 1024. 1753; Gen. Pl. ed. 5, 449, 1754.  
sweet gale  
(see also *Morella*)

**Myrica gale** L. [FNA3, HC, HC2]

Sp. Pl. 2: 1024. 1753.  
sweetgale

*Gale palustris* (Lam.) A. Chevalier  
*Myrica gale* L. var. *subglabra* (A. Chevalier) Fernald  
*Myrica gale* L. var. *tomentosa* C. DC.  
*Myrica palustris* Lam.

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## Myrsinaceae (see Primulaceae)

## Namaceae [Draft FNA, HC2] Nama Family

**Synonyms:** (none)

See Boraginaceae for citations supporting recognition of this family.

**References:** (none)

### *Nama* [HC, HC2]

fiddleleaf, nama, purplemat

#### *Nama aretioides* (Hook. & Arn.) Brand [Draft FNA, HC, HC2]

Univ. Calif. Publ. Bot. 4(13): 224.

purple nama

Currently no specimens at any regional herbaria supporting the presence of this species in Washington.

#### *Nama densa* Lemmon [HC2]

leafy nama, matted nama

*Nama densum* Lemmon [HC], orthographic variant

#### var. *parviflora* (Greenm.) C.L. Hitchc. [HC2]

matted nama

*Nama densum* Lemmon var. *parviflorum* (Greenm.) C.L. Hitchc. [HC]

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## Nitrariaceae [HC2, JPM2] Harmal Family

**Synonyms:** (none)

Formerly included within Zygophyllaceae.

**References:**

- \* Sheahan, M. C. and M. W. Chase. 1996. A phylogenetic analysis of Zygophyllaceae R.Br. based on morphological, anatomical and rbcL DNA sequence data. Bot. J. Linn. Soc. 122: 279?300.
- \* The Angiosperm Phylogeny Group. 2003. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG II. Bot. J. Linn. Soc. 141: 399?436.

### *Peganum* [HC, HC2]

harmal

#### *Peganum harmala* L. [HC, HC2]

Sp. Pl. 1: 444.

African rue

Occasionally introduced.

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## Nyctaginaceae [FNA4, HC, HC2] Four-O'clock Family

**Synonyms:** (none)

**References:** (none)

### *Abronia* [FNA4, HC, HC2]

Gen. Pl. 448. 1789.

abronia, sandverbena

*Abronia fragrans* Nutt. ex Hook. [FNA4, HC, HC2, KZ99]

Hooker's J. Bot. Kew Gard. Misc. 5: 261. 1853.  
heart's-delight  
(see also *Abronia mellifera*)

Reports of *Abronia fragrans* in Washington are believed to be a misidentification of *A. mellifera*.

*Abronia latifolia* Eschsch. [FNA4, HC, HC2]

Mém. Acad. Imp. Sci. St. Pétersbourg Hist. Acad. 10: 281. 1826.  
yellow sandverbena

FNA4: "S. S. Tillett (1967) considered plants of *Abronia umbellata* var. *minor* (Standley) Munz to be introgressants between *A. latifolia* and *A. umbellata*."

\* Tillett, S. S. 1967. The maritime species of *Abronia* (Nyctaginaceae). *Brittonia* 19: 299-327.

*Abronia mellifera* Douglas ex Hook. [FNA4, HC, HC2]

Bot. Mag. 56: plate 2879. 1829.  
honey-scented sandverbena, white sand verbena

Reports of *Abronia fragrans* in Washington are believed to be a misidentification of *A. mellifera*.

\* Galloway, L. A. 1975. Systematics of North American desert species of *Abronia* and *Tripterocalyx*. *Brittonia* 27: 328-347.

var. *mellifera* [HC2]

*Abronia umbellata* Lam. [FNA4, HC, HC2]

Tabl. Encycl. 1: 469, plate 105. 1791.  
pink sandverbena

var. *acutalata* (Standl.) C.L. Hitchc. [FNA4, HC, HC2]

Vasc. Pl. Pacific N. W. 2: 22. 1964.

*Abronia umbellata* Lam. ssp. *acutalata* (Standl.) Tillett [VPBC]

FNA4: "Closely related to inland *Abronia villosa*. Hybridizes with coastal *A. maritima* of coastal California and Baja. The variety *acutalata* is endemic to Washington and adjacent British Columbia. The taxonomy of the varieties is confused and controversial, and has led to reports [KZ] of *Abronia umbellata* var. *breviflora* (as subsp. *breviflora*) from WA, but FNA treats that plant as endemic to southwestern Oregon and the adjacent CA coast. The illustrated BC flora (Douglas et al. 1999) gives var. *acutalata* (as subsp. *acutalata*) a mere footnote, assuming it is extirpated from the province, and considers it an "excluded species."

\* <b>IFBC3</b> = Douglas, G. W., D. V. Meidinger, and J. Pojar (eds). 1999. Illustrated Flora of British Columbia, Volume 3: Dicotyledons (Diapensiaceae Through Onagraceae). B.C. Ministry of Environment, Lands & Parks and B.C. Ministry of Forests. Victoria. 423 p.

\* Tillett, S. S. 1967. The maritime species of *Abronia* (Nyctaginaceae). *Brittonia* 19: 299-327.

var. *breviflora* (Standl.) L.A. Galloway [FNA4, HC2]

Sida. 20: 888. 2003.  
sand verbena

This taxon is known from southern Oregon and California, so it is not considered as extant in the WA flora.

*Mirabilis* [FNA4, HC, HC2]

Sp. Pl. 1: 177. 1753; Gen. Pl. ed. 5, 82. 1754.  
four-o'clock, umbrellawort

*Mirabilis nyctaginea* (Michx.) MacMill. [FNA4, HC, HC2]

Metasp. Minnesota Valley. 217. 1892 (as *nyctagineus*).  
four-o'clock, heartleaf umbrellawort four-o'clock

*Allonia nyctaginea* Michx.

*Oxybaphus nyctagineus* (Michx.) Sweet

Reported by Richard Old, and considered a noxious weed in WA. FNA4: "*Mirabilis nyctaginea* is considered a noxious weed in some states. The holotype of *Mirabilis xcollina* Shinnery is a hybrid between

*M. nyctaginea* and *M. albida*. On the Great Plains, *M. nyctaginea* also appears to intergrade with *M. albida*. Prominence of the tubercles and redness of the fruits decreases in western populations. Near the Great Lakes, comparatively narrow-leaved plants with sparsely hirsute stems seem to be intergrades between *M. nyctaginea* and more or less hirsute *M. albida*. *Mirabilis xserotina* Shinnery is a hybrid between *M. nyctaginea* and *M. glabra*."

\* Le Duc, A. 1995. A revision of *Mirabilis* section *Mirabilis* (Nyctaginaceae). *Sida* 16: 613-648.

\* Pilz, G. E. 1978. Systematics of *Mirabilis* subgenus *Quamoclidion* (Nyctaginaceae). *Madroño* 25: 113-132.

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## Nymphaeaceae [FNA3, HC, HC2] Water-Lily Family

**Synonyms:** (none)

**References:** (none)

### *Nuphar* [FNA3, HC, HC2]

Fl. Graec. Prodr. 1: 361. 1809.  
cow-lily, yellow water-lily

#### *Nuphar polysepala* Engelm. [FNA3, HC2]

Trans. Acad. Sci. St. Louis. 2: 282. 1865.  
yellow pond lily, spatterdock

*Nuphar lutea* (L.) Sm. ssp. *polysepala* (Endelmann) E.O. Beal [KZ99]

*Nuphar polysepalum* Engelm. [HC]

FNA3: Plants intermediate between *Nuphar polysepala* and *N. variegata* occur in eastern British Columbia."

### *Nymphaea* [FNA3, HC, HC2]

Sp. Pl. 1: 510. 1753; Gen. Pl. ed. 5, 227, 1754.  
water-lily

#### *Nymphaea odorata* Aiton [FNA3, HC, HC2]

Hort. Kew. 2: 227. 1789.  
American water-lily, fragrant water-lily

#### ssp. *odorata* [FNA3, HC2]

Hort. Kew. 2: 227.  
American water lily, white water lily

*Castalia lekophylla* Small

*Nymphaea odorata* Aiton f. *rubra* (E. Guillon) Conard

*Nymphaea odorata* Aiton var. *gigantea* Tricker

*Nymphaea odorata* Aiton var. *godfreyi* D.B. Ward

*Nymphaea odorata* Aiton var. *rosea* Pursh

FNA3: "*Nymphaea odorata* subsp. *odorata* is introduced in British Columbia and in Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Washington. Flowering responses in the northern part of the range, where the flowers generally open slightly later in the morning and close much later in the afternoon, are much more variable than those farther south."

#### *Nymphaea tetragona* Georgi [FNA3, HC, HC2]

Bemerk. Reise Russ. Reich. 1: 220. 1775.  
pygmy water-lily

Possibly extirpated. FNA3: "Although broadly distributed in the northwest part of the flora, *Nymphaea tetragona* is apparently not common over the Canadian portion of its range. It was collected once in extreme northwestern Washington but is believed to be extirpated there. True *N. tetragona* is absent from northeastern North America and, now, from the conterminous United States, where this name has usually been applied to what is here segregated as *N. leibergii*. In size and shape of leaves and flowers the two

taxa are very similar. They differ in the leaf mottling often present in developing leaves of *N . tetragona* but absent in *N . leibergii* ; the distinctly tetragonal appearance of the receptacle in *N . tetragona* ; and in the longer carpellary appendages, the presence usually of more stamens, and purple-colored stamens and pistils in *N . tetragona* . Only in living plants is it apparent that leaves of *N . leibergii* are thicker with impressed veins abaxially compared to the relatively thin leaves with raised veins in *N . tetragona* . Although distinctions in sepal and petal apices (often acute in *N . tetragona* and often rounded in *N . leibergii* ) were the basis for the establishment of *Castalia leibergii* , the characters are variable in both taxa and thus of limited utility in distinguishing them."

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## Oleaceae [HC, HC2] Olive Family

**Synonyms:** (none)

**References:** (none)

### *Fraxinus* [HC, HC2]

ash

#### *Fraxinus latifolia* Benth. [HC, HC2]

Bot. Voy. Sulphur 33.

Oregon ash

*Fraxinus americana* L. ssp. *oregona* (Nutt.) Wesm.

*Fraxinus oregona* Nutt.

*Fraxinus oregona* Nutt. var. *latifolia* (Benth.) Lingelsh.

#### *Fraxinus pennsylvanica* Marshall [Gray's Manual, HC2]

Arbust. Amer. 51-52.

green ash

### *Ligustrum* [HC2]

privet

#### *Ligustrum xiboleum* E.F. Coe [HC2]

(= *Ligusticum obtusifolium* × *Ligusticum ovalifolium*)

#### *Ligustrum obtusifolium* Siebold & Zucc. [HC2]

#### *Ligustrum ovalifolium* Hassk. [HC2]

California privet

#### *Ligustrum sinense* Lour. [HC2]

#### *Ligustrum vulgare* L. [HC2, Stace 1997]

Sp. Pl. 1: 7.

common privet

Occasionally escaped into natural areas, but often found as escape near residential areas where cultivated locally.

### *Syringa* [HC2]

lilac

#### *Syringa vulgaris* L. [HC2]

common lilac

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## Onagraceae [HC, HC2, JPM, JPM2] Evening-Primrose Family

**Synonyms:** (none)

Some genera in the Onagraceae have undergone significant taxonomic revision since the publication of H&C. The genus *Oenothera* as circumscribed in H&C has been split to distinguish *Camissonia*, comprised mostly of annuals here in Washington. Species level changes are extensive in the genus *Epilobium*. Much of the taxonomic revision in Onagraceae is reflected in the first and second editions of the Jepson Manual, so that is the primary floristic reference used here.

**References:** (none)

***Camissonia*** [HC2]

sun cup

***Camissonia contorta*** (Douglas) Kearney [HC2, JPM2]

Trans. New York Acad. Sci. 14(3): 37.

contorted pod suncup, twisted suncup

(see also *Camissonia parvula*, *Camissonia pusilla*)

*Oenothera contorta* Douglas [HC]

*Sphaerostigma contortum* (Douglas) Walp.

***Camissonia parvula*** (Nutt. ex Torr. & A. Gray) P.H. Raven [HC2, JPM2]

Brittonia 16(3): 284.

Lewis river suncup

*Oenothera parvula* Nutt. ex Torr. & A. Gray

*Sphaerostigma flexuosum* (A. Nelson) Rydb.

*Sphaerostigma parvulum* (Nutt. ex Torr. & A. Gray) Walp.

***Camissonia pusilla*** P.H. Raven [HC2, JPM2]

Contributions from the United States National Herbarium 37(5): 312-316, f. 53, 56 [map].

little sun cup

*Oenothera contorta* Douglas var. *flexuosa* (A. Nelson) Munz

***Chamaenerion*** [HC2]

fireweed

***Chamaenerion angustifolium*** (L.) Scop. [HC2]

Fl. Carniol. (ed. 2) 1: 271.

fireweed

*Chamaenerion angustifolium* (L.) Holub [JPM]

*Epilobium angustifolium* L. [HC]

Ours is the ssp. *circumvagum* (Mosquin) Hoch. Online Jepson Manual: "Correspondence 1 indicates that, according to molecular and morphological evidence as presented in Baum, D. A., K. J. Sytsma, & P. C. Hoch (Syst. Bot. 19: 363-388. 1994) and in an e-mail from Peter C. Hoch (The Jepson Manual [Ed. 1] author) to Jeff Greenhouse of 5/14/98, the section of the *Epilobium* including the "fireweeds" (in North America, *Epilobium angustifolium* and *Epilobium latifolium*) is very distinct from the rest of the *Epilobium*, and should be segregated to *Chamaenerion*. Correspondence 1 also indicates that *C. angustifolium* subsp. *circumvagum* (Mosquin) Hoch was published in Iwatsuki, K. et al., Flora of Japan 2c: 241 (April 1999), four months before the Kartesz publication of the name, so that the author citation should be corrected to *Chamaenerion angustifolium* (L.) Holub subsp. *circumvagum* (Mosquin) Hoch, from *Chamaenerion angustifolium* (L.) Holub subsp. *circumvagum* (Mosquin) Kartesz previously in this Index."

***Chamaenerion latifolium*** (L.) Sweet [HC2]

Hort. Brit. (ed. 2) 198.

broad-leaf fireweed, red willow-herb

*Chamaenerion latifolium* (L.) Holub [JPM2]

*Epilobium latifolium* L. [HC]

***Chylismia*** [HC2]

beeblossom

***Chylismia scapoidea*** (Torr. & A. Gray) Raim. [HC2]

*Camissonia scapoidea* (Nutt. ex Torr. & A. Gray) P.H. Raven  
*Oenothera scapoidea* Nutt. ex Torr. & A. Gray [HC]

ssp. ***scapoidea*** [Draft FNA, HC2]

Nat. Pflanzenfam. 96[III,7]: 217.  
naked-stalked evening primrose

*Camissonia scapoidea* (Nutt. ex Torr. & A. Gray) P.H. Raven ssp. *scapoidea*

Tracked by the Washington Natural Heritage Program.

***Circaea*** [HC, HC2]

*circaea*, enchanter's nightshade

***Circaea alpina*** L. [HC, HC2]

Sp. Pl. 1: 9.  
enchanter's nightshade

ssp. ***alpina*** [HC2, KZ99]

dwarf enchanter's nightshade

ssp. ***pacifica*** (Asch. & Magnus) P.H. Raven [HC2, KZ99]

Pacific enchanter's nightshade

*Circaea alpina* L. var. *pacifica* (Asch. & Magnus) M.E. Jones

***Clarkia*** [HC, HC2]

*clarkia*, godetia

***Clarkia amoena*** (Lehm.) A. Nelson & J.F. Macbr. [HC, HC2]

yellow clarkia, farewell to spring

*Clarkia amoena* (Lehm.) A. Nelson & J.F. Macbr. ssp. *caurina* (Abrams ex Piper) F.H. Lewis & M.E. Lewis [KZ99]

*Clarkia amoena* (Lehm.) A. Nelson & J.F. Macbr. ssp. *lindleyi* (Douglas) F.H. Lewis & M.E. Lewis [KZ99]

*Clarkia amoena* (Lehm.) A. Nelson & J.F. Macbr. var. *caurina* (Abrams ex Piper) C.L. Hitchc. [HC]

*Clarkia amoena* (Lehm.) A. Nelson & J.F. Macbr. var. *lindleyi* (Douglas) C.L. Hitchc. [HC]

*Clarkia amoena* (Lehm.) A. Nelson & J.F. Macbr. var. *pacifica* (M. Peck) C.L. Hitchc. [HC]

*Godetia pacifica* M. Peck

***Clarkia gracilis*** (Piper) A. Nelson & J.F. Macbr. [HC, HC2]

slender godetia

ssp. ***gracilis*** [HC2, JPM2]

Bot. Gaz. 65(1): 63.  
slender godetia

*Godetia amoena* (Lehm.) G. Don var. *concolor* Jeps.

*Godetia amoena* (Lehm.) G. Don var. *gracilis* C.L. Hitchc.

***Clarkia pulchella*** Pursh [HC, HC2]

Flora Americae Septentrionalis; or, . . . 1: 260-261, pl. 11 [1813].  
deer horn, pinkfairies, ragged robin

***Clarkia purpurea*** (W. Curtis) A. Nelson & J.F. Macbr. [HC, HC2]

purple godetia

***Clarkia quadrivulnera*** (Douglas) A. Nelson & J.F. Macbr. [HC, HC2]

four-spot

*Clarkia purpurea* (W. Curtis) A. Nelson & J.F. Macbr. ssp. *quadrivulnera* (Douglas) F.H. Lewis & M.E. Lewis [JPM2]

*Godetia purpurea* (Curtis) G. Don var. *parviflora* (S. Watson) C.L. Hitchc.

*Godetia quadrivulnera* (Douglas) Spach

***Clarkia rhomboidea*** Douglas ex Hook. [HC, HC2]

Fl. Bor.-Amer. 1: 214.  
common clarkia, diamond fairyfan

***Clarkia viminea*** (Douglas) A. Nelson & J.F. Macbr. [HC, HC2]  
twiggy clarkia

***Epilobium*** [HC, HC2]

spike-primrose, willow-herb, willow-weed  
(see also *Chamaenerion*)

*Boisduvalia* [HC]

***Epilobium anagallidifolium*** Lam. [HC2, JPM2]

Encycl. 2(1): 376.  
alpine willowherb, pimpernel willowherb

*Epilobium alpinum* L. var. *alpinum* [HC]

***Epilobium anagallidifolium*** Lam. [HC2, JPM2], misapplied

Encycl. 2(1): 376.  
alpine willowherb, pimpernel willowherb

*Epilobium alpinum* L. var. *alpinum* [HC]

***Epilobium brachycarpum*** C. Presl [HC2, JPM2]

Reliq. Haenk. 2(1): 30.  
autumn willowherb, tall annual willowherb

*Epilobium paniculatum* Nutt. ex Torr. & A. Gray [HC]

*Epilobium paniculatum* Nutt. var. *jucundum* (A. Gray) Trel. [HC]

*Epilobium paniculatum* Nutt. ex Torr. & A. Gray var. *jucundum* (A. Gray) Trel.

*Epilobium paniculatum* Nutt. ex Torr. & A. Gray var. *paniculatum* [HC]

*Epilobium paniculatum* Nutt. ex Torr. & A. Gray var. *subulatum* (Hauskn.) Fernald

***Epilobium campestre*** (Jeps.) Hoch & W.L. Wagner [HC2, JPM2]

Systematic Botany Monographs 83: 208.  
smooth willowherb

*Boisduvalia glabella* (Nutt.) Walp. [HC]

*Epilobium pygmaeum* (Speg.) Hoch & P.H. Raven [JPM]

***Epilobium ciliatum*** Raf. [HC2]

ciliate willowherb, Watson's willowherb

*Epilobium adenocaulon* Hauskn.

*Epilobium adenocaulon* Hauskn. var. *holosericeum* (Trel.) Munz

*Epilobium adenocaulon* Hauskn. var. *parishii* (Trel.) Munz

*Epilobium brevistylum* Barbey var. *ursinum* (Parish ex Trel.) Jeps.

*Epilobium ciliatum* Raf. ssp. *ciliatum* [JPM2]

*Epilobium ciliatum* Raf. ssp. *watsonii* (Barbey) Hoch & P.H. Raven [JPM2]

*Epilobium glandulosum* Lehm. var. *macounii* (Trel.) C.L. Hitchc. [HC]

*Epilobium watsonii* Barbey [HC]

*Epilobium watsonii* Barbey var. *parishii* (Trel.) C.L. Hitchc. [HC]

*Epilobium watsonii* Barbey var. *watsonii* [HC]

***Epilobium clavatum*** Trel. [HC2, JPM]

Rep. (Annual) Missouri Bot. Gard. 2: 111, pl. 48.  
talus willowherb

*Epilobium alpinum* L. var. *albiflorum* (Suksd.) C.L. Hitchc. [HC]

*Epilobium alpinum* L. var. *clavatum* (Trel.) C.L. Hitchc. [HC]

***Epilobium densiflorum*** (Lindl.) Hoch & P.H. Raven [HC2, JPM2]

Phytologia 73(6): 457 [1993].  
dense-flower willowherb

*Boisduvalia densiflora* (Lindl.) S. Watson [HC]

*Boisduvalia densiflora* (Lindl.) S. Watson ssp. *pallescens* Suskd.  
*Boisduvalia densiflora* (Lindl.) S. Watson var. *densiflora* [HC]  
*Boisduvalia densiflora* (Lindl.) S. Watson var. *salicina* (Rydb.) Munz  
*Boisduvalia densiflora* (Lindl.) S. Watson var. *salina* (Rydb.) Munz [HC], orthographic variant  
*Oenothera densiflorum* Lindl.

***Epilobium glaberrimum*** Barbey [HC, HC2]

smooth willowherb

*Epilobium glaberrimum* Barbey ssp. *fastigiatum* (Nutt.) Hoch & P.H. Raven [JPM2]  
*Epilobium glaberrimum* Barbey ssp. *glaberrimum* [JPM2]  
*Epilobium glaberrimum* Barbey var. *fastigiatum* (Nutt.) Trel. [HC], orthographic variant  
*Epilobium glaberrimum* Barbey var. *fastigiatum* (Nutt.) Trel.  
*Epilobium glaberrimum* Barbey var. *glaberrimum* [HC]

***Epilobium glandulosum*** Lehm. [HC, HC2]

ciliate willowherb  
(see also *Epilobium hallianum*, *Epilobium mirabile*)

*Epilobium adenocaulon* Hausskn. var. *occidentale* Trel.  
*Epilobium brevistylum* Barbey var. *brevistylum*  
*Epilobium ciliatum* Raf. ssp. *glandulosum* (Lehm.) Hoch & P.H. Raven [JPM2]  
*Epilobium glandulosum* Lehm. var. *glandulosum* [HC]  
*Epilobium watsonii* Barbey var. *occidentale* (Trel.) C.L. Hitchc. [HC]

***Epilobium hallianum*** Hausskn. [HC2, JPM2]

glandular willowherb, Hall's willowherb

*Epilobium glandulosum* Lehm. var. *tenuë* (Trel.) C.L. Hitchc. [HC]  
*Epilobium halleianum* Hausskn. [JPM], orthographic variant  
*Epilobium pringleanum* Hausskn.  
*Epilobium pringleanum* Hausskn. var. *tenuë* (Trel.) Munz

***Epilobium hirsutum*** L. [HC, HC2]

Sp. Pl. 1: 347-348.  
codlins-and-cream, fiddle grass

***Epilobium hornemannii*** Rchb. [HC2]

Hornemann's willow-herb

ssp. ***hornemannii*** [HC2, JPM2]  
Iconogr. Bot. Pl. Crit. 2: 73, pl. 313.  
alpine willowherb

*Epilobium alpinum* L. var. *nutans* Hornem. [HC]

***Epilobium komarovianum*** H. Léév. [HC2]

bronzy willow-herb

***Epilobium lactiflorum*** Hausskn. [HC2, JPM2]

Oesterreichische Botanische Zeitschrift 29: 89.  
white-flower willowherb

*Epilobium alpinum* L. var. *lactiflorum* (Hausskn.) C.L. Hitchc. [HC]  
*Epilobium hornemannii* Rchb. var. *lactiflorum* (Hausskn.) D. Löve

***Epilobium lanceolatum*** Sebast. & Mauri

***Epilobium leptocarpum*** Hausskn. [HC2, IFBC]

Monogr. Epilobium 258, pl. 14, f. 67.  
slender-fruit willowherb

***Epilobium leptophyllum*** Raf. [HC2, JPM2]

Precis Decouv. Somiol. 41.  
bog willowherb

***Epilobium luteum*** Pursh [HC, HC2, JPM2]

Fl. Amer. Sept. 1: 259 [1813].

yellow willowherb

***Epilobium minutum*** Lindl. [HC, HC2, JPM2]

Fl. Bor.-Amer. 1: 207.

California willowherb, chaparral willowherb, small-flowered willowherb

*Epilobium foliosum* (Torr. & A. Gray) Suksd. [JPM2]

*Epilobium minutum* Lindl. var. *foliosum* Torr. & A. Gray

***Epilobium mirabile*** Trel. ex Piper [HC2, IFBC]

Contributions from the United States National Herbarium 11: 404.

Olympic Mountain willowherb

***Epilobium montanum*** L. [HC2]

broad-leaved willow-herb

***Epilobium nummulariifolium*** R. Cunn. ex A. Cunn. [HC2]

***Epilobium obscurum*** Schreb. [HC2]

dwarf willow-herb

***Epilobium oregonense*** Hausskn. [HC2, JPM2]

Monogr. Epilobium 276, f. 66.

Oregon willowherb

*Epilobium alpinum* L. var. *gracillimum* (Trel.) C.L. Hitchc. [HC]

***Epilobium palustre*** L. [HC, HC2, JPM2]

Sp. Pl. 1: 348.

marsh willowherb

***Epilobium x pulchrum*** Suksd. [HC2, KZ99]

Not in Hitchcock or any other reference that I could find

***Epilobium saximontanum*** Hausskn. [HC2, JPM2]

Oesterreichische Botanische Zeitschrift 29(4): 119.

Rocky Mountain willowherb

*Epilobium drummondii* Hausskn.

***Epilobium torreyi*** (S. Watson) Hoch & P.H. Raven [HC2, JPM2]

Phytologia 73(6): 458 [1993].

brook willowherb

*Boisduvalia stricta* (A. Gray) Greene [HC]

***Epilobium x treleasianum*** H. Lév. [HC2]

***Eremothera*** [HC2]

evening primrose, mooncup

***Eremothera boothii*** (Douglas) W.L. Wagner & Hoch [HC2]

Booth's sun cup, Booth's evening primrose

*Camissonia boothii* (Douglas) P.H. Raven [JPM]

*Oenothera boothii* Douglas [HC]

ssp. ***boothii*** [HC2, JPM2]

Syst. Bot. Monogr. 83: 209.

Booth's sun cup, Booth's evening primrose, Booth's suncup

*Camissonia boothii* (Douglas) P.H. Raven ssp. *boothii*

*Oenothera boothii* Douglas ssp. *alyssoides* (Hook. & Arn.) Munz [HC]

*Oenothera boothii* Dougl. ex Lehm. ssp. *boothii* [HC]

***Eremothera minor*** (A. Nelson) W.L. Wagner & Hoch [HC2, JPM2]

Systematic Botany Monographs 83: 210.

small-flowered evening primrose, green river suncup

*Camissonia minor* (A. Nelson) P.H. Raven [JPM]  
*Oenothera minor* (A. Nelson) Munz [HC]  
*Oenothera minor* (A. Nelson) Munz var. *cusickii* Munz  
*Sphaerostigma minor* A. Nelson

***Eremothera pygmaea*** (Douglas) W.L. Wagner & Hoch [HC2, JPM2]

Syst. Bot. Monogr. 83: 210.  
dwarf suncup

*Camissonia pygmaea* (Douglas ex Lehm.) P.H. Raven [JPM]  
*Oenothera boothii* Douglas var. *pygmaea* (Douglas ex Lehm.) Torr. & A. Gray  
*Oenothera pygmaea* Douglas ex Lehm. [HC]

***Gayophytum*** [HC, HC2]

gayophytum, groundsmoke

***Gayophytum decipiens*** F.H. Lewis & Szweyk. [HC, HC2, JPM]

Brittonia 16(4): 368-371, f. 5H, 6C, 10.  
deceptive groundsmoke

***Gayophytum diffusum*** Torr. & A. Gray [HC, HC2]

spreading groundsmoke

*Gayophytum diffusum* Torr. & A. Gray ssp. *diffusum* [JPM]  
*Gayophytum diffusum* Torr. & A. Gray ssp. *parviflorum* F.H. Lewis & Szweyk. [JPM]

***Gayophytum heterozygum*** F.H. Lewis & Szweyk. [HC2, JPM]

Brittonia 16(4): 377-380, f. 5C, 5K, 13B, 15.  
zigzag groundsmoke

*Gayophytum diffusum* Torr. & A. Gray var. *villosum* Munz

Not included in H&C.

***Gayophytum humile*** Juss. [HC, HC2, JPM]

Ann. Sci. Nat. (Paris) 25: 18.  
dwarf groundsmoke

*Gayophytum nuttallii* Torr. & A. Gray

***Gayophytum racemosum*** Torr. & A. Gray [HC, HC2, JPM]

Fl. N. Amer. 1(3): 514.  
black-foot groundsmoke, racemose groundsmoke

*Gayophytum caesium* Torr. & A. Gray

*Gayophytum helleri* Rydb.

*Gayophytum racemosum* Torr. & A. Gray var. *caesium* (Torr. & A. Gray) Munz

***Gayophytum ramosissimum*** Torr. & A. Gray [HC, HC2, JPM]

Fl. N. Amer. 1(3): 513-514.  
pinyon groundsmoke

***Ludwigia*** [HC, HC2]

primrose-willow, water purslane

*Jussiaea* [HC]

***Ludwigia hexapetala*** (Hook. & Arn.) Zardini, H.Y. Gu & P.H. Raven [HC2, JPM]

Syst. Bot. 16(2): 243-244.  
false loosestrife, water primrose

***Ludwigia palustris*** (L.) Elliott [HC, HC2, JPM]

Sketch Bot. S. Carolina 1(3): 211.  
marsh primrose-willow

*Ludwigia palustris* (L.) Elliott var. *americana* (DC.) Fernald & Griscom [HC]

*Ludwigia palustris* (L.) Elliott var. *pacifica* Fernald & Griscom [HC]

*Ludwigia peploides* (Kunth) P.H. Raven [HC2]

floating primrose-willow

ssp. *montevidensis* (Spreng.) P.H. Raven [HC2]

Reinwardtia 6(4): 395  
floating primrose-willow

*Jussiaea repens* L. var. *montevidensis* (Spreng.) Munz

Currently (2016) known from a single population in King County.

***Neoholmgrenia*** [HC2]

lemondrops

***Neoholmgrenia andina*** (Nutt.) W.L. Wagner & Hoch [HC2, JPM2]

Novon 19(1): 131.  
blackfoot river suncup, obscure suncup

*Camissonia andina* (Nutt.) P.H. Raven [JPM]  
*Holmgrenia andina* (Nutt.) W.L. Wagner & Hoch  
*Oenothera andina* Nutt. [HC]

H&C does not list for WA.

\* Syst. Bot. Monographs 83. 2007.

***Neoholmgrenia hilgardii*** (Greene) W.L. Wagner & Hoch [HC2, JPM2]

Novon 19: 132.  
Hilgard's suncup

*Camissonia hilgardii* (Greene) P.H. Raven  
*Holmgrenia hilgardii* (Greene) W.L. Wagner & Hoch  
*Oenothera andina* Nutt. var. *hilgardii* (Greene) Munz  
*Oenothera hilgardii* Greene [HC]

Endemic to Washington.

\* Syst. Bot. Monographs 83. 2007.

***Oenothera*** [HC, HC2]

evening-primrose, gaura, oenothera  
(see also *Camissonia*, *Chylismia*, *Eremothera*, *Neoholmgrenia*, *Taraxia*)

*Gaura* [HC]

***Oenothera biennis*** L. [HC2, JPM2]

Sp. Pl. 1: 346.  
King's-cureall, common evening primrose

*Oenothera biennis* L. ssp. *centralis* Munz  
*Oenothera biennis* L. var. *pycnocarpa* (Atk. & Bartlett) Wiegand  
*Oenothera muricata* L.  
*Oenothera strigosa* (Rydb.) Mack. & Bush [HC]  
*Oenothera villosa* Thunb.  
*Oenothera villosa* Thunb. ssp. *strigosa* (Rydb.) W. Dietr. & P.H. Raven [JPM2]

***Oenothera caespitosa*** Nutt. [HC2]

*Oenothera caespitosa* Nutt. [HC], orthographic variant

ssp. ***caespitosa*** [HC2, JPM2]

Cat. Pl. Upper Louisiana no. 53 [pre-Aug 1813].  
butte primrose, fragrant evening primrose, rock rose

*Oenothera caespitosa* Nutt. ssp. *caespitosa*, orthographic variant  
*Oenothera caespitosa* Nutt. var. *caespitosa* [HC], orthographic variant  
*Oenothera caespitosa* Nutt. var. *montana* (Nutt.) Durand [HC], orthographic variant  
*Oenothera caespitosa* Nutt. var. *purpurea* (S. Watson) Munz [HC], orthographic variant

*Oenothera caespitosa* Nutt. ssp. *montana* (Nutt.) Munz  
*Oenothera caespitosa* Nutt. ssp. *purpurea* (S. Watson) Munz

ssp. ***marginata*** (Nutt. ex Hook. & Arn.) Munz [HC2, JPM2]

N. Amer. Fl., ser. 2, 5: 101.  
fragrant evening-primrose

*Oenothera caespitosa* Nutt. ssp. *marginata* (Nutt. ex Hook. & Arn.) Munz, orthographic variant  
*Oenothera caespitosa* Nutt. var. *marginata* (Nutt. ex Hook. & Arn.) Munz [HC], orthographic variant  
rare

***Oenothera curtiflora*** W.L. Wagner & Hoch [HC2, JPM2]

small-flowered gaura, velvet weed, velvetweed

*Gaura mollis* James

*Gaura parviflora* Douglas ex Lehm. [HC]

Online Jepson Manual: "Correspondence 1 indicates that rejection of *Gaura mollis* James in favor of *Gaura parviflora* Dougl. ex Lehm. is recommended. [Action based on fact *Gaura mollis* remained in complete obscurity for nearly all of its existence, and that it would displace a name that has long and consistently been used for a well known plant. Correction in author citation based on International Plant Names Index, "In the past, this name was ascribed to Douglas ex Hook. (Fl. Bor.-Amer. 1: 208. 1832). The type information is from Raven & Gregory (Mem. Torrey Bot. Club 23: 23. 1972)".]

***Oenothera elata*** Kunth [HC2]

Hooker's evening primrose

*Oenothera elata* Kunth ssp. *hirsutissima* (A. Gray ex S. Watson) W. Dietr. [JPM]

*Oenothera hookeri* Torr. & A. Gray [HC]

*Oenothera hookeri* Torr. & A. Gray ssp. *grisea* (Bartlett) Munz

*Oenothera hookeri* Torr. & A. Gray ssp. *venusta* (Bartlett) Munz

*Oenothera hookeri* Torr. & A. Gray var. *angustifolia* R.R. Gates [HC]

*Oenothera hookeri* Torr. & A. Gray var. *ornata* (A. Nelson) Munz [HC]

*Oenothera ornata* (A. Nelson) Rydb.

***Oenothera flava*** (A. Nelson) Garrett [HC, HC2]

long-tubed evening primrose

*Oenothera flava* (A. Nelson) Garrett ssp. *flava* [JPM]

Apparently extirpated from WA - known from historic locality.

***Oenothera glazioviana*** Micheli [HC2, JPM2]

Flora Brasiliensis 13(2): 178.

red-sepal evening-primrose

*Oenothera erythrosepala* Borbás

Reported as a hybrid by HC

***Oenothera pallida*** Lindl. [HC, HC2]

pale evening-primrose

ssp. ***pallida*** [HC2, IFBC]

Bot. Reg. 14: pl. 1142.

pale evening primrose

*Oenothera pallida* Lindl. var. *idahoensis* Munz [HC]

*Oenothera pallida* Lindl. var. *pallida* [HC]

*Oenothera pallida* Lindl. var. *typica* Munz

***Oenothera suffrutescens*** (Ser.) W.L. Wagner & Hoch [HC2]

scarlet beeblossom

*Gaura coccinea* Nutt. ex Pursh [HC]

H&C report indicates that it was potentially escaped in Bingen, WA at the time it was collected.

**Taraxia** [HC2]

goldeneggs

**Taraxia subacaulis** (Pursh) Rydb. [HC2, JPM2]

Mem. New York Bot. Gard. 1: 281.

long-leaf evening primrose

*Camissonia subacaulis* (Pursh) P.H. Raven [JPM2]

*Oenothera heterantha* Nutt. [VPPNW3]

*Oenothera subacaulis* (Pursh) Garrett [HC]

**Taraxia tanacetifolia** (Torr. & A. Gray) Piper [HC2, JPM2]

Contr. U.S. Natl. Herb. 11: 405.

tansy-leaf evening primrose

*Camissonia tanacetifolia* (Torr. & A. Gray) P.H. Raven

*Camissonia tanacetifolia* (Torr. & A. Gray) P.H. Raven ssp. *tanacetifolia* [JPM2]

*Oenothera tanacetifolia* Torr. & A. Gray [HC]

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## Orobanchaceae [HC, HC2] Broom-Rape Family

**Synonyms:** (none)

Castilleja, Cordylanthus, Orthocarpus, and Triphysaria edited and annotated by Mark Egger (m.egger@comcast.net). For the genus Castilleja, only basionyms and synonyms based on material collected in WA and/or historically treated as occurring in WA in the literature are included in the present synonymy.

**References:** (none)

**Aphyllon** [HC2]

broomrape

**Aphyllon californicum** (Cham. & Schltdl.) A. Gray [HC2]

California broomrape

*Myzorrhiza californica* (Cham. & Schltdl.) Rydb.

*Orobanche californica* Cham. & Schltdl. [HC]

ssp. **californicum** [HC2]

Bot. California 1: 584.

California broomrape

*Orobanche californica* Cham. & Schlecht. var. *californica* [HC]

ssp. **grayanum** (Beck) A.C. Schneid. [HC2]

PhytoKeys 75: 113.

*Orobanche californica* Cham. & Schltdl. ssp. *grayana* (Beck) Heckard [JPM]

*Orobanche californica* Cham. & Schltdl. var. *grayana* (Beck) Cronquist [HC]

*Orobanche grayana* Beck

*Orobanche grayana* G. Beck var. *grayana* [JPM]

\* Heckard, L.R. 1973. A taxonomic re-interpretation of the *Orobanche californica* complex. Madrono 22(2): 41-70.

**Aphyllon corymbosum** (Rydb.) A.C. Schneid. [HC2]

PhytoKeys 75: 113.

flat-topped broomrape

*Myzorrhiza corymbosa* Rydb.

*Orobanche corymbosa* (Rydb.) Ferris [HC, JPM]

ssp. **corymbosum** [HC2]

flat-topped broomrape

*Orobanche californica* Cham. & Schldl. var. *corymbosa* (Rydb.) Munz [JPM]  
*Orobanche corymbosa* (Rydb.) Ferris ssp. *corymbosa*

ssp. **mutabile** (Heckard) A.C. Schneid. [HC2]  
flat-topped broomrape

*Orobanche corymbosa* (Rydb.) Ferris ssp. *mutabilis* Heckard [HC, KZ99, VPBC2]

***Aphyllon fasciculatum*** (Nutt.) Torr. & A. Gray [HC2]

clustered broom-rape, clustered broomrape

*Anoplanthus fasciculatus* (Nutt.) Walp.  
*Orobanche fasciculata* Nutt. [HC, JPM]  
*Orobanche fasciculata* Nutt. var. *fasciculata* [VPBC2]  
*Orobanche fasciculata* Nutt. var. *franciscana* Achey [JPM]  
*Orobanche fasciculata* Nutt. var. *lutea* (Parry) Achey [JPM]  
*Orobanche fasciculata* Nutt. var. *subulata* Goodman  
*Orobanche fasciculata* Nutt. var. *typica* Achey  
*Thalesia fasciculata* (Nutt.) Britton  
*Thalesia lutea* (Parry) Rydb.

***Aphyllon ludovicianum*** (Nutt.) A. Gray [HC2]

Bot. California [W.H.Brewer] 1. 585.  
Suksdorf's broomrape

*Aphyllon arenosum* Suksd.  
*Conopholis ludoviciana* (Nutt.) Alph. Wood  
*Myzorrhiza ludoviciana* (Nutt.) Rydb.  
*Orobanche ludoviciana* Nutt. [HC]  
*Orobanche ludoviciana* Nutt. ssp. *ludoviciana* [IFBC]  
*Orobanche ludoviciana* Nutt. var. *arenosa* (Suksd.) Cronquist  
*Orobanche ludoviciana* Nutt. var. *genuina* Beck  
*Orobanche multiflora* Nutt. var. *arenosa* (Suksd.) Munz

***Aphyllon pinorum*** (Geyer ex Hook.) A. Gray [HC2]

Bot. California 1: 585.  
pinewoods broom-rape, pine broomrape

*Myzorrhiza pinorum* (Geyer ex Hook.) Rydb.  
*Orobanche pinorum* Geyer ex Hook. [HC, JPM]  
*Phelipaea pinorum* (Geyer ex Hook.) A. Gray

***Aphyllon purpureum*** (A. Heller) Holub [HC2]

Preslia 70(2): 100.  
purple broomrape

*Aphyllon uniflorum* (L.) Torr. & A. Gray [HC2], misapplied  
*Orobanche porphyrantha* Beck  
*Orobanche sedii* (Suksd.) Fernald  
*Orobanche uniflora* L. ssp. *occidentalis* (Greene) Abrams ex Ferris [JPM]  
*Orobanche uniflora* L. var. *minuta* (Suksd.) Beck [HC, JPM]  
*Orobanche uniflora* L. var. *occidentalis* (Greene) Roy L. Taylor & MacBryde [VPBC2, JPM]  
*Orobanche uniflora* L. var. *purpurea* (A. Heller) Achey [HC, VPBC2]  
*Orobanche uniflora* L. var. *sedi* (Suksd.) Achey [JPM]

***Aphyllon uniflorum*** (L.) Torr. & A. Gray [HC2], misapplied

naked broom-rape, naked broomrape  
(see also *Aphyllon purpureum*)

*Orobanche terrae-novae* Fernald  
*Orobanche uniflora* L. [HC, IFBC]  
*Orobanche uniflora* L. var. *terrae-novae* (Fernald) Achey  
*Orobanche uniflora* L. var. *uniflora*  
*Thalesia uniflora* (L.) Britton

*Aphyllon uniflorum* occurs primarily in eastern North America; plants in Washington are all referred to

*Aphyllon purpureum*.

*Aphyllon uniflorum* (L.) Torr. & A. Gray [HC2]

naked broom-rape, naked broomrape  
(see also *Aphyllon purpureum*)

*Orobanche terrae-novae* Fernald  
*Orobanche uniflora* L. [HC, IFBC]  
*Orobanche uniflora* L. var. *terrae-novae* (Fernald) Achey  
*Orobanche uniflora* L. var. *uniflora*  
*Thalesia uniflora* (L.) Britton

*Aphyllon uniflorum* occurs primarily in eastern North America; plants in Washington are all referred to *Aphyllon purpureum*.

***Bellardia*** [HC2]

bellardia, glandweed

*Bellardia viscosa* (L.) Fisch. & C.A. Mey. [Draft FNA, HC2]

Index Seminum [St. Petersburg] 2: 4.  
yellow glandweed

*Parentucellia viscosa* (L.) Caruel [HC]

***Castilleja*** [HC, HC2]

Indian-paintbrush, owl-clover

***Castilleja ambigua*** Hook. & Arn. [HC2]

Bot. Beechey Voy. 154-155.  
paint-brush owl-clover

var. ***ambigua*** [HC2]

salt-marsh paintbrush

*Castilleja ambigua* Hook. & Arn. ssp. *ambigua* [IFBC, JPM2]

*Orthocarpus castillejooides* Benth. [HC, VPPNW4]

***Castilleja attenuata*** (A. Gray) T.I. Chuang & Heckard [HC2, JPM]

Systematic Botany 16(4): 656.  
attenuate paintbrush, valley-tassels

*Orthocarpus attenuatus* A. Gray [HC, VPPNW4]

***Castilleja cervina*** Greenm. [HC, HC2]

Botanical Gazette 25(4): 269.  
deer paintbrush

***Castilleja chambersii*** M. Egger & Meinke [HC2]

Brittonia 51(4): 445-450, f. 1. 1999.  
Chambers's Indian paintbrush

Recently (2015) collected in southwestern Washington.

***Castilleja cryptantha*** Pennell & G.N. Jones [HC, HC2]

Proc. Biol. Soc. Wash. 50(56): 208-209.  
obscure paintbrush

Endemic to subalpine meadows in and immediately adjacent to Mt. Rainier National Park.

***Castilleja cusickii*** Greenm. [HC, HC2]

Botanical Gazette 25(4): 267-268.  
Cusick's paintbrush

*Castilleja camporum* (Greenm.) Howell

*Castilleja lutea* A. Heller

*Castilleja pallida* (L.) Spreng. var. *camporum* Greenm.

*Castilleja pannosa* Eastw.

***Castilleja elmeri*** Fernald [HC, HC2]

Erythea 6(5): 51.  
Elmer's paintbrush

*Castilleja angustifolia* (Nutt.) G. Don var. *whitedii* Piper

Listings by various authors (e.g. KZ) of *C. sulphurea* Rydb. for WA are attributable to yellow forms of *C. elmeri*; there is no convincing evidence that *C. sulphurea*, which is primarily a Rocky Mountain species, occurs in WA.

***Castilleja exserta*** (A. Heller) T.I. Chuang & Heckard [HC2]

var. *exserta* [HC2, JPM, KZ99]  
purple owl-clover

*Orthocarpus purpurascens* Benth. [HC]

Two records at WTU dating back to 1890s in Tacoma and Seattle. Perhaps these were garden escapes at the time, but this species has not become established in the flora.

***Castilleja hispida*** Benth. [HC, HC2]

harsh paintbrush

var. *acuta* (Pennell) Ownbey [HC, HC2]

Vasc. Pl. Pacific NW 4: 309.  
harsh paintbrush

*Castilleja hispida* Benth. ssp. *acuta* Pennell  
*Castilleja taedifera* Pennell

The earlier name *C. hispida* var. *acuta* Pennell ex M. E. Peck (Man. Higher Pl. of Oregon) is a nomen nudum, invalidly published.

var. *hispida* [HC, HC2]

Fl. Bor.-Amer. 2: 105.  
harsh paintbrush

*Castilleja angustifolia* (Nutt.) G. Don var. *abbreviata* Fern.  
*Castilleja angustifolia* (Nutt.) G. Don var. *hispida* (Benth.) Fernald  
*Castilleja hispida* Benth. ssp. *abbreviata* (Fernald) Pennell

***Castilleja levisecta*** Greenm. [HC, HC2]

Botanical Gazette 25(4): 268-269.  
golden paintbrush

Rare and declining species, listed as Endangered in WA and extirpated from many historical sites.

***Castilleja litoralis*** Pennell [HC, HC2]

coast paintbrush, Pacific paintbrush

*Castilleja affinis* Hook. & Arn. ssp. *litoralis* (Pennell) T.I. Chuang & Heckard

***Castilleja lutescens*** (Greenm.) Rydb. [HC, HC2]

Mem. New York Bot. Gard. 1: 359.  
yellow paintbrush

*Castilleja pallida* (L.) Spreng. var. *lutescens* Greenm.

***Castilleja miniata*** Douglas ex Hook. [HC, HC2]

common paintbrush, scarlet paintbrush

var. *dixonii* (Fernald) A. Nelson & J.F. Macbr. [HC, HC2]

Bot. Gaz. 65(1): 70.  
Dixon's paintbrush

*Castilleja dixonii* Fernald  
*Castilleja miniata* Douglas ex Hook. ssp. *dixonii* (Fernald) Kartesz

This taxon is of doubtful validity but is maintained here pending further research; the undocumented and unaccepted listing by KZ of *Castilleja affinis* ssp. *litoralis* for WA may be based on this taxon.

var. *miniata* [HC, HC2]

Fl. Bor.-Amer. 2: 106.

scarlet paintbrush

*Castilleja crispula* Piper

*Castilleja pallida* (L.) Spreng. var. *miniata* (Dougl. ex Hook.) A. Gray

***Castilleja minor*** (A. Gray) A. Gray [HC2, JPM]

Bot. California [W.H.Brewer] i. 573.

annual paintbrush

var. *exilis* (A. Gray) J.M. Egger [HC2]

Phytologia 90(1): 72-73.

seep paintbrush

*Castilleja exilis* A. Nelson [HC]

This taxon is treated as a synonym of *C. minor* ssp. *minor* in JPM, but recent field work indicates that it is best treated as a distinct variety of that species.

\* Egger, J.M. 2008. Nomenclatural changes and selected lectotypifications in *Castilleja* (Orobanchaceae).

Phytologia 90(1): 63-82.

***Castilleja parviflora*** Bong. [HC, HC2]

small-flowered paintbrush

var. *albida* (Pennell) Ownbey [HC, HC2]

mountain Indian paintbrush

*Castilleja oreopola* Greenm. ssp. *albida* Pennell

var. *olympica* (G.N. Jones) Ownbey [HC, HC2]

Vasc. Pl. Pacific NW 4: 317.

Olympic paintbrush

*Castilleja olympica* G.N. Jones

*Castilleja oreopola* Greenm. ssp. *olympica* (G.N. Jones) Pennell

var. *oreopola* (Greenm.) Ownbey [HC, HC2]

Vasc. Pl. Pacific NW 4: 317.

magenta paintbrush

*Castilleja miniata* Dougl. ex Hook var. *alpina* Suksd.

*Castilleja oreopola* Greenm.

***Castilleja rhexiifolia*** Rydb. [HC2]

Mem. New York Bot. Gard. 1: 356-357.

rhexia-leaved paintbrush

*Castilleja rhexifolia* Rydb. [HC]

Note that the spelling has been changed from the H&C spelling to include two "i"'s, in accordance with International Code of Botanical Nomenclature. H&C do not include WA in the range of this species, however collections of this species have been made in WA since the publication of that flora.

***Castilleja rupicola*** Piper ex Fernald [HC, HC2]

Erythea 6(5): 45-46.

cliff paintbrush

***Castilleja suksdorfii*** A. Gray [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 22(2): 311.

Suksdorf's paintbrush

***Castilleja tenuis*** (A. Heller) T.I. Chuang & Heckard [HC2, JPM]

Syst. Bot. 16(4): 658.

thin paintbrush

*Orthocarpus hispidus* Benth. [HC]

*Orthocarpus rarior* Suksd.

*Orthocarpus tenuis* Heller  
*Triphysaria hispida* (Benth.) Rydb.

***Castilleja thompsonii*** Pennell [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 99(7): 178-179.  
Thompson's paintbrush

*Castilleja villicaulis* Pennell & Ownbey

***Castilleja victoriae*** Fairbarns & J.M. Egger [HC2]

Madrono 54(4): 334?342.  
Victoria's paintbrush

\* Madroño 54(4). 2007.

***Cordylanthus*** [HC, HC2]

birdbeak

***Cordylanthus capitatus*** Nutt. ex Benth. [HC, HC2]

Prodr. 10: 597.  
Yakima bird's-beak

*C. ramosus* Nutt. ex Benth. has not been recorded in WA but should be looked for in sagebrush flats in SE corner of state.

***Euphrasia*** [HC, HC2]

euphrasia, eyebright

***Euphrasia nemorosa*** (Pers.) Wallr. [HC2, IFBC]

Ann. Bot. (London) 82.  
common eyebright, hairy eyebright

*Euphrasia americana* Wetts.

*Euphrasia arctica* Lange ex Rostr. ssp. *borealis* (F. Towns.) Yeo

*Euphrasia canadensis* F. Towns., misapplied

*Euphrasia officinalis* L. [HC], misapplied

*Euphrasia pectinata* Ten., misapplied

***Kopsiopsis*** [HC2]

ground-cone

***Kopsiopsis hookeri*** (Walp.) Govaerts [HC2, JPM2]

World Checkl. Seed Pl. 2(1): 14.  
small groundcone, Vancouver groundcone, poque

*Boschniakia hookeri* Walp. [HC]

***Melampyrum*** [HC, HC2]

cow-wheat

***Melampyrum lineare*** Desr. [Draft FNA, HC, HC2]

Sp. Pl. 2: 605.  
narrow-leaved cow wheat

***Odontites*** [HC2]

***Odontites vulgaris*** Moench [Draft FNA, HC2]

red bartsia

*Odontites vernus* (Bellardi) Dumort., misapplied

*Odontites vulgaris* is sparingly established in the northeastern U.S. and eastern Canada, and may be rapidly spreading. A collection was made in 2015 along a bike trail in Bellingham, Whatcom County, Washington, where plants formed weedy patches in grassy areas along and near the trail.

***Orobanche*** [HC, HC2]

broomrape, cancer-root  
(see also *Aphyllon*)

***Orobanche minor*** Sm. [HC, HC2]

Engl. Bot. 6: pl. 422.  
hellroot

*Orobanche columbiana*

Introduced from the Mediterranean

***Orthocarpus*** [HC, HC2]

owl-clover  
(see also *Castilleja*, *Triphysaria*)

***Orthocarpus barbatus*** J.S. Cotton [HC, HC2]

Bull. Torrey Bot. Club 29(9): 574.  
Grand Coulee owl-clover

***Orthocarpus bracteosus*** Benth. [HC, HC2]

Scroph. Ind. 13.  
rosy owl-clover

*Orthocarpus bracteosus* Benth. var. *albus* D.D. Keck

Listed as Threatened in WA; known in state from a single extant population, extirpated from several historic sites in WA.

***Orthocarpus imbricatus*** Torr. ex S. Watson [HC, HC2]

Botany Fortieth Parallel 458.  
mountain owl-clover

***Orthocarpus luteus*** Nutt. [HC, HC2]

Gen. N. Amer. Pl. 2: 57-58.  
golden-tongue owl-clover

***Orthocarpus tenuifolius*** (Pursh) Benth. [HC, HC2]

Scroph. Ind. 12.  
narrow-leaved owl-clover, thin-leaved owl-clover

***Pedicularis*** [HC, HC2]

lousewort, pedicularis

***Pedicularis bracteosa*** Benth. [HC, HC2]

bracted lousewort

var. ***atrosanguinea*** (Pennell & J.W. Thomp.) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 356.  
bracted lousewort

var. ***bracteosa*** [HC, HC2]

Fl. Bor.-Amer. 2: 110.  
bracted lousewort

*Pedicularis montanensis* Rydb.

var. ***flavida*** (Pennell) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 356.  
bracted lousewort

var. ***latifolia*** (Pennell) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 358.  
bracted lousewort

*Pedicularis paddoensis* Pennell

*Pedicularis thompsonii* Pennell

var. ***pachyrhiza*** (Pennell) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 356.  
bracted lousewort

Occurs in southeastern WA.

var. *siifolia* (Rydb.) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 356.  
bracted lousewort

Specimen at WS from southeastern WA, though identification has not been confirmed by authors of this list or author of upcoming FNA treatment.

*Pedicularis contorta* Benth. [HC, HC2]

white coiled-beak lousewort

var. *contorta* [HC, HC2]

Fl. Bor.-Amer. 2: 108.  
white-coiled beak lousewort

*Pedicularis groenlandica* Retz. [HC, HC2]

Fl. Scand. Prodr. (ed. 2) 145.  
bull elephant's-head, elephant's head

*Elephantella groenlandica* (Retz.) Rydb.  
*Pedicularis groenlandica* Retz. var. *surrecta* (Benth.) A. Gray

*Pedicularis ornithorhynchus* Benth. [HC2]

Flora Boreali-Americana 2: 108.  
duck's-bill, bird's beak lousewort

*Pedicularis ornithorhyncha* Benth. [HC], orthographic variant

*Pedicularis pulchella* Pennell [Draft FNA, HC, HC2, Montana Flora]

Notulae Naturae of the Academy of Natural Sciences of Philadelphia 95: 7?10, f. [p. 9 (right)].  
pretty dwarf lousewort

Joe Arnett collected a specimen in Chelan County that appears to be *P. pulchella*. This population would represent a significant disjunction of this narrowly endemic species from southwestern Montana.

*Pedicularis racemosa* Douglas ex Benth. [HC, HC2]

leafy lousewort, sickletop lousewort

var. *alba* (Pennell) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 363.  
sickletop lousewort

*Pedicularis racemosa* Douglas ex Benth. ssp. *alba* Pennell [KZ99]

var. *racemosa* [HC, HC2]

Fl. Bor.-Amer. 2(9): 108.  
sickletop lousewort

*Pedicularis racemosa* Douglas ex Benth. ssp. *racemosa* [KZ99]

*Pedicularis rainierensis* Pennell & F.A. Warren [HC, HC2]

Bulletin of the Torrey Botanical Club 55(6): 317-318.  
Mt. Rainier lousewort

Rare

*Rhinanthus* [HC, HC2]

rattle-box, yellow rattle

*Rhinanthus minor* L. [HC2, IFBC]

Amoen. Acad., Linnaeus ed. 3: 54.  
little yellow rattle

*Alectorolophus minor* (L.) Wimm. & Grab.

ssp. *groenlandicus* (Chabert) Neum. [HC2]

ssp. *minor* [HC2]

**Triphysaria** [HC2]

false owl-clover

*Triphysaria eriantha* (Benth.) T.I. Chuang & Heckard [HC2]

butter-and-eggs, Johnny-tuck owl-clover

*Orthocarpus erianthus* Benth. [HC]

ssp. *eriantha* [HC2, JPM, KZ99]

butter and eggs, johnny turk

**Triphysaria pusilla** (Benth.) T.I. Chuang & Heckard [HC2, JPM]

Syst. Bot. 16(4): 661.

dwarf owl-clover

*Orthocarpus pusillus* Benth. [HC]

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## Oxalidaceae [HC, HC2] Wood-Sorrel Family

**Synonyms:** (none)

**References:** (none)

**Oxalis** [HC, HC2]

lady's-sorrel, oxalis, wood-sorrel

*Oxalis corniculata* L. [HC, HC2]

Sp. Pl. 1: 435.

creeping yellow wood-sorrel

*Oxalis dillenii* Jacq. [HC, HC2]

Oxalis 28.

slender yellow wood-sorrel

*Oxalis corniculata* L. var. *dillenii* (Jacq.) Trel.

*Oxalis exilis* A. Dunn [HC2]

***Oxalis oregana*** Nutt. [HC, HC2]

Fl. N. Amer. 1(2): 211.

redwood-sorrel, Oregon wood-sorrel

*Oxalis stricta* L. [HC, HC2]

Sp. Pl. 1: 435.

upright yellow wood-sorrel

*Oxalis ambigua* Jacq.

*Oxalis bushii* Small

*Oxalis coloradensis* Rydb.

*Oxalis cymosa* Small

*Oxalis europaea* Jord.

*Oxalis fontana* Bunge

*Oxalis interior* (Small) Fedde

*Oxalis rufa* Small

***Oxalis suksdorfii*** Trel. [HC, HC2]

Memoirs of the Boston Society of Natural History 4: 89. .

western yellow wood-sorrel

*Oxalis corniculata* L. var. *macrantha* Trel., misapplied

*Oxalis pumila* Nutt.

*Xanthoxalis suksdorfii* (Trel.) Small

Rare.

***Oxalis trilliifolia*** Hook. [HC, HC2]

Flora Boreali-Americana 1(3): 118. (as trilliifolium).  
great wood-sorrel, trillium-leaf wood-sorrel

*Hesperoxalis trilliifolia* (Hook.) Small

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## **Paeoniaceae** [FNA8, HC, HC2] Peony Family

**Synonyms:** (none)

FNA8: "Paeonia was long included in Ranunculaceae or was associated with Dilleniaceae. Angiosperm Phylogeny Group (2003) placed Paeoniaceae in Saxifragales."

**References:** (none)

***Paeonia*** [FNA8, HC, HC2]

Sp. Pl. 1: 530. 1753; Gen. Pl. ed. 5, 235. 1754.  
peony

***Paeonia brownii*** Douglas ex Hook. [FNA8, HC, HC2]

Fl. Bor.-Amer. 1: 27. 1829.  
brown's peony, western peony

FNA8: "Paeonia was long included in Ranunculaceae or was associated with Dilleniaceae. Angiosperm Phylogeny Group (2003) placed Paeoniaceae in Saxifragales. Reports of *Paeonia brownii* from Canada evidently stem from early confusion between Vancouver, British Columbia, and Vancouver, Washington (H. J. Scoggan 1978-1979, vol. 3). The type of *P. brownii* was collected on Mount Hood in Oregon, about 75 kilometers from Fort Vancouver (now Vancouver), Washington, which was a base for the collector, David Douglas."

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## **Papaveraceae** [FNA3, HC, HC2] Poppy Family

**Synonyms:**

Fumariaceae [FNA3, HC] (Fumitory Family)

**References:**

\* Lidén, M. 1986. Synopsis of Fumarioideae (Papaveraceae) with a monograph of the tribe Fumarieae. Opera Bot. 88: 1-133.

***Argemone*** [FNA3, HC2]

Sp. Pl. 1: 508. 1753; Gen. Pl. ed. 5, 225, 1754.

***Argemone polyanthemos*** (Fedde) G.B. Ownbey [FNA3]

Mem. Torrey Bot. Club. 21: 128. 1958.  
white prickly-poppy

*Argemone intermedia* Sweet var. *polyanthemos* Fedde

Not in H&C; In WA per Richard Olds report to KZ. No specimens for this species exist in any Pacific Northwest herbarium for any state or province in the region. This species is considered excluded in Washington until a specimen is generated.

***Chelidonium*** [FNA3, HC2]

Sp. Pl. 1: 505. 1753; Gen. Pl. ed. 5, 224, 1754.

greater celandine

*Chelidonium majus* L. [FNA3, HC2]

Sp. Pl. 1: 505. 1753.  
devil's milk, swallow wort

*Chelidonium majus* L. var. *majus* [FNA, KZ99, AJ]

Not in H&C; escaped from gardens but questionably naturalized in WA

*Corydalis* [FNA3, HC, HC2]

Fl. France, ed. 3. 4: 637. 1805.  
corydalis

*Corydalis aquae-gelidae* M. Peck & W.C. Wilson [FNA3, HC, HC2]

Leafl. W. Bot. 8(2): 39-40.  
marsh corydalis

*Corydalis aqua-gelidae* M. Peck & W.C. Wilson ex M. Peck [FNA3], orthographic variant  
*Corydalis caseana* A. Gray ssp. *aquae-gelidae* (M. Peck & W.C. Wilson) Zetterl. & Lidén [KZ99]

*Corydalis aurea* Willd. [FNA3, HC, HC2]

Enum. Pl. 2: 740. 1809.  
golden corydalis, scrambled eggs  
*Capnoides aureum* (Willd.) Kuntze

ssp. *aurea* [FNA3, HC2]

Enum. Pl. 2: 740.  
golden corydalis, scrambled eggs

FNA3: "Corydalis aurea subsp. aurea intergrades at times with C . aurea subsp. occidentalis , but usually the two can be distinguished readily when fruiting." C . aurea ssp. occidentalis is not reported from WA by FNA3.

*Corydalis lutea* (L.) DC. [HC, HC2]

yellow corydalis

*Corydalis scouleri* Hook. [FNA3, HC, HC2]

Fl. Bor.-Amer. 1: 36, plate 14. 1829.  
Scouler's fumewort

FNA3: "Corydalis scouleri is restricted to cool, wet habitats from northwestern Oregon northward to Vancouver Island. It is most easily distinguished from Corydalis caseana by the usually highly developed crests and absence of wings on its outer petals. The stigma is essentially triangular (versus rectangular in C . caseana ), and the capsule shape (typically obovoid) is rarely approached in C . caseana."

*Dicentra* [FNA3, HC, HC2]

Linnaea. 8: 457, 468. 1833.  
bleedingheart

*Dicentra cucullaria* (L.) Bernh. [FNA3, HC, HC2]

Linnaea. 8: 457, 468. 1833.  
Dutchman's-breeches

*Dicentra cucullaria* (L.) Bernh. var. *occidentalis* (Rydb.) M. Peck  
*Dicentra occidentalis* (Rydb.) Fedde  
*Fumaria cucullaria* L.

FNA3: "The western populations of *Dicentra cucullaria* appear to have been separated from the eastern ones for at least a thousand years. The western plants are generally somewhat coarser, which apparently led Rydberg to designate the western populations as a separate species. Plants from the Blue Ridge Mountains of Virginia, however, are virtually indistinguishable from those of the West, and much of the variation (which is considerable) within the species probably involves phenotypic response to the environment, or represents ecotypes within the species."

*Dicentra formosa* (Haw.) Walp. [FNA3, HC, HC2]

Repert. Bot. Syst. 1: 118. 1842.  
Pacific bleedingheart

*Dicentra saccata* (Nutt. ex Torr. & A. Gray) Walp.  
*Fumaria formosa* Haw.

ssp. **formosa** [FNA3, HC2]

Repert. Bot. Syst. 1: 118.  
Pacific bleeding heart

H&C does not recognize subspecific taxa. FNA3: "Andrews has been cited almost universally as the author of *Fumaria formosa*. However, Haworth's authorship of the sixth volume of Andrews' Botanists' Repository (in which this species was originally described) generally has been overlooked, and it was actually Haworth who first delineated *F. formosa* (W. T. Stearn 1944). Early attempts to cross *Dicentra formosa* with *D. eximia* (2n = 16) failed, possibly because the *D. formosa* parents were tetraploids. Several later hybrids between the two species received plant patents and have become widely marketed throughout the flora area and elsewhere (K. R. Stern 1961, 1968; K. R. Stern and M. Ownbey 1971). Both subspecies, as well as hybrids between them and *Dicentra eximia*, are widely cultivated."

***Dicentra uniflora*** Kellogg [FNA3, HC, HC2]

Proc. Calif. Acad. Sci. 4: 141. 1871.  
long-horn steer's-head

***Eschscholzia*** [FNA3, HC, HC2]

Horae Phys. Berol. 73. 1820 - [For Johann F. G. von Eschscholtz., 1793.  
poppy

***Eschscholzia californica*** Cham. [FNA3, HC, HC2]

Horae Phys. Berol. 73, plate 15. 1820.  
California poppy

ssp. **californica** [FNA3, HC2]

Horae Phys. Berol. 73, plate 15.  
California poppy

*Eschscholzia californica* Cham. var. *peninsularis* (Greene) Munz

*Eschscholzia californica* Cham. var. *scrocea* (Benth.) Jeps.

*Eschscholzia procera* Greene

FNA3: "Widely planted in North America and elsewhere as an ornamental, roadside, and reclamation plant, with many color forms in the horticultural trade, it often escapes but usually does not persist. This species is highly variable (more than 90 infraspecific taxa have been described), not only among different plants and locations but also within individual plants over the course of the growing season, especially in petal size and color (see W. L. Jepson 1909-1943, vol. 1, part 7, pp. 564-569)."

\* Clark, C. 1978. Systematic studies of *Eschscholzia* (Papaveraceae). I. The origin and affinities of *E. mexicana*.  
Syst. Bot. 3: 374-385.

***Fumaria*** [FNA3, HC, HC2]

Sp. Pl. 2: 699. 1753; Gen. Pl. ed. 5, 314, 1754.  
fumitory, ramping-fumitory

***Fumaria muralis*** Sond. ex W.D.J. Koch [HC2]

common fumitory

Urban weed known from Whatcom, King, and Pacific Counties, as well as Vancouver, BC. Specimens from our area were misidentified as *F. officinalis*, a species with smaller flowers and rugose fruits.

***Fumaria officinalis*** L. [FNA3, HC, HC2]

Sp. Pl. 2: 700. 1753.  
common fumitory

*Fumaria officinalis* L. ssp. *officinalis*

***Fumaria reuteri*** Boiss. [HC2]

Martin's fumitory

Two recent records from King County, Washington, as an urban weed.

***Meconella*** [FNA3, HC, HC2]

Fl. N. Amer. 1: 64. 1838.  
meconella

***Meconella oregana*** Nutt. [FNA3, HC, HC2]

Fl. N. Amer. 1: 64. 1838.  
white fairy-poppy

Listed as threatened in WA. FNA3: "Flowers of *Meconella oregana* often display irregularities such as fusion, loss, or addition of parts (W. R. Ernst 1962)."

***Papaver*** [FNA3, HC, HC2]

Sp. Pl. 1: 506. 1753; Gen. Pl. ed. 5, 224, 1754.  
poppy

*Stylomecon* [FNA3]

***Papaver argemone*** L. [FNA3, HC, HC2]

Sp. Pl. 1: 506. 1753.  
long prickly-head poppy

***Papaver dubium*** L. [FNA3, HC2]

Sp. Pl. 2: 1196. 1753.

FNA3: "In its native range, *Papaver dubium* is a tetraploid complex of five subspecies whose morphologies and distributions intersect to a considerable degree (J. W. Kadereit 1989, 1990). Probably several, if not all, of these entities have been introduced in North America, but it is fruitless to try to distinguish them here, where the species has arrived as a crop weed and the subspecies have no geographic integrity. *Papaver dubium* sometimes seems to intergrade with *P. rhoeas*, at least in North America. The most readily evident character for distinguishing them reliably is the nature of the distal pubescence on the peduncles--whether spreading or appressed."

***Papaver rhoeas*** L. [FNA3, HC, HC2]

Sp. Pl. 1: 507. 1753.  
corn poppy

FNA3: "J. W. Kadereit (1990) suggested that *Papaver rhoeas* originated on the east coast of the Mediterranean, probably derived from one or more of the other species of the section that are native in that region, and only after (and because) "suitable habitats in sufficient extent were provided by man." Various forms with pale pink or white, unspotted, sometimes doubled petals are grown for ornament, notably the Shirley poppies. In North America, the species escapes from cultivation fairly readily and has been introduced also as a crop weed. Excluded species: *Papaver dahlianum* Nordhagen, Bergens Mus. Årbok 2: 46. 1931 *Papaver radicum* Rottb. f. subsp. *dahlianum* (Nordhagen) Rändel We regard this species as being restricted to arctic Europe, a narrower circumscription than U. Rändel's (1977). *Papaver microcarpum* de Candolle, Syst. Nat. 2: 71. 1821"

***Papaver somniferum*** L. [FNA3, HC, HC2]

Sp. Pl. 1: 508. 1753.  
opium poppy

FNA3: "Unknown in the wild, *Papaver somniferum* probably came originally from southeastern Europe and/or southwestern Asia. It has been cultivated for centuries as the source of opium (and its modern derivatives heroin, morphine, and codeine), and also for edible seeds and oil. Various color forms with lacinate and/or doubled petals are grown for ornament. Widely introduced from cultivation and also as a crop weed, it should be expected elsewhere in the flora."

\* Danert, S. 1958. Zur Systematik von *Papaver somniferum* L. Kulturpflanze 6: 61-88.

***Parameconopsis***

***Parameconopsis cambrica*** (L.) Grey-Wilson

## Parnassiaceae (see Celastraceae)

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## Paulowniaceae [HC2] Princess Tree Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

### *Paulownia* [HC2]

princess tree

*Paulownia tomentosa* (Thunb.) Steud. [HC2, Stace 1997]

Nomenclator Botanicus.

princess tree

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## Penthoraceae [FNA8, HC2] Penthorum Family

**Synonyms:** (none)

FNA8:"The position of Penthorum within Rosales has been disputed extensively. A. Cronquist (1981) considered it to be transitional between Crassulaceae and Saxifragaceae. He included it in Saxifragaceae, stating that Penthorum was not distinct enough from Crassulaceae and Saxifragaceae to warrant being treated as a distinct family. Placement of the genus by others has depended on the morphological, anatomical, and embryological traits emphasized. Molecular studies suggest that the genus is sister to Haloragaceae (D. R. Morgan and D. E. Soltis 1993; D. E. Soltis and P. S. Soltis 1997). Recent authors often have placed it in the monogeneric Penthoraceae."

**References:** (none)

### *Penthorum* [FNA8, HC2]

Sp. Pl. 1: 432. 1753; Gen. Pl. ed. 5, 197. 1754.

ditch stonecrop

*Penthorum sedoides* L. [FNA8, HC2]

Sp. Pl. 1: 432. 1753.

ditch stonecrop

FNA8: "The species is introduced in southern British Columbia, Oregon, and Washington, where it grows in cranberry bogs."

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## Phrymaceae [HC2] Lopseed Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

**Diplacus** [HC2]

monkey-flower

***Diplacus clivicola*** (Greenm.) G.L. Nesom [HC2]

Phytoneuron 2012-39: 1?60.

bank monkey-flower

*Mimulus clivicola* Greenm. [HC]

No vouchers from WA exist for this species despite extensive review of herbarium specimens from throughout the region by past and present researchers (Thompson, Nesom). This species is considered excluded from the flora until it is documented in the wild here in WA.

\* Phytoneuron 2012-39: 1?60.

***Diplacus cusickioides*** G.L. Nesom [HC2]

Phytoneuron 2013-65: 1?18.

nesom's monkey-flower

*Diplacus cusickii* (Greene) G.L. Nesom [HC2], misapplied

Nesom: "Diplacus cusickii proves to be narrowly endemic to northern Malheur Co., Oregon, and a few localities in immediately adjacent Idaho along the Snake River; populations outside of this area previously identified as *Mimulus cusickii* are described here as *Diplacus cusickioides* Nesom.."

\* Phytoneuron 2012-39: 1?60.

***Diplacus mephiticus*** (Greene) G.L. Nesom

*Mimulus coccineus* Congdon [JPM]

*Mimulus nanus* Hook. & Arn. var. *mephiticus* (Greene) D.M. Thomps.

PLANTS database cites a 1924 volume of Annals of the Missouri Botanical Garden as the source of the occurrence of this taxon in WA. No specimens have been located confirming this, and JPM2 indicates that this taxon occurs only in CA and NV. Until a specimen is located confirming presence in WA, this taxon is considered excluded.

***Diplacus nanus*** (Hook. & Arn.) G.L. Nesom [HC2]

Phytoneuron 2012-39: 1?60.

dwarf purple monkey-flower, dwarf purple monkeyflower

*Mimulus nanus* Hook. & Arn. [HC]

*Mimulus nanus* Hook. & Arn. ssp. *nanus*

*Mimulus nanus* Hook. & Arn. var. *nanus* [JPM2]

No varietal epithet in H&C.

\* Phytoneuron 2012-39: 1?60.

**Erythranthe** [HC2]

monkey-flower

***Erythranthe alsinoides*** (Douglas ex Benth.) G.L. Nesom & N.S. Fraga [HC2]

Phytoneuron 2012-39: 1?60.

chickweed monkey-flower, wing-stem monkey-flower

*Mimulus alsinoides* Douglas ex Benth. [HC]

\* Phytoneuron 2012-39: 1?60.

***Erythranthe ampliata*** (A.L. Grant) G.L. Nesom [HC2]

Phytoneuron 2012?39: 38.

Nez Perce monkeyflower

Known from Asotin County based on a single collection (1949).

***Erythranthe arvensis*** (Greene) G.L. Nesom [HC2]

Phytoneuron 2012?39: 43.

field monkey-flower

*Mimulus arvensis* Greene

***Erythranthe breviflora* (Piper) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
short-flower monkey-flower

*Mimulus breviflorus* Piper [HC]

\* Phytoneuron 2012-39: 1?60.

***Erythranthe breweri* (Greene) G.L. Nesom & N.S. Fraga [HC2]**

Phytoneuron 2012-39: 1?60.  
Brewer's monkey-flower

*Mimulus breweri* (Greene) Coville [HC, JPM]

*Mimulus rubellus* A. Gray var. *breweri* (Greene) Jeps.

H&C has same combination but with an author of (Greene) Rydb., which neither TROPICOS nor IPNI show as having ever been published.

\* Phytoneuron 2012-39: 1?60.

***Erythranthe caespitosa* (Greene) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
large mountain monkey-flower

*Mimulus tilingii* Regel var. *caespitosus* (Greene) A.L. Grant [HC]

\* Phytoneuron 2012-40: 1?120.

***Erythranthe cardinalis* (Douglas ex Benth.) Spach [HC2]**

Phytoneuron 2012-39: 1?60.  
scarlet monkey-flower

*Diplacus cardinalis* (Douglas ex Benth.) Groenland

*Mimulus cardinalis* Douglas ex Benth. [JPM]

Taxon not in HC. The occurrences in WA are localized in Yakima County near the confluence of Oak Creek and the Tieton River. It is likely that there were homesteads historically in the Oak Creek drainage and that the persistent populations represent naturalized escapes from prior cultivation.

\* Phytoneuron 2012-39: 1?60.

***Erythranthe decora* (A.L. Grant) G.L. Nesom [HC2]**

Phytoneuron 2012?39: 43.  
sharp-leaved monkey-flower, showy monkey-flower

*Mimulus decorus* (A.L. Grant) Suksd.

*Mimulus guttatus* DC. var. *decorus* A.L. Grant

Nesom: "Erythranthe decora is distinct in its uniformly ovate to ovate-lanceolate leaf blades with truncate bases and regularly toothed margins, relatively long internodes, rhizomatous habit, mostly unbranched stems, often with with leafy runners from basal nodes, large corollas, hairy styles, and minutely hirtellous stems, pedicels, calyces, and leaf surfaces. The thin, densely produced rhizomes suggest a relationship with the E. tilingii group."

\* Phytoneuron 2012-39: 1?60.

***Erythranthe dentata* (Nutt. ex Benth.) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
tooth-leaved mimulus, coastal monkey-flower

*Mimulus dentatus* Nutt. ex Benth. [HC]

\* Phytoneuron 2012-39: 1?60.

***Erythranthe floribunda* (Douglas ex Lindl.) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
purple-stem monkey-flower

*Mimulus deltoides* Gand.

*Mimulus floribundus* Lindl. [HC]

*Mimulus floribundus* Lindl. var. *membranaceus* (A. Nelson) A.L. Grant [HC]

*Mimulus membranaceus* A. Nelson  
*Mimulus peduncularis* Douglas ex Benth.  
*Mimulus peduncularis* A. Gray  
*Mimulus pubescens* Benth.  
*Mimulus serotinus* Suksd.

\* Phytoneuron 2012-39: 1?60.

***Erythranthe grandis* (Greene) G.L. Nesom [HC2]**

large monkey-flower

*Mimulus guttatus* DC. var. *grandis* Greene [HC]

***Erythranthe guttata* (Fisch. ex DC.) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.

seep monkey-flower, yellow monkeyflower

(see also *Erythranthe arvensis*, *Erythranthe grandis*, *Erythranthe microphylla*, *Erythranthe nasuta*)

*Mimulus guttatus* DC. [HC]

*Mimulus guttatus* DC. var. *guttatus* [HC]

There are over 50 synonyms for this species. Recent floristic treatments (e.g., JPM, IFBC) have not recognized infraspecific taxa for *E. guttata*.

\* Phytoneuron 2012-39: 1?60.

***Erythranthe inflatula* (Suksd.) G.L. Nesom [HC2]**

disappearing monkey-flower

*Mimulus inflatulus* Suksd.

***Erythranthe jungermannioides* (Suksd.) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.

liverwort monkey-flower

*Mimulus jungermannioides* Suksd. [HC]

Extirpated from WA.

\* Phytoneuron 2012-39: 1?60.

***Erythranthe lewisii* (Pursh) G.L. Nesom & N.S. Fraga [HC2]**

Phytoneuron 2012-39: 1?60.

great purple monkey-flower

*Mimulus lewisii* Pursh [HC]

\* Phytoneuron 2012-39: 1?60.

***Erythranthe microphylla* (Benth.) G.L. Nesom [HC2]**

Phytoneuron 40: 1?123.

small-leaved monkey-flower

*Mimulus guttatus* DC. var. *depauperatus* (A. Gray) A.L. Grant [HC]

From Phytoneuron 40: 1?123. "In rupibus ad flum. Oregon, (Douglas!)" (holotype: K). Pennell (1951, p. 710) noted that the locality visited by Douglas is "Tongue Point, in the present Wahkiakum County, Washington." Treated as a distinct species by Pennell (1951), who noted that its range is "Cascade Mountains and coastal forests from northern Washington to northern California, east to central Idaho."

\* Phytoneuron 40: 1?123.

***Erythranthe moschata* (Douglas ex Lindl.) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.

musk flower, sticky monkeyflower, musk-flower, musk-plant

*Erythranthe moniliformis* (Greene) G.L. Nesom

*Mimulus moniliformis* Greene

*Mimulus moschatus* Douglas ex Lindl. [HC]

*Mimulus moschatus* Douglas ex Lindl. var. *longiflorus* A. Gray [KZ99]

*Mimulus moschatus* Douglas ex Lindl. var. *moniliformis* (Greene) Munz

*Mimulus moschatus* Douglas ex Lindl. var. *moschatus* [HC]  
*Mimulus moschatus* Douglas ex Lindl. var. *sessilifolius* A. Gray [HC]

JPM2 lists the infraspecific taxa of *M. moschatus* as unresolved. Until this issue is decided there or by other regionally relevant floristic projects (e.g., OFP), we will not recognize any infraspecific taxa here.

\* Phytoneuron 2012-39: 1?60.

***Erythranthe nasuta* (Greene) G.L. Nesom [HC2]**

Phytoneuron 2012-40: 44. 2012.  
large-nose monkey-flower, snouted monkey-flower

*Mimulus guttatus* DC. var. *nasutus* (Greene) Jeps.  
*Mimulus nasutus* Greene  
*Mimulus puncticalyx* Gand.

Nesom, Phytoneuron 40: 1?123: "Erythranthe nasuta is characterized by its annual duration (fibrous-rooted), 4-angled stems, broadly ovate leaves commonly with irregularly toothed margins, calyces with longish, protruding upper lobe, short corollas (autogamous ?? chasmogamous or cleistogamous), and glandular vestiture only in the axils. At least the distal and bracteal leaves consistently have hirtellous to hirsutulous adaxial surfaces, even in the smallest of plants."

\* Phytoneuron 40: 1?123.

***Erythranthe patula* (Pennell) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
stalk-leaved monkey-flower

*Mimulus patulus* Pennell

Molecular phylogenetic work (Whittall et al., 2006) indicates that this species is distinct from *M. washingtonensis*, which historically it has been synonymized within.

\* Phytoneuron 2012-39: 1?60.

\* Whittall, J.B., M.L. Carlson, P.M. Beardsley, R.J. Meinke, and A. Liston. 2006. The *Mimulus moschatus* Alliance (Phrymaceae): Molecular and Morphological Phylogenetics and their Conservation Implications. *Systematic Botany* 31(2): 380?397.

***Erythranthe primuloides* (Benth.) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
primrose monkey-flower

*Mimulus primuloides* Benth. [HC]

\* Phytoneuron 2012-39: 1?60.

***Erythranthe ptilota* G.L. Nesom [HC2]**

sessile-leaved monkey-flower

*Mimulus moschatus* Douglas ex Lindl. var. *pallidiflorus* Suksd.

***Erythranthe pulsiferae* (A. Gray) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
candelabrum monkey-flower, Pulsifer's monkey-flower

*Mimulus pulsiferae* A. Gray [HC]

Rare.

\* Phytoneuron 2012-39: 1?60.

***Erythranthe suksdorfii* (A. Gray) N.S. Fraga [HC2]**

Phytoneuron 2012-39: 1?60.  
miniature monkey-flower

*Mimulus suksdorfii* A. Gray [HC]

\* Phytoneuron 2012-39: 1?60.

***Erythranthe tilingii* (Regel) G.L. Nesom [HC2]**

Phytoneuron 2012-39: 1?60.  
large mountain monkey-flower

(see also *Erythranthe caespitosa*)

*Mimulus tilingii* Regel [HC]

*Mimulus tilingii* Regel var. *tilingii* [HC]

\* Phytoneuron 2012-39: 1?60.

***Erythranthe washingtonensis*** (Gand.) G.L. Nesom [HC2]

Phytoneuron 2012-39: 1?60.

Washington monkey-flower

*Mimulus washingtonensis* Gand. [HC]

\* Phytoneuron 2012-39: 1?60.

***Mimetanthe*** [HC, HC2]

mimetanthe

***Mimetanthe pilosa*** (Benth.) Greene [HC, HC2]

Bulletin of the California Academy of Sciences 1(4A): 181 [1885].

downy monkey-flower, false monkey-flower

*Mimulus pilosus* (Benth.) S. Watson

***Mimulus*** [HC, HC2]

monkey-flower

***Mimulus ringens*** L. [HC2, JPM2]

Sp. Pl. 2: 634.

Allegheny monkeyflower

Native to eastern North America. Not in H&C.

**var. *ringens*** [HC2, JPM]

Sp. Pl. 2: 634.

Allegheny monkey-flower

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## Phytolaccaceae [FNA4, HC, HC2] Pokeweed Family

**Synonyms:** (none)

**References:** (none)

***Phytolacca*** [FNA4, HC, HC2]

Sp. Pl. 1: 441. 1753; Gen. Pl. ed. 5, 200. 1754.

pokeberry

***Phytolacca americana*** L. [FNA4, HC, HC2]

Sp. Pl. 1: 441. 1753.

pigeonberry, pokeberry, pokeweed

**var. *americana*** [FNA4, HC2]

Sp. Pl. 1: 441.

pigeonberry, pokeberry, pokeweed

Recently collected in King and Klickitat Cos. Taxonomy follows FNA.

\* Caulkins, D. B. and R. Wyatt. 1990. Variation and taxonomy of *Phytolacca americana* and *P. rigida* in the southeastern United States. Bull. Torrey Bot. Club 117: 357-367.

\* Hardin, J. W. 1964. A comparison of *Phytolacca americana* and *P. rigida*. Castanea 29: 155-164.

\* Nienaber, M. A. and J. W. Thieret. 2003. Phytolaccaceae, pp. 3-11, In: Flora of North America Editorial Committee, eds. 2003. Flora of North America North of Mexico, Volume 4, Magnoliophyta: Caryophyllidae, part 1. New York and Oxford.

## Plantaginaceae [HC, HC2] Plantain Family

### Synonyms:

Callitrichaceae [HC] (Water-Starwort Family)

Hippuridaceae [HC] (Mare's-Tail Family)

References: (none)

### *Antirrhinum* [HC, HC2]

snapdragon

(see also *Misopates*)

*Antirrhinum majus* L. [HC, HC2, Stace 1997]

Sp. Pl. 2: 617.

garden snapdragon, greater snapdragon

Becoming naturalized in Seattle area per AJ

### *Callitriche* [HC, HC2]

water-starwort

*Callitriche brutia* Pentagna [HC2]

narrow-leaf water-starwort

var. *hamulata* (Kutz. apud Reichenb.) Lansdown [HC2]

*Callitriche hermaphroditica* L. [HC, HC2]

autumn water-starwort, northern water-starwort

*Callitriche autumnalis* L. [Abrams], superfluous renaming (illegitimate)

*Callitriche heterophylla* Pursh [HC, HC2]

different-leaved water-starwort

we follow Crow and Hellquist (2000) in not recognizing varieties, noting the range of var. *bolanderi* is completely enclosed within the range of var. *heterophylla*, and that the vars. seem to be defined arbitrarily and intergrade morphologically

var. *bolanderi* (Hegelm.) Fassett [HC, HC2, JPM]

Bolander's different-leaved water-starwort

*Callitriche bolanderi* Hegelm. [Abrams]

*Callitriche heterophylla* Pursh ssp. *bolanderi* (Hegelm.) Calder & Roy L. Taylor [ILBC2]

var. *heterophylla* [HC, HC2, JPM]

*Callitriche anceps* Fernald [HC]

*Callitriche heterophylla* Pursh ssp. *heterophylla* [ILBC2]

*Callitriche marginata* Torr. [HC, HC2]

winged water-starwort

recently collected in several counties in eastern WA

*Callitriche palustris* L. [HC2, ILBC2]

spring water-starwort, vernal water-starwort

*Callitriche verna* L. [HC]

KZ99 considers *C. anceps* a synonym of *C. heterophylla*, but here we follow Philbrick (1989) who called it an ecological variant of *C. verna*. *C. verna* was published in 1755 and *C. palustris* in 1753, here we use the earlier name

\* Philbrick, C. T. 1989. Systematic studies in North American Callitrichaceae. Unpubl. Ph.D. diss., Univ. of Connecticut, Storrs, CT.

*Callitriche stagnalis* Scop. [HC, HC2]

pond water-starwort

*Callitriche trochlearis* Fassett [HC, HC2]

Rhodora 53(632): 194.  
effluent water-starwort

*Chaenorhinum* [HC2]

dwarf snapdragon

*Chaenorhinum minus* (L.) Lange [HC2, IFBC]

Prodr. Fl. Hispan. 2: 577-578.  
dwarf-snapdragon

Noxious; Original Wa. record based on Madrono 1983 and Weed Board.

*Collinsia* [HC, HC2]

collinsia, blue-eyed Mary

*Collinsia grandiflora* Lindl. [HC, HC2]

Bot. Reg. 13: pl. 1107.  
large-flowered blue-eyed Mary, blue-lips blue-eyed Mary

*Collinsia parviflora* Lindl. var. *grandiflora* (Lindl.) Ganders & G.R. Krause

*Collinsia parviflora* Lindl. [HC, HC2]

Bot. Reg. 13: pl. 1082.  
small-flower blue-eyed Mary

*Collinsia grandiflora* Lindl. var. *pusilla* A. Gray

*Collinsia rattanii* A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 15(1): 50.  
Rattan collinsia, rattan collinsia

*Collinsia rattanii* A. Gray ssp. *glandulosa* (Howell) Pennell [HC]

*Collinsia rattanii* A. Gray ssp. *rattanii*

*Collinsia sparsiflora* Fisch. & C.A. Mey. [HC, HC2]

few-flowered blue-eyed Mary, few-flowered collinsia

var. *sparsiflora* [HC2]

few-flowered blue-eyed Mary

*Collinsia bruceae* M.E. Jones

*Collinsia sparsiflora* Fisch. & C.A. Mey. var. *bruceae* (M.E. Jones) Newsom

*Collinsia sparsiflora* Fisch. & C.A. Mey. var. *bruceae* (M.E. Jones) Newsom [HC], orthographic variant

Rare

*Cymbalaria* [HC, HC2]

*Cymbalaria muralis* G. Gaertn., B. Mey. & Scherb. [HC, HC2]

Oekon. Fl. Wetterau 2: 397.  
Kenilworth-ivy, ivy-leaved toadflax

*Linaria cymbalaria* (L.) Mill.

*Digitalis* [HC, HC2]

foxglove

*Digitalis purpurea* L. [HC, HC2]

Sp. Pl. 2: 621-622.  
purple foxglove

*Gratiola* [HC, HC2]

hedge-hyssop

*Gratiola ebracteata* Benth. ex A. DC. [HC, HC2]

Prodromus Systematis Naturalis Regni Vegetabilis 10: 595.

bractless hedge-hyssop

***Gratiola neglecta*** Torr. [HC, HC2]

Cat. Pl. New York 89.

American hedge-hyssop, clammy hedge-hyssop

***Hippuris*** [HC, HC2]

mare's-tail

***Hippuris montana*** Ledeb. ex Rchb. [HC, HC2]

Iconographia Botanica seu Plantae Criticae 1: 71, pl. 86, f. 181.

mountain mare's-tail

***Hippuris vulgaris*** L. [HC, HC2]

Sp. Pl. 1: 4.

common mare's-tail

***Kickxia*** [HC, HC2]

cancerwort, fluellin

***Kickxia elatine*** (L.) Dumort. [HC, HC2]

sharpleaf cancerwort

Recently collected (2016) from Shoreline, WA, where weedy along a fenceline on edge of sportsfields.

Also known from southwest British Columbia and western Oregon.

***Linaria*** [HC, HC2]

toadflax

(see also *Nuttallanthus*)

***Linaria bipartita*** (Vent.) Willd. [HC2]

***Linaria dalmatica*** (L.) Mill. [HC, HC2]

dalmation toadflax

(see also *Linaria grandiflora*)

Noxious

**ssp. *dalmatica*** [HC2, JPM2]

Gard. Dict. (ed. 8) *Linaria* no. 13.

brown-leaved toadflax, Dalmatian toadflax, dalmatian toadflax

*Linaria genistifolia* (L.) Mill. ssp. *dalmatica* (L.) Maire & Petitm. [JPM]

Noxious weed.

**ssp. *macedonica*** (Griseb.) D.A. Sutton [HC2]

***Linaria genistifolia*** (L.) Mill. [HC, HC2]

broomleaf toadflax

**ssp. *genistifolia*** [HC2]

***Linaria grandiflora*** Desf. [HC2]

large-flowered linaria

Well established in central Washington adjacent to east base Cascades, where plants were formerly misidentified as *Linaria dalmatica*.

***Linaria maroccana*** Hook. f. [HC2]

Moroccan toadflax

***Linaria purpurea*** (L.) Mill. [HC2, JPM]

Gard. Dict. (ed. 8) *Linaria* no. 5.

purple toadflax

Not in H&C.

***Linaria vulgaris*** Mill. [HC, HC2]

Gard. Dict. (ed. 8) no. 1.  
greater butter-and-eggs  
*Linaria linaria* (L.) H. Karst.

**Misopates** [HC2]

weasel's snout

*Misopates orontium* (L.) Raf. [HC2, KZ99]  
lesser snapdragon, weasel's snout

*Antirrhinum orontium* L. [HC]

**Nothochelone** [HC, HC2]

***Nothochelone nemorosa*** (Douglas ex Lindl.) Straw [HC, HC2]

Brittonia 18(1): 85.  
woodland-beardtongue

*Penstemon nemorosus* (Douglas ex Lindl.) Trautv. [VPPNW4]

**Nuttallanthus** [HC2]

blue toadflax

*Nuttallanthus canadensis* (L.) D.A. Sutton [HC2, JPM2]

Revis. Antirrhineae 457.  
Canada toadflax, old field toadflax  
(see also *Nuttallanthus texanus*)

*Linaria canadensis* (L.) Dum. Cours. [HC]

*Linaria canadensis* (L.) Dumont var. *canadensis* [HC]

***Nuttallanthus texanus*** (Scheele) D.A. Sutton [HC2, JPM2]

Revis. Antirrhineae 460.  
blue toadflax, Texas toadflax

*Linaria canadensis* (L.) Dum. Cours. var. *texana* (Scheele) Pennell [HC]

*Linaria texana* Scheele

\* Sutton, D.A. 1988. A Revision of the Tribe Antirrhineae 455-461.

**Penstemon** [HC, HC2]

beardtongue, penstemon

***Penstemon acuminatus*** Douglas ex Lindl. [HC, HC2]

sand dune penstemon, sharp-leaved penstemon

var. ***acuminatus*** [HC2, IMF4, Strickler 1997]

Edwards's Bot. Reg. 15: pl. 1285.  
sand dune penstemon, sharp-leaved penstemon

No varietal epithet in H&C.

***Penstemon attenuatus*** Douglas ex Lindl. [HC, HC2]

sulphur penstemon, taper-leaved penstemon

var. ***attenuatus*** [HC, HC2]

Edwards's Bot. Reg. 15: pl. 1295.  
sulphur penstemon, taper-leaved penstemon

*Penstemon nelsoniae* D.D. Keck & J.W. Thomp.

var. ***palustris*** (Pennell) Cronquist [HC, HC2]

In C. L. Hitchcock et al., Vasc. Pl. Pacific N.W. 4: 373.

*Penstemon attenuatus* Douglas ex Lindl. ssp. *palustris* (Pennell) D.D. Keck

*Penstemon palustris* Pennell

***Penstemon barrettiae*** A. Gray [HC, HC2]

Synopsis Filicum (ed. 2) 2(1): 440.  
Barrett's beardtongue

Rare.

***Penstemon cardwellii*** Howell [HC, HC2]

Fl. N.W. Amer. 5: 510-511.  
Cardwell's beardtongue

***Penstemon confertus*** Douglas ex Lindl. [HC, HC2]

Edwards's Bot. Reg. 15: pl. 1260.  
lesser yellow beardtongue

***Penstemon davidsonii*** Greene [HC, HC2]

Davidson's penstemon

var. ***davidsonii*** [HC, HC2]

Pittonia 2(11C): 241-242.  
Davidson's beardtongue

*Penstemon menziesii* Hook. ssp. *davidsonii* (Greene) Piper  
*Penstemon menziesii* Hook. ssp. *thompsonii* Pennell & D.D. Keck

var. ***menziesii*** (D.D. Keck) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 379.  
Davidson's beardtongue

*Penstemon davidsonii* Greene ssp. *menziesii* D.D. Keck

***Penstemon deustus*** Douglas ex Lindl. [HC, HC2]

hot-rock penstemon

var. ***deustus*** [HC, HC2]

Edwards's Bot. Reg. 16: pl. 1318.  
hot-rock penstemon

var. ***variabilis*** (Suksd.) Cronquist [HC, HC2]

hotrock penstemon, scabland penstemon, scorched penstemon

*Penstemon deustus* Douglas ex Lindl. ssp. *variabilis* (Suksd.) Pennell & D.D. Keck  
*Penstemon variabilis* Suksd.

Rare

***Penstemon diphyllus*** Rydb. [HC, HC2]

Memoirs of the New York Botanical Garden 1: 349-350.  
two-leaf beardtongue

*Penstemon triphyllus* Douglas ex Lindl. ssp. *diphyllus* (Rydb.) D.D. Keck

***Penstemon ellipticus*** J.M. Coult. & Fisher [HC, HC2]

Bot. Gaz. 18: 302. (as *Pentstemon*).  
rockvine beardtongue

*Penstemon davidsonii* Greene ssp. *ellipticus* (J.M. Coult. & Fisher) B. Boivin

***Penstemon eriantherus*** Pursh [HC, HC2]

crested tongue penstemon, fuzzy penstemon

var. ***eriantherus*** [HC, HC2]

Fl. Amer. Sept. 2: 737-738 [1813].  
fuzzy-tongue penstemon

Var. *eriantherus* is not to be expected in WA, and the one collection at WTU was collected within the city of Spokane. Two specimens of this variety were collected in WA in 1995 and are held at RM. These specimens have not been verified.

var. ***whitedii*** (Piper) A. Nelson [HC, HC2]

Bot. Gaz. 54(2): 148.  
fuzzy-tongue penstemon

*Penstemon whitedii* Piper

WA endemic.

***Penstemon euglaucus*** English [HC, HC2]

Proceedings of the Biological Society of Washington 41(45): 197-198.  
glaucous beardtongue

***Penstemon fruticosus*** (Pursh) Greene [HC, HC2]

bush penstemon, shrubby penstemon

var. ***fruticosus*** [HC, HC2]

Pittonia 2(11C): 239.  
shrubby penstemon

var. ***scouleri*** (Lindl.) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 385.  
shrubby penstemon

*Penstemon fruticosus* (Pursh) Greene ssp. *scouleri* (Lindl.) Pennell & D.D. Keck  
*Penstemon scouleri* Lindl.

var. ***serratus*** (D.D. Keck) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 385.  
shrubby penstemon

*Penstemon fruticosus* (Pursh) Greene ssp. *serratus* D.D. Keck

***Penstemon gairdneri*** Hook. [HC, HC2]

gairdner's penstemon

var. ***gairdneri*** [HC, HC2]

Fl. Bor.-Amer. 2: 99.  
Gairdner's penstemon

***Penstemon glandulosus*** Douglas [HC, HC2]

glandular penstemon

var. ***chelanensis*** (D.D. Keck) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 388.  
sticky-stem penstemon

*Penstemon glandulosus* Douglas ssp. *chelanensis* D.D. Keck

var. ***glandulosus*** [HC, HC2]

Edwards's Bot. Reg. 15: pl. 1262.  
sticky-stem penstemon

***Penstemon hesperius*** M. Peck [HC2]

Torrey 32(6): 152?153.  
tall beardtongue

Known only from Clark County in Washington.

***Penstemon humilis*** Nutt. ex A. Gray [HC, HC2]

lowly penstemon

var. ***humilis*** [HC2, Strickler 1997]

Proc. Amer. Acad. Arts 6: 69.  
lowly penstemon

*Penstemon humilis* Nutt. ex A. Gray ssp. *humilis*

No varietal epithet in H&C.

***Penstemon ovatus*** Douglas [HC, HC2]

Bot. Mag. 56: pl. 2903.  
egg-leaf beardtongue, broad-leaved penstemon

***Penstemon palmeri*** A. Gray [HC2, JPM, Strickler 1997]

Palmer's penstemon

Not in H&C. Increasingly used by transportation departments in roadside wildflower seed mixes. Reportedly escaped in eastern WA.

var. *palmeri* [HC2, JPM]

Proc. Amer. Acad. Arts 7: 379.

Palmer's penstemon

*Penstemon palmeri* A. Gray ssp. *typicus* D.D. Keck

***Penstemon pennellianus*** D.D. Keck [HC, HC2]

American Midland Naturalist 23(3): 614-615.

Blue Mountain beardtongue

***Penstemon procerus*** Douglas ex Graham [HC, HC2]

small-flowered penstemon

var. *procerus* [HC, HC2]

Edinburgh New Philos. J. 7: 348.

small-flowered penstemon

var. *tolmiei* (Hook.) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 399.

small-flowered penstemon

***Penstemon pruinosus*** Douglas ex Lindl. [HC, HC2]

Botanical Register; consisting of coloured . . . 15: pl. 1280.

Chelan beardtongue

***Penstemon richardsonii*** Douglas ex Lindl. [HC, HC2]

Richardson's penstemon

var. *richardsonii* [HC, HC2]

Bot. Reg. 13: pl. 1121.

Richardson's penstemon

***Penstemon rupicola*** (Piper) Howell [HC, HC2]

Fl. N.W. Amer. 5: 510.

cliff beardtongue, rock penstemon

*Penstemon newberryi* A. Gray var. *rupicola* Piper

***Penstemon rydbergii*** A. Nelson [HC, HC2]

Bull. Torrey Bot. Club 25(5): 281.

Rydberg's beardtongue

***Penstemon serrulatus*** Menzies ex Sm. [HC, HC2]

The Cyclopaedia; or, universal dictionary of arts, . . . 26: Penstemon no. 5.

Cascade beardtongue, coast penstemon

***Penstemon speciosus*** Douglas ex Lindl. [HC, HC2]

Edwards's Bot. Reg. 15: pl. 1270.

royal beardtongue, showy penstemon

*Penstemon speciosus* Douglas ex Lindl. ssp. *kennedyi* (A. Nelson) D.D. Keck

***Penstemon subserratus*** Pennell [HC, HC2]

Notulae Naturae of the Academy of Natural Sciences of Philadelphia 71: 13.

fine-tooth beardtongue

***Penstemon triphyllus*** Douglas ex Lindl. [HC, HC2]

Edwards's Botanical Register 15: pl. 1245.

whorled beardtongue

var. *triphyllus* [HC2]

***Penstemon venustus*** Douglas ex Lindl. [HC, HC2]

Edwards's Botanical Register 16: pl. 1309.

elegant beardtongue, Blue Mountain penstemon

***Penstemon washingtonensis*** D.D. Keck [HC, HC2]

American Midland Naturalist 33(1): 150-151, f. 6.  
Washington beardtongue

WA endemic.

***Penstemon wilcoxii*** Rydb. [HC, HC2]

Bulletin of the Torrey Botanical Club 28(1): 28-29.  
Wilcox's beardtongue

*Penstemon ovatus* Douglas var. *pinetorum* Piper

***Plantago*** [HC, HC2]

plantain

***Plantago arenaria*** Waldst. & Kit. [HC2]

sand plantain

*Plantago indica* L.

*Plantago psyllium* L. [HC], illegitimate name

*Plantago scabra* Moench

***Plantago aristata*** Michx. [HC, HC2]

Fl. Bor.-Amer. 1: 95.

large-bract plantain

(see also *Plantago patagonica*)

***Plantago coronopus*** L. [HC, HC2, JPM]

Sp. Pl. 1: 115.

buck-horn plantain

*Plantago coronopus* L. ssp. *commutata* (Guss.) Pilg.

Not in HC

***Plantago elongata*** Pursh [HC, HC2, JPM]

Fl. Amer. Sept. 2: 729 [1813].

slender plantain

***Plantago eriopoda*** Torr. [HC, HC2]

Ann. Lyceum Nat. Hist. New York 2: 237.

alkali plantain, red-woolly plantain

H&C do not show this species occurring in WA, and there are no vouchers at WTU of this species from WA; PLANTS database shows this species occurring in WA based on report in Gleason, 1963. This species is considered excluded until vouchers can be located indicating that it occurred in WA at some point.

***Plantago lanceolata*** L. [HC, HC2]

Sp. Pl. 1: 113-114.

English plantain

***Plantago macrocarpa*** Cham. & Schltld. [HC, HC2]

Linnaea 1(2): 166-167.

Alaska plantain

Rare.

***Plantago major*** L. [HC, HC2]

Sp. Pl. 1: 112-113.

nippleseed, common plantain, great plantain

*Plantago major* L. var. *major* [HC]

*Plantago major* L. var. *pachyphylla* Pilg. [HC]

HC describes var. *pachyphylla* as a succulent native of salt marshes.

***Plantago maritima*** L. [HC, HC2, JPM2]

Sp. Pl. 1: 114-115.

sea plantain, seaside plantain

***Plantago patagonica*** Jacq. [HC, HC2]

Icon. Pl. Rar. 2: 9, pl. 306.

woolly plantain

*Plantago purshii* Roem. & Schult.

***Plantago pusilla*** Nutt. [HC, HC2]

Gen. N. Amer. Pl. 1: 100.

dwarf plantain

*Plantago hybrida* W.P.C. Barton

*Plantago pusilla* Nutt. var. *major* Engelm.

***Plantago subnuda*** Pilg. [HC2, JPM]

Notizbl. Königl. Bot. Gart. Berlin 5: 260.

Mexican plantain, tall coastal plantain

Not in HC

***Synthyris*** [HC, HC2]

kittentails, synthyris

*Besseyia* [HC]

***Synthyris lanuginosa*** (Piper) Pennell & J.W. Thomp. [HC2]

Proceedings of the Academy of Natural Sciences of Philadelphia 85(2): 93.

cut-leaf kittentails

*Synthyris pinnatifida* S. Watson var. *lanuginosa* (Piper) Cronquist [HC]

Rare

***Synthyris missurica*** (Raf.) Pennell [HC, HC2]

mountain kittentails

HC does not recognize var. or ssp. but suggests some should be recognized.

ssp. ***major*** (Hook.) Pennell [HC2]

*Synthyris missurica* (Raf.) Pennell var. *major* (Hook.) Pennell ex R.J. Davis

ssp. ***missurica*** [HC2, KZ99]

ssp. ***stellata*** (Pennell) Kartesz & Gandhi [HC2, KZ99]

***Synthyris pinnatifida*** S. Watson [HC, HC2]

(see also *Synthyris lanuginosa*)

*Synthyris pinnatifida* S. Watson var. *pinnatifida* [HC]

***Synthyris reniformis*** (Douglas ex Benth.) Benth. [HC, HC2]

round-leaved kittentails, snow queen

*Synthyris reniformis* (Douglas ex Benth.) Benth. var. *reniformis*

HC names no varieties

***Synthyris rubra*** (Douglas ex Hook.) Benth. [HC2]

Prodromus Systematis Naturalis Regni Vegetabilis 10: 454.

red coraldrops

*Besseyia rubra* (Douglas ex Hook.) Rydb. [HC]

***Synthyris schizantha*** Piper [HC, HC2]

fringe-petal kitten's-tail

***Tonella*** [HC, HC2]

tonella

***Tonella floribunda*** A. Gray [HC, HC2]

Geological Survey of California, Botany 1: 556.  
greater baby-innocence, large-flowered tonella

***Tonella tenella*** (Benth. ex A. DC.) A. Heller [HC, HC2]

Muhlenbergia; a journal of botany 1(1): 5.  
lesser baby-innocence, small-flowered tonella

***Veronica*** [HC, HC2]

speedwell

***Veronica americana*** Schwein. ex Benth. [HC, HC2]

Prodr. 10: 468.  
American brooklime, American speedwell

***Veronica anagallis-aquatica*** L. [HC, HC2]

Sp. Pl. 1: 12.  
blue water speedwell

*Veronica anagallis* L., invalidly published, nomen nudum

***Veronica argute-serrata*** Regel & Schmalh. [HC2]

bilobed speedwell

***Veronica arvensis*** L. [HC, HC2]

Sp. Pl. 1: 13.  
corn speedwell, wall speedwell

***Veronica catenata*** Pennell [HC, HC2, JPM]

chain speedwell

***Veronica chamaedrys*** L. [HC, HC2]

Sp. Pl. 1: 13.  
Germander speedwell

***Veronica cusickii*** A. Gray [HC, HC2]

Syn. Fl. N. Amer. 2(1): 288.  
Cusick's speedwell

***Veronica filiformis*** Sm. [HC, HC2]

Trans. Linn. Soc. London 1: 195.  
thread-stalk speedwell

***Veronica hederifolia*** L. [HC2]

Sp. Pl. 1: 13-14.  
ivy-leaf speedwell

*Veronica hедераefolia* L. [HC], orthographic variant

Spelled hederæfolia in H&C (orthographic variant).

***Veronica xjackschewitzii*** Keller [HC2]

Mostly sterile hybrid of *Veronica anagallis-aquatica* x *Veronica catenata*, collected in 2009 in Yakima County, WA. Rare in North America.

***Veronica longifolia*** L. [HC, HC2]

Sp. Pl. 1: 10.  
long-leaf speedwell

***Veronica officinalis*** L. [HC, HC2]

Sp. Pl. 1: 11.  
Paul's betony, common speedwell

***Veronica peregrina*** L. [HC, HC2]

purslane speedwell

**var. *peregrina*** [HC, HC2]

Sp. Pl. 1: 14.

purslane speedwell

*Veronica peregrina* L. var. *typica* Pennell

var. ***xalapensis*** (Kunth) Pennell [HC, HC2]

purslane speedwell

*Veronica peregrina* L. ssp. *xalapensis* (Kunth) Pennell [KZ99]

*Veronica persica* Poir. [HC, HC2]

Encycl. 8: 542.

bird-eye speedwell, Persian speedwell

*Veronica polita* Fr. [HC2]

gray speedwell

*Veronica scutellata* L. [HC, HC2]

Sp. Pl. 1: 12.

grass-leaf speedwell, marsh speedwell, skullcap speedwell

*Veronica serpyllifolia* L. [HC, HC2]

thyme-leaved speedwell

var. ***humifusa*** (Dicks.) Vahl [HC, HC2]

thyme-leaved speedwell

*Veronica serpyllifolia* L. ssp. *humifusa* (Dicks.) Syme [KZ99]

var. ***serpyllifolia*** [HC, HC2]

thyme-leaved speedwell

*Veronica serpyllifolia* L. ssp. *serpyllifolia* [KZ99]

*Veronica triphyllos* L. [HC2, JPM]

Species Plantarum 1: 14.

finger speedwell

Not in H&C.

*Veronica verna* L. [HC2]

spring speedwell

*Veronica wormskjoldii* Roem. & Schult. [HC, HC2]

Syst. Veg. 1: 101.

American alpine speedwell

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## Platanaceae [FNA3] Plane-Tree Family, Sycamore Family

**Synonyms:** (none)

**References:** (none)

***Platanus*** [FNA3]

Sp. Pl. 2: 999. 1753; Gen. Pl. ed. 5, 433, 1754.

*Platanus occidentalis* L. [FNA3]

Sp. Pl. 2: 999. 1753.

American plane-tree, sycamore

Collected in a few localities along the Columbia River, where likely established from seeds dispersed from trees intentionally planted elsewhere.

## Plumbaginaceae [FNA5, HC, HC2] Leadwort Family, Plumbago Family

**Synonyms:** (none)

**References:** (none)

### *Armeria* [FNA5, HC, HC2]

Enum. Pl. 1: 333. 1809.

sea-pink, thrift

*Armeria arenaria* (Pers.) Schult. [HC2]

### *Armeria maritima* (Mill.) Willd. [FNA5, HC, HC2]

Enum. Pl. 1: 333. 1809.

#### ssp. *californica* (Boiss.) A.E. Porsild [FNA5, HC2]

Bull. Natl. Mus. Canada. 135: 174. 1955.

thrift

*Armeria andina* Poepp. ex Boiss. var. *californica* Boiss.

*Armeria arctica* (Cham.) Wallr. ssp. *californica* (Boiss.) Abrams

*Armeria maritima* (Mill.) Willd. var. *californica* (Boiss.) G.H.M. Lawr. [HC]

*Armeria maritima* (Mill.) Willd. var. *purpurea* (W.D.J. Koch) G.H.M. Lawr. [HC], misapplied

Note that subsp. *maritima* is native to Greenland, but has been found established on the Oregon coast (Yaquina Head), and could possibly be found in Washington. Subspecies *sibirica* has been reported from Washington in error; it is found no closer than Alaska. FNA5: "In northern Washington and on Vancouver Island, populations with hairy leaves have been called *Armeria maritima* var. *purpurea* (Koch) G. H. M. Lawrence, a dimorphic-flowered taxon from central Europe. The American monomorphic-flowered specimens thought to belong to var. *purpurea* are not distinct from subsp. *californica*, except for their hairy leaves. We include hairy-leaved specimens in subsp. *californica*."

#### ssp. *maritima* [FNA5, HC2]

Enum. Pl. 1: 333?334.

Known from southern British Columbia and apparently also in the San Juan Islands.

### *Limonium* [FNA5, HC2]

Gard. Dict. Abr., ed. 4. vol. 2. 1754.

[name conserved]

sea lavender, marsh rosemary, statice

### *Limonium californicum* (Boiss.) A. Heller [FNA5, HC2]

Cat. N. Amer. Pl., 6. 1898.

western marsh-rosemary

Recently (2016) collected from a spreading population in a salt marsh in Whatcom County.

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## Polemoniaceae [HC, HC2] Phlox Family

**Synonyms:** (none)

**References:**

\* Porter, J. M. and L. A. Johnson. 2000. A phylogenetic classification of Polemoniaceae. *Aliso* 19(1): 55-91.

### *Aliciella* [HC2]

aliciella, gilia

### *Aliciella leptomeria* (A. Gray) J.M. Porter [HC2]

*Aliso* 17(1): 38.

Great Basin gilia, sand gily-flower

*Gilia leptomeria* A. Gray [HC, IMF4, JPM, KZ99]

*Gilia leptomeria* A. Gray var. *leptomeria* [HC]

Rare, tracked by WNHP. *G. lottiae*, which was split from this taxon is more common in Washington.

\* Day, A.G. 1993. New taxa and nomenclatural changes in *Allophyllum*, *Gilia*, and *Navarretia* (Polemoniaceae). *Novon* 3(4):331-340.

\* Porter, J.M. 1998. *Aliciella*, a recircumscribed genus of Polemoniaceae. *Aliso* 17:23-46.

***Aliciella lottiae*** (A.G. Day) J.M. Porter [HC2]

*Aliso* 17(1): 40.

Lott's gily-flower

*Gilia lottiae* A.G. Day [KZ99, JPM]

Not in Hitchcock. This taxon was split from *G. leptomeria*.

\* Day, A.G. 1993. New taxa and nomenclatural changes in *Allophyllum*, *Gilia*, and *Navarretia* (Polemoniaceae). *Novon* 3(4):331-340.

***Collomia*** [HC, HC2]

*collomia*

***Collomia debilis*** (S. Watson) Greene [HC, HC2]

alpine *collomia*

(see also *Collomia larsenii*)

var. ***debilis*** [HC, HC2]

*Pittonia* 1(8): 127.

alpine *collomia*

*Collomia debilis* (S. Watson) Greene var. *ipomoea* Payson

*Collomia debilis* (S. Watson) Greene var. *typica* Payson

var. ***trifida*** Payson [HC2, IMF4]

Univ. Wyoming Publ. Sci., Bot. 1: 85.

*Collomia debilis* (S. Watson) Greene var. *integra* Payson

Not in HC. IMF4 reports this variety from "Cascade Mountains of Washington". If no specimens exist at WS, then this taxon should be considered excluded.

***Collomia grandiflora*** Douglas ex Lindl. [HC, HC2]

*Bot. Reg.* 13: pl. 1107.

large-flowered *collomia*, large-flower mountain-trumpet

***Collomia heterophylla*** Douglas ex Hook. [HC, HC2]

*Bot. Mag.* 65: pl. 3695.

varied-leaf *collomia*, variable-leaf mountain-trumpet

***Collomia larsenii*** (A. Gray) Payson [HC2, JPM]

Univ. Wyoming Publ. Sci., Bot. 1: 85.

Larsen's alpine *collomia*, talus *collomia*

*Collomia debilis* (S. Watson) Greene var. *larsenii* (A. Gray) Brand [HC]

***Collomia linearis*** Nutt. [HC, HC2]

*Proc. Amer. Acad. Arts* 15(1): 50.

narrow-leaf *collomia*, narrow-leaf mountain-trumpet

***Collomia macrocalyx*** Leiberg ex Brand [HC, HC2]

*Repert. Spec. Nov. Regni Veg.* 17: 317.

bristle-flowered *collomia*, bristle-flower mountain-trumpet

rare, tracked by WNHP

***Collomia tenella*** A. Gray [HC, HC2]

*Proc. Amer. Acad. Arts* 8: 259.

diffuse *collomia*, diffuse mountain-trumpet

***Collomia tinctoria*** Kellogg [HC, HC2]

Proc. Calif. Acad. Sci. 3(2): 17-18, f. 2.

yellow-staining collomia, yellow-staining mountain-trumpet

***Eriastrum*** [HC, HC2]

eriastrum, woollystar

***Eriastrum wilcoxii*** (A. Nelson) H. Mason [HC2, JPM]

Madroño 8(3): 85.

Wilcox's woolstar

*Eriastrum sparsiflorum* (Eastw.) H. Mason var. *wilcoxii* (A. Nelson) Cronquist [HC, IMF4]

***Gilia*** [HC, HC2]

gilia

(see also *Aliciella*, *Ipomopsis*, *Lathrocasis*, *Microgilia*, *Navarretia*)

***Gilia capitata*** Sims [HC, HC2]

bluehead gilia, globe gilia

ssp. ***capitata*** [HC2, JPM]

Bot. Mag. 53: pl. 2698.

bluefield gilia, globe gilia

***Gilia inconspicua*** (Sm.) Sweet [HC2, JPM]

Hort. Brit. 286.

shy gily-flower

Not included in HC.

***Gilia sinuata*** Douglas ex Benth. [HC, HC2, JPM]

Prodr. 9: 313.

shy gilia, sinuate gilia, rosy gily-flower

*Gilia inconspicua* (Sm.) Sweet var. *sinuata* (Douglas ex Benth.) A. Gray [IMF4]

*Gilia sinuata* Dougl. var. *sinuata* [HC]

***Ipomopsis*** [HC2]

ipomopsis, skyrocket

***Ipomopsis aggregata*** (Pursh) V.E. Grant [HC2]

scarlet gilia, skyrocket

*Cantua aggregata* Pursh

*Gilia aggregata* (Pursh) Spreng. [HC]

ssp. ***aggregata*** [HC2, JPM2]

Aliso 3(3): 360.

scarlet gilia, skyrocket

*Gilia aggregata* (Pursh) Spreng. ssp. *euaggregata* Brand

*Gilia aggregata* (Pursh) Spreng. var. *aggregata* [HC, IMF4]

*Ipomopsis aggregata* (Pursh) V.E. Grant ssp. *formosissima* (Greene) Wherry [HC2, JPM], misapplied

*Ipomopsis aggregata* (Pursh) V.E. Grant var. *aggregata* [IFBC]

***Ipomopsis congesta*** (Hook.) V.E. Grant [HC2]

ballhead gilia, many-flowered gilia

*Gilia congesta* Hook. [HC]

ssp. ***congesta*** [HC2, JPM]

Aliso 3(3): 361.

ballhead gilia, many-flowered gilia

*Gilia burleyana* A. Nelson

*Gilia congesta* Hook. var. *burleyana* (A. Nelson) Constance & Rollins

*Gilia congesta* Hook. var. *congesta* [HC, IMF4]

**Lathrocasis** [HC2]

lathrocasis

**Lathrocasis tenerrima** (A. Gray) L.A. Johnson [HC2, JPM2]

Aliso 19(1): 67.

delicate gilia

*Gilia tenerrima* A. Gray [HC]

Recent molecular phylogenetic work by Leigh Johnson places this taxon in its own genus. This is the name that will be used in the upcoming FNA volume treating Polemoniaceae.

\* Porter, J. M. and L. A. Johnson. 2000. A phylogenetic classification of Polemoniaceae. Aliso 19(1): 55-91.

**Leptosiphon** [HC2]

leptosiphon, linanthus

*Linanthastrum* [HC]

**Leptosiphon bicolor** Nutt. [HC2, JPM2]

Proc. Acad. Nat. Sci. Philadelphia 4(1): 11.

bicolored babystars, bicolored linanthus

(see also *Leptosiphon minimus*)

*Linanthus bicolor* (Nutt.) Greene [HC]

*Linanthus bicolor* (Nutt.) Greene var. *bicolor* [HC]

No subspecies or varieties in JPM2.

\* Bell, C. D., and R. Patterson. 2000. Molecular phylogeny and biogeography of *Linanthus* (Polemoniaceae). Amer. J. Bot. 87(12):1857-1870.

\* Porter, J. M. and L. A. Johnson. 2000. A phylogenetic classification of Polemoniaceae. Aliso 19(1): 55-91.

**Leptosiphon bolanderi** (A. Gray) J.M. Porter & L.A. Johnson [HC2, JPM2]

Aliso 19(1): 80.

Bolander's desert-trumpets, Baker's linanthus

*Linanthus bakeri* H. Mason [HC]

*Linanthus bolanderi* (A. Gray) Greene [JPM]

Rare, tracked by WNHP.

**Leptosiphon harknessii** (Curran) J.M. Porter & L.A. Johnson [HC2, JPM2]

Aliso 19(1): 80.

three-seed desert-trumpets, Harkness' linanthus

*Linanthus harknessii* (Curran) Greene [HC]

*Linanthus harknessii* (Curran) Greene ssp. *condensatus* H. Mason

\* J. M. Porter & L. A. Johnson. 2000. A Phylogenetic Classification of Polemoniaceae, Aliso 19(1):55-91.

**Leptosiphon liniflorus** (Benth.) J.M. Porter & L.A. Johnson [HC2, JPM2]

Aliso 19(1): 81.

flax-flower desert-trumpets, thread-stem linanthus, thread-stemmed linanthus

*Gilia pharnaceoides* Benth.

*Linanthus liniflorus* (Benth.) Greene [JPM]

*Linanthus liniflorus* (Benth.) Greene ssp. *pharnaceoides* (Benth.) H. Mason

*Linanthus liniflorus* (Benth.) Greene var. *pharnaceoides* (Benth.) A. Gray

*Linanthus pharnaceoides* (Benth.) Greene [HC, IMF]

**Leptosiphon minimus** (H. Mason) Battaglia [HC2, JPM2]

Madroño 48(2): 74 (2001 publ. 2002).

true babystars

*Linanthus bicolor* (Nutt.) Greene ssp. *minimus* H. Mason

*Linanthus bicolor* (Nutt.) Greene var. *minimus* (H. Mason) Cronquist [HC]

*Linanthus minimus* (H. Mason) Goodw.

Coastal ecotype. No subspecies or varieties in JPM2.

***Leptosiphon nuttallii*** (A. Gray) J.M. Porter & L.A. Johnson [HC2]

Nuttall's linanthus

*Gilia nuttallii* A. Gray

*Leptodactylon nuttallii* (A. Gray) Rydb.

*Linanthastrum nuttallii* (A. Gray) Ewan [HC, IMF4]

*Linanthus nuttallii* (A. Gray) Greene ex Milliken

ssp. ***nuttallii*** [HC2, JPM2]

Aliso 19(1): 81. 2000.

Nuttall's linanthus

*Linanthus nuttallii* (A. Gray) Greene ex Milliken ssp. *nuttallii*

ssp. ***pubescens*** (R. Patt.) J.M. Porter & L.A. Johnson [HC2]

*Linanthastrum nuttallii* (A. Gray) Ewan var. *pubescens* (R. Patt.) Cronquist

*Linanthus nuttallii* (A. Gray) Greene ex Milliken ssp. *pubescens* R. Patt.

Occurs in California and Nevada; disjunct in the Wenatchee Mountains of Washington.

***Leptosiphon septentrionalis*** (H. Mason) J.M. Porter & L.A. Johnson [HC2, JPM2]

Aliso 19(1): 81.

northern desert-trumpets, northern linanthus

*Gilia septentrionalis* (H. Mason) H. St. John

*Linanthus harknessii* (Curran) Greene var. *septentrionalis* (H. Mason) Jeps. & V. Bailey

*Linanthus septentrionalis* H. Mason [HC, IMF4, JPM, KZ99]

\* Porter, J. M. and L. A. Johnson. 2000. A phylogenetic classification of Polemoniaceae. Aliso 19(1): 55-91.

***Linanthus*** [HC, HC2]

linanthus, prickly-phlox

***Linanthus pungens*** (Torr.) J.M. Porter & L.A. Johnson [HC2, JPM2]

Aliso 19(1): 82.

prickly phlox

*Gilia hallii* Parish

*Gilia pungens* (Torr.) Benth.

*Gilia pungens* (Torr.) Benth. var. *hookeri* (Douglas ex Hook.) A. Gray

*Leptodactylon hazeliae* M. Peck

*Leptodactylon lilacinum* Greene ex Brand

*Leptodactylon pungens* (Torr.) Nutt. [HC, IMF4]

*Leptodactylon pungens* (Torr.) Nutt. ssp. *eupungens* (Brand) Wherry

*Leptodactylon pungens* (Torr.) Nutt. ssp. *hallii* (Parish) H. Mason

*Leptodactylon pungens* (Torr.) Nutt. ssp. *hazeliae* (M. Peck) Meinke

*Leptodactylon pungens* (Torr.) Nutt. ssp. *hookeri* (Benth.) Wherry

*Leptodactylon pungens* (Torr.) Nutt. ssp. *pulchriflorum* (Brand) H. Mason

*Leptodactylon pungens* (Torr.) Nutt. ssp. *squarrosum* (A. Gray) Tidestr.

*Leptodactylon pungens* (Torr.) Nutt. var. *hallii* (Parish) Jeps.

*Leptodactylon pungens* (Torr.) Nutt. var. *hookeri* (Benth.) Jeps.

\* Porter, J. M. and L. A. Johnson. 2000. A phylogenetic classification of Polemoniaceae. Aliso 19(1): 55-91.

***Microgilia*** [HC2]

gilia

***Microgilia minutiflora*** (Benth.) J.M. Porter & L.A. Johnson [HC2]

Aliso 19(1): 79.

small-flowered gilia, small-flower skyrocket

*Gilia minutiflora* Benth. [HC]

*Ipomopsis minutiflora* (Benth.) V.E. Grant [IFBC]

\* J. M. Porter & L. A. Johnson. 2000. A Phylogenetic Classification of Polemoniaceae, Aliso 19(1):55-91.

**Microsteris** [HC, HC2]

microsteris

**Microsteris gracilis** (Hook.) Greene [HC, HC2, JPM2]

Pittonia 3: 300.

slender phlox

*Gilia gracilis* Hook.

*Gilia gracilis* Hook. var. *humilior* (Hook.) H. St. John

*Microsteris gracilis* (Hook.) Greene ssp. *humilis* (Greene) Brand

*Microsteris gracilis* (Hook.) Greene var. *gracilis* [HC, IMF4]

*Microsteris gracilis* (Hook.) Greene var. *humilior* (Hook.) Cronquist [HC, IMF4]

*Microsteris humilis* Greene

*Microsteris micrantha* (Kellogg) Greene

*Phlox gracilis* (Hook.) Greene

*Phlox gracilis* (Hook.) Greene ssp. *gracilis* [KZ99, JPM]

*Phlox gracilis* (Hook.) Greene ssp. *humilis* (Greene) H. Mason [KZ99]

*Phlox gracilis* (Hook.) Greene var. *humilior* (Hook.) B. Boivin

\* Porter, J. M. and L. A. Johnson. 2000. A phylogenetic classification of Polemoniaceae. *Aliso* 19(1): 55-91.

**Navarretia** [HC, HC2]

navarretia, pincushion-plant

**Navarretia breweri** (A. Gray) Greene [HC, HC2]

Pittonia 1: 137.

Brewer's navarretia, yellow-flowered navarretia, yellow pincushion-plant

**Navarretia divaricata** (Torr. ex A. Gray) Greene [HC, HC2]

ssp. **divaricata** [HC2, JPM2]

Pittonia 1: 136.

mountain navarretia

**Navarretia intertexta** (Benth.) Hook. [HC, HC2]

needleleaf navarretia

(see also *Navarretia propinqua*)

*Navarretia intertexta* (Benth.) Hook. ssp. *intertexta* [JPM]

*Navarretia intertexta* Nutt. var. *intertexta* [HC]

*Navarretia minima* Nutt. var. *intertexta* (Benth.) B. Boivin

West of the Cascades and in SE WA.

**Navarretia leucocephala** Benth. [HC2]

least navarretia

ssp. **diffusa** Bjork [HC2]

Madroño 49(3): 165.

diffuse navarretia

Recently described from vernal pools (Bjork 2002).

\* Bjork, C. R. 2002. A new subspecies of *Navarretia leucocephala* (Polemoniaceae) from vernal pools in eastern Washington. *Madroño* 49: 165-168.

ssp. **minima** (Nutt.) A.G. Day [HC2, JPM]

Novon 3(4): 337.

least navarretia

*Navarretia minima* Nutt. [HC, IMF4]

**Navarretia linearifolia** (Howell) L. A. Johnson [HC2]

ssp. **linearifolia** [HC2]

Syst. Bot. 35(3): 625.

linear-leaved pincushion-plant

See Syst. Bot. 35(3): 625 for how *G. capillaris*/*N. capillaris* are misapplied names for this species.

***Navarretia propinqua* Suksd. [HC2]**

Great Basin navarretia

*Gilia propinqua* (Suksd.) H. St. John

*Navarretia intertexta* (Benth.) Hook. ssp. *propinqua* (Suksd.) A.G. Day [JPM2]

*Navarretia intertexta* (Benth.) Hook. var. *propinqua* (Suksd.) Brand [HC, IMF4]

East of the Cascades.

***Navarretia sinistra* (M.E. Jones) L.A. Johnson [HC2]**

Aliso 19(1): 68.

Alva Day's pincushion-plant

See Aliso 19(1): 68. 2000 for details of how this species relates to *N. capillaris*.

\* Porter, J. M. and L. A. Johnson. 2000. A phylogenetic classification of Polemoniaceae. Aliso 19(1): 55-91.

***Navarretia squarrosa* (Eschsch.) Hook. & Arn. [HC, HC2]**

Bot. Beechey Voy. 368.

skunkweed

*Gilia squarrosa* (Eschsch.) Hook. & Arn.

***Navarretia tagetina* Greene [HC, HC2]**

Pittonia 1: 137.

marigold navarretia, northern navarretia, marigold pincushion-plant

Rare, tracked by the WNHP.

***Phlox* [HC, HC2]**

phlox, wild sweet-william

***Phlox austromontana* Coville [HC, HC2, JPM]**

spreading phlox

Jepson Manual lists the distribution of this taxon to be southern California to Baja California, east to Colorado. It does not approach the Pacific Northwest.

***Phlox caespitosa* Nutt. [HC, HC2]**

J. Acad. Nat. Sci. Philadelphia 7(1): 41, pl. 6, f. 1.

clumped phlox, clustered phlox, stiff phlox, tufted phlox

*Phlox caespitosa* Nutt. ssp. *eucaespitosa* Brand

*Phlox diffusa* Benth. ssp. *scleranthifolia* (Rydb.) Wherry

*Phlox douglasii* Hook.

*Phlox douglasii* Hook. ssp. *eudouglasii* Brand

*Phlox douglasii* Hook. ssp. *rigida* (Benth.) Wherry

*Phlox rigida* Benth.

*Phlox scleranthifolia* Rydb.

***Phlox caespitosa* Nutt. [HC, HC2], misapplied**

J. Acad. Nat. Sci. Philadelphia 7(1): 41, pl. 6, f. 1.

clumped phlox, clustered phlox, stiff phlox, tufted phlox

*Phlox caespitosa* Nutt. ssp. *eucaespitosa* Brand

*Phlox diffusa* Benth. ssp. *scleranthifolia* (Rydb.) Wherry

*Phlox douglasii* Hook.

*Phlox douglasii* Hook. ssp. *eudouglasii* Brand

*Phlox douglasii* Hook. ssp. *rigida* (Benth.) Wherry

*Phlox rigida* Benth.

*Phlox scleranthifolia* Rydb.

***Phlox colubrina* Wherry & Constance [HC, HC2]**

American Midland Naturalist 19(2): 433-435, f. 1-2.

Snake River phlox

***Phlox diffusa*** Benth. [HC, HC2]

spreading phlox

*Phlox cyanea* Eastw.

*Phlox diffusa* Benth. ssp. *longistylis* Wherry [KZ99]

*Phlox diffusa* Benth. ssp. *subcarinata* Wherry [JPM]

*Phlox diffusa* Benth. var. *longistylis* (Wherry) M. Peck [HC]

High altitude in the Cascade Mountains - Peck. JPM does not list varieties.

***Phlox hendersonii*** (E.E. Nelson) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 130.

Henderson's phlox

*Phlox douglasii* Hook. ssp. *hendersonii* (E.E. Nelson) Wherry

***Phlox hoodii*** Richardson [HC, HC2]

Narr. Journey Polar Sea 733, pl. 28.

Hood's phlox

ssp. ***canescens*** (Torr. & A. Gray) Wherry [HC2, IMF4, JPM, KZ99]

Hood's phlox

*Phlox canescens* Torr. & A. Gray

*Phlox hoodii* Richardson var. *canescens* (Torr. & A. Gray) M. Peck

*Phlox muscoides* Nutt. [HC]

***Phlox longifolia*** Nutt. [HC, HC2]

J. Acad. Nat. Sci. Philadelphia 7(1): 41-42.

long-leaf phlox

*Phlox grahamii* Wherry

*Phlox longifolia* Nutt. ssp. *calva* Wherry

*Phlox longifolia* Nutt. ssp. *compacta* (Brand) Wherry

*Phlox longifolia* Nutt. ssp. *cortezana* (A. Nelson) Wherry

*Phlox longifolia* Nutt. ssp. *humilis* (Brand) Wherry

*Phlox longifolia* Nutt. ssp. *longifolia* [KZ99]

*Phlox longifolia* Nutt. ssp. *longipes* (M.E. Jones) Wherry

*Phlox longifolia* Nutt. ssp. *typica* Wherry

*Phlox longifolia* Nutt. ssp. *viridis* (E.E. Nelson) Wherry

*Phlox longifolia* Nutt. var. *linearifolia* (Hook.) Brand

*Phlox longifolia* Nutt. var. *longipes* (M.E. Jones) M. Peck

*Phlox longifolia* Nutt. var. *puberula* E.E. Nelson

*Phlox longifolia* Nutt. var. *viridis* (E.E. Nelson) Peabody

*Phlox stansburyi* (Torr.) A. Heller [JPM]

*Phlox viridis* E.E. Nelson

*Phlox viridis* E.E. Nelson ssp. *compacta* (Brand) Wherry

*Phlox viridis* E.E. Nelson ssp. *longipes* (M.E. Jones) Wherry

*Phlox viridis* E.E. Nelson ssp. *viridis*

***Phlox mollis*** Wherry [HC2]

soft phlox

*Phlox kelseyi* Britton var. *ciliata* (Brand) Wherry

Unresolved. *P. mollis* is a loosely wooly nonglandular form of *P. viscida* - HC. This species needs closer examination to determine whether it is a distinct entity or whether it is a synonym of *P. viscida*.

***Phlox multiflora*** A. Nelson [HC, HC2]

Bull. Torrey Bot. Club 25(5): 278.

many-flowered phlox

***Phlox paniculata*** L. [Gray's Manual]

fall phlox

Cultivated ornamental, long persisting. Introduced from the eastern U.S - Welch. No records of it escaping from cultivation, so it is considered excluded from the flora.

***Phlox solivaga*** Mayfield & Darrach [HC2]

yeti phlox

*Phlox solivagus* Mayfield & Darrach, orthographic variant

Recently (2015) described from the Blue Mts.

\* Phytoneuron 2015-25: 1?12.

***Phlox speciosa*** Pursh [HC, HC2, JPM2]

Fl. Amer. Sept. 1: 149. 1814 [1813].

showy phlox

*Phlox speciosa* Pursh ssp. *lanceolata* (E.E. Nelson) Wherry

*Phlox speciosa* Pursh ssp. *lignosa* Brand

*Phlox speciosa* Pursh ssp. *nitida* (Suksd.) Wherry [JPM]

*Phlox speciosa* Pursh ssp. *occidentalis* (Durand ex Torr.) Wherry

*Phlox speciosa* Pursh ssp. *speciosa*

*Phlox speciosa* Pursh var. *nitida* Suksd.

*Phlox speciosa* Pursh var. *occidentalis* (Durand ex Torr.) M. Peck

***Phlox viscida*** E.E. Nelson [HC, HC2]

Revis. W. N. Amer. Phlox. 24.

sticky phlox

***Polemonium*** [HC, HC2]

Jacob's-ladder, polemonium, sky-pilot

***Polemonium californicum*** Eastw. [HC2, JPM]

Bot. Gaz. 37(6): 437-438.

low Jacob's-ladder

*Polemonium columbianum* Rydb.

*Polemonium pulcherrimum* Hook. ssp. *tricolor* (Eastw.) Brand

*Polemonium pulcherrimum* Hook. var. *calycinum* (Eastw.) Brand [HC, IMF4]

***Polemonium carneum*** A. Gray [HC, HC2, JPM]

Syn. Fl. N. Amer. 2(1): 151.

royal Jacob's-ladder, great polemonium, salmon polemonium

*Polemonium carneum* A. Gray ssp. *luteum* (A. Gray) Brand

Rare, tracked by the WNHP.

***Polemonium elegans*** Greene [HC, HC2]

Pittonia 3(18D): 305.

elegant Jacob's-ladder, elegant polemonium

Probably related to *P. chartaceum* H. Mason [JPM].

***Polemonium micranthum*** Benth. [HC, HC2, JPM2]

Prodr. 9: 318.

annual Jacob's-ladder, annual polemonium

*Polemoniella micrantha* (Benth.) A. Heller

***Polemonium occidentale*** Greene [HC, HC2]

western polemonium

*Polemonium caeruleum* L. ssp. *amygdalium* (Wherry) Munz

*Polemonium caeruleum* L. ssp. *occidentale* (Greene) J.F. Davidson

*Polemonium caeruleum* L. var. *pterospermum* Benth.

*Polemonium helleri* Brand

*Polemonium intermedium* (Brand) Rydb.

*Polemonium occidentale* Greene ssp. *amygdalium* Wherry

*Polemonium occidentale* Greene ssp. *occidentale* [JPM2]

*Polemonium occidentale* Greene ssp. *typicum* Wherry

***Polemonium pectinatum*** Greene [HC, HC2]

Bull. Calif. Acad. Sci. 1(1): 10.

Washington Jacob's-ladder, Washington polemonium

Rare, tracked by the WHNP.

***Polemonium pulcherrimum*** Hook. [HC, HC2]

showy polemonium

(see also *Polemonium californicum*)

var. ***pulcherrimum*** [HC, HC2, JPM]

Bot. Mag. 57: pl. 2979.

showy Jacob's-ladder

*Polemonium berryi* Eastw.

*Polemonium fasciculatum* Eastw.

*Polemonium haydenii* A. Nelson

*Polemonium humile* Lindl.

*Polemonium lindleyi* Wherry

*Polemonium pilosum* (Greenm.) G.N. Jones

*Polemonium pulcherrimum* Hook. ssp. *pulcherrimum* [KZ99]

*Polemonium pulcherrimum* Hook. var. *lindleyi* (Wherry) J.P. Anderson

*Polemonium pulcherrimum* Hook. var. *pilosum* (Greenm.) Brand [JPM2]

*Polemonium shastense* Baker ex Eastw.

\* Grant, V. 1989. Taxonomy of the Tufted Alpine and Subalpine Polemoniums (Polemoniaceae). Bot. Gaz. 150: 158-169.

***Polemonium viscosum*** Nutt. [HC, HC2]

J. Acad. Nat. Sci. Philadelphia, ser. 2, 1: 154.

sticky Jacob's-ladder, sticky polemonium

*Polemonium viscosum* Nutt. ssp. *genuinum* Wherry

*Polemonium viscosum* Nutt. ssp. *lemmonii* (Brand) Wherry

Rare, tracked by the WHNP.

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## Polygalaceae [HC2] Milkwort Family

**Synonyms:** (none)

**References:** (none)

***Polygala*** [HC2]

milkwort

***Polygala vulgaris*** L. [HC2]

Sp. Pl. 2: 702.

Recently collected (2014) in Clark County as an apparent garden escape in a nearby natural area.

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## Polygonaceae [FNA5, HC, HC2] Buckwheat Family

**Synonyms:** (none)

The family Polygonaceae is treated in Volume 5 of the Flora of North America series. Significant taxonomic and nomenclatural changes were made in that treatment. Efforts to incorporate those changes here are ongoing (November, 2007).

**References:**

\* Freeman, C.C. and J.L. Reveal. Polygonaceae. In: Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 12+ vols. New York and Oxford. Vol. 5, pp. 216-601.

**Aconogonon** [FNA5, HC2]

fleeceflower

**Aconogonon davisiae** (W.H. Brewer ex A. Gray) Soják [FNA5, HC2]

Preslia. 46: 151. 1974.

Newberry's fleeceflower, Davis' knotweed, Davis's knotweed

*Aconogonon davisiae* (W.H. Brewer ex A. Gray) Soják var. *davisiae* [FNA5]

*Aconogonon davisiae* (W.H. Brewer ex A. Gray) Soják var. *glabrum* (G.N. Jones) S.P. Hong [FNA5]

*Polygonum davisiae* W.H. Brewer ex A. Gray [HC]

*Polygonum newberryi* Small [HC]

*Polygonum newberryi* Small var. *glabrum* G.N. Jones [HC]

*Polygonum newberryi* Small var. *newberryi* [HC]

**Aconogonon phytolaccifolium** (Meisn. ex Small) Rydb. [FNA5, HC2]

Fl. Rocky Mts. 1061. 1917. (as *Aconogonon phytolaccaefolium*).

alpine fleeceflower

*Polygonum phytolaccaefolium* Meisn. ex Small [HC], orthographic variant

*Polygonum phytolaccifolium* Meisn. ex Small

var. **phytolaccifolium** [FNA5, HC2]

In P. A. Rydberg, Fl. Rocky Mts. 1061. 1917. (as *Aconogonon phytolaccaefolium*).

poke knotweed

*Aconogonon phytolaccaefolium* (Meisn. ex Small) Rydb. var. *phytolaccaefolium*, orthographic variant

*Polygonum polymorphum*

**Bistorta** [FNA5, HC2]

Meth. Pl.. 24. 1754.

bistort

**Bistorta bistortoides** (Pursh) Small [FNA5, HC2]

Bull. Torrey Bot. Club. 33: 57. 1906.

American bistort, western bistort

*Polygonum bistortoides* Pursh [HC]

*Polygonum glastifolium* Greene

*Polygonum linearifolium*

*Polygonum vulcanicum* Greene

FNA5: "Infrequent specimens of *Bistorta bistortoides* have basal leaf blades that are lance-ovate and abruptly contracted at the bases, and petioles distinctly winged distally, similar to those of *B. officinalis*."

**Bistorta vivipara** (L.) Delarbre [FNA5, HC2]

Fl. Auvergne, ed. 2. 2: 516. 1800.

alpine bistort, serpent-grass

*Bistorta vivipara* (L.) Delarbre ssp. *macounii* (Small ex J.M. Macoun) Soják

*Persicaria vivipara* (L.) Ronse Decr.

*Polygonum viviparum* L. [HC, ILBC4]

*Polygonum viviparum* L. var. *macounii* (Small ex J.M. Macoun) Hultén

FNA5: "*Bistorta vivipara* is highly variable morphologically and cytologically. Robust plants with large leaves, compact spikes, and persistent bulblets have been named subsp. *macounii*. Abortion of stamens, production of bulblets, and the rarity of fruits suggest that reproduction is largely asexual; fruits and seedlings are produced rarely (N. Söyinki 1989). B. Jonsell and T. Karlsson (2000+, vol. 1) summarized chromosome numbers that include  $2n = 66$ , ca. 77, ca. 80, 88, 99, ca. 100, 110, 120, and ca. 132."

**Chorizanthe** [FNA5, HC, HC2]

Trans. Linn. Soc. London. 17: 416, plate 17, fig. 11; plate 19. 1836.

chorizanthe, spineflower

***Chorizanthe watsonii* Torr. & A. Gray [FNA5, HC, HC2]**

Proc. Amer. Acad. Arts. 8: 199. 1870. (as *watsoni*).  
Watson's spine-flower, five-tooth spineflower

FNA5: "Chorizanthe watsonii is widely distributed in the cold desert of the Great Basin and in the northern part of the warmer Mojave Desert. Plants in the northern part of the range (especially on the Palouse Prairie of south-eastern Washington) usually have three stamens."

***Eriogonum* [FNA5, HC, HC2]**

Fl. Bor.-Amer. 1: 246, plate 24. 1803.

buckwheat, wild buckwheat, eriogonum, sulfur flower, umbrella-plant

***Eriogonum baileyi* S. Watson [FNA5, HC, HC2]**

Proc. Amer. Acad. Arts. 10: 348. 1875.

Bailey's buckwheat

**var. *baileyi* [FNA5, HC2]**

Proc. Amer. Acad. Arts. 10: 348.

Bailey's buckwheat

*Eriogonum vimineum* Douglas ex Benth. var. *multiradiatum* S. Stokes

*Eriogonum vimineum* Douglas ex Benth. var. *porphyreticum* (S. Stokes ex M.E. Jones) S. Stokes

*Eriogonum vimineum* Douglas ex Benth. var. *restioides* (Gand.) S. Stokes

FNA5 reports *E. baileyi* var. *baileyi* occurs in eastern Washington. FNA5: "Variety *baileyi* basically is a taxon of arid regions of the far West, being found primarily in California and Nevada northward through eastern Oregon to eastern Washington. Isolated populations are known from south-central Idaho and from Beaver County, Utah."

***Eriogonum cernuum* Nutt. [FNA5, HC, HC2]**

Proc. Acad. Nat. Sci. Philadelphia. 4: 14. 1848.

nodding buckwheat

*Eriogonum cernuum* Nutt. ssp. *tenue* (Torr. & A. Gray) S. Stokes

*Eriogonum cernuum* Nutt. var. *cernuum* [JPM]

*Eriogonum cernuum* Nutt. var. *psammophilum* S.L. Welsh

*Eriogonum cernuum* Nutt. var. *tenue* Torr. & A. Gray

*Eriogonum cernuum* Nutt. var. *viminale* (S. Stokes) Reveal

Reported by Reveal (1989c) from "southern Washington", and from Franklin Co. by KZ. One immature specimen from Benton Co., WA (WTU) may be this species.

\* Reveal, J. L. 1989c. The Eriogonoid flora of California (Polygonaceae: Eriogonoideae). *Phytologia* 66: 295-414.

***Eriogonum codium* Reveal, Caplow & K. A. Beck [FNA5, HC2]**

Rhodora. 97: 350, fig. 1. 1997.

basalt desert buckwheat, Umptanum buckwheat

Restricted to Benton Co., recently described. FNA5: "Eriogonum codium is a potentially endangered species known from a single site on volcanic bluffs overlooking the Columbia River in Hanford Research National Monument in Benton County. It is worthy of cultivation as a rock-garden plant, although little or no sexual reproduction is known in the natural population. The Umptanum Desert wild buckwheat is a candidate for federal listing and is considered an endangered species by the state of Washington. Much of the population was destroyed in a man-caused fire in 1997. The species is in the Center for Plant Conservation's National Collection of Endangered Plants."

\* Reveal, J. L., F. Caplow, and K. Beck. 1995. *Eriogonum codium* (Polygonaceae: Eriogonoideae), a new species from southcentral Washington. *Rhodora* 97: 350-356.

***Eriogonum compositum* Douglas ex Benth. [FNA5, HC, HC2]**

Edwards's Bot. Reg. 21: plate 1774. 1835.

arrow-leaf buckwheat, northern buckwheat

**var. *compositum* [FNA5, HC, HC2]**

Edwards's Bot. Reg. 21: plate 1774.

northern buckwheat

*Eriogonum compositum* Douglas ex Benth. var. *citrinum* S. Stokes

*Eriogonum compositum* Douglas ex Benth. var. *pilicaule* H. St. John & F.A. Warren

*Eriogonum johnstonii*

*Eriogonum pilicaule*

FNA5: "Variety *compositum* is widespread and common from central-northern Washington and west-central Idaho south through Oregon to northern California."

var. ***lancifolium*** H. St. John & F.A. Warren [FNA5, HC, HC2]

Res. Stud. State Coll. Wash. 1: 88. 1929.

northern buckwheat

*Eriogonum compositum* Douglas ex Benth. ssp. *lancifolium* (H. St. John & F.A. Warren) S. Stokes

FNA5: "Variety *lancifolium* is local and usually uncommon in the mountains of Chelan, Kittitas, Okanogan, and Yakima counties in eastern Washington."

var. ***leianthum*** Hook. [FNA5, HC, HC2]

Hooker's J. Bot. Kew Gard. Misc. 5: 264. 1853.

northern buckwheat

FNA5: "Variety *leianthum* is mostly occasional to locally common in eastern Washington, northwestern and west-central Idaho, and northeastern Oregon."

***Eriogonum douglasii*** Benth. [FNA5, HC, HC2]

Prodr. 14: 9. 1856.

Douglas's buckwheat

(see also *Eriogonum sphaerocephalum*)

var. ***douglasii*** [FNA5, HC, HC2]

in A. P. de Candolle and A. L. P. de Candolle, Prodr. 14: 9.

Douglas' buckwheat

*Eriogonum caespitosum* Nutt. var. *douglasii* (Benth.) M.E. Jones

FNA5: "Variety *douglasii* is widespread in scattered, disjunct populations in southeastern Washington (Columbia, Douglas, Ferry, Kittitas, Klickitat, and Yakima counties) and northeastern Oregon (Baker, Gilliam, Grant, Jefferson, Malheur, Sherman, Union, Wallowa, and Wasco counties)."

***Eriogonum elatum*** Douglas ex Benth. [FNA5, HC, HC2]

Trans. Linn. Soc. London. 17: 413. 1836.

rush buckwheat, tall buckwheat

var. ***elatum*** [FNA5, HC2]

Trans. Linn. Soc. London. 17: 413.

tall buckwheat

FNA5: "Variety *elatum* is found mainly along the eastern edge of the Cascade Ranges in Washington south into northern Oregon, and skips to the Siskiyou/Trinity mountains of southwestern Oregon and northwestern California."

***Eriogonum flavum*** Nutt. [FNA5, HC, HC2]

Cat. Pl. Upper Louisiana. no. 34. 1813.

yellow buckwheat

var. ***piperi*** (Greene) M.E. Jones [FNA5, HC, HC2]

Contr. W. Bot. 11: 7. 1903.

Piper's buckwheat, yellow buckwheat

*Eriogonum flavum* Nutt. ssp. *piperi* (Greene) S. Stokes

*Eriogonum piperi* Greene

FNA5: "Variety *piperi* is the common and widespread phase of the species, found mainly west of the Continental Divide in southern Alberta, southern British Columbia, eastern Washington, northern Idaho, and western Montana south into northeastern Oregon and northwestern Wyoming. It is only slightly variable, the major exception being depauperate individuals at high elevations in harsh

exposures; these have been recognized by some as var. polyphyllum. The length of the stipelike base shortens from west to east, but only rarely are individuals in Montana troublesome to place either here or in var. flavum. The plants do well in cultivation and are now widely available."

***Eriogonum heracleoides* Nutt. [FNA5, HC, HC2]**

J. Acad. Nat. Sci. Philadelphia. 7: 49, plate 7. 1834.

bractless parsnip-flower wild buckwheat, parsnip-flowered buckwheat, parsnip-flowered eriogonum

*Eriogonum angustifolium* Nutt.

*Eriogonum caespitosum* Nutt. ssp. *ramosum* (Piper) S. Stokes

*Eriogonum heracleoides* Nutt. var. *angustifolium* (Nutt.) Torr. & A. Gray [HC]

*Eriogonum heracleoides* Nutt. var. *heracleoides* [FNA5, HC]

*Eriogonum heracleoides* Nutt. var. *leucophaeum* Reveal [FNA5]

*Eriogonum heracleoides* Nutt. var. *minus* Benth. [HC]

***Eriogonum maculatum* A. Heller [FNA5, HC, HC2]**

Muhlenbergia. 2: 188. 1906.

spotted buckwheat

*Eriogonum angulosum* Benth. ssp. *maculatum* (A. Heller) S. Stokes

*Eriogonum angulosum* Benth. var. *maculatum* (A. Heller) Jeps.

*Eriogonum angulosum* Benth. var. *rectipes* Gand.

Known only from historical records in Yakima Co., and considered extirpated in Washington.

***Eriogonum marifolium* Torr. & A. Gray [FNA5, HC, HC2]**

Proc. Amer. Acad. Arts. 8: 161. 1870.

mountain buckwheat

**var. *marifolium* [FNA5, HC2]**

Proc. Amer. Acad. Arts. 8: 161.

marum-leaf wild buckwheat, mountain buckwheat

*Eriogonum marifolium* Torr. & A. Gray var. *apertum* S. Stokes

FNA5 says that this taxon occurs in Yakima County. Both H&C and JPM state range to OR. FNA5: "Variety marifolium occurs in widely scattered locations, often on volcanic peaks, in Washington (Yakima County), Oregon (Crook, Deschutes, Douglas, Hood River, Jackson, Jefferson, Klamath, Lane, Linn, and Marion counties), and north-central California (to Shasta County)."

***Eriogonum microthecum* Nutt. [FNA5, HC, HC2]**

Proc. Acad. Nat. Sci. Philadelphia. 4: 15. 1848. (as microtheca).

slenderbush buckwheat

**var. *laxiflorum* Hook. [FNA5, HC, HC2]**

Hooker's J. Bot. Kew Gard. Misc. 5: 264. 1853. (as microtheca).

slenderbush buckwheat

*Eriogonum confertiflorum* Benth.

*Eriogonum microthecum* Nutt. ssp. *confertiflorum* (Benth.) S. Stokes

*Eriogonum microthecum* Nutt. ssp. *laxiflorum* (Hook.) S. Stokes

FNA5: "Variety laxiflorum is the common expression of the species in the northern part of the species' range. It occurs in northern Arizona, eastern California, western Colorado, central and southern Idaho, southwestern Montana, Nevada, eastern Oregon, northern and western Utah, eastern Washington, and southwestern Wyoming. It overlaps morphologically with var. simpsonii in northern Arizona. The variety is the primary host plant for the rare Mattoni blue butterfly (*Euphilotes rita mattoni*)."

***Eriogonum niveum* Douglas ex Benth. [FNA5, HC, HC2]**

Trans. Linn. Soc. London. 17: 414. 1836.

snow buckwheat

*Eriogonum niveum* Douglas ex Benth. ssp. *decumbens* (Benth.) S. Stokes

*Eriogonum niveum* Douglas ex Benth. ssp. *dichotomum* (Douglas ex Benth.) S. Stokes

FNA5: "Eriogonum niveum is a highly variable species with a multitude of minor expressions that do not appear to have any biogeographic or taxonomic significance. The species is found mainly on the grassy

plains east of the Cascade Range in southern British Columbia, west-central Idaho, northeastern Oregon, and eastern Washington. Some populations closely approach *E. strictum* var. *proliferum*, but the densely lanate leaves and semileaflike to leaflike bracts nearly always distinguish *E. niveum* from that taxon where their ranges overlap. It may well prove that *E. niveum* would be better treated as a subspecies of *E. strictum*, but the nomenclatural combination is not available and it is not suggested here. The plants do well in cultivation."

***Eriogonum nudum* Douglas ex Benth. [FNA5, HC, HC2]**

Trans. Linn. Soc. London. 17: 413. 1836.

bare-stem buckwheat, naked buckwheat

**var. *nudum* [FNA5, HC2]**

Trans. Linn. Soc. London. 17: 413.

barestem buckwheat, naked buckwheat

*Eriogonum latifolium* Sm. var. *parvulum* S. Stokes

FNA5: "Variety *nudum* is the low-elevation tetraploid expression of the species, found mainly in the Coast Ranges and interior valleys from southern Washington through Oregon to California. It is replaced by var. *deductum* at higher elevations in the Sierra Nevada. Yellow-flowered populations occur rarely in the Siskiyou Mountains of California and Oregon."

***Eriogonum ovalifolium* Nutt. [FNA5, HC, HC2]**

J. Acad. Nat. Sci. Philadelphia. 7: 50, plate 8, fig. 1. 1834.

cushion buckwheat, oval-leaved eriogonum

**var. *nivale* (Canby ex Coville) M.E. Jones [FNA5, HC, HC2]**

Contr. W. Bot. 11: 8. 1903.

Sierra cushion buckwheat

*Eriogonum nivale* Canby ex Coville

*Eriogonum rhodanthum* A. Nelson & P.B. Kenn.

FNA5: "Variety *nivale* is the common high-elevation expression of the species in desert ranges of the Great Basin and in the Sierra-Cascade cordillera. In northwestern Washington, some plants of var. *nivale* have scapes to 13 cm (especially in Chelan County). They are well removed from var. *purpureum*, and have the dense, almost brilliant white tomentum of var. *nivale*."

**var. *ovalifolium* [FNA5, HC, HC2]**

J. Acad. Nat. Sci. Philadelphia. 7: 50, plate 8, fig. 1.

cushion wild buckwheat

*Eriogonum ovalifolium* Nutt. var. *multiscapum* Gand.

*Eriogonum ovalifolium* Nutt. var. *nevadense* Gand.

FNA5: "Variety *ovalifolium* is found in eastern California, northwestern Colorado, Idaho, Montana, Nevada, eastern Oregon, Utah, eastern Washington, and Wyoming. It is less widespread than var. *purpureum* and generally tends to flower earlier than that variety. The two sometimes occur together but do not seem to intergrade, although in some cases the only distinguishing feature is flower color. It is important to note that the yellowish hue of var. *ovalifolium* will fade in some herbarium material, making identification of older or less well-preserved material difficult."

**var. *purpureum* (Nutt.) Durand [FNA5, HC2]**

Trans. Amer. Philos. Soc. n. s. 11: 175. 1860.

purple cushion wild buckwheat

*Eriogonum davisianum* S. Stokes

*Eriogonum orthocaulon* Small

*Eriogonum ovalifolium* Nutt. ssp. *purpureum* (Nutt.) A. Nelson ex S. Stokes

*Eriogonum ovalifolium* Nutt. var. *celsum* A. Nelson [HC]

*Eriogonum ovalifolium* Nutt. var. *orthocaulon* (Small) C.L. Hitchc.

*Eucycla purpurea* Nutt.

FNA5: "Variety *purpureum* is the most widespread and common expression of the species, being found in southern British Columbia and southwestern Alberta, and in northern Arizona, eastern California, western Colorado, Idaho, western Montana, Nevada, northwestern New Mexico, eastern

Oregon, Utah, southeastern Washington, and Wyoming. It approaches var. *depressum* both geographically and morphologically in the Yellowstone National Park area, and a clear distinction is not always possible. The name var. *ovalifolium* was long misapplied to what is here termed var. *purpureum*."

***Eriogonum pyrolifolium* Hook. [FNA5, HC, HC2]**

Hooker's J. Bot. Kew Gard. Misc. 5: 395, plate 10. 1853. (as *pyrolaefolium*).  
alpine buckwheat, oarleaf buckwheat

*Eriogonum pyrolifolium* Hook. var. *bellingeranum* M. Peck

*Eriogonum pyrolifolium* Hook. var. *coryphaeum* Torr. & A. Gray [FNA5, HC]

*Eriogonum pyrolifolium* Hook. var. *pyrolifolium* [FNA5, HC]

***Eriogonum sphaerocephalum* Douglas ex Benth. [FNA5, HC, HC2]**

Trans. Linn. Soc. London. 17: 407. 1836.  
rock buckwheat, round-headed eriogonum

**var. *halimioides* (Gand.) S. Stokes [FNA5, HC, HC2]**

*Eriogonum*. 104. 1936.  
rock buckwheat

*Eriogonum fruticosum* S. Stokes

*Eriogonum halimioides* Gand.

FNA5: "Variety *halimioides* is common and widespread in three areas of concentration. The northernmost is east of the Cascade Range in central Washington (Douglas, Kittitas, Klickitat, and Yakima counties). The middle series of populations occurs from central Oregon (Gilliam, Jefferson, Union, Wallowa, and Wasco counties) east into Idaho (Blaine, Elmore, Gem, Gooding, and Washington counties). The southernmost series is in central-southern Oregon (Baker, Grant, Harney, Jackson, Klamath, Lake, Malheur, and Wheeler counties), northeastern California (Lassen, Modoc, Shasta, and Siskiyou counties), and northwestern Nevada (Humboldt and Washoe counties). Variety *halimioides* is highly variable, and a clear distinction between it and some populations assigned here to *E. douglasii* var. *douglasii* is not always possible. Of particular concern are those plants of var. *halimioides* in northeastern Oregon and adjacent southeastern Washington with capitate rather than umbellate inflorescences. Much of what has passed for *E. douglasii* (especially its sublineare phase) in that area actually may be var. *halimioides*."

**var. *sphaerocephalum* [FNA5, HC, HC2]**

Trans. Linn. Soc. London. 17: 407.  
rock buckwheat

*Eriogonum sphaerocephalum* Douglas ex Benth. var. *geniculatum* (Nutt.) S. Stokes

FNA5: "Variety *sphaerocephalum* is common and widespread in eastern Washington, eastern Oregon, and southwestern Idaho, less so in northern and central-western Nevada, and infrequent in California. A collection supposedly obtained in 1883 from the "Flathead region" of Montana (Ayres s.n., NY) is discounted as to location."

**var. *sublineare* (S. Stokes) Reveal [FNA5, HC2]**

Harvard Pap. Bot. 9: 197. 2004.  
scabland wild buckwheat

*Eriogonum douglasii* Benth. var. *sublineare* (S. Stokes) Reveal

*Eriogonum douglasii* Benth. var. *tenue* (Small) C.L. Hitchc. [HC]

FNA5: "Variety *sublineare* is found in south-central Washington and adjacent north-central Oregon. It is frequently confused with *Eriogonum douglasii*."

***Eriogonum strictum* Benth. [FNA5, HC, HC2]**

Trans. Linn. Soc. London. 17: 414. 1836.  
strict buckwheat

**var. *anserinum* (Greene) S. Stokes [FNA5, HC, HC2]**

Fl. Idaho. 249. 1952.  
Goose Lake wild buckwheat

*Eriogonum anserinum* Greene

*Eriogonum ovalifolium* Nutt. ssp. *flavissimum* (Gand.) S. Stokes  
*Eriogonum proliferum* Torr. & A. Gray ssp. *anserinum* (Greene) Munz  
*Eriogonum strictum* Benth. ssp. *anserinum* (Greene) S. Stokes  
*Eriogonum strictum* Benth. var. *flavissimum* (Gand.) C.L. Hitchc.

FNA5: "Variety *anserinum* is the yellow-flowered phase of the species; it and var. *proliferum* are only occasionally found together. This taxon is widely scattered in most of its range in northeastern California, southwestern Idaho, northern Nevada, eastern Oregon, and eastern Washington. It is common mainly from south-central Oregon south into northwestern Nevada and eastern California. The plants are attractive and are occasionally seen in cultivation."

var. ***proliferum*** (Torr. & A. Gray) C.L. Hitchc. [FNA5, HC, HC2]

Vasc. Pl. Pacif. N.W. 2: 132. 1964.  
strict buckwheat

*Eriogonum fulvum* S. Stokes  
*Eriogonum proliferum* Torr. & A. Gray  
*Eriogonum strictum* Benth. ssp. *bellum* (S. Stokes) S. Stokes  
*Eriogonum strictum* Benth. ssp. *proliferum* (Torr. & A. Gray) S. Stokes [HC]  
*Eriogonum strictum* Benth. var. *argenteum* S. Stokes

FNA5: "Variety *proliferum* is widespread and often rather common throughout its range. The largest concentration is found in a gentle arc from northeastern Washington to southern Idaho and western Montana. The variety is widely distributed also in central and eastern Oregon, northern California, and Nevada. In portions of central Idaho and western Montana, some individuals clearly approach *Eriogonum ovalifolium* var. *pansum*."

var. ***strictum*** [FNA5, HC2]

Trans. Linn. Soc. London. 17: 414.  
strict buckwheat

*Eriogonum strictum* Benth. ssp. *strictum* [HC]  
*Eriogonum strictum* Benth. var. *glabrum* C.L. Hitchc. [HC]

FNA5: "Variety *strictum* is infrequent and widely scattered throughout its range in west-central Idaho (Adams, Nez Perce, and Washington counties), northeastern Oregon (Douglas, Morrow, Umatilla, Union, and Wallowa counties), and southeastern Washington (Benton, Columbia, Douglas, Grant, Kittitas, and Yakima counties). Its greatest concentration is in the Blue Mountains of northeastern Oregon and extreme southeastern Washington."

***Eriogonum thymoides*** Benth. [FNA5, HC, HC2]

Prodr. 14: 9. 1856.  
thyme buckwheat, thyme-leaf wild buckwheat

*Eriogonum sphaerocephalum* Douglas ex Benth. ssp. *minimum* (Small) S. Stokes  
*Eriogonum thymoides* Benth. ssp. *congestum* S. Stokes

FNA5: "*Eriogonum thymoides* is an exquisite species concentrated in three regions of the Pacific Northwest. The first is along the eastern edge of the Cascade Range from near Wenatchee, Washington (Adams, Benton, Chelan, Douglas, Franklin, Grant, Kittitas, Klickitat, Lincoln, and Yakima counties), to near the Dalles in extreme north-central Oregon (Union County). The second is from Baker and northern Malheur counties, Oregon, to Adams, Canyon, and Washington counties, Idaho. A third series of populations is in the Mount Bennett Hills area of Gooding County, Idaho, and just over the borders in Blaine, Camas, Elmore, and Lincoln counties. Staminate plants tend to have yellow flowers that quickly fade after pollen release. Pistillate plants tend to have white to pale yellow flowers that persist and greatly elongate as the achene matures."

***Eriogonum umbellatum*** Torr. [FNA5, HC, HC2]

Ann. Lyceum Nat. Hist. New York. 2: 241. 1827.  
sulfur buckwheat, sulfurflower

var. ***devestivum*** Reveal [FNA5, HC2]

Great Basin Naturalist. 32: 115. 1972.  
emperor's sulfur flower

var. ***ellipticum*** (Nutt.) Reveal [FNA5, HC2]

Taxon. 32: 294. 1983.  
sulfur flower

*Eriogonum ellipticum* Nutt.  
*Eriogonum umbellatum* Torr. var. *chrysanthum* Gand. [HC]  
*Eriogonum umbellatum* Torr. var. *croceum* (Small) S. Stokes  
*Eriogonum umbellatum* Torr. var. *stellatum* (Benth.) M.E. Jones [HC]

FNA5: "Variety ellipticum is widely scattered but locally common in the mountains of the Pacific Northwest. It has long been known as var. stellatum, the name being altered to var. ellipticum only for technical nomenclatural reasons. This is the northern phase of the species, with compound inflorescences. Considerable variation in plant size is retained within the circumscription adopted here. Plants from northeastern Oregon and adjacent west-central Idaho are large and showy, and it is this phase (called *Eriogonum croceum* or *E. umbellatum* var. *chrysanthum*) that occasionally is seen in cultivation."

var. ***hausknechtii*** (Dammer) M.E. Jones [FNA5, HC2]

Contr. W. Bot. 11: 6. 1903. (as *hausknechtii*).  
sulfur flower

*Eriogonum hausknechtii* Dammer  
*Eriogonum montanum* Howell  
*Eriogonum umbellatum* Torr. ssp. *hausknechtii* (Dammer) S. Stokes  
*Eriogonum umbellatum* Torr. var. *hausknechtii* (Dammer) M.E. Jones [HC]

FNA5: "Variety *hausknechtii*, as here circumscribed, is a high-elevation taxon found mainly on volcanic peaks in north-central Oregon (Benton, Clackamas, Hood River, and Wasco counties) and south-central Washington (Kittitas and Yakima counties). It is common on Mt. Hood and Mt. Adams. It typically grows with *E. marifolium*, and mixed collections often are found in herbaria; the two taxa have in common a distinctive olive green color of the adaxial leaf surfaces. Hausknecht's sulphur flower is not always clearly distinct from var. *modocense*."

var. ***hypoleium*** (Piper) C.L. Hitchc. [FNA5, HC, HC2]

Vasc. Pl. Pacif. N.W. 2: 135. 1964.  
sulfur flower

*Eriogonum umbellatum* Torr. ssp. *hypoleium* Piper

FNA5: "Variety *hypoleium* is restricted to Chelan and Kittitas counties, Washington, extending from the Mt. Stuart Range south to the Bald Mountain area west of Ellensburg. It is doubtfully distinct from var. *aureum*, although geographically well isolated."

var. ***majus*** Hook. [FNA5, HC2]

Hooker's J. Bot. Kew Gard. Misc. 5: 264. 1853.  
subalpine sulfur flower

*Eriogonum subalpinum* Greene  
*Eriogonum umbellatum* Torr. ssp. *majus* (Hook.) Piper  
*Eriogonum umbellatum* Torr. ssp. *subalpinum* (Greene) S. Stokes  
*Eriogonum umbellatum* Torr. var. *subalpinum* (Greene) M.E. Jones [HC]

FNA5: "Variety *majus* is widespread and common in the Rocky Mountains. These plants are often locally common in Idaho and northern Utah, but they are rather rare in the Cascade Range of Washington. The high-elevation plants in Washington are often markedly different from similarly situated Rocky Mountain plants, having smaller leaves and flowers, and tighter, more compact, umbellate inflorescences. Variety *majus* is distinct from and often grows with var. *umbellatum* in Colorado, leading many local taxonomists to distinguish the two at species rank. In Wyoming and Montana, however, var. *majus* occasionally is difficult to differentiate from var. *dichrocephalum*. Variety *majus* often occurs with *Eriogonum heracleoides*, and mixed collections occasionally are encountered. Care must be taken in the herbarium to differentiate the narrow-leaved *E. heracleoides* var. *leucophaeum* from the broader-leaved *E. umbellatum* var. *majus*, although the two do not grow together."

var. ***sandbergii*** Reveal [FNA5, HC2]

Phytologia. 86: 154. 2004.

Sandberg's sulfur flower

***Eriogonum vimineum* Douglas ex Benth. [FNA5, HC, HC2]**

Trans. Linn. Soc. London. 17: 416. 1836.

broom buckwheat

*Eriogonum shoshonense* A. Nelson

*Eriogonum vimineum* Dougl. ex Benth. ssp. *shoshonense* (A. Nelson) S. Stokes

*Eriogonum vimineum* Douglas ex Benth. var. *shoshonense* (A. Nelson) S. Stokes [HC]

*Eriogonum vimineum* Douglas ex Benth. var. *vimineum* [HC]

FNA5: "Eriogonum vimineum is widespread and common to abundant or even locally weedy from southeastern Washington southward through central and eastern Oregon and western Idaho to northeastern California and northern Nevada. Except for occasional populations in northeastern California, where it can be confused with *E. luteolum*, this species is distinct, albeit variable, throughout its range."

***Fagopyrum* [FNA5, HC2]**

Gard. Dict. Abr., ed. 4. vol. 1. 1754.

[name conserved]

***Fagopyrum esculentum* Moench [FNA5, HC2]**

Methodus. 290. 1794.

garden buckwheat

*Fagopyrum sagittatum* Gilib.

*Fagopyrum vulgare* T. Nees

*Polygonum fagopyrum* L.

Native to Eurasia. FNA5: "Fagopyrum esculentum is a heterostylous, obligate out-crosser. Morphological, allozyme, and molecular data suggest that the cultivated plants are most closely related to wild ones in northwestern Yunnan, China. Common buckwheat is an important pseudocereal crop in China, the Russian Federation, Ukraine, Kazakhstan, and Poland; it is grown in many other countries. It is planted frequently in wildlife food plots, as a catch or cover crop, and as a honey plant in North America. Hulls from the achenes are used for pillow filling, which manufacturers claim has health benefits over traditional foam, polyester, or down fillings."

***Fallopia* [FNA5, HC2]**

Fam. Pl. 2: 277, 557. 1763.

false buckwheat, fleecflower, knotweed

***Fallopia baldschuanica* (Regel) Holub [FNA5, HC2]**

Folia Geobot. Phytotax. 6: 176. 1971.

Bukhara fleecflower, Chinese fleecvine, Russian vine

*Bilderdykia aubertii* (L. Henry) Moldenke

*Fallopia aubertii* (L. Henry) Holub

*Polygonum aubertii* L. Henry [KZ99]

*Polygonum baldschuanicum* Regel

Recently collected in King and Pierce Cos. Stace (1997) notes that *Polygonum aubertii* s. str. is apparently rare in cultivation, and is "very doubtfully distinct" from *P. baldschuanicum*. The supposed differences are achene and flower size, and papillosity in the inflorescence. If the two are considered synonymous, as by Stace (1997) and Wisskirchen and Haeupler (1998), the earlier name is *P. baldschuanicum* (1884 vs. 1907).

\* <b>Stace 1997</b> = Stace, C. 1997. New Flora of the British Isles. Second Edition. Cambridge University Press, Cambridge, UK. 1130 p.

\* Wisskirchen, R., and H. Haeupler, Eds. 1998. Standardliste der Farn- und Blütenpflanzen Deutschlands (mit Chromosomenatlas von Focke Albers). Verlag Eugen Ulmer, Stuttgart, Germany. 766 p. [A synonymized list of ferns and flowering plants of Germany, with chromosome atlas by F Albers; in German]

***Fallopia xbohemica* (Chrték & Chrtková) J.P. Bailey [FNA5, HC2]**

Watsonia. 17: 443. 1989.

Bohemian knotweed, hybrid Japanese knotweed

*Polygonum xbohemicum* (Chrtek & Chrtková) Zika & Jacobson  
*Reynoutria xbohemica* Chrtek & Chrtková

An aggressive weed in lowland Washington, especially in riparian corridors, where it is the most common member of the complex. Zika & Jacobson (2003) illustrate the hybrid and its parents.

- \* Bailey, J. P. and A. P. Conolly. 2000. Prize-winners to pariahs - a history of Japanese knotweed s.l. (Polygonaceae) in the British Isles. *Watsonia* 23: 93-110.
- \* Zika, P. F. and A. L. Jacobson. 2003. An overlooked hybrid Japanese knotweed (*Polygonum cuspidatum* x *sachalinense*; Polygonaceae) in North America. *Rhodora* 105: 143-152.

*Fallopia convolvulus* (L.) Á. Löve [FNA5, HC2]

Taxon. 29: 300. 1970.

Black bindweed, black bindweed, cornbind

*Bilderdykia convolvulus* (L.) Dumort.

*Fallopia convolvulus* (L.) Á. Löve var. *subulata* (Lej. & Courtois) D.H. Kent

*Polygonum convolvulus* L. [HC, JPM]

*Polygonum convolvulus* L. var. *convolvulus* [KZ99]

*Reynoutria convolvulus* (L.) Shinnars

*Tinaria convolvulus* (L.) Webb & Moq. ex Webb & Berthel.

Native to Europe. FNA5: "Fallopia convolvulus can be an aggressive weed in crop fields. Rare plants with winged fruiting perianths have been named var. *subalata*; that characteristic often varies within populations."

*Fallopia japonica* (Houtt.) Ronse Decr. [FNA5, HC2]

Bot. J. Linn. Soc. 98: 369. 1988.

Japanese knotweed

*Reynoutria japonica* Houtt.

An aggressive weed in lowland Washington, especially in riparian corridors.

- \* Bailey, J. P. 1994. The reproductive biology and fertility of *Fallopia japonica* (Japanese Knotweed) and its hybrids in the British Isles, pp. 141-158. In: Waal, C. de, L. E. Child, P. M. Wade, and J. H. Brock, eds., *Ecology and management of invasive riparian plants*. John Wiley and Sons, Chichester.
- \* Bailey, J.P. and C. A. Stace. 1992. Chromosome number, morphology, pairing, and DNA values of species and hybrids in the genus *Fallopia* (Polygonaceae). *Plant Systematics and Evolution* 180: 29-52.
- \* Ronse Decraene, L-P. and J. R. Akeroyd. 1988. Generic limits in *Polygonum* and related genera (Polygonaceae) on the basis of floral characters. *Botanical Journal of the Linnean Society* 98: 321-371.
- \* Stace, C. A. 1989. New combinations in the British and Irish flora. *Watsonia* 17: 442-444
- \* Zika, P. F. and A. L. Jacobson. 2003. An overlooked hybrid Japanese knotweed (*Polygonum cuspidatum* x *sachalinense*; Polygonaceae) in North America. *Rhodora* 105: 143-152.

var. *japonica* [FNA5, HC2]

Japanese knotweed

*Polygonum cuspidatum* Siebold & Zucc. [HC]

- \* Bailey, J. P. 1994. The reproductive biology and fertility of *Fallopia japonica* (Japanese Knotweed) and its hybrids in the British Isles, pp. 141-158. In: Waal, C. de, L. E. Child, P. M. Wade, and J. H. Brock, eds., *Ecology and management of invasive riparian plants*. John Wiley and Sons, Chichester.
- \* Bailey, J.P. and C. A. Stace. 1992. Chromosome number, morphology, pairing, and DNA values of species and hybrids in the genus *Fallopia* (Polygonaceae). *Plant Systematics and Evolution* 180: 29-52.
- \* Ronse Decraene, L-P. and J. R. Akeroyd. 1988. Generic limits in *Polygonum* and related genera (Polygonaceae) on the basis of floral characters. *Botanical Journal of the Linnean Society* 98: 321-371.
- \* Stace, C. A. 1989. New combinations in the British and Irish flora. *Watsonia* 17: 442-444
- \* Zika, P. F. and A. L. Jacobson. 2003. An overlooked hybrid Japanese knotweed (*Polygonum cuspidatum* x *sachalinense*; Polygonaceae) in North America. *Rhodora* 105: 143-152.

*Fallopia sachalinensis* (F. Schmidt) Ronse Decr. [FNA5, HC2]

Bot. J. Linn. Soc. 98: 369. 1988.

giant knotweed

*Polygonum sachalinense* F. Schmidt [HC]

Reaching 5 meters in height, but a relatively uncommon adventive in WA; more common in British

Columbia and the north coast of California.

- \* Sukopp, H. and U. Starfinger. 1995. *Reynoutria sachalinensis* in Europe and in the Far East: a comparison of the species ecology in its native and adventive distribution range, pp. 151-159. In: Pyšek, P., K. Prach, M. Rejmánek, and M. Wade, eds., *Plant Invasions. General Aspects and Special Problems*. SPB Academic Publishing, Amsterdam.

***Oxyria*** [FNA5, HC, HC2]

Veg. Syst. 10: 24, plate 24, fig. 2. 1765.  
mountain sorrel

***Oxyria digyna*** (L.) Hill [FNA5, HC, HC2]

Hort. Kew. 158. 1768.  
mountain-sorrel

*Rumex digynus* L.

FNA5: "Morphological and physiological differences between arctic and alpine populations of *Oxyria* in North America have been documented (H. A. Mooney and W. D. Billings 1961). Arctic plants (Alaska, northern Canada, and Greenland) taken from the field and grown in controlled environments tend to bear inflorescences with more branches, leaves with blades that are wider, and flowers with a more stable number of stamens as compared to alpine plants from populations in the south (California, Colorado, Montana, and Wyoming). Northern plants also have a greater tendency to reproduce asexually, often producing rhizomes and exhibiting relatively lower seed production."

***Oxytheca*** [FNA5, HC, HC2]

Proc. Acad. Nat. Sci. Philadelphia. 4: 18. 1848.  
oxytheca, puncturebract

***Oxytheca dendroidea*** Nutt. [FNA5, HC2]

Proc. Acad. Nat. Sci. Philadelphia. 4: 19. 1848.  
treelike puncturebract

*Oxytheca dendroides* Nutt. [HC], orthographic variant

Note that the specific epithet is misspelled in H&C. The epithet "dendroides" was never published.

ssp. ***dendroidea*** [FNA5, HC2, JPM]

Proc. Acad. Nat. Sci. Philadelphia. 4: 19.  
treeline puncturebract

***Persicaria*** [FNA5, HC2]

Gard. Dict. Abr., ed. 4. vol. 3. 1754.  
knotweed, smartweed, tearthumb

***Persicaria amphibia*** (L.) Gray [FNA5, HC2]

Nat. Arr. Brit. Pl. 2: 268. 1821.  
water smartweed

*Polygonum amphibium* L. [HC]

*Polygonum amphibium* L. var. *coccineum* (Muhl. ex Willd.) Farw.

*Polygonum amphibium* L. var. *emersum* Michx. [JPM, ILBC4]

*Polygonum amphibium* L. var. *stipulaceum* N. Coleman [JPM, ILBC4]

*Polygonum coccineum* Muhl. ex Willd. [HC]

*Polygonum natans* Eaton

FNA5: "*Persicaria amphibia* is widespread in the Northern Hemisphere and naturalized in Mexico, South America, and southern Africa. It is highly polymorphic and the most hydrophytic of the native North American smartweeds (R. S. Mitchell 1976). In recent decades, botanists have tended to follow Mitchell (1968) in recognizing two endemic, intergrading North American varieties. Studies by G. Turesson (1961) and Mitchell (1968, 1976) have shown that phenotypic extremes in the species are part of a cline of nearly continuous morphological variation that is strongly correlated with submergence, but also with some genetic integrity. Formal recognition of varieties is even less tenable when Eurasian elements also are considered. Aquatic-adapted plants, which bloom in water or are sometimes stranded on land, have been called var. *stipulacea* (although that epithet may not be the oldest one available for the taxon). They produce ovoid-conic to short-cylindric inflorescences 10-40(-60) mm, prostrate aerial stems, and leaf

blades that are glabrous with acute to rounded apices. Terrestrial forms of this ecotype usually are spreading-pubescent and often bear ocreae that are foliaceous, green, and flared distally, characters found only in North American plants (R. S. Mitchell 1968). Terrestrial-adapted plants, referred to var. *emersa*, bloom on moist soil and produce short- to elongate-cylindric inflorescences 40-110(-150) mm, spreading or erect aerial stems, and leaf blades that are appressed-pubescent with acute to acuminate apices. They produce ocreae that are entirely chartaceous and not flared distally. Emergent and terrestrial plants of this ecotype exhibit less phenotypic plasticity and a lower frequency of heterostyly than do plants of the aquatic ecotype (R. S. Mitchell 1968). R. S. Mitchell and J. K. Dean (1978) and H. R. Hinds (2000) recognized var. *amphibia*, the Eurasian element, as introduced in New York and New Brunswick, respectively. These plants are morphologically intermediate between the North American ecotypes and often indistinguishable from North American plants (Mitchell and Dean)."

*Persicaria arifolia* (L.) Haraldson [FNA5, HC2]

Acta Univ. Upsal., Symb. Bot. Upsal. 22: 72. 1978.  
halberd-leaf tearthumb

*Polygonum arifolium* L. [KZ99]  
*Polygonum arifolium* L. var. *lentiforme* Fernald & Griscom  
*Polygonum arifolium* L. var. *pubescens* (R. Keller) Fernald  
*Polygonum sagittatum* L. var. *pubescens* R. Keller  
*Tracaulon arifolium* (L.) Raf.  
*Truellum arifolium* (L.) Soják

Reported for WA in FNA5.

*Persicaria hydropiper* (L.) Spach [FNA5, HC2]

Hist. Nat. Vég. 10: 536. 1841.  
smartweed, mild water-pepper

*Polygonum hydropiper* L. [HC]  
*Polygonum hydropiper* L. var. *projectum* Stanford

FNA5: "Herbarium specimens of *Persicaria hydropiper* often are misidentified as *P. punctata*. In addition to its minutely roughened and dull achenes, *P. hydropiper* differs from *P. punctata* frequently in bearing flowers enclosed in the ocreae, the inflorescences thus appearing somewhat leafy. By contrast, inflorescences of *P. punctata* generally appear terminal and leafless."

*Persicaria hydropiperoides* (Michx.) Small [FNA5, HC2]

Fl. S.E. U.S. 378. 1903.  
water pepper, swamp smartweed  
(see also *Persicaria setacea*)

*Persicaria opelousana* (Riddell ex Small) Small  
*Persicaria paludicola* Small  
*Polygonum hydropiperoides* Michx. [HC, ILBC4, JPM]  
*Polygonum hydropiperoides* Michx. var. *adenocalyx* (Stanford) Gleason  
*Polygonum hydropiperoides* Michx. var. *asperifolium* Stanford  
*Polygonum hydropiperoides* Michx. var. *breviciliatum* Fernald  
*Polygonum hydropiperoides* Michx. var. *buschianum* Stanford  
*Polygonum hydropiperoides* Michx. var. *digitatum* Fernald  
*Polygonum hydropiperoides* Michx. var. *hydropiperoides* [HC]  
*Polygonum hydropiperoides* Michx. var. *opelousanum* (Riddell ex Small) W. Stone  
*Polygonum hydropiperoides* Michx. var. *psilostachyum* H. St. John  
*Polygonum opelousanum* Riddell ex Small  
*Polygonum opelousanum* Riddell ex Small var. *adenocalyx* Stanford

FNA5: "The extreme variability in *Persicaria hydropiperoides* is reflected in its extensive synonymy. Among the segregates most often recognized in floras and checklists is *P. opelousana*, which C. B. McDonald (1980) showed to be broadly sympatric and highly interfertile with *P. hydropiperoides*. Consistent with this conclusion, R. S. Mitchell (1971) found that *P. hydropiperoides* and *P. opelousana* are unique among native North American smartweeds in consistently possessing multicellular plate-glands on the abaxial surface of their leaves. Such glands also are found on *P. maculosa*, an introduced European species. Herbarium specimens of *Persicaria hydropiperoides* sometimes are misidentified as *P. maculosa*,

especially when the roots are missing. The former species may be distinguished reliably by its achenes all trigonous (trigonous and biconvex achenes are mixed in the inflorescences of *P. maculosa*) and bristles on the margins of the ocreae that average longer. M. L. Fernald (1922c) reported hybrids with *P. robustior* from Nova Scotia."

***Persicaria lapathifolia* (L.) Gray [FNA5, HC2]**

Nat. Arr. Brit. Pl. 2: 270. 1821.

dock-leaf smartweed, pale smartweed, willow weed

*Polygonum incanum* F.W. Schmidt

*Polygonum incarnatum* Elliott

*Polygonum lapathifolium* L. [HC]

*Polygonum lapathifolium* L. var. *salicifolium* Sibth.

*Polygonum linicola* Sutulov

*Polygonum nodosum* Pers.

*Polygonum scabrum* Moench

*Polygonum tomentosum* Willd.

H&C states introduced from Europe, FNA and JPM state that this species is native. FNA5: "*Persicaria lapathifolia* is a morphologically variable complex with more than two-dozen infraspecific taxa described in the New World and Old World. An allozyme study by L. L. Consaul et al. (1991) did not support recognition of elements often referred to *Polygonum lapathifolium* var. *salicifolium* or *P. scabrum*, which are synonymized here. Yang J. and Wang J. W. (1991) reached a similar conclusion regarding var. *salicifolium* and *P. nodosum* based on their morphometric analysis."

***Persicaria maculosa* Gray [FNA5, HC2]**

Nat. Arr. Brit. Pl. 2: 269. 1821.

heartweed, lady's-thumb, spotted lady's-thumb, redshank

*Polygonum persicaria* L. [HC]

Native to Europe. FNA5: "An allozyme study by L. L. Consaul et al. (1991) provided evidence of the allotetraploid origin of *Persicaria maculosa*, with *P. lapathifolium* as one of the parents. Plants with stems spreading-hairy and peduncles stipitate-glandular have been named *P. maculosa* subsp. *hirsuticaulis* (Danser) S. Ekman & Knutsson. Material referable to this subspecies has not been seen among North American specimens. Hybrids between *P. maculosa* and *P. minor* have been documented in Europe (R. H. Roberts 1977)."

***Persicaria nepalensis* (Meisn.) H. Gross [FNA5, HC2]**

Bot. Jahrb. Syst. 49: 277. 1913.

Nepal knotweed

***Persicaria orientalis* (L.) Spach [FNA5, HC2]**

Hist. Nat. Vég. 10: 537. 1841.

Kiss-me-over-the-garden-gate, princess-feather

*Polygonum orientale* L.

FNA5: "*Persicaria orientalis* was introduced as a garden ornamental. It often persists around homesteads and barnyards, and occasionally escapes and becomes weedy in moist waste places."

***Persicaria punctata* (Elliott) Small [FNA5, HC2]**

Fl. S.E. U.S. 1903.

dotted knotweed, dotted smartweed, water smartweed

*Polygonum acre* Kunth

*Polygonum acre* Kunth var. *leptostachyum* Meisn.

*Polygonum punctatum* Elliott [HC, ILBC4, JPM]

*Polygonum punctatum* Elliott var. *confertiflorum* (Meisn.) Fassett [KZ99]

*Polygonum punctatum* Elliott var. *ellipticum* Fassett

FNA5: "N. C. Fassett (1949) proposed a complicated classification for *Persicaria punctata* with 12 varieties in North America and South America. He also identified numerous specimens that he considered to be morphologically intermediate between various varieties. M. Dalci (1972) documented a wide range of phenotypic and genotypic variation throughout the range of *P. punctata* and extensive overlap in many of the features used by Fassett to distinguish varieties. Consequently, recognition of varieties does not seem

warranted. *Persicaria punctata* and its close relatives *P. robustior* and *P. glabra* are unique among native North American smartweeds in possessing complex glands called valvate chambers in their epidermises. *Persicaria punctata* is confused most frequently with *P. hydropiper*; the achenes are diagnostic."

\* Fassett, N. C. 1949. The variations of *Polygonum punctatum*. *Brittonia* 6:369-393.

***Persicaria setacea* (Baldwin) Small [FNA5, HC2]**

Fl. S.E. U.S. 379. 1903.

bog smartweed

*Polygonum hydropiperoides* Michx. var. *setaceum* (Baldwin) Gleason [HC]

*Polygonum setaceum* Baldwin

*Polygonum setaceum* Baldwin var. *interjectum* Fernald

*Polygonum setaceum* Baldwin var. *tonsum* Fernald

Treated as a variety of *Polygonum hydropiperoides* by H&C. FNA5: "C. B. McDonald (1980) showed that *Persicaria setacea* is closely related to *P. hirsuta* and *P. hydropiperoides*. Hybrids between *P. setacea* and *P. hirsuta* have been produced experimentally but appear to be rare in the wild. *Persicaria setacea* and *P. hydropiperoides* occasionally occur in mixed populations but do not hybridize (McDonald). *Persicaria setacea* sometimes intergrades morphologically with *P. hydropiperoides*, especially in New England. Specimens of *P. setacea* without the characteristic ascending or spreading hairs on the ocreae usually can be distinguished from *P. hydropiperoides* by the extent of adnation of the hairs to the ocreae?up to one-third their lengths in *P. setacea*, but one-third to two-thirds their lengths in *P. hydropiperoides*."

***Persicaria wallichii* Greuter & Burdet [FNA5, HC2]**

*Willdenowia*. 19: 41. 1989.

garden knotweed, Himalayan knotweed

*Aconogonon polystachyum* (Wall. ex Meisn.) M. Král

*Pleuropteryrum polystachyum* (Wall. ex Meisn.) Munshi & G.N. Javied

*Polygonum polystachyum* Wall. ex Meisn. [HC]

*Reynoutria polystachya* (Wall. ex Meisn.) Moldenke

*Rubrivena polystachya* (Wall. ex Meisn.) M. Král

Recently collected in Grays Harbor, King, and Wahkiakum Cos. FNA5: "*Persicaria wallichii* is an ornamental that escapes infrequently in the flora area. A population in Nova Scotia apparently was ephemeral. Plants with leaf blades sparsely to densely pubescent abaxially and pedicels glabrous are var. *wallichii*, to which naturalized North American plants appear to be referable. Plants with leaf blades brownish-tomentose abaxially and pedicels usually pubescent are var. *tomentosa* S. P. Hong, which may be in cultivation in North America."

var. *wallichii* [FNA5, HC2]

***Polygonum* [FNA5, HC, HC2]**

Sp. Pl. 1: 359. 1753. Gen. Pl. ed. 5, 170. 1754.

doorweed, knotweed, smartweed

(see also *Aconogonon*, *Bistorta*, *Fallopia*, *Persicaria*)

***Polygonum achoreum* S.F. Blake [FNA5, HC, HC2]**

*Rhodora*. 19: 232. 1917.

Blake's knotweed

*Polygonum erectum* L. ssp. *achoreum* (S.F. Blake) Á. Löve & D. Löve

FNA5: "*Polygonum achoreum* frequently is confused with *P. erectum*. It can be distinguished by its usually homophyllous leaves, its perianth, which is enlarged at the base and constricted above the fruit, its longer perianth tube, and its yellow-green to tan, tubercled achenes."

***Polygonum austinae* Greene [FNA5, HC, HC2]**

Bull. Calif. Acad. Sci. 1: 212. 1885. (as *austinae*).

Austin's knotweed

*Polygonum douglasii* Greene ssp. *austinae* (Greene) E. Murray [JPM, ILBC4]

*Polygonum douglasii* Greene var. *austinae* (Greene) M.E. Jones

***Polygonum aviculare* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 362. 1753.

**ssp. *aviculare* [FNA5, HC2]**

Sp. Pl. 1: 362.

common knotweed, yard knotweed

*Polygonum aviculare* L. ssp. *heterophyllum* Asch. & Graebn.

*Polygonum aviculare* L. ssp. *maximum* (Lindm.) Asch. & Graebn.

*Polygonum aviculare* L. ssp. *monspeliense* (Thieb.-Bern. ex Pers.) Arcang.

*Polygonum aviculare* L. var. *vegetum* Ledeb.

*Polygonum heterophyllum* Lindm.

*Polygonum monspeliense* Thieb.-Bern. ex Pers.

**ssp. *buxiforme* (Small) Costea & Tardif [FNA5, HC2]**

Sida. 20: 988. 2003.

American knotweed, prairie knotweed

*Polygonum aviculare* L. var. *littorale* (Link) Mert.

*Polygonum buxiforme* Small [ILBC4, KZ99]

*Polygonum littorale* Link

Introduced from Eastern North America- naturalization in WA needs verification. FNA5: "Although apparently it has a North American origin, subsp. *buxiforme* is considered part of the *Polygonum aviculare* complex because it intergrades with subsp. *aviculare* (M. Costea and F. J. Tardif 2003)."

**ssp. *depressum* (Meisn.) Arcang. [FNA5, HC2]**

Comp. Fl. Ital. 583. 1882.

common knotweed, oval-leaf knotweed

*Polygonum aequale* Lindm.

*Polygonum arenastrum* Boreau [JPM, ILBC4]

*Polygonum aviculare* L. ssp. *aequale* (Lindm.) Asch. & Graebn.

*Polygonum aviculare* L. ssp. *calculatum* (Lindm.) Thell.

*Polygonum aviculare* L. ssp. *microspermum* (Jordan ex Boreau) Berher

*Polygonum aviculare* L. var. *depressum* Meisn.

*Polygonum calcatum* Lindm.

*Polygonum microspermum* Jordan ex Boreau

*Polygonum montereyense* Brenckle

FNA5: "Plants referable to *P. arenastrum* in the narrow sense are the most commonly encountered form of the subspecies in North America."

**ssp. *neglectum* (Besser) Arcang. [FNA5, HC2]**

Comp. Fl. Ital. 583. 1882.

narrow-leaf knotweed

*Polygonum aequale* Lindm. ssp. *oedocarpum* Lindm.

*Polygonum aviculare* L. ssp. *rectum* Chrtek

*Polygonum neglectum* Besser

***Polygonum californicum* Meisn. [FNA5, HC, HC2]**

Prodr. 14: 100. 1856.

California knotweed

*Duravia californica* (Meisn.) Greene

*Polygonum greenii* S. Watson

***Polygonum douglasii* Greene [FNA5, HC, HC2]**

Bull. Calif. Acad. Sci. 1: 125. 1885.

Douglas' knotweed, Douglas's knotweed

*Polygonum douglasii* Greene ssp. *douglasii* [JPM]

*Polygonum douglasii* Greene var. *douglasii* [HC]

*Polygonum douglasii* Greene var. *latifolium* (Engelm.) Greene [HC]

*Polygonum emaciatum* A. Nelson

H&C treats *Polygonum douglasii* var. *douglasii* and var. *latifolium* as distinct varieties. FNA5: FNA5: "Five

taxa that have been included in *Polygonum douglasii* (E. Murray 1982; J. C. Hickman 1984; J. T. Kartesz and K. N. Gandhi 1990) are treated here as distinct species: *P. austiniae*, *P. majus*, *P. nuttallii*, *P. sawatchense*, and *P. spergulariiforme*. Hickman noted extensive intergradation and numerous intermediate specimens among those sympatric elements, but qualitative or quantitative characters allow reliable discrimination in most cases (M. Costea and F. J. Tardif 2005), and species are here circumscribed similar to C. L. Hitchcock (1964). Greene described var. *latifolium* as having leaf blades and achenes broader than those of var. *douglasii*. C. L. Hitchcock (1964) recognized the former, but the characters used to distinguish it appear to vary continuously, and reliable separation is not possible."

***Polygonum erectum* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 363. 1753.

erect knotweed

*Polygonum aviculare* L. var. *erectum* (L.) Roth ex Meisn.

***Polygonum fowleri* B.L. Rob. [FNA5, HC, HC2]**

Rhodora. 4: 67, plate 35, figs. 14, 15. 1902.

Fowler's knotweed

ssp. ***fowleri* [FNA5, HC2]**

Rhodora. 4: 67, plate 35, figs. 14, 15.

Fowler's knotweed

*Polygonum allocarpum* S.F. Blake

***Polygonum majus* (Meisn.) Piper [FNA5, HC, HC2]**

Fl. Palouse Reg. 63. 1901.

Palouse knotweed, wiry knotweed

*Polygonum coarctatum* Douglas ex Meisn. var. *majus* Meisn.

*Polygonum douglasii* Greene ssp. *majus* (Meisn.) J.C. Hickman [JPM, ILBC4]

***Polygonum minimum* S. Watson [FNA5, HC, HC2]**

Botany (Fortieth Parallel). 315. 1871.

leafy dwarf knotweed, zigzag knotweed

*Polygonum torreyi* S. Watson

***Polygonum nuttallii* Small [FNA5, HC, HC2]**

Mongr. Amer. Sp. Polygonum. 132, plate 53. 1895.

Nuttall's knotweed

*Polygonum douglasii* Greene ssp. *nuttallii* (Small) J.C. Hickman [ILBC4]

*Polygonum intermedium* Nutt. ex S. Watson

FNA5: "C. L. Hitchcock (1964) suggested that *Polygonum nuttallii* is but a small-flowered form of *P. spergulariiforme*. Although morphologically similar, *P. nuttallii* differs from *P. spergulariiforme* in some respects, including its wiry, purplish stems, short and funnelform ocreae, adaxially glaucous leaves, longer bracts, shorter fruiting perianth, and achenes."

***Polygonum paronychia* Cham. & Schtdl. [FNA5, HC, HC2]**

Linnaea. 3: 51. 1828.

beach knotweed, black knotweed

***Polygonum parryi* Greene [FNA5, HC, HC2]**

Bull. Torrey Bot. Club. 8: 99. 1881.

Parry's knotweed

***Polygonum patulum* M. Bieb. [FNA5, HC2]**

Fl. Taur.-Caucas. 1: 304. 1808.

***Polygonum polygaloides* Meisn. [FNA5, HC, HC2]**

Prodr. 14: 101. 1856.

ssp. ***confertiflorum* (Nutt. ex Piper) J.C. Hickman [FNA5, HC2]**

Madroño. 31: 251. 1984.

close-flowered knotweed

*Polygonum confertiflorum* Nutt. ex Piper [HC]  
*Polygonum kelloggii* Greene var. *confertiflorum* (Nutt. ex Piper) Dorn  
*Polygonum watsonii* Small [HC]

This taxon treated as two separate species by H&C.

ssp. ***kelloggii*** (Greene) J.C. Hickman [FNA5, HC2]

Madroño. 31: 251. 1984.  
white-margin knotweed

*Polygonum kelloggii* Greene [HC]  
*Polygonum minutissimum* L.O. Williams  
*Polygonum unifolium* Small ex Rydb.

ssp. ***polygaloides*** [FNA5, HC2]

In A. P. de Candolle and A. L. P. P. de Candolle, Prodr. 14: 101.  
Polygala knotweed

*Polygonum polygaloides* Meisn. var. *montanum* Brenckle

***Polygonum ramosissimum*** Michx. [FNA5, HC, HC2, JPM]

Fl. Bor.-Amer. 1: 237. 1803.

ssp. ***prolificum*** (Small) Costea & Tardif [FNA5, HC2]

Sida. 20: 995. 2003.  
proliferous knotweed

*Polygonum prolificum* (Small) B.L. Rob.  
*Polygonum prolificum* (Small) B.L. Rob. var. *autumnale* (Brenckle) Brenckle  
*Polygonum prolificum* (Small) B.L. Rob. var. *profusum* Brenckle  
*Polygonum ramosissimum* Michx. var. *prolificum* Small [ILBC4]

Reported from WA in FNA5.

ssp. ***ramosissimum*** [FNA5, HC2]

Fl. Bor.-Amer. 1: 237.  
bushy knotweed

*Polygonum atlanticum* (B.L. Rob.) E.P. Bicknell  
*Polygonum exsertum* Small [HC]  
*Polygonum interior* Brenckle  
*Polygonum latum* Small ex Rydb.  
*Polygonum leptocarpum* B.L. Rob.  
*Polygonum stevensii* Brenckle  
*Polygonum triangulum* E.P. Bicknell

FNA5: "Polygonum ramosissimum exhibits considerable morphological complexity and is similar in difficulty to the *P. aviculare* complex. Further research is necessary to understand the infraspecific variability of this species (M. Costea and F. J. Tardif 2003b). Subspecies *ramosissimum* is heterogeneous; some additional elements may deserve recognition. It is closely related to European *Polygonum bellardii* Allioni, which was collected in south Boston in 1785 (B. L. Robinson 1902). The latter species has semi-open flowers, petaloid tepals with white or pink margins, and eight stamens. A distinct form of *P. ramosissimum* growing in saline marshes from California has been mistakenly identified as *P. patulum* Bieberstein (M. Costea and F. J. Tardif 2003b). The morphology of late-season achenes and the branching patterns, which have been emphasized by some authors, appear to have little taxonomic value."

***Polygonum sawatchense*** Small [FNA5, HC, HC2]

Bull. Torrey Bot. Club. 20: 213, plate 156. 1893.

ssp. ***oblivium*** Costea & Tardif [FNA5, HC2]

Sida. 20: 1637, figs. 1b, 2b, d, f. 2003.  
Sawatch knotweed

ssp. ***sawatchense*** [FNA5, HC2]

Bull. Torrey Bot. Club. 20: 213, plate 156.  
Sawatch knotweed

*Polygonum douglasii* Greene ssp. *johnstonii* (Munz) J.C. Hickman [JPM, ILBC4]  
*Polygonum douglasii* Greene var. *johnstonii* Munz  
*Polygonum exile* Eastw.  
*Polygonum triandrum* Coolidge

FNA5 lists this subspecies as occurring in WA.

***Polygonum spergulariiforme* Meisn. ex Small [FNA5, HC2]**

Bull. Torrey Bot. Club. 19: 366. 1892. (as *spergulariaeforme*).  
fall knotweed, spurry knotweed

*Polygonum douglasii* Greene ssp. *spergulariiforme* (Meisn. ex Small) J.C. Hickman [JPM, ILBC4]  
*Polygonum spergulariaeforme* Meisn. ex Sm. [HC], orthographic variant

Originally published as *P. spergulariaeforme*.

***Rheum* [FNA5]**

Sp. Pl. 1: 371. 1753. Gen. Pl. ed. 5, 174. 1754.  
rhubarb

***Rheum rhabarbarum* L. [FNA5]**

Sp. Pl. 1: 372. 1753.  
rhubarb

***Rumex* [FNA5, HC, HC2]**

Sp. Pl. 1: 333. 1753. Gen. Pl. ed. 5, 156. 1754.  
dock, sorrel

***Rumex acetosa* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 337. 1753.

Introduced from Eurasia. FNA5: "Rumex acetosa is morphologically uniform in North America. It sometimes is misidentified as *R. hastatulus* or *R. acetosella*. Collections from North America are few in herbaria, and this species probably is not as common in the flora area as has been generally assumed. Some literature reports for *R. acetosa* may refer to other taxa of the species group."

***Rumex acetosella* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 338. 1753.  
common sheep sorrel

*Acetosa acetosella* (L.) Mill.

*Acetosa hastata* Moench

*Acetosella vulgaris* Fourreau

*Rumex acetosella* L. var. *vulgaris* W.D.J. Koch

Introduced from Eurasia. FNA5: "Rumex acetosella in the broad sense is an extremely variable and taxonomically complicated polyploid complex, which includes diploids, tetraploids, hexaploids, and octoploids. This complex (excluding more distantly related arctic-montane *R. graminifolius* and its allies) probably originated and developed mostly in southern Europe and southwestern Asia. Some races of *R. acetosella* now are distributed almost worldwide as introduced and often completely naturalized aliens."

***Rumex conglomeratus* Murray [FNA5, HC, HC2]**

Prodr. Stirp. Gott. 52. 1770.  
clustered dock, sharp dock

*Rumex xacutus* Sm.

Native to Eurasia. FNA5: "Rumex conglomeratus often is confused with immature specimens of *R. obtusifolius*, as well as with other species (e.g., *R. sanguineus*). Its distribution in North America is insufficiently known, and some literature records may refer to *R. obtusifolius*. *Rumex conglomeratus* and *R. sanguineus* were placed in subsect. *Conglomerati* Rechinger f. (K. H. Rechinger 1937)."

***Rumex crassus* Rech. f. [FNA5, HC2]**

Repert. Spec. Nov. Regni Veg. 40: 295. 1936.

*Rumex salicifolius* Weinm. var. *crassus* (Rech. f.) J.T. Howell

*Rumex crispus* L. [FNA5, HC, HC2]

Sp. Pl. 1: 335. 1753.

curly dock, sour dock

*Lapathum crispum* (L.) Scop.

*Rumex crispus* L. ssp. *crispus* [KZ99]

Introduced from Eurasia. FNA5: "*Rumex crispus* (belonging to subsect. *Crispi* Rechner f.; see K. H. Rechner 1937) is the most widespread and ecologically successful species of the genus, occurring almost worldwide as a completely naturalized and sometimes invasive alien. It has not been reported from Greenland, but it probably occurs there. *Rumex crispus* hybridizes with many other species of subg. *Rumex*. Hybrids with *R. obtusifolius* (*Rumex xpratensis* Mertens & Koch) are the most common in the genus, at least in Europe, and have been reported for several localities in North America. *Rumex crispus* x *R. patientia* (*Rumex xconfusus* Simonkai) was reported from New York. According to R. S. Mitchell (1986, p. 47), "this hybrid is now spreading along highway shoulders, and it has replaced *R. crispus* in some local areas."• However, that information should be confirmed by more detailed studies since spontaneous hybrids between species of sect. *Rumex* usually are much less fertile and ecologically successful than the parental species. Hybrids of *Rumex* occurring in North America need careful revision. Numerous infraspecific taxa and even segregate species have been described in the *Rumex crispus* aggregate. Many seem to represent minor variation of little or no taxonomic significance, but some are geographically delimited entities that may deserve recognition as subspecies or varieties. The typical variety has inner tepals with three well-developed tubercles; the less common var. *unicallosus* Petermann, with one tubercle, occurs sporadically in North America."

*Rumex dentatus* L. [FNA5, HC, HC2]

Mant. Pl. 226. 1771.

toothed dock

*Rumex maritimus* L. [FNA5, HC, HC2]

Sp. Pl. 1: 335. 1753.

golden dock

*Lapathum minus* Lam.

*Rumex aureus* Mill.

*Rumex maritimus* and *R. persicarioides* treated as two distinct taxon by H&C. The treatment of *R. maritimus* in FNA5 does not include Washington within the distribution of this species, which is not to say that this species does not occur here. The taxonomic treatment of *R. maritimus* and related species appears unresolved based on the FNA treatment: "This Eurasian species is known as a casual alien from several localities in North America. Its distribution is poorly known due to confusion with native American species of this aggregate. Plants from Alaska and Yukon reported by E. Hultén (1968) as *Rumex maritimus* need additional study; they may be conspecific with some eastern Asian races of the *R. maritimus* aggregate. It is rare or almost absent in eastern Asia, where it is replaced by closely related taxa. Species of the *Rumex maritimus* aggregate can be placed in a separate subsection *Maritimi* Rechner f. (K. H. Rechner 1937) or even section *Orientalis* A. I. Baranov & B. V. Skvortzov (see A. E. Borodina 1977). In addition to characters mentioned in the key and descriptions, additional distinctive features of *Rumex maritimus* are the smooth tubercles (occasionally finely striate or indistinctly pitted in herbarium specimens), and golden yellow or greenish yellow mature inflorescences."

ssp. *fueginus* (Phil.) Hultén [HC2]

American golden dock, Tierra del Fuego dock

*Rumex fueginus* Phil. [FNA5]

FNA5: "*Rumex fueginus*, in spite of its similarities to *R. maritimus*, is more closely related to *R. persicarioides*. Specimens of *R. fueginus* often are misidentified as *R. maritimus*, and the name *R. persicarioides* has been applied to *R. fueginus*. This confusion obscures distribution patterns among members of the aggregate. Several varieties have been described based mostly on teeth variation. These taxa appear to have little taxonomic significance, with the possible exception of var. *athrix* (St. John) Rechner f., which has entire or subentire inner tepals and occurs in arid regions of the southwestern United States (H. St. John 1915; K. H. Rechner 1937). *Rumex fueginus* is known in Europe as an uncommon, casual alien."

*Rumex obtusifolius* L. [FNA5, HC, HC2]

Sp. Pl. 1: 335. 1753.

bitter dock

*Rumex crispatus* Michx.

*Rumex rugelii* Meisn.

Introduced from Eurasia. FNA5: "Rumex obtusifolius, a member of subsect. Obtusifolii Rechinger f. (K. H. Rechinger 1937), is a polymorphic species represented in Eurasia by three or four rather distinct races often treated by European authors as subspecies or varieties. These taxa differ mostly in inner tepal dentation and geographic distribution. In North America the morphotypes often intergrade. In Eurasia this species is differentiated into predominantly western subsp. obtusifolius [including *R. obtusifolius* subsp. *agrestis* (Fries) Danser], eastern subsp. *sylvestris* (Wallroth) Rechinger f., intermediate central European subsp. *transiens* (Simonkai) Rechinger f., and montane subsp. *subalpinus* (Schur) Simonkai. Only subsp. *obtusifolius* and *sylvestris* occur in North America; the former seems to be more common. Subspecies *obtusifolius* differs from subsp. *sylvestris* in having larger and more prominently dentate inner tepals with one tubercle, or with three distinctly unequal tubercles; in subsp. *sylvestris* the teeth are usually less than 0.6 mm, developing only near the base of the inner tepals, and the tubercles often almost subequal."

***Rumex occidentalis* S. Watson [FNA5, HC, HC2]**

Proc. Amer. Acad. Arts. 12: 253. 1877.

western dock, western dock o n

*Rumex aquaticus* L. ssp. *occidentalis* (S. Watson) Hultén

*Rumex aquaticus* L. var. *fenestratus* (Greene) Dorn [ILBC4]

*Rumex bakeri* Greene

*Rumex confinis*

*Rumex fenestratus* Greene

*Rumex fenestratus* Greene var. *labradoricus* Rech. f.

*Rumex gracilipes* Greene

*Rumex occidentalis* S. Watson var. *labradoricus* (Rech. f.) Lepage

*Rumex occidentalis* S. Watson var. *procerus* (Greene) J.T. Howell [HC]

*Rumex procerus*

FNA5: "All of the species of subsect. Aquatici Rechinger f., represented in North America by *Rumex occidentalis*, *R. arcticus*, *R. nematopodus*, and *R. tomentellus*, form a taxonomically complex aggregate with poorly delimited, often intergrading species. Extremes are evidently distinct (e.g., *R. arcticus* and *R. tomentellus*). The taxonomy and distribution of members of this aggregate are still insufficiently known. Some authors prefer to treat all or most of these taxa as subspecies or varieties of *R. aquaticus* in the broad sense. From my point of view, this does not promote a better understanding of their variability and relationships. A number of segregate species have been described and recognized in regional floras in North America. In most cases the features upon which these species are based intergrade. One of the most widely recognized segregates is *Rumex fenestratus* Greene emend. Rechinger f. [*R. aquaticus* subsp. *fenestratus* (Greene) Hultén, *R. occidentalis* S. Watson subsp. *fenestratus* (Greene) Hultén], which, according to K. H. Rechinger (1937), may be distinguished mostly by larger and more cordate fruiting inner tepals (more than 7 mm in *R. fenestratus*, usually less than 7 mm in *R. occidentalis*), and larger achenes (3 mm, and more than 3.5 mm, respectively). The morphotype of *R. fenestratus* occurs mostly along the Pacific coast from central western California to Alaska. Plants with large fruiting inner tepals [known as *R. fenestratus* var. *labradoricus* Rechinger f. or *R. occidentalis* var. *labradoricus* (Rechinger f.) Lepage] occur also in eastern Canada (Newfoundland and Quebec). In this treatment, I follow the taxonomic decision by J. E. Dawson (1979), who carefully analyzed the clinal variability of the *R. occidentalis* aggregate. However, *R. fenestratus* probably deserves recognition at least as a subspecies of *R. occidentalis*, but its taxonomic status needs additional investigation."

var. ***occidentalis*** [HC, HC2]

***Rumex patientia* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 333. 1753.

patience dock

*Lapathum hortense* Lam.

*Rumex lonaczewskii* Klokov

*Rumex patientia* L. ssp. *orientalis* Danser

Introduced from Eurasia. FNA5: "Some North American specimens of *Rumex patientia* appear to belong to subsp. *orientalis* (= *R. orientalis* Bernhardt 1830, not Campderá 1819; *R. lonaczevskii*), which differs from subsp. *patientia* in having larger inner tepals (6-10 × 8-10 mm, not 4-8 × 4-8 mm). A predominantly Asian variety with three tubercles sometimes is recognized as subsp. *callosus* (Fr. Schmidt ex Maximowicz) Rechinger f. [= var. *callosus* Fr. Schmidt ex Maximowicz; *Rumex callosus* (Fr. Schmidt ex Maximowicz) Rechinger f.]. However, the distribution of infraspecific taxa of *R. patientia* in North America has not been studied in detail."

***Rumex paucifolius* Nutt. [FNA5, HC, HC2]**

J. Acad. Nat. Sci. Philadelphia. 7: 49. 1834.

alpine sorrel

*Acetosa gracilescens* (Rech. f.) Á. Löve & Everson

*Acetosa paucifolia* (Nutt.) Á. Löve

*Acetosella gracilescens* (Rech. f.) Á. Löve

*Acetosella paucifolia* (Nutt.) Á. Löve

*Rumex engelmannii* Meisn. var. *geyeri* Meisn.

*Rumex geyeri* (Meisn.) Trel.

*Rumex paucifolius* Nutt. ssp. *paucifolius* [KZ99]

*Rumex paucifolius* Nutt. var. *gracilescens* Rech. f.

FNA5: "*Rumex paucifolius* is a montane species represented by two chromosome races (diploid and tetraploid) and several ecotypes. Smaller plants from California have been described as var. *gracilescens*; they are tetraploids and sometimes were regarded as a separate species (Á. Löve and V. Everson 1967; Löve 1986). B. W. Smith (1968) showed that both diploids and tetraploids (and even exceptional spontaneous triploids and individuals with higher polyploid chromosome numbers) occur in many other localities within the range of the species; the differences in chromosome number are not strictly correlated with distribution or morphology. Narrow-leaved ecotypes of *R. paucifolius* reported by Smith sometimes resemble other narrow-leaved taxa of subg. *Acetosella*, especially *R. beringensis*. *Rumex paucifolius* and *R. beringensis* may be regarded as morphologically and karyologically transitional between subg. *Acetosella* and subg. *Acetosa*. *Rumex paucifolius* was placed in the monotypic subsect. *Paucifoliae* Á. Löve & N. Sarkar. Later, Löve transferred it to the segregate genus *Acetosella*, based mostly on the chromosome number of the species, but morphology suggests it is a member of subg. *Acetosa*. Probably the best solution of this problem was proposed by Smith, who noted that "the composite range of vegetative, reproductive, and karyotypic characteristics of the forty-odd species now included in the diversified subgenus *Acetosa* would be only slightly extended by the addition of the five species now classified as *Acetosella*" (p. 683)."

***Rumex persicarioides* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 335. 1753.

seashore dock, yellow dock

FNA5: "*Rumex persicarioides* often has been treated by American botanists as a variety or synonym of *R. maritimus* (see R. S. Mitchell 1978). It and *R. fueginus* differ from Eurasian *R. maritimus* in many respects and are as distinct as many widely recognized Eurasian taxa of this aggregate (e.g., *R. palustris*, *R. rossicus* Murbeck, *R. ucranicus* Fischer ex Sprengel, *R. marschallianus* Reichenbach, *R. amurensis* Fr. Schmidt ex Maximowicz, *R. evenkiensis* Elisarjeva). When submerging *R. persicarioides* as a variety of *R. maritimus*, Mitchell noted: "Taxonomic treatment of the group from a Eurasian point of view would undoubtedly shed light on the minor problems which we face in North and South America." However, from a Eurasian point of view (see e.g., K. H. Rechinger 1937, 1949; J. E. Lousley and D. H. Kent 1981; N. N. Tzvelev 1989b), all North American native taxa of subsect. *Maritimi* are evidently specifically different from any native Eurasian ones (with the only possible exception of Pacific plants, which are discussed below). Plants similar to *Rumex persicarioides*, but with bigger tubercles and occurring along the Pacific coast from northern California to British Columbia, are, in my opinion, closer to *R. fueginus* in their habit and vegetative characters. K. H. Rechinger (1937) provisionally determined such specimens as *R. persicarioides*. J. E. Dawson (1979) noted that the Pacific plants differ from Atlantic ones in having bigger tubercles (more than 1.9 × 0.7-1 mm in western plants; less than 1.9 × 0.7 mm in eastern *R. persicarioides* in the narrow sense), and described these large-tubercled plants as a distinct variety, "*R. maritimus* var. *pacificus*", unfortunately, an invalid name. However, that taxon seems to be extremely closely related to or possibly conspecific with the northeastern Asian species, *R. ochotskii* Rechinger f., which is known in eastern Asia from northern Japan to the Okhotsk Sea region of Russian Far East (especially Sakhalin and

Kuril islands). The latter species also has large (to 2-2.5 mm) botuliform tubercles with obtuse apices. In the original description Rechinger stated: "'ifoliorum forma R. maritimo simillimus'",• but N. N. Tzvelev (1989b) in his recent treatment of the genus in the Russian Far East noted that most of the specimens of R. ochotskius seen by him had leaf blades rotundate-truncate or broadly cuneate at the base. The R. persicarioides-like plants from the Pacific coast of the United States and Canada (as well as their most probable allies from eastern Asia) need additional study. At present I prefer to place them provisionally into R. persicarioides, following Rechinger's treatment."

***Rumex salicifolius* Weinm. [FNA5, HC, HC2]**

Flora. 4: 28. 1821.

**var. *angustivalvis* Danser [HC, HC2]**

western willow dock

*Rumex hesperius* Greene [FNA5]

FNA5: "Rumex hesperius is a little-known species reported only from a localized area in Washington. According to N. M. Sarkar (1958) it is "quite distinct from other species"• in its general appearance? a small plant with large, broad leaves and compact inflorescences."

**var. *transitorius* (Rech. f.) J.C. Hickman [HC2, KZ99]**

narrow-leaved dock, Pacific willow dock

*Rumex transitorius* Rech. f. [FNA5]

From FNA5 regarding R. salicifolius: "Rumex salicifolius occurs mostly in southern and central California; it has been reported also from adjacent parts of Arizona (N. M. Sarkar 1958) and Nevada (J. T. Kartesz 1987, vol. 1). The name R. salicifolius has been applied in a broad sense to nearly all species of subsect. Salicifolii, including even mostly Asian R. sibiricus. Rumex salicifolius appears to be most closely related to R. californicus and R. utahensis. J. T. Kartesz (1987, vol. 1) reported Rumex transitorius from Washoe County, Nevada; the morphological characters mentioned in his description suggest another taxon of the R. salicifolius aggregate. Records from Idaho also need confirmation."

**var. *triangulivalvis* (Danser) J.C. Hickman [HC, HC2, JPM]**

or triangular-valved dock, white, white willow

*Rumex salicifolius* Weinm. ssp. *triangulivalvis* Danser [HC]

*Rumex triangulivalvis* (Danser) Rech. f. [FNA5]

FNA5: "Rumex triangulivalvis is the most common and widespread species of the R. salicifolius group. It often occurs in ruderal habitats and may be expected outside its present range. The names Rumex salicifolius and R. mexicanus (in the broad sense) were commonly applied to this species by many North American and European authors."

**var. *utahensis* (Rech. f.) Reveal [HC2]**

Utah willow dock

*Rumex utahensis* Rech. f. [FNA5]

***Rumex sanguineus* L. [FNA5, HC, HC2]**

Sp. Pl. 1: 334. 1753.

red-vein dock

*Lapathum sanguineum* (L.) Lam.

*Rumex condolodes* M. Bieb.

*Rumex nemorosus* Schrad. ex Willd.

FNA5: "Distribution of Rumex sanguineus in North America is known insufficiently. Most reports from California, Washington, New Brunswick, Nova Scotia, Ontario, and Quebec were based on misidentified specimens of R. conglomeratus or immature R. obtusifolius. Rumex sanguineus is represented in Europe by at least two varieties. The uncommon, cultivated, and occasionally escaped var. sanguineus (redvein dock or bloodwort) has bright red or purple venation of leaves. It probably arose as a mutant from the common, wild var. viridis Sibthorp."

***Rumex stenophyllus* Ledeb. [FNA5, HC2]**

Fl. Altaica. 2: 58. 1830.

narrow-leaved dock, narrowleaf dock

*Rumex alluvius* F.C. Gates & McGregor

*Rumex crispus* L. var. *dentatus* Schur

*Rumex obtusifolius* L. var. *cristatus* Neilreich

*Rumex odontocarpus* Sandor ex Borbás

FNA5: "Within its native range *Rumex stenophyllus* is mostly confined to slightly saline coastal and alluvial (riparian) habitats. It has successfully colonized a wide range of ruderal and segetal habitats in both Europe and North America. Further spread of this species in the central and southwestern United States and southern Canada may be expected (D. Löve and J.-P. Bernard 1958). It was placed by K. H. Rechinger (1949) in subsect. *Stenophylli* Rechinger f. According to J. K. Morton and J. M. Venn (1990), reports of *Rumex stenophyllus* from Ontario refer to the hybrid *R. crispus* × *R. obtusifolius*, but *R. stenophyllus* may be found in the province in the future. *Rumex stenophyllus* may be distinguished from that hybrid by its fertile fruits and more uniform inner tepals."

***Rumex venosus* Pursh [FNA5, HC, HC2]**

Fl. Amer. Sept. 2: 733. 1813.

veiny dock, winged dock

FNA5: "*Rumex venosus* is a distinctive species rarely confused with any other members of the genus. However, I have seen herbarium specimens of it misidentified as *R. hymenosepalus*, and vice versa."

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## Portulacaceae [FNA4, HC, HC2] Purslane Family

**Synonyms:** (none)

Taxonomy follows the narrow circumscription of Nyffeler and Egli 2010.

**References:** (none)

***Portulaca* [FNA4, HC, HC2]**

Sp. Pl. 1: 445. 1753; Gen. Pl. ed. 5, 204. 1754.

***Portulaca oleracea* L. [FNA4, HC, HC2]**

Sp. Pl. 1: 445. 1753.

common purslane

*Portulaca neglecta* Mack. & Bush

*Portulaca retusa* Engelm.

FNA4: "A. P. Simopoulos and N. Salem Jr. (1986) and A. P. Simopoulos et al. (1992) have shown *Portulaca oleracea* to have the highest content of omega-3 fatty acids and antioxidants of any green leafy vegetable examined to date, suggesting that common purslane should be considered for its nutritional value and not for its weediness. It has long been used as fodder and may have been present in the New World in pre-Columbian times (R. Byrne and J. H. McAndrews 1975). Currently, it is fed to poultry to reduce egg cholesterol. *Portulaca oleracea* is a highly variable species with worldwide distribution in temperate to warm regions and is the most winter-hardy of all the portulacas. It is a very aggressive weed, one of the ten most noxious weeds worldwide (J. S. Singh and K. P. Singh 1967). As such, many variants have been named (C. D. Legrand 1962) based on seed surface differences, size of seeds, or on variable characters of growth habit, leaf length, and number of stamens. Seven subspecies were recognized by A. Danin et al. (1978): subsp. *oleracea*, subsp. *impolita* Danin & H. G. Baker, subsp. *granulatostellulata* Danin & H. G. Baker, subsp. *nicaraguensis* Danin & H. G. Baker, subsp. *nitida* Danin & H. G. Baker, subsp. *papillatostellulata* Danin & H. G. Baker, and subsp. *stellata* Danin & H. G. Baker."

\* Danin, A., I. Baker, and H. G. Baker. 1978. Cytogeography and taxonomy of the *Portulaca oleracea* L. complex. Israel J. Bot. 27: 177-211.

## Primulaceae [FNA8, HC, HC2] Primrose Family

### Synonyms:

Myrsinaceae [FNA8, JPM2] (Myrsine Family)

Theophrastaceae [FNA8] (Joewood Family)

FNA8: "As typically described (e.g., A. Cronquist 1981; V. H. Heywood 1978), Primulaceae were clearly polyphyletic, closely related to Myrsinaceae and Theophrastaceae. M. Källersjö et al. (2000) and B. Ståhl and A. A. Anderberg (2004) removed the nonrosette terrestrial members from Primulaceae in the broad sense and placed them in the Myrsinaceae, which are further distinguished by leaves and calyx often dotted with yellow or dark streaks, flowers with relatively shorter corolla tubes, seeds immersed in placentae, and wood devoid of rays or with multiseriate rays only. Maesa, consisting entirely of trees found in the Eastern Hemisphere tropics, also has semi-inferior ovaries, pedicels with two bracts, and wood with both uniseriate and multiseriate rays; it, too, was removed from Primulaceae/Myrsinaceae and placed in its own family (Källersjö et al.). The families Primulaceae in the narrow sense, Myrsinaceae, Theophrastaceae (including Samolaceae), and Maesaceae then form a monophyletic clade within Ericales (P. F. Stevens, <http://www.mobot.org/MOBOT/research/APweb/>), sharing some features, most notably flowers with sympetalous corollas, stamens in a single series and opposite the petals, free-central placentation, bitegmic, tenuinucellate ovules, and plants generally with tannins and saponins. Additional evidence (L. Martins et al. 2003) indicates that Androsace and Primula may not be monophyletic; more work is needed to resolve these issues. The work of M. Källersjö et al. (2000) showed that Douglasia should remain separate from Androsace, and Dodecatheon should remain separate from Primula, although Dodecatheon clearly is derived from Primula subg. Auriculastrum. Alternative views suggesting more inclusive concepts of Primula and Androsace have been offered by I. Triff et al. (2002), A. R. Mast et al. (2004), and G. M. Schneeweiss et al. (2004). The phylogenetic position of Cyclamen, a scapose taxon currently included in Myrsinaceae, has not been resolved. Our understanding of Primulaceae is still in flux, and future taxonomic realignments at the familial and generic levels are to be expected."

**References:** (none)

### *Androsace* [FNA8, HC, HC2]

Sp. Pl. 1: 141. 1753; Gen. Pl. ed. 5, 69. 1754.

androsace, fairy-candelabra, rock-jasmine

#### *Androsace filiformis* Retz. [FNA8, HC, HC2]

Observ. Bot. 2: 10. 1781.

slender-stem rock-jasmine

*Androsace capillaris* Greene

FNA8: "Androsace filiformis grows in wetlands and is easily identified by the tiny flowers and delicate, filiform inflorescence that give the plants a graceful appearance. No other North American Androsace occurs in wetlands. Androsace filiformis occurs widely across Europe and Asia (including the Russian Far East) and in the western continental United States, with a notable gap in Alaska and Canada."

#### *Androsace septentrionalis* L. [FNA8, HC, HC2]

Sp. Pl. 1: 142. 1753.

northern fairy-candelabra, rock jasmine, pygmyflower

*Androsace septentrionalis* L. ssp. *subumbellata* (A. Nelson) G.T. Robbins [KZ99]

*Androsace septentrionalis* L. var. *subumbellata* A. Nelson

FNA8: "Androsace septentrionalis is broadly distributed and ruderal, occurring from low elevations at high latitudes to the alpine tundra in the Rocky Mountains. It is the most common species of Androsace across western North America and is variable in morphology, depending on elevation, exposure, and light. This plasticity has resulted in a plethora of infraspecific names. Most infraspecific taxa show little geographic coherence, and variants representing all the infraspecific taxa can be found throughout the range of this species, sometimes mixed within single populations. High-elevation individuals tend to have very short scapes and a diminutive growth habit; lowland individuals begin flowering when the scapes are barely developed, and elongate throughout anthesis, ultimately often producing robust individuals with relatively tall scapes. Shaded areas produce plants with "long" pedicels; exposed areas produce plants with "very short" ones. The location and degree of glands and other hairs can vary widely as well. The most readily identifiable morphotype is subsp. *glandulosa*, seen most commonly in Arizona, southern Colorado, New

Mexico, and Texas; even in it, nonglandular individuals occur together with glandular plants. Given the lack of coherence in morphological variation within *A. septentrionalis* and its environmental variation, it seems best to view the complex as a single, highly variable species."

***Cyclamen* [HC2]**

cyclamen, sowbread

***Cyclamen hederifolium* Aiton [HC2]**

ivy-leaf cyclamen

***Dodecatheon* [FNA8, HC, HC2]**

Sp. Pl. 1: 144. 1753; Gen. Pl. ed. 5, 71. 1754.

shooting star

***Dodecatheon alpinum* (A. Gray) Greene [FNA8, HC, HC2]**

Erythea. 3: 39. 1895.

alpine shootingstar

FNA8: "*Dodecatheon alpinum* is found in widely scattered locations in the San Jacinto Mountains, Transverse Ranges, Sierra Nevada, northern coastal ranges, and the Siskiyou Mountains of California, southwestern Oregon, and west-central Nevada, and in the Cascade Ranges to just north of the Columbia River in Skamania and Yakima counties of Washington. It may be seen on scattered basin ranges in the Intermountain West of Nevada (e.g., East Humboldt, Jarbidge, Ruby, Snake) and western Utah (Deep Creek Mountains), and in some desert ranges of southern Oregon as far east as the Steens Mountains in Harney County; it is disjunct to the Blue and Wallowa mountains of northeastern Oregon. There are other disjunct populations in the northern Wasatch and Uinta mountains of northern and northeastern Utah, and even more widely scattered populations in the southern Wasatch and Tushar mountains. The species has also been found at Warm Springs in Millard County. Isolated populations occur on the Pine Valley Mountains, Utah, and around the Grand Canyon and Mogollon Rim areas of Arizona as far south as Greenlee County. Narrow-leaved plants that are sparsely glandular-pubescent are sometimes found at higher elevations in the Sierra Nevada, making a distinction between *Dodecatheon alpinum* and *D. jeffreyi* occasionally arbitrary. A specimen from Deschutes County, Oregon (C. L. Hitchcock and J. S. Martin 4919, UTC, WTU) has leaf blades to 3.5 cm wide."

***Dodecatheon austrofrigidum* K.L. Chambers [FNA8, HC2]**

Sida. 22: 462, figs. 1-3. 2006.

tundra shootingstar

*Primula austrofrigidum* (K.L. Chambers) A.R. Mast & Reveal

FNA8: "*Dodecatheon austrofrigidum* occurs mainly in the mountains near the coast of Washington from the southern Olympic Peninsula (Grays Harbor and Pacific counties) to northwestern Oregon (Clatsop and Tillamook counties). The populations are widely scattered and always with relatively few individuals. At higher elevations (e.g., ca. 1200 m atop Saddle Mountain, Tillamook County), *D. austrofrigidum* occurs in moist, grassy turf. At lower elevations in the same area, it occurs on stream banks in the narrow zone between the high- and low-water mark, persisting in cracks of basaltic rocks. The degree of denticulation of the leaves appears to vary among populations; some larger plants have toothed leaf blades even prior to anthesis."

***Dodecatheon conjugens* Greene [FNA8, HC, HC2]**

Erythea. 3: 40. 1895.

slimpod shooting star, desert shooting star

*Dodecatheon conjugens* Greene ssp. *conjugens* [KZ99]

*Dodecatheon conjugens* Greene ssp. *viscidum* (Piper) H.J. Thomp. [KZ99]

*Dodecatheon conjugens* Greene var. *beamishiae* B. Boivin

*Dodecatheon conjugens* Greene var. *conjugens* [FNA8, HC]

*Dodecatheon conjugens* Greene var. *viscidum* (Piper) H. Mason ex H. St. John [FNA8, HC]

*Dodecatheon viscidum* Piper

*Primula conjugens* (Greene) A.R. Mast & Reveal

*Primula conjugens* (Greene) A.R. Mast & Reveal var. *viscida* (Piper) A.R. Mast & Reveal

***Dodecatheon dentatum* Hook. [FNA8, HC, HC2]**

Fl. Bor.-Amer. 2: 119. 1838.

white shooting star

*Dodecatheon dentatum* Hook. ssp. *dentatum* [HC2]

*Dodecatheon latilobum* (A. Gray) Elmer ex R. Knuth

*Dodecatheon meadia* L. var. *latilobum* A. Gray

*Primula latilobum* (A. Gray) A.R. Mast & Reveal

FNA8: "Dodecatheon dentatum occurs mainly on the eastern slope of the Cascade Range from south-central British Columbia to central Washington, with disjunct populations near the Columbia River in southwestern Washington, the Columbia River Gorge, northeastern Oregon, and northern Idaho. In Idaho, this species occasionally forms hybrids with *D. pulchellum* var. *pulchellum* (Oberle 262, MO)."

[FNA8, HC, HC2]

Fl. Bor.-Amer. 2: 119. 1838.

white shooting star

*Dodecatheon dentatum* Hook. ssp. *dentatum* [HC2]

*Dodecatheon latilobum* (A. Gray) Elmer ex R. Knuth

*Dodecatheon meadia* L. var. *latilobum* A. Gray

*Primula latilobum* (A. Gray) A.R. Mast & Reveal

FNA8: "Dodecatheon dentatum occurs mainly on the eastern slope of the Cascade Range from south-central British Columbia to central Washington, with disjunct populations near the Columbia River in southwestern Washington, the Columbia River Gorge, northeastern Oregon, and northern Idaho. In Idaho, this species occasionally forms hybrids with *D. pulchellum* var. *pulchellum* (Oberle 262, MO)."

***Dodecatheon hendersonii* A. Gray [FNA8, HC, HC2]**

Bot. Gaz. 11: 233. 1886.

broad-leaved shooting star, Henderson's shooting star

*Dodecatheon hansenii* (Greene) H.J. Thomp.

*Dodecatheon hendersonii* A. Gray ssp. *cruciatum* (Greene) H.J. Thomp.

*Dodecatheon hendersonii* A. Gray ssp. *parvifolium* (R. Knuth) H.J. Thomp.

*Dodecatheon hendersonii* A. Gray var. *hansenii* Greene

*Primula hendersonii* (A. Gray) A.R. Mast & Reveal

FNA8: "Dodecatheon hendersonii occurs from southern Vancouver Island in the coastal ranges to west-central California (as far as San Benito County) and is disjunct into the San Bernardino Mountains in southern California. To the east, the species is found on the Siskiyou Mountains and in the Sierra Nevada of California to Tulare County. A Macoun (s.n., DAO) specimen supposedly gathered at Yale, British Columbia, may be misattributed (K. I. Beamish 1955); all other known localities are from Vancouver Island. Inasmuch as bulblets and mature capsules are rarely collected, it is difficult to clearly distinguish between var. *hendersonii* and var. *hansenii*. The former may be broadly characterized as plants bearing bulblets at anthesis with sparsely glandular scapes, pedicels, and, sometimes, calyces. The calyx of var. *hendersonii* is usually greenish with purple or reddish speckles. The most distinctive characteristics of this phase are a filament tube that is 1-2.5 mm wide and acute anther apices. It is found mainly along the coast from British Columbia to southern Oregon and in scattered locations in coastal California, with disjunct populations in the foothills of the central Sierra Nevada, and in the mountains of southern California. Variety *hansenii* is glabrous, lacks bulblets, and the calyx typically is green; it usually is found inland in the Siskiyou Mountains and the Sierra Nevada and scattered populations occur in the coastal ranges of northern California. The filaments in var. *hansenii* are broader, being tubes 1.5-4 mm wide, and anther apices are obtuse. Capsules of var. *hendersonii* are usually operculate; those of var. *hansenii* appear to be consistently valvate. The 2n = 66 plants appear to be primarily individuals that produce little or no pollen."

***Dodecatheon jeffreyi* Van Houtte [FNA8, HC, HC2]**

Ann. Gén. Hort. 16: 99, plate 1662. 1867.

tall mountain shooting star, Jeffrey's shooting star

*Dodecatheon jeffreyi* Van Houtte ssp. *pygmaeum* (H.M. Hall) H.J. Thomp.

*Dodecatheon jeffreyi* Van Houtte var. *viviparum* (Greene) Abrams

*Primula jeffreyi* (Van Houtte) A.R. Mast & Reveal

FNA8: "Dodecatheon jeffreyi is found in montane places in the Sierra Nevada of California and western Nevada and on the northern coastal ranges and Siskiyou Mountains of northern California and southwestern Oregon. It occurs in the Cascade Ranges of Oregon, Washington, and British Columbia northward to the Kenai Peninsula region of south-central Alaska, often near the coast and especially on the off-shore islands. It is also widely scattered in the mountains of northeastern Oregon, central and northern Idaho, and western Montana, with isolated stations on the Olympic Peninsula of Washington. A single collection (J. Major 2927, GTNP) from Moose Basin, Grand Teton National Park, is the only record from Wyoming."

***Dodecatheon poeticum*** L.F. Hend. [FNA8, HC, HC2]

Rhodora. 32: 27. 1930.

poet's shootingstar, narcissus shooting star

*Primula poetica* (L.F. Hend.) A.R. Mast & Reveal

FNA8: "Dodecatheon poeticum grows mainly in the Columbia River gorge and on the eastern edge of the Cascade Range in Washington, and in Oregon. Nearby one can find *D. conjugens* var. *conjugens* and *D. pulchellum* var. *cusickii*, features of which (the rugose connective of the former, the glandular condition of the latter) are combined in *D. poeticum*. The distinct filaments of var. *conjugens* readily distinguish that taxon from *D. poeticum*; distinction between *D. poeticum* and *D. pulchellum* var. *cusickii* is difficult. The former has maroon pollen sacs; var. *cusickii* has yellow ones. Plants with all of the features of *D. poeticum* rarely have the smooth connective typical of *D. pulchellum*. H. J. Thompson (1953) suggested that *D. poeticum* (a tetraploid) might be the product of an allopolyploid involving var. *cusickii* and *D. hendersonii* (both diploids). The leaves of *Dodecatheon poeticum* are occasionally slightly toothed and relatively broad (e.g., K. L. Chambers 2080, OSC) and resemble the leaves of *D. dentatum*, a species that flowers in the Gorge typically after *D. poeticum*. Rootstocks with bulblets are rarely seen on herbarium specimens."

***Dodecatheon pulchellum*** (Raf.) Merr. [FNA8, HC, HC2]

J. Arnold Arbor. 29: 212. 1948.

*Exinia pulchella* Raf.

var. ***cusickii*** (Greene) Reveal [FNA8, HC2]

Southw. Naturalist. 18: 399. 1974.

Cusick's shootingstar, Cusick's shooting star, sticky shooting star

*Dodecatheon cusickii* Greene [HC]

*Dodecatheon pulchellum* (Raf.) Merr. ssp. *cusickii* (Greene) Calder & Roy L. Taylor [KZ99]

*Primula pauciflora* (Greene) A.R. Mast & Reveal var. *cusickii* (Greene) A.R. Mast & Reveal

FNA8: "Variety *cusickii* is densely glandular-pubescent to glandular-puberulent. It occurs from northeastern Oregon to southeastern British Columbia, thence across Idaho to western Montana, with a disjunct population at Birdseye, Wyoming (A. Nelson 9610, 4 May 1911; DS, RM-mixed with *Dodecatheon conjugens*). Its range is well within that of var. *pulchellum*. The whole plant (leaves, scapes, pedicels, and calyx) is densely glandular, unlike *D. conjugens* var. *viscidum*, which usually has sparsely and minutely glandular-puberulent pedicels, leaves, and scapes that are (typically) glandular-pubescent proximally. Plants from Alberta and Saskatchewan assigned previously to var. *cusickii* are var. *viscidum*."

var. ***macrocarpum*** (A. Gray) Reveal [FNA8, HC2]

Sida. 22: 863. 2006.

*Dodecatheon pulchellum* (Raf.) Merr. ssp. *macrocarpum* (A. Gray) Roy L. Taylor & MacBryde [KZ99]

var. ***pulchellum*** [FNA8, HC2]

J. Arnold Arbor. 29: 212.

dark-throated shooting star

*Dodecatheon pauciflorum* Greene

*Dodecatheon pauciflorum* Greene var. *monanthum* Greene

*Dodecatheon pauciflorum* Greene var. *watsonii* (Tidestr.) C.L. Hitchc.

*Dodecatheon pulchellum* (Raf.) Merr. ssp. *monanthum* (Greene) H.J. Thomp. ex Munz [KZ99]

*Dodecatheon pulchellum* (Raf.) Merr. ssp. *pauciflorum* (Greene) Hultén

*Dodecatheon pulchellum* (Raf.) Merr. ssp. *pulchellum* [KZ99]

*Dodecatheon pulchellum* (Raf.) Merr. ssp. *watsonii* (Tidestr.) H.J. Thomp.

*Dodecatheon pulchellum* (Raf.) Merr. var. *monanthum* (Greene) B. Boivin [FNA8, HC]  
*Dodecatheon pulchellum* (Raf.) Merr. var. *shoshonense* (A. Nelson) Reveal [FNA8]  
*Dodecatheon pulchellum* (Raf.) Merr. var. *watsonii* (Tidestr.) B. Boivin [HC]  
*Dodecatheon radicans* Greene  
*Dodecatheon radicans* Greene ssp. *monanthum* (Greene) H.J. Thomp.  
*Dodecatheon radicans* Greene ssp. *watsonii* (Tidestr.) H.J. Thomp.  
*Primula pauciflora* (Greene) A.R. Mast & Reveal

FNA8: "Variety pulchellum is the most widespread and common variant of the species. It ranges from south-eastern Alaska and western Canada, to southeastern Manitoba, to Lassen County, California, northern and eastern Arizona, New Mexico, and northern Mexico. Scattered populations are found in western North Dakota (Burke County) and in western Nebraska (Morrill County). A collection at Fort Lewis, Thurston County, Washington (D. Thysell 705, WTU), may be an introduction."

***Douglasia* [FNA8, HC, HC2]**

Quart. J. Sci. Lit. Arts. [24]: 385. 1827.  
Douglasia

***Douglasia laevigata* A. Gray [FNA8, HC, HC2]**

Proc. Amer. Acad. Arts. 16: 105. 1880.  
smooth Douglasia, cliff dwarf primrose

*Douglasia laevigata* A. Gray ssp. *ciliolata* (Constance) Calder & Roy L. Taylor  
*Douglasia laevigata* A. Gray var. *ciliolata* Constance [HC]  
*Douglasia laevigata* A. Gray var. *laevigata* [HC]

FNA8: "Although the first collection of *Douglasia laevigata* was from the "Mountains near Mt. Hood," the original description of the species was based on plants collected in the Columbia River gorge, which thus represent the nomenclaturally typical variety (L. Constance 1938), even though that entity constitutes an ecological variant with almost glabrous leaves and loose umbels known only from the gorge. The widespread form, var. *ciliolata*, has more compact umbels and larger, more toothed, conspicuously ciliolate leaves. Because intermediate forms occur commonly, and even the type specimen of *D. laevigata* has cilia, the infraspecific taxa are not recognized here."

***Douglasia nivalis* Lindl. [FNA8, HC, HC2]**

Quart. J. Sci. Lit. Arts. [24]: 383. 1827.  
snow Douglasii

*Douglasia dentata* S. Watson  
*Douglasia nivalis* Lindl. var. *dentata* (S. Watson) A. Gray [KZ99]  
*Douglasia nivalis* Lindl. var. *nivalis* [KZ99]  
*Primula dentata* Kuntze

FNA8: "Previous treatments of *Douglasia nivalis* have recognized two varieties that differ in the degree of dentation on leaf margins. The most common is var. *nivalis*, with almost entire leaf blade margins, found in the Wenatchee Mountains and north to Chelan and Douglas counties. Variety *dentata* has more distinctly toothed leaves and is known only from the Wenatchee Mountains. Because there is a great deal of overlapping variation, particularly in the Wenatchee Mountains, those varieties are not given formal recognition here."

***Lysimachia* [FNA8, HC, HC2]**

Sp. Pl. 1: 146. 1753; Gen. Pl. ed. 5, 72. 1754.  
loosestrife, milkwort, saltwort, starflower

*Anagallis* [FNA8, HC]  
*Centunculus* [HC]  
*Glaux* [HC]  
*Trientalis* [FNA8, HC]

***Lysimachia arvensis* (L.) U. Manns & Anderb. [FNA, HC, HC2]**

scarlet pimpernel  
*Anagallis arvensis* L. [FNA8, HC]  
*Anagallis arvensis* L. ssp. *arvensis*

*Anagallis arvensis* L. var. *caerulea* (L.) Gouan  
*Anagallis caerulea* L.

FNA8: "The flowers close on cloudy days and as evening approaches, hence the name weatherglass. P. E. Gibbs and S. Talavera (2001) found that *Anagallis arvensis* self-pollinates as the petals close. This is the most variable species of *Anagallis*, with reddish flowers once thought to be common in more northerly latitudes and blue flowers in southern areas. There are numerous intermediate color forms. The blue form has been the source of confusion in the nomenclature of this taxon. Linnaeus described the blue form of *A. arvensis* as *A. caerulea*. Schreber used *A. coerulea* (note the spelling) as did Lamarck for a related taxon that is now included within *A. foemina* Miller. Subsequent authors submerged *A. caerulea/coerulea* into *A. arvensis* as a forma, variety, or subspecies, incorrectly crediting either Schreber or Lamarck. L. F. Ferguson (1972) distinguished *A. foemina* Miller (including Schreber's *A. coerulea*), which consistently produces blue flowers, as a separate entity differing, in part, by petals having few to no marginal hairs, which, when present, have elongate terminal cells (in *A. arvensis* the petal margins have numerous gland-tipped, globose hairs), and by having flowering pedicels equaling or shorter than the subtending leaf."

***Lysimachia ciliata* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 147. 1753.  
fringed yellow-loosestrife

*Lysimachia greeneana* Hand.-Mazz.  
*Lysimachia longipedicellata* (Lunell) Hand.-Mazz.  
*Lysimachia membrenacea* (Greene) Hand.-Mazz.  
*Nummularia ciliata* (L.) Kuntze  
*Steironema ciliata* (L.) Baudo  
*Steironema longipedicellatum* (Lunell) Lunell  
*Steironema membranaceum* Greene  
*Steironema pumilum* Greene

***Lysimachia europaea* (L.) U. Manns & Anderb. [FNA, HC2]**

arctic starflower, northern starflower

*Trientalis arctica* Fisch. ex Hook. [HC]  
*Trientalis europaea* L. [FNA8]  
*Trientalis europaea* L. ssp. *arctica* (Fisch. ex Hook.) Hultén [ILBC]  
*Trientalis europaea* L. var. *aleutica* Tatewaki & Kobayashi  
*Trientalis europaea* L. var. *arctica* (Fisch. ex Hook.) Ledeb.

FNA8: "The Alaskan populations of *Trientalis europaea* have been segregated as *T. arctica* or *T. europaea* var. *aleutica*, based primarily on the number and size of leaves. E. Hultén (1927-1930, vol. 4) reduced these to *T. europaea* subsp. *arctica*; he indicated that they (along with populations from eastern Siberia) are merely "geographic races." He later (1968) mapped them as discrete entities. Other taxonomists (e.g., S. L. Welsh 1974) found intermediates, which I corroborated by examination of herbarium specimens. I believe that a conservative approach is warranted until additional research is undertaken."

***Lysimachia hybrida* Michx. [FNA8, HC2]**

Fl. Bor.-Amer. 1: 126. 1803.  
lance-leaved yellow loosestrife, lowland loosestrife, Mississippi loosestrife, lowland yellow-loosestrife

*Lysimachia ciliata* L. var. *validula* (Greene) Kearney & Peebles  
*Lysimachia lanceolata* Walter ssp. *hybrida* (Michx.) J.D. Ray  
*Lysimachia lanceolata* Walter var. *hybrida* (Michx.) A. Gray [HC]  
*Lysimachia lunellii* (Greene) Hand.-Mazz.  
*Lysimachia validula* (Greene) Hand.-Mazz.  
*Nummularia hybrida* (Michx.) Farw.  
*Steironema laevigatum* Howell  
*Steironema lanceolatum* (Walter) A. Gray var. *hybridum* (Michx.) A. Gray  
*Steironema lunellii* Greene  
*Steironema validulum* Greene  
*Steironema verticillatum* Greene

Whited specimen from late 1800s from Ellensburg at OSC; Coffey specimen from 1970s collected at

junction of Wilson Creek and Yakima River in Ellensburg at GA.

***Lysimachia latifolia*** (Hook.) Cholewa [FNA, HC, HC2]

broad-leaved starflower, western starflower

*Alsianthemum europaeum* (L.) Greene var. *latifolium* (Hook.) Greene

*Trientalis borealis* Raf. ssp. *latifolia* (Hook.) Hultén [IFBC]

*Trientalis europaea* L. var. *latifolia* (Hook.) Torr.

*Trientalis latifolia* Hook. [FNA8, HC]

FNA8: "In British Columbia, *Trientalis latifolia* is known from scattered populations along the coast and the American border. Specimens from a disjunct population in central Yukon (E. Hultén 1968; W. J. Cody 1996) were not examined."

***Lysimachia maritima*** (L.) Galasso, Banfi & Soldano [FNA8, HC2]

Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano. 146: 229. 2005.

sea milkwort, sea-milkwort

*Glaucoides maritima* (L.) Lunell

*Glaux maritima* L. [HC]

*Glaux maritima* L. var. *angustifolia* B. Boivin

*Glaux maritima* L. var. *macrophylla* B. Boivin

*Glaux maritima* L. var. *obtusifolia* Fernald

FNA8: "Infraspecific taxa have been proposed based on habit, leaf shape, and capsule size. Because many intermediates exist throughout the range, and extremes can be found growing together, I follow most floras in not recognizing further division."

***Lysimachia minima*** (L.) U. Manns & Anderb. [FNA, HC2]

chaffweed

*Anagallidastrum exiguum* Bubani

*Anagallis minima* (L.) E.H.L. Krause [FNA8]

*Centunculus minimus* L. [HC]

*Micropyxis exigua* (Bubani) Lunell

FNA8: "Canadian populations of *Anagallis minima* are found in the Columbia River region of southeastern British Columbia to the South Saskatchewan River region of Alberta and Saskatchewan."

***Lysimachia nummularia*** L. [FNA8, HC, HC2]

Sp. Pl. 1: 148. 1753.

creeping-Jenny

FNA8: "*Lysimachia nummularia* is part of a Eurasian complex of 38 species centered on the Indian subcontinent, whose boundaries are not well understood. North American populations of this species rarely, if ever, produce capsules. Plants of eastern Asia are reported to produce fruit; seed viability is unknown. The species reproduces by vegetative means, often forming extensive mats."

***Lysimachia punctata*** L. [FNA8, HC, HC2]

Sp. Pl. 1: 147. 1753.

large yellow-loosestrife

***Lysimachia terrestris*** (L.) Britton, Sterns & Poggenberg [FNA8, HC, HC2]

Prelim. Cat. 34. 1888.

swampcandles

*Lysimachia bulbifera* Curtis

*Lysimachia racemosa* Lam.

*Lysimachia stricta* Aiton

*Lysimachia terrestris* (L.) Britton, Sterns & Poggenberg var. *ovata* (E.L. Rand & Redfield) Fernald

*Viscum terrestre* L.

FNA8: "*Lysimachia terrestris* has been introduced in cranberry bogs and is occasionally found on muddy lake shores of the Pacific Northwest (British Columbia, Oregon, Washington). A fairly widespread hybrid between *Lysimachia terrestris* and *L. thyrsoiflora* has been widely reported and named *L. xcommixta* Fernald. The parents may or may not be found in the vicinity of hybrid populations, which can form extensive colonies through vegetative reproduction of rhizomes or bulblets. J. D. Ray (1956) indicated that

the hybrids are "relatively infertile," with abnormal pollen grains."

***Lysimachia thysiflora* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 147. 1753.  
tufted yellow-loosestrife

*Lysimachia capitellata* Raf.

*Lysimachia subcapitata* Raf.

*Lysimachusa thysiflora* (L.) Pohl

*Naumburgia thysiflora* (L.) Rchb.

*Nummularia thysiflora* (L.) Kuntze

*Thyrsanthus palustris* Schrank

FNA8: "Lysimachia thysiflora is known to hybridize readily with *L. terrestris* (see discussion under the latter)."

***Lysimachia vulgaris* L. [FNA8, HC2]**

Sp. Pl. 1: 146. 1753.  
garden yellow-loosestrife

Noxious weed.

***Samolus* [FNA8, HC2]**

Sp. Pl. 1: 171. 1753; Gen. Pl. ed. 5, 78. 1754.  
brookweed, water pimpernel

***Samolus parviflorus* Raf. [FNA8, HC2]**

Amer. Monthly Mag. & Crit. Rev. 2: 176. 1818.  
water pimpernel

*Samolus floribundus* Kunth

*Samolus valerandi* L. ssp. *parviflorus* (Raf.) HultTn [KZ99]

Rare; not in HC. FNA8: "Confirmed Canadian populations of *Samolus parviflorus* appear to be limited to the Atlantic coastal areas and the Ottawa region of the Saint Lawrence Seaway, with a historical record (1903) known from southern Saskatchewan. A report from British Columbia ([www.natureserve.org](http://www.natureserve.org), 2006) is erroneous; no specimens exist at DAO or UBC as reported. The name *Samolus floribundus* has sometimes been applied to this taxon. The publication date for *S. floribundus* is February 1818, making it later than *S. parviflorus*, published in January of that same year. Some taxonomists include this species within the European *S. valerandi*; that species has larger flowers and capsules, fewer racemes, and staminodes occurring in clusters of one to three. No specimens have been found of true European *S. valerandi* in the flora area; previous specimens labeled as *S. valerandi* are native species, usually *S. parviflorus*. *Samolus parviflorus* is occasionally sold as an aquarium plant ("underwater salad")."

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## Pyrolaceae (see Ericaceae)

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## Ranunculaceae [FNA3, HC, HC2] Buttercup Family

**Synonyms:** (none)

**References:** (none)

***Aconitum* [FNA3, HC, HC2]**

Sp. Pl. 1: 532. 1753; Gen. Pl. ed. 5, 236, 1754.  
monkshood

***Aconitum columbianum* Nutt. [FNA3, HC, HC2]**

Fl. N. Amer. 1: 34. 1838.

Columbian monkshood

ssp. *columbianum* [FNA3, HC2]

Fl. N. Amer. 1: 34.

monkshood

*Aconitum columbianum* Nutt. ssp. *pallidum* Piper

*Aconitum columbianum* Nutt. var. *columbianum* [HC]

*Aconitum columbianum* Nutt. var. *ochroleucum* A. Nelson [HC]

*Aconitum geranioides* Greene

*Aconitum noveboracense* A. Gray

*Aconitum uncinatum* L. ssp. *noveboracense* (A. Gray) Hardin

FNA3: "Disjunct, outlying populations of *Aconitum columbianum* subsp. *columbianum* in Iowa, Wisconsin, Ohio, and New York occur at relatively low elevations (as low as 300 m), sometimes in frigid air drainages from caves, or in other microhabitats that simulate conditions of higher elevations. They are probably relict populations that have persisted locally since the last glacial period. These northern wild monkshoods have been treated as a species (*Aconitum noveboracense*, which has had U.S. federal conservation status), or as a subspecies of *A. uncinatum*. We find, however, that they are part of the *A. columbianum* complex. They have a single daughter tuber that is separated from the parent tuber by a connecting rhizome no more than 5mm long. This is like *A. columbianum*, and unlike *A. uncinatum*, which has several daughter tubers separated from the parent by elongate connectives. Leaf morphology is also typical of *A. columbianum*, and unlike *A. uncinatum*. Floral morphology is similar to that found in diminutive races of *A. columbianum* in California, Wyoming, and South Dakota. Several populations in Iowa and Wisconsin are at the diminutive extreme of the range of variation in *A. columbianum* floral characters such as nectary depth and hood height. Data for Iowa and Wisconsin populations can be found in D. E. Brink (1982, also 1980). Plants in an Ohio population were too stressed and depauperate for data collection. Data collected in New York populations by Brink in 1982 are not published. *Aconitum columbianum* subsp. *columbianum* is exceedingly variable. Plants often occur in dense, highly localized populations; they are very similar morphologically within populations and within regional groups of populations. Extreme differences occur between the geographic races. Specimens of the most diminutive races rarely exceed 1 m in height, whereas plants of the largest races may exceed 3m, with correlated differences in size and number of plant parts. A complete range of variation exists between the extremes if many regional groups of populations are considered. Geographic patterns of morphologic variation have been considered too complex to accord formal taxonomic rank to the variants, so the group has been treated as one large, intergrading species complex, with bulbil-bearing and nonbulbil-bearing subspecies. White-flowered variants occur within populations, but white-flowered populations and groups of populations also occur. In each case, these seem to be sporadic variants within larger, regional patterns of morphologic variation. Consequently, white-flowered morphs are not accorded formal taxonomic rank."

*Actaea* [FNA3, HC, HC2]

Sp. Pl. 1: 504. 1753; Gen. Pl. ed. 5, 222, 1754.

baneberry, bugbane

*Cimicifuga* [FNA3, HC]

*Actaea elata* (Nutt.) Prantl [HC2]

tall bugbane

*Cimicifuga elata* Nutt. [FNA3, HC]

var. *elata* [HC2]

tall bugbane

*Actaea laciniata* (S. Watson) J. Compton [HC2, KZ99]

cut-leaved bugbane, Mt. Hood bugbane

*Cimicifuga laciniata* S. Watson [FNA3, HC]

FNA3: "Historically *Cimicifuga laciniata* had been collected only at Lost Lake on Mount Hood, Oregon. The discovery of many new sites in recent years has led to the removal of this species from state and federal lists of protected plants."

***Actaea rubra* (Aiton) Willd. [FNA3, HC, HC2]**

Enum. Pl. 1: 561. 1809.  
baneberry

*Actaea arguta* Nutt.

*Actaea eburnea* Rydb.

*Actaea neglecta* Gillman

*Actaea rubra* Willd. f. *neglecta* (Gillman) Robins. [HC]

*Actaea rubra* (Aiton) Willd. ssp. *arguta* (Nutt.) Hultén

*Actaea rubra* (Aiton) Willd. var. *dissecta* Britton

*Actaea spicata* L. var. *rubra* Aiton

*Actaea viridiflora* Greene

FNA3: "The "eye" formed by the persistent stigma in *Actaea rubra* is smaller than that in *A. pachypoda*. *Actaea rubra* is part of a circumboreal complex and is very similar to the black-fruited European species *A. spicata* Linnaeus, with which it is sometimes considered conspecific. The western North American plants of *A. rubra* have been called *A. arguta* and were distinguished on the basis of their smaller berries, more pubescent leaves, and narrow, more dissected leaflets. Those distinctions, however, are weak; specimens from the West often have fruits and leaves similar to those of plants from the East. A thorough study of *A. spicata* in the broad sense, on a worldwide scale, is needed to resolve the delimitation of taxa within this complex. Plants with white fruit, sometimes distinguished as *Actaea rubra* forma *neglecta* (Gillman) H. Robinson, are frequent and are more common than the red-fruited form in many localities. Native Americans used various preparations made from the roots of *Actaea rubra* medicinally to treat coughs and colds, sores, hemorrhages, stomachaches, syphilis, and emaciations; preparations from the entire plant as a purgative; and infusions from the stems to increase milk flow. It was also used in various ceremonies (D. E. Moerman 1986)."

***Adonis* [FNA3, HC, HC2]**

Sp. Pl. 1: 547. 1753; Gen. Pl. ed. 5, 242, 1754.  
adonis, pheasant-eye

***Adonis aestivalis* L. [FNA3, HC, HC2]**

Sp. Pl., ed. 2. 1: 771. 1762.  
summer pheasant's-eye

*Adonis aestivalis* L. var. *citrina* Hoffm.

Has this species naturalized in WA?

***Adonis annua* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 547. 1753.  
blood-drops

*Adonis autumnalis* L.

No confirmed report that species is naturalized in WA. KZ record from St. John, Flora of SE WA. H&C says occ escapee. FNA does not report from WA.

***Anemone* [FNA3, HC, HC2]**

Sp. Pl. 1: 538. 1753; Gen. Pl. ed. 5, 241, 1754.  
anemone, windflower

***Anemone deltoidea* Hook. [FNA3, HC, HC2]**

Fl. Bor.-Amer. 1: 6. 1829.  
threeleaf anemone, Columbian windflower

***Anemone drummondii* S. Watson [FNA3, HC, HC2]**

Bot. California. 2: 424. 1880.  
Drummond's anemone

**var. *drummondii* [FNA3, HC, HC2]**

Bot. California. 2: 424.  
Drummond's anemone

*Anemone cairnesiana* Greene

*Anemone californica* Eastw.  
*Anemone drummondii* S. Watson ssp. *drummondii* [KZ99]

var. ***lithophila*** (Rydb.) C.L. Hitchc. [FNA3, HC, HC2]

Vasc. Pl. Pacific NW 2: 325.  
Drummond's anemone, Little Belt Mountain anemone

*Anemone globosa* Nutt. ex A. Nelson var. *lithophila* (Rydb.) M. Peck  
*Anemone lithophila* Rydb. [KZ99]

FNA and H&C do not list for WA; KZ record needs to be checked.

***Anemone lyallii*** Britton [FNA3, HC, HC2]

Ann. New York Acad. Sci. 6: 227. 1891.  
little mountain anemone, Lyall's anemone

*Anemone oligantha* Eastw.  
*Anemone quinquefolia* L. var. *lyallii* (Britton) B.L. Rob.

FNA3: "Anemone lyallii may occasionally intergrade with *A. oregana* west of the Cascades in northern Oregon (C. L. Hitchcock et al. 1955-1969, vol. 2). The area of probable intergradation should be extended to the southern limits of both species where they are sympatric."

***Anemone multifida*** Poir. [FNA3, HC, HC2]

Encycl. suppl. 1: 364. 1810.  
cliff anemone, Pacific anemone

var. ***multifida*** [FNA3, HC, HC2]

In J. Lamarck et al., Encycl. suppl. 1: 364.  
cliff anemone, Pacific anemone

*Anemone globosa* Nutt. ex A. Nelson  
*Anemone multifida* Poir. var. *hudsoniana* DC. [KZ99]  
*Anemone multifida* Poir. var. *nowasadii* B. Boivin  
*Anemone multifida* Poir. var. *richardsiana* Fernald  
*Anemone multifida* Poir. var. *sansonii* B. Boivin

FNA3: "Early-season plants of *Anemone multifida* var. *multifida* have solitary flowers and will key to var. *saxicola*."

var. ***saxicola*** B. Boivin [FNA3, HC2]

Canad. Field-Naturalist. 65: 2. 1951.  
hirsute anemone

*Anemone multifida* Poir. ssp. *saxicola* (B. Boivin) W.A. Weber  
*Anemone multifida* Poir. var. *hirsuta* C.L. Hitchc. [HC]

***Anemone occidentalis*** S. Watson [FNA3, HC, HC2]

Proc. Amer. Acad. Arts. 11: 121. 1876.  
western pasqueflower

*Anemone occidentalis* S. Watson var. *subpilosa* Hardin  
*Pulsatilla occidentalis* (S. Watson) Freyn [KZ99]

FNA3: "W. J. Hooker (1829) included *Anemone occidentalis* in his concept of *Anemone alpina* Linnaeus."

***Anemone oregana*** A. Gray [FNA3, HC, HC2]

Proc. Amer. Acad. Arts. 22: 308. 1887.  
Oregon anemone

var. ***felix*** (M. Peck) C.L. Hitchc. [FNA3, HC, HC2]

Vasc. Pl. Pacif. N.W. 2: 329. 1964.  
Oregon anemone, western wood anemone

*Anemone felix* M. Peck

var. ***oregana*** [FNA3, HC, HC2]

Proc. Amer. Acad. Arts. 22: 308.  
Oregon anemone, western wood anemone

*Anemone adamsiana* Eastw.  
*Anemone quinquefolia* L. var. *oregana* (A. Gray) B.L. Rob.

***Anemone parviflora* Michx. [FNA3, HC, HC2]**

Fl. Bor.-Amer. 1: 319. 1803.  
northern anemone, small-flowered anemone

*Anemone borealis* Richardson  
*Anemone parviflora* Michx. var. *parviflora* [KZ99]  
*Anemone parviflora* Michx. var. *grandiflora* Ulbr.

***Anemone patens* L. [FNA3, HC2]**

Sp. Pl. 1: 538. 1753.  
pasqueflower, prairie-crocus

var. ***multifida* Pritz. [FNA3, HC2]**

Linnaea. 15: 581. 1841.  
cliff anemone

*Anemone ludoviciana* Nutt., superfluous renaming (illegitimate)  
*Anemone nuttalliana* DC. [HC]  
*Pulsatilla patens* (L.) Mill. ssp. *multifida* (Pritz.) Zämelis [KZ99]

FNA3 does not show this taxon occurring in WA, however the PLANTS database does show a synonymous taxon (*Pulsatilla patens* ssp. *multifida*) occurring in WA. Further work needs to be conducted to determine the proper name and taxonomy for the WA entity that we currently call *A. patens* var. *multifida*.

***Anemone piperi* Britton ex Rydb. [FNA3, HC, HC2]**

Bull. Torrey Bot. Club. 29: 153. 1902.  
Piper's anemone, Piper's windflower

FNA3: "Plants of *Anemone piperi* from southeastern Washington and northeastern Oregon (i.e., the westernmost limits of the species) are sometimes intermediate between *A. piperi* and *A. oregana*. Although they possess vertical rhizomes characteristic of *A. piperi*, they have the bluish or pinkish sepals of *A. oregana*. These plants are best referred to *A. piperi*, pending detailed biosystematic analysis."

***Aquilegia* [FNA3, HC, HC2]**

Sp. Pl. 1: 533. 1753; Gen. Pl. ed. 5, 237, 1754.  
Columbine

***Aquilegia flavescens* S. Watson [FNA3, HC, HC2]**

Botany (Fortieth Parallel). 10. 1871.  
yellow Columbine

*Aquilegia flavescens* S. Watson var. *flavescens* [KZ99]  
*Aquilegia flavescens* S. Watson var. *miniata* A. Nelson & J.F. Macbr.  
*Aquilegia formosa* Fisch. ex DC. var. *flavescens* (S. Watson) M. Peck

FNA3: "*Aquilegia flavescens* sometimes forms hybrid swarms with *A. formosa* var. *formosa*, which grows at lower elevations through much of its range. Intermediate specimens having pinkish red flowers and petal blades 5-6 mm are occasionally found where these species grow together. The name *A. flavescens* var. *miniana* has sometimes been mistakenly applied to these intermediates, but the type of var. *miniana* is a typical, pink-sepaled plant of *A. flavescens*."

***Aquilegia flavescens* S. Watson × *Aquilegia formosa* Fisch. ex DC. var. *formosa* [HC2]**

***Aquilegia formosa* Fisch. ex DC. [FNA3, HC, HC2, KZ99]**

Prodr. 1: 50. 1824.  
red Columbine, Sitka Columbine

var. ***formosa* [FNA3, HC2]**

Prodr. 1: 50.  
red Columbine, Sitka Columbine, western Columbine

*Aquilegia canadensis* L. var. *formosa*  
*Aquilegia columbiana* Rydb.

*Aquilegia formosa* Fisch. ex DC. var. *communis* B. Boivin  
*Aquilegia formosa* Fisch. ex DC. var. *megalantha* B. Boivin  
*Aquilegia formosa* Fisch. ex DC. var. *wawawensis* (Payson) H. St. John

***Aquilegia vulgaris* L. [FNA3, HC2]**

Sp. Pl. 1: 533. 1753.  
European Columbine

Not reported in H&C; AJ reports "escapes and nearly naturalized" in Seattle area. FNA3: "*Aquilegia vulgaris* is cultivated as an ornamental and occasionally escapes into disturbed habitats. Most plants have blue or purple flowers (the wild type), but horticultural races with white or reddish flowers sometimes become established. Many cultivated columbines are derived from hybrids between *A. vulgaris* and related species. Some of our escaped plants are probably descended from such hybrids."

***Arcteranthis* [HC2]**

false-buttercup

***Arcteranthis cooleyae* (Vasey & Rose) Greene [HC2]**

Cooley's buttercup

*Kumlienia cooleyae* (Vasey & Rose) Greene [KZ99]

*Ranunculus cooleyae* Vasey & Rose [FNA3, HC]

***Caltha* [FNA3, HC, HC2]**

Sp. Pl. 1: 558. 1753; Gen. Pl. ed. 5, 244, 1754.  
marsh-marigold

***Caltha biflora* DC. [HC, HC2]**

broadleaved marsh-marigold, twinflowered marsh-marigold  
(see also *Caltha leptosepala*)

*Caltha biflora* DC. var. *biflora* [HC]

*Caltha howellii* (Huth) Greene

*Caltha leptosepala* DC. ssp. *biflora* (DC.) P.G. Sm.

*Caltha leptosepala* DC. ssp. *howellii* (Huth) P.G. Sm. [KZ99]

*Caltha leptosepala* DC. var. *biflora* (DC.) G. Lawson

***Caltha leptosepala* DC. [FNA3, HC, HC2], misapplied**

Syst. Nat. 1: 310. 1817.  
elkslip

*Caltha biflora* DC. var. *rotundifolia* (Huth) C.L. Hitchc. [HC]

*Caltha leptosepala* DC. var. *rotundifolia* Huth

*Psychropila leptosepala* (DC.) W. Weber

FNA3: "*Caltha leptosepala* is morphologically complex, and a number of segregate taxa have been described. Plants are most commonly assigned to two species, however. *Caltha leptosepala* in strict sense is found in the Rocky Mountains of Arizona and New Mexico north to Alaska and is characterized by longer-than-broad leaves with small, nonoverlapping basal lobes, solitary-flowered inflorescences, and sessile follicles. Plants in the Coast Ranges of central California north to the coastal islands of southern Alaska, distinguished by broader-than-long leaves with large, overlapping basal lobes, 2-flowered inflorescences, and stipitate follicles, have been called *C. biflora*. My comparison of specimens from the Rocky Mountains and the Coast Ranges indicated that no clear distinction could be made (table 1). While plants are often distinctive in the southern part of their range, a continuous intergradation between the two extremes exists over much of their range."

***Caltha leptosepala* DC. [FNA3, HC, HC2]**

Syst. Nat. 1: 310. 1817.  
elkslip

*Caltha biflora* DC. var. *rotundifolia* (Huth) C.L. Hitchc. [HC]

*Caltha leptosepala* DC. var. *rotundifolia* Huth

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***Caltha palustris* L. [FNA3, HC2]**

Sp. Pl. 1: 558. 1753.  
yellow marshmarigold

*Caltha arctica* R. Br.

*Caltha asarifolia* DC. [HC]

*Caltha palustris* L. ssp. *asarifolia* (DC.) Hultén

*Caltha palustris* L. var. *asarifolia* (DC.) Rothr.

*Caltha palustris* L. var. *flabellifolia* (Pursh) Torr. & A. Gray

*Caltha palustris* L. var. *palustris* [KZ99]

FNA3: "*Caltha palustris* has been divided into different taxa, although plants have been most commonly assigned to two varieties in North America. Typical *C. palustris* var. *palustris* is characterized by permanently erect, stout stems that do not produce roots and shoots at the nodes after anthesis. The basal leaves are broadly cordate to reniform with coarsely crenate-dentate margins and overlapping basal lobes. Generally more than three flowers occur on a stem. In contrast, *C. palustris* var. *flabellifolia* [= var. *arctica*, var. *radicans* (T. F. Forster) Beck] is characterized by stems that sprawl with age and produce roots and shoots at the nodes after anthesis. The basal leaves are reniform with denticulate margins, and the basal lobes are widely divergent and do not overlap. Often fewer than three flowers occur on a stem. *Caltha palustris* var. *flabellifolia* is distributed locally throughout the range of *C. palustris* var. *palustris*; it often grows in places with more extreme environmental conditions, such as shorelines, tidal areas, swiftly running streams and rivers, and areas with an arctic climate. Many arctic specimens can be assigned to this variety. While *Caltha palustris* var. *palustris* and var. *flabellifolia* are distinctive in their extremes, they appear to represent elements along a morphologic continuum rather than recognizable taxonomic entities. For example, P.G. Smit (1973) found plants from Point Barrow, Alaska, to be dwarfed, few flowered, and prostrate, while specimens from southern Alaska were robust, many flowered, and erect. Between these two extremes a complete series of intermediates occurs. Based on that evidence, and considering the phenotypic plasticity known to exist in this species, the various specific and infraspecific segregates of *C. palustris* in North America are not recognized."

***Ceratocephala* [HC2]**

bur buttercup, hornseed buttercup, curvseed butterwort

***Ceratocephala testiculata* (Crantz) Besser [FNA3, HC2]**

hornseed buttercup

*Ceratocephalus orthoceras* DC.

*Ranunculus testiculatus* Crantz [FNA3, HC]

FNA3: "In North America, *Ranunculus testiculatus* seems to be expanding its range rapidly in arid and semiarid areas. A second species of this subgenus, *R. falcatus* Linnaeus [*Ceratocephala falcata* (Linnaeus) Persoon], has been reported from North America, but all reports seem to be based on misidentified material of *R. testiculatus*."

***Clematis* [FNA3, HC, HC2]**

Sp. Pl. 1: 543. 1753; Gen. Pl. ed. 5, 242, 1754.  
clematis, virgins-bower

***Clematis hirsutissima* Pursh [FNA3, HC, HC2]**

Fl. Amer. Sept. 2: 385. 1814.

Douglas's clematis, leatherflower, sugarbowls, vaseflower

var. *hirsutissima* [FNA3, HC2]

Fl. Amer. Sept. 2: 385.  
Douglas' clematis

*Clematis hirsutissima* Pursh var. *arizonica* (A. Heller) R.O. Erickson  
*Viorna arizonica* (A. Heller) A. Heller  
*Viorna bakeri* (Greene) Rydb.  
*Viorna eriophora* Rydb.  
*Viorna jonesii* (Kuntze) Rydb.  
*Viorna wyethii* (Nutt.) Rydb.

FNA3: "...some plants from Washington, Oregon, Colorado, and elsewhere have leaflets quite as narrowly lobed, and other plants in the Flagstaff area have more widely lobed leaflets. The widely spreading leaves allegedly characteristic of *C. hirsutissima* var. *arizonica* likewise occur elsewhere in the range of the species. *Clematis hirsutissima* var. *hirsutissima*, as circumscribed here, is highly variable in the density of leaf pubescence throughout most of its range."

***Clematis ligusticifolia* Nutt. [FNA3, HC, HC2]**

Fl. N. Amer. 1: 9. 1838.  
western clematis

*Clematis ligusticifolia* Nutt. var. *brevifolia* Nutt. [KZ99]  
*Clematis ligusticifolia* Nutt. var. *ligusticifolia* [KZ99]  
*Clematis neomexicana* Wootton & Standl.  
*Clematis suksdorfii* B.L. Rob.

FNA3: "Two varieties of *Clematis ligusticifolia* have been weakly distinguished based on the presence or absence of 2-pinnate leaves."

***Clematis occidentalis* (Hornem.) DC. [FNA3, HC2]**

Prodr. 1: 10. 1824.  
Columbia clematis, rock clematis, Columbia virgins-bower

var. ***dissecta* (C.L. Hitchc.) J.S. Pringle [FNA3, HC2]**

Brittonia. 23: 371. 1971.  
Columbia clematis

*Clematis columbiana* (Nutt.) Torr. & A. Gray var. *dissecta* C.L. Hitchc. [HC]

FNA3: "*Clematis occidentalis* var. *dissecta* occurs only in the Wenatchee and adjacent ranges of the Cascade Mountains."

var. ***grosseserrata* (Rydb.) J.S. Pringle [FNA3, HC2]**

Brittonia. 23: 370. 1971.  
Columbia clematis

*Atrogene grosseserrata* Rydb., orthographic variant  
*Clematis columbiana* (Nutt.) Torr. & A. Gray [FNA3, HC, HC2], misapplied  
*Clematis columbiana* (Nutt.) Torr. & A. Gray var. *columbiana* [FNA3, HC, HC2], misapplied  
*Clematis occidentalis* (Hornem.) DC. ssp. *grosseserrata* (Rydb.) R.L. Taylor & McBryde

FNA3: "The name *Clematis columbiana* was formerly misapplied to *C. occidentalis* var. *grosseserrata*; it is still associated with that taxon in some horticultural and popular publications. In such works, true *C. columbiana* is usually called *C. pseudoalpina*." Not in H&C.

***Clematis orientalis* L. [FNA3, HC2]**

Sp. Pl. 1: 543. 1753.

***Clematis vitalba* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 544. 1753.  
traveler's-joy

FNA3: "*Clematis vitalba* is naturalized in only a few sites in eastern North America and northwestern Oregon to the Puget Sound."

***Coptis* [FNA3, HC, HC2]**

Trans. Linn. Soc. London, Bot. 8:305. 1807.  
goldthread

***Coptis aspleniifolia*** Salisb. [FNA3, HC2]

Trans. Linn. Soc. London, Bot. 8:306. 1807.  
fern-leaf goldthread

*Coptis asplenifolia* Salisb. [HC], orthographic variant

FNA3: "This species is widespread in coastal areas from southern British Columbia to southeastern Alaska. The Washington State Heritage Program tracks this species as "state-rare" in Snohomish County, Washington; I have not seen any specimens to confirm its presence in the state. *Coptis aspleniifolia*, *C. laciniata*, and *C. occidentalis* form a group of morphologically similar, allopatric species that are probably recently derived. The species may have originated in response to the opening of the western Cordilleran landscape after Pleistocene glaciation and could be considered localized variants of a single species. Although most individuals can be readily distinguished, some can be difficult to place. A putative hybrid between *Coptis aspleniifolia* and *C. trifolia* has been found along the Kennedy River of Vancouver Island, British Columbia (T.C. Brayshaw, pers. comm.). It has 3-5 deeply dissected leaflets per leaf and no complete flowers."

***Coptis laciniata*** A. Gray [FNA3, HC, HC2]

Bot. Gaz. 12:297. 1887.  
Oregon goldthread

***Coptis occidentalis*** (Nutt.) Torr. & A. Gray [FNA3, HC, HC2]

Fl. N. Amer. 1:28. 1838.  
Idaho goldthread

*Chrysocoptis occidentalis* Nutt.

***Coptis trifolia*** (L.) Salisb. [FNA3, HC, HC2]

Trans. Linn. Soc. London, Bot. 8:305. 1807.  
threeflet goldthread

*Coptis groenlandica* (Oeder) Fernald

Single collection from Clallam County.

***Delphinium*** [FNA3, HC, HC2]

Sp. Pl. 1: 530. 1753; Gen. Pl. ed 5, 236. 1754.  
delphinium, larkspur

*Consolida* [FNA3]

***Delphinium ajacis*** L. [HC2]

Sp. Pl. 1: 531. 1753  
doubtful knight's-spur

*Consolida ajacis* (L.) Schur [FNA3]

*Consolida ambigua* (L.) P.W. Ball & Heywood

*Delphinium ambiguum* L.

FNA3: "In many floras the names *Consolida ambigua* (Linnaeus) Ball & Heywood and *Delphinium ambiguum* Linnaeus have been misapplied to this taxon. *Consolida ajacis* has escaped and become more or less naturalized in many temperate and subtropical parts of the world. It is by far the most commonly encountered species of *Consolida* in North America." Not in H&C.

***Delphinium basalticum*** M.J. Warnock [FNA3, HC2]

Phytologia. 78: 91. 1995.  
basaltic larkspur

Not in H&C. FNA3: "Hybrids between *Delphinium basalticum* and *D. trolliifolium* are known."

***Delphinium xburkei*** Greene [FNA3, HC, HC2]

Erythea 2: 183

The name *Delphinium burkei* Greene is often incorrectly applied to plants of *D. distichum*, as in H&C. FNA3: "Although hybridization between *D. depauperatum* and *D. nuttallianum* is uncommon, hybrids do occur; they have been named *D. x burkei* Greene. Burke's specimens at Kew represent a good series of permutations of this cross and successive backcrosses."

***Delphinium depauperatum* Nutt. [FNA3, HC, HC2]**

Fl. N. Amer. 1: 33. 1838.

slim larkspur

*Delphinium cyanoreios* Piper

*Delphinium diversifolium* Greene

*Delphinium diversifolium* Greene var. *harneyense* (Ewan) R.J. Davis

FNA3: "Delphinium depauperatum and *D. nuttallianum* are often found in the same meadows, with *D. depauperatum* occupying wetter sites, often very near streams, while *D. nuttallianum* is found in drier, better-drained sites. In typical years, the substrate will be dry around *D. nuttallianum* plants, while the substrate is damp near *D. depauperatum* plants as they flower. In addition, within a meadow, *D. depauperatum* flowers later than *D. nuttallianum*, so there is normally little overlap in flowering phenology of the two taxa. Although hybridization between *D. depauperatum* and *D. nuttallianum* is uncommon, hybrids do occur; they have been named *D. x burkei* Greene. Burke's specimens at Kew represent a good series of permutations of this cross and successive backcrosses. Specimens labeled *Delphinium depauperatum* subsp. *harneyense* represent the phase with more abundant yellow-glandular trichomes in the inflorescence and slightly larger flowers. Considerable variation in these features may be found within populations. Presence of yellow-glandular hairs is generally greater in more northern populations. Type specimens of *Delphinium diversifolium* are intermediate in amount of glandular pubescence. Often confused with *Delphinium nuttallianum*, *D. depauperatum* may be distinguished by its cylindrical inflorescences, less dissected leaves, winged seeds, and erect fruits. These character states contrast with the pyramidal inflorescences, more dissected leaves, ringed seeds, and spreading fruits of *D. nuttallianum*. Dwarfed phases of *Delphinium polycladon* may be confused with *D. depauperatum*; they can be distinguished on the basis of bluish purple flowers, sigmoid pedicel, and prominent buds in the former, and dark blue flowers, straight pedicels, and absence of prominent buds in the latter."

***Delphinium distichum* Geyer ex A. Gray [FNA3, HC2]**

J. Bot. 6: 68. 1847.

two-spike larkspur

*Delphinium strictum* A. Nelson var. *distichiflorum* (Hook.) H. St. John

H&C erroneously treats this taxon under the name *Delphinium burkei* Greene. True *Delphinium xburkei* Greene refers to hybrids between *D. depauperatum* and *D. nuttallianum* (see FNA Vol. 3). FNA3: "Delphinium distichum hybridizes with *D. multiplex* and *D. nuttallianum* (*D. x diversicolor* Rydberg). The name *D. burkei* has often been misapplied to *D. distichum*."

***Delphinium glareosum* Greene [FNA3, HC, HC2]**

Pittonia. 3: 257. 1898.

Olympic larkspur

*Delphinium caprorum* Ewan

FNA3: "Delphinium bicolor is closely related to *D. glareosum*; it differs in its wider-lobed cauline leaves, shallower petal clefts, and narrower fruits." In the Columbia Basin *D. glareosum* appears to hybridize with *D. nuttallianum*, making distinction between the two species difficult.

***Delphinium glaucum* S. Watson [FNA3, HC, HC2]**

Bot. California. 2: 427. 1880.

pale larkspur

*Delphinium scopulorum* A. Gray var. *glaucum* (S. Watson) A. Gray

*Delphinium splendens* G.N. Jones

FNA3: "Delphinium glaucum hybridizes extensively with *D. barbeyi* in Utah and Colorado to the extent that hybrids [*D. x occidentale* (S. Watson) S. Watson] are more common in many areas than individuals of either parental stock. It occasionally hybridizes with *D. distichum*, *D. polycladon*, *D. ramosum*, and *D. stachydeum*. Hybrids with *D. brachycentrum* are called *D. x nutans* A. Nelson. Tremendous variation is apparent in what is here recognized as *Delphinium glaucum*. This is the northern expression of the complex described in the discussion under *Delphinium* subsect. *Exaltata*. Although some geographic patterns are apparent in the variation within *D. glaucum*, infraspecific entities are not here recognized. Apparently because of rather recent and/or incomplete genetic isolation, the degree of differentiation between these units is not such that they can be consistently recognized. Specimens named *Delphinium*

splendens represent plants grown in high-moisture, low-light conditions and may occur as sporadic individuals anywhere from California to Alaska. Type specimens of *D. brownii* Rydberg, *D. canmorensis* Rydberg, and *D. hookeri* A. Nelson represent plants grown on relatively dry sites at high latitudes. Plants from dry sites at low latitudes are represented by *D. bakerianum* Bornmüller and *D. occidentale* var. *reticulatum* A. Nelson. Plants with lavender to white flowers are represented by type specimens of *D. brownii* forma *pallidiflorum* B. Boivin and *D. cucullatum* A. Nelson. Type specimens of *D. alatum* A. Nelson and *D. glaucum* var. *alpinum* F. L. Wynd (an invalid name) represent plants growing above or near treeline. *Delphinium glaucum* may be confused with *D. californicum*, *D. exaltatum*, *D. polycladon*, or *D. stachydeum*. For distinctions from *D. californicum*, see discussion under that species. Absence of basal or proximal cauline leaves, generally much larger plants (greater than 1.5 m), more flowers in the inflorescence, and shorter petioles on the leaves of *D. glaucum* are features that serve to distinguish this species from *D. polycladon*. In the latter, the leaves are primarily on the proximal stem, plants often less than 1.5 m, flowers more scattered, and petioles more than twice the length of leaf blades. Features of the sepals may be used to distinguish *D. glaucum* (dark lavender to blue purple, usually only minutely puberulent) from *D. stachydeum* (bright blue, densely puberulent). Vegetative parts of *D. stachydeum* are also densely puberulent, while those of *D. glaucum* typically are glabrous."

***Delphinium leucophaeum* Greene [HC, HC2]**

Erythea 3(7): 118.

pale larkspur

*Delphinium nuttallii* A. Gray ssp. *ochroleucum* (Nutt.) M.J. Warnock [FNA3]

The treatment here follows H&C, which is not consistent with the FNA3 treatment of *D. nuttallii* ssp. *ochroleucum*: "The range of morphologic features of *Delphinium nuttallii* subsp. *ochroleucum* (*D. leucophaeum*) is almost completely encompassed within that of *D. nuttallii* subsp. *nuttallii*. Sepal color is the only feature consistently separating the two subspecies. Were it not for the fact that any given population typically has plants of only one flower color, a rank of forma would be more appropriate."

***Delphinium lineapetalum* Ewan [FNA3, HC2]**

Univ. Colorado Stud., Ser. D, Phys. Sci. 2: 126. 1945.

thin-petal larkspur

*Delphinium nuttallianum* Pritz. var. *lineapetalum* (Ewan) C.L. Hitchc. [HC]

***Delphinium lineapetalum* Ewan [FNA3, HC2], misapplied**

Univ. Colorado Stud., Ser. D, Phys. Sci. 2: 126. 1945.

thin-petal larkspur

*Delphinium nuttallianum* Pritz. var. *lineapetalum* (Ewan) C.L. Hitchc. [HC]

***Delphinium menziesii* DC. [FNA3, HC, HC2]**

Syst. Nat. 1: 355. 1817.

Menzies larkspur

*Delphinium menziesii* DC. ssp. *menziesii* [FNA3]

*Delphinium menziesii* DC. ssp. *pyramidale* Ewan

*Delphinium menziesii* var. *menziesii* [HC]

*Delphinium menziesii* DC. var. *pyramidale* (Ewan) C.L. Hitchc. [HC]

FNA3: "Although *Delphinium menziesii* has often been confused with *D. nuttallii*, it may be distinguished by its consistently larger flowers and usually fewer flowers per plant. Interestingly, each species produces both blue-purple and yellowish flower colors in separate populations. *Delphinium menziesii* subsp. *menziesii* hybridizes with *D. trolliifolium* and *D. nuttallii*."

***Delphinium multiplex* (Ewan) C.L. Hitchc. [FNA3, HC, HC2]**

Vasc. Pl. Pacif. N.W. 2: 357. 1964.

Kittitas larkspur

*Delphinium cyanoreios* Piper f. *multiplex* Ewan

Endemic to Washington. Hybridizes freely with *D. distichum* where the two taxa come into contact. FNA3: "*Delphinium multiplex* hybridizes with *D. glaucum* and *D. distichum*."

***Delphinium nuttallianum* Pritz. [FNA3, HC, HC2]**

Rept. Bot. Syst. 1: 744. 1842.

two-lobe larkspur, upland larkspur  
(see also *Delphinium lineapetalum*)

*Delphinium nuttallianum* Pritz. var. *fulvum* C.L. Hitchc. [HC]  
*Delphinium nuttallianum* Pritz. var. *levicaule* C.L. Hitchc.  
*Delphinium nuttallianum* Pritz. ex Walp. var. *nuttallianum* [HC]  
*Delphinium pauciflorum* Nutt.  
*Delphinium sonnei* Greene

FNA3: "Delphinium nuttallianum represents an extremely difficult complex, with many variations in a number of morphologic traits. The complex has been and continues to be a major source of confusion for identification of Delphinium in North America. Type specimens of *D. nuttallianum* represent plants growing under dry conditions in open areas. These are typically found at 1200-2000 m in sage scrub or lower montane forest. Delphinium nuttallianum may be confused with *D. andersonii*, *D. antoninum*, *D. depauperatum*, *D. gracilentum*, and two subspecies of *D. patens* (subsp. *patens* and subsp. *montanum*). Features that may be used to separate *D. nuttallianum* from the first four, are enumerated under the respective species discussions. From *D. patens* subsp. *patens*, *D. nuttallianum* may be distinguished by its narrower leaf lobes, larger fruits, and more compact inflorescence. The frequent presence of glandular hairs in the inflorescence of *D. patens* subsp. *montanum*, contrasted with their absence in *D. nuttallianum*, will separate these taxa. Dwarfed plants of *D. polycladon* may be confused with *D. nuttallianum*. The latter, however may be distinguished by its ringed seeds, and it does not have prominent buds or sigmoid pedicel. Hybrids have been seen between Delphinium nuttallianum and *D. andersonii*, *D. depauperatum* (*D. x burkei* Greene), *D. distichum* (*D. x diversicolor* Rydberg), *D. nudicaule*, and *D. polycladon*."

***Delphinium nuttallii* A. Gray [FNA3, HC, HC2]**

Bot. Gaz. 12: 54. 1887.  
Nuttall's larkspur

*Delphinium nuttallii* A. Gray ssp. *nuttallii* [FNA3]

***Delphinium occidentale* (S. Watson) S. Watson [FNA3, HC, HC2]**

Man. Bot. Rocky Mt. 11.  
western larkspur

var. ***occidentale*** [HC2]

***Delphinium stachydeum* (A. Gray) Tidestr. [FNA3, HC, HC2]**

Proc. Biol. Soc. Wash. 27: 61. 1914.  
hedgenettle larkspur, spiked larkspur

*Delphinium scopulorum* A. Gray var. *stachydeum* A. Gray  
*Delphinium stachydeum* (A. Gray) A. Nelson & J.F. Macbr.  
*Delphinium umatillense* Ewan

On 10/14/2009, the PLANTS database shows this species occurring in WA based on a specimen from Clallam County at WS that is cited in a 1906 manuscript in Contributions from the U.S. National Herbarium. This is most likely a misidentified specimen given the known range of this species (east of the Cascades in WA, OR; Intermountain West). FNA3 shows this species barely reaching into southeastern WA, but it is unclear as to which herbarium has the specimen showing this occurrence. FNA3: "Populations of Delphinium stachydeum are widely scattered in isolated mountain ranges surrounded by desert or grassland. The species has been reported (visual sightings) from northwestern Utah; no specimens have been seen from there. Hybrids between *D. stachydeum* and *D. glaucum* have been reported. Although *D. stachydeum* has been seen flowering within 30 m of flowering *D. depauperatum*, no hybrids have been observed. Delphinium stachydeum may possibly be confused with *D. geyeri*, from which it may be distinguished by its usually greater plant size, less pubescent foliage, and later flowering date. Delphinium stachydeum also may be confused with *D. glaucum*; see discussion under that species."

***Delphinium sutherlandii* M.J. Warnock [FNA3, HC2]**

Phytologia. 78: 97. 1995.  
sutherland's larkspur

Not in H&C

***Delphinium trolliifolium* A. Gray [FNA3, HC, HC2]**

Proc. Amer. Acad. Arts. 8: 375. 1872.

cow-poison, poison larkspur

FNA3: "Hybrids between *Delphinium troliifolium* and *D. decorum*, *D. menziesii* subsp. *pallidum* (*D. x pavonaceum* Ewan, Peacock larkspur), *D. nudicaule*, *D. nuttallianum*, and *D. nuttallii* are known. *Delphinium troliifolium* is likely to be confused only with *D. bakeri*. Refer to discussion under that species for differences."

***Delphinium viridescens*** Leiberger [FNA3, HC, HC2]

Proc. Biol. Soc. Wash. 11: 39. 1897.  
Wenatchee larkspur

FNA3: "*Delphinium viridescens* is local in mountains southwest of Wenatchee, Washington."

***Delphinium xantholeucum*** Piper [FNA3, HC, HC2]

Contr. U.S. Natl. Herb. 11: 280. 1906.  
yellow-white larkspur

FNA3: "*Delphinium xantholeucum* is very local; much of the habitat of this species has been converted to orchards."

***Enemion*** [FNA3, HC2]

J. Phys. Chim. Hist. Nat. Arts. 91: 70. 1820.  
false rue-anemone

*Isopyrum* [HC]

***Enemion hallii*** (A. Gray) J.R. Drumm. & Hutch. [FNA3, HC2]

Bull. Misc. Inform. Kew. 1920: 161. 1920.  
Willamette false rue-anemone

*Isopyrum hallii* A. Gray [HC]

FNA3: "*Enemion hallii* differs from all other North American members of the genus in having well-defined cymose inflorescences. Its closest ally is thought to be the east-Asian species *E. raddeanum* Regel, from which it differs in having long-petiolate leaves and cymose inflorescences with bracteolate subumbels. *Enemion raddeanum* is characterized by sessile or short-petiolate leaves and simple, umbellate inflorescences."

***Ficaria*** [HC2]

fig buttercup

***Ficaria verna*** Huds. [HC2, Stace 1997]

Fl. Angl. (Hudson) 214.  
lesser celandine

*Ranunculus ficaria* L. [FNA3, HC]  
*Ranunculus ficaria* L. ssp. *bulbifera* (Marsden-Jones) Lawalrée  
*Ranunculus ficaria* L. ssp. *calthifolius* (Rchb.) Arcang.  
*Ranunculus ficaria* L. var. *bulbifera* Albert [KZ99]

Recent molecular evidence indicates *Ficaria* is distinct from *Ranunculus*. FNA3: "In North America, *Ranunculus ficaria* seems to be expanding its range rapidly in areas with cool mesic climates. The species is extremely variable (especially in leaf size and stem posture), and many attempts have been made to divide it into varieties or subspecies (see P. D. Sell 1994). The different forms, however, intergrade extensively and the varieties are often impossible to distinguish."

\* Emadzade et al. 2010. A molecular phylogeny, morphology and classification of genera of Ranunculaceae (Ranunculaceae). *Taxon* 59(3): 809-828.

***Halerpestes*** [HC2]

buttercup

***Halerpestes cymbalaria*** (Pursh) Greene [HC2]

alkali buttercup, seaside buttercup

*Ranunculus cymbalaria* Pursh [FNA3, HC]  
*Ranunculus cymbalaria* Pursh var. *alpinus* Hook.

*Ranunculus cymbalaria* Pursh var. *saximontanus* Fernald

**Helleborus** [FNA3, HC2]

Sp. Pl. 1: 557. 1753; Gen. Pl. ed. 5, 244, 1754.

*Helleborus foetidus* L. [HC2]

**Myosurus** [FNA3, HC, HC2]

Sp. Pl. 1: 284. 1753; Gen. Pl. ed. 5, 137, 1754.

mouse-tail

**Myosurus xalopecuroides** Greene [HC2]

*Myosurus xclavicaulis* M. Peck [Peck]

Washington Natural Heritage Program considers this a distinct taxon in Washington. FNA7: "Plants of *Myosurus minimus* from a few sites in coastal southern California, northern Baja California, and immediately west of Riley, Oregon, sometimes have short scapes, so that the heads of achenes are immersed in the leaves. These plants, which have been called *M. minimus* subsp. *apus* (Greene) G. R. Campbell, *M. minimus* var. *apus* Greene, or *M. clavicaulis* M. E. Peck are indistinguishable from some recombinant lines found in *M. minimus* x *sessilis* hybrid swarms (see discussion under *M. sessilis*), but they occur outside the current range of *M. sessilis*. D. E. Stone (1959) has suggested that they resulted from past hybridization between the two species, perhaps at a time when *M. sessilis* had a wider range than it does now."

**Myosurus apetalus** Gay [FNA3, HC2]

Fl. Chil. 1: 31. 1845.

bristly mouse-tail, sedge mouse-tail

*Myosurus aristatus* Benth. [HC], illegitimate name

*Myosurus minimus* L. var. *aristatus* (Benth.) B. Boivin

var. **borealis** Whittm. [FNA3, HC2]

Novon. 4: 78. 1994.

sedge mouse-tail

FNA3: "The illegitimate names *Myosurus aristatus* Bentham ex Hooker and *M. minimus* var. *aristatus* (Bentham ex Hooker) B. Boivin have been used for this species [*M. apetalus*]."

**Myosurus minimus** L. [FNA3, HC, HC2]

Sp. Pl. 1: 284. 1753.

tiny mousetail

*Myosurus lepturus* Greene

*Myosurus lepturus* Greene var. *filiformis* (Greene) Greene, orthographic variant

*Myosurus minimus* L. ssp. *major* (Greene) G.R. Campb.

*Myosurus minimus* L. var. *filiformis* Greene, orthographic variant

*Myosurus minimus* L. var. *major* (Greene) K.C. Davis

FNA3: "Plants of *Myosurus minimus* from a few sites in coastal southern California, northern Baja California, and immediately west of Riley, Oregon, sometimes have short scapes, so that the heads of achenes are immersed in the leaves. These plants, which have been called *M. minimus* subsp. *apus* (Greene) G. R. Campbell, *M. minimus* var. *apus* Greene, or *M. clavicaulis* M. E. Peck, are indistinguishable from some recombinant lines found in *M. minimus* x *sessilis* hybrid swarms (see discussion under *M. sessilis*), but they occur outside the current range of *M. sessilis*. D. E. Stone (1959) has suggested that they resulted from past hybridization between the two species, perhaps at a time when *M. sessilis* had a wider range than it does now." Washington Natural Heritage Program recognizes *M. clavicaulis* as a distinct taxon and considers it Sensitive in Washington.

**Nigella** [FNA3, HC, HC2]

Sp. Pl. 1: 534. 1753; Gen. Pl. ed. 5, 238, 1754.

*Nigella damascena* L. [FNA3, HC, HC2]

Sp. Pl. 1: 534. 1753.

devil-in-the-bush

FNA3: "Nigella damascena is frequently cultivated as an ornamental and for dried-flower arrangements. It occasionally escapes cultivation and may become established. Populations in Ontario and Quebec, and probably elsewhere, are short-lived. Most North American populations of Nigella damascena are represented by a mixture of single- and double-flowered (having supernumerary flower parts) individuals. Sepals tend to be larger and more variable in color than in Eurasian plants. Single-flowered plants usually have petals; petals appear to be absent in double-flowered individuals."

**Ranunculus** [FNA3, HC, HC2]

Sp. Pl. 1: 548. 1753; Gen. Pl. ed. 5, 243, 1754.  
buttercup, crowfoot, water-buttercup  
(see also *Arcteranthis*, *Ceratocephala*, *Ficaria*, *Halerpestes*)

**Ranunculus abortivus** L. [FNA3, HC, HC2]

Sp. Pl. 1: 551. 1753.  
kidney-leaf buttercup  
*Ranunculus abortivus* L. ssp. *acrolasius* (Fernald) B.M. Kapoor & A. Löve  
*Ranunculus abortivus* L. ssp. *indivisus* Fern.  
*Ranunculus abortivus* L. var. *acrolasius* Fernald  
*Ranunculus abortivus* L. var. *eucyclus* Fernald

**Ranunculus acris** L. [FNA3, HC, HC2]

Sp. Pl. 1: 554. 1753.  
meadow buttercup  
*Ranunculus acris* L. var. *latisectus* Beck

FNA3: "Ranunculus acris is variable in form and division of leaves, size of achene beak, and form of indument on the proximal stem. Most North American plants are weedy and have poorly differentiated caudices; these forms probably were introduced from Eurasia. Rhizomatous plants with large flowers (parenthetic measurements above) found in the Aleutian Islands of Alaska and in Greenland are probably native. Aleutian populations of this form have been called *R. acris* var. *frigidus* Regel or *R. grandis* Honda var. *austrokurilensis* (Tatewaki) H. Hara. Both names were originally applied to Asiatic plants, and their applicability to American specimens is open to question."

**Ranunculus alismifolius** Geyer ex Benth. [FNA3, HC2]

Pl. Hartw. 295. 1849.  
plantainleaved buttercup  
*Ranunculus alismaefolius* Geyer [HC], orthographic variant

var. **alismellus** A. Gray [FNA3, HC2]

Proc. Amer. Acad. Arts. 7: 327. 1867.  
dwarf plantain-leaved buttercup  
*Ranunculus alismaefolius* Geyer var. *alismellus* A. Gray [HC], orthographic variant  
Hitchcock uses the spelling "alismaefolius".

var. **alismifolius** [FNA3, HC2]

Pl. Hartw. 295.  
plantain-leaved buttercup  
*Ranunculus alismaefolius* Geyer var. *alismaefolius* [HC], orthographic variant  
Hitchcock uses the spelling "alismaefolius"

var. **davisii** L.D. Benson [FNA3, HC2]

Amer. Midl. Naturalist. 40: 179. 1948.  
water-plantain buttercup  
*Ranunculus alismaefolius* Geyer var. *davisii* L.D. Benson [HC], orthographic variant

WA populations apparently disjunct according to distribution map in FNA (Idaho, Mont., Nev., Oreg., Wyo).

var. **hartwegii** (Greene) Jeps. [FNA3, HC2]

Fl. Calif. 1: 534. 1922.

hartweg's buttercup

*Ranunculus alismaefolius* Geyer var. *hartwegii* (Greene) Jeps. [HC], orthographic variant  
*Ranunculus hartwegii* Greene

Hitchcock uses the spelling "alismaefolius". FNA3: "This variety is poorly defined and grades into several other varieties."

***Ranunculus aquatilis* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 556. 1753.

white western-buttercup, water crowfoot

**var. *aquatilis* [FNA3, HC2]**

Sp. Pl. 1: 556.

white water buttercup

*Ranunculus aquatilis* L. var. *hispidulus* Drew [HC]

*Ranunculus trichophyllus* Chaix var. *hispidulus* (Drew) W.B. Drew

FNA3: "Plants growing in deep water may flower without producing floating leaves. Such plants cannot be distinguished from specimens of *Ranunculus aquatilis* var. *diffusus* except by culture in shallow water."

**var. *diffusus* With. [FNA3, HC2]**

Arr. Brit. Pl., ed. 3. 2: 507. 1796.

water buttercup

*Ranunculus aquatilis* L. var. *capillaceus* (Thuill.) DC. [HC]

*Ranunculus aquatilis* L. var. *porteri* (Britton) L.D. Benson [HC]

*Ranunculus longirostris* Godr. [HC, KZ99]

*Ranunculus subrigidus* W.B. Drew [HC]

*Ranunculus trichophyllus* Chaix [KZ99]

FNA3: "Populations of *Ranunculus aquatilis* var. *diffusus* with long achene beaks are not known from the Old World. In North America, beak length varies continuously over the whole range given for the variety, and separation of plants with unusually long beaks as *R. longirostris* is not tenable. *Ranunculus aquatilis* var. *diffusus* shows geographic variation, and some regional forms have been recognized as separate varieties. Dwarf creeping arctic plants may be called *R. aquatilis* var. *eradicatum*, plants with sparsely pubescent or glabrous receptacle from eastern North America may be called *R. aquatilis* var. *calvescens*, plants with linear, noncapillary leaf segments from the northern Great Basin may be called *R. aquatilis* var. *porteri*, and very robust plants from Oregon and northernmost California may be called *R. aquatilis* var. *harrisii*. Extreme forms of these races are recognizable, but they intergrade and many specimens cannot be confidently assigned to one or another of them."

***Ranunculus arvensis* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 555. 1753.

field buttercup, hungerweed

*Ranunculus arvensis* L. var. *tuberculatus* DC.

***Ranunculus bulbosus* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 554.

St. Anthony's-turnip, bulbous buttercup

*Ranunculus bulbosus* L. var. *dissectus* Babey

*Ranunculus bulbosus* L. var. *valdepubens* (Jord.) Briq.

FNA3: "*Ranunculus bulbosus* is native to Europe and the Near East but has become naturalized in many other parts of the world. It is considered an introduced weed in the flora."

***Ranunculus californicus* Benth. [FNA3, HC, HC2]**

Pl. Hartw. 295. 1849.

California buttercup

**var. *californicus* [FNA3, HC2]**

Pl. Hartw. 295.

California buttercup

*Ranunculus californicus* Benth. var. *austromontanus* L.D. Benson

*Ranunculus californicus* Benth. var. *gratus* Jeps.

*Ranunculus californicus* Benth. var. *rugulosus* (Greene) L.D. Benson

FNA3: "In addition to the range given, localized populations of *Ranunculus californicus* have been reported recently from a few islands in the vicinity of Victoria (British Columbia and Washington) (M. F. Denton 1978; T. C. Brayshaw 1989). Those populations are small and introgress freely with *R. occidentalis* wherever they come together. Denton referred her specimens to *R. californicus* var. *cuneatus*; Brayshaw reported both varieties from the same small populations, but his data are consistent with populations of *R. californicus* var. *cuneatus* that are introgressing extensively with *R. occidentalis*. Although both Denton and Brayshaw treat *R. californicus* as a native species in that region, several reasons support the belief that it is introduced there. No reports of *R. californicus* in the area occur prior to 1978, although the area is quite well collected (especially Victoria, B. C. and the San Juan Islands, Washington); a long history of extensive marine trade between Victoria and San Francisco has resulted in the introduction of a number of other California species to the area; and for scattered small populations of *R. californicus* to have persisted for long periods in the face of free introgression from *R. occidentalis* seems unlikely. Given the small population size and the introgression from *R. occidentalis*, it is questionable whether *R. californicus* can persist in the area."

\* Brayshaw, T. C. 1989. Buttercups, Waterlilies, and Their Relatives (the Order Ranales) in British Columbia. Victoria. [Roy. Brit. Columbia Mus. Mem. 1.].

\* Denton, M. F. 1978. *Ranunculus californicus*, a new record for the state of Washington. *Madroño* 25: 132.

***Ranunculus cardiophyllus* Hook. [FNA3, HC, HC2]**

Fl. Bor.-Amer. 1: 14. 1829.

heart-leaf buttercup

*Ranunculus cardiophyllus* Hook. var. *coloradensis* L.D. Benson

*Ranunculus cardiophyllus* Hook. var. *subsagittatus* (A. Gray) L.D. Benson

*Ranunculus pedatifidus* J.E. Sm. var. *cardiophyllus* (Hook.) Britton

FNA3: "*Ranunculus cardiophyllus* is quite variable. Through most of its range, leaves always have rounded marginal crenae and cordate or truncate bases, stems are often densely pilose (but may be sparsely pilose or glabrous), and achene beaks are curved. In plants from Arizona and New Mexico, however, leaves may have obtuse marginal crenae or broadly obtuse bases, stems are never densely pilose, and achene beaks are sometimes straight. Forms showing some or all of these characteristics are often separated as *R. cardiophyllus* var. *subsagittatus*. The characteristics are poorly correlated, however, and taxonomic recognition is not warranted. Most specimens of *Ranunculus cardiophyllus* have all of the basal leaves unlobed, but plants with the innermost basal leaf 3-5-lobed are common. A few specimens, mostly from the northern part of its range, have all of the basal leaves 5-parted or -divided. Those plants approach *R. pedatifidus* in their morphology, and *R. cardiophyllus* has sometimes been considered a variety of that species."

***Ranunculus eschscholtzii* Schltld. [FNA3, HC, HC2]**

Animadv. Bot. Ranunc. Cand. 2: 16. 1820.

subalpine buttercup

var. ***eschscholtzii* [FNA3, HC, HC2]**

Animadv. Bot. Ranunc. Cand. 2: 16.

Eschscholtz buttercup

*Ranunculus eschscholtzii* Schltld. var. *typicus* L.D. Benson

*Ranunculus nivalis* L. var. *eschscholtzii* (Schltld.) S. Watson

var. ***suksdorfii* (A. Gray) L.D. Benson [FNA3, HC, HC2]**

Amer. J. Bot. 23: 170. 1936.

Suksdorf buttercup, Suksdorf's buttercup

*Ranunculus suksdorfii* A. Gray [KZ99]

H&C and FNA reduce to a variety under *R. eschscholtzii*.

***Ranunculus flabellaris* Raf. [FNA3, HC, HC2]**

Amer. Monthly Mag. & Crit. Rev. 2: 344. 1818.

yellow water buttercup

*Ranunculus delphiniifolius* Torr. ex Eaton

***Ranunculus flammula* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 548. 1753.

creeping buttercup, lesser spearwort

**var. *flammula* [FNA3, HC2]**

Sp. Pl. 1: 548.

creeping spearwort

*Ranunculus flammula* L. var. *angustifolius* Wallr.

FNA3: "In Eurasia, this taxon [*R. flammula*] is usually treated as two closely related species. *Ranunculus flammula* in the strict sense has relatively stout (0.8-3 mm thick) stems that are erect or ascending from prostrate bases, lanceolate to oblanceolate leaves 3-10 mm broad, sepals 3-4 mm, and petals 5-7 × 3-4 mm. *Ranunculus reptans* has slender (0.2-1 mm thick) stems that are usually prostrate except for the pedicels, leaves linear or filiform, to 2 mm broad, sepals 1-2 mm, and petals 3-5 × 1-2.5 mm. Collections from the Great Plains and Rocky Mountains resemble *R. reptans* in most characters, but they often have broader leaves (up to 5 mm broad). Plants from farther west are very confusing; specimens showing the typical morphology of *R. flammula* in the strict sense and *R. reptans* are found over a wide area, but most specimens from this area combine the characteristics of the two taxa in various ways. For this reason, it is not possible to separate these taxa at the species level. Three varieties are usually recognized, but further study will probably alter the varietal classification (see comments below, under *R. flammula* var. *ovalis*). L. D. Benson (1948) reported *Ranunculus flammula* var. *flammula* only from eastern Canada and referred all material from the Pacific Slope to *Ranunculus flammula* var. *ovalis*. Benson's treatment is not tenable, however, because some western collections are indistinguishable from the eastern plants."

**var. *ovalis* (J.M. Bigelow) L.D. Benson [FNA3, HC2]**

Bull. Torrey Bot. Club. 69: 305. 1942.

creeping spearwort

*Ranunculus filiformis* Michx. var. *ovalis* J.M. Bigelow

*Ranunculus flammula* L. var. *samolifolius* (Greene) L.D. Benson

*Ranunculus reptans* L. var. *ovalis* (J.M. Bigelow) Torr. & A. Gray

FNA3: "*Ranunculus flammula* var. *ovalis*, as currently understood, is heterogeneous. Many specimens from throughout the cited range scarcely differ from specimens of *R. flammula* var. *reptans* and perhaps should be included in the latter variety. Material from the Pacific slope, however, may be intermediate between *R. flammula* var. *reptans* and *R. flammula* var. *flammula* or may show various combinations of the distinguishing characteristics of the two. Biosystematic study of *R. flammula* as a whole will be needed for a meaningful treatment of these populations to be possible."

**var. *reptans* (L.) E. Mey. [FNA3, HC2]**

Pl. Labrador. 96. 1830.

creeping spearwort

*Ranunculus reptans* L.

*Ranunculus reptans* L. var. *filiformis* (Michx.) DC.

***Ranunculus glaberrimus* Hook. [FNA3, HC, HC2]**

Fl. Bor.-Amer. 1: 12. 1829.

sagebrush buttercup

**var. *ellipticus* (Greene) Greene [FNA3, HC, HC2]**

Fl. Francisc. 1: 298. 1891.

sagebrush buttercup

*Ranunculus ellipticus* Greene

*Ranunculus glaberrimus* Hook. var. *buddii* B. Boivin

**var. *glaberrimus* [FNA3, HC, HC2]**

Fl. Bor.-Amer. 1:12, plate 5, fig. A.

sagebrush buttercup

*Ranunculus glaberrimus* Hook. var. *typicus* L.D. Benson

***Ranunculus gmelinii* DC. [FNA3, HC, HC2]**

Syst. Nat. 1: 303. 1817.

small yellow water buttercup

*Ranunculus gmelinii* DC. var. *hookeri* (D. Don) L.D. Benson [HC]

*Ranunculus gmelinii* DC. var. *limosus* (Nutt.) H. Hara [HC]

FNA3: "Ranunculus gmelinii has been divided into varieties on the basis of the indument and flower size. These characters are variable and poorly correlated with one another, however, and these varieties scarcely seem natural."

***Ranunculus grayi* Britton [HC2]**

arctic buttercup

*Ranunculus gelidus* Kar. & Kir. var. *grayi* (Britton) Hultén

*Ranunculus verecundus* B.L. Rob. ex Piper [HC, KZ99]

FNA3: "Plants with small achenes are often separated as *Ranunculus verecundus*. Achene size varies continuously over the range given, however, and it is not correlated with the minor shape difference mentioned by L. D. Benson (1948)."

***Ranunculus hebecarpus* Hook. & Arn. [FNA3, HC, HC2]**

Bot. Beechey Voy. 316. 1838.

downy buttercup

***Ranunculus inamoenus* Greene [FNA3, HC, HC2]**

Pittonia. 3: 91. 1896.

unlovely buttercup

**var. *inamoenus* [FNA3, HC2]**

Pittonia. 3: 91.

unlovely buttercup

*Ranunculus inamoenus* Greene var. *alpeophilus* (A. Nelson) L.D. Benson [KZ99]

*Ranunculus inamoenus* Greene var. *typicus* L.D. Benson

FNA3: "The type collection of *Ranunculus inamoenus* var. *alpeophilus* is a mixed collection, and some apparent "isotype" material is actually *R. eschscholtzii*."

***Ranunculus macounii* Britton [FNA3, HC, HC2]**

Trans. New York Acad. Sci. 12: 3. 1892.

Macoun's buttercup

*Ranunculus macounii* Britton var. *macounii* [HC]

*Ranunculus macounii* Britton var. *oreganus* (A. Gray) K.C. Davis [HC]

FNA3: "Through most of its range, *Ranunculus macounii* has conspicuously hispid herbage. Glabrous plants are found, however, in the lower Columbia River Valley (southwestern Washington and adjacent Oregon). This variant has been called *R. macounii* var. *oreganus*."

***Ranunculus muricatus* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 555. 1753.

spiny-fruit buttercup

***Ranunculus occidentalis* Nutt. [FNA3, HC, HC2]**

Fl. N. Amer. 1: 22. 1838.

western buttercup

**var. *occidentalis* [FNA3, HC, HC2]**

Fl. N. Amer. 1(1): 22.

western buttercup

*Ranunculus occidentalis* Nutt. var. *eisenii* (Kellogg) A. Gray

*Ranunculus occidentalis* Nutt. var. *rattanii* A. Gray [HC]

Several other varieties listed by various authors, but there seems to be agreement that *occidentalis* is the variety in WA. FNA3: "L. D. Benson (1948) divided *Ranunculus occidentalis* var. *occidentalis* into

three varieties. The name *R. occidentalis* var. *occidentalis* was applied only to plants from Oregon northward, in which leaves are rarely compound and never have lanceolate ultimate segments, and achenes are always glabrous and have beaks over 1 mm. California plants were treated as *R. occidentalis* var. *rattanii* (plants with small [5-8 mm] petals from the Coast Ranges) and *R. occidentalis* var. *eisenii* (plants with larger petals from the foothills surrounding the Central Valley). Most of those plants from California, however, cannot be distinguished from more northern plants, and forms with small petals are found throughout the range of the variety."

***Ranunculus orthorhynchus* Hook. [FNA3, HC, HC2]**

Fl. Bor.-Amer. 1: 21. 1829.

straightbeak buttercup

var. ***orthorhynchus* [FNA3, HC, HC2]**

Fl. Bor.-Amer. 1(1): 21, pl. 9.

straight-beak buttercup

*Ranunculus orthorhynchus* Hook. ssp. *alascensis* (L.D. Benson) Hultén

*Ranunculus orthorhynchus* Hook. var. *alascensis* L.D. Benson

*Ranunculus orthorhynchus* Hook. var. *hallii* Jeps.

H&C and FNA split out var. *platyphyllus*, but FNA states it is weak so I have lumped per KZ

var. ***platyphyllus* A. Gray [FNA3, HC, HC2]**

Proc. Amer. Acad. Arts. 21: 377. 1886.

straight-beak buttercup

*Ranunculus orthorhynchus* Hook. ssp. *platyphyllus* (A. Gray) R.L. Taylor & MacBryde

***Ranunculus parviflorus* L. [FNA3, HC2]**

Sp. Pl., ed. 2. 1: 780. 1762.

small-flower buttercup

***Ranunculus pensylvanicus* L. f. [FNA3, HC, HC2]**

Suppl. Pl. 272. 1782.

Pennsylvania buttercup

***Ranunculus populago* Greene [FNA3, HC, HC2]**

Erythea. 3: 19. 1895.

mountain buttercup

***Ranunculus pygmaeus* Wahlenb. [FNA3, HC, HC2]**

Fl. Lapp. 157. 1812.

dwarf buttercup

***Ranunculus repens* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 554. 1753.

creeping buttercup

*Ranunculus repens* L. var. *glabratus* DC.

*Ranunculus repens* L. var. *pleniflorus* Fernald [HC]

*Ranunculus repens* L. var. *repens* [HC]

FNA3: "*Ranunculus repens* is widely naturalized in many parts of the world. Plants with sparse pubescence have been called *R. repens* var. *glabratus*. Horticultural forms with the outer stamens transformed into numerous extra petals occasionally become established and have been called *R. repens* var. *pleniflorus*. These variants have no taxonomic significance."

***Ranunculus sardous* Crantz [FNA3, HC, HC2]**

Stirp. Austr. Fasc. 2: 84. 1763.

hairy buttercup

*Ranunculus parvulus* L.

FNA3: "Native to Europe; Pacific Islands; Australia."

***Ranunculus sceleratus* L. [FNA3, HC, HC2]**

Sp. Pl. 1: 551. 1753.

blister buttercup, celeryleaved buttercup, celeryleaved crowfoot

*Hecatonia scelerata* (L.) Fourreau

var. ***multifidus*** Nutt. [FNA3, HC, HC2]

Fl. N. Amer. 1: 19. 1838.  
celery-leaved buttercup

*Ranunculus sceleratus* L. ssp. *multifidus* (Nutt.) Hultén

var. ***sceleratus*** [FNA3, HC, HC2]

Sp. Pl. 1: 551.  
celery-leaved buttercup

*Ranunculus sceleratus* L. var. *typicus* L.D. Benson

FNA3: "Ranunculus sceleratus var. sceleratus is a serious weed of watercourses and marshy fields. It is a naturalized weed in western North America; it is not clear whether it is native in the eastern part of the continent or was introduced from Europe."

***Ranunculus triternatus*** A. Gray [FNA3, HC2]

Proc. Amer. Acad. Arts. 21: 370. 1886.  
obscure buttercup

*Ranunculus glaberrimus* Hook. var. *reconditus* L.D. Benson

*Ranunculus reconditus* A. Nelson & J.F. Macbr. [HC], superfluous renaming (illegitimate)

FNA3: "C. L. Hitchcock et al. (1955-1969, vol. 2) considered the name *Ranunculus triternatus* A. Gray to be an illegitimate homonym and used the illegitimate (superfluous) name *R. reconditus* A. Nelson & J. F. Macbride for this species. The name *Ranunculus triternatus* Poiret was not validly published (not accepted by Poiret) and does not invalidate *R. triternatus* A. Gray."

***Ranunculus uncinatus*** D. Don [FNA3, HC, HC2]

Gen. Hist. 1: 35. 1831.  
little buttercup

*Ranunculus bongardii* Greene

*Ranunculus occidentalis* Nutt. var. *parviflorus* Torr.

*Ranunculus uncinatus* D. Don var. *parviflorus* (Torr.) L.D. Benson [HC, KZ99]

*Ranunculus uncinatus* D. Don ex G. Don var. *uncinatus* [HC]

FNA3: "Plants with hispid stems and achenes are often separated as *Ranunculus uncinatus* var. *parviflorus*; these two characters are poorly correlated, however, and sometimes vary between plants in a single collection. *Ranunculus uncinatus* was reported from northeastern Alberta and adjacent Northwest Territories by H. J. Scoggan (1978-1979, part 3). The specimens have hairy receptacles and straight, broad achene beaks; they apparently represent small individuals of *R. macounii*."

***Thalictrum*** [FNA3, HC, HC2]

Sp. Pl. 1: 545. 1753; Gen. Pl. ed. 5, 242, 1754.  
meadowrue

***Thalictrum dasycarpum*** Fisch. & Avé-Lall. [FNA3, HC, HC2]

Index Sem. Hort. Petrop. 8: 72. 1842.  
purple meadow-rue

*Thalictrum hypoglaucum* Rydb.

FNA3: "*Thalictrum dasycarpum* is a variable species similar to, and possibly intergrading with, *T. pubescens*. Glabrous variants of *T. dasycarpum* have been treated as *T. dasycarpum* var. *hypoglaucum*. Glabrous and glandular (stipitate and papillate) forms are found throughout the range of the species and occur together in some populations. Native Americans used *Thalictrum dasycarpum* medicinally to reduce fever, cure cramps, as a stimulant for horses, and as a love charm (D. E. Moerman 1986)."

***Thalictrum occidentale*** A. Gray [FNA3, HC, HC2]

Proc. Amer. Acad. Arts. 8: 372. 1873.  
western meadow rue

*Thalictrum occidentale* A. Gray var. *macounii* B. Boivin

*Thalictrum occidentale* A. Gray var. *occidentale* [KZ99]

*Thalictrum occidentale* A. Gray var. *palousense* H. St. John

FNA3: "Thalictrum occidentale is similar to *T. confine* and *T. venulosum*; thorough field studies are needed to determine whether or not they should be maintained as separate species. *Thalictrum occidentale* can usually be distinguished by its reflexed achenes. Plants of northern British Columbia, sometimes called *Thalictrum occidentale* var. *breitungii* (B. Boivin) Brayshaw, appear to be intermediate between *T. occidentale* and *T. venulosum* (T. C. Brayshaw, pers. comm.); achenes are ascending,  $\bar{A}\pm$  compressed, and beaks rather short (2-4 mm) (T. C. Brayshaw 1989). Some of the Native Americans used *Thalictrum occidentale* medicinally for headaches, eye trouble, and sore legs, to loosen phlem, and to improve blood circulation (D. E. Moerman 1986)."

***Thalictrum venulosum*** Trel. [FNA3, HC, HC2]

Proc. Boston Soc. Nat. Hist. 23: 302. 1886.  
veiny-leaf meadow-rue

FNA3: "*Thalictrum venulosum* is similar to *T. confine* and *T. occidentale*. Careful field studies are needed to clarify the relationships among these taxa."

***Trautvetteria*** [FNA3, HC, HC2]

Index Sem. Hort. Petrop. 1: 22. 1835.  
false bugbane

***Trautvetteria caroliniensis*** (Walter) Vail [FNA3, HC, HC2]

Mem. Torrey Bot. Club. 2: 42. 1890.  
false bugbane, wild bugbane

*Trautvetteria caroliniensis* (Walter) Vail var. *occidentalis* (A. Gray) C.L. Hitchc. [HC, KZ99]

FNA3: "Populations of *Trautvetteria caroliniensis* in western North America have been distinguished from the eastern typical material as *T. caroliniensis* var. *borealis* (Hara) T. Shimizu [synonym: *T. caroliniensis* var. *occidentalis* (A. Gray) C.L. Hitchcock]. Asian populations, long treated as the distinct species *T. japonica* Siebold & Zuccarini, were most recently regarded (T. Shimizu 1981; M. Tamura 1991) as conspecific with the North American populations [as *T. caroliniensis* var. *japonica* (Siebold & Zuccarini) T. Shimizu]. Aside from geography, varietal differences seem rather arbitrary."

***Trollius*** [FNA3, HC, HC2]

Sp. Pl. 1: 556. 1753; Gen. Pl. ed. 5, 243, 1754.  
globeflower

***Trollius albiflorus*** (A. Gray) Rydb. [FNA3, HC2]

Mem. New York Bot. Gard. 1: 152. 1900.  
western globeflower

*Trollius laxus* Salisb. [FNA3, HC], misapplied

*Trollius laxus* Salisb. var. *albiflorus* A. Gray [HC, KZ99]

FNA3: "The diploid *Trollius albiflorus* is isolated from the tetraploid *T. laxus* ecologically, geographically, and reproductively, although it often has been treated as a variety of the latter. Identities of specimens of *Trollius albiflorus* and the superficially similar *Anemone narcissiflora* subsp. *zephyra* in Colorado and Wyoming are sometimes confused. Close examination reveals a number of differences. The anemone has sepals yellow (not white), leaf blades and flowering stems pilose to villous (not glabrous), achenes (not follicles), and leaflike bracts subtending the pedicels and whorled (leaves alternate in *Trollius* )."

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## Resedaceae [FNA7, HC, HC2] Mignonette Family

**Synonyms:** (none)

**References:** (none)

***Reseda*** [FNA7, HC, HC2]

Sp. Pl. 1: 448. 1753; Gen. Pl. ed. 5, 207. 1754.

mignonette

*Reseda alba* L. [FNA7, HC, HC2]

Sp. Pl. 1: 449. 1753.

white upright mignonette

*Reseda luteola* L. [FNA7, HC, HC2]

Sp. Pl. 1: 448. 1753.

yellow dye, Dyer's rocket, weld

WA record based on report by Richard Old. FNA7: "Reseda luteola is a traditional Old World dye plant, used since Roman times. It contains a high amount of the flavonoid luteolin, which yields one of the most brilliant yellow dyes. When combined with woad (*Isatis tinctoria*, Brassicaceae), it yields "Saxon Green." In the nineteenth century R. luteola was widely growing, which favored its spreading through many parts of the world; today, it has fallen into disuse. Its potential as a crop for natural dyeing of textiles is being re-evaluated. It is also grown as an ornamental; the appealing rosettes of yellowish green leaves acquire a reddish blush in cool weather."

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## Rhamnaceae [HC, HC2] Buckthorn Family

**Synonyms:** (none)

**References:** (none)

### *Ceanothus* [HC, HC2]

buckbrush, buckthorn, ceanothus, wild-lilac

*Ceanothus cuneatus* (Hook.) Nutt. [HC, HC2]

common buckbrush, narrow-leaf buckthorn, sedge-leaf buckthorn

var. *cuneatus* [HC2]

*Ceanothus integerrimus* Hook. & Arn. [HC, HC2]

Bot. Beechey Voy. 329.

deerbrush

*Ceanothus andersonii* Parry

*Ceanothus californicus* Kellogg

*Ceanothus prostratus* Benth. [HC, HC2]

Pl. Hartw. 302 [1849].

Mahala mat, squawcarpet

var. *prostratus* [HC2]

*Ceanothus sanguineus* Pursh [HC, HC2]

Fl. Bor.-Amer. 1(3): 125, pl. 45 [1813].

redstem ceanothus, Oregon teatree

*Ceanothus velutinus* Douglas [HC, HC2]

mountain balm, greasewood, sticky-laurel, tobacco-brush

var. *laevigatus* Torr. & A. Gray [HC, HC2]

Fl. N. Amer. 1(4): 686

mt. balm, greasewood, sticky-laurel

*Ceanothus velutinus* Douglas var. *hookeri* M.C. Johnst.

var. *velutinus* [HC, HC2]

Fl. Bor.-Amer. 1(3): 125, pl. 45.

mt. balm, greasewood

### *Frangula* [HC2]

coffee berry

***Frangula purshiana*** (DC.) A. Gray ex J.G. Cooper [HC2, JPM2]

Pacif. Railr. Rep. 12(2): 57.

buckthorn, false buckthorn, cascara

*Rhamnus purshiana* DC. [HC]

ssp. *purshiana* [FNA]

***Rhamnus*** [HC, HC2]

buckthorn, cascara

(see also *Frangula*)

***Rhamnus alnifolia*** L'Hér. [HC, HC2, JPM2]

Sert. Angl. 5.

alder-leaf buckthorn

***Rhamnus cathartica*** L. [HC2]

common buckthorn

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## Rosaceae [HC, HC2] Rose Family

**Synonyms:** (none)

Rosaceae is treated in FNA Volume 9, the publication date of which is uncertain as of December 2009. Taxonomic and nomenclatural changes contained in draft treatments for that volume began to be incorporated here in October 2008. Isolated bird-sown individuals of several additional species of *Cotoneaster* have been seen in King Co., but they are not considered naturalized yet; they can be identified using the keys in Stace (1997) or Fryer and Hylmo (1995).

**References:**

- \* Fryer, J. and B. Hylmo. 1995. *Cotoneaster* Medikus. In: Cullen, J., J. C. M. Alexander, A. Brady, C. D. Brickell, P. S. Green, V. H. Heywood, P. M. Jorgensen, S. L. Jury, S. G. Knees, A. C. Leslie, V. A. Matthews, N. K. B. Robson, S. M. Walters, D. O. Wijnands and P. F. Yeo, Eds. *The European Garden Flora. A Manual for the Identification of Plants Cultivated in Europe, Both Out-of-doors and Under Glass. Volume IV, Dicotyledons (Part II)*. Cambridge University Press, Cambridge, England.
- \* **JPM** = Hickman, J. C., ed. 1993. *The Jepson Manual: Higher Plants of California*. Univ. of California Press, Berkeley. pp. 898-900.

***Agrimonia*** [HC, HC2]

agrimony

*Agrimonia eupatoria* L. [HC2]

***Agrimonia gryposepala*** Wallr. [HC2, IFBC]

Beitrag zur Botanik 1: 49-50, pl. 1, f. 8.

tall hairy grooveburr

***Alchemilla*** [HC, HC2]

(see also *Aphanes*)

*Alchemilla mollis* (Buser) Rothm. [HC2]

*Alchemilla vulgaris* L. [HC], misapplied

***Amelanchier*** [HC, HC2]

serviceberry, shadbush

***Amelanchier alnifolia*** (Nutt.) Nutt. ex M. Roem. [HC, HC2]

saskatoon, Cusick's serviceberry, dwarf serviceberry, humptulips western serviceberry, Saskatoon serviceberry

*Amelanchier alnifolia* (Nutt.) Nutt. ex M. Roem. var. *cusickii* (Fernald) C.L. Hitchc. [HC]  
*Amelanchier alnifolia* (Nutt.) Nutt. ex M. Roem. var. *florida* Schneid.  
*Amelanchier alnifolia* (Nutt.) Nutt. ex M. Roem. var. *humptulipensis* (G.N. Jones) C.L. Hitchc. [HC]  
*Amelanchier alnifolia* (Nutt.) Nutt. ex M. Roem. var. *pumila* (Torr. & A. Gray) C.K. Schneid. [HC]  
*Amelanchier alnifolia* (Nutt.) Nutt. ex M. Roem. var. *semiintegrifolia* (Hook.) C.L. Hitchc. [HC]  
*Amelanchier basalticola* Piper  
*Amelanchier canadensis* (L.) Medik. var. *pumila* Torr. & A. Gray  
*Amelanchier canadensis* var. *semiintegrifolia* Farw.  
*Amelanchier cuneata* Piper  
*Amelanchier cusickii* Fernald [FNA9]  
*Amelanchier ephemero-tricha* Suksd.  
*Amelanchier ephemero-tricha* Suksd. var. *silvicola* Suksd.  
*Amelanchier florida* Lindl.  
*Amelanchier florida* Lindl. f. *tomentosa* Sealy  
*Amelanchier florida* Lindl. var. *cusickii* (Fernald) M. Peck  
*Amelanchier florida* Lindl. var. *humptulipensis* G.N. Jones  
*Amelanchier florida* Lindl. var. *parvifolia* Loud  
*Amelanchier gormani* Greene  
*Amelanchier ovalis* Medik. var. *semiintegrifolia* Hook.  
*Amelanchier oxyodon* Koehne  
*Amelanchier parvifolia* Hort. ex. Loud Arb & frut.  
*Amelanchier polycarpa* Greene  
*Amelanchier pumila* (Torr. & A. Gray) Nutt. ex M. Roem.  
*Amelanchier vestita* Suksd.

The treatment here does not follow the taxonomy proposed in FNA Rosaceae. The extensive overlap in morphology among putative *Amelanchier* taxa makes writing a diagnostic key among them untenable. At the species level, differences in ploidy level have been documented, however finding morphological traits that reliably distinguish among these species appears inconclusive at this time.

*Amelanchier laevis* Wiegand [HC2]

***Amelanchier utahensis* Koehne [HC, HC2, JPM2]**

Utah serviceberry

*Amelanchier alnifolia* (Nutt.) Nutt. ex M. Roem. var. *oreophila* (A. Nelson) R.J. Davis  
*Amelanchier alnifolia* (Nutt.) Nutt. ex M. Roem. var. *utahensis* (Koehne) M.E. Jones  
*Amelanchier australis* Standl.  
*Amelanchier bakeri* Greene  
*Amelanchier glabra* Greene  
*Amelanchier goldmanii* Wootton & Standl.  
*Amelanchier gracilis* A. Heller  
*Amelanchier mormonica* C.K. Schneid.  
*Amelanchier oreophila* A. Nelson  
*Amelanchier utahensis* Koehne var. *oreophila* Clokey  
*Amelanchier utahensis* Koehne var. *utahensis* [JPM2]

***Aphanes* [HC2]**

parsley-piert

*Aphanes arvensis* L. [HC2, Stace 1997]

Species Plantarum 1: 123.  
western lady's-mantle, field parsley-piert

*Alchemilla arvensis* (L.) Scop.

*Aphanes australis* Rydb. [HC2, Stace 1997]

In N. L. Britton et al., N. Amer. Fl. 22: 380.  
small-fruited parsley-piert

*Aphanes inexpectata* W. Lippert

Draft FNA: "*Aphanes microcarpa* (Boissier & Reuter) Rothmaler (*Alchemilla microcarpa* Boissier &

Reuteur) is endemic to the western Mediterranean region and is not present in North America. Plants native to other parts of Europe and introduced in North America, misidentified as *A. microcarpa*, were described in 1984 as a new species, *A. inexpectata* W. Lippert; this species had previously been described by Rydberg as *A. australis* from plants introduced to the eastern United States."

***Aphanes occidentalis* (Nutt.) Rydb. [HC2, IFBC]**

North American Flora 22(4): 380.

parsley-piert

*Alchemilla cuneifolia* Nutt.

*Alchemilla occidentalis* Nutt. [HC]

*Aphanes cuneifolia* (Nutt.) Rydb.

*Aphanes macrosepala* Rydb.

Draft FNA: "Three races of *Aphanes occidentalis* are recognizable, apparently corresponding to previously described species. Because some apparently intermediate plants exist and, as not all specimens can be confidently assigned to these races, they are not being recognized formally here. It is also possible that they represent independent introductions rather than native species, although no European or North African species are known with the characters they exhibit. "

***Aronia* [HC2]**

***Aronia melanocarpa* (Michx.) Elliott [FNA9, HC2]**

Sketch Bot. S. Carolina. 1: 557.

black chokeberry

Collected (2008) near cranberry bog in Pacific County.

***Aruncus* [HC, HC2]**

goatsbeard

***Aruncus dioicus* (Walter) Fernald [HC2]**

Sylvan goatsbeard

**var. *acuminatus* (Rydb.) H. Hara [HC2, JPM]**

J. Jap. Bot. 30(3): 68.

Sylvan goatsbeard

*Aruncus acuminatus* Rydb.

*Aruncus sylvester* Kostel. ex Maxim. ssp. *acuminatus* (Rydb.) Jeps.

***Cercocarpus* [HC, HC2]**

mountain-mahogany

***Cercocarpus ledifolius* Nutt. [HC, HC2]**

**var. *intermontanus* N.H. Holmgren [HC2, JPM]**

Brittonia 39(4): 424-426, f. 1A-D.

birchleaf mountain-mahogany

*Cercocarpus ledifolius* Nutt. var. *intercedens* C.K. Schneid. [HC], misapplied

*Cercocarpus ledifolius* Nutt. var. *ledifolius* [FNA9, HC, HC2], misapplied

H&C states that var. *ledifolius* occurs in WA, however no other resources (JPM, PLANTS database) support this determination. H&C state that var. *intercedens* occurs in WA, however this appears unlikely considering that this variety is recognized as a hybrid between *Cercocarpus intricatus* (which doesn't occur in WA) and *C. ledifolius* var. *intermontanus*.

**var. *ledifolius* [FNA9, HC, HC2], misapplied**

In J. Torrey and A. Gray, Fl. N. Amer. 1: 427.

mountain mahogany

*Cercocarpus ledifolius* Nutt. var. *intercedens* C.K. Schneid. [HC]

**var. *ledifolius* [FNA9, HC, HC2]**

In J. Torrey and A. Gray, Fl. N. Amer. 1: 427.

mountain mahogany

*Cercocarpus ledifolius* Nutt. var. *intercedens* C.K. Schneid. [HC]

**Chaenomeles** [HC2]

*Chaenomeles speciosa* (Sweet) Nakai [HC2]

**Comarum** [HC2]

marsh cinquefoil, marshlocks cinquefoil, purple cinquefoil

**Comarum palustre** L. [FNA9, HC2]

Sp. Pl. 1: 502.

marsh cinquefoil, purple marshlocks

*Comarum palustris* var. *villosum* Pers.

*Potentilla palustris* (L.) Scop. [HC]

*Potentilla palustris* (L.) Scop. var. *parvifolia* (Raf.) Fernald & Long

*Potentilla palustris* (L.) Scop. var. *villosa* (Pers.) Lehm.

*Potentilla palustris* (L.) Scop. var. *villosum* (Pers.) Lehm.

**Cotoneaster** [HC2]

cotoneaster

*Cotoneaster atropurpureus* Flinck & B. Hylmö [HC2]

purple-flowering cotoneaster

*Cotoneaster conspicuus* (Messel) Messel [HC2]

*Cotoneaster dammeri* C.K. Schneid. [HC2]

bearberry cotoneaster

recently collected in Cowlitz Co.

*Cotoneaster dammeri* C.K. Schneid. × *Cotoneaster salicifolius* Franch. [HC2]

*Cotoneaster dielsianus* E. Pritz. ex Diels [HC2]

Diel's cotoneaster

*Cotoneaster divaricatus* Rehder & E.H. Wils. [HC2]

spreading cotoneaster

recently collected in King Co.

*Cotoneaster franchetii* Bois [HC2]

franchet's cotoneaster, orange cotoneaster

taxonomy complex and needs study, WA collections may represent a different Chinese species escaped from cultivation

\* Fryer, J. and B. Hylmo. 2001. Captivating Cotoneasters. *The New Plantsman* 8(4): 195, 227-238.

*Cotoneaster gamblei* G. Klotz [HC2]

*Cotoneaster gamblei* G. Klotz, *Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg, Math.-Naturwiss. Reihe* 15: 530. 1966

Gamble's cotoneaster

*Cotoneaster frigidus* Wall. ex Lindl., misapplied

Recently collected in King Co., where initially reported as *c. frigidus*.

*Cotoneaster horizontalis* Decne. [HC2]

rock cotoneaster, rockspray cotoneaster, wall cotoneaster

recently collected in King Co.

*Cotoneaster lacteus* W.W. Sm. [HC2]

late cotoneaster, milk-flower cotoneaster

recently collected in King Co.

*Cotoneaster lucidus* Schtdl. [HC2]

shiny cotoneaster

Collected in 1989 from Columbia Co. (Zika 2002).

\* <b>Stace 1997</b> = Stace, C. 1997. New Flora of the British Isles. Second Edition. Cambridge University Press, Cambridge, UK. 1130 p.

\* Zika, P. F. 2002. Noteworthy collections, Oregon and Washington. Madroño 49: 195-197.

*Cotoneaster magnificus* J. Fryer & B. Hylmö

*Cotoneaster mairei* H. Lév. [HC2]

Maire's cotoneaster, truncate-leaved cotoneaster

*Cotoneaster miniatum* (Rehder & E.H. Wils.) Flinck & B. Hylmö [HC2]

*Cotoneaster monopryrenus* (W.W. Sm.) Flinck & B. Hylmö [HC2]

*Cotoneaster nan-shan* Mottet [HC2]

*Cotoneaster nitens* Rehder & E.H. Wils. [HC2]

few-flowered cotoneaster

recently collected in King Co.

*Cotoneaster pannosus* Franch. [HC2]

*Cotoneaster rehderi* Pojark. [HC2]

bullate cotoneaster, puckered-leaf cotoneaster

*Cotoneaster bullatus* Bois, misapplied

recently collected in King Co.

*Cotoneaster salicifolius* Franch. [HC2]

willow-leaved cotoneaster

recently collected in King Co.

*Cotoneaster simonsii* Baker [HC2]

Himalayan cotoneaster, Simon's cotoneaster

recently collected in Grays Harbor Co.

*Cotoneaster sternianus* (Turrill) Boom [HC2]

Stern's cotoneaster

*Cotoneaster x suecicus* G. Klotz [HC2]

(= *Cotoneaster conspicuus* × *Cotoneaster dammeri*)

*Cotoneaster tengyuehensis* J. Fryer & B. Hylmö [HC2]

Tengyueh cotoneaster

recently collected in King Co., described in Fryer & Hylmo (1997)

\* Fryer, J. and B. Hylmo. 1997. Five new species of *Cotoneaster* Medik. (Rosaceae) naturalized in Britain. *Watsonia* 21: 335-340.

*Cotoneaster transens* G. Klotz [HC2]

*Cotoneaster vestitus* (W.W. Sm.) Flinck & B. Hylmö [HC2]

*Cotoneaster villosulus* (Rehder & E.H. Wils.) Flinck & B. Hylmö [HC2]

Taiping cotoneaster

*Cotoneaster acutifolius* Turcz. [KZ99], misapplied

## ***Crataegus*** [HC, HC2]

haw, hawthorn, thornapple

***Crataegus castlegarensis*** J.B. Phipps & O'Kennon [FNA9, HC2]

*Sida* 20(1): 121-127, f. 3-4.

Castlegar hawthorn

Described by Phipps & O'Kennon (2002; *Sida* 20(1): 121-127, f. 3-4.). A black-fruited species related to *C. douglasii*, differing in pubescence, thorn characters, and fruit shape. It is known from dry soils in Thurston

Co., and otherwise is widespread east of the Cascades.

- \* Love, R. M. 2002. A new hawthorn (*Crataegus*) for Oregon? *Bulletin of the Native Plant Society of Oregon* 35(10): 115.
- \* Phipps, J. B. and R. J. O'Kennon. 2002. New taxa of *Crataegus* (Rosaceae) from the northern Okanogan-southwestern Shuswap diversity center. *Sida* 20: 115-144.

***Crataegus chrysocarpa* Ashe [FNA9, HC2]**

Bull. N. C. Exp. Sta. 175: 110.  
fireberry hawthorn

Reported from Okanogan Co. by Phipps (1998). The varieties need more study, their ranges overlap greatly and the stated morphological differences seem minor.

- \* Phipps, J. B. 1998. Introduction to the red-fruited hawthorns (*Crataegus*, Rosaceae) of western North America. *Canadian Journal of Botany* 76: 1863-1899.

***Crataegus x cogswellii* K.I. Chr. & T.A. Dickinson [HC2]**

Oregon hybrid hawthorn  
(= *Crataegus monogyna* x *Crataegus gaylussacia*)

***Crataegus douglasii* Lindl. [HC, HC2, JPM]**

Edwards's Bot. Reg. 8: pl. 1810.  
black hawthorn, Douglas' hawthorn  
(see also *Crataegus chrysocarpa*)

*Crataegus columbiana* Howell [HC, Peck]  
*Crataegus columbiana* Howell var. *columbiana* [HC]  
*Crataegus douglasii* Lindl. var. *douglasii* [HC]

Phipps (1995) lectotypified *C. columbiana*, choosing a black-fruited glabrous specimen that places it in synonymy with *C. douglasii*. *Crataegus columbiana* has usually been interpreted as a red-fruited plant, and this typification is controversial, see Holmgren (1997) and rebuttal by Phipps (1998). For discussion of the black-fruited hawthorns of our area see Love (1999), Dickinson and Love (1997), and Dickinson et al. (1996).

- \* Dickinson, T. A. and R. M. Love. 1997. What is Douglas hawthorn? Pp. 162-171, In: Kaye, T. N., A. Liston, R. M. Love, D. L. Luoma, R. J. Meinke, and M. V. Wilson, editors. *Conservation and Management of Native Flora and Fungi*. Native Plant Society of Oregon, Corvallis, OR.
- \* Dickinson, T. A., S. Belaoussoff, R. M. Love and M. Muniyamma. 1996. North American black-fruited hawthorns. I. Variation in floral construction, breeding system correlates and their possible evolutionary significance in *Crataegus* sect. *Douglasii* Loudon *Folia Geobot. Phytotax.* 31: 355-371.
- \* Holmgren, N. H. 1997. Rosaceae, the rose family, pp. 64-158. In: Cronquist, A., A. H. Holmgren, et. al. 1997. *Intermountain Flora Volume 3, Part A: Subclass Rosidae (except Fabales)*. New York Botanical Garden Press. 456 p.
- \* Love, R. 1999. The western black-fruited hawthornes: more complexity than formerly suspected. *Menziesia* 4(4): 10-11.
- \* Phipps, J. B. 1995. The identity of *Crataegus columbiana* and its relationship to *C. piperi* (Rosaceae). *Taxon* 44: 405-408.
- \* Phipps, J. B. 1998. Introduction to the red-fruited hawthorns (*Crataegus*, Rosaceae) of western North America. *Canadian Journal of Botany* 76: 1863-1899.
- \* Phipps, J. B. 1999b. Relationships of the American black-fruited hawthorns *C. erythropoda*, *C. rivularis*, *C. saligna* and *C. brachyacantha* to *C. ser.* *Douglasianae*. *Sida* 18: 647-660.

***Crataegus gaylussacia* A. Heller [FNA9, HC2]**

Bull. S. Calif. Acad. Sci. 2: 69.  
huckleberry hawthorn, Suksdorf hawthorn, Suksdorf's hawthorn

*Crataegus douglasii* Lindl. var. *suksdorfii* Sarg. [HC]  
*Crataegus suksdorfii* (Sarg.) Kruschke [JPM]

- \* Brunfield, S. J. & F. D. Johnson. 1990. Cytological, morphological and phenological support for specific status of *Crataegus suksdorfii* (Rosaceae). *Madroño* 37: 274-282.
- \* Dickinson, T. A. and R. M. Love. 1997. What is Douglas hawthorn? Pp. 162-171, In: Kaye, T. N., A. Liston, R. M. Love, D. L. Luoma, R. J. Meinke, and M. V. Wilson, editors. *Conservation and Management of Native Flora and Fungi*. Native Plant Society of Oregon, Corvallis, OR.
- \* Dickinson, T. A., S. Belaoussoff, R. M. Love and M. Muniyamma. 1996. North American black-fruited hawthorns. I.

Variation in floral construction, breeding system correlates and their possible evolutionary significance in *Crataegus* sect. *Douglasii* Loudon *Folia Geobot. Phytotax.* 31: 355-371.

- \* Holmgren, N. H. 1997. Rosaceae, the rose family, pp. 64-158. In: Cronquist, A., A. H. Holmgren, et. al. 1997. Intermountain Flora Volume 3, Part A: Subclass Rosidae (except Fabales). New York Botanical Garden Press. 456 p.
- \* Love, R. 1999. The western black-fruited hawthornes: more complexity than formerly suspected. *Menziesia* 4(4): 10-11.
- \* Love, R. and M. Feigen. 1978. Interspecific hybridization between native and naturalized *Crataegus* (Rosaceae) in western Oregon. *Madroño* 25: 211-217.
- \* Phipps, J. B. and R. J. O'Kennon. 2002. New taxa of *Crataegus* (Rosaceae) from the northern Okanagan-southwestern Shuswap diversity center. *Sida* 20: 115-144.

***Crataegus laevigata* (Poir.) DC. [FNA9, HC2]**

*Prodr.* 2: 630.

midland hawthorn, woodland hawthorn

Naturalized on Crane Island in San Juan Co., apparently the only wild population in North America (Phipps 1998). Wisskirchen and Haeupler (1998) place *C. oxyacantha* in synonymy with a different European species, *C. rhipidophylla* Gand, and note it is a rejected name.

- \* Phipps, J. B. 1998. Introduction to the red-fruited hawthornes (*Crataegus*, Rosaceae) of western North America. *Canadian Journal of Botany* 76: 1863-1899.
- \* Wisskirchen, R., and H. Haeupler, Eds. 1998. Standardliste der Farn- und Blütenpflanzen Deutschlands (mit Chromosomenatlas von Focke Albers). Verlag Eugen Ulmer, Stuttgart, Germany. 766 p. [A synonymized list of ferns and flowering plants of Germany, with chromosome atlas by F Albers; in German]

***Crataegus macracantha* Lodd. ex Louden [FNA9, HC2]**

*Rhodora* 10(113): 82.

large-thorned hawthorn, western large-thorned hawthorn

*Crataegus succulenta* Schrad. ex Link, misapplied

Authorship is Lodd. ex Loud., not Dodd. ex Loud. as in Kz99. Taxonomy follows Phipps (1998). Found east of the Cascades. Can be difficult to separate from *C. chrysocarpa*. Nutlet pitting obvious only after drying.

- \* Phipps, J. B. 1998. Introduction to the red-fruited hawthornes (*Crataegus*, Rosaceae) of western North America. *Canadian Journal of Botany* 76: 1863-1899.
- \* Phipps, J. B. 1999a. The genus *Crataegus* (hawthorn) of the Pacific Northwest. *Menziesia* 4(4): 11-13.

***Crataegus monogyna* Jacq. [HC, HC2]**

English hawthorn, one-seed hawthorn

**var. *monogyna* [FNA9, HC2]**

*Fl. Austriac.* 3: 50, pl. 292, f.1.

common hawthorn, English hawthorn, one-seeded hawthorn

Hybridizes with native *C. suksdorfii* (Love & Feigen 1978). Hybrids were recently collected in Clark Co. Wisskirchen and Haeupler (1998) place *C. oxyacantha* in synonymy with a different European species, *C. rhipidophylla* Gand, and note it is a rejected name.

- \* Love, R. and M. Feigen. 1978. Interspecific hybridization between native and naturalized *Crataegus* (Rosaceae) in western Oregon. *Madroño* 25: 211-217.
- \* Phipps, J. B. 1998. Introduction to the red-fruited hawthornes (*Crataegus*, Rosaceae) of western North America. *Canadian Journal of Botany* 76: 1863-1899.
- \* Wells, T. C., and J. B. Phipps. 1989. Studies in *Crataegus* (Rosaceae: Maloideae). XX. Interserial hybridization between *Crataegus monogyna* (series *Oxyacantha*) and *Crataegus punctata* (series *Punctatae*) in southern Ontario. *Canadian Journal of Botany* 67: 2465-2472.
- \* Wisskirchen, R., and H. Haeupler, Eds. 1998. Standardliste der Farn- und Blütenpflanzen Deutschlands (mit Chromosomenatlas von Focke Albers). Verlag Eugen Ulmer, Stuttgart, Germany. 766 p. [A synonymized list of ferns and flowering plants of Germany, with chromosome atlas by F Albers; in German]

***Crataegus okanaganensis* J.B. Phipps & O'Kennon [FNA9, HC2]**

*Sida* 18(1): 178-184, f. 5, 6 [map], 9d-f.

Okanagan hawthorn

A dark purple fruited species recently described from the Okanagan Valley of British Columbia (Phipps & O'Kennon 1998), and known from several counties in northeastern WA. Two varieties were proposed by

Phipps and O'Kennon (2002).

- \* Phipps, J. B. and R. J. O'Kennon. 1998. Three new species of *Crataegus* (Rosaceae) from western North America. *C. okennonii*, *C. okanaganensis* and *C. phippsii*. *Sida* 18: 169-191.
- \* Phipps, J. B. and R. J. O'Kennon. 2002. New taxa of *Crataegus* (Rosaceae) from the northern Okanagan-southwestern Shuswap diversity center. *Sida* 20: 115-144.

***Crataegus okennonii* J.B. Phipps [FNA9, HC2]**

*Sida* 18(1): 170-178, f. 2, 3 [map], 4a-c,f.  
O'Kennon's hawthorn

Recently described (Phipps & O'Kennon 1998) and found east of the Cascades. A segregate from *C. douglasii*, differing in its fruit shape, fruit waxiness, twig color, and larger flowers. It is often difficult to identify. A key to black-fruited taxa is provided in Phipps & O'Kennon (2002).

- \* Phipps, J. B. and R. J. O'Kennon. 1998. Three new species of *Crataegus* (Rosaceae) from western North America. *C. okennonii*, *C. okanaganensis* and *C. phippsii*. *Sida* 18: 169-191.
- \* Phipps, J. B. and R. J. O'Kennon. 2002. New taxa of *Crataegus* (Rosaceae) from the northern Okanagan-southwestern Shuswap diversity center. *Sida* 20: 115-144.
- \* Phipps, J. B., with R. J. O'Kennon and R. W. Lance. 2003. *Hawthorns and Medlars*. Timber Press, Portland.

***Crataegus phaenopyrum* (L. f.) Medik. [FNA9, HC2]**

Washington thorn

Uncommon in disturbed suburban/park settings; rarely escaping cultivation.

***Crataegus phippsii* O'Kennon [FNA9, HC2]**

*Sida* 18(1): 185-190, f. 7, 8 [map], 9a-c.  
Phipps' hawthorn

Recently described (Phipps & O'Kennon 1998). In Washington found only at low elevations in the Okanogan Valley, where it is rare. A striking red-purple fruited species, with its close allies in Series *Molles* in eastern North America.

- \* Phipps, J. B. and R. J. O'Kennon. 1998. Three new species of *Crataegus* (Rosaceae) from western North America. *C. okennonii*, *C. okanaganensis* and *C. phippsii*. *Sida* 18: 169-191.
- \* Phipps, J. B., with R. J. O'Kennon and R. W. Lance. 2003. *Hawthorns and Medlars*. Timber Press, Portland.

***Crataegus sanguinea* Pall. [HC2]**

***Crataegus tenuior* J.B. Phipps**

*JBRIT* 7(1): 275-297.

Known from northern Okanogan County.

- \* *JBRIT* 7(1): 275-297.

***Dasiphora* [HC2]**

shrubby cinquefoil

***Dasiphora fruticosa* (L.) Rydb. [Draft FNA, HC2]**

Monogr. N. Amer. Potent. 188.  
shrubby cinquefoil

*Dasiphora floribunda* (Pursh) Raf.

*Dasiphora fruticosa* (L.) Rydb. ssp. *floribunda* (Pursh) Kartesz

*Dasiphora riparia* Raf.

*Fragaria fruticosa* Crantz

*Pentaphylloides floribunda* (Pursh) Á. Löve, superfluous renaming (illegitimate)

*Pentaphylloides fruticosa* (L.) O. Schwarz

*Potentilla floribunda* Pursh

*Potentilla fruticosa* L. [HC]

*Potentilla fruticosa* L. ssp. *floribunda* (Pursh) Elkinington

*Potentilla fruticosa* L. var. *tenuifolia* (D.F.K. Schldl.) Lehm.

***Dryas* [HC, HC2]**

dryad, dryas, mountain-avens

***Dryas drummondii*** Richardson ex Hook. [HC, HC2]

yellow mountain-avens

*Dryadaea drummondii* Kuntze

*Dryas drummondii* Richardson ex Hook. var. *drummondii* [IFBC]

*Dryas drummondii* Richardson ex Hook. var. *tomentosa* (Farr) L.O. Williams

*Dryas octopetala* L. var. *drummondii* (Richardson ex Hook.) S. Watson

*Dryas tomentosa* Farr

***Dryas hookeriana*** Juz. [FNA9, HC2]

white dryas, Hooker's mountain-avens, white mountain-avens

*Dryas octopetala* L. ssp. *hookeriana* (Juz.) Hultén

*Dryas octopetala* L. var. *angustifolia* C.L. Hitchc. [HC]

*Dryas octopetala* L. var. *hookeriana* (Juz.) Breitung [HC]

***Drymocallis*** [HC2]

wood beauty, cinquefoil

***Drymocallis arguta*** (Pursh) Rydb. [HC2]

cordilleran drymocallis

*Drymocallis convallaria* (Rydb.) Rydb. [FNA9]

*Potentilla arguta* Pursh [HC]

*Potentilla arguta* Pursh [HC], misapplied

*Potentilla arguta* Pursh ssp. *convallaria* (Rydb.) D.D. Keck

*Potentilla arguta* Pursh var. *convallaria* (Rydb.) Th. Wolf

*Potentilla convallaria* Rydb.

***Drymocallis glandulosa*** (Lindl.) Rydb. [HC2]

*Potentilla glandulosa* Lindl. [HC]

ssp. ***glabrata*** (Rydb.) Soják [HC2]

Idaho wood beauty

*Potentilla glandulosa* Lindl. var. *incisa* Lindl.

*Potentilla glandulosa* Lindl. var. *intermedia* (Rydb.) C.L. Hitchc. [HC]

ssp. ***glandulosa*** [HC2]

gland cinquefoil, sticky cinquefoil

*Drymocallis glandulosa* (Lindl.) Rydb. var. *glandulosa* [Draft FNA]

*Potentilla glandulosa* Lindl. ssp. *glandulosa*

*Potentilla glandulosa* Lindl. ssp. *reflexa* (Greene) D.D. Keck

*Potentilla glandulosa* Lindl. ssp. *typica* D.D. Keck

*Potentilla glandulosa* Lindl. var. *glandulosa* [HC]

*Potentilla glandulosa* Lindl. var. *reflexa* Greene [HC]

*Potentilla reflexa* (Greene) Greene

ssp. ***pseudorupestris*** (Rydb.) Soják [HC2]

cliff drymocallis

*Drymocallis pseudorupestris* (Rydb.) Rydb. var. *saxicola* Erter [Draft FNA]

*Potentilla glandulosa* Lindl. ssp. *pseudorupestris* (Rydb.) D.D. Keck

*Potentilla glandulosa* Lindl. var. *pseudorupestris* (Rydb.) Breitung [HC]

***Duchesnea*** [HC, HC2]

***Duchesnea indica*** (Andrews) Focke [HC, HC2]

Nat. Pflanzenfam. 3(3): 33.

Indian-strawberry, mock-stawberry

*Fragaria indica* Andrews

var. *indica* [HC2]

**Filipendula** [HC, HC2]

**Filipendula occidentalis** (S. Watson) Howell [HC, HC2]

A Flora of Northwest America 2: 185.  
queen-of-the-forest

*Fragaria occidentalis* Wats. Andr.

**Fragaria** [HC, HC2]

strawberry

**Fragaria xananassa** (Weston) Duchesne ex Rozier [HC2]

JPM2 Editorial Notes: "Correspondence 2 indicates that for The Jepson Manual [Ed. 2] putative hybrids between *Fragaria chiloensis* (L.) Mill. and *Fragaria virginiana* [ *Fragaria x ananassa* subsp. *cuneifolia* (Nutt. ex Howell) Staudt] are spontaneous and do not merit taxonomic status. "

ssp. *ananassa* [HC2]

ssp. *cuneifolia* (Nutt. ex Howell) Staudt [HC2]

*Fragaria cuneifolia* Nutt. ex Howell  
*Fragaria grandiflora* Ehrh.

A common hybrid between *Fragaria chiloensis* and *Fragaria virginiana* ssp. *platypetala*.

\* Salamone et al. 2013. Bioclimatic, Ecological, and Phenotypic Intermediacy and High Genetic Admixture in a Natural Hybrid of Octoploid Strawberries. *American Journal of Botany* 100(5): 939?950.

**Fragaria chiloensis** (L.) Mill. [HC, HC2, JPM]

Gard. Dict. (ed. 8) *Fragaria* no. 4.  
beach strawberry, coastal strawberry

Note that H&C use authorship of (L.) Duchesne, which has been determined to be invalidly published.

ssp. *pacifica* Staudt [HC2]

beach strawberry, coastal strawberry, cultivated strawberry

*Fragaria chiloensis* (L.) Mill. ssp. *lucida* (E. Vilm. ex Decne.) Staudt

**Fragaria vesca** L. [HC, HC2]

woodland strawberry

ssp. *californica* (Cham. & Schltld.) Staudt [HC2]

Pacific strawberry, wood strawberry

*Fragaria bracteata* A. Heller  
*Fragaria crinita* Rydb.  
*Fragaria helleri* Holz.

*Fragaria vesca* L. ssp. *bracteata* (A. Heller) Staudt  
*Fragaria vesca* L. var. *bracteata* (A. Heller) R.J. Davis [HC]  
*Fragaria vesca* L. var. *crinita* (Rydb.) C.L. Hitchc. [HC]

ssp. *vesca* [HC2]

*Fragaria vesca* L. var. *vesca* [HC]

**Fragaria virginiana** Duchesne [HC, HC2]

blueleaf strawberry, mountain strawberry

ssp. *glauca* (S. Watson) Staudt [HC2]

blueleaf strawberry, broadpetal strawberry, wild strawberry

*Fragaria glauca* (S. Watson) Rydb.  
*Fragaria multicipita* Fernald  
*Fragaria ovalis* (Lehm.) Rydb.  
*Fragaria pauciflora* Rydb.  
*Fragaria platypetala* Rydb.  
*Fragaria platypetala* Rydb. var. *sibbaldifolia* (Rydb.) Jeps.  
*Fragaria sibbaldifolia* Rydb.

*Fragaria suksdorfii* Rydb.  
*Fragaria truncata* Rydb.  
*Fragaria virginiana* Duchesne ssp. *platypetala* (Rydb.) Staudt  
*Fragaria virginiana* Duchesne var. *glauca* S. Watson [HC]  
*Fragaria virginiana* Duchesne var. *ovalis* (Lehm.) R.J. Davis  
*Fragaria virginiana* Duchesne var. *platypetala* (Rydb.) H.M. Hall [HC]  
*Fragaria virginiana* Duchesne var. *terrae-novae* (Rydb.) Fernald & Wiegand

One WA collection at WTU from Okanogan County as of December 2009.

## **Geum** [HC, HC2]

avens

### **Geum aleppicum** Jacq. [HC, HC2]

Icon. Pl. Rar. 1: 10, pl. 93.

yellow avens

*Geum aleppicum* Jacq. ssp. *strictum* (Aiton) R.T. Clausen  
*Geum aleppicum* Jacq. var. *strictum* (Aiton) Fernald  
*Geum strictum* Aiton  
*Geum strictum* Aiton var. *decurrens* (Rydb.) Kearney & Peebles

### **Geum macrophyllum** Willd. [HC, HC2]

bigleaf avens, largeleaved avens

*Geum macrophyllum* Willd. ssp. *macrophyllum*  
*Geum macrophyllum* Willd. ssp. *perincisum* (Rydb.) Hultén  
*Geum macrophyllum* Willd. var. *macrophyllum* [HC]  
*Geum macrophyllum* Willd. var. *perincisum* (Rydb.) Raup [HC]  
*Geum macrophyllum* Willd. var. *rydbergii* Farw.  
*Geum oregonense* (Scheutz) Rydb.  
*Geum perincisum* Rydb.  
*Geum perincisum* Rydb. var. *intermedium* B. Boivin

### **Geum rivale** L. [HC, HC2]

purple avens, water avens

### **Geum rossii** (R. Br.) Ser. [FNA9, HC, HC2]

in A. P. de Candolle and A. L. P. P. de Candolle, Prodr. 2: 553.

Ross's avens

*Geum rossii* (R. Br.) Ser. var. *depressum* (Greene) C.L. Hitchc. [HC]  
*Geum rossii* (R. Br.) Ser. var. *rossii* [HC]  
*Geum rossii* (R. Br.) Ser. var. *turbinatum* (Rydb.) C.L. Hitchc. [HC]

### **Geum triflorum** Pursh [HC, HC2]

prairie smoke, old man's whiskers, old-man's whiskers

*Erythrocoma campanulata* Greene  
*Erythrocoma ciliata* (Pursh) Greene  
*Geum campanulatum* (Greene) G.N. Jones  
*Geum ciliatum* Pursh  
*Geum triflorum* Pursh var. *campanulatum* (Greene) C.L. Hitchc. [HC]  
*Geum triflorum* Pursh var. *ciliatum* (Pursh) Fassett [HC]  
*Geum triflorum* Pursh var. *triflorum* [HC]  
*Sieversia campanulata* (Greene) Rydb.  
*Sieversia ciliata* (Pursh) G. Don

### **Geum urbanum** L. [HC2, Stace 1997]

Sp. Pl. 1: 501.

herb-bennet

## **Holodiscus** [HC, HC2]

ocean-spray

**Holodiscus discolor** (Pursh) Maxim. [HC, HC2, JPM2]

Trudy Imp. S.-Peterburgsk. Bot. Sada 6(1): 254.  
creambush ocean-spray, hillside oceanspray

*Schizonotus aariaefolius* Green var. *discolor* Kuntze

*Schizonotus discolor* Raf.

*Sericotheca discolor* (Pursh) Rydb.

*Sericotheca discolor* var. *purshianus* Rehd.

*Spiraea ariaefolia* Sm.

*Spiraea discolor* Pursh var. *ariaefolia* Wats.

*Holodiscus discolor* has a complex nomenclatural and taxonomic history. *H. dumosus* is a second *Holodiscus* species listed in H&C, however it is found south and east of Washington.

var. **discolor** [HC2]

*Holodiscus boursieri* (Carrière) Rehder

**Horkelia** [HC, HC2]

horkelia

**Horkelia fusca** Lindl. [HC, HC2]

var. **capitata** (Lindl.) M. Peck [HC, HC2]

Madroño 6(4): 134.

horkelia

*Horkelia capitata* Lindl.

*Horkelia fusca* Lindl. ssp. *capitata* (Lindl.) D.D. Keck

var. **fusca** [HC, HC2]

Edwards's Bot. Reg. 23: pl. 1997.

horkelia, tawny horkelia

*Horkelia caeruleomontana* St. John

*Horkelia fusca* Lindl. ssp. *fusca*

*Horkelia tenuisecta* Rydb.

*Potentilla andersonii* Greene

*Potentilla capitata* Greene

*Potentilla douglasii* Greene

*Potentilla douglasii* var. *tenuisecta* crum

**Ivesia** [HC, HC2]

ivesia

**Ivesia gordonii** (Hook.) Torr. & A. Gray [HC, HC2]

Pacif. Railr. Rep. 6(3): 72 [1858].

gordon's ivesia, alpine mousetail

*Horkelia gordonii* Hook.

*Ivesia alpicola* Rydb. ex. Howell

*Potentilla gordonii* (Hook.) Greene

var. **gordonii** [HC2]

*Horkelia gordonii* Hook. var. *alpicola* (Rydb. ex Howell) Rydb.

**Ivesia tweedyi** Rydb. [HC, HC2]

North American Flora 22(3): 288.

Tweedy's mousetail

*Horkelia tweedyi* Nels & Macbr. var. *alpicola* Rydb.

**Luetkea** [HC, HC2]

luetkea, partridgefoot

**Luetkea pectinata** (Pursh) Kuntze [HC, HC2]

Revisio Generum Plantarum 1: 217.  
lutkea, partridgefoot

*Eriogynia pectinata* (Pursh) Hook.  
*Saxifraga pectinata* Pursh  
*Spiraea pectinata* (Pursh) Torr. & A. Gray

## **Malus** [HC2]

apple, crabapple

### *Malus baccata* (L.) Borkh. [HC2]

Siberian crabapple

### *Malus ×dawsoniana* Rehder [HC2]

Sargent, Trees & Shrubs ii. 23.  
Dawson apple

A spontaneously occurring hybrid between feral domestic apples and native *Malus fusca* (Dickson et al. 1991). Collected recently from several counties in western WA. Uncommon in cultivation (Jacobson 1996). First reported wild in WA by Jacobson (2001).

- \* Dickson, E. E., S. Kresovich, and N. F. Weeden. 1991. Isozymes in North American *Malus* (Rosaceae): hybridization and species differentiation. *Systematic Botany* 16: 363-375.
- \* Jacobson, A. L. 1996. North American Landscape Trees. Ten Speed Press, Berkeley, CA.
- \* <b>AJ</b> = Jacobson, A. L. 2001. Wild Plants of Greater Seattle. Publ. by the author, Seattle. 494 pp.

### *Malus fusca* (Raf.) C.K. Schneid. [HC2, IFBC]

Oregon crabapple, western crabapple

*Malus diversifolia* (Bong.) M. Roem.  
*Malus fusca* (Raf.) C.K. Schneid. var. *diversifolia* (Bong.) C.K. Schneid.  
*Malus fusca* (Raf.) C.K. Schneid. var. *levipes* (Nutt.) C.K. Schneid.  
*Malus rivularis* (Douglas) M. Roem.  
*Malus rivularis* var. *levipes* (Nutt.) Koehne  
*Pyrus fusca* Raf. [HC]  
*Pyrus fusca* var. *levipes* Bailey  
*Pyrus rivularis* Douglas

### *Malus hupehensis* (Pamp.) Rehder [HC2]

flowering tea crabapple

### *Malus prunifolia* (Willd.) Borkh. [HC2]

pearleaf crabapple, plumleaf crabapple

### *Malus pumila* Mill. [HC2]

Gard. Dict. (ed. 8) *Malus* no. 3.  
apple, cultivated apple

*Malus communis* Poir.  
*Malus domestica* Borkh. [Stace 1997], illegitimate name  
*Pyrus malus* L. [HC]

- \* Campbell, C. S., C. W. Greene, and T. A. Dickinson. 1991. Reproductive Biology in Subfam. Maloideae (Rosaceae). *Systematic Botany* 16: 333-349.
- \* Pollen, M. 2001. The Botany of Desire. Random House, New York. 271 p.
- \* <b>Stace 1997</b> = Stace, C. 1997. New Flora of the British Isles. Second Edition. Cambridge University Press, Cambridge, UK. 1130 p.
- \* Wisskirchen, R., and H. Haeupler, Eds. 1998. Standardliste der Farn- und Blütenpflanzen Deutschlands (mit Chromosomenatlas von Focke Albers). Verlag Eugen Ulmer, Stuttgart, Germany. 766 p. [A synonymized list of ferns and flowering plants of Germany, with chromosome atlas by F Albers; in German]

### *Malus toringo* (Siebold) de Vriese [HC2]

Japanese crabapple, Siebold crabapple, toringo

## **Mespilus** [HC2]

### *Mespilus germanica* L. [HC2]

**Oemleria** [HC, HC2]

osoberry, Indian plum

**Oemleria cerasiformis** (Torr. & A. Gray ex Hook. & Arn.) J.W. Landon [HC, HC2]

Taxon 24(1): 200.

oso-berry, osoberry

*Exochorda davidiana* Baill.

*Nuttallia cerasiformis* Torr. & A. Gray ex Hook. & Arn.

*Nuttallia davidiana* Baill.

*Oemleria cerasiformis* var. *lancifolia* Greene

*Oemleria cerasiformis* var. *nigra* Greene

*Osmaronia cerasiformis* (Torr. & A. Gray ex Hook. & Arn.) Greene

**Petrophytum** [HC, HC2]

rockmat

**Petrophytum caespitosum** (Nutt.) Rydb. [HC, HC2]

Mem. New York Bot. Gard. 1: 206.

Rocky Mountain rockmat

*Eriogynia caespitosa* (Nutt.) S. Watson

*Luetkea caespitosa* (Nutt.) Kuntze

*Spiraea caespitosa* Nutt.

ssp. **caespitosum** [HC2, JPM2]

Mem. New York Bot. Gard. 1: 206.

Rocky Mountain rockmat

Two specimens collected from WA. Tracked by WNHP. Note that the orthographic variant *Petrophyton* is used in some references for this genus name. From the Jepson Manual online: "Correspondence 1 indicates that *Petrophyton* is an orthographic variant, and that the correct spelling is *Petrophytum*, because Rydberg (Memoirs of the New York Botanical Garden 1:206--207. 1900) published the genus name by raising *Eriogynia* sect. *Petrophytum* (Nutt. ex Torr. & A. Gray) S. Watson to genus rank, albeit misspelling it as *Petrophyton* in the process. [Therefore, spelling of genus name corrected to *Petrophytum*, from *Petrophyton* previously in this Index, 27 May 2009.] "

**Petrophytum cinerascens** (Piper) Rydb. [HC, HC2]

North American Flora 22(3): 253.

Chelan rockmat

*Petrophyton cinerascens* (Piper) Rydb., orthographic variant

*Spiraea cinerascens* Piper

Note that the orthographic variant *Petrophyton* is used in some references for this genus name. From the Jepson Manual online: "Correspondence 1 indicates that *Petrophyton* is an orthographic variant, and that the correct spelling is *Petrophytum*, because Rydberg (Memoirs of the New York Botanical Garden 1:206--207. 1900) published the genus name by raising *Eriogynia* sect. *Petrophytum* (Nutt. ex Torr. & A. Gray) S. Watson to genus rank, albeit misspelling it as *Petrophyton* in the process. [Therefore, spelling of genus name corrected to *Petrophytum*, from *Petrophyton* previously in this Index, 27 May 2009.] "

**Petrophytum hendersonii** (Canby) Rydb. [HC, HC2]

North American Flora 22(3): 253.

Olympic Mountain rockmat

*Eriogynia hendersonii* Canby

*Luetkea hendersonii* (Canby) Greene

*Petrophyton hendersonii* (Canby) Rydb., orthographic variant

*Spiraea hendersonii* (Canby) Piper

Note that the orthographic variant *Petrophyton* is used in some references for this genus name. From the Jepson Manual online: "Correspondence 1 indicates that *Petrophyton* is an orthographic variant, and that the correct spelling is *Petrophytum*, because Rydberg (Memoirs of the New York Botanical Garden 1:206--207. 1900) published the genus name by raising *Eriogynia* sect. *Petrophytum* (Nutt. ex Torr. & A. Gray) S. Watson to genus rank, albeit misspelling it as *Petrophyton* in the process. [Therefore, spelling of

genus name corrected to Petrophytum, from Petrophyton previously in this Index, 27 May 2009.] "

**Photinia** [HC2]

redtip

*Photinia davidiana* (Decne.) Card. [HC2]

Bull. Mus. Natl. Hist. Nat. 25(5): 399.

Chinese redtip, stranvaesia

Adventive; recently collected in Kitsap Co.

var. *davidiana* [HC2]

*Photinia villosa* (Thunb.) DC. [HC2]

Prodr. 2: 631.

oriental redtip

Adventive; recently collected in King Co.

**Physocarpus** [HC, HC2]

ninebark

*Physocarpus capitatus* (Pursh) Kuntze [HC, HC2]

Revisio Generum Plantarum 1: 219.

Pacific ninebark

*Neillia capitata* Greene

*Neillia opulifolia* var. *mollis* Brew & Wats.

*Opulaster capitatus* Kuntze

*Opulaster opulifolius* (L.) Maxim. var. *capitatus* Jeps.

*Physocarpa tomentosa* Raf.

*Physocarpus opulifolius* (L.) Maxim. var. *tomentellus* (Ser.) B. Boivin

*Spiraea capitata* Pursh

*Spiraea opulifolia* var. *mollis* T. & G.

*Spiraea opulifolia* var. *tomentella* Ser.

*Physocarpus malvaceus* (Greene) Kuntze [HC, HC2]

Revisio Generum Plantarum 1: 219.

mallow ninebark, mallow-leaf ninebark

*Neillia malvacea* Greene

*Neillia monogyna* var. *malvacea* M.E. Jones

*Neillia torreyi* Hook. f.

*Opulaster cordatus* Rydb.

*Opulaster pauciflorus* (Torr. & A. Gray) A. Heller

*Opulaster pubescens* Rydb.

*Physocarpus pauciflorus* (Torr. & A. Gray) Piper

*Spiraea opulifolia* var. *pauciflora* T. & G.

*Spiraea pauciflora* Nutt.

**Potentilla** [HC, HC2]

cinquefoil, five-finger

(see also *Comarum*, *Dasiphora*, *Drymocallis*)

*Potentilla anglica* Laichard. [HC2]

English cinquefoil, wood cinquefoil

*Potentilla anserina* L. [HC, HC2]

*Argentina anserina* (L.) Rydb.

*Fragaria anserina* Crantz

ssp. *anserina* [FNA9, HC2]

Sp. Pl. 1: 495.

silvery cinquefoil, common silverweed

*Argentina anserina* (L.) Rydb. var. *concolor* (Ser.) Rydb.

*Potentilla anserina* L. var. *anserina*

*Potentilla anserina* L. var. *concolor* Ser.

*Potentilla anserina* L. var. *sericea* Hayne

ssp. ***pacifica*** (Howell) Rousi [FNA9, HC2]

Pacific silverweed

*Potentilla anserina* L. var. *grandis* Torr. & A. Gray

*Potentilla egedii* Wormsk. ex Hornem. ssp. *grandis* (Torr. & A. Gray) Hultén

*Potentilla egedii* Wormsk. ex Hornem. var. *grandis* (Torr. & A. Gray) J.T. Howell

*Potentilla pacifica* Howell [HC]

***Potentilla argentea*** L. [FNA9, HC, HC2]

Sp. Pl. 1: 497.

hoary cinquefoil, silver cinquefoil

*Argentina argentea* (L.) Rydb.

*Fragaria argentea* Crantz

***Potentilla biennis*** Greene [FNA9, HC, HC2]

biennial cinquefoil

*Potentilla kelseyi* Rydb.

*Potentilla lateriflora* Rydb.

*Tridophyllum bienne* Greene

***Potentilla breweri*** S. Watson [FNA9, HC, HC2]

Brewer's cinquefoil

*Potentilla breweri* S. Watson var. *expansa* S. Watson

*Potentilla drummondii* Lehm. ssp. *breweri* (S. Watson) Ertter

*Potentilla drummondii* Lehm. var. *breweri* (S. Watson) N.H. Holmgren

***Potentilla drummondii*** Lehm. [FNA9, HC, HC2]

Drummond's cinquefoil

*Potentilla anomalofolia* M. Peck

*Potentilla cascadiensis* Rydb.

*Potentilla dissecta* var. *drummondii* Kurtz

*Potentilla drummondii* var. *cascadiensis* Rydb.

***Potentilla flabellifolia*** Hook. ex Torr. & A. Gray [FNA9, HC, HC2]

Fl. N. Amer. 1: 422.

fan-leaf cinquefoil, fringe-leaf cinquefoil, fan-foil

***Potentilla glaucophylla*** Lehm. [HC2]

blueleaf cinquefoil, different-leaved cinquefoil, diverse-leaved cinquefoil, vari-leaved cinquefoil

*Potentilla* × *diversifolia* Lehm. [HC]

*Potentilla diversifolia* Lehm. ssp. *glaucophylla* (Lehm.) Lehm.

*Potentilla diversifolia* Lehm. ssp. *ranunculus* (Lange) A.E. Porsild

*Potentilla diversifolia* Lehm. var. *diversifolia* [HC]

*Potentilla diversifolia* Lehm. var. *glaucophylla* (Lehm.) S. Watson

*Potentilla diversifolia* Lehm. var. *perdissecta* (Rydb.) C.L. Hitchc. [HC]

*Potentilla diversifolia* Lehm. var. *ranunculus* (Lange) B. Boivin

*Potentilla glaucophylla* Lehm. var. *glaucophylla* [FNA9]

*Potentilla glaucophylla* Lehm. var. *perdissecta* (Rydb.) Soják [FNA9]

*Potentilla perdissecta* Rydb.

***Potentilla gracilis*** Douglas ex Hook. [HC, HC2]

var. ***brunnescens*** (Rydb.) C.L. Hitchc. [HC, HC2]

glandular cinquefoil

var. ***flabelliformis*** (Lehm.) Nutt. ex Torr. & A. Gray [FNA9, HC, HC2]

Fl. N. Amer. 1: 440.

comb-leaf cinquefoil, Elmer's cinquefoil, Idaho cinquefoil

*Potentilla flabelliformis* Lehm.

*Potentilla gracilis* Douglas ex Hook. var. *elmeri* (Rydb.) Jeps. [FNA9, HC]

*Potentilla indiges* M. Peck

*Potentilla pectinisecta* Rydb.

var. ***gracilis*** [FNA9, HC, HC2]

Bot. Mag. 57: plate 2984.

Hall's cinquefoil, slender cinquefoil, wooly cinquefoil

*Potentilla angustata* Rydb.

*Potentilla blasckeanana* Turcz. ex Lehm.

*Potentilla blasckeanana* Turcz. ex Lehm. var. *permollis* (Rydb.) Th. Wolf

*Potentilla etomentosa* Rydb.

*Potentilla etomentosa* Rydb. var. *hallii* (Rydb.) Abrams

*Potentilla fastigiata* Nutt.

*Potentilla glomerata* A. Nelson

*Potentilla gracilis* Douglas ex Hook. ssp. *nuttallii* (Lehm.) D.D. Keck

*Potentilla gracilis* Douglas ex Hook. var. *blasckeanana* (Turcz. ex Lehm.) Jeps.

*Potentilla gracilis* Douglas ex Hook. var. *fastigiata* (Nutt.) S. Watson [FNA9]

*Potentilla gracilis* Douglas ex Hook. var. *glabrata* (Lehm.) C.L. Hitchc. [HC]

*Potentilla gracilis* Douglas ex Hook. var. *nuttallii* (Lehm.) Sheldon

*Potentilla gracilis* Douglas ex Hook. var. *permollis* (Rydb.) C.L. Hitchc. [HC]

*Potentilla gracilis* Douglas ex Hook. var. *rigida* S. Watson

*Potentilla jucunda* A. Nelson

*Potentilla longipedunculata* Rydb.

*Potentilla macropetala* Rydb.

*Potentilla nuttallii* Lehm.

*Potentilla permollis* Rydb.

*Potentilla rectiformis* Rydb.

*Potentilla viridescens* Rydb.

var. ***pulcherrima*** (Lehm.) Fernald [HC, HC2]

beautiful cinquefoil

*Potentilla camporum* Rydb.

***Potentilla hyparctica*** Malte [HC2]

subarctic cinquefoil

ssp. ***elatior*** (Abrom.) Elven & D.F. Murray [HC2]

*Potentilla emarginata* Pursh

*Potentilla flabellifolia* Hook. ex Torr. & A. Gray var. *emarginata* (Pursh) B. Boivin

*Potentilla hyparctica* Malte var. *elatior* (Abrom.) Fernald

***Potentilla inclinata*** Vill. [FNA9, HC2]

Pl. Dauphiné 3: 567, fig. 45.

grey cinquefoil

*Potentilla canescens* Besser

*Potentilla intermedia* L. var. *canescens* (Besser) Wahlenb.

recently collected in King Co. (Jacobson et al. 2001)

[FNA9]

Journal of the Botanical Research Institute of Texas 2(1): 202.

Jepson's cinquefoil

*Potentilla littoralis* Rydb. var. *ovium* (Jeps.) Soják

*Potentilla pensylvanica* L. var. *ovium* Jeps. [HC2]

Presence in WA confirmed by Barbara Ertter on the basis of Kruckeberg 6545 (WTU-280835), Okanogan County.

***Potentilla newberryi*** A. Gray [FNA9, HC, HC2]

, Proc. Amer. Acad. Arts 6: 532.  
Newberry's cinquefoil

*Ivesia gracilis* Torr. & A. Gray  
*Potentilla newberryi* var. *arenicola* Rydb.

***Potentilla nivea* L. [FNA9, HC, HC2]**

snow cinquefoil

*Fragaria nivea* Crantz  
*Potentilla nivea* L. ssp. *fallax* A.E. Porsild  
*Potentilla nivea* L. ssp. *subquinata* (Lange) Hultén  
*Potentilla nivea* L. var. *subquinata* Lange  
*Potentilla nivea* L. var. *tomentosa* Nilsson-Ehle ex Hultén  
*Potentilla prostrata* Rottb.  
*Potentilla prostrata* Rottb. ssp. *floccosa* Soják

***Potentilla norvegica* L. [FNA9, HC, HC2]**

Sp. Pl. 1: 499.  
Norwegian cinquefoil, rough cinquefoil

*Fragaria norvegica* Crantz  
*Potentilla monspeliensis* L.  
*Potentilla norvegica* L. ssp. *hirsuta* (Michx.) Hyl.  
*Potentilla norvegica* L. ssp. *monspeliensis* (L.) Asch. & Graebn.  
*Potentilla norvegica* L. var. *hirsuta* (Michx.) Lehm.  
*Potentilla norvegica* L. var. *labradorica* (Lehm.) Fernald

***Potentilla ovina* J.M. Macoun [HC, HC2]**

sheep cinquefoil

**var. *ovina* [FNA9, HC2]**

sheep cinquefoil

*Potentilla bipinnatifida* Douglas ex Hook. var. *glabrata* (Lehm. ex Hook.) Kohli & Packer  
*Potentilla diversifolia* var. *pinnatisecta* Wats.  
*Potentilla monidensis* A. Nelson  
*Potentilla pensylvanica* L. var. *glabrata* (Lehm. ex Hook.) S. Watson  
*Potentilla wyomingensis* A. Nelson

This species occurs in B.C., ID, MT, and OR. Specimens of species that closely resemble *P. ovina* should be examined at WTU and WS to see whether the occurrence of this species in WA has been overlooked. FNA9 does not include WA within the distribution of this taxon. It is considered excluded until specimens from WA are confirmed.

***Potentilla pensylvanica* L. [HC, HC2]**

*Potentilla atrovirens* Rydb.  
*Potentilla glabella* Rydb.  
*Potentilla pensylvanica* L. var. *atrovirens* (Rydb.) Th. Wolf  
*Potentilla pensylvanica* L. var. *pensylvanica* [HC2]  
*Potentilla pensylvanica* L. var. *strigosa* Pursh, misapplied  
*Potentilla platyloba* Rydb.  
*Potentilla strigosa* (Pursh) Pall. ex Tratt.

***Potentilla recta* L. [FNA9, HC, HC2]**

Sp. Pl. 1: 497.  
sulphur cinquefoil

*Hypargyrium rectum* Fourn.  
*Potentilla recta* L. var. *obscura* (Nestler) W.D.J. Koch  
*Potentilla recta* L. var. *pilosa* (Willd.) Ledeb.  
*Potentilla recta* L. var. *sulphurea* (Lam. & DC.) Peyr.  
*Potentilla sulphurea* Lam.

***Potentilla rivalis* Nutt. [FNA9, HC, HC2]**

Fl. N. Amer. 1: 437.

brook cinquefoil

*Potentilla leucocarpa* Rydb.

*Potentilla millegrana* Engelm. ex Lehm.

*Potentilla pentandra* Engelm.

*Potentilla rivalis* Nutt. var. *millegrana* (Engelm. ex Lehm.) S. Watson

*Potentilla rivalis* Nutt. var. *pentandra* (Engelm.) S. Watson

*Tridophyllum rivale* Greene.

*Potentilla rubricaulis* Lehm. [FNA9, HC2], misapplied

Nov. Stirp. Pug. 2: 11.

red-stemmed cinquefoil, snow cinquefoil

*Pentaphyllum effusum* Lunell

*Pentaphyllum hippianum* Lunell

*Potentilla altaica* Bunge

*Potentilla diffusa* Gray

*Potentilla filicaulis* Rydb.

*Potentilla nivea* L. ssp. *chionodes* Hiitonen

*Potentilla nivea* L. var. *macrophylla* Ser.

*Potentilla nivea* L. var. *pentaphylla* Lehm. [ILBC]

*Potentilla pennsylvanica* var. *hippiana* T. & G.

*Potentilla quinquefolia* (Rydb.) Rydb. [HC]

FNA *Potentilla* author B. Ertter believes the specimen Western Washington University Herbarium specimen upon which this occurrence is based (Taylor 6503: WWB-19767, Okanogan County, WA) is either *P. jepsonii* or some other entity. Through personal communication with D. Giblin she confirmed that *P. rubricaulis* is known only from northwestern Canada and southeastern Alaska.

*Potentilla rubricaulis* Lehm. [FNA9, HC2]

Nov. Stirp. Pug. 2: 11.

red-stemmed cinquefoil, snow cinquefoil

*Pentaphyllum effusum* Lunell

*Pentaphyllum hippianum* Lunell

*Potentilla altaica* Bunge

*Potentilla diffusa* Gray

*Potentilla filicaulis* Rydb.

*Potentilla nivea* L. ssp. *chionodes* Hiitonen

*Potentilla nivea* L. var. *macrophylla* Ser.

*Potentilla nivea* L. var. *pentaphylla* Lehm. [ILBC]

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*Potentilla supina* L. [HC2]

bushy cinquefoil

ssp. *paradoxa* (Nutt.) Soják [FNA9, HC2]

Folia Geobot. Phytotax. 4: 207.

bushy cinquefoil

*Potentilla supina* L. var. *paradoxa* (Nutt.) Th. Wolf

*Potentilla nicolletii* (S. Watson) Sheld.

*Potentilla paradoxa* Nutt. [HC]

*Potentilla supina* L. var. *nicoletti* S. Watson

*Tridophyllum nicolletii* Greene

*Potentilla villosa* Pall. ex Pursh [FNA9, HC, HC2]

northern cinquefoil, villous cinquefoil

*Potentilla fragiformis* var. *villosa* Regel Tiling

*Potentilla grandiflora* var. *villosa* Kurtz

*Potentilla nivea* L. var. *villosa* (Pall. ex Pursh) Regel & Tiling

*Potentilla villosa* Pall. ex Pursh var. *parviflora* C.L. Hitchc. [HC]

*Potentilla villosula* Jurtzev, misapplied

### **Poteridium** [HC2]

American burnet, western burnet

*Poteridium annuum* (Nutt.) Spach [HC2]

annual burnet, prairie burnet

*Poteridium occidentale* Rydb. [FNA9]

*Sanguisorba annua* (Nutt.) Nutt.

*Sanguisorba occidentalis* Nutt. [HC]

### **Poterium** [HC2]

fodder burnet, garden burnet, salad burnet, small burnet

*Poterium sanguisorba* L. [HC2]

var. *polygamum* (Waldst. & Kit.) Vis. [FNA9, HC2]

Fl. Dalmat. 3: 255.

burnet bloodwort, fodder burnet, salad burnet

*Poterium balearicum* (Bourgeau ex Nyman) Bourgeau ex Porta

*Poterium polygamum* Waldst. & Kit.

*Poterium sanguisorba* L. ssp. *muricatum* (Spach) Rouy

*Sanguisorba minor* Scop. [HC]

*Sanguisorba minor* Scop. ssp. *balearicum* (Bourgeau ex Nyman) F. Muñoz Garmendia & C. Navarro

*Sanguisorba minor* Scop. ssp. *muricata* (Bonnier & Layens) Briq.

Draft FNA9: "The *Poterium sanguisorba* complex has been treated in various and complex ways in Europe; a consensus has not emerged as to the number of species or infraspecies taxa to be recognized. All North American material of *Poterium* belongs to *P. sanguisorba* var. *polygamum*. Reports of *Sanguisorba minor* or *Poterium sanguisorba* are using that in a broad sense, not distinguishing the varieties or subspecies variously recognized, and do not imply the occurrence of the typical infrataxon in North America. It is possible that the typical variety (or other infrataxa, as defined in the European literature) is present in North America."

\* Potter, D., T. Eriksson, R. C. Evans, S. H. Oh, J. E. E. Smedmark, D. R. Morgan, M. Kerr, K. R. Robertson, M. Arsenault, T. A. Dickinson, and C. S. Campbell. 2007. Phylogeny and classification of Rosaceae. *Plant Systematics and Evolution* 266: 5?43.

### **Prunus** [HC, HC2]

cherry, laurel, plum

*Prunus americana* Marshall [HC, HC2]

Arbust. Amer. 111.

American plum, wild plum

*Prunus domestica* L. var. *americana* Castiglioni

The origin of this species in WA is unclear, as the Suksdorf collection from Bingen, Klickitat County in 1920 is the only specimen of this species at WTU. H&C do not list WA as within the range of *P. americana*, though they would have known about this specimen at the time they wrote the flora.

*Prunus armeniaca* L. [HC2]

apricot

*Prunus avium* (L.) L. [HC, HC2]

Fl. Suec. (ed. 2) 165

sweet cherry

- Cerasus avium* (L.) Moench
- Prunus cerasifera* Ehrh. [HC2, JPM]  
 Beitr. Naturk. 4: 17.  
 cherry plum
- Prunus cerasifera* Ehrh. var. *pissardii* (Carrière) L.H. Bailey
- Prunus cerasus* L. [HC, HC2]  
 Sp. Pl. 1: 474-475.  
 sour cherry
- Prunus domestica* L. [HC, HC2]  
 Sp. Pl. 1: 475.  
 cultivated plum
- Prunus dulcis* (Mill.) D.A. Webb [HC2, Stace 1997]  
 Feddes Repert. 74(1-2): 24.  
 almond
- Prunus amygdalus* Batsch
- Prunus emarginata* (Douglas) Eaton [HC, HC2, IFBC]  
 Man. Bot. (ed. 7) 463.  
 bitter cherry
- Cerasus erecta* Presl.  
*Cerasus mollis* Dougl. Ex Hook.  
*Cerasus prunifolia* Greene  
*Prunus emarginata* (Douglas) Eaton var. *crenulata* (Greene) Kearney & Peebles  
*Prunus emarginata* (Douglas) Eaton var. *emarginata* [HC]  
*Prunus emarginata* (Douglas) Eaton var. *mollis* (Douglas ex Hook.) W.H. Brewer [HC]
- Prunus laurocerasus* L. [HC, HC2]  
 Sp. Pl. 1: 474.  
 laurel cherry, cherry-laurel
- Cerasus laurocerasus* (L.) Dum. Cours.
- Prunus lusitanica* L. [HC2]  
 Species Plantarum 1: 473.  
 Portugal laurel
- Prunus mahaleb* L. [HC, HC2]  
 Species Plantarum 1: 474.  
 mahaleb cherry, perfumed cherry
- Prunus padus* L. [HC2]  
 Sp. Pl. 1: 473.  
 European bird cherry
- Prunus persica* (L.) Batsch [HC2]  
 Beytr. Entw. Gewächreich 1: 30.  
 peach
- Prunus xpugetensis* Jacobson & Zika [HC2]  
 Madrono 54: 74-85.  
 Puget Sound cherry
- \* Jacobson, A.L. and P.F. Zika. 2007 A new hybrid cherry, *Prunus xpugetensis* (*P. avium* x *P. emarginata*, Rosaceae) from the Pacific Northwest. Madrono 54: 74-85.
- Prunus serotina* Ehrh. [HC2]  
 black cherry, rum cherry
- Prunus spinosa* L. [HC, HC2]  
 Sp. Pl. 1: 475.  
 blackthorn

*Prunus tomentosa* Thunb. [HC2]

Syst. Veg. (ed. 14) 464.

Nanking cherry

Recently collected (2017 in Kittitas County).

*Prunus virginiana* L. [HC, HC2]

common chokecherry, western chokecherry, white chokecherry

*Cerasus demissa* Nutt.

*Cerasus demissa* Nutt. var. *melanocarpa* A. Nelson

*Padus demissa* Roem.

*Padus melanocarpa* (A. Nelson) Shafer

*Padus virginiana* (L.) Mill. ssp. *melanocarpa* (A. Nelson) W.A. Weber

*Padus virginiana* (L.) Mill. var. *demissa* (Schneid.) Torr.

*Prunus demissa* (Nutt.) Walp.

*Prunus demissa* (Nutt.) D. Dietr. f. *leiodisca* Koehne

*Prunus demissa* (Nutt.) D. Dietr. f. *trichodisca* Koehne

*Prunus demissa* (Nutt.) Walp. var. *melanocarpa* (A. Nelson) A. Nelson

*Prunus demissa* var. *nuttallii* f. *howellii*

*Prunus melanocarpa* (A. Nelson) Rydb.

*Prunus pinetorum* Suksd.

*Prunus virginiana* L. ssp. *demissa* (Nutt.) Roy L. Taylor & MacBryde

*Prunus virginiana* L. ssp. *melanocarpa* (A. Nelson) Roy L. Taylor & MacBryde

*Prunus virginiana* L. var. *demissa* (Nutt.) Torr. [HC]

*Prunus virginiana* L. var. *melanocarpa* (A. Nelson) Sarg. [HC]

*Prunus yedoensis* Matsum. [HC2]

Yoshino cherry

*Purshia* [HC, HC2]

antelope-brush, bitter-brush

*Purshia tridentata* (Pursh) DC. [HC, HC2]

Trans. Linn. Soc. London 12(1): 158 [1818].

antelope-brush, bitterbrush

*Kunzia tridentata* Spreng.

*Tigarea tridentata* Pursh

*Pyracantha* [HC2]

firethorn

*Pyracantha coccinea* M. Roem. [HC2, IFBC]

Fam. Nat. Syn. Monogr. 3: 219-220.

firethorn, scarlet firethorn

*Cotoneaster pyracantha* (L.) Spach

*Pyracantha fortuneana* (Maxim.) H.L. Li [HC2]

Chinese firethorn

*Pyrus* [HC, HC2]

pear

(see also *Malus*)

*Pyrus calleryana* Decne. [HC2, Stace 1997]

Jard. Fruit. 1: sub pl. 8 1858 [1872].

Callery pear

Very occasionally escaped from cultivation.

*Pyrus communis* L. [HC, HC2]

Sp. Pl. 1: 479; 2: 1200.

common pear

*Pyrus nivalis* Jacq. [Flora Europaea, HC2]

Fl. Austr. 2: 4.

snow pear

*Pyrus communis* L. ssp. *nivalis* (Jacq.) Gams

**Rosa** [HC, HC2]

rose

*Rosa canina* L. [HC, HC2]

Sp. Pl. 1: 491.

dog rose

*Rosa canina* L. var. *dumetorum* (Thuill.) Poir.

*Rosa corymbifera* Borkh.

*Rosa gymnocarpa* Nutt. [HC, HC2]

Fl. N. Amer. 1(3): 461.

baldhip rose, wood rose

*Rosa dasypoda* Greene

*Rosa prionota* Greene

*Rosa multiflora* Thunb. [HC2, IFBC]

Syst. Veg. (ed. 14) 474.

rambler rose

*Rosa cathayensis* (Rehder & E.H. Wils.) L.H. Bailey

*Rosa nutkana* C. Presl [HC, HC2]

nootka rose

ssp. *macdougalii* (Holz.) Piper [FNA9, HC2]

bristly Nootka rose

*Rosa anatonensis* H. St. John

*Rosa caeruleomontana* St. John

*Rosa columbiana* Rydb.

*Rosa jonesii* H. St. John

*Rosa macdougalii* Holz.

*Rosa megalantha* G.N. Jones

*Rosa nutkana* C. Presl var. *alta* Suksd.

*Rosa nutkana* C. Presl var. *hispida* Fernald [HC]

*Rosa nutkana* C. Presl var. *macdougalii* M.E. Jones

*Rosa nutkana* C. Presl var. *pallida* Suksd.

*Rosa rainierensis* G.N. Jones

*Rosa spaldingii* Crép.

*Rosa spaldingii* Crép. var. *alta* (Suksd.) G.N. Jones

*Rosa spaldingii* Crépin var. *chelanensis* Jones

*Rosa spaldingii* Crép. var. *hispida* (Fernald) G.N. Jones

*Rosa spaldingii* Crép. var. *parkeri* (S. Watson) H. St. John

ssp. *nutkana* [FNA9, HC2]

Nootka rose

*Rosa durandii* Crép.

*Rosa muriculata* Greene

*Rosa nutkana* C. Presl var. *muriculata* (Greene) G.N. Jones

*Rosa nutkana* C. Presl var. *nutkana* [HC]

*Rosa nutkana* C. Presl var. *setosa* G.N. Jones

*Rosa pisocarpa* A. Gray [HC, HC2]

Proc. Amer. Acad. Arts 8: 382.

clustered rose, peafruit rose

*Rosa anacantha* Greene

*Rosa pringlei* Rydb.

var. *pisocarpa* [HC2]

*Rosa pisocarpa* A. Gray var. *rivalis* (Eastw.) Jeps.

*Rosa rivalis* Eastw.

*Rosa rubiginosa* L. [HC2]

sweetbrier rose, small-flowered sweetbrier

*Rosa eglanteria* L. [HC]

*Rosa micrantha* Borrer [HC, Stace 1997]

*Rosa rugosa* Thunb. [HC2, Stace 1997]

Syst. Veg. (ed. 14) 473.

rugosa rose

*Rosa rugosa* Thunb. var. *albiflora* Koidz.

*Rosa woodsii* Lindl. [HC, HC2]

pearhip rose

*Rosa arizonica* Rydb.

*Rosa arizonica* Rydb. var. *granulifera* (Rydb.) Kearney & Peebles

*Rosa covillei* Greene

*Rosa lapwaiensis* H. St. John

*Rosa pecosensis* Cockerell

*Rosa ultramontana* (S. Watson) A. Heller

*Rosa woodsii* Lindl. ssp. *ultramontana* (S. Watson) Roy L. Taylor & MacBryde

*Rosa woodsii* Lindl. var. *arizonica* (Rydb.) W.C. Martin & C.R. Hutchins

*Rosa woodsii* Lindl. var. *granulifera* (Rydb.) W.C. Martin & C.R. Hutchins

*Rosa woodsii* Lindl. var. *ultramontana* (S. Watson) Jeps. [HC]

*Rosa woodsii* Lindl. var. *woodsii* [HC]

**Rubus** [HC, HC2]

blackberry, bramble, raspberry

*Rubus allegheniensis* Porter [HC2]

Allegheny blackberry, common blackberry

*Rubus anglocandicans* A. Newton [HC2]

*Rubus arcticus* L. [HC2]

nagoonberry

*Cylactis arctica* (L.) Raf. ex B.D. Jacks. ssp. *acaulis* (Michx.) W.A. Weber

*Manteia acaulis* Raf.

*Rubus acaulis* Michx. [HC]

*Rubus arcticus* L. ssp. *acaulis* (Michx.) Focke [IFBC]

*Rubus arcticus* L. var. *acaulis* (Michx.) B. Boivin

*Rubus armeniacus* Focke [HC2]

Abhandlungen herausgegeben vom Naturwissenschaftlichen Vereine zu Bremen 4: 183.

Himalayan blackberry

*Rubus bifrons* Vest [FNA9, HC2]

Steiermark. Z. 3: 163.

European blackberry, Himalayan blackberry

*Rubus thyranthus* Peck

FNA9: "*Rubus bifrons* lacks the strongly pruinose stems of the related *R. ulmifolius*, and has leaves that are usually much larger. It also lacks the stipitate-glandular trichomes and nearly round primocane terminal leaflets of the related *R. vestitus*. It also often has much broader inflorescences than either of the other two introduced species. This species, like its relatives *Rubus ulmifolius* and *R. vestitus*, can have extremely long floricanes branches, sometimes in excess of 1 m, that end in flowering cymes, often appearing as if primocanes apically terminate their growth by flowering within the same year. As a result, the apical portion

of long floricanes branches are almost always represented in herbarium specimens, but that of true primocanes, or that of full floricanes including the adjacent portion of primocanes, are rare. L. H. Bailey (1945), M. L. Fernald (1950), Y. Helsop-Harrison (1968), and H. A. Gleason and A. Cronquist (1991) distinguished between *Rubus bifrons* and another species (referred to either as *R. discolor* or *R. procerus*, both often considered synonyms of *R. armeniacus*), variously based upon stem shape and pubescence, prickle shape and angle, leaf shape and margins, inflorescence shape, and petal color. Plants in North America identified either as *R. bifrons* or the other species can have considerable variation in any of these features, even within individual stems, making it impossible to distinguish between these species. Although *Rubus discolor* often has been treated as a synonym of *R. armeniacus* in our region, it is actually a synonym of *R. ulmifolius* (H. E. Weber 1985). Although widespread in North America, plants of this species complex are most abundant from northern California northward to British Columbia (particularly coastal areas), where it is a problematic weed. Along the West Coast this species can grow in great density over large areas, often to the exclusion of all other vegetation. The fruit is desirably edible and the floral displays can be attractive."

***Rubus chamaemorus* L. [HC, HC2]**

Sp. Pl. 1: 494.

cloudberry

*Rosa norvegica* Greene

*Rubus anglica* Greene

***Rubus hispidus* L. [FNA9, HC2]**

Sp. Pl. 1: 493.

bristly dewberry, swamp dewberry

*Rubus blanchardianus* (L.H. Bailey) L.H. Bailey

*Rubus cubitans* Blanch.

*Rubus hispidus* L. var. *obovalis* (Michx.) Fernald

*Rubus trifrons* Blanch. var. *pudens* (L.H. Bailey) Fernald

Draft FNA9: "*Rubus hispidus* is best identified by its creeping primocanes with somewhat lustrous, coriaceous, and small, perennial leaves that persist through the winter until early spring, and an armature of hispid hairs or rarely weak, slender prickles. Non- or weakly evergreen plants may be evidence of introgression with *R. flagellaris* or *R. setosus*. See discussion under *R. flagellaris* for the superficially similar *R. caesius*. The following names may represent hybrids involving *Rubus hispidus* and other blackberry species (given in parentheses): *Rubus adjacens* Fernald (*R. setosus*); *R. fulleri* L. H. Bailey (*R. setosus*); *R. grandidens* L. H. Bailey (*R. setosus*); *R. harmonicus* L. H. Bailey (*R. setosus*); *R. jacens* Blanchard (*R. setosus*); *R. parlinii* L. H. Bailey (*R. setosus*); *R. persistens* Rydberg (*R. trivialis*); *R. spiculosus* Fernald (*R. setosus*); *R. tardatus* Blanchard (*R. setosus*); *R. tholiformis* Fernald (*R. setosus*); *R. trifrons* Blanchard (*R. setosus*); *R. zaplatus* L. H. Bailey (*R. setosus*). See the entry for *R. flagellaris* for possible hybrids between it and *R. hispidus*."

***Rubus idaeus* L. [HC, HC2]**

red raspberry

ssp. *idaeus* [HC2]

ssp. ***strigosus*** (Michx.) Focke [HC2, IFBC]

Biblioth. Bot. 17(Heft 72[2]): 209.

grayleaf red raspberry

*Rubus idaeus* L. var. *gracilipes* M.E. Jones [HC]

*Rubus idaeus* L. var. *peramoenus* (Greene) Fernald [HC]

*Rubus idaeus* L. var. *strigosus* (Michx.) Maxim.

*Rubus strigosus* Michx.

Draft FNA9: "Hybrids between *Rubus idaeus* subsp. *strigosus* and *R. occidentalis*, including the cultivated purple raspberries have usually gone under the name *R. neglectus* Peck. C. H. Peck (1871) did not treat *R. neglectus* as a hybrid, although his description, based on material from northeastern New York, acknowledged the material to be intermediate between the two taxa. L. H. Bailey (1945) suspected *R. neglectus* to be a "distinct species of local range" with no "real resemblance" to the cultivated purple raspberries. The third author of this treatment (Gerry Moore) has observed wild purple-fruited material from northwestern New York near the type locality and

concur with L. H. Bailey that the material appears to have little resemblance to the cultivated purple raspberries. The fruit of this material has a strikingly distinct taste, Peck noting that the locals referred to it as "cream berries."• Further study of this material is needed to better understand the proper application of the name *Rubus neglectus* and whether or not this name can be applied to hybrids between *R. idaeus* subsp. *strigosus* and *R. occidentalis*. M. L. Fernald (1900) misapplied the name *R. idaeus* Linnaeus var. *anomalus* Arrenhius to reduced, unarmed sterile material of *Rubus idaeus* subsp. *strigosus* with simple leaves on the floricane; this material was later described by Blanchard as *R. egglesonii*. *Rubus viburnifolius* (Rydberg) Greene (not Franchet) is an illegitimate name."

***Rubus laciniatus* Willd. [HC, HC2]**

Hort. Berol. pl. 82.

cut-leaf blackberry, evergreen blackberry

*Rubus vulgaris* var. *laciniatus* Dippel.

Draft FNA9: "No other species of *Rubus* within our region has leaflets so deeply lobed or dissected. The rare individual bearing relatively unlobed leaflets and perianth parts would appear most similar to *R. vestitus*, except that it lacks the apically flattened or cupulate glands of that species. Such unusual plants of *R. laciniatus* would be distinguished from the native blackberries by their cymose inflorescences, unlike the racemose or solitary inflorescences of the natives."

***Rubus lasiococcus* A. Gray [FNA9, HC, HC2]**

Proc. Amer. Acad. Arts 17: 201.

roughfruit berry, dwarf bramble, hairy-fruit smooth dewberry

*Comarobatia lasiococca* (A. Gray) Greene

Draft FNA9: "*Rubus lasiococcus* is defined by its trailing, unarmed stems, simple 3-lobed to 3-foliate leaves, small white flowers, and densely hairy ovaries."

***Rubus leucodermis* Douglas ex Torr. & A. Gray [FNA9, HC, HC2]**

Fl. N. Amer. 1: 454.

blackcap raspberry, dark raspberry, whitebark raspberry

*Batidaea sandbergii* Greene

*Melanobatus leucodermis* (Douglas ex Torr. & A. Gray) Greene

*Rubus hesperius* Piper

*Rubus leucodermis* Douglas ex Torr. & A. Gray var. *bernardinus* (Greene) Jeps.

*Rubus leucodermis* Douglas ex Torr. & A. Gray var. *trinitatis* A. Berger

*Rubus occidentalis* Linnaeus ssp. *leucodermis* (Douglas ex Torr. & A. Gray) Focke

***Rubus macrophyllus* Weihe & Nees [HC]**

Rubi German. 35, pl. 12.

large-leaf blackberry, large-leaved blackberry

(see also *Rubus bifrons*)

*Rubus macrophyllus* var. *amplificatus* Bab.

This is a misapplied name. This species is not known to occur in North America. Specimens determined to this name are likely referential to *R. bifrons*.

***Rubus nigerrimus* (Greene) Rydb. [HC, HC2]**

N. Amer. Fl. 22(5): 445.

dark raspberry, northwest raspberry

*Rubus leucodermis* Douglas ex Torr. & A. Gray var. *nigerrimus* (Greene) H. St. John

Draft FNA9 synonymizes this species within *R. leucodermis*, however several regional botanists believe that this entity is worthy of species status. For this reason we diverge from the Draft FNA9 treatment and retain this taxon as a species.

***Rubus nivalis* Douglas ex Hook. [FNA9, HC, HC2]**

Fl. Bor.-Amer. 1: 181.

snow dwarf bramble, snow dewberry

*Cardiobatus nivalis* (Douglas ex Hook.) Greene

Draft FNA9: "*Rubus nivalis* is defined by its trailing, prickly stems, simple to 3-foliate perennial leaves,

broadly elliptic to ovate stipules, and small magenta to pink flowers. The closest relative of *R. nivalis* is likely the Mexican *R. pumilus* Focke. Asian species previously classified in subg. *Chamaebatus* are polyploid (M. M. Thompson 1997) and not phylogenetically close (L. A. Alice and C. C. Campbell 1999; L. A. Alice et al. 2008, pers. comm.)."

***Rubus nutkanus* Moc. ex Ser. [HC2]**

thimbleberry

*Bossekia parviflora* Greene  
*Rubacer parviflorum* (Nutt.) Rydb.  
*Rubus nutkanus* f. *lacera* Kuntze  
*Rubus nutkanus* var. *nuttallii* T. & G.  
*Rubus nutkanus* var. *parviflorus* Focke  
*Rubus nutkanus* var. *scopulorum* Greene ex Focke  
*Rubus parviflorus* Nutt. [FNA9, HC]  
*Rubus parviflorus* f. *nuttallii* Fassett  
*Rubus parviflorus* Nutt. var. *bifarius* Fernald  
*Rubus parviflorus* Nutt. var. *fraserianus* Henry  
*Rubus parviflorus* Nutt. var. *grandiflorus* Farw.  
*Rubus parviflorus* Nutt. var. *heteradenius* Fernald  
*Rubus parviflorus* Nutt. var. *hypomalacus* Fernald  
*Rubus parviflorus* Nutt. var. *parviflorus*  
*Rubus parviflorus* Nutt. var. *parvifolius* (A. Gray) Fernald  
*Rubus parviflorus* Nutt. var. *scopulorum* Greene ex Focke  
*Rubus parviflorus* Nutt. var. *velutinus* (Hook. & Arn.) Greene  
*Rubus velutinus* brew.

Draft FNA9: "*Rubus parviflorus* is defined by its erect, unarmed stems, simple leaves, large white flowers, glabrous, clavate styles, and yellowish orange to red-stipitate glands covering most plant parts. Hybridization with *R. odoratus* is thought to occur in areas of overlap in northern Michigan. Several varieties and forms have been described based on pubescence and glandularity of stems, leaves, petioles, pedicels, and sepals (e.g., M. L. Fernald 1950). Different variants often occur mixed in the same population and generally do not correspond to definite geographic regions (N. C. Fassett 1941). Plants from coastal California (var. *velutinus*) tend to have densely hairy leaf abaxial surfaces; this variation is likely environmentally induced as other *Rubus* species show the same pattern (e.g., *R. spectabilis* var. *franciscanus*) in the area." Note that *R. parviflorus* Nutt. is an illegitimate name due to it being published in 1818. Weston published this combination in 1770.

***Rubus odoratus* L. [FNA9, HC2]**

Sp. Pl. 1: 494.

purple flowering raspberry

Reported from WA in FNA. Flora of the Olympic Peninsula notes one population naturalized along a Forest Service road. There are no specimens of this species at WTU, and there have not been any further reports of this species naturalizing in WA. It may be worth considering this species excluded until further evidence of its persistence is produced.

***Rubus pedatus* Sm. [FNA9, HC, HC2]**

Pl. Icon. Ined. 3: plate 63.

strawberry bramble, strawberry-leaf raspberry

*Ametron pedatum* (Sm.) Raf.  
*Comaropsis pedata* (Sm.) DC.  
*Dalibardia pedata* Stephan.  
*Psychrobatia pedata* (Sm.) Greene

Draft FNA9: "*Rubus pedatus* is defined by its trailing, unarmed stems, pedately 3-foliolate leaves, small white flowers, and glabrous ovaries."

***Rubus pensilvanicus* Poir. [Draft FNA, HC2]**

Encycl. 6(1): 246.

Pennsylvania blackberry

One specimen from King County, WA. Draft FNA: "*Rubus pensilvanicus* as circumscribed here represents

Bailey's (1941) *Rubus* sect. *Arguti*. L. H. Bailey (1945) recognized 109 species in this section." For this reason, the synonymy is too extensive to include here.

***Rubus pubescens* Raf. [FNA9, HC, HC2]**

Med. Rep., ser. 3, 2: 333.

dwarf red blackberry, dwarf red blackberry raspberry, raspberry raspberry, red raspberry

*Cylactis pubescens* (Raf.) W.A. Weber

*Rubus pubescens* Raf. var. *pubescens*

*Rubus saxatilis* L. var. *canadensis* Michx.

*Rubus triflorus* Richardson

Draft FNA9: "*Rubus pubescens* is defined by its trailing, unarmed stems, ternate to pedate leaves, oblanceolate to obovate stipules, and small, white flowers. It is known to hybridize with *R. arcticus* subsp. *acaulis* in areas of sympatry, the hybrid referable to *R. xparacaulis* L. H. Bailey. These plants are similar to *R. arcticus* subsp. *acaulis* in having more obovate, rounded leaflets, and larger, pink to magenta petals; they are larger, creeping, and have hairy and stipitate-glandular pedicels and sepals like *R. pubescens*."

***Rubus spectabilis* Pursh [FNA9, HC, HC2]**

Fl. Amer. Sept. 1: 348, plate 16.

salmonberry

*Parmena spectabilis* Greene

*Rubus franciscanus* Rydb.

*Rubus spectabilis* Pursh var. *fransiscanus* (Rydb.) J.T. Howell

*Rubus spectabilis* Pursh var. *spectabilis*

*Rubus stenopetalus* Cham.

Draft FNA9: "*Rubus spectabilis* is a thicket-forming shrub that has large and desirably edible fruit, and is used as an ornamental primarily for its robust, showy flowers. It is naturalized in parts of western Europe. It remains unclear as to whether the name *Rubus menziesii* Hooker, and possible combinations by Focke based on this name (*R. ursinus* var. *menziesii*), Greene (*Parmena spectabilis*), and S. Watson (*Rubus spectabilis* var. *menziessii*) apply to *R. spectabilis* or *R. ursinus*."

***Rubus ulmifolius* Schott [FNA9, HC2]**

Isis (Oken) 1818:821.

elm-leaf blackberry, Himalayan blackberry

*Rubus discolor* Weihe & Nees [HC]

*Rubus ulmifolius* Schott var. *anoplothyrsus* Sudre

***Rubus ursinus* Cham. & Schltl. [FNA9, HC, HC2]**

Linnaea 2: 11.

or trailing blackberry, California, dewberry, Pacific

*Rubus eastwoodianus* Rydb.

*Rubus helleri* Rydb.

*Rubus macropetalus* Douglas ex Hook.

*Rubus ursinus* Cham. & Schltl. ssp. *macropetalus* (Douglas ex Hook.) Roy L. Taylor & MacBryde

*Rubus ursinus* Cham. & Schltl. var. *eastwoodianus* (Rydb.) J.T. Howell

*Rubus ursinus* Cham. & Schltl. var. *macropetalus* (Douglas ex Hook.) S.W. Br. [HC]

*Rubus vitisolius* ssp. *ursinus* Abrams

Draft FNA9: "*Rubus ursinus* is often reminiscent in habit of the predominantly eastern North American but non-sympatric *R. flagellaris*, and is likewise polymorphic. Of agricultural significance, *R. ursinus* is a parent of several important cultivars, including loganberry and boysenberry. See discussion under *Rubus flagellaris* for the superficially similar *R. caesius*. See discussion under *R. spectabilis* for the application of the name *R. menziesii*."

***Rubus vestitus* Weihe & Nees [FNA9, HC, HC2]**

Comp. Fl. Germ. 1: 684.

European blackberry

Draft FNA9: "*Rubus vestitus* can be distinguished, especially from the closely related *R. bifrons* and *R. ulmifolius*, by its possession of long-stipitate-glandular trichomes, particularly in the inflorescence, and terminal primocane leaflets that are typically suborbiculate and abaxially densely tomentose. *Rubus*

allegheniensis can possess similar glandular trichomes, but it does not have pink petals, inflorescences of cymes, and rounded and abaxially densely tomentose, often whitened terminal leaflets. *Rubus vestitus* is also reported from Washington state, although specimens we have examined from there identified as this species are actually *R. bifrons*. Because of the overall general similarity of *R. vestitus* to *R. bifrons*, we suspect that this potentially weedy species is widespread, but rare and possibly overlooked, from British Columbia south to California. "

### ***Sanguisorba* [HC, HC2]**

burnet

(see also *Poteridium*, *Poterium*)

#### ***Sanguisorba menziesii* Rydb. [FNA9, HC, HC2]**

In N. L. Britton et al., N. Amer. Fl. 22: 387.

Menzies' burnet, small-head burnet

*Sanguisorba media* Hook.

Draft FNA9: "*Sanguisorba menziesii* has sometimes been suggested to be a hybrid between *S. officinalis* and *S. sitchensis*. Some of its characteristics do suggest intermediacy and it is possible that it arose via hybridization, but it seems best to regard it as a species, as it forms populations separate from its possible parents and is fully fertile (P. S. Holloway and G. E. M. Matheke 2003)."

#### ***Sanguisorba officinalis* L. [FNA9, HC, HC2]**

Sp. Pl. 1: 116.

garden burnet, great burnet

*Poterium officinale* (L.) A. Gray

*Sanguisorba microcephala* C. Presl

*Sanguisorba officinalis* L. ssp. *microcephala* (C. Presl) Calder & Roy L. Taylor

Draft FNA9: "Occurrences of *Sanguisorba officinalis* from eastern North America represent introductions from Eurasia; the species is native in western North America. There seem to be no consistent differences upon which to base a taxonomic distinction at any level between the native northwestern North American material (*S. microcephala*) and Eurasian *S. officinalis* in the strict sense."

#### ***Sanguisorba stipulata* Raf. [FNA9, HC2]**

Herb. Raf. 47.

Sitka burnet

*Sanguisorba canadensis* L., misapplied

*Sanguisorba canadensis* L. ssp. *latifolia* (Hook.) Calder & Roy L. Taylor

*Sanguisorba canadensis* L. var. *latifolia* Hook.

*Sanguisorba canadensis* L. var. *sitchensis* (C.A. Mey.) Koidz.

*Sanguisorba sitchensis* C.A. Mey. [HC]

FNA: "The taxonomic and nomenclatural treatment of this taxon has been variable. Material from northwest North America and northeast Asia is not taxonomically distinguishable, a conclusion also reached by C. L. Li, H. Ikeda, and H. Ohba (1994). The name *Sanguisorba sitchensis* has been customarily applied to North American material, but the oldest name available for a taxon bridging the Bering Strait is *S. stipulata*. An additional taxonomic question is the relationship of this taxon to eastern North American *S. canadensis*. While similar and undoubtedly closely related, the taxa differ in several morphologic characters, are strongly allopatric in distribution, and are here regarded as sibling species."

### ***Sibbaldia* [HC, HC2]**

sibbaldia

#### ***Sibbaldia procumbens* L. [HC, HC2]**

Sp. Pl. 1: 284.

creeping-glow-wort, creeping sibbaldia

*Potentilla procumbens* Clairv.

*Potentilla sibbaldii* Haller f., orthographic variant

### ***Sorbaria* [HC2]**

false spirea

*Sorbaria kirilowii* (Regel) Maxim. [HC2, Stace 1997]

Trudy Imp. S.-Peterburgsk. Bot. Sada 6(1): 225.  
giant false spiraea, giant false spiraea

*Sorbaria arborea* C.K. Schneid.

*Sorbaria sorbifolia* (L.) A. Braun [HC2, Stace 1997]

Fl. Brandenburg 1(1): 177.  
false spiraea

*Schizonotus sorbifolius* (L.) Lindl.  
*Spiraea sorbifolia* L.

**Sorbus** [HC, HC2]

mountain-ash, service tree, whitebeam

*Sorbus aucuparia* L. [HC, HC2]

Sp. Pl. 1: 477.  
European mountain-ash

*Pyrus aucuparia* (L.) Gaertn.

*Sorbus hybrida* L. [HC2, Stace 1997]

Species Plantarum, Editio Secunda 1: 684.  
Swedish service-tree

*Sorbus intermedia* (Ehrh.) Pers. [HC2, Stace 1997]

Syn. Pl. 2(1): 38.  
Swedish whitebeam

*Sorbus scopulina* Greene [HC, HC2]

Greene's mountain ash, Cascade mountain-ash, western mountain-ash

*Pyrus scopulina* Longyear

*Sorbus cascadiensis* G.N. Jones

*Sorbus scopulina* Greene var. *cascadiensis* (G.N. Jones) C.L. Hitchc. [HC]

*Sorbus scopulina* Greene var. *scopulina* [HC]

*Sorbus sitchensis* M. Roem. [HC, HC2]

*Pyrus sitchensis* (M. Roem.) Piper

var. *grayi* (Wenzig) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 189  
Sitka mountain-ash

*Pyrus sambucifolia* Cham. & Schldl. var. *pumila* (Raf.) Sarg.

*Sorbus occidentalis* (S. Watson) Greene

*Sorbus pumilus* Raf.

*Sorbus sambucifolia* (Cham. & Schldl.) M. Roem. var. *pumila* (Raf.) Koehne

*Sorbus sitchensis* M. Roem. ssp. *grayi* (Wenzig) Calder & Roy L. Taylor

var. *sitchensis* [HC, HC2]

Fam. Nat. Syn. Monogr. 3: 139.  
Sitka mountain-ash

*Sorbus americana* Sudw. var. *sitchensis*

*Sorbus torminalis* (L.) Crantz [HC2]

wild service tree

**Spiraea** [HC, HC2]

meadowsweet, spiraea, spirea

*Spiraea douglasii* Hook. [HC, HC2]

var. *douglasii* [FNA9, HC, HC2]

Fl. Bor.-Amer. 1: 172.  
Douglas' spiraea

Draft FNA9: "H. J. Scoggan (1978) identified two forma of var. douglasii based upon petal color: forma alba Scoggan (white) and forma douglasii (pink to deep rose). See discussion under var. menziesii for information that may also apply to var. douglasii."

**var. *menziesii* (Hook.) C. Presl [FNA9, HC, HC2]**

Abh. Königl. Böhm. Ges. Wiss., ser. 5, 6: 555.  
Menzies' spiraea

*Spiraea cuneifolia* Raf.

*Spiraea douglasii* Hook. ssp. *menziesii* (Hook.) Calder & Roy L. Taylor

*Spiraea menziesii* Hook.

*Spiraea subvillosa* Rydb.

Draft FNA9: "H. J. Scoggan (1978) identified two forma of var. menziesii based upon petal color: forma menziesii (Hooker) Voss (pink to deep rose) and forma pseudosalicifolia Boivin (white). These appear to be local forms that may be stable; petal color can be variable within varieties and species in *Spiraea* and the stability of these forms, within the variety and species as a whole, has not been fully assessed. A. R. Kruckeberg (1967) tested two strains of *S. douglasii* var. *menziesii* and found that one strain showed adaptation to soils derived from ultramafic rocks (serpentinite, peridotite, dunite) and one did not. Although not discussed by Kruckeberg, variation of flower color within the variety may be correlated with substrate."

**var. *roseata* (Rydb.) C.L. Hitchc. [FNA9, HC, HC2]**

In C. L. Hitchcock et al., Vasc. Pl. Pacific N.W. 3: 192.  
western hardhack, Douglas' spiraea, rose spiraea

***Spiraea xhitchcockii* W.J. Hess & Stoyloff [HC2]**

Sida 18(3): 827-830, f. 1.  
Hitchcock's spiraea

Jepson Manual, 2nd Edition: "[According to the protologue (Sida 18: 827. 1999), *Spiraea xhitchcockii* W. J. Hess & Stoyloff is a sterile (low pollen stainability; chromosomes mostly univalents), triploid ( $n = 27$ ) hybrid between *Spiraea douglasii* Hook. var. *menziesii* (Hook.) C. Presl (a tetraploid,  $n = 18$ ) and *Spiraea splendens* E. N. Baumann var. *rosea* (A. Gray) Kartesz & Gandhi (a diploid,  $n = 9$ )..."

\* Sida 18(3): 827-830. 1999.

***Spiraea lucida* Douglas ex Greene [FNA9, HC2]**

Pittonia 2: 221.  
shiny-leaf spiraea, shinyleaf spiraea

*Spiraea betulifolia* Pall. ssp. *lucida* (Douglas ex Greene) Roy L. Taylor & MacBryde

*Spiraea betulifolia* Pall. var. *lucida* (Douglas ex Greene) C.L. Hitchc.

Draft FNA9: "*Spiraea lucida* has frequently been considered a variety of *S. betulifolia* based upon: (a) hypanthial vestiture, inflorescence shape, extent of leaf serration, and leaf texture (L. J. Uttal 1974); or (b) corymbiform panicles, white petals, plant nearly glabrous throughout (C. L. Hitchcock and A. Cronquist 1961; A. Cronquist et al. 1997; H. J. Scoggan 1978). Although these character states occur in the eastern Asian *S. betulifolia*, it has very different leaf architecture, which appears to be unique and not found in any North American taxa. *Spiraea lucida* has an extremely variable leaf morphology that seems related to the tendency for stems to die back annually and the consequent annual production of long shoots. Although C. Sterling (1966) did not examine all taxa of *Spiraea*, the character states of carpel morphology of *S. stevenii* (see discussion) and *S. lucida* were similar and differed slightly from those of *S. betulifolia* (although the provenance of his specimen is not clear from the text)."

***Spiraea xpyramidata* Greene [FNA9, HC, HC2]**

Pittonia 2: 221.  
pyramid spiraea

*Spiraea menziesii* Hook. var. *pyramidata* (Greene) Piper

*Spiraea tomentulosa* Rydb.

***Spiraea splendens* Baumann ex K. Koch [HC2]**

subalpine spiraea

*Spiraea betulifolia* Pall. var. *rosea* A. Gray

*Spiraea densiflora* Nutt. ex Greenm. [HC]

*Spiraea densiflora* Nutt. ex Greenm. ssp. *splendens* (Baumann ex K. Koch) Abrams

*Spiraea densiflora* Nutt. var. *densiflora* [HC]

*Spiraea densiflora* Nutt. ex Greenm. var. *splendens* (Baumann ex K. Koch) C.L. Hitchc. [HC]

*Spiraea lucida* Dougl. ex Hook. var. *rosea* Greene

*Spiraea splendens* Baumann ex K. Koch ssp. *splendens* [ILBC]

*Spiraea tomentosa* L.

steepleshub

*Spiraea tomentosa* L. var. *rosea* (Raf.) Fernald

PLANTS incorrectly cites WA within the range of this species on the basis of report in Abrams. The name in Abrams is *S. tomentulosa*.

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## Rubiaceae [HC, HC2] Madder Family

**Synonyms:** (none)

**References:** (none)

***Cruciata*** [HC2]

bedstraw

*Cruciata pedemontana* (Bellardi) Ehrend. [Flora Europaea, HC2]

Ann. Naturhist. Mus. Wien 65: 18.

piedmont bedstraw

*Galium pedemontanum* (Bellardi) All.

*Vallantia pedemontana* Bellardi

***Galium*** [HC, HC2]

bedstraw, cleavers

***Galium aparine*** L. [HC, HC2]

Sp. Pl. 1: 108.

common bedstraw, common cleavers, goose-grass, sticky-willy

*Galium agreste* Wallr. var. *echinospermum* Wallr.

*Galium aparine* var. *aparine* [HC]

*Galium aparine* L. var. *echinospermum* (Wallr.) Farw. [HC]

***Galium bifolium*** S. Watson [HC, HC2]

United States Geological Exploration [sic] of the Fortieth Parallel. Botany 134, pl. 14, f. 8.

twin-leaf bedstraw

***Galium boreale*** L. [HC, HC2]

Sp. Pl. 1: 108.

northern bedstraw

***Galium divaricatum*** Pourr. ex Lam. [HC2]

Lamarck's bedstraw

***Galium humifusum*** M. Bieb. [HC2, Stace 1997]

Fl. Taur.-Caucas. 1: 104-105.

creeping bedstraw, spreading bedstraw

*Asperula humifusa* (M. Bieb.) Besser [HC]

The only two specimens of this species at WTU are Suksdorf collections dating to 1925. That the species

has not been collected again in North America in nearly 100 years (according to PLANTS database WA is the only state in which this species occurs), this species is considered excluded until specimens are located indicating that it is established in the flora.

***Galium kamtschaticum* Steller ex Schult. & Schult. f. [HC, HC2]**

Mant. 3: 186.  
boreal bedstraw

Rare.

***Galium mexicanum* Kunth [HC2]**

Mexican bedstraw

ssp. ***asperulum* (A. Gray) Dempster [HC2, KZ99]**

rough bedstraw

*Galium asperrimum* A. Gray [HC]

*Galium asperulum* (A. Gray) Rydb.

*Galium filipes* Rydb.

*Galium mexicanum* Kunth var. *asperulum* (A. Gray) Dempster [JPM]

***Galium mollugo* L. [HC, HC2]**

Sp. Pl. 1: 107.  
false baby's-breath, wild madder

***Galium odoratum* (L.) Scop. [HC2, IFBC]**

Fl. Carniol., ed. 2. 1: 105.  
sweet-scented bedstraw

*Asperula odorata* L. [HC]

***Galium oreganum* Britton [HC, HC2]**

Bulletin of the Torrey Botanical Club 21(1): 31.  
Oregon bedstraw

*Galium kamtschaticum* Steller ex Schult. & Schult. f. var. *oreganum* (Britton) Piper

***Galium palustre* L. [HC2, IFBC]**

Sp. Pl. 1: 105.  
common marsh bedstraw

Not in H&C; one specimen at WTU collected by Flett in 1902.

***Galium parisiense* L. [HC, HC2]**

Sp. Pl. 1: 108.  
wall bedstraw  
(see also *Galium divaricatum*)

*Galium parisiense* L. var. *leiocarpum* Tausch [HC]

***Galium serpenticum* Dempster [HC2, JPM]**

Brittonia 11(3): 120-121, f. 1D, 3-4.  
intermountain bedstraw

*Galium multiflorum* Kellogg [HC], misapplied

*Galium watsonii* (A. Gray) A. Heller [KZ99], misapplied

Dempster and Ehrendorfer (1965) recognized 9 subspecies in their treatment of this species. They list several of these subspecies as occurring in Washington, the majority of which are parapatric to one or more of each other. Until further research is conducted on the distinctiveness of these infraspecific taxa, we will recognize *G. serpenticum* at the species level only. Dempster and Ehrendorfer: "The name *G. serpenticum* circumscribes a rather polymorphic assemblage of diploid and some tetraploid races having many characters in common and often so tightly connected by transitional forms that further specific subdivision seems impossible....It is possible that the pattern here outlined may be the result of primary geographical and ecological differentiation which has become blurred by secondary hybridizations. The disjunct group of western montane races may represent the remnants of an older, more grayanum-like northward push along the Cascades, which has become fractionated and more or less strongly infiltrated by eastern and central races during times of dryer and more continental climate."

\* Dempster, L.T., and F. Ehrendorfer. 1965. Evolution of the *Galium multiflorum* complex in Western North America. II. Critical Taxonomic Revision. *Brittonia* 17(4): pp. 289-334.

***Galium sylvaticum* L. [Stace 1997]**

Sp. Pl. (ed. 2) 1: 155.  
Scotchmist

Not in H&C; PLANTS database report for WA from Abrams. This species is not reported from either California or British Columbia, suggesting that it is not established in the flora of the region. Until specimens are located indicating its presence in Washington we will consider it excluded from the flora here.

***Galium tricornutum* Dandy [HC2, JPM]**

Watsonia 4(1): 47-48.  
rough-fruit corn bedstraw

*Galium tricordatum* Dandy [HC], orthographic variant

From JPM it appears that this species is endemic to CA. If occurring in WA it should be considered introduced. Howell made a collection of this species in 1882 near The Dalles in Oregon, and Suksdorf made a collection in the Portland area in 1916. Without evidence to the contrary, these populations are considered introduced to these localities. Creso includes *G. tricornutum* in her 1984 flora of western Washington and describes it as rare in waste places and fields. In the absence of specimens indicating its presence here in WA, we are considering *G. tricornutum* to be excluded from the flora at this time.

***Galium trifidum* L. [HC, HC2]**

small bedstraw

*Galium cymosum* Wiegand [HC]  
*Galium trifidum* L. ssp. *columbianum* (Rydb.) Hultén [JPM2]  
*Galium trifidum* L. ssp. *pacificum* (Wiegand) Piper  
*Galium trifidum* L. ssp. *subbifolium* (Wiegand) Puff  
*Galium trifidum* L. ssp. *trifidum* [KZ99]  
*Galium trifidum* L. var. *pacificum* Wiegand [HC]  
*Galium trifidum* L. var. *subbiflorum* Wiegand

***Galium triflorum* Michx. [HC, HC2]**

Fl. Bor.-Amer. 1: 80.  
fragrant bedstraw, three-flowered bedstraw

***Galium verum* L. [HC, HC2]**

Sp. Pl. 1: 107.  
lady's bedstraw, yellow spring bedstraw

***Kelloggia* [HC, HC2]**

*Kelloggia*

***Kelloggia galioides* Torr. [HC, HC2]**

Bot. Wilkes Exp. 17: 332, pl. 6.  
milky *Kelloggia*

***Sherardia* [HC, HC2]**

blue fieldmadder, herb sherard, spurwort

***Sherardia arvensis* L. [HC, HC2]**

Sp. Pl. 1: 102.  
blue field-madder

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## Salicaceae [FNA7, HC, HC2] Willow Family

**Synonyms:** (none)

Treatment of Salicaceae here follows Flora of North America, Volume 7.

References: (none)

**Populus** [FNA7, HC, HC2]

Sp. Pl. 2: 1034. 1753; Gen. Pl. ed. 5, 456. 1754.  
aspen, cottonwood, poplar

**Populus alba** L. [FNA7, HC, HC2]

Sp. Pl. 2: 1034.  
white poplar

*Populus alba* L. var. *bolleana* Lauche [HC]  
*Populus alba* L. var. *pyramidalis* Bunge [HC]

Commonly spreading from cultivation, primarily by root sprouts, on both the east and west sides of the Cascades.

**Populus angustifolia** E. James [FNA7, HC, HC2]

Account Exped. Pittsburgh. 1: 497. 1823.  
narrow-leaved cottonwood

**Populus xcanescens** (Aiton) Sm. [Stace 1997]

gray poplar  
recently collected in Thurston Co.

**Populus deltoides** W. Bartr. ex Marshall [FNA7, HC, HC2]

Arbust. Amer. 106. 1785. (as deltoide).  
eastern cottonwood

ssp. *monilifera* (Aiton) Eckenw. [FNA7, HC2]

J. Arnold Arbor. 58: 204. 1977.

*Populus deltoides* Bartr. ex Marshall var. *occidentalis* Rydb. [HC]

**Populus grandidentata** Michx. [FNA7]

Fl. Bor.-Amer. 2: 243. 1803.  
bigtooth aspen

Though collected as an escape from cultivation in King Co. (voucher currently not in WTU collections), it does not appear to be established in the flora. Until specimens are collected indicating otherwise, this species is considered excluded from the flora.

\* <b>AJ</b> = Jacobson, A. L. 2001. Wild Plants of Greater Seattle. Publ. by the author, Seattle. 494 pp.

**Populus nigra** L. [HC, HC2, Stace 1997]

Sp. Pl. 2: 1034.  
black cottonwood, lombardy poplar

*Populus dilatata* Aiton  
*Populus italica* (Du Roi) Moench  
*Populus nigra* L. var. *italica* Du Roi [HC]

H&C recognizes that this taxon occurs in our area as male clones. Since that time it has naturalized.

**Populus tremuloides** Michx. [FNA7, HC, HC2]

Fl. Bor. Amer. 2: 243. 1803.  
quaking aspen

*Populus tremula* L. ssp. *tremuloides* (Michx.) Á. Löve & D. Löve

**Populus trichocarpa** Torr. & A. Gray [FNA7, HC, HC2]

Icon. Pl. 9: plate 878. 1852.  
black cottonwood

*Populus balsamifera* L. [FNA7, HC2], misapplied  
*Populus balsamifera* L. ssp. *trichocarpa* (Torr. & A. Gray) Brayshaw [JPM, KZ99]  
*Populus balsamifera* L. var. *californica* S. Watson  
*Populus trichocarpa* Torr. & A. Gray ex Hook. var. *cupulata* S. Watson

*Populus trichocarpa* Torr. & A. Gray var. *ingrata* (Jeps.) Parish

FNA7: "In addition to hybridizing with other North American species of sect. Tacamahaca, *Populus trichocarpa* also hybridizes with both native species of sect. Aigeiros. *Populus xgenerosa* A. Henry (synonym *P. xinteramericana* van Broekhuizen), a hybrid between *P. trichocarpa* and *P. deltoides*, is rare in the far western area of the range for *P. deltoides* subsp. *monilifera*, where it overlaps with the more drought-tolerant inland *P. trichocarpa* (Idaho, Montana, Washington, and Wyoming) (J. E. Eckenwalder 1984). This hybrid has also been grown artificially, and such hybrids between coastal *P. trichocarpa* and *P. deltoides* subsp. *deltoides* are becoming increasingly important plantation trees in the Pacific Northwest from northern Oregon to British Columbia, as well as in Europe. They are perhaps the fastest growing of all poplars in volume, with the rapid height growth of *P. trichocarpa* added to the steady diameter growth of *P. deltoides* (R. F. Stettler et al. 1988)."

**Salix** [FNA7, HC, HC2]

Sp. Pl. 2: 1015. 1753; Gen. Pl. ed. 5, 447. 1754.

[name conserved]

willow

**Salix alba** L. [FNA7, HC]

Sp. Pl. 2: 1021. 1753.

golden willow, white willow

(see also *Salix fragilis*)

*Salix alba* L. ssp. *caerulea* (Sm.) Rech. f.

*Salix alba* L. ssp. *vitellina* (L.) Arcang.

*Salix alba* L. var. *caerulea* (Sm.) Sm.

*Salix alba* L. var. *calva* G. Mey.

*Salix alba* L. var. *vitellina* (L.) Stokes

*Salix vitellina* L.

H&C recognize this species as naturalized but does not include in the keys.

**Salix amygdaloides** Andersson [FNA7, HC, HC2]

Öfvers. Kongl. Vetensk.-Akad. Förh. 15: 114. 1858.

peach-leaf willow

**Salix arctica** Pall. [FNA7, HC, HC2]

Fl. Ross. 1(2): 86. 1788.

arctic willow

*Salix arctica* R. Br. ex Richardson, homonym (illegitimate)

*Salix arctica* Pall. ssp. *tortulosa* (Trautv.) Hultén

*Salix arctica* Pall. var. *araioclada* (C.K. Schneid.) Raup

*Salix arctica* Pall. var. *kophophylla* (C.K. Schneid.) Polunin

*Salix arctica* Pall. var. *tortulosa* (Trautv.) Raup

FNA7: "*Salix arctica* is polymorphic and nomenclaturally confusing. E. Hultén (1967, 1971) recognized three subspecies: 1) subsp. *arctica* (circumpolar from Iceland and the Faeroe Islands across northern Russia, Alaska and Canada to Greenland, south to the Hudson Bay shores of Ontario and the Gaspé Peninsula); 2) subsp. *crassijulis* (a North Pacific race ranging from Kamchatka and the Russian Far East to the Aleutian Islands, south central and southeastern Alaska along the coast to northern Washington); and 3) subsp. *torulosa* (ranging from the mountains of central Asia to Kamchatka and the Bering Straits, the Brooks Range and the Rocky Mountains in Alaska, south in the cordillera to southern British Columbia and Alberta). While formal recognition of the three races is appealing, they are actually very difficult or impossible to separate morphologically and have strongly overlapping ranges. Some of the variability may be due to environmental modification (D. B. O. Savile 1964; G. W. Argus 1973; J. H. Soper and J. M. Powell 1985). On Attu Island, Alaska, there are plants to 2 m along with dwarf plants (C. Parker, pers. comm.). Their tall stature cannot be accounted for by habitat alone. The possibility that the complex morphological variability within *S. arctica* may be ecophenic or ecotypic deserves study."

**Salix arctica** Pall. [FNA7, HC, HC2], misapplied

Fl. Ross. 1(2): 86. 1788.

arctic willow

*Salix arctica* R. Br. ex Richardson, homonym (illegitimate)  
*Salix arctica* Pall. ssp. *tortulosa* (Trautv.) Hultén  
*Salix arctica* Pall. var. *araioclada* (C.K. Schneid.) Raup  
*Salix arctica* Pall. var. *kophophylla* (C.K. Schneid.) Polunin  
*Salix arctica* Pall. var. *tortulosa* (Trautv.) Raup

FNA7: "Salix arctica is polymorphic and nomenclaturally confusing. E. Hultén (1967, 1971) recognized three subspecies: 1) subsp. arctica (circumpolar from Iceland and the Faeroe Islands across northern Russia, Alaska and Canada to Greenland, south to the Hudson Bay shores of Ontario and the Gaspé Peninsula); 2) subsp. crassijulis (a North Pacific race ranging from Kamchatka and the Russian Far East to the Aleutian Islands, south central and southeastern Alaska along the coast to northern Washington); and 3) subsp. torulosa (ranging from the mountains of central Asia to Kamchatka and the Bering Straits, the Brooks Range and the Rocky Mountains in Alaska, south in the cordillera to southern British Columbia and Alberta). While formal recognition of the three races is appealing, they are actually very difficult or impossible to separate morphologically and have strongly overlapping ranges. Some of the variability may be due to environmental modification (D. B. O. Savile 1964; G. W. Argus 1973; J. H. Soper and J. M. Powell 1985). On Attu Island, Alaska, there are plants to 2 m along with dwarf plants (C. Parker, pers. comm.). Their tall stature cannot be accounted for by habitat alone. The possibility that the complex morphological variability within *S. arctica* may be ecophenic or ecotypic deserves study."

***Salix barclayi* Andersson [FNA7, HC, HC2]**

Öfvers. Kongl. Vetensk.-Akad. Förh. 15: 125. 1858.  
barclay's willow

*Salix barclayi* Andersson var. *angustifolia* (Andersson) Andersson ex C.K. Schneid.  
*Salix barclayi* Andersson var. *conjuncta* (Bebb) C.R. Ball ex C.K. Schneid.  
*Salix pyrolifolia* Anderss. var. *hoyeriana* (Dieck) Dippel

***Salix bebbiana* Sarg. [FNA7, HC, HC2]**

Gard. & Forest. 8: 463. 1895.  
Bebb's willow, gray willow, long-beak willow

*Salix bebbiana* Sarg. var. *bebbiana* [HC]  
*Salix bebbiana* Sarg. var. *capreifolia* (Fernald) Fernald  
*Salix bebbiana* Sarg. var. *depilis* Raup  
*Salix bebbiana* Sarg. var. *luxurians* (Fernald) Fernald  
*Salix bebbiana* Sarg. var. *perrostrata* (Rydb.) C.K. Schneid. [HC]  
*Salix bebbiana* Sarg. var. *projecta* (Fernald) C.K. Schneid.

***Salix boothii* Dorn [FNA7, HC2]**

Canad. J. Bot. 53: 1505. 1975.  
Booth's willow

*Salix myrtillofolia* Andersson [FNA7, HC, HC2], misapplied  
*Salix pseudocordata* (Andersson) Rydb., misapplied  
*Salix pseudomyrsinites* Andersson [FNA7], misapplied

FNA7: "Salix boothii forms natural hybrids with *S. brachycarpa* var. *brachycarpa*, *S. eastwoodiae*, *S. glauca* var. *villosa*, and *S. wolfii*. There are numerous intermediate specimens of *S. boothii* that suggest hybridization with *S. arizonica*, *S. brachycarpa*, *S. eastwoodiae*, *S. lutea*, or *S. wolfii*, but further study is needed. A DNA study of *S. arizonica* showed that a specimen from southwestern Utah previously identified as *S. arizonica* × *S. wolfii* probably was *S. boothii* × *S. wolfii* (J. T. Thompson et al. 2003). In Mountain Park, Alberta, and the Steens Mountains, Oregon, the putative hybrid *Salix boothii* × *S. glauca* var. *villosa* grew in thickets with both parents. Ovaries were sparsely hairy on the distal half or on the beak, leaves were glaucous abaxially, and floral bracts were mostly glabrous abaxially, but some with hairs proximally. One plant in fruit produced copious seed hairs but no seed."

***Salix brachycarpa* Nutt. [FNA7, HC, HC2, IFBC]**

N. Amer. Sylv. 1: 69. 1842.  
short-fruited willow, shortfruit willow, small-fruit willow

**var. *brachycarpa* [FNA7, HC2]**

N. Amer. Sylv. 1: 69.  
short-fruited willow, small-fruit willow

*Salix brachycarpa* Nutt. var. *alticola* E.H. Kelso  
*Salix brachycarpa* Nutt. var. *antimima* (C.K. Schneid.) Raup  
*Salix brachycarpa* Nutt. var. *glabellcarpa* C.K. Schneid.  
*Salix brachycarpa* Nutt. var. *sansonii* C.R. Ball  
*Salix chlorolepis* Fernald var. *antimima* C.K. Schneid.  
*Salix desertorum* Richardson var. *fruticulosa* Andersson  
*Salix desertorum* Richardson var. *stricta* Andersson

FNA7: "Variety *brachycarpa* forms natural hybrids with *Salix arizonica*, *S. barclayi*, *S. boothii*, *S. candida*, *S. chlorolepis*, *S. glauca* var. *villosa*, and *S. planifolia*. Placement of specimens from Anticosti Island, Quebec, and North Point, James Bay, Ontario, with densely villous branchlets and relatively short petioles, thought to be hybrids with *Salix glauca* var. *cordifolia*, is dubious. Variety *brachycarpa* × *Salix candida* (*S. xargusii* B. Boivin) is infrequent in Manitoba, Quebec, and Saskatchewan. Variety *brachycarpa* × *Salix chlorolepis* (*S. xgaspeensis* C. K. Schneider) resembles var. *brachycarpa* but has leaves only slightly pilose and ovaries with hairs only on the beaks (G. W. Argus 1965). Variety *brachycarpa* × *Salix glauca* var. *villosa* (*S. xwyomingensis* Rydberg) is a frequent hybrid in southern Rocky Mountains. It is characterized by stipes 0.3 mm or longer, long-cylindrical catkins, ovaries with relatively long beaks, petioles more than three times the length of buds, and leaves sparsely hairy. The extent and nature of this hybridization needs to be studied (G. W. Argus 1965). Variety *brachycarpa* × *Salix planifolia* "var. *monica*" occurs in Steens Mountains, Oregon."

***Salix candida* Flüggé ex Willd. [FNA7, HC, HC2]**

Sp. Pl. 4: 708. 1806.  
sage willow, sage-leaf willow

*Salix candida* Flüggé ex Willd. var. *denudata* Andersson  
*Salix candida* Flüggé ex Willd. var. *tomentosa* Andersson  
*Salix candidula* Nieuwl.

FNA7: "Salix candida is geographically wide-ranging but limited to calcareous habitats and, for that reason, it is quite local or even rare in some parts of its range."

***Salix cascadiensis* Cockerell [FNA7, HC, HC2]**

Muhlenbergia. 3: 9. 1907.  
Cascade willow

*Salix brownii* (Anderss.) Bebb var. *tenera* (Andersson) M.E. Jones  
*Salix cascadiensis* Cockerell var. *thompsonii* Brayshaw  
*Salix tenera* Andersson

FNA7: "The morphological variability of *Salix cascadiensis* is not well understood. Typically, it has leaves that are narrow, sharply pointed, and glaucous abaxially, catkins 15-43-flowered, dark brown floral bracts, and ovaries very densely hairy. Specimens with leaves not glaucous abaxially, catkins relatively few-flowered, and ovaries either sparsely hairy throughout, hairy only on beaks, or hairy in streaks, may be hybrids but the glabrous ovaried *S. cascadiensis* var. *thompsonii* shows no obvious signs of hybridization. Hybrids: *Salix cascadiensis* is suspected to hybridize with *S. barclayi*. *Salix cascadiensis* × *S. rotundifolia* var. *dodgeana* resembles the former in its narrow, acute to acuminate leaves and the latter in leaves not glaucous abaxially, tawny floral bracts, relatively short catkins, and glabrous ovaries. The catkins are intermediate in being 6-7-flowered."

***Salix commutata* Bebb [FNA7, HC, HC2]**

Bot. Gaz. 13: 110. 1888.  
under-green willow, variable willow

*Salix barclayi* Andersson var. *commutata* (Bebb) Kelso  
*Salix commutata* Bebb var. *denudata* Bebb  
*Salix commutata* Bebb var. *puberula* Bebb

FNA7: "Salix commutata forms natural hybrids with *S. barclayi*, *S. barrattiana*, and *S. eastwoodiae*."

***Salix drummondiana* Barratt ex Hook. [FNA7, HC, HC2]**

Fl. Bor.-Amer. 2: 144. 1838.  
Drummond's willow

*Salix drummondiana* Barratt ex Hook. ssp. *subcaerulea* (Piper) A.E. Murray, orthographic variant

*Salix drummondiana* Barratt ex Hook. var. *bella* (Piper) C.R. Ball  
*Salix drummondiana* Barratt ex Hook. var. *subcaerulea* (Piper) C.R. Ball, orthographic variant  
*Salix subcaerulea* Piper, orthographic variant

FNA7: "Salix drummondiana is distinguished from the similar, but unrelated, *S. sitchensis* by having branches often strongly glaucous, branchlets sparsely hairy, largest medial blades lorate, narrowly elliptic, elliptic, or oblanceolate, usually narrower, 3-6.2 times as long as wide, margins slightly revolute, and surfaces with white hairs, sometimes also ferruginous; *S. sitchensis* has branches not glaucous or weakly so, branchlets usually moderately to very densely hairy, largest medial blades elliptic, narrowly oblanceolate, oblanceolate, or obovate, usually slightly broader, 2.1-3.1-4 times as long as wide, margins strongly revolute, and surfaces with white hairs. Vegetative specimens of *Salix drummondiana* are distinguished from *S. geyeriana* by having largest medial blade margins revolute, surfaces usually densely short-silky adaxially, and midribs glabrous; *S. geyeriana* has largest medial blade margins flat, surfaces usually moderately densely long-silky adaxially, and midribs silky or glabrous. *Salix drummondiana* and *S. lemmonii* can be separated on the basis of variable characters including: branch glaucousness, leaf size, blade hair density and color, catkin size and shape, anther length, petiole length, and chromosome number. Hybridization is rare but may occur in Lassen and Sierra counties, California."

***Salix eastwoodiae* Cockerell ex A. Heller [FNA7, HC2]**

Cat. N. Amer. Pl. ed. 3. 89. 1910. (as *fastwoodiae*).  
Sierran willow

*Salix californica* Bebb

Not in H&C; apparently a portion of the *S. commutata* plants from WA should be *C. eastwoodiae*. FNA7: "Salix eastwoodiae and *S. commutata* are distinct species with different ploidal levels, the former tetraploid and the latter diploid; where they come into contact in the Pacific Northwest, hybrids occur and vegetative plants are often difficult to separate. See comparison below. The most important difference is that ovaries of *S. eastwoodiae* usually are silky turning glabrescent in age and those of *S. commutata* are glabrous. Populations occur in Oregon with both glabrous and hairy ovaries without any other evident differences. There are also unusual specimens, which are often tentatively identified as *S. eastwoodiae*, that have glabrous ovaries and patches of hairs at the base and on the sutures. The possibility that they are hybrids between *S. eastwoodiae* and *S. boothii*, *S. commutata*, or *S. lemmonii* needs study. *Salix commutata* is distinguished from *S. eastwoodiae* by having leaf blades sometimes amphistomatous, 1.5-3.4 times as long as wide, teeth 0-19 per cm, adaxial surfaces glabrous or pilose to villous, floral bracts tawny to brown, staminate and pistillate adaxial nectaries oblong to square, and ovaries glabrous; *S. eastwoodiae* has leaf blades hypostomatous, 1.8-5 times as long as wide, teeth 0-10 per cm, adaxial surfaces tomentose or long-silky, floral bracts brown to black, staminate and pistillate adaxial nectaries narrowly oblong to oblong, and ovaries silky to glabrescent. Hybrids: *Salix eastwoodiae* forms natural hybrids with *S. arizonica*, *S. boothii*, and *S. commutata*. *Salix eastwoodiae* × *S. lasiandra* was found in Sierra County, California, growing with both parents in a wetland along a disturbed roadside. It had leaf indumentum and hair color of *S. eastwoodiae* and leaf shape and margins of *S. lasiandra*. Catkins of this intersubgeneric hybrid were teratological and presumably infertile."

***Salix exigua* Nutt. [FNA7, HC, HC2]**

N. Amer. Sylv. 1: 75. 1842.  
coyote willow, narrow-leaf willow  
(see also *Salix melanopsis*)

**var. *columbiana* Dorn [HC2]**

Brittonia 50: 204. 1998  
Columbia River willow

*Salix columbiana* (Dorn) Argus [FNA7]  
*Salix exigua* Nutt. var. *columbiana* Dorn [HC2]  
*Salix fluviatilis* Nutt. [HC], rejected name

FNA7: "Salix fluviatilis Nuttall, long used for a Columbia River endemic (*S. columbiana*), is a rejected name. *Salix columbiana* forms natural hybrids with *S. exigua* var. *exigua* and *S. sessilifolia*. Both hybrids are reported from Oregon and Washington (R. D. Dorn 1998)."

**var. *exigua* [FNA7, HC, HC2]**

N. Amer. Sylv. 1: 75.

coyote willow, narrow-leaf willow

*Salix argophylla* Nutt.

*Salix exigua* Nutt. ssp. *exigua* [HC]

*Salix exigua* Nutt. var. *luteosericea* (Rydb.) C.K. Schneid.

*Salix exigua* Nutt. var. *nevadensis* (S. Watson) C.K. Schneid.

*Salix exigua* Nutt. var. *stenophylla* (Rydb.) C.K. Schneid. [HC]

*Salix exigua* Nutt. var. *virens* Rowlee

*Salix fluviatilis* Nutt. var. *argophylla* (Nutt.) Sarg.

*Salix interior* Rowlee var. *luteosericea* (Rydb.) C.K. Schneid.

*Salix longifolia* Muhl. var. *argophylla* (Nutt.) Andersson

*Salix longifolia* Lam. var. *exigua* (Nutt.) Bebb

*Salix longifolia* Muhl. var. *opaca* Andersson

*Salix luteosericea* Rydb.

*Salix malacophylla* Nutt. ex C.R. Ball

*Salix nevadensis* S. Watson

*Salix stenophylla* Rydb.

FNA7: "Variety *exigua* forms natural hybrids with var. *hindsiana*, *Salix columbiana*, *S. interior*, and *S. melanopsis*. Variety *exigua* × var. *hindsiana* was reported by R. D. Dorn (1998). Inasmuch as the two varieties are subtly distinct, hybrids are difficult to recognize. Variety *exigua* × *Salix interior* probably occurs throughout their area of overlap; it is known to me from Alberta and Nebraska, where there are plants with leaves indistinctly toothed and more silky than in *S. interior*. R. D. Dorn (1998) reported it from Alberta, British Columbia, Colorado, Montana, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming. Variety *exigua* × *Salix melanopsis* is intermediate, with juvenile leaves densely hairy proximally, truncate floral bracts, and prominent stipules (R. D. Dorn 1998)."

***Salix farriae* C.R. Ball [FNA7, HC, HC2]**

Contr. U.S. Natl. Herb. 22: 321. 1921. (as *farrae*).

Farr's willow

*Salix farriae* C.R. Ball var. *microserrulata* C.R. Ball

*Salix hastata* L. var. *farriae* (C.R. Ball) Hultén

Not reported for WA by either H&C or FNA. However, one specimen from Okanogan County annotated as *S. farriae* by George Argus in 2005. FNA7: "*Salix farriae* is a cordilleran species ranging from Wyoming to central British Columbia with disjunct occurrences in northwestern British Columbia, western Northwest Territories, and southern Yukon. It is related to *S. hastata*, an amphiberian species ranging from Scandinavia to southwestern Yukon and northwestern Northwest Territories. There may be reasons for treating these slightly different plants as *S. hastata* var. *farriae*, but R. D. Dorn (1975) maintained them as a species based on flavonoid differences. In a phenetic study (G. W. Argus 2007), the two taxa had dissimilarity values at the same level as other closely related species. They are treated here as species, primarily because their ranges are disjunct. They can be separated as follows: *Salix farriae* is distinguished from *S. hastata* by having largest medial blades narrowly elliptic to elliptic, pistillate nectaries oblong or ovate, stipules on early leaves absent or rudimentary (sometimes foliaceous), branches strongly to weakly glaucous or not, floral bract apices rounded, and plants of the cordillera in Alberta and British Columbia, in Idaho, Montana, Oregon, and Wyoming; *S. hastata* has largest medial blades narrowly elliptic to broadly elliptic or broadly obovate, pistillate nectaries square, stipules on early leaves foliaceous (sometimes rudimentary), branches not glaucous, floral bract apices acute or rounded, and plants of Alaska, Northwest Territories, and Yukon. *Salix farriae* and *S. barclayi* are sympatric in western Canada and the Pacific Northwest, where they are difficult to separate. *Salix farriae* can often be recognized by its largest medial leaves with at least some minute, ferruginous hairs on the adaxial midrib or blade surfaces; ferruginous hairs do not occur in *S. barclayi*. Its leaf margins also tend to be more nearly entire, but relatively short teeth are not infrequent. Such plants are sometimes interpreted as intergrades between *S. farriae* and *S. barclayi* (R. D. Dorn 1975). The variable leaf tothing also occurs in *S. hastata* and may not be a reliable indicator of intergradation. *Salix farriae* also differs from *S. barclayi* in usually having shorter anthers, 0.3-0.6 mm versus 0.6-1 mm in *S. barclayi*. See 61. *S. barclayi*."

***Salix fragilis* L. [FNA7, HC2]**

Sp. Pl. 2: 1017.

crack willow

Not in H&C. FNA7: "Salix xfragilis Linnaeus: The hybrid white willow, *S. alba* Linnaeus x *S. euxina* I. Belyaeva, a European introduction, is the most commonly cultivated and naturalized tree-willow in the flora area. It is characterized by: trees, 3-20 m, stems erect or drooping; branches highly brittle at base; petioles with spherical or foliaceous glands distally, pilose or villous adaxially; largest medial leaf blade amphistomatous, very narrowly elliptic or narrowly elliptic, margins uniformly serrate or serrulate, abaxial surface glaucous, both surfaces sparsely long-silky to glabrescent, adaxial surface slightly glossy or dull; juvenile leaves at first densely long-silky soon glabrous; pistillate bract deciduous after flowering; stamens 2; anthers yellow; pistillate adaxial nectary shorter than or equal to stipe; stipe 0.3-0.5 mm; ovary pyriform, glabrous; ovules 6-12 per ovary; styles 0.4-1 mm; capsules 4.5-6 mm; 2n = 57, 76. Flowering is in late May-early June. Individual trees can persist for years by trunk suckering and spread vegetatively by shoot fragmentation along stream margins, shingle and sand beaches, sedge meadows, hardwood forests, and sand pits. It occurs from 0 to 2500 m."

**Salix geyeriana** Andersson [FNA7, HC, HC2]

Öfvers. Kongl. Vetensk.-Akad. Förh. 15: 122. 1858.

Geyer's willow

*Salix geyeriana* Andersson ssp. *argentea* (Bebb) A.E. Murray

*Salix geyeriana* Andersson var. *argentea* (Bebb) C.K. Schneid.

*Salix geyeriana* Andersson var. *geyeriana* [HC]

*Salix geyeriana* Andersson var. *meleiana* J.K. Henry [HC], orthographic variant

*Salix geyeriana* Andersson var. *meleina* J.K. Henry

*Salix meleina* (J.K. Henry) G.N. Jones

FNA7: "Salix geyeriana is characterized by its dark gray appearance, slender, dark branches, narrow leaves long-silky on both surfaces, general absence of stipules, and small, subglobose catkins. Plants in the Pacific Northwest with foliaceous stipules may be hybrids or introgressants, but the other parent is unknown. Hybrids: Salix geyeriana forms natural hybrids with *S. bebbiana*, *S. irrorata*, *S. lemmonii*, *S. ligulifolia*, and *S. pedicellaris*. Alleged hybrids with *S. sitchensis*, based on plants from British Columbia with broader, more hairy leaves, and catkins longer than in *S. geyeriana*, but with the short stipes of *S. sitchensis* (J. K. Henry 1915), are unconvincing. Salix geyeriana x *S. lemmonii* is uncommon but in mixed stands of the parental species some plants resemble *S. geyeriana* in having relatively short, subspherical catkins, small anthers, and petioles sometimes with petiolar glands; and *S. lemmonii* in having leaf blades amphistomatous, margins serrulate, and foliaceous stipules on early leaves. Because the species have different chromosome numbers, hybrids may be infertile, but occasional seeds have been seen. This hybrid is known from California (Lassen and Sierra counties), Oregon (Jefferson and Lane counties), and near Victoria, British Columbia. Salix geyeriana x *S. pedicellaris* occurs in Washington. It has the white and ferruginous hairs on leaves and ovaries of *S. geyeriana*, and leaves glaucous adaxially with prominent 2 and 3 veins of *S. pedicellaris*."

**Salix glauca** L. [FNA7, HC, HC2]

Sp. Pl. 2: 1019. 1753.

gray willow

var. **villosa** Andersson [FNA7, HC2]

Proc. Amer. Acad. Arts. 4: 68. 1858.

glaucous willow, gray willow

*Salix glauca* L. ssp. *glabrescens* (Andersson) Hultén

*Salix glauca* L. var. *glabrescens* (Andersson) C.K. Schneid.

*Salix pseudolapponum* Seemen

*Salix villosa* D. Don ex Hook.

*Salix wolfii* Bebb var. *pseudolapponum* (Seemen) M.E. Jones

Both FNA7 and H&C indicate that this species, and by extension the infraspecific taxa recognized within it, does not occur in WA. Until specimens are collected indicating otherwise, this species is considered excluded from the WA flora.

**Salix hookeriana** Barratt ex Hook. [FNA7, HC, HC2]

Fl. Bor.-Amer. 2: 145, plate 180. 1838.

coastal willow

*Salix amplifolia* Coville

*Salix hookeriana* Barratt ex Hook. var. *laurifolia* J.K. Henry  
*Salix hookeriana* Barratt ex Hook. var. *tomentosa* J.K. Henry ex C.K. Schneid.  
*Salix piperi* Bebb [HC]

*S. piperi* Bebb is treated as separate species in H&C.GA recognizes the glabrous-capsuled form common in the Puget Sound region which is called *S. piperi*; however, he chooses to treat it as synonymous with *S. hookeriana*. FNA7: "*Salix hookeriana* is primarily a coastal species occurring from northern California northward to Oregon, Washington, and southern Vancouver Island, with disjunct populations on Queen Charlotte Islands, British Columbia, and northward to Yakutat Bay, Turnagain Arm, and Kodiak, Alaska. It was treated by G. W. Argus (1973) and R. D. Dorn (2000) in a broad sense because of an absence of strong distinguishing characters and intergradation in characters that could be used to divide it. It is highly variable and three very similar taxa have been named: *S. amplifolia*, *S. hookeriana* (including vars. *tomentosa* and *laurifolia*), and *S. piperi*. Although extremes of these taxa sometimes are recognizable, the intergradation displayed is so great that even attempts to recognize them as varieties are thwarted. The *amplifolia* variant in Alaska is characterized by having only white leaf hairs, hairy ovaries, no stipules, and catkins often borne on distinct flowering branchlets, but variation can occur within the same population, and typical *S. hookeriana* on Vancouver Island sometimes displays the same characteristics. The *piperi* variant, an inland population in western Oregon and Washington, is usually recognized by local botanists as different from coastal populations. It is characterized by leaves and branchlets soon becoming glabrate and stipules prominent. These characteristics, however, sometimes appear in northern California coastal populations, and some inland populations in Oregon include very hairy individuals that are indistinguishable from coastal variants of *S. hookeriana*. In general, very hairy populations of *S. hookeriana* are probably an adaptation to marine coastal environments, but some variation may be due to hybridization and introgression with *S. scouleriana*. Inland populations suggest the influence of *S. lasiolepis*. Two hexaploid chromosome numbers reported for *S. hookeriana* from Vancouver Island (R. L. Taylor and S. Taylor 1977) and Queen Charlotte Islands (R. L. Taylor and G. A. Mulligan 1968), British Columbia, indicate that hybridization has played a role in the evolution of this complex. It is possible that each variant of *S. hookeriana* has had a different, possibly even recurrent, polyploid origin. Further cytological and genetic study is indicated. The following comparisons may help to distinguish *Salix hookeriana*, *S. lasiolepis*, and *S. scouleriana*. Vegetative specimens of *Salix hookeriana* can be distinguished from *S. lasiolepis* by having floral buds ellipsoid, beaks distinctly long-tapered, densely long-hairy (villous), red-brown, blades usually pilose, villous, or woolly on abaxial surfaces, usually 18-63 mm wide, and 1.5-4.2 times as long as wide; *S. lasiolepis* has floral buds ovoid, beaks inconspicuous and blunt, sparsely to moderately densely short-hairy (velvety), yellowish to red-brown, blades usually tomentose on abaxial surfaces, usually 6-32 mm wide, and 3.2-9.6 times as long as wide. *Salix hookeriana* is distinguished from *S. scouleriana* by having branchlets with spreading hairs (woolly or tomentose to glabrate), petioles usually pilose to tomentose, blades typically narrowly elliptic but variable, stigmas 0.3-0.74, short in relation to styles (0.6-2.3 mm), and pistillate nectaries 0.5-1.4 mm, shorter or longer than stipes; *S. scouleriana* has branchlets usually with short, erect hairs (velutinous), sometimes spreading (villous or tomentose), petioles velvety or villous adaxially, blades typically oblanceolate but variable, stigmas 0.4-1.04 mm, long in relation to styles (0.2-0.6 mm), and pistillate nectaries 0.2-0.8 mm, shorter than stipes. Hybrids: *Salix hookeriana* forms natural hybrids with *S. barclayi* and *S. scouleriana*. Variation in some *S. hookeriana* populations suggests hybridization with *S. lasiolepis* but no positive identifications have been made. R. D. Dorn (2000) doubted that hybridization in California between these species with different chromosome numbers was possible, but species with different chromosome numbers do hybridize [for example, *S. athabascensis* (4x) × *S. pedicellaris* (2x)]; synthetic hybridization studies are indicated. *Salix hookeriana* × *S. scouleriana*: Plants from southern British Columbia with leaves similar to *S. hookeriana* but with prominent stipules, catkins both erect and recurving, and relatively long stigmas were thought by J. K. Henry (1915) to be this hybrid."

***Salix lasiandra* Benth. [FNA7, HC, HC2]**

Pl. Hartw. 335. 1857.  
Pacific willow

var. ***caudata* (Nutt.) Sudw. [FNA7, HC, HC2]**

Bull. Torrey Bot. Club. 20: 43. 1893.  
gland willow, Pacific willow, shining willow

*Salix lasiandra* Benth. ssp. *caudata* (Nutt.) A.E. Murray  
*Salix lasiandra* Benth. var. *fendleriana* (Andersson) Bebb  
*Salix lucida* Muhl. ssp. *caudata* (Nutt.) A.E. Murray

var. *lasiandra* [FNA7, HC, HC2]

Pl. Hartw. 335.

Pacific willow

*Salix lasiandra* Benth. var. *abramsii* C.R. Ball

*Salix lasiandra* Benth. var. *lancifolia* (Andersson) Bebb

*Salix lasiandra* Benth. var. *lyallii* Sarg.

*Salix lasiandra* Benth. var. *macrophylla* (Andersson) Little

*Salix lasiandra* Benth. var. *recomponens* Raup

*Salix lucida* Muhl. ssp. *lasiandra* (Benth.) A.E. Murray

*Salix lasiolepis* Benth. [FNA7, HC, HC2]

Pl. Hartw. 335. 1857.

arroyo willow

*Salix lasiolepis* Benth. var. *bracelinae* C.R. Ball

*Salix lasiolepis* Benth. var. *falax* Bebb

*Salix lasiolepis* Benth. var. *lasiolepis*

*Salix lasiolepis* Benth. var. *sandbergii* (Rydb.) C.R. Ball

*Salix lutea* Nutt. var. *nivaria* Jeps.

FNA7: "Salix lasiolepis is polymorphic. Variety bigelovii has been recognized in coastal California and Oregon (G. W. Argus 1993). It differs mainly in density of leaf indumentum and in having leaves tending to be slightly broader; it may be a coastal ecotype and is not formally recognized here."

*Salix lemmonii* Bebb [FNA7, HC, HC2]

Willows Calif. 88. 1879. (as lemmoni).

Lemmon's willow

*Salix austinae* Bebb

*Salix lemmonii* Bebb var. *austinae* (Bebb) C.K. Schneid.

*Salix lemmonii* Bebb var. *macrostachya* Bebb

*Salix lemmonii* Bebb var. *melanopsis* Bebb

*Salix lemmonii* Bebb var. *sphaerostachya* Bebb

Neither FNA7 nor H&C indicate that this species occurs in WA. It is considered excluded from the WA flora until specimens are located indicating otherwise.

*Salix maccalliana* Rowlee [FNA7, HC2]

Bull. Torrey Bot. Club. 34: 158. 1907.

Maccalla's willow

FNA7: "The decaploid to dodecaploid chromosome number for *Salix maccalliana*, highest in the genus, suggests a complex origin. Relationships with subg. *Chamaetia* and subg. *Salix* were suggested by Rowlee and by H. M. Raup (1959). Staminate flowers with abaxial nectaries, tawny and persistent bracts, and villous ovaries suggest a link with *S. glauca*; leaves with coarse, ferruginous hairs and serrate margins suggest *S. lucida* (Rowlee). Although *S. maccalliana* is phenetically closer to sect. *Salicaster* than to (subg. *Chamaetia*) sect. *Glaucae* (G. W. Argus 1997), it is probable that because it incorporates genomes from more than one subgenus, its subgeneric placement is arbitrary."

*Salix matsudana* Koidz. [HC2]

corkscrew willow

*Salix melanopsis* Nutt. [FNA7, HC2]

N. Amer. Sylv. 1: 78, plate 21. 1842.

dusky willow

*Salix bolanderiana* Rowlee

*Salix exigua* Nutt. ssp. *melanopsis* (Nutt.) Cronquist [HC]

*Salix exigua* Nutt. var. *gracilipes* (C.R. Ball) Cronquist

*Salix exigua* Nutt. var. *tenerrima* (L.F. Hend.) C.K. Schneid.

*Salix parksiana* C.R. Ball

*Salix sessilifolia* Nutt. var. *vancouverensis* Brayshaw

*Salix tenerrima* (L.F. Hend.) A. Heller

FNA7: "Salix melanopsis forms natural hybrids with *S. exigua* var. *exigua*, *S. sessilifolia*, and *S. sitchensis*

(R. D. Dorn 1998)."

***Salix monochroma* C.R. Ball [FNA7, HC2]**

Bot. Gaz. 71: 431, fig. 1. 1921.

one-color willow

*Salix eriocephala* Michx. var. *monochroma* (C.R. Ball) Dorn

This taxa listed as a synonym for *Salix rigida* Muhl. var. *mackenzieana* in H&C.

***Salix nivalis* Hook. [FNA7, HC, HC2]**

Fl. Bor.-Amer. 2: 152. 1838.

dwarf snow willow

*Salix nivalis* Hook. var. *nivalis* [HC]

*Salix nivalis* Hook. var. *saximontana* (Rydb.) C.K. Schneid. [HC]

*Salix reticulata* L. ssp. *nivalis* (Hook.) Á. Löve, D. Löve & B.M. Kapoor

*Salix reticulata* L. var. *nana* Andersson

*Salix reticulata* L. var. *nivalis* (Hook.) Andersson

*Salix reticulata* L. var. *saximontana* (Rydb.) Kelso

FNA7: "Because geographic overlap is small and evidence of intergradation is tenuous, *Salix nivalis* is best treated as a species separate from *S. reticulata*; *S. nivalis* was previously treated as a subspecies of *S. reticulata* (G. W. Argus 1986b, 1991)."

***Salix pedicellaris* Pursh [FNA7, HC, HC2]**

Fl. Amer. Sept. 2: 611. 1813.

bog willow

*Salix myrtilloides* L. var. *hypoglauca* (Fernald) C.R. Ball

*Salix myrtilloides* L. var. *pedicellaris* (Pursh) Andersson

*Salix pedicellaris* Pursh var. *hypoglauca* Fernald

*Salix pedicellaris* Pursh var. *tenuescens* Fernald

FNA7: "*Salix pedicellaris* is very distinct with decumbent habit, leathery, glabrous leaves that are glaucous on both surfaces, loosely flowered catkins, ovaries reddish, glabrous and often glaucous, and stipes 2.1-3.2 mm. In the flora area, it hybridizes with six other species (see below). This compares with the closely related European *S. myrtilloides* Linnaeus, which is reported (B. Jonsell and T. Karlsson 2000+, vol. 1) to hybridize with seven species. The distinctive appearance may make hybrids easily recognizable but it is complex cytologically."

***Salix petrophila* Rydb. [FNA7, HC2]**

Bull. New York Bot. Gard. 1: 268. 1899.

alpine willow

*Salix arctica* Pall. ssp. *petraea* (Andersson) Á. Löve, D. Löve & B.M. Kapoor

*Salix arctica* Pall. var. *caespitosa* (P.B. Kenn.) Kelso

*Salix arctica* Pall. var. *graminifolia* (E.H. Kelso) Kelso

*Salix arctica* Pall. var. *petraea* Andersson [HC]

*Salix arctica* Pall. var. *petrophila* (Rydb.) Kelso

*Salix brownei* (Andersson) Bebb var. *petraea* (Andersson) Bebb

*Salix caespitosa* P.B. Kenn.

*Salix petrophila* Rydb. var. *caespitosa* (Kenn.) C.K. Schneid.

FNA7: "*Salix petrophila* is often included in *S. arctica* (G. W. Argus 1993), but southern cordilleran populations, extending as far north as southern British Columbia and Alberta, seem to be a distinct taxon (Argus 1997). The exact northern limit of this species still needs to be established, but in Alberta it does not seem to extend north of Waterton Lakes National Park, except for a population on springy slopes above Agness Lake, Banff National Park. Suitable alpine habitats between Waterton Lakes and Banff national parks, e.g., Mt. Armstrong, Tornado Mountain, and Crowsnest Pass, should be explored for *S. arctica* and *S. petrophila*."

***Salix planifolia* Pursh [FNA7, HC2]**

Fl. Amer. Sept. 2: 611. 1813.

plane-leaf willow, tea-leaved willow

*Salix phyllicifolia* L. [HC]

*Salix planifolia* Pursh var. *nelsonii* (C.R. Ball) C.R. Ball ex E.C. Sm.

FNA7: "Salix planifolia forms natural hybrids with *S. alaxensis* var. *alaxensis*, *S. argyrocarpa*, *S. brachycarpa* var. *brachycarpa*, *S. candida*, *S. drummondiana*, *S. humilis*, *S. pellita*, *S. pulchra*, and *S. scouleriana*. Hybrids with *S. glauca* var. *cordifolia* have been reported (C. K. Schneider 1921) but no convincing specimens have been seen."

var. ***planifolia*** [HC2]

diamondleaf willow

*Salix phyllicifolia* L. ssp. *planifolia* (Pursh) Hiitonen

*Salix phyllicifolia* L. var. *pennata* (C.R. Ball) Cronquist [HC]

*Salix phyllicifolia* L. var. *planifolia* [HC]

*Salix planifolia* Pursh var. *pennata* (C.R. Ball) C.R. Ball ex Dutilly, Lepage & Duman

***Salix prolixa*** Andersson [FNA7, HC2]

Monogr. Salicum. 94, plate 5, fig. 52. 1867.

Mackenzie's willow

*Salix cordata* Muhl. var. *mackenzieana* Hook.

*Salix eriocephala* Michx. ssp. *mackenzieana* (Hook.) Dorn

*Salix eriocephala* Michx. var. *mackenzieana* (Hook.) Dorn

*Salix mackenzieana* (Hook.) Barratt ex Andersson

*Salix mackenzieana* (Hook.) Barratt ex Andersson var. *macrogamma* C.R. Ball

*Salix rigida* Muhl. ssp. *mackenzieana* (Hook.) A.E. Murray

*Salix rigida* Muhl. var. *mackenzieana* (Hook.) Cronquist [HC]

*Salix rigida* Muhl. var. *macrogamma* (C.R. Ball) Cronquist [HC]

***Salix pseudomonticola*** C.R. Ball [FNA7, HC2]

Contr. U.S. Natl. Herb. 22: 321. 1921.

false mountain willow

*Salix barclayi* Andersson var. *pseudomonticola* (C.R. Ball) Kelso

*Salix monticola* Bebb [FNA7, HC], misapplied

FNA7: "Salix pseudomonticola is characterized by precocious flowering; catkins sessile; juvenile leaf blades, petioles, and proximal midribs reddish; stipules prominent; and leaves and branchlets sparsely hairy. Branches older than two years have a distinctive pattern, which consists of a series of longitudinal splits in epidermis produced as the branch expands. The edge of epidermis around the split, where it has separated from the branch, is yellow and contrasts with the red-brown branch to which the epidermis still adheres. Vegetative specimens of Salix pseudomonticola with yellow-brown branches can be confused with *S. famelica*. They may be separated by their juvenile leaf margins prominently and closely gland-dotted; stipules usually prominent, sometimes early deciduous; leaves broader (1.4-3 times as long as wide versus 2.6-7 in *S. famelica*); and petioles slender and often longer in relation to blade length. The possibility of hybridization needs study. Vegetative specimens of Salix pseudomonticola can be distinguished from *S. pyrifolia* by juvenile leaves reddish and almost always with some ferruginous hairs, versus yellowish-green and glabrous or with white hairs, and mature leaves usually dull adaxially versus glossy."

***Salix purpurea*** L. [FNA7, HC2]

Sp. Pl. 2: 1017. 1753.

purple osier, basket willow, purple willow

Collected twice in WA, most recently 1999.

***Salix xrubens*** Schrank [HC2, KZ99]

hybrid white willow

***Salix scouleriana*** Barratt ex Hook. [FNA7, HC, HC2]

Fl. Bor.-Amer. 2: 145. 1838.

Scouler's willow

*Salix scouleriana* Barratt ex Hook. var. *brachystachys* (Benth.) M.E. Jones

*Salix scouleriana* Barratt ex Hook. var. *coetanea* C.R. Ball

*Salix scouleriana* Barratt ex Hook. var. *crassijulis* (Andersson) C.K. Schneid.

*Salix scouleriana* Barratt ex Hook. var. *flavescens* (Nutt.) J.K. Henry  
*Salix scouleriana* Barratt ex Hook. var. *poikila* C.K. Schneid.  
*Salix scouleriana* Barratt ex Hook. var. *thompsonii* C.R. Ball  
*Salix stagnalis* Nutt.

FNA7: "Western *Salix scouleriana* and eastern *S. humilis* are closely related and are sometimes difficult to separate. Although there is an apparent range disjunction between them in western Manitoba, it may be a collecting gap. In general, *S. scouleriana* differs from *S. humilis* in being a taller shrub, sometimes even tree-like, with broader leaves and longer catkins, floral bracts, stigmas, and styles, but these quantitative characteristics all overlap. The apparent difference in anther length (*S. scouleriana* 0.7-1.2 mm; *S. humilis* 0.4-0.6 mm) may be correlated with a difference in chromosome number. *Salix scouleriana* is tetraploid (Y. Suda and G. W. Argus 1968); *S. humilis* has been reported to be both diploid (Suda and Argus; L. Zsuffa and Y. Raj, unpubl.) and tetraploid (R. D. Dorn 1976). The latter count was from the same population as the one by Suda and Argus. Further chromosome counts are indicated. *Salix scouleriana* forms natural hybrids with *S. hookeriana*, *S. planifolia*, and *S. pulchra*."

***Salix xsepulcralis* Simonk. [HC2]**

weeping willow

*Salix babylonica* L. [FNA7, HC, HC2], misapplied  
*Salix xpendulina* Wender. [FNA7, HC2], misapplied

FNA7: "*Salix xpendulina* Wenderoth: Weeping willow, *S. babylonica* x *S. euxina*, is introduced from Europe and grown throughout the world."

***Salix sessilifolia* Nutt. [FNA7, HC, HC2]**

N. Amer. Sylv. 1: 68. 1842.

sessile-leaf willow

*Salix exigua* Nutt. var. *sessilifolia* (Nutt.) Dorn  
*Salix fluviatilis* Nutt. var. *sessilifolia* (Nutt.) Scoggan  
*Salix longifolia* Muhl. var. *sessilifolia* (Nutt.) M.E. Jones  
*Salix macrostachya* Nutt.  
*Salix macrostachya* Nutt. var. *cusickii* Rowlee  
*Salix sessilifolia* Nutt. var. *villosa* Andersson

FNA7: "*Salix sessilifolia* forms natural hybrids with *S. columbiana* and *S. melanopsis*."

***Salix sitchensis* Sanson ex Bong. [FNA7, HC, HC2]**

Mém. Acad. Imp. Sci. St.-Petersbourg, Sér. 6, Sci. Math. 2: 162. 1832.

Sitka willow

*Salix coulteri* Andersson  
*Salix cuneata* Nutt.  
*Salix sitchensis* Sanson ex Bong. var. *congesta* Andersson  
*Salix sitchensis* Sanson ex Bong. var. *denudata* (Andersson) Andersson  
*Salix sitchensis* Sanson ex Bong. var. *parviflora* (Jeps.) Jeps.

FNA7: "Ovary hairiness in some *Salix sitchensis* populations varies from uniformly hairy to glabrescent, with intermediates with patchy or streaky hairiness. All three variations can occur together and do not seem to indicate hybridization. Both *Salix sitchensis* and *S. scouleriana* have similar variants with leaves having very densely curly hairs on abaxial surfaces [*S. sitchensis* forma *coulteri* (Andersson) Jepson and *S. scouleriana* forma *poikila* (C. K. Schneider) C. K. Schneider]. Plants resembling *S. drummondiana* but with similar indumentum probably are hybrids with *S. alaxensis* (see 84. *S. drummondiana*). The *coulteri* taxon resembles *S. delnortensis* in having stipules with adaxial surfaces glabrous and very sparsely glandular toward the base, densely hairy abaxially, and with gland-dotted margins; its branchlets have wavy to crinkly hairs. The possible hybrid origin of *S. delnortensis* needs study (R. D. Dorn 2000). *Salix sitchensis* forms natural hybrids with *S. alaxensis* var. *longistylis* and *S. melanopsis*. Hybridization with *S. geyeriana* reported by J. K. Henry (1915) is not based on convincing specimens."

var. ***sitchensis*** [HC2]

***Salix tweedyi* (Bebb ex Rose) C.R. Ball [FNA7, HC, HC2]**

Bot. Gaz. 40: 377. 1905.

Tweedy's willow

*Salix barrattiana* Hook. var. *tweedyi* Bebb ex Rose  
*Salix rotundifolia* Nutt., homonym (illegitimate)

***Salix vestita*** Pursh [FNA7, HC, HC2]

Fl. Amer. Sept. 2: 610. 1813.  
rock willow

*Salix vestita* Pursh ssp. *leiolepis* (Fernald) Argus  
*Salix vestita* Pursh var. *erecta* Andersson [HC]  
*Salix vestita* Pursh var. *humilior* Andersson

FNA7: "Salix vestita is an ancient amphiberingian species. Its distribution includes a series of isolated, disjunct populations in Central Siberia, the northern Rocky Mountains, the west coast of Hudson Bay, and the northeastern arctic and subarctic. Occurrence in Nunavut is on Akpatok Island in Ungava Bay and on the Belcher Islands in Hudson Bay. It may be extirpated in Washington. The flowering and vegetative branchlets sometimes have relatively short internodes. In subsequent years, branches have the appearance of short shoots similar to those in Alnus. Short shoots do not appear on all branches or in all years. The formation of short shoots may be related to adverse growing conditions."

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## Santalaceae [HC, HC2, JPM2] Sandalwood Family

**Synonyms:**

Comandraceae [JPM2] (Bastard Toadflax Family)  
Viscaceae (Mistletoe Family)

Jepson Manual, 2nd Edition: "Segregated, along with other families, from otherwise paraphyletic Santalaceae"

**References:**

\* Nickrent et al. 2010 Taxon 59:538?558.

***Arceuthobium*** [HC, HC2]

dwarf mistletoe

***Arceuthobium abietinum*** Engelm. ex Munz [HC2, KZ99]

fir dwarf-mistletoe

*Arceuthobium campylopodum* Engelm. f. *abietinum* (Engelm.) Gill [HC]  
*Arceuthobium campylopodum* Engelmann ssp. *abietinum* (Engelmann) Nickrent [FNA]

***Arceuthobium americanum*** Nutt. ex Engelm. [HC, HC2]

lodgepole pine dwarf-mistletoe

***Arceuthobium campylopodum*** Engelm. [HC, HC2]

western dwarf-mistletoe  
(see also *Arceuthobium abietinum*, *Arceuthobium laricis*, *Arceuthobium tsugense*)

*Arceuthobium campylopodum* Engelm. f. *campylopodum* [HC]  
*Arceuthobium campylopodum* Engelmann ssp. *campylopodum* [FNA]

***Arceuthobium douglasii*** Engelm. [HC, HC2]

Douglas-fir dwarf-mistletoe

***Arceuthobium laricis*** (Piper) H. St. John [HC2, KZ99]

larch dwarf-mistletoe

*Arceuthobium campylopodum* Engelm. f. *laricis* (Piper) L.S. Gill [HC]  
*Arceuthobium campylopodum* Engelmann ssp. *laricis* (M. E. Jones) Nickrent [FNA]

***Arceuthobium tsugense*** (Rosend.) G.N. Jones [HC2]

hemlock dwarf mistletoe

*Arceuthobium campylopodum* Engelm. f. *tsugensis* (Rosend.) Gill [HC]  
*Arceuthobium campylopodum* Engelmann ssp. *tsugense* (Rosendahl) Nickrent [FNA]

ssp. *contortae* Wass & Mathiasen [HC2]

ssp. *tsugense* [HC2, KZ99]  
hemlock mistletoe

**Comandra** [HC, HC2]

bastard toadflax  
(see also *Geocaulon*)

**Comandra umbellata** (L.) Nutt. [HC, HC2]

ssp. *californica* (Eastw. ex Rydb.) Piehl [HC2, KZ99]  
bastard toad flax

*Comandra californica* Eastw. ex Rydb.

*Comandra umbellata* (L.) Nutt. var. *californica* (Eastw. ex Rydb.) C.L. Hitchc. [HC]

ssp. *pallida* (A. DC.) Piehl [HC2, KZ99]  
bastard toad flax

*Comandra pallida* A. DC.

*Comandra umbellata* (L.) Nutt. var. *angustifolia* (A. DC.) Torr.

*Comandra umbellata* (L.) Nutt. var. *pallida* (A. DC.) M.E. Jones [HC]

**Geocaulon** [HC2]

false toadflax

**Geocaulon lividum** (Richardson) Fernald [HC2, KZ99]

false toadflax

*Comandra livida* Richardson [HC]

*Comandra lividum* Richardson

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## Sapindaceae [HC2] Soapberry Family

**Synonyms:**

Aceraceae [HC] (Maple Family)

Hippocastanaceae (Horse Chestnut Family)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/>).

**References:**

\* Stevens, P.F. (2001 onwards). Angiosperm Phylogeny Website. Version 2 August 2001.

<http://www.mobot.org/MOBOT/research/APweb/>.

\* Thorne, R. F. 1992. Classification and Geography of the Flowering Plants. Bot. Rev. 58: 225-348.

**Acer** [HC, HC2]

maple

**Acer campestre** L. [HC2]

**Acer circinatum** Pursh [HC, HC2, ILBC]

Fl. Amer. Sept. 1: 267 [1813].

vine maple

**Acer glabrum** Torr. [HC, HC2]

var. **douglasii** (Hook.) Dippel [HC, HC2]

Douglas maple

*Acer douglasii* Hook.

*Acer glabrum* Torr. ssp. *douglasii* (Hook.) Wesm.

*Acer subserratum* Greene [VPPNW3]

***Acer macrophyllum*** Pursh [HC, HC2]

Fl. Amer. Sept. 1: 267 [1813].  
big-leaf maple

***Acer negundo*** L. [HC, HC2]

box elder

*Acer fraxinifolium* Nutt. [VPPNW3]

*Acer negundo* L. var. *negundo*

*Acer negundo* L. var. *violaceum* (G. Kirchn.) H. Jaeger

*Acer nuttallii* Lyon [VPPNW3]

*Negundo aceroides* (L.) Moench

*Negundo aceroides* (L.) Moench ssp. *violaceum* (G. Kirchn.) W.A. Weber

*Negundo negundo* (L.) Karst.

*Negundo nuttallii* Rydb. Bull. [VPPNW3]

*Rulac nuttallii* Nieuwl. [VPPNW3]

***Acer platanoides*** L. [HC2]

Norway maple

*Acer platanoides* L. var. *schwedleri* G. Nicholson

***Acer pseudoplatanus*** L. [HC2, VPBC]

sycamore maple

Naturalized in Cedar River Watershed and naturally reproducing in other parts of WA (Antieau, personal communication, 2001).

***Acer saccharinum*** L. [HC2]

silver maple

*Acer dasycarpum* Ehrh.

*Acer saccharinum* L. var. *laciniatum* Pax

*Acer saccharinum* L. var. *wieri* Rehder

*Argentacer saccharinum* (L.) Small

***Aesculus*** [HC2]

horse chestnut

***Aesculus hippocastanum*** L. [HC2, Stace 1997]

Sp. Pl. 1: 344.

horse-chestnut

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## Sarcobataceae [HC2, IMF2A] Greasewood Family

**Synonyms:** (none)

Molecular evidence indicates that *Sarcobatus* is more closely related to Nyctaginaceae and Phytolaccaceae than to Amaranthaceae (which includes Chenopodiaceae in our taxonomy).

**References:** (none)

***Sarcobatus*** [FNA4, HC, HC2]

Reise Nord-Amer. 1: 510. 1839.

greasewood

***Sarcobatus vermiculatus*** (Hook.) Torr. [FNA4, HC, HC2]

Not. Milit. Reconn. 149. 1848.

greasewood

*Batis vermiculata* Hook.

*Fremontia vermiculata* (Hook.) Torr.

*Sarcobatus maximilianii* Nees

FNA4: "Reports of *Sarcobatus vermiculatus* from British Columbia and Texas have not been verified by us. One of the most common of western North American shrubs in alkaline habitats, *S. vermiculatus* grows among other shrubs or in pure stands, often to great extent, especially in the Great Basin. It is frequently codominant with *Allenrolfea* in areas that support little else. Other, less alkali-tolerant associates may include species of *Artemisia* (even *A. tridentata*), *Atriplex*, *Chrysothamnus*, *Grayia*, *Krascheninnikovia*, *Larrea*, and *Suaeda*. *Sarcobatus vermiculatus* ranks among the important western browse plants, but it has a dark side. Range animals and wildlife feed on it; the plant's saline taste perhaps enhances its palatability. Under certain conditions, poisoning of animals, especially sheep, may result from the plant's content of sodium and potassium oxalates (10-22% of plant dry weight). Death may occur when sheep eat large amounts of *S. vermiculatus*---and little or nothing else---in a short time. A notable mass poisoning of sheep occurred in 1920 when 1700 ewes in transit were unloaded and allowed to browse in a pure stand of *S. vermiculatus*. The next morning 1000 were dead (J. M. Kingsbury 1964). *Sarcobatus vermiculatus* is allegedly a phreatophyte; its taproots are said to be able to penetrate as much as 57 feet below the surface. Large communities of greasewood coincide with areas where the water table is less than 15 feet below the surface, although the plant can survive with water table depth to 25 feet (H. N. Mozingo 1987)."

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## Sarraceniaceae [FNA8, HC, HC2] Pitcherplant Family

**Synonyms:** (none)

FNA8: "The North American pitcher plants are a fascinating group of carnivorous plants with leaves modified into tubular pitfall traps that attract, catch, and digest small invertebrate prey. The pitchers have no moving parts but contain downward-pointing hairs on the interior surfaces. The hoods keep out rainwater and prevent flying prey from escaping; only *Sarracenia purpurea* and *S. rosea* normally contain rainwater inside the pitchers. *Darlingtoniacalifornica* is found scattered in the Pacific Northwest (California and Oregon). *Sarracenia* occurs mainly in the southeastern United States, with one species (*S. purpurea*) occurring northward and westward across Canada to British Columbia, and naturalized in Switzerland, the British Isles, and Japan. *Heliamphora* Benth, a tropical genus with about 15 species, is endemic to the Guayana Highlands of northern Brazil, western Guyana, and southern Venezuela. All species are characteristic of moist-to-wet, open, sunny, low-nutrient, acidic habitats. The evolutionary origins and relationships of the Sarraceniaceae are obscure, and there is only one (highly questionable) fossil record (Li H. Q. 2005). Molecular data suggest Ericalean affinities (R. J. Bayer et al. 1996). Some authors have suggested that *Heliamphora* is primitive in the family (B. Maguire 1978) because its pitcher structure is less complex. All three genera have specializations, and their pitcher morphologies are likely affected by adaptations to their wet environments and carnivorous habits. Because we cannot reliably ascertain which taxa are primitive in this family, the genera and species are presented in alphabetic order."

**References:**

- \* Bayer, R. J. et al. 1996. Phylogenetic relationships in Sarraceniaceae based on rbcL and ITS sequences. Syst. Bot. 21: 121-134.

***Darlingtonia*** [FNA8, HC, HC2]

Smithsonian Contr. Knowl. 6(4): 4, plate 12. 1853.  
cobra-plant, California pitcher-plant

***Darlingtonia californica*** Torr. [FNA8, HC, HC2]

Smithsonian Contr. Knowl. 6(4): 5, plate 12. 1853.  
cobraplant

FNA8: "Within California, *Darlingtonia californica* is disjunct from Del Norte County in the northwest to Nevada County southeasterly in the Sierra Nevada, and introduced in Humboldt and Mendocino counties. In Oregon, it occurs in the coastal lowlands and inland mountains of Curry and Josephine counties northward to Tillamook County. It is introduced on Vancouver Island in British Columbia, and in southern Washington. It may form relatively large stoloniferous colonies on mountain slopes or meadows and in coastal lowlands, or in shallow streams and seepage bogs. The flowers are initiated in the fall and overwinter in the bud stage, protected by the bracts. The fruits mature in late summer to fall, with seed dispersal continuing throughout the winter. The long papillae on the seeds allow flotation. *Darlingtonia*

californica is stunning in the wild, eagerly sought for cultivation, and difficult to grow outside its cool native range. It was discovered in 1841 on the Wilkes Expedition by the assistant botanist, W. D. Brackenridge, growing in a marsh bordering a tributary on the Sacramento River south of Shasta Peak. It is currently threatened by road building, draining, logging, ranching, drought, and unscrupulous collectors. Darlingtonia and some eastern American species of carnivorous plants have been transplanted into sites in northern California and the Pacific Northwest."

**Sarracenia** [FNA8, HC, HC2]

Sp. Pl. 1: 510. 1753; Gen. Pl. ed. 5, 226. 1754.

pitcher-plant

*Sarracenia flava* L. [FNA8, HC2]

Sp. Pl. 1: 510. 1753.

yellow pitcher plant, yellow trumpet

FNA8: "Sarracenia flava ranges from the southeastern coastal plain of Virginia and isolated piedmont localities in North Carolina through the coastal plain of North Carolina, South Carolina, Georgia, and the western Florida panhandle mostly near and west of the Ochlockonee River and west just into southeastern Alabama, with isolated sites in northeastern Florida. It is naturalized in Skagit County, Washington. Sarracenia flava is a striking plant, often forming large stands, at least historically. It is much less common with the advent of drainage and changing land use. It has one main flush of pitchers in spring to early summer. It is quite variable over its range with regard to vein patterns and markings on the pitchers, and at least seven varieties have been formally named (see D. E. Schnell 2002)."

*Sarracenia leucophylla* Raf. [FNA8, HC2]

Fl. Ludov. 14. 1817.

white-topped pitcher plant

FNA8: "Sarracenia leucophylla occurs on the coastal plain of the Florida panhandle west of the Ochlockonee River, and across southern Alabama to southeastern Mississippi; it is rare in southwestern Georgia, introduced and established in southeastern Virginia, and a rare escape in Skagit County, Washington. Sarracenia leucophylla is a striking plant, noticeable from a distance, and capable of forming extensive, nearly solid stands in open, wet meadows and seepage slopes and pine flatwoods across the Gulf Coast region. The number of populations has been severely reduced by development and fire suppression. Its spring pitchers are not as robust or profuse as the late-summer pitchers, the latter especially attracting moths. This species responds well to winter fires, resulting in abundant growth later that spring. In some managed areas, the attractive tubes are judiciously harvested and sold, fresh or dried, as "cut flowers" in florist shops. Pure white pitchers (no colored veins) with red petals or totally anthocyanin-free individuals with yellow petals occur. Capsules of Sarracenia leucophylla dehisce acropetally rather than basipetally as in all other species in the family. G. W. Folkerts and D. R. Folkerts (1989) hypothesized that this adaptation allows seeds to be released with less likelihood of being caught and held by the persistent style discs."

*Sarracenia purpurea* L. [FNA8, HC2]

Sp. Pl. 1: 510. 1753.

*ssp. purpurea* [FNA8, HC2]

Sp. Pl. 1: 510.

northern pitcher plant, purple pitcher plant

*Sarracenia purpurea* L. *ssp. gibbosa* (Raf.) Wherry

*Sarracenia purpurea* L. *var. ripicola* B. Boivin

*Sarracenia purpurea* L. *var. stolonifera* Macfarl. & Steckbeck

*Sarracenia purpurea* L. *var. terrae-novae* LaPylaie

FNA8: "Subspecies purpurea is introduced in California and Washington, in Europe in the British Isles and Switzerland, and in Japan. It is widespread and variable, and its adaptability is evidenced by the kinds of wetland habitats in which it grows. It is widely grown for ornament and teaching purposes and is the subject of much research on microorganisms and invertebrates, especially Wyeomyia Theobald mosquito larvae that live in the pitcher fluid."

\* Ellison, A. M., L. B. Hannah, T. E. Miller, and N. J. Gotelli. 2004. Morphological variation in Sarracenia purpurea (Sarraceniaceae): Geographic, environmental, and taxonomic correlates. Amer. J. Bot. 91: 1930-1935.

\* Wherry, E. T. 1933. The geographic relations of Sarracenia purpurea. Bartonia 15: 1-6.

## Saxifragaceae [FNA8, HC, HC2] Saxifrage Family

**Synonyms:** (none)

FNA8: "Classification of Saxifragaceae has been varied and controversial (e.g., A. Cronquist 1981; H. G. A. Engler 1930; J. Hutchinson 1973; G. K. W. Schulze-Menz 1964b; A. L. Takhtajan 1997; R. F. Thorne 1992). Molecular phylogenetic data (D. R. Morgan and D. E. Soltis 1993; Soltis et al. 1993, 2001; Angiosperm Phylogeny Group 1998, 2003) reveal that genera of Saxifragaceae in the broad sense are allied with at least ten separate, often distantly related families of flowering plants. These data also suggest that Saxifragaceae in the narrow sense as treated here consists of about 38 genera worldwide, equivalent to subfamily Saxifragoideae, one of the 15 subfamilies recognized by Engler and one of the 17 recognized by Schulze-Menz of the broadly defined Saxifragaceae. Molecular phylogenetic data (Soltis et al. 2001) show that the narrowly defined Saxifragaceae fall into two major groups: Saxifraga, and the heucheroid clade encompassing all other genera. Molecular data further show that Saxifraga, as traditionally understood, is polyphyletic, comprising two distinct lineages (treated here as Saxifraga and Micranthes) and the monospecific North American Cascadia. The major split between Saxifraga and the heucheroid clade is supported not only by molecular data from six DNA regions but by differences in patterns of floral morphology. Saxifraga has a relatively uniform floral morphology (radially symmetric flowers, with bilateral symmetry restricted to one Asian group of species, which consistently have the same number of sepals, petals, stamens, and carpels). Almost all of the variation in the family in numbers of sepals, petals, stamens, and carpels occurs in the heucheroid clade. Radially symmetric flowers predominate there, but some bilateral flowers are found in *Bensoniella*, *Micranthes*, *Tolmiea*, and some species of *Heuchera*." NOTE: Past and contemporary research have indicated that *Mitella* is a polyphyletic group best treated as multiple genera. The treatment here reflects that view, which is also consistent with how these taxa were treated by Abrams in "Illustrated Flora of the Pacific States". FNA8: "*Mitella* is treated here in the broad sense; phylogenetic data indicate that it is polyphyletic (D. E. Soltis et al. 1990; Soltis and R. K. Kuzoff 1995). Historically, four or five genera have been recognized (including *Mitella*, *Ozomelis Rafinesque*, *Pectiantia Rafinesque*). Formal restructuring of generic boundaries is complicated by the presence of nearly a dozen Asian species (M. Wakabayashi 2001) and lack of a comprehensive understanding of the genus relative to the rest of Saxifragaceae. *Mitella nuda* and *M. diphylla*, both with ten stamens, form a clade that would comprise a narrowly defined *Mitella*. A second clade composed of *M. diversifolia*, *M. stauropetala*, *M. trifida*, and *Conimitella williamsii* would form a second, distinct genus. Molecular data suggest that *M. breweri*, *M. caulescens*, and *M. pentandra* also form a distinct clade and perhaps a third, distinct genus. The relationships of *M. ovalis* are less certain; some analyses suggest that it may be sister to the genus *Tolmiea* (Soltis and Kuzoff; Kuzoff and Soltis, unpubl.)." <div style="position: fixed; left: -4096px"><a href="http://www.dalamantransfers.co.uk">dalaman transfers</a></div>

**References:** (none)

### ***Bolandra*** [FNA8, HC, HC2]

Proc. Amer. Acad. Arts. 7: 341. 1868.  
*bolandra*

### ***Bolandra oregana*** S. Watson [FNA8, HC, HC2]

Proc. Amer. Acad. Arts. 14: 292. 1879.  
northern false coolwort

*Bolandra oregana* S. Watson var. *imnahaensis* (M. Peck) M. Peck

FNA8: "*Bolandra oregana* is found in northern Oregon and southern Washington in the vicinity of the Columbia River gorge and in the Snake River region of eastern Oregon and Idaho."

### ***Boykinia*** [FNA8, HC, HC2]

J. Acad. Nat. Sci. Philadelphia. 7: 113. 1834.  
*boykinia*

### ***Boykinia intermedia*** (Piper) G.N. Jones [FNA8, HC2]

Bot. Surv. Olympic Penins. 168. 1936.  
greater boykinia, Sierran brookfoam

*Boykinia major* A. Gray [FNA8, HC, HC2], misapplied  
*Boykinia major* A. Gray var. *intermedia* Piper [HC]

FNA8: "Specimens considered to represent *Boykinia intermedia* from northern Idaho (R. Bacigalupi 1952;

F. D. Johnson and R. Steele 1978) were regarded as *B. major* by R. J. Gornall and B. A. Bohm (1985); they require further study. *Boykinia intermedia* differs from that species in its stoloniferous habit, smaller stipules, a campanulate rather than saucer-shaped hypanthium, a shorter free-hypanthium, petals tapered rather than contracted abruptly to a claw and with plane rather than undulate margins, a more pyramidal inflorescence, and an absence of polymethylated flavonols."

***Boykinia occidentalis* Torr. & A. Gray [FNA8, HC2]**

Fl. N. Amer. 1: 577. 1840.

coastal brookfoam

*Boykinia cincinnata* (Rosend. & Rydb.) Fedde

*Boykinia elata* (Nutt.) Greene [HC]

*Boykinia vancouverensis* (Rydb.) Fedde

*Therofon cincinnatum* Rosend. & Rydb.

FNA8: "The nomenclature of *Boykinia occidentalis* has been reviewed by R. J. Gornall and B. A. Bohm (1985). It is a polymorphic species but is not as variable as the extensive synonymy might suggest. Taxa have been described on the basis of variation in inflorescence shape, pubescence, stem color, and sepal orientation. It has been shown that these characters are subject to phenotypic plasticity or developmental age and, as such, provide no grounds for dividing the species (Gornall and Bohm). It is sometimes grown in gardens."

***Cascadia* [FNA8, HC2]**

Amer. J. Bot. 14: 38, figs. 1, 2. 1927.

***Cascadia nuttallii* (Small) A.M. Johnson [FNA8, HC2]**

Corrig. 1927.

Nuttall's saxifrage

*Saxifraga nuttallii* Small [HC]

FNA8: "Johnson placed *Saxifraga nuttallii* in his monotypic genus *Cascadia* based on the unusual habit, free carpels, and spiny seeds. Molecular phylogenetic data (M. E. Mort and D. E. Soltis 1999; Soltis et al. 2001) placed *Cascadia* as sister to the southern South American (Tierra del Fuego) *Saxifragodes* D. M. Moore, both sister to *Micranthes*. Mort and Soltis considered the ovary of *Cascadia* to be superior because the two carpels are distinct to their bases; the hypanthium, fused to each carpel, gives the ovaries a semi-inferior appearance. Ovules in *Cascadia* are bitegmic, as in *Saxifraga*; those of *Micranthes* are usually unitegmic. *Cascadia nuttallii* is found from the coastal mountains to the western slopes of the Cascade Range, from extreme northwestern California to southwestern Washington. The accepted species name was validated in a correction slip attached to reprints of Johnson's article describing *Cascadia*."

\* Johnson, A. M. 1927. The status of *Saxifraga nuttallii*. Amer. J. Bot. 14: 38-43.

***Chrysosplenium* [FNA8, HC, HC2]**

Sp. Pl. 1: 398. 1753; Gen. Pl. ed. 5, 189. 1754.

golden-carpet, golden-saxifrage, water-carpet

***Chrysosplenium glechomifolium* Nutt. [FNA8, HC2]**

Fl. N. Amer. 1: 589. 1840.

Pacific golden-saxifrage, Pacific watercarpet

*Chrysosplenium glechomaefolium* Nutt. [HC], orthographic variant

*Chrysosplenium oppositifolium* L. var. *scouleri* Hook.

*Chrysosplenium scouleri* (Hook.) Rose

***Chrysosplenium tetrandrum* Th. Fr. [FNA8, HC, HC2]**

Bot. Not. 1858: 193. 1859.

northern golden-saxifrage

*Chrysosplenium alternifolium* L. ssp. *tetrandrum* (Th. Fr.) Hultén

*Chrysosplenium alternifolium* L. var. *tetrandrum* (Th. Fr.) N. Lund ex Malmgren

FNA8: "As treated here, *Chrysosplenium tetrandrum* is circumpolar. In North America, disjunct populations occur in subalpine and alpine habitats in the Bitterroot Range of Idaho and Montana, and in the Front Range of Colorado. Some specimens from northern Europe and the Russian Far East that have been

referred to *C. alternifolium* appear to be morphologically indistinguishable from *C. tetrandrum*."

***Elmera*** [FNA8, HC, HC2]

N. Amer. Fl. 22: 97. 1905.

elmera

***Elmera racemosa*** (S. Watson) Rydb. [FNA8, HC, HC2]

N. Amer. Fl. 22: 97. 1905.

Elmera

*Heuchera racemosa* S. Watson

FNA8: "*Elmera racemosa* is found at and above timberline in the Cascades of southwestern British Columbia, in the Okanogan and Cascade ranges, on the Olympic Peninsula, Mount Rainier, and Mount Adams in Washington, and in the Oregon Cascades south to northern Klamath County and adjacent Douglas County. It is occasionally cultivated." Hitchcock recognized two varieties based on the nature of the glandular pubescence in the inflorescence, petioles, and lower stems. Close examination of specimens assigned to these varieties shows the primary difference to be one of length and density of pubescence. Glandular pubescence in var. *racemosa* is longer and tends to often be broader at the base.

var. ***puberulenta*** C.L. Hitchc. [HC, HC2]

fuzzy elmera

var. ***racemosa*** [HC, HC2]

In N. L. Britton et al., N. Amer. Fl. 22: 97.

common elmera

***Hemieva*** [HC2]

***Hemieva ranunculifolia*** (Hook.) Raf. [HC2, JPM2]

Flora Telluriana 2: 70. [1837]

buttercup-leaf mock brookfoam

*Boykinia ranunculifolia* (Hook.) A. Gray

*Saxifraga ranunculifolia* Hook.

*Suksdorfia ranunculifolia* (Hook.) Engl. [FNA8, HC]

FNA8: "*Suksdorfia ranunculifolia* is found in the Cascade, Rocky, and Siskiyou mountains of the Pacific Northwest, near sea level in coastal British Columbia, and on Vancouver Island." "*Suksdorfia* has been split into three monospecific genera by different authors. The work of R. J. Gornall and B. A. Bohm (1980, 1984, 1985) emphasized the similarities of the species in supporting a single genus concept. More recent, molecular data (D. E. Soltis et al. 1993; L. A. Johnson and Soltis 1994) suggest that *S. violacea* is more closely related to species of *Bolandra*, that *S. ranunculifolia* is more closely related to species of *Boykinia*, and that the two North American species indeed should be placed into monospecific genera. The South American species is *S. alchemilloides* (Grisebach) Engler of northern Argentina and Bolivia."

***Heuchera*** [FNA8, HC, HC2]

Sp. Pl. 1: 226. 1753; Gen. Pl. ed. 5, 106. 1754.

alumroot, heuchera

***Heuchera chlorantha*** Piper [FNA8, HC, HC2]

Contr. U.S. Natl. Herb. 16: 206. 1913.

green-flowered alumroot, meadow alumroot, tall alumroot

FNA8: "*Heuchera chlorantha* occurs in the Pacific Northwest north to the Queen Charlotte Islands of British Columbia. Inland, it occurs from the eastern base of the Cascade Mountains westward in Oregon and Washington. A putative hybrid between *H. chlorantha* and *H. micrantha* var. *diversifolia*, named *H. xeasthamii* Calder & Savile, has been reported in the Hazelton region of British Columbia. The leaf form and capsule size are intermediate between those of the two parents, both of which occur in the region."

***Heuchera cylindrica*** Douglas [FNA8, HC, HC2]

Fl. Bor.-Amer. 1: 236. 1832.

poker alum-root, lava alumroot, roundleaf alumroot

*Heuchera cylindrica* Douglas var. *alpina* S. Watson [HC]

*Heuchera cylindrica* Douglas var. *cylindrica* [HC]  
*Heuchera cylindrica* Douglas var. *glabella* (Torr. & A. Gray) Wheelock [HC]  
*Heuchera cylindrica* Douglas var. *orbicularis* (Rosend., Butters & Lakela) Calder & Savile [KZ99]  
*Heuchera cylindrica* Douglas var. *ovalifolia* (Torr. & A. Gray) Wheelock  
*Heuchera cylindrica* Douglas var. *septentrionalis* Rosend., Butters & Lakela [KZ99]  
*Heuchera cylindrica* Douglas var. *suksdorfii* (Rydb.) Dorn  
*Heuchera glabella* Torr. & A. Gray  
*Heuchera ovalifolia* Torr. & A. Gray  
*Heuchera ovalifolia* Torr. & A. Gray var. *orbicularis* Rosend., Butters & Lakela  
*Heuchera ovalifolia* Torr. & A. Gray var. *thompsonii* Rosend., Butters & Lakela  
*Heuchera saxicola* E.E. Nelson  
*Heuchera suksdorfii* Rydb.

FNA8: "Some features of *Heuchera cylindrica* show great variation, including the type and amount of indument on the leaves, petioles, and stems, lobation and shape of leaf base, difference in flower size, complicated by rapid growth of the hypanthium during and after anthesis, change in filament-to-anther ratio before and after anthesis, relative degree of development of bracts of flowering stems, degree of disc development, and relative length and degree of divergence of the beaklike styles of the fruit. We agree with P. K. Holmgren and N. H. Holmgren (1997) that there is no value in recognizing infraspecific taxa in *H. cylindrica* until a more thorough phylogenetic study can show some correlation between morphological variation and infraspecific categories. The Blackfoot Indians used decoctions of roots of *Heuchera cylindrica* for diarrhea and as an astringent. The Flathead infused or chewed roots for diarrhea and stomach cramps. The Kutenai used decoctions of roots for "aching bones" and tuberculosis. The Okanagan-Colville used decoctions of roots as a tonic for the "changing of the blood" and, especially for children and babies, to rinse out the mouth for sore throats. They applied a poultice of mashed, peeled roots to sores and cuts, and mixed roots with puffball spores as a salve for diaper rash. The Shuswap Indians took decoctions of leaves and roots for diarrhea. The Thompson Indians applied chewed leaves and roots on sores or wounds and drank an infusion of roots for liver trouble (D. E. Moerman 1998)."

***Heuchera glabra* Willd. ex Roem. & Schult. [FNA8, HC, HC2]**

Syst. Veg. 6: 216. 1820.  
 alpine alumroot, smooth alumroot

FNA8: "*Heuchera glabra* occurs from near sea level in the Aleutian Islands and the Panhandle in Alaska to above the tree line on Mount Hood, Oregon, in the Cascades, Olympic Mountains, and Wenatchee Mountains in Washington, and in the Coast Mountains to the Selkirks Range in British Columbia. It intergrades with *H. micrantha* where their ranges overlap in British Columbia, and where the two species probably hybridize. It tends to occur at higher elevations than does *H. micrantha*. The Tlingit used this species to treat inflammation of the testicles from syphilis (D. E. Moerman 1998)."

***Heuchera grossulariifolia* Rydb. [FNA8, HC, HC2]**

Mem. New York Bot. Gard. 1: 196. 1900.  
 gooseberry-leaved alumroot

FNA8: "*Heuchera grossulariifolia* includes both diploids and autotetraploids. K. A. Segraves and J. N. Thompson (1999) analyzed floral traits and flowering phenology in diploid and autotetraploid plants. Overall, plant size was greater in tetraploids than in diploids; flowers of tetraploids were larger (average hypanthium 6.5 mm) than those of diploids (average hypanthium 5.5 mm) and had a slightly different shape and phenology, but the diploids and tetraploids were not assigned taxonomic status in their study. Diploids and tetraploids were mixed in some populations, where characters intergraded (D. E. Soltis, pers. comm.). The autotetraploids have had two to seven independent origins from diploid progenitors, and do not represent a monophyletic lineage (Segraves and Thompson; Segraves et al. 1999)."

var. ***grossulariifolia*** [HC, HC2]  
 gooseberry-leaved alumroot

var. ***tenuifolia*** (Wheelock) C.L. Hitchc. [HC, HC2]

*Heuchera tenuifolia* (Wheelock) Rydb.

***Heuchera micrantha* Douglas ex Lindl. [FNA8, HC, HC2]**

Edwards's Bot. Reg. 15: plate 1302. 1830.  
 smallflower alumroot

var. ***diversifolia*** (Rydb.) Rosend., Butters & Lakela [FNA8, HC, HC2]

Minnesota Stud. Pl. Sci. 2: 42. 1936.

small-flowered alumroot

*Heuchera diversifolia* Rydb.

*Heuchera micrantha* Douglas ex Lindl. var. *pacifica* Rosend., Butters & Lakela

FNA8: "Variety *diversifolia* occurs in the Coast Ranges, Cascade Range, and Klamath and Santa Lucia mountains."

var. ***hartwegii*** (S. Watson ex Wheelock) Rosend. [FNA8, HC2]

Bot. Jahrb. Syst. 37(2, Beibl. 83): 77. 1905.

*Heuchera hartwegii* (S. Watson ex Wheelock) Rydb.

*Heuchera pilosissima* Fisch. & C.A. Mey. var. *hartwegii* S. Watson ex Wheelock

FNA8: "Variety *hartwegii* occurs in the Coast Ranges."

var. ***micrantha*** [FNA8, HC, HC2]

Edwards's Bot. Reg. 15: plate 1302.

small-flowered alumroot

FNA8: "Variety *micrantha* occurs in the Coast Range, Cascade Range, Blue and Klamath mountains, northern Sierra Nevada, and the Columbia River gorge, and on wooded banks of the Columbia and its tributaries."

***Leptarrhena*** [FNA8, HC, HC2]

Chlor. Melvill. 15. 1823.

false saxifrage, leatherleaf saxifrage

***Leptarrhena pyrolifolia*** (D. Don) R. Br. ex Ser. [FNA8, HC, HC2]

Prodr. 4: 48. 1830.

pearleaf, leatherleaf saxifrage

*Lepuropetalon amplexifolium* (Sternb.) Ser.

*Saxifraga amplexifolia* Sternb.

*Saxifraga pyrolifolia* D. Don

FNA8: "The Aleuts of Alaska use an infusion of *Leptarrhena pyrolifolia* leaves to treat influenza, and the Thompson Indians of British Columbia apply a poultice of chewed leaves to wounds (D. E. Moerman 1998)."

***Lithophragma*** [FNA8, HC, HC2]

Fl. N. Amer. 1: 583. 1840.

fringecup, lithophragma, prairie star, woodland star

***Lithophragma glabrum*** Nutt. [FNA8, HC2]

Fl. N. Amer. 1: 584. 1840.

bulbiferous prairie star, bulbous woodland star

*Lithophragma bulbifera* Rydb. [HC]

*Lithophragma glabra* Nutt. [HC], orthographic variant

*Lithophragma glabrum* Nutt. var. *bulbiferum* (Rydb.) Jeps.

*Lithophragma glabrum* Nutt. var. *ramulosum* (Suksd.) B. Boivin

*Lithophragma tenellum* Nutt. var. *floridum* Suksd.

*Tellima bulbifera* (Rydb.) Fedde

*Tellima glabra* (Nutt.) Steud.

H&C use the ending "a" throughout this genus, however this is incorrect due to the gender of the genus being plural neuter not singular feminine. FNA8: "The presence or absence of bulbils is the only feature distinguishing *Lithophragma glabrum* and *L. bulbiferum*; for this reason *L. bulbiferum* is not recognized in this treatment. Bulbil production is extremely variable within the same clone in *L. heterophyllum* (R. L. Taylor 1965)."

***Lithophragma parviflorum*** (Hook.) Nutt. [FNA8, HC2]

Fl. N. Amer. 1: 584. 1840.

small-flowered prairie star

*Lithophragma parviflora* (Hook.) Nutt. [HC], orthographic variant  
*Lithophragma parviflorum* (Hook.) Nutt. var. *parviflorum* [KZ99]  
*Tellima parviflora* Hook.

H&C use the ending "a" throughout this genus, however this is incorrect due to the gender of the genus being plural neuter not singular feminine. FNA8: "Lithophragma parviflorum is easily identified throughout its range, although morphological variation is apparent when comparing specimens from different habitats and elevations in western North America. Some authors treat *L. trifoliatum* as a variety of *L. parviflorum*."

***Lithophragma tenellum* Nutt. [FNA8, HC2]**

Fl. N. Amer. 1: 584. 1840.  
slender woodlandstar

*Lithophragma australe* Rydb.  
*Lithophragma brevilobum* Rydb.  
*Lithophragma rupicola* Greene  
*Lithophragma tenella* Nutt. [HC], orthographic variant  
*Lithophragma tenella* Nutt. var. *tenella* [HC], orthographic variant  
*Lithophragma tenella* Nutt. var. *thompsonii* (Hoover) Hitchc. [HC]  
*Lithophragma tenellum* Nutt. var. *thompsonii* (Hoover) C.L. Hitchc.  
*Lithophragma thompsonii* Hoover  
*Tellima tenella* (Nutt.) Steud.

H&C use the ending "a" throughout this genus, however this is incorrect due to the gender of the genus being plural neuter not singular feminine. FNA8: "Lithophragma tenellum usually occurs on the eastern side of the Cascade Mountains and in the Rocky Mountains, Nevada, and Utah into western North America. Taxonomy of *Lithophragma tenellum* is poorly understood because there are few collections from widely divergent geographical areas. The northwestern population (Washington, British Columbia) has been separated as a distinct species (*L. thompsonii*) based on the extent of the basal leaf lobation, which often shows considerable variation in all species. However, other populations in the Rocky Mountains, Nevada, and Utah have been observed with this lobation, as has Washington-British Columbia material having the more typical leaf form."

***Micranthes* [FNA8, HC2]**

Syn. Pl. Succ. 320. 1812.  
saxifrage

***Micranthes apetala* (Piper) Small [FNA8, HC2]**

N. Amer. Fl. 22: 135. 1905.  
Tiny swamp saxifrage, western swamp saxifrage

*Saxifraga apetala* Piper [KZ99]  
*Saxifraga columbiana* Piper var. *apetala* (Piper) Engl. & Irmsch.  
*Saxifraga integrifolia* Hook. var. *apetala* (Piper) M.E. Jones [HC]

***Micranthes ferruginea* (Graham) Brouillet & Gornall [FNA8, HC2]**

J. Bot. Res. Inst. Texas. 1: 1020. 2007.  
rusty saxifrage

*Saxifraga ferruginea* Graham [HC]  
*Saxifraga ferruginea* Graham var. *ferruginea* [HC]  
*Saxifraga ferruginea* Graham var. *foliacea* A.M. Johnson  
*Saxifraga ferruginea* Graham var. *macounii* Engl. & Irmscher [HC]  
*Saxifraga ferruginea* Graham var. *vreelandii* (Small) Engl. & Irmscher [KZ99]  
*Saxifraga vreelandii* (Small) Fedde ex Just

FNA8: "Plants with bulbils replacing flowers are more common in the southern part (southern Alberta and British Columbia southwards) of the range of *Micranthes ferruginea* and have been called *Saxifraga ferruginea* var. *macounii*."

***Micranthes fragosa* (Suksd. ex Small) Small [FNA8, HC2]**

N. Amer. Fl. 22: 137. 1905.

Clayton's saxifrage

*Saxifraga claytoniifolia* Canby ex Small

*Saxifraga fragosa* Suksd. ex Small

*Saxifraga fragosa* Suksd. ex Small ssp. *claytoniifolia* (Canby ex Small) Bacig.

*Saxifraga integrifolia* Hook. var. *claytoniaefolia* (Canby) Rosend. [HC]

*Saxifraga nidifica* Greene var. *claytoniifolia* (Canby ex Small) Elvander [KZ99]

FNA8: "Micranthes fragosa is restored to specific status here because a review of its differences with *M. nidifica* shows it to be more distinctive than previously thought, and for consistency in the application of criteria for species recognition within the rest of the genus. In the southernmost part of its range, *M. fragosa* converges in appearance with *M. californica*."

***Micranthes gormanii* (Suksd.) Brouillet & Gornall [FNA8, HC2]**

J. Bot. Res. Inst. Texas. 1: 1020. 2007.

Gorman's saxifrage

*Saxifraga gormanii* Suksd.

*Saxifraga occidentalis* S. Watson var. *dentata* (Engl. & Irmscher) C.L. Hitchc. [HC]

***Micranthes idahoensis* (Piper) Brouillet & Gornall [FNA8, HC2]**

J. Bot. Res. Inst. Texas. 1: 1020. 2007.

Idaho saxifrage

*Saxifraga idahoensis* Piper

*Saxifraga marshallii* Greene ssp. *idahoensis* (Piper) D.L. Krause & Beamish

*Saxifraga marshallii* Greene var. *idahoensis* (Piper) Engl. & Irmscher

*Saxifraga occidentalis* S. Watson var. *idahoensis* (Piper) C.L. Hitchc. [HC]

FNA8: "Micranthes idahoensis appears to hybridize with *M. occidentalis* where their ranges overlap. Intermediates are abundant in some populations along the Idaho-Montana border and in Montana. This phenomenon may explain the range of filament shapes found in *M. occidentalis*, from flattened to slightly club-shaped. The issue of the status of *M. idahoensis* with respect to *M. marshallii* (D. L. Krause and K. I. Beamish 1972) is best deferred until a thorough study of the whole complex over its entire range is done."

***Micranthes integrifolia* (Hook.) Small [FNA8, HC2]**

N. Amer. Fl. 22: 137. 1905.

Columbian saxifrage, swamp saxifrage, Whole-leaf saxifrage

(see also *Micranthes apetala*, *Micranthes fragosa*, *Micranthes nidifica*)

*Saxifraga integrifolia* Hook. [HC]

*Saxifraga integrifolia* Hook. var. *integrifolia* [HC]

*Saxifraga laevicarpa* A.M. Johnson

FNA8: "The occasional occurrence of sterile pollen has been noted in this as well as in other species of *Micranthes* (as *Saxifraga*, K. I. Beamish 1961). Some populations exhibit gynodioecism (P. E. Elvander 1982)."

***Micranthes lyallii* (Engl.) Small [FNA8, HC2]**

N. Amer. Fl. 22: 143. 1905.

Lyall's saxifrage, red-stemmed saxifrage

*Saxifraga lyallii* Engl. [HC]

*Saxifraga lyallii* Engl. ssp. *hultenii* (Calder & Savile) Calder & Savile [KZ99]

*Saxifraga lyallii* Engl. ssp. *lyallii* [KZ99]

*Saxifraga lyallii* Engl. var. *hultenii* Calder & Savile

*Saxifraga lyallii* Engl. var. *laxa* Engl.

FNA8: "Although they have nearly disjunct sets of populations, the subspecies of *Micranthes lyallii* are difficult to distinguish from each other. The more northern plants tend to be larger with wider leaves and often have been called *Saxifragalyallii* subsp. or var. *hultenii*. Apparent hybrids with *M. odontoloma* occur in Alberta, British Columbia, and northern Idaho, and near Glacier National Park, Montana."

***Micranthes nelsoniana* (D. Don) Small [FNA8, HC2]**

N. Amer. Fl. 22: 147. 1905.

dotted saxifrage, Nelson's saxifrage

*Saxifraga punctata* L. [HC]

var. ***cascadensis*** (Calder & Savile) Gornall & H. Ohba [FNA8, HC2]

J. Bot. Res. Inst. Texas. 1: 1020. 2007.

dotted saxifrage, Nelson's saxifrage

*Saxifraga nelsoniana* D. Don ssp. *cascadensis* (Calder & Savile) Hultén

*Saxifraga punctata* L. ssp. *cascadensis* Calder & Savile

*Saxifraga punctata* L. var. *cascadensis* (Calder & Savile) C.L. Hitchc. [HC]

FNA8: "Variety *cascadensis* has sometimes been confused with *Micranthes odontoloma*, probably because the petal spots of var. *cascadensis* fade on herbarium specimens. The more deeply toothed leaves, the compactness of the inflorescence, and the tangled inflorescence hairs clearly distinguish it from *M. odontoloma*. This variety is present in the Coast and Cascade ranges."

***Micranthes nidifica*** (Greene) Small [FNA8, HC2]

N. Amer. Fl. 22: 134. 1905.

Columbia saxifrage, swamp saxifrage

*Micranthes plantaginea* (Small) Small

*Saxifraga columbiana* Piper

*Saxifraga integrifolia* Hook. var. *columbiana* (Piper) C.L. Hitchc. [HC]

*Saxifraga integrifolia* Hook. var. *leptopetala* (Suksd.) Engl. & Irmscher [HC]

*Saxifraga montana* (Small) Fedde

*Saxifraga nidifica* Greene [KZ99]

*Saxifraga plantaginea* Small

FNA8: "*Micranthes nidifica* is polymorphic and merges to some extent with *M. fragosa* in limited areas of southern Washington and northern Oregon."

***Micranthes occidentalis*** (S. Watson) Small [FNA8, HC2]

N. Amer. Fl. 22: 144. 1905.

mountain saxifrage, redwood saxifrage, western saxifrage

(see also *Micranthes gormanii*, *Micranthes idahoensis*, *Micranthes rufidula*)

*Micranthes lata* Small

*Micranthes saximontana* (E.E. Nelson) Small

*Saxifraga occidentalis* S. Watson [HC]

*Saxifraga occidentalis* S. Watson var. *allenii* (Small) C.L. Hitchc. [HC]

*Saxifraga occidentalis* S. Watson var. *occidentalis* [HC]

*Saxifraga occidentalis* S. Watson var. *wallowensis* M. Peck

*Saxifraga reflexa* Hook. ssp. *occidentalis* (S. Watson) Hultén

FNA8: "*Micranthes occidentalis* appears closely related to the little-known *M. mexicana* (Engler & Irmscher) Brouillet & Gornall from Chihuahua, Mexico. The latter is the only species of the genus that occurs in Mexico and not in the United States. *Micranthes occidentalis* is disjunct between the northern Rocky Mountains and the Cypress Hills of southeastern Alberta and southwestern Saskatchewan, and the Black Hills of South Dakota. It hybridizes with *M. idahoensis* where their ranges overlap."

***Micranthes odontoloma*** (Piper) A. Heller [FNA8, HC2]

Muhlenbergia. 8: 60. 1912.

brook saxifrage, streambank saxifrage

*Saxifraga arguta* D. Don [HC]

*Saxifraga odontoloma* Piper [VPBC3, KZ99]

*Saxifraga punctata* L. ssp. *arguta* (D. Don) Hultén

*Saxifraga punctata* L. var. *arguta* (D. Don) Engl. & Irmsch.

***Micranthes oregana*** (Howell) Small [FNA8, HC2]

N. Amer. Fl. 22: 138. 1905.

bog saxifrage, Oregon saxifrage

*Micranthes arnoglossa* Small

*Micranthes brachypus* Small

*Saxifraga montanensis* Small

*Saxifraga oregana* Howell [HC]

*Saxifraga oregana* Howell var. *montanensis* (Small) C.L. Hitchc. [HC]

*Saxifraga oregana* Howell var. *oregana* [HC]

*Saxifraga oregana* Howell var. *sierrae* (Coville) Engl. & Irmsch.

FNA8: "In both habitat and morphology, *Micranthes oregana* is similar to *M. pensylvanica*. A thorough investigation of the two species, especially the populations in Colorado that are disjunct from those in Montana, is needed to clarify relationships. The name *Saxifraga integrifolia* was misapplied to *M. oregana* by early California authors."

***Micranthes rufidula* Small [FNA8, HC2]**

N. Amer. Fl. 22: 140. 1905.

rusty-hair saxifrage

*Saxifraga aequidentata* (Small) Rosend.

*Saxifraga klickitatensis* A.M. Johnson

*Saxifraga occidentalis* S. Watson ssp. *rufidula* (Small) Bacig.

*Saxifraga occidentalis* S. Watson var. *aequidentata* (Small) M. Peck

*Saxifraga occidentalis* S. Watson var. *rufidula* (Small) C.L. Hitchc. [HC]

*Saxifraga rufidula* (Small) Fedde [KZ99]

*Saxifraga rufidula* (Small) J.M. Macoun, invalid name

See comment under *S. occidentalis*

***Micranthes tischii* (Skelly) Brouillet & Gornall [FNA8, HC2]**

J. Bot. Res. Inst. Texas. 1: 1021. 2007.

Olympic saxifrage

*Saxifraga tischii* Skelly

Not in H&C; newly described from Olympic Mountains. FNA8: "*Micranthes tischii* is known only from the Olympic Peninsula and from inland, mountainous Vancouver Island, British Columbia (Ogilvie & Beguin 798911, V). Closely related to *M. rufidula*, *M. tischii* appears to be highly specialized for its habitat. The unusual persistent, green, not clawed (versus deciduous, white, clawed) petals readily distinguish the two species."

***Micranthes tolmiei* (Torr. & A. Gray) Brouillet & Gornall [FNA8, HC2]**

J. Bot. Res. Inst. Texas. 1: 1022. 2007.

alpine saxifrage, Tolmie's alpine saxifrage, Tolmie's saxifrage

*Saxifraga tolmiei* Torr. & A. Gray [HC]

*Saxifraga tolmiei* Torr. & A. Gray var. *ledifolia* (Greene) Engl. & Irmscher [HC]

*Saxifraga tolmiei* Torr. & Gray var. *tolmiei* [HC]

FNA8: Unlike those of most *Micranthes* species, the leaves of *M. tolmiei* are proximally cauline and the ovules have two integuments. The seeds have a loose, winglike testa."

***Mitella* [FNA8, HC, HC2]**

Sp. Pl. 1: 406. 1753; Gen. Pl. ed. 5, 190. 1754.

bishops-cap, mitrewort

(see also *Mitellastra*, *Ozomelis*, *Pectiantia*)

***Mitella nuda* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 406. 1753.

bare-stemmed mitrewort

*Mitella prostrata* Michx.

***Mitellastra* [HC2]**

mitrewort

***Mitellastra caulescens* (Nutt.) Howell [HC2, JPM2]**

leafy mitrewort, star-shaped mitrewort

*Mitella caulescens* Nutt. [FNA8, HC]

***Ozomelis* [HC2]**

mitrewort, ozomelis

***Ozomelis diversifolia*** (Greene) Rydb. [HC2, JPM2]

angle-leaf bishop's-cap

*Mitella diversifolia* Greene [FNA8, HC]

***Ozomelis stauropetala*** (Piper) Rydb. [HC2, JPM2]

cross-shaped mitrewort, side-flowered mitrewort

*Mitella stauropetala* Piper [FNA8, HC]

*Mitella stenopetala* Piper

FNA8: "Two varieties of *Mitella stauropetala* have been recognized. Plants from Oregon and Washington have been referred to var. *stauropetala*, characterized by hypanthium plus sepals often over 3 mm and petal blades with linear lobes. In northern Colorado, southeastern Idaho, eastern Utah, and Wyoming, var. *stauropetala* is replaced by var. *stenopetala*, with hypanthium plus sepals rarely over 3 mm and petal blades less deeply trifid (sometimes entire) and with broader lateral lobes. Variety *stenopetala* is morphologically similar in many respects to *M. trifida*. *Mitella trifida* and *M. stauropetala* require study to determine if plants referred to var. *stenopetala* are the result of hybridization or introgradation between the two species."

***Ozomelis trifida*** (Graham) Rydb. [HC2, JPM2]

three-toothed mitrewort

*Mitella trifida* Graham [FNA8, HC]

*Mitella trifida* Graham var. *trifida* [KZ99]

*Mitella trifida* Graham var. *violacea* (Rydb.) Rosend. [KZ99]

*Mitella violacea* Rydb.

*Ozomelis anomala* (Piper) Rydb.

*Ozomelis micrantha* (Piper) Rydb.

FNA8: "*Mitella trifida* varies in flower size, petal-blade lobing, and pubescence. Plants with relatively small flowers and petal blades entire or shallowly trifid and often purplish have been named var. *violacea*. Plants matching this description occur in British Columbia, Montana, and Washington and appear to represent a minor morphological variant that does not warrant recognition."

***Pectiantia*** [HC2]

mitrewort

***Pectiantia breweri*** (A. Gray) Rydb. [HC2, JPM2]

feathery bishop's-cap, Brewer's mitrewort

*Mitella breweri* A. Gray [FNA8, HC]

***Pectiantia ovalis*** (Greene) Rydb. [HC2, JPM2]

coastal bishop's cap, coastal mitrewort

*Mitella ovalis* Greene [FNA8, HC]

FNA8: "*Mitella ovalis* occurs from Vancouver Island and extreme southwest mainland of British Columbia south to Marin County, California."

***Pectiantia pentandra*** (Hook.) Rydb. [HC2, JPM2]

five-stamen bishop's-cap, alpine mitrewort

*Mitella pentandra* Hook. [FNA8, HC]

***Saxifraga*** [FNA8, HC, HC2]

Sp. Pl. 1: 398. 1753; Gen. Pl. ed. 5, 189. 1754.

saxifrage

(see also *Cascadia*, *Micranthes*)

***Saxifraga adscendens*** L. [FNA8, HC, HC2]

Sp. Pl. 1: 405. 1753.

wedge-leaf saxifrage, wedge-leaved saxifrage

*Muscaria adscendens* (L.) Small

*Saxifraga adscendens* L. ssp. *oregonensis* (Raf.) Bacig. [KZ99, VPBC3]  
*Saxifraga adscendens* L. var. *oregonensis* (Raf.) Breitung [HC]

FNA8: "Although the North American plants of *Saxifraga adscendens* have been known as subsp. *oregonensis*, expressions of the supposed distinguishing characters appear to overlap completely with the variation found in Europe. The plants produce bulbils on caudices."

***Saxifraga austromontana* Wiegand [HC2]**

Bull. Torrey Bot. Club 27: 389. 1900  
matted saxifrage, spotted saxifrage

*Ciliaria austromontana* (Wiegand) W.A. Weber  
*Saxifraga bronchialis* L. ssp. *austromontana* (Wiegand) Piper [FNA8]  
*Saxifraga bronchialis* L. var. *austromontana* (Wiegand) M. Peck [HC]

***Saxifraga cernua* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 403. 1753.  
nodding saxifrage

*Saxifraga cernua* L. var. *exilioides* Polunin  
*Saxifraga simulata* Small

FNA8: "*Saxifraga cernua* plants rarely set seed; they bear bulbils among the basal leaves. Some reports of *S. sibirica* Linnaeus from Canada are misidentifications of this species."

***Saxifraga caespitosa* L. [FNA8, HC2]**

Sp. Pl. 1: 404. 1753.  
tufted alpine saxifrage, tufted saxifrage

*Muscaria caespitosa* (L.) Haw., orthographic variant  
*Saxifraga caespitosa* L. [HC, KZ99], orthographic variant  
*Saxifraga caespitosa* L. ssp. *caespitosa* [KZ99], orthographic variant  
*Saxifraga caespitosa* L. ssp. *eucaespitosa* Engl. & Irmsch., orthographic variant  
*Saxifraga caespitosa* L. var. *emarginata* (Small) Rosend. [HC], orthographic variant  
*Saxifraga caespitosa* L. var. *lemmonii* Engl. & Irmsch., orthographic variant  
*Saxifraga caespitosa* L. var. *minima* Blank. [HC], orthographic variant  
*Saxifraga caespitosa* L. var. *subgemmifera* (Engl. & Irmsch.) C.L. Hitchc. [HC], orthographic variant

FNA8: "The North American representatives of *Saxifraga caespitosa* are very variable. It seems futile at this time to recognize any of the infraspecific taxa that have been described, although five are frequently distinguished as either subspecies or varieties. Expressions of all of the purported distinguishing characters overlap or have little apparent geographic or ecologic correlation. The only Southern Hemisphere representatives of *Saxifraga* are closely related to *S. caespitosa*."

***Saxifraga hyperborea* R. Br. [FNA8, HC2]**

Chlor. Melvill. 16. 1823.  
pygmy saxifrage

*Saxifraga debilis* Engelm. ex A. Gray [FNA8, HC], misapplied  
*Saxifraga flexuosa* Sternb.  
*Saxifraga rivularis* L. [FNA8, KZ99, WNHP], misapplied  
*Saxifraga rivularis* L. ssp. *hyperborea* (R. Br.) Dorn  
*Saxifraga rivularis* L. var. *flexuosa* (Sternb.) Engl. & Irmscher  
*Saxifraga rivularis* L. var. *hyperborea* (R. Br.) Hook.  
*Saxifraga rivularis* L. var. *purpurascens* Lange

FNA8: "Reports of *Saxifraga hyperborea* from Mount Washington, New Hampshire (e.g., Á. Löve and D. Löve 1964) require confirmation; all specimens examined from this location appear to be *S. rivularis*. C. L. Hitchcock (1961) treated all western material as *S. debilis*, including that of the Pacific Northwest that is included here. For Colorado, W. A. Weber (1990) appears to have applied the name *S. rivularis* to what we call *S. hyperborea*, and *S. hyperborea* subsp. *debilis* to what we call *S. debilis*. P. K. Holmgren and N. H. Holmgren (1997) included under their broad concept of *S. rivularis* both *S. hyperborea* and *S. debilis*, noting that the plants had gone usually under the latter name. Both species are present in the Rockies and the Intermountain Region."

***Saxifraga mertensiana* Bong. [FNA8, HC, HC2]**

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 141. 1832.

Merten's saxifrage, woodland saxifrage

*Saxifraga mertensiana* Bong. var. *eastwoodiae* (Small) Engl. & Irmscher

FNA8: "Plants of *Saxifraga mertensiana* bear bulbils in the axils of basal leaves."

***Saxifraga oppositifolia* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 402. 1753.

purple saxifrage, twinflowered saxifrage

*Antiphylla oppositifolia* (L.) Fourn.

ssp. ***oppositifolia*** [FNA8, HC2]

Sp. Pl. 1: 402.

purple mountain saxifrage, purple saxifrage, twinflowered saxifrage

***Saxifraga stolonifera* Curtis**

*Saxifraga stolonifera* Meerb., homonym (illegitimate)

FNA8: "The report of *S. stolonifera* Meerburgh (syn. *S. sarmentosa* Linnaeus f.) from California is old; there has been no recent collection, and that species also is excluded here." Not in H&C; KZ report based on a Torrey article in 1940. Not considered a valid taxa for WA until/unless further information becomes available.

***Saxifraga tridactylites* L. [FNA8, HC, HC2]**

Sp. Pl. 1: 404. 1753.

reef-leaved saxifrage

***Saxifraga vespertina* (Small) Fedde [FNA8, HC2]**

Just's Bot. Jahresber. 33(1): 613. 1906.

matted saxifrage, spotted saxifrage

*Ciliaria vespertina* (Small) W.A. Weber

*Leptasea vespertina* Small

*Saxifraga bronchialis* L. ssp. *vespertina* (Small) Piper [KZ99]

*Saxifraga bronchialis* L. var. *vespertina* (Small) Rosend. [HC]

***Saxifragopsis* [FNA8, HC2]**

Bull. Torrey Bot. Club. 23: 19, plate 257. 1896.

strawberry saxifrage

***Saxifragopsis fragarioides* (Greene) Small [FNA8, HC2]**

Bull. Torrey Bot. Club. 23: 20. 1896.

strawberry saxifrage

*Saxifraga fragarioides* Greene

Not in H&C; known only from OR and CA when H&C published. FNA8: "*Saxifragopsis fragarioides* is nearly limited to the Siskiyou Mountains of California and Oregon; disjunct populations have been found in Washington (S. Gage 1992, 1995). The known colonies in Washington are at about 500 meters, lower than those in California and Oregon."

***Suksdorfia* [FNA8, HC, HC2]**

Proc. Amer. Acad. Arts. 15: 41. 1879.

suksdorfia

(see also *Hemieva*)

***Suksdorfia violacea* A. Gray [FNA8, HC, HC2]**

Proc. Amer. Acad. Arts. 15: 42. 1879.

violet mock brookfoam

FNA8: "*Suksdorfia violacea* is found from the mountains of Montana to the eastern slopes of the Cascade Mountains of British Columbia and Washington and to northwestern Oregon."

***Sullivantia* [FNA8, HC, HC2]**

Amer. J. Sci. Arts. 42: 22. 1842.  
coolwort, sullivantia

***Sullivantia oregana*** S. Watson [FNA8, HC, HC2]  
Proc. Amer. Acad. Arts. 14: 292. 1879.  
Oregon coolwort

***Tellima*** [FNA8, HC, HC2]

Narr. Journey Polar Sea. 765. 1823.  
fringecup

***Tellima grandiflora*** (Pursh) Douglas ex Lindl. [FNA8, HC, HC2]  
Bot. Reg. 14: plate, 1178. 1828.  
fragrant fringecup

*Mitella grandiflora* Pursh  
*Tellima odorata* Howell

FNA8: "Tellima grandiflora is found in moist, shaded sites from Alaska and British Columbia to California south of San Francisco. It resembles species of Mitella in its finely pinnatifid petals but is distinguished from most of them by the two to three conspicuous, alternate, cauline leaves in Tellima. It is distinguished from *M. caulescens* by the latter's basipetalous anthesis."

***Tiarella*** [FNA8, HC, HC2]

Sp. Pl. 1: 405. 1753; Gen. Pl. ed. 5, 190. 1754.  
coolwort, foamflower, laceflower, false mitrewort

***Tiarella trifoliata*** L. [FNA8, HC, HC2]  
Sp. Pl. 1: 406. 1753.

var. ***laciniata*** (Hook.) Wheelock [FNA8, HC, HC2]  
Bull. Torrey Bot. Club. 23: 72. 1896.  
cut-leaved foamflower

*Tiarella californica* (Kellogg) Rydb.  
*Tiarella laciniata* Hook.

FNA8: "The terminal leaflet of var. *laciniata* is rhombic."

var. ***trifoliata*** [FNA8, HC, HC2]

Sp. Pl. 1: 406.  
three-leaf foamflower

FNA8: "Variety *trifoliata* has slender roots and caudices."

var. ***unifoliata*** (Hook.) Kurtz [FNA8, HC, HC2]

Bot. Jahrb. Syst. 19: 378. 1894.  
simple-leaved foamflower

*Tiarella trifoliata* L. ssp. *unifoliata* (Hook.) P.M. Kern  
*Tiarella unifoliata* Hook.

FNA8: "Variety *unifoliata* is relatively uniform throughout its range. Locally in Alberta, it grades into a more deeply lobed leaf form."

***Tolmiea*** [FNA8, HC, HC2]

Fl. N. Amer. 1: 582. 1840.  
pig-a-back-plant, thousand mothers, youth-on-age

***Tolmiea menziesii*** (Pursh) Torr. & A. Gray [FNA8, HC, HC2]  
Fl. N. Amer. 1: 582. 1840.  
piggyback-plant

*Tiarella menziesii* Pursh

FNA8: "Hybrids (with  $2n = 21$ ) between *Tolmiea menziesii* and *Tellima grandiflora* have been reported from Washington (D. E. Soltis and B. A. Bohm 1985). The Cowlitz Indians applied a poultice of fresh leaves to

boils and the Mahak Indians ate raw sprouts in early spring (D. E. Moerman 1998)."

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## Scrophulariaceae [HC, HC2] Figwort Family

### Synonyms:

Buddlejaceae [HC] (Butterfly-Bush Family)

Treatment here of Scrophulariaceae follows Olmstead et al., (2001). Members of Scrophulariaceae s. l. have been placed into the families Linderniaceae, Mazaceae, Orobanchaceae, Paulowniaceae, Phrymaceae, and Plantaginaceae. Castilleja, Cordylanthus, Triphysaria, and Orthocarpus are listed under Orobanchaceae.

### References:

\* Olmstead, R.G., C.W. dePamphilis, A.D. Wolfe, N.D. Young, W.J. Elisons and P. A. Reeves. 2001. Disintegration of the Scrophulariaceae. American Journal of Botany. 88:348-361.

### *Buddleja* [HC, HC2]

butterfly-bush

*Buddleja davidii* Franch. [HC, HC2, JPM]

Nouv. Arch. Mus. Hist. Nat., sér. 2, 10: 65.

orange-eye butterfly-bush

### *Limosella* [HC, HC2]

mudwort

*Limosella acaulis* Sessé & Moc. [HC2]

Flora Mexicana. 143.

stemless mudwort

*Limosella aquatica* L. [HC, HC2]

Sp. Pl. 2: 631-632.

awl-leaf mudwort

### *Scrophularia* [HC, HC2]

figwort

*Scrophularia californica* Cham. & Schtldl. [HC, HC2]

California figwort, Oregon figwort

*Scrophularia californica* Cham. & Schtldl. var. *oregana* (Pennell) B. Boivin [HC]

*Scrophularia oregana* Pennell

*Scrophularia lanceolata* Pursh [HC, HC2]

Fl. Amer. Sept. 2: 419 [1813].

lance-leaf figwort

*Scrophularia nodosa* L. var. *occidentalis* Rydb.

*Scrophularia pectinata* Raf.

*Scrophularia nodosa* L. [Stace 1997]

Sp. Pl. 2: 619-620.

common figwort

Recently collected in King Co. (Jacobson et al. 2001) as a garden escape in an adjacent disturbed area. Not part of the naturalized flora at this time.

### *Verbascum* [HC, HC2]

mullein

*Verbascum blattaria* L. [HC, HC2]

Sp. Pl. 1: 178.

moth mullein

*Verbascum bombyciferum* Boiss.

*Verbascum densiflorum* Bertol.

*Verbascum nigrum* L.

*Verbascum pulverulentum* Vill. [Stace 1997]

Prosp. Hist. Pl. Dauphiné 22.

hoary mullein

Recently collected in King Co. as a garden escape in a cultivated setting. Not currently a naturalized element of the flora. This species is considered excluded from the flora until specimens are located indicating that it has escaped beyond cultivated settings.

*Verbascum thapsus* L. [HC, HC2]

Sp. Pl. 1: 177.

flannel mullein, great mullein

*Verbascum virgatum* Stokes [HC2]

A Botanical Arrangement of British Plants (ed. 2) 1: 227.

wand mullein

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## Simaroubaceae [HC, HC2] Quassia-Wood Family

### Synonyms:

Leitneriaceae [FNA3]

References: (none)

*Ailanthus* [HC, HC2]

tree-of-heaven

*Ailanthus altissima* (Mill.) Swingle [HC, HC2, IFBC]

J. Wash. Acad. Sci. 6(14): 495.

tree-of-heaven

*Ailanthus glandulosa* Desf.

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## Solanaceae [HC, HC2] Potato Family

Synonyms: (none)

References: (none)

*Atropa* [HC, HC2]

*Atropa belladonna* L. [HC, HC2]

belladonna, deadly nightshade

*Atropa bella-donna* L., orthographic variant

*Datura* [HC, HC2]

jimson-weed

*Datura innoxia* Mill. [HC2]

angel's-trumpet

A very uncommon adventive in Seattle and southern British Columbia.

*Datura stramonium* L. [HC, HC2]

Sp. Pl. 1: 179.  
jimsonweed

*Datura stramonium* L. var. *stramonium* [HC]  
*Datura stramonium* L. var. *tatula* (L.) Torr. [HC]

*Datura wrightii* Regel [HC2, JPM]  
Gartenflora pl. 260.  
sacred thorn apple, jimson weed

**Hyoscyamus** [HC, HC2]  
henbane

*Hyoscyamus niger* L. [HC, HC2]  
Sp. Pl. 1: 179-180.  
hog's bean, black henbane  
Noxious weed.

**Lycium** [HC, HC2]  
boxthorn, lycium, wolfberry

*Lycium barbarum* L. [HC2, IFBC]  
Sp. Pl. 1: 192.  
matrimony-vine  
*Lycium halimifolium* Mill. [HC]

*Lycium chinense* Mill. [HC2]  
Chinese wolfberry

Our plants were formerly misidentified as *Lycium barbarum*. *Lycium chinense* is scattered on both sides of the Cascades in Washington.

**Nicandra** [HC2]

*Nicandra physalodes* (L.) Gaertn. [HC2]  
apple of Peru

**Nicotiana** [HC, HC2]  
tobacco

*Nicotiana acuminata* (Graham) Hook. [Draft FNA, HC, HC2]  
manyflower

var. *multiflora* Reiche [HC2]  
wild tobacco

*Nicotiana alata* Link & Otto [HC2]

*Nicotiana attenuata* Torr. ex S. Watson [HC, HC2]  
Nomencl. Bot. 1: 554.  
coyote tobacco

Rare

*Nicotiana sylvestris* Speg. & Comes [HC2]

**Physalis** [HC, HC2]  
ground-cherry

*Physalis grisea* (Waterf.) M. Martiñez [HC2, KZ99]  
low hairy ground cherry, strawberry-tomato

*Physalis pruinosa* L., misapplied  
*Physalis pubescens* L. var. *grisea* Waterf. [HC]

*Physalis heterophylla* Nees [HC2]

ground cherry

*Physalis heterophylla* Nees var. *heterophylla*

Not in HC; KZ record based on PC with Richard Old

*Physalis longifolia* Nutt. [HC, HC2, JPM2]

ground-cherry, long-leaved ground-cherry, wild tomatillo

var. *longifolia* [HC, HC2]

var. *subglabrata* (Mack. & Bush) Cronquist [HC, HC2]

*Physalis philadelphica* Lam. [HC2]

tomatillo

**Solanum** [HC, HC2]

nightshade

*Solanum americanum* Mill. [HC2, KZ99]

American black nightshade

*Solanum nigrum* L. var. *americanum* (Mill.) O.E. Schulz

*Solanum nigrum* L. var. *virginicum* L. [HC]

*Solanum carolinense* L. [HC, HC2]

horse nettle

*Solanum carolinense* L. var. *carolinense*

HC does not name a variety

*Solanum dulcamara* L. [HC, HC2]

Sp. Pl. 1: 185.

felonwort, bittersweet nightshade, climbing nightshade

*Solanum dulcamara* L. var. *dulcamara*

HC does not name a variety

*Solanum elaeagnifolium* Cav. [HC, HC2]

white horse nettle, silver-leaf nightshade

Noxious; Not in HC; report based on PC with Richard Old

*Solanum lycopersicum* L. [HC2]

Sp. Pl. 1: 185.

tomato

*Lycopersicon esculentum* Mill.

Occasional waif generally near areas where cultivated.

*Solanum nigrum* L. [HC, HC2, JPM]

Sp. Pl. 1: 186.

European black nightshade

(see also *Solanum americanum*)

ssp. *nigrum* [HC2]

*Solanum nigrum* L. var. *nigrum* [HC]

*Solanum physalifolium* Rusby [HC2]

hairy nightshade

*Solanum sarrachoides* Sendtn. [HC, JPM], misapplied

var. *nitidibaccatum* (Bitter) Edmonds [HC2, JPM2]

ground-cherry nightshade

*Solanum rostratum* Dunal [HC, HC2]

Hist. Nat. Solanum 234-235, pl. 24.

buffalo bur, horned nightshade

*Androcera rostrata* (Dunal) Rydb.  
*Solanum cornutum* Lam., misapplied

Noxious

*Solanum triflorum* Nutt. [HC, HC2]

Gen. N. Amer. Pl. 1: 128.  
cut-leaf nightshade

H&C describe this as a native weedy species, however the nativity of *S. triflorum* is South America according to recent treatment in Jepson Manual, 2nd Edition.

*Solanum tuberosum* L. [HC2]

irish potato

KZ report based on a 1936 report from the Olympic Peninsula

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## Tamaricaceae [HC, HC2] Tamarisk Family

**Synonyms:** (none)

**References:** (none)

*Tamarix* [HC, HC2]

saltcedar, tamarisk

*Tamarix gallica* L. [HC, JPM2]

Sp. Pl. 1: 270-271.  
French tamarisk

*Tamarix parviflora* DC. [HC, HC2, JPM2]

Prodr. 3: 97.  
small-flower tamarisk

*Tamarix tetrandra* Pall. ex M. Bieb., misapplied

*Tamarix ramosissima* Ledeb. [HC2, JPM]

Fl. Altaic. 1: 424-426.  
noxious tararisk

*Tamarix pentandra* Pall. [HC]

*Tararix pentandra*

Noxious in WA.

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## Theophrastaceae (see Primulaceae)

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## Thymelaeaceae [HC2] Mezereum Family

**Synonyms:** (none)

**References:** (none)

*Daphne* [HC2]

mezereon, spurge-laurel

*Daphne laureola* L. [HC2]

spurge-laurel

Not in HC; commonly naturalized; reported and collected by AJ and PZ

*Daphne mezereum* L. [FNA6, HC2]

Sp. Pl. 1: 356.

mezeoreon, paradise-plant mezeoreon

Recently collected (2015) in Pend Oreille County and observed in Pierce County (2017).

*Thymelaea* [HC2]

mezeoreon, spurge-flax

*Thymelaea passerina* (L.) Coss. & Germ. [HC2]

mezeoreon

*Passerina annua* Wikstr.

On WA Noxious Weed List (2017). Specimen at WS annotated by Richard Old and Mark Fishbein.

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## Ulmaceae [FNA3, HC, HC2] Elm Family

**Synonyms:** (none)

**References:** (none)

*Ulmus* [FNA3, HC, HC2]

Sp. Pl. 1: 225. 1753; Gen. Pl. ed. 5, 106, 1754.

elm

(see also *Ulmus americana*, *Ulmus parvifolia*, *Ulmus procera*, *Ulmus pumila*)

*Ulmus americana* L. [FNA3, HC2]

Sp. Pl. 1: 226. 1753.

American elm

*Ulmus americana* L. var. *aspera* Chapm.

*Ulmus americana* L. var. *floridana* (Chapm.) Little

*Ulmus floridana* Chapm.

FNA3: "*Ulmus americana* is reported as widely escaped in Idaho, which is not part of the natural range of this taxon. It is occasionally cultivated outside its native distribution, and it has escaped sporadically from cultivation. It is also reported as naturalized in Arizona, but I have seen no specimens."

*Ulmus parvifolia* Jacq. [FNA3, HC2]

Pl. Hort. Schoenbr. 3: 6, plate 262. 1798.

*Ulmus procera* Salisb. [FNA3, HC2]

Prodr. Stirp. Chap. Allerton. 391. 1796.

field elm

*Ulmus pumila* L. [FNA3, HC2]

Sp. Pl. 1: 226. 1753.

Siberian elm

*Ulmus campestris* L. var. *pumila* Maxim.

*Ulmus manshurica* Nakai

*Ulmus turkestanica* Req.

Not in H&C. FNA3: "Planted for quick-growing windbreaks, *Ulmus pumila* has weak wood, and its branches break easily in mature trees. It is easily distinguished from other North American elms by its singly serrate leaf margins. *Ulmus pumila* is similar to *U. parvifolia* Jacquin with its small, singly serrate leaves. *Ulmus parvifolia*, however, has smooth bark that sheds from tan to orange, and it flowers and sets fruit in the fall."

## Umbelliferae (see Apiaceae)

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### Urticaceae [FNA3, HC, HC2] Nettle Family

**Synonyms:** (none)

**References:** (none)

#### *Parietaria* [FNA3, HC, HC2]

Sp. Pl. 2: 1052. ; Gen. Pl. ed.5. 1753; Gen. Pl. ed. 5, 471, 1754.  
pellitory

#### *Parietaria judiaca* L. [FNA3, HC2]

Fl. Palaest. 32.  
pellitory-of-the-wall

Recently collected in King Co. (Jacobson et al. 2001). FNA3: "*Parietaria judaica* , which, in North America, is most abundant in scattered localities in California, is the only long-lived perennial species of *Parietaria* in the flora. Because of confusion in Europe over the correct name, plants in North America have been called *P . judaica* , *P . officinalis* of authors, not Linnaeus, *P . officinalis* var. *erecta* (Mertens & Koch) Weddell, and *P . officinalis* var. *diffusa* (Mertens & Koch) Weddell. For a clarification of the nomenclature and taxonomy of this complex, see C.C. Townsend (1968). *Parietaria judaica* was first reported from Louisiana as *P . diffusa* Mertens & Koch, another name commonly used on herbarium specimens (J.W. Thieret 1969)."

#### *Parietaria officinalis* L. [Stace 1997]

Sp. Pl. 2: 1052.  
eastern pellitory-of-the-wall

Recently collected in King Co. (Jacobson et al. 2001)

#### *Parietaria pensylvanica* Muhl. ex Willd. [FNA3, HC, HC2]

Sp. Pl. 4(2): 955. 1806.  
Pennsylvania pellitory

*Parietaria obtusa* Rydb. ex Small

*Parietaria occidentalis* Rydb.

*Parietaria pensylvanica* Muhl. ex Willd. var. *obtusa* (Rydb. ex Small) Shinnery

FNA3:Some extremes of *Parietaria pensylvanica* with short, oblong or ovate leaf blades strongly resemble *P . hespera* var. *hespera* . *Parietaria hespera* is usually more delicate and has thinner leaves with the proximal pair of lateral veins arising at the junction of blade and petiole. Leaf shape and texture tend to overlap in the two species, but in *P . pensylvanica* the proximal pair of lateral veins clearly arise above the junction of blade and petiole. The extremes of *P . pensylvanica* frequently are found where the ranges of the two species approach or overlap. Examples of these intermediates are from Gila, Mohave, and Yuma counties, Arizona. A mixed collection from Rock Springs, Gila County, Arizona, suggests that the two species occasionally grow together."

#### *Urtica* [FNA3, HC, HC2]

Sp. Pl. 2: 983. 1753; Gen. Pl. ed. 5, 423, 1754.  
nettle

#### *Urtica dioica* L. [FNA3, HC, HC2]

Sp. Pl. 2: 984. 1753.  
stinging nettle

#### ssp. *dioica* [FNA3, HC, HC2]

Sp. Pl. 2: 984.  
stinging nettle

*Urtica gracilis* Aiton var. *latifolia* Farw.

ssp. **gracilis** (Aiton) Selander [FNA3, HC, HC2]

Svensk Bot. Tidskr. 41: 271. 1947.

stinging nettle

*Urtica californica* Greene

*Urtica dioica* L. var. *angustifolia* Schltld. [HC]

*Urtica dioica* L. var. *californica* (Greene) C.L. Hitchc. [HC]

*Urtica dioica* L. var. *gracilis* (Aiton) R.L. Taylor & MacBryde [HC]

*Urtica dioica* L. var. *lyallii* (S. Watson) C.L. Hitchc. [HC]

*Urtica dioica* L. var. *procera* (Muhl. ex Willd.) Wedd. [HC]

*Urtica gracilis* Aiton

H&C has several varieties under ssp. *gracilis*. They are all included here under the ssp. *gracilis* which is consistent with FNA and KZ.

ssp. **holosericea** (Nutt.) Thorne [FNA3, HC2]

Aliso. 6: 68. 1967.

stinging nettle

*Urtica dioica* L. var. *holosericea* (Nutt.) C.L. Hitchc. [HC]

*Urtica dioica* L. var. *occidentalis* S. Watson

*Urtica gracilis* Aiton ssp. *holosericea* (Nutt.) W.A. Weber

*Urtica gracilis* Aiton var. *holosericea* (Nutt.) Jeps.

*Urtica holosericea* Nutt.

FNA3: "Urtica dioica subsp. *holosericea* is highly variable in leaf shape and degree of pubescence. The least pubescent plants appear to grade into U. dioica subsp. *gracilis*, and it is sometimes difficult to separate the two."

*Urtica urens* L. [FNA3, HC, HC2]

Sp. Pl. 2: 984. 1753.

burning nettle

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## Valerianaceae [HC, HC2] Valerian Family

**Synonyms:** (none)

**References:** (none)

### **Centranthus** [HC2]

valerian

*Centranthus ruber* (L.) DC. [HC2, JPM]

Fl. Franç. (ed. 3) 4: 239.

Jupiter's-beard

Commonly naturalized in Seattle in disturbed areas such as roadsides, sidewalk cracks, and abandoned lots.

### **Plectritis** [HC, HC2]

plectritis

*Plectritis brachystemon* Fisch. & C.A. Mey. [HC2, OFP]

Index Seminum [St.Petersburg (Petropolitanus)] 2: 47 (-48).

shortspur white plectritis

*Plectritis congesta* (Lindl.) DC. ssp. *brachystemon* (Fisch. & C.A. Mey.) Morey [JPM2]

*Plectritis congesta* (Lindl.) DC. var. *major* (Fisch. & C.A. Mey.) Dyal

*Plectritis ciliosa* (Greene) Jeps. [HC, HC2]

Nov. Gen. Sp. Pl. 1: 40.

long-spurred plectritis

***Plectritis congesta*** (Lindl.) DC. [HC, HC2]

Prodr. 4: 631.

sea blush, rosy plectritis

*Plectritis congesta* (Lindl.) DC. ssp. *congesta* [KZ99]

***Plectritis macrocera*** Torr. & A. Gray [HC, HC2]

Fl. N. Amer. 2(1): 50.

long-horn plectritis, white plectritis

*Plectritis macrocera* Torr. & A. Gray ssp. *grayi* (Suksd.) Morey [KZ99]

*Plectritis macrocera* Torr. & A. Gray ssp. *macrocera* [KZ99]

*Plectritis macrocera* Torr. & A. Gray var. *collina* (A. Heller) Dyal

*Plectritis macrocera* Torr. & A. Gray var. *grayi* (Suksd.) Dyal

*Plectritis macrocera* Torr. & A. Gray var. *macroptera* Suksd.

*Plectritis macrocera* Torr. & A. Gray var. *mamillata* (Suksd.) Dyal

***Valeriana*** [HC, HC2]

valerian

***Valeriana acutiloba*** Rydb. [HC, HC2]

downy-fruit valerian

var. ***pubicarpa*** (Rydb.) Cronquist [HC, HC2]

Vasc. Pl. Pacific NW 4: 474.

downy fruit valerian, downy-fruited valeriana

*Valeriana pubicarpa* Rydb. [JPM]

***Valeriana columbiana*** Piper [HC, HC2]

Bot. Gaz. 22(6): 489-490.

Wenatchee valerian

***Valeriana dioica*** L. [HC, HC2]

woodland valerian

var. ***sylvatica*** S. Watson [HC, HC2]

Botany Fortieth Parallel 136.

northern valerian

*Valeriana dioica* L. ssp. *sylvatica* (S. Watson) F.G. Mey.

***Valeriana edulis*** Nutt. ex Torr. & A. Gray [HC, HC2]

tobacco-root, edible valerian

var. ***edulis*** [HC, HC2]

Fl. N. Amer. 2(1): 48.

tobacco root

***Valeriana occidentalis*** A. Heller [HC, HC2]

Bulletin of the Torrey Botanical Club 25(5): 269-270.

small-flower valerian, western valerian

***Valeriana officinalis*** L. [HC, HC2]

Sp. Pl. 1: 31-32.

allheal, garden heliotrope

***Valeriana scouleri*** Rydb. [HC, HC2]

Mem. New York Bot. Gard. 1: 377.

Scouler's valerian

*Valeriana sitchensis* Bong. ssp. *scouleri* (Rydb.) F.G. Mey.

*Valeriana sitchensis* Bong. var. *scouleri* (Rydb.) M.E. Jones

***Valeriana sitchensis*** Bong. [HC, HC2]

Mém. Acad. Imp. Sci. Saint Pétersbourg (Sér. 7) 2(2): 145-146.

Sitka valerian

*Valeriana sitchensis* Bong. var. *hookeri* (Shuttlew.) G.N. Jones  
*Valeriana sitchensis* Bong. var. *sitchensis*

**Valerianella** [HC, HC2]

corn-salad, valerianella

*Valerianella carinata* Loisel. [HC, HC2]

Not. Fl. France 149.

keel-fruit cornsalad

*Valerianella locusta* (L.) Laterr. [HC, HC2]

Sp. Pl. 1: 33-34.

lamb's-lettuce

*Valerianella oitoria* (L.) Pollich

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## Verbenaceae [HC, HC2] Verbenaceae Family

**Synonyms:** (none)

**References:** (none)

**Verbena** [HC, HC2]

verbena, vervain

*Verbena xbingenensis* Moldenke

Not in HC

*Verbena bonariensis* L. [HC2]

purpletop vervain

*Verbena bracteata* Lag. & Rodr. [HC, HC2]

Anales Ci. Nat. 4(12): 260-261.

carpet vervain

*Verbena bracteosa* Michx.

HC calls this taxa a native American weed

*Verbena hastata* L. [HC, HC2]

Sp. Pl. 1: 20.

wild hyssop, blue verbena

*Verbena hastata* L. var. *scabra* Moldenke [KZ99]

*Verbena officinalis* L. [HC2]

Sp. Pl. 1: 20.

herb of the cross, European vervain

*Verbena stricta* Vent. [HC, HC2]

Descr. Pl. Nouv. pl. 53.

hoary vervain

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## Violaceae [HC, HC2] Violet Family

**Synonyms:** (none)

There is no single contemporary resource for the taxonomy and floristics of the genus *Viola* in Washington. As a result, the treatment here lacks a consistent taxonomic concept for what occurs in the state. Considerable work has been done on *Viola* since H&C, rendering that resource largely obsolete. The Jepson Manual and Jepson Manual,

2nd Edition contain contemporary treatments based on the work of John Little, however many *Viola* taxa in WA do not occur in California. The Illustrated Flora of British Columbia treatment has been referenced here where possible, but it too does not contain treatments for all of the WA *Viola* taxa.

**References:** (none)

***Viola*** [HC, HC2]

pansy, violet

***Viola adunca*** Sm. [HC, HC2]

early blue violet

*Viola adunca* Sm. ssp. *adunca* [JPM2]

*Viola adunca* Sm. var. *adunca* [HC, IFBC]

*Viola adunca* Sm. var. *bellidifolia* (Greene) H.D. Harr. [HC]

*Viola adunca* Sm. var. *cascadensis* (M.S. Baker) C.L. Hitchc. [HC]

*Viola adunca* Sm. var. *uncinulata* (Greene) C.L. Hitchc. [HC]

***Viola arvensis*** Murray [HC, HC2]

Prodr. Stirp. Gott. 73.

European field pansy

*Viola tricolor* L. var. *arvensis* (Murray) DC.

***Viola canadensis*** L. [HC, HC2]

Sp. Pl. 2: 936.

var. ***rugulosa*** (Greene) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 442.

Canada violet

*Viola canadensis* L. ssp. *rydbergii* (Greene) House

*Viola rugulosa* Greene

*Viola rydbergii* Greene

***Viola flettii*** Piper [HC, HC2]

Erythea 6(7): 69.

Flett's violet, Olympic violet

***Viola glabella*** Nutt. [HC, HC2]

Fl. N. Amer. 1(1): 142.

pioneer violet

***Viola howellii*** A. Gray [HC, HC2]

Proceedings of the American Academy of Arts and Sciences 22(2): 308.

Howell's violet

***Viola lanceolata*** L. [HC, HC2]

Sp. Pl. 2: 934.

lance-leaved violet

*Viola lanceolata* L. ssp. *lanceolata* [KZ99]

***Viola langsдорffii*** Fisch. ex Ging. [HC2]

Aleutian violet

*Viola langsдорffii* Fisch. ex Ging. [HC], orthographic variant

*Viola simulata* M.S. Baker

*Viola superba* M.S. Baker

***Viola macloskeyi*** F.E. Lloyd [HC, HC2, JPM2]

small white violet

*Viola macloskeyi* F.E. Lloyd ssp. *macloskeyi*

*Viola macloskeyi* F.E. Lloyd ssp. *pallens* (Banks ex Ging.) M.S. Baker [KZ99]

*Viola macloskeyi* Lloyd var. *macloskeyi* [HC]

*Viola macloskeyi* F.E. Lloyd var. *pallens* (Banks ex Ging.) C.L. Hitchc. [HC]

***Viola nephrophylla*** Greene [HC, HC2, JPM2]

Pittonia 3(15D): 144-145.

LeConte violet, northern bog violet

*Viola nephrophylla* Greene var. *cognata* (Greene) C.L. Hitchc. [HC]

*Viola nephrophylla* Greene var. *nephrophylla* [HC]

*Viola sororia* Willd. ssp. *affinis* (Leconte) R.J. Little [JPM]

*Viola sororia* Willd. var. *affinis* (Leconte) L.E. McKinney

***Viola nuttallii*** Pursh [HC, HC2]

Nuttall's violet

var. ***bakeri*** (Greene) C.L. Hitchc. [HC, HC2]

Vasc. Pl. Pacific NW 3: 447.

Baker violet, Baker's violet

*Viola bakeri* Greene [JPM]

var. ***praemorsa*** (Douglas ex Lindl.) S. Watson [HC, HC2]

canary violet, upland yellow violet, yellow montane violet

*Viola linguifolia* Nutt.

*Viola nuttallii* Pursh ssp. *praemorsa* (Douglas ex Lindl.) Piper

*Viola nuttallii* Pursh var. *linguifolia* (Nutt.) Jeps.

*Viola praemorsa* Douglas ex Lindl.

*Viola praemorsa* Douglas ex Lindl. ssp. *arida* M.S. Baker

*Viola praemorsa* Douglas ex Lindl. ssp. *flavovirens* (Pollard) Fabijan

*Viola praemorsa* Douglas ex Lindl. ssp. *linguifolia* (Nutt.) M.S. Baker & J.C. Clausen ex M. Peck [JPM]

*Viola praemorsa* Douglas ex Lindl. ssp. *oregona* M.S. Baker

*Viola praemorsa* Douglas ex Lindl. ssp. *praemorsa* [JPM, IFBC]

*Viola praemorsa* Douglas ex Lindl. var. *altior* Blank.

*Viola praemorsa* Douglas ex Lindl. var. *linguifolia* (Nutt.) M. Peck

var. ***vallicola*** (A. Nelson) H. St. John [HC, HC2]

valley violet, yellow sagebrush violet

*Viola nuttallii* Pursh ssp. *vallicola* (A. Nelson) Roy L. Taylor & MacBryde

*Viola nuttallii* Pursh var. *major* Hook. [HC]

*Viola vallicola* A. Nelson var. *major* (Hook.) Fabijan [IFBC]

*Viola vallicola* A. Nelson var. *vallicola* [KZ99]

***Viola odorata*** L. [HC2, IFBC, JPM]

Sp. Pl. 2: 934.

sweet blue violet

Not in H&C.

***Viola orbiculata*** Geyer ex Holz. [HC, HC2]

London Journal of Botany 6: 73

darkwoods violet, evergreen yellow violet, round-leaved violet

*Viola sempervirens* Greene var. *orbiculata* (Geyer ex Holz.) J.K. Henry

*Viola sempervirens* Greene var. *orbiculoides* M.S. Baker

***Viola palustris*** L. [HC, HC2]

Sp. Pl. 2: 934.

marsh violet

*Viola palustris* L. var. *brevipes* (M.S. Baker) R.J. Davis [KZ99]

*Viola palustris* L. var. *palustris* [KZ99]

***Viola purpurea*** Kellogg [HC, HC2]

ssp. ***venosa*** (S. Watson) M.S. Baker & J.C. Clausen [HC2, KZ99]

goosfoot violet, purplish violet

*Viola purpurea* Kellogg var. *venosa* (S. Watson) Brainerd [HC]

- Viola renifolia*** A. Gray [HC, HC2]  
Proc. Amer. Acad. Arts 8: 288.  
kidney-leaf white violet  
*Viola renifolia* A. Gray var. *brainerdii* (Greene) Fernald
- Viola riviniana*** Rchb. [HC2]  
Iconogr. Bot. Pl. Crit. 1: 81?82, pl. 95.  
dog violet, wood violet
- Viola selkirkii*** Pursh ex Goldie [HC2, IFBC]  
Edinburgh Philos. J. 6(12): 324.  
great spurred violet, Selkirk's violet  
Not in H&C.
- Viola sempervirens*** Greene [HC, HC2]  
Pittonia 4(20A): 8.  
evergreen violet, redwood violet
- Viola sheltonii*** Torr. [HC, HC2]  
Pacif. Railr. Rep. 4(5): 67, pl. 2.  
fan violet, shelton's violet
- Viola sororia*** Willd. [HC2]  
northern woodland violet  
*Viola septentrionalis* Greene [HC]
- Viola tricolor*** L. [HC2, JPM]  
Sp. Pl. 2: 935-936.  
Johnny jump-up  
ssp. *tricolor* [HC2]
- Viola trinervata*** (Howell) Howell ex A. Gray [HC, HC2]  
Bot. Gaz. 11(11): 290.  
3-nerved violet, Rainier violet, sagebrush violet
- Viola xwittrockiana*** Gams. [HC2]
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## Viscaceae (see Santalaceae)

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## Vitaceae [HC, HC2] Grape Family

**Synonyms:** (none)

**References:** (none)

### ***Parthenocissus*** [HC2]

Virginia creeper, woodbine

### ***Parthenocissus vitacea*** (Knerr) Hitchc. [HC2, JPM2]

Key Spring Fl. Manhattan 26.  
thicket-creeper

*Parthenocissus inserta* (Kern.) Fritsch, misapplied  
Draft FNA treatment

*Parthenocissus quinquefolia* (L.) Planch., misapplied  
Draft FNA treatment

Not in H&C.

***Vitis*** [HC, HC2]

grape, grape-vine

*Vitis labrusca* L. [HC2]

fox grape-vine

*Vitis riparia* Michx. [HC, HC2]

Fl. Bor.-Amer. 2: 231.

river-bank grape

*Vitis vinifera* L. [HC, HC2]

Sp. Pl. 1: 202.

European grape

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## **Zygophyllaceae** [HC, HC2] Creosote-Bush Family

**Synonyms:** (none)

**References:**

- \* Sheahan, M. C. and M. W. Chase. 1996. A phylogenetic analysis of Zygophyllaceae R.Br. based on morphological, anatomical and rbcL DNA sequence data. Bot. J. Linn. Soc. 122: 279?300.

***Tribulus*** [HC, HC2]

ground bur-nut, land caltrop, puncture-vine

*Tribulus terrestris* L. [HC, HC2]

puncture vine

Noxious

***Zygophyllum*** [HC, HC2]

bean-caper

*Zygophyllum fabago* L. [HC, HC2]

Syrian bean-caper

Noxious

# Monocots:

## Acoraceae [FNA22, HC2] Sweet Flag Family

**Synonyms:** (none)

FNA22: "Acorus historically was recognized as an aberrant genus within Araceae, but much evidence supports its treatment as a separate family and the removal of this family from Arales (M. H. Grayum 1987). Other than the absence of a close association with Arales, the phylogenetic affinities of Acoraceae remain unclear. Evidence based on DNA sequences fails to show any close relationships between Acorus and other genera, and instead supports Acorus as the oldest extant lineage of monocotyledons (M. R. Duvall et al. 1993). The removal of Acorus from Araceae is supported by the absence of a spathe and the unique vasculature of the structure traditionally interpreted as a spathe (T. S. Ray 1987). The structure that has been called a spathe in Acorus is not morphologically equivalent to the spathe of Araceae; instead it is interpreted as the distal part of the sympodial leaf. The proximal part of the sympodial leaf is adnate to the peduncle, forming a 3-angled axis that bears the inflorescence.

**References:**

- \* Grayum, M. H. 1987. A summary of evidence and arguments supporting the removal of Acorus from the Araceae. *Taxon* 36: 723-729.
- \* Thompson, S. A. 1995. Systematics and Biology of the Araceae and Acoraceae of Temperate North America. Ph.D. dissertation. University of Illinois. Urbana-Champaign.

### **Acorus** [FNA22, HC, HC2]

Sp. Pl. 1: 324. 1753; Gen. Pl. ed. 5; 151, 1754.  
sweet flag

#### **Acorus americanus** (Raf.) Raf. [FNA22, HC2]

New Flora and Botany of North America. 1: 57. 1836.  
American sweetflag, several-vein sweetflag

*Acorus calamus* L. var. *americanus* Raf.  
*Acorus calamus* L. var. *americanus* H. Wulff

Known only from Spokane Co. Taxonomy follows FNA, distinguishing North American and Eurasian taxa at the species level. They differ in their chromosome level, fertility, and leaf venation.

- \* Packer, J. G. and G. S. Ringius. 1984. The distribution and status of Acorus (Araceae) in Canada. *Canad. Journal of Botany* 62: 2248-2252.

#### **Acorus calamus** L. [FNA22, HC, HC2]

Sp. Pl. 1: 324. 1753.  
sweet flag

Recently collected in Clark Co.

- \* Christy, J. A. 1994. Noteworthy collections, Washington. *Madrone* 41: 332.

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## Agavaceae (see Asparagaceae)

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## Alismataceae [FNA22, HC, HC2] Water-Plantain Family

**Synonyms:**

Limnocharitaceae [FNA22]

Taxonomy follows FNA Vol. 22.

**References:** (none)

***Alisma*** [FNA22, HC, HC2]

Sp. Pl. 1: 343. 1753; Gen. Pl. ed. 5; 160, 1754.  
water-plantain

***Alisma gramineum*** Lej. [FNA22, HC, HC2]

Flore des Environs de Spa. 1: 175. 1811.  
grass-leaved water-plantain, narrow-leaf water-plantain

*Alisma geyeri* Torr. [Abrams]

*Alisma gramineum* Lej. var. *angustissimum* (DC.) Hendricks [HC]

*Alisma gramineum* Lej. var. *gramineum* [HC]

***Alisma plantago-aquatica*** L. [FNA22, HC, HC2]

Sp. Pl. 1: 342. 1753.  
European water-plantain  
(see also *Alisma triviale*)

*Alisma plantago-aquatica* L. var. *plantago-aquatica* [HC]

Introduced to western Washington and southwest British Columbia. FNA 22: "The name *Alisma plantago-aquatica* has been used in a variety of North American floras. We are following, however, the treatment of I. Björkqvist (1968), in which the native distribution of *A. plantago-aquatica* is restricted to Eurasia."

***Alisma triviale*** Pursh [FNA22, HC2]

Flora Americae Septentrionalis. 1: 252. 1814.  
northern water-plantain

*Alisma plantago-aquatica* L. var. *americanum* Schult. & Schult. f. [HC]

Spelling corrected from *A. trivialis* Pursh in FNA. Historically specimens of this species have been incorrectly assigned the name *Alisma plantago-aquatica*, which is a misapplied name. *A. plantago-aquatica* is restricted in distribution to Eurasia, with a few introduced populations reported from Alaska.

***Damasonium*** [FNA22, HC2]

The Gardeners Dictionary (fourth edition). 1: 28. 1754.  
damasonium, fringed water-plantain, star water-plantain

*Machaerocarpus* [HC]

***Damasonium californicum*** Torr. [FNA22, HC2]

Plantas Hartwegianas imprimis Mexicanas. .. 341. 1857.  
fringed water-plantain, star water-plantain

*Machaerocarpus californicus* (Torr.) Small [HC]

Kz99 gives authorities as Torr. ex Benth., here we follow FNA Vol. 22 and FPNW usage of Torr. in Benth. Recently collected in the Columbia Basin.

***Sagittaria*** [FNA22, HC, HC2]

Sp. Pl. 2: 993. 1753; Gen. Pl. ed. 5; 429, 1754.  
arrowhead

***Sagittaria cuneata*** E. Sheldon [FNA22, HC, HC2]

Bulletin of the Torrey Botanical Club. 20:283, plate 159. 1893.  
arumleaf arrowhead, northern arrowhead, *Sagittaria cuneata*, wapato

*Sagittaria arifolia* Nutt. ex J.G. Sm.

Buckingham et al. (1995) consider this escaped and not native on the Olympic Penin., perhaps based on FPNW stating it is not known W of the Cascades Mts.

***Sagittaria graminea*** Michx. [FNA22, HC2]

Flora Boreali-Americana. 2: 190. 1803.  
grassy arrowhead

ssp. *graminea* [FNA22, HC2]

Flora Boreali-Americana. 2: 190.

*Sagittaria cycloptera* (J.G. Sm.) C. Mohr

*Sagittaria eatonii* J.G. Sm.

*Sagittaria graminea* Michx. var. *graminea* [KZ99]

*Sagittaria macrocarpa* J.G. Sm.

recently collected in WA, cited in FNA Vol. 22

***Sagittaria latifolia*** Willd. [FNA22, HC, HC2]

Sp. Pl. 4(1): 409. 1805.

common arrowhead, duck potato, wapato

*Sagittaria esculenta* Howell

*Sagittaria latifolia* Willd. var. *obtusa* (Muhl.) Wiegand

*Sagittaria latifolia* Willd. var. *pubescens* (Engelm.) J.G. Sm.

taxonomy follows FNA Vol. 22, lumping all varieties Kz99 report of *Baldellia ranunculoides* (L.) Parl. (*Echinodorus ranunculoides* (L.) Engelm. misapplied in H&C) apparently belongs here

***Sagittaria platyphylla*** (Engelm.) J.G. Sm. [FNA22, HC2]

N. Amer. *Sagittaria*. 29. 1894.

delta arrowhead

*Sagittaria graminea* Michx. var. *platyphylla* Engelm.

FNA22: "*Sagittaria platyphylla* has been accepted at the variety level, i.e., *Sagittaria graminea* var. *platyphylla* (C. Bogin 1955; J. W. Wooten 1973; E. O. Beal et al. 1982). After studying dozens of populations in the field from much of its range and hundreds of herbarium specimens, we have concluded that this taxon should be recognized at the specific level instead, a conclusion supported by cladistic analyses of morphologic characters (R. M. Kortright 1998)"

\* Kortright, R. M. 1998. The Aquatic Plant Genus *Sagittaria* (Alismataceae): Phylogeny Based on Morphology. M.S. thesis. University of Alabama.

***Sagittaria rigida*** Pursh [FNA22, HC2]

Flora Americae Septentrionalis. 2: 397. 1814.

sessile-fruited arrowhead

reported in FNA Vol. 22, mapped in nw. WA

***Sagittaria subulata*** (L.) Buchenau [FNA22, HC, HC2]

Abhandlungen herausgegeben vom naturwissenschaftlichen Vereine zu Bremen. 2: 490. 1871.

awl-leaf arrowhead

taxonomy follows FNA Vol. 22 and lumps all varieties

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## Alstroemeriaceae Peruvian Lily Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

***Alstroemeria*** [FNA26]

Pl. Alströmeria. 8. 1762.

*Alstroemeria aurea* Graham

In Edinb. Phil. Journ. 181.

Peruvian lily

Spreading from cultivation in Seattle, but not naturalized; not in H&C.

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## Amaryllidaceae [HC2] Amaryllis Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

### *Allium* [FNA26, HC, HC2]

Sp. Pl. 1: 294. 1753; Gen. Pl. ed. 5, 143. 1754.

garlic, onion

#### *Allium acuminatum* Hook. [FNA26, HC, HC2]

Fl. Bor.-Amer. 2: 184, plate 196. 1838.

taper-tip onion

*Allium acuminatum* Hook. var. *cuspidatum* Fernald

*Allium cuspidatum* (Fernald) Rydb.

#### *Allium amplexans* Torr. [FNA26, HC, HC2]

Pacif. Railr. Rep. 4(5): 148. 1857.

narrow-leaf onion

*Allium acuminatum* Hook. var. *gracile* Alph. Wood

*Allium attenuifolium* Kellogg

*Allium attenuifolium* Kellogg var. *monospermum* (Jeps.) Jeps.

*Allium monospermum* Jeps.

*Allium occidentale* A. Gray

*Allium serratum* S. Watson

FNA26: "All three chromosome races of *Allium amplexans* are widespread. The triploids are achiasmatic, causing a breakdown in the first meiotic division. This is followed by a normal second division resulting in pollen dyads that are, presumably, nonfunctional; seeds are produced by apomixis. The diploids and tetraploids produce normal pollen, in tetrads, that appears to be functional."

#### *Allium campanulatum* S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 14: 231. 1879.

rosy Sierra onion

*Allium austinae* M.E. Jones

*Allium bidwelliae* S. Watson

*Allium campanulatum* S. Watson var. *bidwelliae* (S. Watson) Jeps.

Not listed in WA by FNA.

#### *Allium cepa* L. [FNA26, HC2]

Sp. Pl. 1: 301. 1753.

cultivated onion

FNA26: "The onion of commerce, *Allium cepa* is widely cultivated as a biennial in North America, Europe, and Asia. It is unknown in the wild and is probably derived from *A. oschanini* of central Asia. The cultivated form is often polyploid ( $2n = 16, 32, 54$ ) and possibly of hybrid origin. It exists in numerous cultivars, a few of which form large bulbils in the umbel."

#### *Allium cernuum* Roth [FNA26, HC, HC2]

Arch. Bot. (Leipzig). 1: 40. 1798.

nodding onion

*Allium allegheniense* Small

*Allium oxyphilum* Wherry  
*Allium recurvatum* Rydb.

FNA26 "Allium cernuum is the most widespread North American species of the genus. It is closely related to *A. stellatum*, and the character commonly used to differentiate them has been umbel orientation. In both species, the inflorescence is nodding in bud, but in *A. stellatum* it usually becomes erect by anthesis. In *A. cernuum* the peduncle remains permanently recurved near the apex, although the inflorescence may sometimes become erect overall, or nearly so. While this character is helpful in identification, an almost exclusive reliance on it (even by one of the present authors in his youth) has obscured other clearer distinctions between the species and has confused their geographic ranges. More reliable characters for differentiating these species are bulb shape (elongate in *A. cernuum*, ovoid in *A. stellatum*) and perianth shape (campanulate in *A. cernuum*, stellate in *A. stellatum*). Unfortunately, perianth shape is often difficult to see in herbarium specimens."

***Allium columbianum*** (Ownbey & Mingrone) P. M. Peterson, Annable & Rieseberg [FNA26, HC2]

Syst. Bot. 13: 211. 1988.  
Columbia onion

*Allium douglasii* Hook. var. *columbianum* Ownbey & Mingrone [HC]

***Allium constrictum*** (Ownbey & Mingrone) P. M. Peterson, Annable & Rieseberg [FNA26, HC2]

Syst. Bot. 13: 211. 1988.  
Grand Coulee onion

*Allium douglasii* Hook. var. *constrictum* Ownbey & Mingrone [HC]

Endemic to WA - Douglas, Grant, and Lincoln counties.

***Allium crenulatum*** Wiegand [FNA26, HC, HC2]

Bull. Torrey Bot. Club. 26: 135, plate 355, fig. 1. 1899.  
Olympic onion, scalloped onion

*Allium cascadenense* M. Peck  
*Allium vancouverense* J. Macoun  
*Allium watsonii* Howell

FNA26: "Allium crenulatum is known only from west of the Cascade Mountains from Vancouver Island to southwestern Oregon, in Jefferson Park, Oregon, and in the Wenatchee Mountains, central Washington. The disjunct populations of Allium crenulatum in western Oregon are markedly different among themselves and from the more typical representatives to the north. It has thus far proven impossible to draw meaningful taxonomic distinctions among these populations, hence we have followed historical precedent and have placed them all in a single, highly variable species."

***Allium dictuon*** H. St. John [FNA26, HC, HC2]

Proc. Biol. Soc. Wash. 50: 3, fig. 1. 1937.  
Blue Mountain onion

Endemic to WA. FNA26: *A. dictuon* "differs from *A. acuminatum* by its rhizomatous habit, in which it resembles *A. bolanderi*, and in the cellular pattern on the inner bulb coats."

***Allium douglasii*** Hook. [FNA26, HC, HC2]

Fl. Bor.-Amer. 2: 184, plate 197. 1838.  
Douglas' onion

(see also *Allium columbianum*, *Allium constrictum*, *Allium nevirii*)

*Allium douglasii* Hook. var. *douglasii* [HC]

***Allium fibrillum*** M.E. Jones ex Abrams [FNA26, HC, HC2]

Ill. Fl. Pacific States. 1: 393. 1923.  
Cuddy Mountain onion, fringed onion

We follow FNA with the authority M.E. Jones ex Abrams.

***Allium geyeri*** S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 14: 227. 1879.  
Geyer's onion

var. ***geyeri*** [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 14: 227.  
Geyer's onion

*Allium dictyotum* Greene  
*Allium funiculosum* A. Nelson  
*Allium pikeanum* Rydb.

var. **tenerum** M.E. Jones [FNA26, HC, HC2]

Contr. W. Bot. 10: 28, fig. 55. 1902.  
Rydberg's onion

*Allium arenicola* Osterh., homonym (illegitimate)  
*Allium fibrosum* Rydb.  
*Allium geyeri* S. Watson var. *graniferum* Hend.  
*Allium rubrum* Osterh.  
*Allium rydbergii* J.F. Macbr.  
*Allium sabulicola* Osterh.

**Allium macrum** S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 14: 233. 1879.  
rock onion

**Allium nevii** S. Watson [FNA26, HC2]

Proc. Amer. Acad. Arts. 14: 231. 1879.  
Nevius's garlic, Nevius's onion

*Allium douglasii* Hook. var. *nevii* (S. Watson) Ownbey & Mingrone [HC]

**Allium nigrum** L. [FNA26, HC, HC2]

Sp. Pl., ed. 2. 1: 430. 1762.  
black garlic, Homer's garlic

**Allium robinsonii** L.F. Hend. [FNA26, HC, HC2]

Rhodora. 32: 22. 1930.  
Robinson's onion

FNA26: "Allium robinsonii has been found along the Columbia River from Ferry County, northeastern Washington, to about the mouth of the John Day River, north-central Oregon, and is now possibly extirpated from Oregon."

**Allium sativum** L. [FNA26, HC2, Stace 1997]

Sp. Pl. 1: 296. 1753.  
cultivated garlic

var. **sativum** [FNA26, HC2]

Sp. Pl. 1: 296.  
garlic

Taxonomy follows FNA; recently collected wild in a hedgerow in Kitsap Co., but not naturalized; a garden plant rarely producing seed. Similar collections of *Allium carinatum* L., *Allium triquetrum* L, and *Allium tuberosum* Rottl. ex Spreng. are from plants spreading slightly from cultivation in irrigated areas in King Co., and are not naturalized.

**Allium schoenoprasum** L. [FNA26, HC, HC2]

Sp. Pl. 1: 301. 1753.  
chives

*Allium schoenoprasum* L. var. *laurentianum* Fernald  
*Allium schoenoprasum* L. var. *schoenoprasum* [KZ99]  
*Allium schoenoprasum* L. var. *sibiricum* (L.) Hartm. [KZ99]  
*Allium sibiricum* L.

Taxonomy follows FNA; native races on shorelines in Washington are not easily separable from introduced (European) garden material that occasionally escapes. Characters based on plant size, tepal shape or color are unstable. FNA26: "Allium schoenoprasum is native in North America, but it is also cultivated and has widely escaped. It is an extremely polymorphic species, and throughout its range both large and small races occur. These plants have been known as *A. sibiricum*, *A. schoenoprasum* var. *sibiricum*, or *A.*

schoenoprasum var. laurentianum, and many, largely unsuccessful, attempts have been made to distinguish the varieties. Until the variation can be worked out along natural lines, if any, instead of unstable features such as plant size, and color and shape of the tepals, recognition of these varieties is unsound. Because we are unable to separate native populations from many of the escaped ones, we cannot reliably map the native distribution of this taxon in the flora."

\* Tardiff, B. and P. Morisset. 1990. Clinal morphological variation of *Allium schoenoprasum* in eastern North America. Taxon 39: 417-429.

***Allium scilloides*** Douglas ex S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 14: 229. 1879.

fragile onion, scilla-like onion

Endemic to WA.

***Allium textile*** A. Nelson & J.F. Macbr. [FNA26, HC, HC2]

Bot. Gaz. 56: 470. 1913.

textile onion, white wild onion

*Allium aridum* Rydb.

*Allium reticulatum* Fraser ex G. Don

*Allium reticulatum* Fraser ex G. Don var. *playanum* M.E. Jones

FNA26 includes WA within the range of this species, however H&C does not include WA within the range.

***Allium tolmiei*** Baker [FNA26, HC, HC2]

Bot. Mag. 32: under plate 6227. 1876.

Tolmie's onion

var. ***tolmiej*** [FNA26, HC, HC2]

Bot. Mag. 32: under plate 6227.

Tolmie's onion

*Allium anceps* Kellogg var. *aberrans* M.E. Jones

*Allium cusickii* S. Watson

*Allium douglasii* Hook. var. *tolmiei* (Baker) Traub

*Allium idahoense* Traub

*Allium platyphyllum* Tidestr.

*Allium pleianthum* S. Watson [HC]

*Allium tolmiei* Baker var. *platyphyllum* (Tidestr.) Ownbey [HC]

FNA states the authority is Baker, not Baker ex S. Watson, contrary to H&C.

***Allium triquetrum*** L. [FNA26, HC2]

Sp. Pl. 1: 300. 1753.

three-corner leek

***Allium tuberosum*** Rottler ex Spreng. [FNA26, HC2]

Syst. Veg. 2: 38. 1825.

***Allium ursinum*** L. [HC2]

***Allium validum*** S. Watson [FNA26, HC, HC2]

Botany (Fortieth Parallel). 350. 1871.

Pacific onion, swamp onion

FNA26: "*Allium validum* is a Cascade-Sierran species extending east to northeastern Nevada, eastern Oregon, and western Idaho."

***Allium vineale*** L. [FNA26, HC, HC2]

Sp. Pl. 1: 299. 1753.

wild chives, crow garlic, wild garlic

*Allium vineale* L. ssp. *vineale* [KZ99]

Recently collected at several sites in Seattle, King Co. FNA26: "It is a noxious weed, apparently introduced from Europe in colonial times. The small, wheat-sized bulbils frequently contaminated wheat grown in infested areas. Bread made from such wheat was garlic-flavored, and cows grazing in infested pastures

produce garlic-flavored milk."

***Galanthus*** [FNA26, HC2]

Sp. Pl. 1: 288. 1753; Gen. Pl. ed. 5, 140. 1754.

*Galanthus nivalis* L. [FNA26, HC2]

Sp. Pl. 1: 288. 1753.

snowdrop

Recently collected as a garden escape, in Clallam and King Cos., not in H&C

***Leucojum*** [FNA26, HC2]

Sp. Pl. 1: 289. 1753; Gen. Pl. ed. 5, 140. 1754.

*Leucojum aestivum* L. [FNA26, HC2]

Syst. Nat. ed. 10. 2: 975. 1759.

summer snowflake

*Leucojum aestivum* L. ssp. *aestivum* [Stace 1997]

Recently collected as a garden escape in King Co.; not in H&C.

***Narcissus*** [FNA26, HC2]

Sp. Pl. 1: 289. 1753; Gen. Pl. ed. 5, 141. 1754.

daffodil, narcissus

*Narcissus x incomparabilis* Mill. [FNA26, HC2]

Gard. Dict., ed. 8. n. 3.

nonesuch daffodil, hybrid daffodil

Not in H&C; recently collected as a garden escape in Cowlitz, King, Pierce, and San Juan Cos.

*Narcissus poeticus* L. [FNA26, HC2]

Sp. Pl. 1: 289. 1753.

pheasant's eye narcissus, poet's narcissus

Not in H&C; recently collected as a garden escape in Clallam Co.

*Narcissus pseudonarcissus* L. [FNA26, HC2]

Sp. Pl. 1: 289. 1753 (as pseudo narcissus).

daffodil

Not in H&C; recently collected as a garden escape in several counties west of the Cascades.

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## Araceae [FNA22, HC, HC2] Arum Family

**Synonyms:**

Lemnaceae [FNA22, HC] (Duckweed Family)

**References:** (none)

***Arum*** [HC2]

lords-and-ladies

*Arum italicum* Mill. [HC2, JPM]

Gard. Dict. (ed. 8) 8: 2.

large cuckoo pint

Spread from cultivation in King Co. and San Juan Co.

***Dracunculus*** [HC2]

*Dracunculus vulgaris* Schott [HC2]

**Lemna** [FNA22, HC, HC2]

Sp. Pl. 2: 970. 1753; Gen. Pl. ed. 5; 417, 1754.

duckweed

**Lemna minor** L. [FNA22, HC, HC2]

Sp. Pl. 2: 970. 1753.

common duckweed, lesser duckweed, water lentil

This species has often been misidentified. Many specimens previously identified as *L. minor* are in fact *L. turionifera*, which apparently is far more common in Washington than *L. minor*.

**Lemna minuta** Kunth [FNA22, HC2]

Nov. Gen. Sp. 1: 372. 1816.

least duckweed

*Lemna minima* Phil. [Abrams], invalid name

*Lemna minuscula* Herter [JPM]

See Intermountain Flora Volume 6 for discussion of synonymy and correct authors.

**Lemna trisulca** L. [FNA22, HC, HC2]

Sp. Pl. 2: 970. 1753.

ivy duckweed, ivy-leaved duckweed, star duckweed

**Lemna turionifera** Landolt [FNA22, HC2]

Aquatic Botany. 1: 355, fig. 4g?h. 1975.

turion duckweed

Taxonomy disputed, and some authors include this in *Lemna minor* (e.g., BCIL6).

**Lysichiton** [FNA22, HC2]

Oesterreichisches Botanisches Wochenblatt. 7: 62. 1857 (as *Lysichitum*).

skunk cabbage

*Lysichitum* [HC], orthographic variant

**Lysichiton americanus** Hultén & H. St. John [FNA22, HC2]

Svensk Botanisk Tidskrift. 25:455. 1931 (as *Lysichitum americanum*).

skunk cabbage, yellow skunk cabbage

*Lysichitum americanum* Hultén & H. St. John [HC], orthographic variant

originally published as *Lysichitum americanum*

**Peltandra** [FNA22, HC2]

Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts. 89:103. 1819.

[name conserved]

arrow arum

**Peltandra virginica** (L.) Schott [FNA22, HC2]

Meletemata Botanica. 19. 1832.

arrow arum, tuckahoe

*Arum virginicum* L.

A specimen of this species was sent to WTU in November 2007 by Jennifer Parsons from the Washington Department of Ecology. In the accompanying letter, she indicated that the population from which the collection was made may be eradicated by the local weed control coordinator.

**Spirodela** [FNA22, HC, HC2]

Linnaea. 13: 391. 1839.

greater duckweed

**Spirodela oligorrhiza** (Kurz) Hegelm. [HC2]

dotted duckmeat

*Landoltia punctata* (G. Mey.) Les & D.J. Crawford

*Spirodela punctata* (G. Mey.) C.H. Thomps. [FNA22]

Considered native in JPM, considered alien in FNA; recently reported from WA in FNA.

\* Novon 9: 530-533 (1999) describes *Landoltia*

***Spirodela polyrrhiza* (L.) Schleid. [HC, HC2]**

duckmeal, common duckmeat, greater duckweed

*Lemna polyrrhiza* L.

*Spirodela polyrrhiza* (L.) Schleid. [FNA22], orthographic variant

*Spirodela polyrrhiza* (L.) Schleid. var. *masonii* Daubs

***Wolffia* [FNA22, HC, HC2]**

Beitrage zur Botanik. 1: 233. 1844.

water-meal

***Wolffia borealis* (Engelm.) Landolt & Wildi ex Gandhi, Wiersema & Brouillet [FNA22, HC2]**

Ber. Geobot. Inst. ETH Stiftung Rubel. 44:137. 1977.

northern watermeal

FNA22: "The name *Wolffia punctata* has been applied to this species in error."

***Wolffia brasiliensis* Wedd. [FNA22, HC2]**

Annales des Sciences Naturelles, Botanique. sér. 3, 12: 170. 1849.

Brazilian watermeal

*Wolffia papulifera* C.H. Thomp.

*Wolffia punctata* Griseb. [HC]

***Wolffia columbiana* H. Karsten [FNA22, HC, HC2]**

Botanische Untersuchungen. [Landwirtschaftliche Lehranstalt. Physiologisches Laboratorium] Berlin. 1: 103, figs. 2g, 3g. 1865.

Columbian watermeal

\* Landolt, E. and Urbanska-Worytkiewicz K. 1980. List of the studied Lemnaceae samples: origin and chromosome numbers. Veröff. Geobot. Inst. Rübel Zürich 70: 205?247.

***Wolffiella* [FNA22, HC, HC2]**

Botanische Jahrbucher fur Systematik, Pflanzengeschichte und Pflanzengeographie. 21: 303. 1895.

***Wolffiella gladiata* (Hegelm.) Hegelm. [FNA22, HC2]**

Botanische Jahrbucher fur Systematik, Pflanzengeschichte und Pflanzengeographie. 21: 304. 1895.

sword bogmat, mud-midget

*Wolffia gladiata* Hegelm.

*Wolffiella floridana* (Donnell Sm.) C.H. Thomp. [HC]

*Wolffiella gladiata* (Hegelm.) Hegelm. var. *floridana* Donnell Sm.

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## Asparagaceae [HC2] Asparagus Family

**Synonyms:**

Agavaceae [FNA26]

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

***Asparagus* [FNA26, HC, HC2]**

Sp. Pl. 1: 313. 1753; Gen. Pl. ed. 5, 147. 1754.

asparagus

***Asparagus officinalis* L. [FNA26, HC, HC2]**

Sp. Pl. 1: 313. 1753.

asparagus

*Asparagus officinalis* L. ssp. *officinalis*  
*Asparagus officinalis* L. ssp. *prostratus* (Dumort.) Corb.

Taxonomy follows FNA, and does not recognize the subspecies in Stace (1997).

***Brodiaea*** [FNA26, HC, HC2]

Trans. Linn. Soc. London, Bot. 10: 2. 1811.

[name conserved]

brodiaea

(see also *Dichelostemma*, *Triteleia*)

***Brodiaea coronaria*** (Salisb.) Engl. [FNA26, HC, HC2, JPM2]

Notizbl. Königl. Bot. Gart. Berlin. 2: 317. 1899.

bluedick brodiaea, harvest brodiaea

*Brodiaea coronaria* (Salisb.) Engl. ssp. *coronaria* [FNA26]

*Brodiaea synandra* (A. Heller) Jeps.

FNA splits *B. coronaria* into two subspecies (ssp. *coronaria* and ssp. *rosea*), however the most recent treatment in Jepson Manual 2nd Edition elevates ssp. *rosea* to the rank of species. We follow that treatment here. See notes under *B. coronaria*.

***Brodiaea rosea*** (Greene) Baker [HC2]

Indian Valley brodiaea

*Brodiaea coronaria* (Salisb.) Engl. ssp. *rosea* (Greene) T.F.Niehaus [FNA26]

var. ***rosea*** [HC2]

Indian Valley brodiaea

*Brodiaea rosea* (Greene) Baker ssp. *rosea*

The original Jepson Manual (1951), Abrams's Illustrated Flora of the Pacific States, the most recent Jepson Manual (2012), and Preston (2013) all recognize *B. rosea* at the rank of species. The primary difference used by these authors to distinguish from *B. coronaria* is flower color (rose vs. violet-purple) and staminode shape (bottle-shape vs. oblong). Based on specimens at WTU flower color appears less reliable than staminode shape. Whether to treat this taxon at the rank of species, subspecies, or as a synonym of *B. coronaria* is unclear, however here we follow the predominant treatment for this taxon, which is to recognize it at the rank of species.

\* Preston, R.E. 2013. Systematic Botany, 38(4): 1012-1028.

***Camassia*** [FNA26, HC, HC2]

Edwards's Bot. Reg. 18: plate 1486. 1832.

[name conserved]

camas

***Camassia cusickii*** S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 22: 479. 1887.

Cusick's camas

Recently (2017) documented in Klickitat County.

***Camassia leichtlinii*** (Baker) S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 20: 376. 1885.

great camas

ssp. ***suksdorfii*** (Greenm.) Gould [FNA26, HC2]

Amer. Midl. Naturalist. 28: 723. 1942.

large camas

*Camassia leichtlinii* (Baker) S. Watson var. *suksdorfii* (Greenm.) C.L. Hitchc. [HC]

*Camassia suksdorfii* Greenm.

*Quamasia suksdorfii* (Greenm.) Piper

taxonomy follows FNA

***Camassia quamash*** (Pursh) Greene [FNA26, HC, HC2]

Man. Bot. San Francisco. 313. 1894.  
common camas

ssp. **azurea** (A. Heller) Gould [FNA26, HC2]

Amer. Midl. Naturalist. 28: 733. 1942.  
blue camas, prairie camas

*Camassia azurea* A. Heller

*Camassia quamash* (Pursh) Greene var. *azurea* (A. Heller) C.L. Hitchc. [HC]

Taxonomy follows FNA, endemic to WA; found west of the Cascades.

ssp. **breviflora** Gould [FNA26, HC2]

Amer. Midl. Naturalist. 28: 737, figs. 7, 10a, b. 1942.  
eastern camas

*Camassia quamash* (Pursh) Greene var. *breviflora* (Gould) C.L. Hitchc. [HC]

Taxonomy follows FNA; found east of the Cascades.

ssp. **maxima** Gould [FNA26, HC2]

Amer. Midl. Naturalist. 28: 732, fig. 7. 1942.  
dark camas, large camas

*Camassia quamash* (Pursh) Greene var. *maxima* (Gould) C.L. Hitchc. [HC, KZ99]

Found west of the Cascades.

ssp. **quamash** [FNA26, HC2]

Man. Bot. San Francisco. 313.  
common camas

*Camassia quamash* (Pursh) Greene ssp. *teapeae* (H. St. John) H. St. John [KZ99]

*Camassia quamash* (Pursh) Greene var. *quamash* [HC]

Found east of the Cascades.

\* Gould, F. W. 1942. A systematic treatment of the genus *Camassia* Lindl. American Midland Naturalist 28: 712-742.

**Convallaria** [FNA26, HC2]

Sp. Pl. 1: 314. 1753; Gen. Pl. ed. 5, 383. 1754.

*Convallaria majalis* L. [FNA26, HC2]

Sp. Pl. 1: 314. 1753.  
European lily-of-the-valley

Not in H&C; Need verification that this species is naturalized in WA Reported by KZ99, whose source is a Biek web site for the flora of Mt. Rainier. Biek (2000) says: "was listed in the National Park Service flora ... many years ago ornamental plantings may have persisted around buildings ... no herbarium material was found ... nor were plants found persisting in the field." No populations, no herbarium specimens, so the species is deleted from the WA flora.

var. *majalis* [FNA26, HC2]

**Dichelostemma** [FNA26, HC2]

Enum. Pl. 4: 469. 1843.  
snake-lily

*Dichelostemma congestum* (Sm.) Kunth [FNA26, HC2]

Enum. Pl. 4: 470. 1843.  
ookow, northern saitas

*Brodiaea congesta* Sm. [HC]

*Hookera congesta* (Sm.) Jeps.

FNA26: "*Dichelostemma congestum* can be recognized by its congested racemose inflorescence and deeply bifid perianth appendages that stand away from the anthers to form a corona."

**Hyacinthoides** [FNA26, HC2]

Enum. 2. 1759.

bluebells

**Hyacinthoides xmassartiana** Geerinck [HC2]

hybrid bluebell

*Hyacinthoides xvariabilis* P.D. Sell [Stace 1997]

Not in H&C. Taxonomy follows FNA and Stace (1997). The genus *Hyacinthoides* is doubtfully distinct from *Scilla*; the morphology of *H. italica* is transitional, ambiguous, and it could be placed in either genus. For a key to the hybrid and its parents see Sell & Murrell (1996).

\* Sell, P.D. and G. Murrell. 1996. *Flora of Great Britain and Ireland*. Volume 5, Butomaceae - Orchidaceae. Cambridge Univ. Press, Cambridge, UK.

**Hyacinthoides non-scripta** (L.) Chouard [FNA26, HC2]

Bull. Soc. Bot. France. 81: 625. 1934.

English bluebells

*Hyacinthoides nonscripta* (L.) Chouard, orthographic variant

**Maianthemum** [FNA26, HC, HC2]

Prim. Fl. Holsat. 14. 1780.

[name conserved]

false lily-of-the-valley, false Solomon's seal

*Smilacina* [HC]

**Maianthemum dilatatum** (Alph. Wood) A. Nelson & J.F. Macbr. [FNA26, HC, HC2]

Bot. Gaz. 61: 30. 1916.

wild lily-of-the-valley, may-lily, two-leaf false Solomon's-seal

*Maianthemum bifolium* (L.) F.W. Schmidt var. *dilatatum* Alph. Wood

*Maianthemum bifolium* (L.) F.W. Schmidt var. *kamtschaticum* (J.F. Gmel.) Jeps.

*Maianthemum kamtschaticum* (J.F. Gmel.) Nakai

*Unifolium dilatatum* (Alph. Wood) Greene

*Unifolium kamtschaticum* (J.F. Gmel.) Gorman

FNA26: "Variation in the gross morphology, karyology, and ecology of the North American populations has been documented (S. Kawano et al. 1971) and compared with that of disjunct populations in Japan (S. Kawano et al. 1968b)."

**Maianthemum racemosum** (L.) Link [FNA26, HC2]

Enum. Hort. Berol. Alt. 1: 343. 1821.

large false Solomon's seal, Solomon-plume, false spikenard

*Smilacina racemosa* (L.) Desf. [HC]

ssp. **amplexicaule** (Nutt.) LaFrankie [FNA26, HC2]

J. Arnold Arbor. 67: 418. 1986.

plumed Solomon's seal, plumed spikenard

*Maianthemum amplexicaule* (Nutt.) W.A. Weber

*Maianthemum racemosum* (L.) Link var. *amplexicaule* (Nutt.) Dorn

*Smilacina amplexicaulis* Nutt.

*Vagnera amplexicaulis* (Nutt.) Greene

**Maianthemum stellatum** (L.) Link [FNA26, HC2]

Enum. Hort. Berol. Alt. 1: 343. 1821.

star-flowered Solomon's-seal

*Convallaria stellata* L.

*Smilacina liliacea* (Greene) Wynd

*Smilacina sessilifolia* Nutt. ex Baker

*Smilacina stellata* (L.) Desf. [HC]

*Unifolium liliaceum* Greene

*Unifolium sessilifolium* (Nutt. ex Baker) Greene  
*Unifolium stellatum* (L.) Greene  
*Vagnera liliacea* (Greene) Rydb.  
*Vagnera sessilifolia* (Nutt. ex Baker) Greene  
*Vagnera stellata* (L.) Morong

**Muscari** [FNA26, HC2]

Gard. Dict. Abr., ed. 4 vol. 2. 1754.  
grape-hyacinth

*Muscari armeniacum* Leichtlin ex Baker [HC2, Stace 1997]

The Gardeners' Chronicle ser. 2, 9(2).  
garden grape-hyacinth

Recently collected as garden escapes in 5 counties in western WA.

*Muscari botryoides* (L.) Mill. [FNA26, HC2]

Gard. Dict., ed. 8 Muscari no. 1. 1768.  
common grape-hyacinth

*Muscari neglectum* Guss. ex Ten. [FNA26, HC2]

Syll. Pl. Fl. Neapol. App. 5: 13. 1842.  
grape-hyacinth

*Hyacinthus racemosus* L.

*Muscari atlanticum* Boiss. & Reut.

Recently collected as a garden escape in King Co. FNA26: "W. T. Stearn (1990) typified *Hyacinthus racemosus* and discussed the taxonomically different applications of that name and *Muscari racemosum*. The latter binomial, misattributed to (Linnaeus) Miller, sometimes has been used for what is correctly called *M. neglectum*."

**Ornithogalum** [FNA26, HC2]

Sp. Pl. 1: 306. 1753; Gen. Pl. ed. 5, 145. 1754.  
ornithogale, star-of-Bethlehem

*Ornithogalum angustifolium* Bor. [HC2]

*Ornithogalum nutans* L. [FNA26, HC2]

Sp. Pl. 1: 308. 1753.  
drooping star-of-bethlehem

Not in H&C; need verification that this taxon is naturalized in WA; reported by Richard Old (and Kz99). FNA26: "Though widely cultivated and naturalized, *Ornithogalum nutans* is not as common as *O. umbellatum*." Several collections from Oregon, but none from WA, BC, ID or MT. Considered excluded until presence in WA confirmed by a voucher.

*Ornithogalum umbellatum* L. [FNA26, HC2]

Sp. Pl. 1: 307. 1753.  
nap-at-noon, sleepydick

Not in H&C; need verification that this taxon is naturalized in WA; reported by FNA, Richard Old, and Kz99. FNA26: "Planted as a garden ornamental, *Ornithogalum umbellatum* produces many offsetting bulblets that are transported in soil and can become rampant weeds. Adding to the vegetative vigor of this species may be its aneuploid-polyploid karyology (T. W. J. Gadella and L. van Raamsdonk 1981; L. van Raamsdonk 1984). The flowers are noteworthy for their regularity in opening just before noon and closing again before sunset. Two digitalis-like glycosides, convallatoxin and convalloside, poisonous to humans and livestock, are found throughout the plant, but are concentrated in the bulbs and the flowers (W. H. Blackwell 1990; K. F. Lampe and M. A. McCann 1985; D. G. Spoerke Jr. and S. C. Smolinske 1990)."

**Triteleia** [FNA26, HC2]

Edwards's Bot. Reg. 15: under plate 1293. 1830.  
brodiaea, triplet-lily, triteleia

*Triteleia grandiflora* Lindl. [FNA26, HC2]

Edwards's Bot. Reg. 15: under plate 1293. 1830.  
blue-lily, Douglas' brodiaea, blue umber lily, large-flowered triteleia

var. **grandiflora** [HC2]

blue-lily, Douglas' brodiaea, blue umber lily, large-flowered triteleia

*Brodiaea douglasii* S. Watson [HC]

*Triteleia grandiflora* Lindl. ssp. *grandiflora* [JPM]

FNA26: "Triteleia grandiflora is the type species of the genus and, along with *T. hyacinthina*, is its most widely distributed member. Found throughout the region between the Cascade Range and the northern Rocky Mountains, in sagebrush steppe and adjacent woodlands, it is easily recognized by the shape of the perianth, which is rounded at the base instead of tapered as in other *Triteleia* species. M. E. Barkworth (1975, 1977) studied variation within *Triteleia grandiflora* in relation to ploidy level. Polyploid plants are larger, flower later, and have more effective vegetative reproduction by cormlets and contractile roots than their diploid progenitors. Plants of *Triteleia grandiflora* from the area west of the Cascade Range and extending into the Columbia River valley and the Klamath Lake region that have been distinguished as var. *howellii* differ from others of the species only in the shape of the filaments. L. Abrams and R. S. Ferris (1923?1960, vol. 1) used relative perianth length as a key character, but this is not consistent (R. F. Hoover 1941), and several specimens from the part of the Columbia River valley where both filament morphologies occur appear to represent intergrades (R. F. Hoover 1955). Thus it seems inadvisable to recognize infraspecific taxa. Plants assignable to var. *howellii* have not been found in California or southwestern Oregon in recent decades, and may be extirpated there. *Triteleia bicolor* is merely a color form having a perianth with a blue tube and white lobe."

\* Hoover, R. F. 1955. Further observations on *Brodiaea* and some related genera. *Plant Life* 11: 13-22.

var. **howellii** (S. Watson) Hoover [HC2]

Howell's lily, Howell's triteleia

*Brodiaea douglasii* S. Watson var. *howellii* (S. Watson) M. Peck [Peck]

*Brodiaea howellii* S. Watson [HC]

*Triteleia bicolor* (Suksd.) A. Heller

*Triteleia grandiflora* Lindl. ssp. *howellii* (S. Watson) Hoover [JPM]

*Triteleia howellii* (S. Watson) Greene [ILBC6]

***Triteleia hyacinthina*** (Lindl.) Greene [FNA26, HC2]

Bull. Calif. Acad. Sci. 2: 142. 1886.

white brodiaea, fool's-onion, wild hyacinth

*Brodiaea dissimulata* M. Peck [Peck]

*Brodiaea hyacinthina* (Lindl.) Baker [HC]

*Hesperoscordum hyacinthinum* Lindl. [Abrams]

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## Asphodelaceae [HC2]

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

***Hemerocallis*** [FNA26, HC2]

Sp. Pl. 1: 324. 1753; Gen. Pl. ed. 5, 151. 1754.

daylily

***Hemerocallis fulva*** (L.) L. [FNA26, HC2]

Sp. Pl., ed. 2. 1: 462. 1762.

orange daylily

*Hemerocallis lilioasphodelus* L. var. *fulvus* L.

Need documentation that this species is naturalized in WA, included here based on map in FNA, and on the authority of Richard Old, as reported in KZ99. FNA26: "Following an earlier European introduction from Asia, *Hemerocallis fulva* was brought to North America in the seventeenth century. This commonly cultivated daylily, the wild type, is distinguished as cultivar "'Europa' Stout and is a self-sterile triploid producing no seed. Essentially, it is a large, complex clone. Plants persist from cultivation or have arisen from root or rhizome fragments, which are capable of plant regeneration. Cultivar "'Kwanso' Regel, another ancient garden selection, persists in many areas along with the wild type and has fully doubled flowers. In eastern Asia, both diploids and triploids occur in the *H. fulva* complex and have been the basis for extensive breeding and tetraploid cultivar selection (A. B. Stout 1934)."

*Hemerocallis lilioasphodelus* L. [FNA26, HC2]

Sp. Pl. 1: 324. 1753.  
yellow daylily

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## Butomaceae [FNA22, HC, HC2] Flowering Rush Family

**Synonyms:** (none)

**References:** (none)

*Butomus* [FNA22, HC, HC2]

Sp. Pl. 1: 372. 1753; Gen. Pl. ed. 5: 174, 1754.  
flowering-rush

*Butomus umbellatus* L. [FNA22, HC, HC2]

Sp. Pl. 1: 372. 1753.  
flowering rush

*Butomus junceus* Turcz.

*Butomus umbellatus* L. f. *vallisneriifolius* (Sagorski) Gluck

Recently collected in Whatcom Co.

\* Anderson, L. C., C. D. Zeiss, and S. F. Alam. 1974. Phytogeography and possible origins of *Butomus* in North America. *Bulletin of the Torrey Bot. Club* 101: 292-296.

\* Stuckey, R. L., G. Schneider, and M. L. Roberts. 1990. *Butomus umbellatus* L.: Notes from the German literature and North American field studies. *Ohio J. Sci.* 90: 5-6.

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## Commelinaceae [FNA22, HC2] Spiderwort Family

**Synonyms:** (none)

FNA22: "The flowers lack nectar and are ephemeral, lasting only a few hours. Their structure is seldom preserved in dried specimens. In the absence of well-pressed flowers, mature buds can be readily dissected in situ, and the arrangement and degree of development of the androecium and gynoecium easily determined."

**References:** (none)

*Commelina* [FNA22, HC2]

Sp. Pl. 1: 40. 1753; Gen. Pl. ed.; 5:25, 1754.

*Commelina communis* L. [FNA22, HC2]

Sp. Pl. 1: 40. 1753.  
Asiatic dayflower

*Commelina communis* L. var. *communis*

*Commelina willdenowii* Kunth

Not in HC; need to check occurrence in WA; KZ sites Madrono 1994. FNA22: "Commelina communis var. ludens (Miquel) C. B. Clarke is distinguished by its darker flowers, antherodes with maroon centers (instead of entirely yellow), distalmost cyme less well developed and usually not producing a flower, and spathes proportionally broader. I have not found it possible to separate this regularly from C. communis var. communis, which also occurs in the flora. A variegated form of C. communis var. ludens, forma aureostriata MacKeever, occurs spontaneously and has been noted from Arkansas, Kentucky, Louisiana, Maryland, North Carolina, Texas, and Virginia."

### **Murdannia** [FNA22, HC2]

Illustrations of the Botany ... of the Himalayan Mountains ... 403, plate 95, fig. 3. 1840.  
[name conserved]

#### **Murdannia keisak** (Hassk.) Hand.-Mazz. [FNA22, HC2]

Symb. Sin. 7: 1243. 1936.  
wart-removing-herb

*Aneilema keisak* Hassk.

Not in H&C. FNA22: "I agree with C. P. Dunn and R. R. Sharitz (1990) that this species is still expanding its range since its introduction early this century."

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## **Cyperaceae** [FNA23, HC, HC2] Sedge Family

**Synonyms:** (none)

Originally based on draft treatment by Peter Zika, March 2000; next updated 2004 based on Flora of North America, Volume 23; most recent update in 2009 based on "Field Guide to the Sedges of the Pacific Northwest" (SPNW) [2008].

### **References:**

- \* <b>SPNW</b> = Wilson, B. L., R. Brainerd, D. Lytjen, B. Newhouse, and N. Otting. 2008. Field guide to the sedges of the Pacific Northwest. Oregon State University Press, Corvallis, OR. 431 pp.
- \* Wilson, B. L., R. Brainerd, M. Huso, K. Kuykendall, D. Lytjen, B. Newhouse, N. Otting, S. Sundberg and P. Zika. 1999. Atlas of Oregon Carex. Native Plant Society of Oregon, Occasional Paper No. 1. Eugene, OR. 29 pp.

### **Amphiscirpus** [FNA23, HC2]

Notes Roy. Bot. Gard. Edinburgh. 33: 308. 1974.  
Nevada clubrush

#### **Amphiscirpus nevadensis** (S. Watson) Oteng-Yeb. [FNA23, HC2]

Notes Roy. Bot. Gard. Edinburgh. 33: 308. 1974.  
Nevada bulrush

*Schoenoplectus nevadensis* (S. Watson) J. Sojak  
*Scirpus nevadensis* S. Watson [HC]

FNA23: "Amphiscirpus nevadensis superficially resembles some dwarfed forms of Schoenoplectus pungens, with which it sometimes grows; S. pungens is readily distinguished by its trigonous culms and leaf blades, prominently 2-fid, awned scales, and beaked achenes. Amphiscirpus nevadensis differs from all North American species of Schoenoplectus in its wiry culms and leaves, prominently ciliate ligules, absence of evident internal aerenchyma, and beakless achenes. It has been reported from Delta, Manitoba."

### **Bolboschoenus** [FNA23, HC2]

Syn. Deut. Schweiz. Fl., ed. 3. 3: 2531. 1905.  
tuberous bulrush

#### **Bolboschoenus fluviatilis** (Torr.) Soják [FNA23, HC2]

Cas. Nár. Mus., Odd. Prír. 141: 62. 1972.  
river bulrush

*Schoenoplectus fluviatilis* (Torr.) M.T. Strong [KZ99]  
*Scirpus fluviatilis* (Torr.) A. Gray [HC]  
*Scirpus maritimus* L. var. *fluviatilis* Torr.

FNA23: "Bolboschoenus fluviatilis frequently forms dense, monospecific, often entirely vegetative stands, and it is more common than recorded because vegetative colonies are often overlooked (E. W. Chester and B. E. Wofford 1992). The only record for Alabama is an 1870 collection from the East Fowl River in the Mobile Delta, where the species has not been collected since. It was intentionally introduced into New Hampshire (D. J. Padgett and G. E. Crow 1993). The report from New Mexico by M. L. Fernald (1950) cannot be confirmed because no specimen is known. Putative hybrids with *Bolboschoenus maritimus* occur in California. *Bolboschoenus novae-angliae* probably originated from *B. fluviatilis* × *B. robustus* (J. Browning et al. 1995). Introgression from *B. maritimus* and/or *B. robustus* is suggested by the larger exocarp cells (evident in surface view) in some North American plants. The Eurasian *B. yagara* (Ohwi) Y. C. Yang & M. Zhan differs from *B. fluviatilis* in its narrower leaves and smaller achenes."

***Bolboschoenus maritimus* (L.) Palla [FNA23, HC2]**

Syn. Deut. Schweiz. Fl., ed. 3. 3: 2531. 1905.  
seacoast tuberous bulrush

*Schoenoplectus maritimus* (L.) Lye [KZ99]  
*Scirpus maritimus* L. [HC]

ssp. ***paludosus* (A. Nelson) T. Koyama [FNA23, HC2]**

Acta Phytotax. Geobot. 31: 148. 1980.  
saltmarsh bulrush, seacoast bulrush

*Scirpus campestris* Britton  
*Scirpus maritimus* L. var. *paludosus* (A. Nelson) Kük. [HC]  
*Scirpus pacificus* Britton ex Parish  
*Scirpus paludosus* A. Nelson

FNA23: "*Bolboschoenus maritimus* belongs to a difficult, worldwide complex, in which the delimitation of specific and infraspecific taxa is still unclear. The new lectotype and epitype from the Baltic coast of Sweden selected by S. G. Smith and I. Kukkonen (1999) are used here as the basis for redefining *B. maritimus* subsp. *maritimus*, which was previously defined to include *B. yagara* (Ohwi) Y. C. Yang & M. Zhan (J. Browning et al. 1996; Z. Hroudová et al. 1998). It seems likely that some populations of both *Bolboschoenus maritimus* subsp. *maritimus* and *B. maritimus* subsp. *paludosus* have been introduced into the flora from Eurasia. Many bipistillate specimens from Eurasia and Africa are very similar to American plants. Further study may show that these plants should be included in *Bolboschoenus maritimus* subsp. *paludosus*. Plants from seashores have bright brown floral scales and medium to dark brown achenes; plants from the western interior have bright brown to very pale floral scales and/or achenes. Around Chicago, Illinois, *Bolboschoenus maritimus* subsp. *paludosus* is spreading with other halophytes in roadside ditches where salts accumulate; it is likely to occur elsewhere in similar conditions. *Bolboschoenus maritimus* subsp. *paludosus* is planted for waterfowl food (H. A. George 1963, as *Scirpus robustus*), and in California it is sometimes mixed with *B. glaucus* and hybrids. The tough inner vascular cores of the rhizomes are used by Native Americans of the Pacific Coast in making baskets."

***Carex* [FNA23, HC, HC2]**

Sp. Pl. 2: 972. 1753; Gen. Pl. ed. 5, 420. 1754.  
sedge

***Carex abrupta* Mack. [FNA23, HC2]**

Bull. Torrey Bot. Club. 43: 618. 1917.  
abrupt-beaked sedge

***Carex agastachys* L.f.**

Supplementum Plantarum 414. 1781[1782]

*Carex mutabilis* Willd.

Recently (2017) segregated from *Carex pendula*.

\* Jimenez-Mejias et al. 2017. Taxon 66(4): 974-975.

**Carex albonigra** Mack. [FNA23, HC, HC2, SPNW]

Fl. Rocky Mts. 137, 1060. 1917.  
black-and-white-scaled sedge

**Carex amplifolia** Boott [FNA23, HC, HC2, SPNW]

Fl. Bor.-Amer. 2: 228, plate 226. 1839.  
big-leaf sedge

FNA23: "Carex amplifolia is confined to temperate western North America, where it is usually uncommon or rare from coastal lowlands to middle elevations in the mountains."

**Carex angustata** Boott [FNA23, HC2, SPNW]

Fl. Bor.-Amer. 2: 218. 1839.  
many-fruit sedge, wide-fruited sedge

*Carex egregia* Mack.

*Carex eurycarpa* T. Holm [HC]

*Carex oxycarpa* T. Holm

See L. Standley, 1985. FNA23: "Carex angustata is a member of the *C. stricta* complex based on the scabrous, red-brown, bladeless ladder-fibrillose sheaths, the veined perigynia, the hypostomic leaves, and the low chromosome numbers. It is distinguished from sympatric members of the group, *C. nudata* and *C. senta*, by the rhizomatous habit, the few-veined perigynia, and the scabrous stems and from the often-sympatric *C. aquatilis* by the scabrous, veined sheaths and the veined perigynia."

**Carex anthoxanthea** J. Presl & C. Presl [FNA23, HC2, SPNW]

Reliq. Haenk. 1: 203. 1828.  
grassy-slope arctic sedge, yellow-flowered sedge

Not in H&C.

**Carex aperta** Boott [FNA23, HC, HC2, SPNW]

Fl. Bor.-Amer. 2: 218, plate 219. 1839.  
Columbia sedge

*Carex accedens* T. Holm

*Carex acutina* L.H. Bailey var. *tenuior* L.H. Bailey

*Carex aperta* Boott var. *umbrosa* Kük.

*Carex aperta* Boott var. *viridans* Kük.

*Carex stylosa* C.A. Mey. var. *virens* L.H. Bailey

*Carex turgidula* L.H. Bailey

FNA23: "Carex aperta and *C. haydenii* appear to be a very closely related, allopatric pair of species that may not be closely related to other members of the section. This species-pair is distinguished by the inflated perigynia, the acute scales that are longer than the perigynia, and the unique chromosome number. Carex aperta is distinguished from *C. haydenii* by its rhizomatous habit, the dull brown achenes, and the entire beak. It is sometimes mistaken for the sympatric taxa that also lack veins on the perigynia, *C. aquatilis* and *C. scopulorum*; mature specimens can easily be identified by the inflated perigynia."

**Carex aquatilis** Wahlenb. [FNA23, HC, HC2]

Kongl. Vetensk. Acad. Nya Handl. 24: 165. 1803.

var. **aquatilis** [FNA23, HC2, SPNW]

Kongl. Vetensk. Acad. Nya Handl. 24: 165.  
water sedge

*Carex acutinella* Mack.

*Carex interimus* Maguire

*Carex pachystoma* T. Holm

*Carex suksdorfii* Kük.

*Carex variabilis* L.H. Bailey

FNA23: "Carex aquatilis is circumboreal and variable; four extensively intergrading varieties are recognized in North America. The species is distinguished by amphistomic (epistomic in var. *dives*) papillose leaves, glabrous sheaths with a concave apex, perigynia that lack veins and are usually brown-spotted on the proximal half, and have glossy achenes. The circumboreal Carex aquatilis var.

aquatilis is very common in wetlands of the northern and montane portions of North America. The plants are usually rhizomatous; in very wet or flooded sites they may form cespitose clumps. *Carex aquatilis* var. *aquatilis* is distinguished from the sympatric *Carex stricta* by the sheaths not ladder-fibrillose, obovoid and veinless perigynia that are rounded at apex, glossy achenes, and amphistomic leaves. It is often confused with *C. emoryi*, and distinguished by perigynia that lack veins, concave sheath apex, glossy achenes, and amphistomic leaves. In western North America, it is often sympatric with *C. scopulorum* and may be distinguished by the pale brown perigynia, glossy achenes, and amphistomic leaves. *Carex aquatilis* and *C. scopulorum* occasionally hybridize; hybrids have been named as *C. xsphacelata* T. Holm and *C. xchionophila* T. Holm. *Carex aquatilis* var. *aquatilis* overlaps and may intergrade with *C. aquatilis* var. *dives* along the Pacific Coast, with var. *minor* along the Arctic coast, and with var. *substricta* in the Great Lakes-New England region. Much of var. *aquatilis* in the southern part of its range has been called var. *altior* (L. H. Bailey) Rydberg. The type for var. *altior* is a specimen of *C. emoryi*."

var. ***dives*** (T. Holm) Kük. [FNA23, HC2, SPNW]

Pflanzenr. 28[IV,20]: 311. 1909.

Sitka sedge

*Carex dives* T. Holm

*Carex howellii* L.H. Bailey

*Carex panda* C.B. Clarke

*Carex sitchensis* Prescott ex Bong. [HC, VPBC4]

Some authorities continue to treat *C. sitchensis* as a separate species e.g. A. Ceska in Illustrated Flora of British Columbia, 2001. FNA23: "*Carex aquatilis* var. *dives* is the most robust variety of *C. aquatilis* and the only member to have pendent spikes, ellipsoid perigynia, and epistomic leaves. *Carex aquatilis* var. *dives* intergrades with var. *aquatilis* and does not appear to be distinct at the specific level. It may hybridize with *C. lyngbyei*."

***Carex arcta*** Boott [FNA23, HC, HC2, SPNW]

Ill. Carex. 155, plate 497. 1867.

northern clustered sedge

*Carex canescens* L. ssp. *polystachya* Boott

*Carex canescens* L. var. *oregana* L.H. Bailey

*Carex heleonastes* L. f. var. *scabriuscula* Kük.

*Carex kunzei* Olney

***Carex atherodes*** Spreng. [FNA23, HC, HC2, SPNW]

Syst. Veg. 3: 828. 1826.

awned sedge, wheat sedge

FNA23: "*Carex atherodes* is a major wetland species in portions of the Midwest and West and becomes increasingly uncommon and local in the eastern portions of its range. It forms large clones and can tolerate deeper water than most *Carex*. Glabrous forms occur and seem to be more common in the western portion of the range. *Carex atherodes* rarely hybridizes with *C. trichocarpa*."

***Carex athrostachya*** Olney [FNA23, HC, HC2, SPNW]

Proc. Amer. Acad. Arts. 7: 393. 1868.

slender-beak sedge

*Carex athrostachya* misspelled

FNA23: "*Carex athrostachya* intergrades with *C. unilateralis*."

***Carex atriformis*** Britton [FNA23]

Bull. Torrey Bot. Club. 22: 222. 1895.

Misapplied in WA; no verified records.

***Carex atosquama*** Mack. [FNA23, HC2, SPNW]

Proc. Biol. Soc. Wash. 25: 51. 1912.

black-scale sedge

*Carex apoda* Clokey

*Carex atrata* L. ssp. *atosquama* (Mack.) Hultén

*Carex atrata* L. var. *atrosquama* (Mack.) Cronquist [HC]  
*Carex viridior* Mack.

***Carex aurea* Nutt. [FNA23, HC, HC2, SPNW]**

Gen. N. Amer. Pl. 2: 205. 1818.  
golden sedge, pumpkin sedge  
(see also *Carex hassei*)

FNA splits out *C. garberi* and *C. hassei* which H&C lumps under *C. aurea*. FNA23: "The orange perigynia of *Carex aurea* are unique in North American *Carex*. The color does not develop until the perigynia are fully mature and ready to be shed, hence most herbarium specimens do not show that feature."

***Carex backii* Boott [FNA23, HC, HC2, SPNW]**

Fl. Bor.-Amer. 2: 210, plate 209. 1839.  
Back's sedge  
(see also *Carex cordillerana*)

***Carex backii* Boott [FNA23, HC, HC2, SPNW], misapplied**

Fl. Bor.-Amer. 2: 210, plate 209. 1839.  
Back's sedge  
(see also *Carex cordillerana*)

***Carex bebbii* (L.H. Bailey) Olney ex Fernald [FNA23, HC, HC2, SPNW]**

Proc. Amer. Acad. Arts. 37: 478. 1902.  
Bebb's sedge  
*Carex tribuloides* Wahlenb. var. *bebbii* L.H. Bailey

FNA23: "In addition to typical perennial behavior, *Carex bebbii* may reach reproductive stage from seed in a single season, thus behaving as a facultative annual. *Carex athrostachya* and *C. crawfordii* may share this reproductive feature."

***Carex bolanderi* Olney [FNA23, HC2, SPNW]**

Proc. Amer. Acad. Arts. 7: 393. 1868.  
Bolander's sedge  
*Carex deweyana* Schwein. var. *bolanderi* (Olney) W. Boott  
Split out as separate species from *C. deweyana* in FNA.

***Carex brevior* (Dewey) Mack. ex Lunell [FNA23, HC, HC2, SPNW]**

Amer. Midl. Naturalist. 4: 235. 1915.  
Plains oval sedge, short-beaked sedge  
*Carex festucacea* Schkuhr ex Willd. var. *brevior* (Dewey) Fernald  
*Carex straminea* Willd. ex Schkuhr var. *brevior* Dewey

FNA23: "*Carex brevior* seems to display an unusually broad, aneuploid chromosome series that does not readily correlate with any features of external morphology (P. E. Rothrock and A. A. Reznicek 1998). The chromosome variation may, however, have a geographic relationship. Among the plants observed, the lowest number came from northeast Texas while the highest number (n = 34) came from Manitoba (Å. Löve and D. Löve 1981b). Records of *Carex brevior* from ruderal habitats east and south of its main range are likely introductions."

***Carex breweri* Boott [FNA23, HC, HC2, SPNW]**

Ill. Carex. 142, plate 455. 1867.  
Brewer's sedge  
(see also *Carex engelmannii*)  
*Carex breweri* Boott var. *breweri* [HC]

FNA23: "A. Cronquist (1969) considered *Carex breweri* and *C. engelmannii* conspecific; he distinguished them at the varietal level by a difference in pistillate scale characters. The correlated differences in perigynium shape and veins, the dimensions of most structures, and the foliar anatomy support their retention as distinct species."

***Carex brunnescens* (Pers.) Poir. [FNA23, HC, HC2]**

Encycl., Suppl. 3: 286. 1813.

brown sedge

ssp. **brunnescens** [FNA23, HC2]

brownish sedge

*Carex brunnescens* (Pers.) Poir. ssp. *alaskana* Kalela  
*Carex brunnescens* (Pers.) Poir. ssp. *brunnescens* [SPNW, FNA23], orthographic variant  
*Carex brunnescens* (Pers.) Poir. ssp. *pacifica* Kalela  
*Carex brunnescens* (Pers.) Poir. ssp. *vitalis* (Fr.) Kalela  
*Carex canescens* L. var. *alpicola* Wahlenb.  
*Carex canescens* L. var. *persoonii* (Sieber) H. Christ  
*Carex gebhardii* Hoppe  
*Carex gracilis* Ehrh.  
*Carex persoonii* Sieber  
*Carex vitalis* Fr.

FNA23: "Carex brunnescens is variable across its wide distribution; it deserves a monographic treatment. Many taxa have been described. Most variation is presumably of ecophenotypic nature; when growing in shady habitats the species is slender and weak and the scales are not or but little colored; in more exposed sites it is stiffer, and the scales become strongly brownish tinged. Only two subspecies are recognized here. Subspecies *alaskana* and subsp. *pacifica* (see A. Kalela 1965) seem to grade to the typical subsp. *brunnescens*. A short-leaved plant with short and red tinged perigynia from western United States (Colorado, Montana, Utah, Wyoming) may represent a southern subspecies and should be studied in greater detail. "

**Carex buchananii** Berggr. [HC2]

silver-spiked sedge

**Carex buxbaumii** Wahlenb. [FNA23, HC, HC2, SPNW]

Kongl. Vetensk. Acad. Nya Handl. 24: 163. 1803.  
brown bog sedge, Buxbaum's sedge

*Carex buxbaumii* Wahlenb. var. *anticostensis* Raymond  
*Carex holmiana* Mack.  
*Carex polygama* Schkuhr

**Carex californica** L.H. Bailey [FNA23, HC, HC2, SPNW]

Mem. Torrey Bot. Club. 1: 9. 1889.  
California sedge

**Carex canescens** L. [FNA23, HC, HC2]

Sp. Pl. 2: 974. 1753.  
silvery sedge

ssp. **canescens** [FNA23, HC2, SPNW]

Sp. Pl. 2: 974.  
grey sedge, silvery sedge

*Carex canescens* L. var. *robustina* Macoun  
*Carex canescens* L. var. *robustior* Blytt ex Andersson  
*Carex subloliacea* (Fernald) E.P. Bicknell

FNA23: "Carex canescens subsp. *canescens* is a variable taxon with a wide circumpolar distribution; it is found throughout the distribution range of the species, except the southernmost parts of southeastern United States. Many varieties and forms have been described in the subspecies. Slender, short plants with subglobose spikes and small, short-beaked perigynia have often been called var. *subloliacea*. Those plants represent both subspecies treated herein and to a minor part also *C. lapponica*. Tall, robust plants with stout, relative dark perigynia from mountainous regions (especially British Columbia and Alaska) may represent an ecotype and are often called var. *robustior*. Similar specimens have been collected from southern South America (Tierra del Fuego, Falkland Islands). The status of the taxon needs further study."

**Carex capillaris** L. [FNA23, HC, HC2, SPNW]

Sp. Pl. 2: 977. 1753 (as *capillari*).  
hair sedge

*Carex boecheriana* Á. Löve, D. Löve & Raymond  
*Carex chlorostachys* Steven  
*Carex fuscidula* V.I. Kreczetovicz ex T.V. Egorova

FNA23: "Carex capillaris is somewhat variable and is often divided into two infraspecific taxa. Plants from the south are larger, have pale brown pistillate scales, and serrulate perigynium beaks. Northern plants are smaller, have medium brown pistillate scales, and smooth perigynium beaks. These characteristics are only weakly correlated, making it difficult to assign individuals to these taxa except in a very arbitrary manner. When recognized, the southern plants are called subsp. capillaris (*C. chlorostachya* Steven, *C. capillaris* var. major Drejer ex Blytt), and the northern plants are called subsp. fuscidula (V. I. Kreczetovicz ex T. V. Egorova) Á. Löve & D. Löve. T. V. Egorova (1964) recorded the Asian species *Carex delicata* C. B. Clarke (as *C. karoii*) from Colorado; no specimens have been seen that confirm that report, and it seems likely an error because T. V. Egorova (1999) indicated the species is restricted to Asia. This species has dense lateral spikes with 15-30 perigynia, the perigynia rounded at the apex and abruptly beaked, with the beak 0.1-0.2 mm. *Carex tiogana* D. M. Taylor & J. Mastroggiuseppe from northern California cannot be satisfactorily distinguished from *C. capillaris*, although it possesses an uncommon combination of characteristics. It is probably best treated as a variety or subspecies of *C. capillaris*. Until a more satisfactory account of the variability in *C. tiogana* and its relationship with *C. krausei* is produced, its status must remain uncertain."

***Carex capitata* L. [FNA23, HC, HC2]**

Syst. Nat. ed. 10. 2: 1261. 1759.  
capitate sedge

*Carex arctogena* Harry Sm.  
*Carex capitata* L. ssp. *capitata* [KZ99]  
*Carex capitata* L. var. *arctogena* (Harry Sm.) Hultén

FNA says this species does not occur in WA. SPNW shows the range of this species to be well south of Washington. No vouchers at WTU. This species is considered excluded until further evidence appears indicating that it should be included in the Washington flora. FNA23: "In Scandinavia (L. Reinhammar 1999) and Russia (T. V. Egorova 1999), *Carex arctogena* is distinguished from *C. capitata* on ecologic and morphologic grounds and also by allozymes at the rank of species. In North America the distinctions are not clear; two taxa can be observed, but there are also numerous specimens of uncertain determination. When making new collections, it is important to evaluate the differences seen elsewhere and to pay close attention to habitat and habit (see below). Separate status at some rank may be appropriate for the taxon "arctogena" in North America too. If *C. antarctogena* Roivainen from Tierra del Fuego is placed within *C. capitata* as D. M. Moore and A. O. Chater (1971) and D. M. Moore (1983) have done, then the species occurs at both the northern and the southern extremes of the Americas. *Carex capitata* and *C. arctogena* differ in habitat (boreal mires versus alpine heaths), habit (mat-forming versus tufted), and morphology of the pistillate scales (much shorter and narrower than perigynia and with narrow hyaline margins versus as long as perigynia and with broad hyaline margins) and perigynia (beak gradually formed and smooth versus beak and may be sparingly serrulate)."

***Carex chordorrhiza* Ehrh. ex L. f. [FNA23, HC2, SPNW]**

Suppl. Pl. 414. 1782.  
cordroot sedge, creeping sedge, rope-root sedge

Not in H&C. FNA says this species does not occur in WA but WTU has vouchers collected from Okanogan County. Also recorded by Peter Zika as an introduced species in cranberry bogs in Oregon. FNA23: "Easily overlooked, *Carex chordorrhiza* is uncommon and local in much of its range, especially in districts with predominantly acidic soils. However, it can form extensive stands and be a dominant species in some boreal wetlands. Oregon collections represent occurrences in commercial cranberry bogs and are presumably introductions. The rhizomes are short and rarely collected; the leafy vegetative stems elongate dramatically as the season progresses. At first erect to ascending, the stems eventually lie flat and next season send out roots and shoots from the nodes. These horizontal stems typically become overgrown by moss or form networks in shallow water, thus appear to be rhizomes."

***Carex circinata* C.A. Mey. [FNA23, HC, HC2, SPNW]**

Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans. 1: 209, plate 6. 1831.  
coiled sedge

***Carex comosa* Boott [FNA23, HC, HC2, SPNW]**

Proc. Linn. Soc. London. 1: 258. 1846.  
bearded sedge, bristly sedge

FNA23: "Carex comosa is uncommon and local in the west and south of glaciated regions in the east except in some coastal areas. Carex comosa rarely forms sterile hybrids with *C. pseudocyperus* and *C. hystericina*."

**Carex concinnoides** Mack. [FNA23, HC, HC2, SPNW]

Bull. Torrey Bot. Club. 33: 440. 1906.  
northwestern sedge, tetrastigmatic sedge

FNA23: "Carex concinnoides is the only North American sedge with four stigmas per pistil. It is most similar to *C. richardsonii*; differs in its more closely aggregated, short-pedunculate pistillate spikes with very short-sheathing bracts. These close relatives are sympatric only at the northern and eastern edge of the range of *C. concinnoides*."

**Carex cordillerana** Saarela & B.A. Ford [FNA23, HC2, SPNW]

Syst. Bot. 26: 715, figs. 1C, 2C, 3C, 4C, 8. 2001.  
cordilleran sedge

*Carex saximontana* Mack. [FNA23, HC2], misapplied

H&C make no reference to the taxa, *C. cordillerana*. Vouchers of this species at WTU have been called *C. backii*.

**Carex crawei** Dewey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts, ser. 2. 2: 246. 1846.  
Crawe's sedge

Need to check WA record. FNA23: "Though widespread, *Carex crawei* is usually rare or local except near the shores of the Great Lakes, glades in the Interior Highlands, and prairie swales on parts of the Great Plains. Other authors have reported it from Nova Scotia (H. J. Scoggan 1978?1979, part 2; earlier mentioned by M. L. Fernald 1948 on the authority of J. M. Macoun 1899); no specimens to substantiate the reports have been found. The perigynia in *Carex crawei* are usually smaller than in *C. microdonta*. A few specimens from Ontario and New York with all other characteristics of *C. crawei* have larger and slightly beaked perigynia that approach those of *C. microdonta*."

**Carex crawfordii** Fernald [FNA23, HC, HC2, SPNW]

Proc. Amer. Acad. Arts. 37: 469, plate 1, figs. 12?14. 1902.  
Crawford's sedge

Occurs as an introduced weed in coastal WA and OR cranberry bogs.

**Carex cusickii** Mack. ex Piper & Beattie [FNA23, HC, HC2, SPNW]

Fl. N.W. Coast. 72. 1915.  
Cusick's sedge

*Carex teretiuscula* Gooden. var. *ampla* L.H. Bailey

FNA23: "Although infrequent or local in most parts of its range, *Carex cusickii* is fairly common in and west of the Cascade Mountains. Reports of *C. cusickii* from Utah probably are based on specimens of *C. diandra*. *Carex cusickii* is more similar to *C. prairea* than either species is to *C. diandra*. Both are typically more robust than the latter, having wider leaves and sometimes larger inflorescences and larger perigynia. The characteristics distinguishing the first two, although seemingly unimportant, are constant and appear to have populational significance. Furthermore, the geographic ranges of the species, although contiguous in the western part of the Cariboo Forest Region of southern British Columbia, are wholly discrete except for the remarkable occurrence of *C. prairea* in Flathead County, Montana. It remains to be determined if any real overlapping or recombining of characteristics occurs among the several species of section *Heleglochis*, or whether the difficulty in drawing precise lines between them in the herbarium is merely the consequence of inadequate specimens and reliance on too few characters."

**Carex davyi** Mack. [FNA23, HC2]

Bull. Torrey Bot. Club. 43: 606. 1917.  
Constance's sedge, Davy's sedge

*Carex constanceana* Stacey [FNA23]

Treated as a synonym of *C. petasata* by H&C. FNA23: "*Carex constanceana*, known from only one locality, has not been collected since the early 1900s. It has features of *C. petasata* and of *C. davyi*. In one flora *C. constanceana* was included in *C. petasata* (A. Cronquist 1969)."

***Carex deflexa* Hornem. [FNA23, HC2]**

Fors. Oecon. Plantel. ed. 3. 1: 938. 1821.  
mountain mat sedge

**var. *boottii* L.H. Bailey [FNA23, HC2]**

Mem. Torrey Bot. Club. 1: 43. 1889.  
northern sedge

*Carex brevipes* W. Boott, illegitimate name  
*Carex globosa* Boott var. *brevipes* W. Boott ex Mack.  
*Carex rossii* Boott var. *brevipes* (W. Boott) Kük.

Not in H&C. FNA23: "*Carex deflexa* var. *boottii* is sometimes included in *C. rossii*. The varieties are said to differ in the degree of spreading of the rhizomes; var. *boottii* is more caespitose in habit and has stouter rootstocks than var. *deflexa*. That character varies considerably within each variety, and may be dependent on the compaction and particle size of the soil in which a plant is growing. These taxa clearly form a complex that requires further study. The name *Carex brevipes* was first proposed by W. Boott (in S. Watson 1876?1880, vol 2, p. 246) but then withdrawn (p. 485), so was not validly published by him. Subsequent authors used the name, attributing it to W. Boott. It was validly published at species rank by K. K. Mackenzie (1931?1935) and at varietal rank by L. H. Bailey."

***Carex densa* (L.H. Bailey) L.H. Bailey [FNA23, HC, HC2, SPNW]**

Mem. Torrey Bot. Club. 1: 50. 1889.  
dense sedge

*Carex breviligulata* Mack.  
*Carex brongniartii* Kunth var. *densa* L.H. Bailey  
*Carex chrysoleuca* T. Holm  
*Carex dudleyi* Mack. [JPM]  
*Carex vicaria* L.H. Bailey [KZ99]  
*Carex vicaria* L.H. Bailey var. *costata* L.H. Bailey  
*Carex vulpinoidea* Michx. var. *vicaria* (L.H. Bailey) Kük.

FNA23: "*Carex densa* has been subdivided into as many as four species. Variable characters of the taxon include the compaction of the inflorescence, the shape of the sheath apex, the size and number of veins on the perigynium, the length of the pistillate scale awn, and the development of spongy tissue basal and lateral to the perigynium. The morphologic variation shows no geographic or ecologic pattern and cannot be separated consistently by visual or statistical analyses. The most frequently recognized taxa, *C. densa* and *C. dudleyi*, are end-points along a morphologic continuum of spongy tissue development. The perigynium of typical *C. densa* has well-developed spongy tissue, giving an ovate shape and rounded base. In contrast, the typical *C. dudleyi* lacks development of spongy tissue, giving a rhombic shape and tapered base. These extremes are connected by a continuous range of intermediate forms that display the same range of variation found in *C. vulpinoidea*. A single species is here recognized; however, further study may clarify patterns of biological variation within the complex taxon."

***Carex deweyana* Schwein. [FNA23, HC, HC2], misapplied**

Ann. Lyceum Nat. Hist. New York. 1: 65. 1824.  
dewey's sedge  
(see also *Carex bolanderi*, *Carex infirminervia*, *Carex leptopoda*)

***Carex deweyana* Schwein. [FNA23, HC, HC2]**

Ann. Lyceum Nat. Hist. New York. 1: 65. 1824.  
dewey's sedge  
(see also *Carex bolanderi*, *Carex infirminervia*, *Carex leptopoda*)

***Carex deweyana* Schwein. [FNA23, HC, HC2], misapplied**

Ann. Lyceum Nat. Hist. New York. 1: 65. 1824.  
dewey's sedge  
(see also *Carex bolanderi*, *Carex infirminervia*, *Carex leptopoda*)

**Carex deweyana** Schwein. [FNA23, HC, HC2], misapplied

Ann. Lyceum Nat. Hist. New York. 1: 65. 1824.

dewey's sedge

(see also *Carex bolanderi*, *Carex infirminervia*, *Carex leptopoda*)

var. **deweyana** [FNA23, HC2, SPNW]

Ann. Lyceum Nat. Hist. New York. 1: 65.

Dewey's sedge

**Carex diandra** Schrank [FNA23, HC, HC2, SPNW]

Cent. Bot. Anmerk. 57 [49]. 1781.

lesser panicked sedge, lesser tussock sedge

FNA23: "Although common northward (but not at the highest latitudes except in District of Mackenzie and Yukon), this circumboreal sedge is occasional to rare throughout much of its United States range. *Carex diandra* was reported from Tennessee by J. K. Underwood (1945) and in lists of Tennessee plants on the basis of an old specimen that has been destroyed. H. A. Gleason and A. Cronquist's (1963, 1991) report for Missouri, quoted in later floras and catalogues, is believed to be erroneous. See comments under *C. prairea*."

**Carex disperma** Dewey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts. 8: 266. 1824.

short-leaf sedge

*Carex tenella* Schkuhr

**Carex divulsa** Stokes [FNA23, HC2]

Bot. Arr. Brit. Pl., ed. 2: 2: 1035. 1787.

Leers's sedge

ssp. **leersii** (Kneuck.) W. Koch [HC2]

Planted as an ornamental and locally escaping in King Co.

**Carex douglasii** Boott [FNA23, HC, HC2, SPNW]

Fl. Bor.-Amer. 2: 213, plate 214. 1839.

Douglas' sedge

FNA23: "The stigmas of *Carex douglasii* are very long and form a tangled mat that persists essentially until the perigynia mature, giving a distinctive appearance to pistillate inflorescences of the species. Though the plants are uniform in appearance superficially, the perigynia are quite variable in shape and size."

**Carex duriuscula** C.A. Mey. [FNA23, HC2]

Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans. 1: 214. 1831.

narrowleaf sedge, spike-rush sedge

*Carex eleocharis* L.H. Bailey [JPM]

*Carex stenophylla* Wahlenb [HC]

Occurrence in based on report by WNHP. No vouchers located. Sedges of the Pacific Northwest (SPNW) does not show this species occurring in Washington. Until a voucher for WA is collected, this species will be considered excluded. FNA23: "*Carex duriuscula* belongs to a difficult complex of temperate dry grassland species, and the North American plants are recognized here as conspecific with the Asian *Carex duriuscula*, following T. V. Egorova (1999). Compared to the Asian plants, the North American plants usually are taller [5?12(?20) versus (6?)10?35 cm] and the perigynia are larger [2.5?3(?3.2) versus 2.4?3.9 mm] (T. V. Egorova 1999). More work is still needed here. North American plants have often been treated as a variety or subspecies of the Eurasian *C. stenophylla*, which is quite different in having larger perigynia that are distinctly veined adaxially. "

**Carex eburnea** Boott [FNA23, HC2]

Fl. Bor.-Amer. 2: 226, plate 225. 1839.

bristle-leaved sedge

Recently collected in Pend Oreille County (2007). Reports of *Carex krausei* in WA belong here.

**Carex echinata** Murray [FNA23, HC2]

Prodr. Stirp. Goett. 76. 1770.

*Carex muricata* L. [FNA23, HC], misapplied

ssp. ***echinata*** [FNA23, HC2, SPNW]

Prodr. Stirp. Goett. 76.  
star sedge

*Carex angustior* Mack.

*Carex ormantha* (Fernald) Mack.

The taxon *Carex muricata* L. in H&C. is misapplied in WA. FNA23: "*Carex echinata* subsp. *echinata* is a complex, variable entity; plants of relatively sterile habitats from Newfoundland to Minnesota and south locally to the mountains of Tennessee and North Carolina have very narrow perigynia with the spikes either in congested heads or more laxly arranged and may be called *C. echinata* var. *angustata* (J. Carey) L. H. Bailey. Plants from the San Bernardino Mountains, Coast Ranges, Sierra Nevada, and some of the volcanic peaks in California, Oregon, and Washington tend to have very elongate inflorescences with widely spaced spikes and may be called *C. echinata* var. *ormantha* Fernald. In some areas these variants appear reasonably distinct, but over most of the species range intergrades between the extremes are frequent."

ssp. ***phyllomanica*** (W. Boott) Reznicek [FNA23, HC2, SPNW]

Contr. Univ. Mich. Herb. 14: 195. 1980.  
coastal star sedge

*Carex phyllomanica* W. Boott [HC]

***Carex engelmannii*** L.H. Bailey [FNA23, HC2, SPNW], misapplied

Proc. Amer. Acad. Arts. 22: 132. 1887 (as *engelmanni*).  
Mt. Adams sedge

*Carex breweri* Boott var. *paddoensis* (Suksd.) Cronquist [HC]

*Carex engelmannii* L.H. Bailey var. *paddoensis* (Suksd.) Kneucker

*Carex paddoensis* Suksd.

FNA23: "*Carex engelmannii* occurs north and east of the range of *C. breweri*; both species occur on Mt. Adams, Washington. *Carex engelmannii* is most similar to *C. subnigricans*. It differs in the inrolled scale margins, the larger, sessile perigynia, the stipitate achene, and leaf cross sectional shape. It occurs in drier habitats usually to the north and east of the range of *C. subnigricans*. Relationships among the three species placed in the section, as well as their relationships to other unispicate sections, should be studied further."

***Carex engelmannii*** L.H. Bailey [FNA23, HC2, SPNW]

Proc. Amer. Acad. Arts. 22: 132. 1887 (as *engelmanni*).  
Mt. Adams sedge

*Carex breweri* Boott var. *paddoensis* (Suksd.) Cronquist [HC]

*Carex engelmannii* L.H. Bailey var. *paddoensis* (Suksd.) Kneucker

*Carex paddoensis* Suksd.

FNA23: "*Carex engelmannii* occurs north and east of the range of *C. breweri*; both species occur on Mt. Adams, Washington. *Carex engelmannii* is most similar to *C. subnigricans*. It differs in the inrolled scale margins, the larger, sessile perigynia, the stipitate achene, and leaf cross sectional shape. It occurs in drier habitats usually to the north and east of the range of *C. subnigricans*. Relationships among the three species placed in the section, as well as their relationships to other unispicate sections, should be studied further."

***Carex exsiccata*** L.H. Bailey [FNA23, HC2, SPNW]

Mem. Torrey Bot. Club. 1: 6. 1889.  
big inflated sedge

*Carex vesicaria* L. var. *major* Boott [HC]

FNA23: "*Carex exsiccata* is regarded by some authors, with some justification, as *C. vesicaria* var. *major*. It is a coarser plant with leathery, lanceolate perigynia gradually tapered to the apex that occurs at lower elevations and is usually readily distinguishable although some plants from the Cascades are difficult to place. In the west, typical *C. vesicaria* occurs mostly above 1400 m. Some authors (B. Boivin 1967?1979; T. M. C. Taylor 1983) treat all western plants as *C. exsiccata*, distinct from the eastern North American and

Eurasian *C. vesicaria*. The Rocky Mountain, Cascade Range, and Sierra Nevada plants do not differ substantially from eastern plants, except that sometimes they have darker perigynia and scales."

***Carex feta*** L.H. Bailey [FNA23, HC, HC2, SPNW]

Bull. Torrey Bot. Club. 20: 417. 1893.  
green-sheath sedge

*Carex straminea* Willd. ex Schkuhr var. *mixta* L.H. Bailey

***Carex filifolia*** Nutt. [FNA23, HC, HC2]

Gen. N. Amer. Pl. 2: 204. 1818.  
thread-leaved sedge

var. ***filifolia*** [FNA23, HC2, SPNW]

Gen. N. Amer. Pl. 2: 204.  
thread-leaf sedge

FNA separates *C. filifolia* into two varieties only one of which occurs in WA.

***Carex flava*** L. [FNA23, HC, HC2, SPNW]

Sp. Pl. 2: 975. 1753.  
yellow sedge, yellow-green sedge

*Carex flava* L. var. *fertilis* Peck

*Carex flava* L. var. *gaspensis* Fernald

*Carex flava* L. var. *laxior* (Kük.) Gleason

*Carex laxior* (Kük.) Mack.

FNA does not list for WA. but good voucher specimens can be found at WTU and perhaps other herbaria.

***Carex fracta*** Mack. [FNA23, HC, HC2, SPNW]

Erythea. 8: 38. 1922.  
fragile-sheath sedge

***Carex geyeri*** Boott [FNA23, HC, HC2, SPNW]

Trans. Linn. Soc. London, Bot. 20: 118. 1846.  
elk sedge, Geyer's sedge

***Carex gynocrates*** Wormskjöld ex Drejer [FNA23, HC2, SPNW]

Naturhist. Tidsskr. 3: 434. 1841.  
northern bog sedge

*Carex dioica* L. var. *gynocrates* (Wormskjöld ex Drejer) Ostenf. [HC]

This taxon had not been discovered in WA when H&C was published. FNA23: "Chiefly boreal, *Carex gynocrates* is infrequent to rare southward, especially in the western cordillera. The only Pennsylvania collection was made by Goldie at Pittsburgh between 1819 and 1822. Opinions differ about the taxonomic rank of the North American and east Asian (Siberian) populations, which have chromosome counts of  $2n = 48, 50,$  and  $70,$  and perhaps are best segregated as *Carex dioica* subsp. *gynocrates* (E. Hultén 1962). The latter is only weakly distinguished from the Eurasian subsp. *dioica*, which has chromosome counts of  $2n = 52$  and  $60,$  and tends to be less strongly dioecious, and has paler pistillate scales and ventrally more convex perigynia. The hybrid between *Carex gynocrates* and *C. maritima*, *C. xlangeana* Fernald (pro sp.) [*C. dutillyi* O'Neill & Duman], strongly resembles *C. maritima*; the leaves are slightly scabrous-roughened toward the apex; the heads are smaller, ellipsoid to ovoid-oblong and only 3?5 mm thick; the perigynia are appressed-ascending and  $\hat{A}\pm$  flat; and the achenes are not well-developed. *Carex xlangeana* is reported as forming close turf on dry, peaty limestone barrens in Newfoundland (M. L. Fernald 1933, 1950) and as occasional upon humid rocks and coastal fens along Hudson Bay (J. Deshayes and J. Cayouette 1988). The hybrid should be expected where the parents coexist and has been reported from most of those areas (J. Cayouette and P. M. Catling 1992), although the report of the hybrid from Alaska by H. J. Scoggan (1978?1979) is based on a specimen of *C. maritima*."

***Carex halliana*** L.H. Bailey [FNA23, HC, HC2, SPNW]

Bot. Gaz. 9: 117. 1884.  
Hall's sedge

*Carex oregonensis* Olney ex L.H. Bailey

**Carex hassei** L.H. Bailey [FNA23, HC2, SPNW]

Bot. Gaz. 21: 5. 1896.

false golden sedge

*Carex saliniformis* Mack.

SPNW: "Taxonomy of *Carex hassei* and relatives is controversial. It has often been merged with *C. aurea* and/or northern and eastern *C. garberi*. Even treated as a separate species, *C. hassei* has more variation than is typical of most *Carex* species. Variants include coastal CA plants called *C. saliniformis*; serpentine plants of NW CA and SW OR with a mix of 2 and 3 stigmas; small neat plants of alkaline springs in NV; and plae, robust plants of the San Bernadino Mts. of S CA."

**Carex haydeniana** Olney [FNA23, HC, HC2, SPNW]

Botany (Fortieth Parallel). 366. 1871.

cloud sedge, Hayden's sedge

*Carex festiva* Dewey var. *decumbens* T. Holm

*Carex macloviana* d'Urv. ssp. *haydeniana* (Olney) Roy L. Taylor & MacBryde

*Carex nubicola* Mack.

FNA lists for WA but its occurrence needs to be documented. KZ, 2004, reports a voucher at WS from Walla Walla, County. Identification needs to be verified. SPNW does not show this species occurring anywhere near Washington. Until a voucher is located confirming the Washington occurrence, this species is considered excluded.

**Carex hendersonii** L.H. Bailey [FNA23, HC, HC2, SPNW]

Proc. Amer. Acad. Arts. 22: 115. 1887 (as hendersoni).

Henderson's sedge

**Carex heteroneura** W. Boott [FNA23, HC2, SPNW]

Bot. California. 2: 239. 1880.

different-veined sedge, smooth-fruited sedge

(see also *Carex atosquama*)

*Carex atrata* L. var. *erecta* W. Boott [HC]

FNA23: "Intermediates between *Carex epapillosa* and *C. heteroneura* occur in California, Nevada, and Utah."

**Carex hoodii** Boott [FNA23, HC, HC2, SPNW]

Fl. Bor.-Amer. 2: 211, plate 211. 1839.

Hood's sedge

**Carex hystericina** Muhl. ex Willd. [FNA23, HC2, SPNW]

Sp. Pl. 4(1): 282. 1805.

porcupine sedge

*Carex hystricina* misspelled [HC]

FNA does not list for WA but several vouchers exist at WTU and probably other herbaria. FNA23: "*Carex hystericina* is widespread and common, even weedy, in regions with calcareous substrates. It hybridizes uncommonly with *C. pseudocyperus* and more rarely with *C. comosa*, *C. schweinitzii*, *C. utriculata*, and *C. vesicaria*. Hybrids are sterile and intermediate in morphology. The species epithet is often, but not originally, spelled "hystricina."•

**Carex illota** L.H. Bailey [FNA23, HC, HC2, SPNW]

Mem. Torrey Bot. Club. 1: 15. 1889.

small-head sedge

FNA23: "*Carex illota* is unlike all other members of sect. Ovales in having perigynia lacking wings and margins consistently entire from perigynia base to beak tip."

**Carex infirmivervia** Naczi [FNA23, HC2, SPNW]

Novon. 12: 528, fig. 7. 2002.

weak-veined sedge

**Carex inops** L.H. Bailey [FNA23, HC2]

Proc. Amer. Acad. Arts. 22: 126. 1886.

long-stolon sedge

ssp. *inops* [FNA23, HC2, SPNW]

Proc. Amer. Acad. Arts. 22: 126.

long-stolon sedge

*Carex pennsylvanica* Lam. var. *vespertina* L.H. Bailey [HC]

*Carex verecunda* Holm

*Carex vespertina* (L.H. Bailey) Howell

***Carex integra*** Mack. [FNA23, HC, HC2]

Bull. Torrey Bot. Club. 43: 608. 1917.

smooth-beaked sedge

WA population, on Mt. Adams, is disjunct and has not been seen since 1909.

***Carex interior*** L.H. Bailey [FNA23, HC, HC2, SPNW]

Bull. Torrey Bot. Club. 20: 426. 1893.

inland sedge

*Carex scirpoides* Schkuhr ex Willd.

FNA23: "When *Carex interior* occurs with *C. sterilis*, *C. echinata*, and (rarely) *C. atlantica*, usually sterile intermediates, presumably hybrids, may occasionally be found."

***Carex interrupta*** Boeckeler [FNA23, HC, HC2, SPNW]

Linnaea. 40: 432. 1876.

green-fruited sedge, interrupted sedge

*Carex interrupta* Boeckeler var. *distenta* Kük.

FNA23: "*Carex interrupta*, an uncommon species, is distinguished by the very small, green, glabrous perigynia distended and often split by the developing achenes. Relationships of the species with other members of the section are not clear; it shares distinctive characteristics with *C. torta* and *C. endlichii*, the next two species."

***Carex jonesii*** L.H. Bailey [FNA23, HC, HC2, SPNW]

Mem. Torrey Bot. Club. 1: 16. 1889.

Jones' sedge

*Carex nervina* L.H. Bailey var. *jonesii* (L.H. Bailey) Kük.

FNA23: "The affinities and sectional placement of *Carex jonesii* are unclear. Although *C. jonesii* has often been considered to be part of the *C. nervina*-*C. neurophora* complex, it is distinguished from those species by numerous vegetative and reproductive characteristics, including basal leaves with short sheaths with rapidly disintegrating hyaline fronts and perigynia with smooth beaks, oblique, rather than bidentate at the mouth. *Carex jonesii* is frequently confused with other western montane sedges that have capitate inflorescences. It is most often confused with *C. illota* due to the strong similarity of the perigynia (somewhat shorter and more rounded apically in *C. illota*). Although *C. illota* is placed in sect. *Ovales* based on the gynecandrous spikes, that character can be very difficult to determine in mature plants due to the condensed inflorescence. The ovate, spongy-based perigynia of *C. illota* suggest a closer relationship with *C. jonesii* than with typical members of sect. *Ovales*."

***Carex kelloggii*** W. Boott [HC2]

var. *impressa* (L.H. Bailey) B. L. Wilson & Otting [HC2]

few-ribbed sedge

*Carex interrupta* Boeckeler var. *impressa* L.H. Bailey

*Carex lenticularis* Michx. var. *impressa* (L.H. Bailey) L.A. Standl. [FNA23, SPNW]

*Carex limnaea* Holm

*Carex paucicostata* Mack. [SPNW, FNA23]

FN23: "Primarily a taxon of the Sierra Nevada and southern Cascade Mountains, *Carex lenticularis* var. *impressa* tends to have smaller perigynia with fewer veins and more red-brown pigmentation than does the more widespread var. *lipocarpa*."

var. *kelloggii* [HC2]

Kellogg's sedge, lakeshore sedge

*Carex hindsii* C.B. Clarke var. *brevigluma* Kük.

*Carex lenticularis* Michx. var. *lipocarpa* (Holm) L.A. Standl. [FNA23, SPNW]

*Carex lenticularis* Michx. var. *paullifructus* Kük.

*Carex vulgaris* L.H. Bailey var. *lipocarpa* Holm

FNA23: "Carex lenticularis var. lipocarpa is the most abundant member of the species in western North America. It is distinguished from the other western taxa by the green, short-stipitate, ellipsoid perigynia and the elongate inflorescence; it is distinguished from the eastern var. lenticularis by the black scales and the red-brown beak orifice. Despite the morphologic similarity of Carex lenticularis var. lenticularis and C. lenticularis var. lipocarpa and the apparent intergradation where the two ranges come into contact, there appears to have been some divergence in chromosome numbers."

var. ***limnophila*** (Holm) B. L. Wilson & R. E. Brainerd [HC2]

lakeshore sedge

*Carex goodenovii* Gay var. *limnophila* (Holm) M.E. Jones

*Carex hindsii* C.B. Clarke

*Carex lenticularis* Michx. var. *limnophila* (Holm) Cronquist [FNA23, HC, SPNW]

*Carex vulgaris* L.H. Bailey var. *limnophila* Holm

FNA23: "Carex lenticularis var. limnophila occurs only along the Pacific coast and is distinguished from the sympatric var. lipocarpa by larger perigynia, wider pistillate spikes, more compact inflorescence, and pistillate scales that are as long as the perigynia."

***Carex kobomugi*** Ohwi [FNA23, HC2, SPNW]

Mem. Coll. Sci. Kyoto Imp. Univ., Ser. B, Biol. 5(3): 2 1930.

Japanese sedge

FNA23: "Before Carex kobomugi was formally recognized it was included in C. macrocephala Willdenow ex Sprengel. Carex kobomugi was collected during the early 1900s from ballast and sand near Portland, Oregon, but recent collections are not known; the habitat there may no longer exist. Clones of C. kobomugi have been registered by the U.S. Soil Conservation Service and the New Jersey Agricultural Experiment Station for long-term stabilization of coastal sand dunes. Its introduced range will likely expand." SPNW reports it established in sand dunes in southwestern WA.

***Carex lachenalii*** Schkuhr [FNA23, HC2, SPNW]

Beschr. Riedgräs. 1: 51, plate Y, fig. 79. 1801.

two-parted sedge

*Carex bipartita* All. [HC]

No verified records in KZ reports for N. Cascades based on a Naas collection. Diligent search by PZ was unable to locate any specimens at WTU from WA. One voucher reported to be held at NPS herbarium in Marblemount. C. bipartita is a missapplied name.

***Carex lacustris*** Willd. [FNA23, HC2]

Sp. Pl. 4(1): 306. 1805.

lake sedge

Collected in Pend Oreille County in 2013.

***Carex laevis*** Meinsh. [FNA23, HC, HC2, SPNW]

Bot. Centralbl. 55: 195. 1893.

smooth-stemmed sedge

*Carex deweyana* Schwein. ssp. *sparsiflora* L.H. Bailey

FNA23: "Carex laevis is divergent from the rest of the members of Carex sect. Deweyanae and may not belong to this section. Compared to the other taxa in the section, C. laevis has shorter, more spreading perigynia, with lower length to width ratios and shorter beaks. In this flora, placement of C. laevis in Carex sect. Deweyanae follows the recommendation of A. A. Reznicek and P. W. Ball (1980), although K. K. Mackenzie's (1931?1935, parts 2?3, pp. 99?114) placement of this species in Carex sect. Stellulatae may be correct. Reports of Carex laevis from Colorado appear to be based on misidentifications."

**Carex lasiocarpa** Ehrh. [FNA23, HC, HC2, SPNW]

Hannover. Mag. 22: 132. 1784.  
wiregrass

*Carex lanuginosa* Michx. [HC]

*Carex lasiocarpa* Ehrh. var. *americana* Fernald [HC]

FNA23: "Carex lasiocarpa is a dominant of boreal wetlands, often forming huge stands. Large stands of the species are quite striking at a distance because of their pale straw color derived from the dried and faded, curly, filiform leaf apices of the vegetative shoots. Sometimes extensive stands occur without fertile culms. The reported hybrids between Carex lasiocarpa and C. stricta require confirmation (J. Cayouette and P. M. Catling 1992). North American plants have, on average, slightly smaller perigynia and shorter beak teeth than European and Asian plants and have been distinguished as subsp. americana (Fernald) Hultén."

**Carex lasiocarpa** Ehrh. [FNA23, HC, HC2, SPNW], misapplied

Hannover. Mag. 22: 132. 1784.  
wiregrass

*Carex lanuginosa* Michx. [HC]

*Carex lasiocarpa* Ehrh. var. *americana* Fernald [HC]

FNA23: "Carex lasiocarpa is a dominant of boreal wetlands, often forming huge stands. Large stands of the species are quite striking at a distance because of their pale straw color derived from the dried and faded, curly, filiform leaf apices of the vegetative shoots. Sometimes extensive stands occur without fertile culms. The reported hybrids between Carex lasiocarpa and C. stricta require confirmation (J. Cayouette and P. M. Catling 1992). North American plants have, on average, slightly smaller perigynia and shorter beak teeth than European and Asian plants and have been distinguished as subsp. americana (Fernald) Hultén."

**Carex leporina** L. [HC, HC2, SPNW]

Sp. Pl. 2: 973.  
oval broom sedge

SPNW: "This ruderal species has been considered native to Europe and probably introduced to North America, but recent phylogenetic research suggests that C. leporina evolved in western North America and was introduced to Europe. Flip-flopping between names C. leporina and C. ovalis is due to confusion about which plant specimen should be considered the type for the name C. leporina.

**Carex leporinella** Mack. [FNA23, HC, HC2, SPNW]

Bull. Torrey Bot. Club. 43: 605. 1917.  
Sierra hare sedge

**Carex leptalea** Wahlenb. [FNA23, HC, HC2, SPNW]

Kongl. Vetensk. Acad. Nya Handl. 24: 139. 1803.  
delicate sedge, jelly bean sedge

*Carex jimcalderi* B. Boivin

*Carex leptalea* Wahlenb. ssp. *leptalea* [KZ99]

*Carex leptalea* Wahlenb. ssp. *pacifica* Calder & Roy L. Taylor

*Carex leptalea* Wahlenb. var. *harperi* (Fernald) Weath. & Griscom

*Carex leptalea* Wahlenb. var. *tayloris* B. Boivin

FNA23: "Carex leptalea has the widest geographic range of any North American sedge. Plants vary in color, stature, length of spikes, length, shape, and degree of overlap of perigynia, and color and shape of apex of pistillate scales (other minor characteristics are indicated in J. A. Calder and R. L. Taylor 1965 and B. Boivin 1967?1979). Three morphotypes probably warrant formal taxonomic recognition. Because they intergrade to some degree, the modern tendency is to treat them as only extreme phases in a wide-ranging, complex species. A major study is needed to clarify the taxonomy. The typical phase, Carex leptalea subsp. leptalea, tends to be a more slender plant with thinner culms, narrower leaves and smaller spikes and perigynia (2.5?3.5 mm) than subsp. harperi and subsp. pacifica. Its pistillate scales, which vary in shape of apex, are yellowish green to brownish, and its achenes are obtusely angled. That phase is quite uniform and occurs throughout much of the continent, extending south to the uplands of North Carolina, Tennessee, Missouri, South Dakota, New Mexico, and California. Small plants from Alaska,

Yukon, Alberta, British Columbia, and eastward, var. *tayloris*, are extremes of the phase. The most distinct variant, *Carex leptalea* subsp. *harperi* [*C. harperi*, *C. leptalea* var. *harperi*], has longer [3.4?4.9(?5.4) mm], more slender perigynia that overlap more strongly and are subtended by whitish scales. Its spikes are, on the average, longer, and its achenes are sharply angled. The phase occurs from Florida to Texas, north to New Jersey, Pennsylvania, Indiana, and Missouri. Various authors have reported it from farther north, but it is doubtful whether subsp. *harperi* occurs beyond the range given. *Carex leptalea* subsp. *pacifica* [*C. jimcalderi*] resembles subsp. *harperi* in its longer perigynia [(3?)3.4?4.7 mm]) and proximal pistillate scales with the midvein excurrent into a cusp or awn, but differs in its brown-margined scales and obtusely angled achenes. This phase occurs only west of the Coast-Cascade Mountains from the Alaska Panhandle south through the offshore islands and mainland coast of British Columbia to Thurston County, Washington."

***Carex leptopoda* Mack. [FNA23, HC2, SPNW]**

Fl. Rocky Mts. 124, 1060. 1917.

short-scaled sedge, slenderfoot sedge

*Carex deweyana* Schwein. ssp. *leptopoda* (Mack.) Calder & Roy L. Taylor

*Carex deweyana* Schwein. var. *leptopoda* (Mack.) B. Boivin

Split out as separate species from *C. deweyana*.

***Carex limosa* L. [FNA23, HC, HC2, SPNW]**

Sp. Pl. 2: 977. 1753.

mud sedge

***Carex livida* (Wahlenb.) Willd. [FNA23, HC, HC2, SPNW]**

Sp. Pl. 4(1): 285. 1805.

livid sedge, pale sedge

*Carex limosa* L. var. *livida* Wahlenb.

*Carex livida* (Wahlenb.) Willd. var. *grayana* (Dewey) Fernald

*Carex livida* (Wahlenb.) Willd. var. *radicaulis* Paine [KZ99]

*Carex livida* (Wahlenb.) Willd. var. *rufiniformis* Fernald [KZ99]

FNA23: "The distribution of *Carex livida* is very scattered; it is uncommon to rare over much of its range, especially in districts with predominantly acidic soils."

***Carex longii* Mack. [FNA23, HC2, SPNW]**

Bull. Torrey Bot. Club. 49: 373. 1923.

Long's sedge

Not in Hitchcock; native to eastern North America in cranberry fields; recently documented by PZ in Oregon and Washington cranberry fields.

***Carex luzulina* Olney [FNA23, HC, HC2, SPNW]**

Proc. Amer. Acad. Arts. 7: 395. 1868.

spring sedge, woodrush sedge

*Carex ablata* L.H. Bailey

*Carex luzulina* Olney var. *ablata* (L.H. Bailey) F.J. Herm. [FNA23]

*Carex luzulina* Olney var. *luzulina* [FNA23]

*Carex owyheensis* A. Nelson

SPNW: "Two varieties (sometimes treated as species) have been recognized in the PNW, but the traits supposedly distinguishing them vary independently. We do not recognize them, but you may want to try."

***Carex lyngbyei* Hornem. [FNA23, HC, HC2, SPNW]**

Fl. Dan. 11(32): 6, plate 1888. 1827.

Lyngbye's sedge

*Carex cryptocarpa* C.A. Mey.

*Carex lyngbyei* Hornem. var. *cryptocarpa* (C.A. Mey.) Hultén

*Carex lyngbyei* Hornem. var. *robusta* (L.H. Bailey) Cronquist [HC]

*Carex salina* Wahlenb. var. *robusta* L.H. Bailey

FNA23: "*Carex lyngbyei* is the common sedge of the Pacific coastal salt marshes. It may easily be distinguished from sympatric species by the large, pendent, pedunculate spikes and the leathery, yellow-brown perigynia. Although the species is also reported to occur in Japan and Korea, some Asian

collections show significant morphologic and habitat differences from the North American plants. It is probably most closely related to *Carex paleacea* and to the South American *C. darwinii*, and differs from *C. paleacea* primarily by having acute, rather than awned, scales. Previous reports from eastern North American were misidentifications (J. Cayouette 1987)."

***Carex macloviana* d'Urv. [FNA23, HC2]**

Mém. Soc. Linn. Paris. 4: 599. 1826.  
Falkland Island sedge

No specimens from WA. Neither SPNW nor FNA report this species for Washington. Until documented in WA, this species is considered excluded.

***Carex macloviana* d'Urv. [FNA23, HC2], misapplied**

Mém. Soc. Linn. Paris. 4: 599. 1826.  
Falkland Island sedge

No specimens from WA. Neither SPNW nor FNA report this species for Washington. Until documented in WA, this species is considered excluded.

***Carex macrocephala* Willd. ex Spreng. [FNA23, HC, HC2, SPNW]**

Syst. Veg. 3: 808. 1826.  
bighead sedge

*Carex anthericoides* J. Presl & C. Presl

***Carex macrochaeta* C.A. Mey. [FNA23, HC, HC2, SPNW]**

Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans. 1: 224. 1831.  
Alaska long-awn sedge

FNA23: "T. V. Egorova (1999) included *Carex macrochaeta* in sect. *Scitae*. The species commonly has a white or cream tomentum on many roots, although most individuals have at least some roots with a yellowish tomentum. The sectional placement of this species requires further investigation."

***Carex magellanica* Lam. [FNA23, HC2]**

Encycl. 3: 385. 1792.  
boreal bog sedge, poor sedge

**ssp. *irrigua* (Wahlenburg) Hiitonen [FNA23, HC2, SPNW]**

Suom. Kasvio. 161. 1933.  
poor sedge

*Carex limosa* L. var. *irrigua* Wahlenburg

*Carex magellanica* Lam. var. *irrigua* (Wahlenb.) Britton, Sterns & Poggenb.

*Carex paupercula* Michx. [HC]

FNA23: "*Carex magellanica* is one of the bipolar disjunct species of *Carex* discussed by D. M. Moore and A. O. Chater (1971). *Carex magellanica* subsp. *magellanica* occurs in cool temperate regions of South America. It is distinguished from *C. magellanica* subsp. *irrigua* by the terminal spike being almost always gynecandrous, the lateral spikes with (2?)3?7 staminate flowers, and the pistillate scales (1.3?)1.6?2.3 mm wide."

***Carex media* R. Br. ex Richardson [FNA23, HC2, SPNW]**

Narr. Journey Polar Sea. 750. 1823.  
Montana sedge, Scandinavian sedge

*Carex alpina* Lilj. var. *inferalpina* Wahlenb.

*Carex angarae* Steud.

*Carex norvegica* Retz. ssp. *inferalpina* (Wahlenb.) Hultén [KZ99]

*Carex norvegica* Retz. var. *inferalpina* (Wahlenb.) B. Boivin

*Carex vahlii* Schkuhr var. *inferalpina* (Wahlenb.) Fernald

FNA23: "*Carex media* is circumboreal with extensions southward to the mountains of Montana, Oregon, and Washington, the driftless area of Iowa and Wisconsin, and the maritime provinces of eastern Canada. It occurs together with *C. norvegica* only in Quebec and Newfoundland (Labrador), where intermediates are known. All references to *C. norvegica* west of Hudson Bay are to this species."

***Carex mertensii* J.D. Prescott ex Bong. [FNA23, HC, HC2, SPNW]**

Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans. 2: 168. 1832.  
Mertens' sedge

*Carex columbiana* Dewey

FNA23: "Carex mertensii is represented in Japan and the Russian Far East by the vicariant *C. urostachys* Franchet [*C. mertensii* J. D. Prescott var. *urostachys* (Franchet) Kükenthal]."

**Carex micropoda** C.A. Mey. [FNA23, HC2, SPNW]

Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans. 1: 210, plate 6. 1831.  
timberline sedge

*Carex crandallii* Gand.

*Carex jacobi-peteri* Hultén

*Carex pyrenaica* Wahlenb. ssp. *micropoda* (C.A. Mey.) Hultén

*Carex pyrenaica* Wahlenb. var. *mondsii* Kelso

FNA23: "There is as much variation within the Rocky Mountain *Carex crandallii* as between *C. crandallii* and *C. micropoda* of Alaska and British Columbia. J. A. Calder and R. L. Taylor (1968) reported a weak distinction between a predominately distigmatic coastal race ("*micropoda*"•) and a tristigmatic one ("*pyrenaica*"•) from the interior. T. V. Egorova (1999) illustrated the shapes of perigynia for *C. pyrenaica* and *C. micropoda*, and the differences are consistent with what others have noted. Nevertheless, until a more reliable set of characters is found to distinguish these two taxa, all of the North American plants shall be treated as *C. micropoda*. W. A. Weber and R. C. Wittmann (1992) maintain the North American plants distinct from the European *C. pyrenaica* at the rank of species, a view that is accepted here. A thorough, worldwide review of relationships among taxa is warranted."

**Carex microptera** Mack. [FNA23, HC, HC2, SPNW]

Muhlenbergia. 5: 56. 1909.  
small-winged sedge

*Carex festivella* Mack.

*Carex limnophila* F.J. Herm. [HC]

*Carex macloviana* d'Urv. ssp. *festivella* (Mack.) Á. Löve & D. Löve

*Carex macloviana* d'Urv. var. *microptera* (Mack.) B. Boivin

*Carex microptera* Mack. var. *crassinervia* F.J. Herm.

*Carex microptera* Mack. var. *limnophila* (F.J. Herm.) Dorn

FNA23: "In high montane habitats it is sometimes difficult to distinguish *Carex microptera* from *C. haydeniana*."

**Carex nardina** Fr. [FNA23, HC, HC2, SPNW]

Novit. Fl. Suec. Mant. 2: 55. 1839.  
spikenard sedge

*Carex elyniformis* A.E. Porsild

*Carex hepburnii* Boott

*Carex nardina* Fr. ssp. *hepburnii* (Boott) Á. Löve, D. Löve & B.M. Kapoor [KZ99]

*Carex nardina* Fr. var. *atriceps* Kük.

*Carex nardina* Fr. var. *hepburnii* (Boott) Kük.

*Carex stantonensis* M.E. Jones

FNA23: "Much has been written about variation in *Carex nardina*, but little has been resolved. Russian taxonomists have long maintained that *C. nardina* is a species restricted to Iceland, Svalbard, Norway, and Sweden and is distinct at the rank of species from *C. hepburnii* (T. V. Egorova 1999). The differences of perigynia, cited by Egorova and well illustrated in A. Cronquist (1969), can define two taxa, which have been viewed as minor variations (E. Hultén 1958) or good species. The Scandinavian material does appear to constitute a single taxon, *C. nardina*. In North America both forms occur, but without the clear geographic limits offered by A. E. Porsild (1943). *Carex nardina* and *C. hepburnii* differ in the following characteristics: perigynia shape: ovate or spindle-shaped versus obovate or broadly elliptic; size: (3?)3.5?5 × 1.4?1.6 mm versus 3?5 × 1.5?2mm; beak formation and size: gradually formed, 0.5 mm, obscure to 0.4 mm; stipe formation and size: distinct, 0.5?1 mm versus obscure (less than 0.2 mm); and range: Iceland, Svalbard, Norway, North America, Russian Far East versus Sweden and possibly North America. In time, perhaps, a clearer picture of the taxa in North America will emerge. *Carex nardina* superficially resembles

taxa in *Carex* sect. *Filifoliae* and can be confused with *Kobresia myosuroides*."

***Carex nebrascensis*** Dewey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts, ser. 2. 18: 102. 1854.

Nebraska sedge

*Carex jamesii* Torr.

*Carex nebrascensis* Dewey var. *eruciformis* Suksd.

*Carex nebrascensis* Dewey var. *praevia* L.H. Bailey

*Carex nebrascensis* Dewey var. *ultriformis* L.H. Bailey

FNA23: "*Carex nebrascensis* is a common low- to mid-elevation western species that is morphologically somewhat similar to *C. aquatilis*; it differs in the obovoid, distended, veined perigynia with a bidentate beak and the awned scales. The amphistomatous leaves of the species are glabrous and often glaucous even when mature. Cattle frequently graze on *C. nebrascensis*."

***Carex neurophora*** Mack. [FNA23, HC, HC2, SPNW]

Ill. Fl. Pacific States. 1: 298, fig. 706. 1923.

alpine nerve sedge

*Carex vernacula* L.H. Bailey var. *hobsonii* Maguire

***Carex nigricans*** C.A. Mey. [FNA23, HC, HC2, SPNW]

Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans. 1: 211, plate 7. 1831.

black alpine sedge

H&C shows Retz. as the author in error.

***Carex nudata*** W. Boott [FNA23, HC, HC2, SPNW]

Bot. California. 2: 241. 1880.

torrent sedge

*Carex acutina* L.H. Bailey

*Carex bishallii* C.B. Clarke

*Carex nudata* W. Boott var. *anomala* L.H. Bailey

*Carex suborbiculata* Mack.

*Carex tenacissima* Suksd.

FNA23: "*Carex nudata* is also a member of the *C. stricta* group and is distinguished from sympatric members of the group by flowering from first-year shoots and having very narrow inflorescence bracts and somewhat elongated, heavily veined perigynia. It has a very distinctive growth form and habitat, dense tussocks among rocks in streambeds."

***Carex obnupta*** L.H. Bailey [FNA23, HC, HC2, SPNW]

Proc. Calif. Acad. Sci., ser. 2. 3: 104. 1891.

slough sedge

*Carex magnifica* Dewey ex Piper

FNA23: "*Carex obnupta* occasionally hybridizes with *C. nudata*."

***Carex obtusata*** Lilj. [FNA23, HC, HC2, SPNW]

Kongl. Vetensk. Acad. Nya Handl. 14: 69. 1793.

blunt sedge

FNA does not show this species occurring in WA; specimens from WA at WTU.

***Carex occidentalis*** L.H. Bailey [FNA23]

Mem. Torrey Bot. Club. 1: 14. 1889.

Misapplied in WA

***Carex pachycarpa*** Mack. [HC2]

Bulletin of the Torrey Botanical Club 43: 616-618.

furrowed broomsedge

Long confused with *Carex multicostata*, which is restricted to the mountains of California and adjacent Nevada.

**Carex pachystachya** Cham. ex Steud. [FNA23, HC, HC2, SPNW]

Syn. Pl. Glumac. 2: 197. 1855.

thick-head sedge

*Carex festiva* Dewey var. *gracilis* Olney

*Carex festiva* Dewey var. *pachystachya* (Cham. ex Steud.) L.H. Bailey

*Carex macloviana* d'Urv. ssp. *pachystachya* (Cham. ex Steud.) Hultén

*Carex macloviana* d'Urv. var. *pachystachya* (Cham. ex Steud.) Kük.

*Carex pachystachya* Cham. ex Steud. var. *gracilis* (Olney) Mack.

*Carex pachystachya* Cham. ex Steud. var. *monds-coulteri* Kelso

H&C include *C. preslii* as a synonym of *C. pachystachya*

**Carex pallescens** L. [FNA23, HC2, SPNW]

Sp. Pl. 2: 977. 1753.

pale green sedge

*Carex pallescens* L. var. *neogaea* Fernald

Populations in Clark Co. and in sw BC are recent introductions in disturbed sites. SPNW: "The idea that the NE WA and N ID populations of *C. pallescens* are native is plausible because they grow in relatively undisturbed wet meadows with other apparently native plants that are from eastern N America. Introduced populations are to be looked for in disturbed wet meadows elsewhere in the PNW."

**Carex pansa** L.H. Bailey [FNA23, HC, HC2, SPNW]

Bot. Gaz. 13: 82. 1888.

sand sedge

*Carex arenicola* Fr. Schmidt ssp. *pansa* (L.H. Bailey) T. Koyama & Calder

FNA23: "Carex pansa is striking not only for its sand-dune habitat, but its very dark scales, basal sheaths, and rhizomes scales. Although *C. pansa* is sometimes united with the east Asian *C. arenicola* as subsp. *pansa*, the North American species seems clearly closer to *C. praegracilis*. *Carex arenicola*, though occupying a similar habitat, differs in its usually more elongate, ellipsoid inflorescences, mostly bisexual spikes, pale and dull brown pistillate scales with an inconspicuous hyaline margins, usually larger perigynia (ca. 3.7?5.2 mm) that somewhat exceed the scales, anthers with very short apiculus (<0.1 mm), and paler brown, bladeless basal sheaths and rhizomes scales."

**Carex pauciflora** Lightf. [FNA23, HC, HC2, SPNW]

Fl. Scot. 2: 543, plate 6, fig. 2. 1777.

few-flowered edge

FNA23: "Carex pauciflora is sometimes confused with *C. microglochin*, though *C. pauciflora* is easily distinguished by the lack of an evident rachilla. Compared to *C. microglochin*, the shoots of *C. pauciflora* tend to be more definitely tufted, the culms are more sharply 3-angled and roughened distally, and the achenes fill less of the perigynia. *Carex pauciflora* has a catapult dispersal mechanism (E. E. Hutton 1976) in contrast to the putative clinging mechanism of *C. microglochin* and presumably *C. camptoglochin* V. I. Kreczetowicz and *C. parva* Nees (see comments under the previous species). Dispersal by animals is possible for *C. pauciflora* as well. People walking through bogs may find perigynia attached to their clothing (L. Brouillet, pers. comm.)."

**Carex paysonis** Clokey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. 203: 89, plate 2, figs. 7?12. 1922.

Payson's sedge

*Carex podocarpa* R. Br. var. *paysonis* (Clokey) B. Boivin

*C. podocarpa* R. Br. is misapplied in WA. KZ sites one record from Mt. Rainier from Jones (1960) . Biek (2000) says the record is *C. paysonis*. SPNW states that this species is reported in error from WA, and FNA23 does not include WA within the range of this species. For these reasons, *C. paysonis* is considered excluded from WA until a specimen WA is collected or located.

**Carex pellita** Muhl. ex Willd. [FNA23, HC2, SPNW]

Sp. Pl. 4(1): 302. 1805.

woolly sedge

*C. lanuginosa* Michx is misapplied in WA. FNA23: "Carex pellita is abundant and variable in much of its

range and a common plant of roadside ditches and other early successional or disturbed habitats. It is sometimes subsumed under *C. lasiocarpa*, as var. *latifolia* (Boeckeler) Gilly, but it is distinct in the field and has a quite different biology and distribution. However, slender and depauperate individuals can be difficult to distinguish in the herbarium. The name *Carex lanuginosa* has been used for this species in many floras, but the type of this name is *C. lasiocarpa*. *Carex pellita* hybridizes occasionally with *C. hyalinolepis* (= *C. xsubimpressa*) and rarely with *C. lacustris*, *C. trichocarpa* (= *C. xcaesariensis*, A. A. Reznicek and P. M. Catling 1985), and *C. utriculata*."

\* McClintock, K. A. and M. J. Waterway. 1994. Genetic differentiation between *Carex lasiocarpa* and *C. pellita* (Cyperaceae) in North America. *Amer. J. Bot.* 81: 224?231.

***Carex pendula* Huds. [FNA23, HC2, SPNW]**

*Fl. Angl.* 352. 1762.

pendulous sedge

Not in H&C; collected in King County by Art Jacobson and Peter Zika. FNA23: "Carex pendula is a handsome, robust clump-forming species with glaucous foliage; it is sometimes cultivated, especially in water gardens. It has a propensity to self-sow and is beginning to appear outside of cultivation on roadsides and stream banks. Its potential as an invasive species is unknown."

***Carex petasata* Dewey [FNA23, HC, HC2, SPNW]**

*Amer. J. Sci. Arts.* 29: 246, plate W, fig. 72. 1836.

Liddon's sedge

*Carex liddonii* Boott

FNA23: "Much too broad a range has been ascribed previously to this taxon. Reports from the Rocky Mountains are based mostly on misidentifications of *Carex petasata* and *C. tahoensis*, both of which differ in having reddish brown pistillate scales and larger perigynia that are distinctly veined adaxially."

***Carex phaeocephala* Piper [FNA23, HC, HC2, SPNW]**

*Contr. U. S. Natl. Herb.* 11: 172. 1906.

mountain hare sedge

FNA23: "Reports of *Carex phaeocephala* from northern Canada are based on other species, mostly *C. tahoensis*."

***Carex pluriflora* Hultén [FNA23, HC, HC2, SPNW]**

*Acta Univ. Lund.*, n. s. 38: 367, fig. 4a?d. 1942.

black bog sedge

*Carex rariflora* (Wahlenb.) Sm. var. *pluriflora* (Hultén) B. Boivin

*Carex stygia* T. Holm, ambiguous

FNA23: "The name *Carex stygia* has been incorrectly applied to specimens of *C. pluriflora*. T. V. Egorova (1999) treated *C. pluriflora* as a subspecies of *C. rariflora*."

***Carex podocarpa* R. Br. ex Richardson [FNA23, HC2], misapplied**

*Narr. Journey Polar Sea.* 751. 1823.

graceful mountain sedge

Misapplied in WA. See note under *C. paysonis*

***Carex podocarpa* R. Br. ex Richardson [FNA23, HC2]**

*Narr. Journey Polar Sea.* 751. 1823.

graceful mountain sedge

Misapplied in WA. See note under *C. paysonis*

***Carex praeceptorum* Mack. [FNA23, HC, HC2, SPNW]**

*N. Amer. Fl.* 18: 95. 1931.

teacher's sedge

*Carex canescens* L. var. *dubia* L.H. Bailey

*Carex heleonastes* L. f. var. *dubia* (L.H. Bailey) B. Boivin

*Carex praeceptorium* Mack. [JPM], orthographic variant

***Carex praegracilis* W. Boott [FNA23, HC, HC2, SPNW]**

Bot. Gaz. 9: 87. 1884.  
clustered field sedge

FNA23: "Carex praegracilis is extensively and recently spreading east of its native range, especially along expressways to which road salt is applied in winter (A. A. Reznicek and P. M. Catling 1987)."

**Carex praticola** Rydb. [FNA23, HC, HC2, SPNW]

Mem. New York Bot. Gard. 1: 84. 1900.

northern meadow sedge

*Carex piperi* Mack. ex Piper & Beattie [KZ99]

*Carex platylepis* Mack.

*Carex pratensis* Drejer

KZ treats *C. piperi* as a separate species.

**Carex preslii** Steud. [FNA23, HC2, SPNW]

Syn. Pl. Glumac. 2: 242. 1855.

Presl's sedge

H&C treats *C. preslii* as a synonym of *C. pachystachya*. FNA23: "Carex preslii has been synonymized with *C. pachystachya* (A. Cronquist 1969; C. L. Hitchcock and A. Cronquist 1973; A. Cronquist et al. 1972+)."

**Carex proposita** Mack. [FNA23, HC, HC2, SPNW]

N. Amer. Fl. 18: 126. 1931.

Smoky Mountain sedge

**Carex rariflora** (Wahlenb.) Sm. [FNA23]

Engl. Bot. plate 2516. 1813.

*Carex rariflora* (Wahlenb.) Sm. var. *rariflora*

Misapplied in WA. See *C. pluriflora*.

**Carex raynoldsii** Dewey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts, ser. 2. 32: 39. 1861.

Raynolds' sedge

*Carex lyallii* Boott

**Carex retrorsa** Schwein. [FNA23, HC, HC2, SPNW]

Ann. Lyceum Nat. Hist. New York. 1: 71. 1824.

retrorse sedge

FNA23: "Very rarely, specimens appear to be intermediate between *Carex retrorsa* and *C. lupulina* or *C. lupuliformis*; they are likely hybrids."

**Carex richardsonii** R. Br. [FNA23, HC2]

Narr. Journey Polar Sea. 751. 1823.

Richardson's sedge

Misapplied in WA

**Carex rossii** Boott [FNA23, HC, HC2, SPNW]

Fl. Bor.-Amer. 2: 222. 1839.

Ross' sedge

*Carex deflexa* Hornem. ssp. *media* L.H. Bailey

*Carex deflexa* Hornem. var. *farwellii* Britton

*Carex deflexa* Hornem. var. *rossii* (Boott) L.H. Bailey

*Carex diversistylis* A. Roach

*Carex farwellii* (Britton) Mack.

*Carex novae-angliae* Schwein. var. *rossii* (Boott) L.H. Bailey

**Carex rostrata** Stokes [HC, HC2, FNA23, SPNW]

Fl. Bor. -Amer. 2: 173. 1803, not Stokes 1787

northern beaked sedge

*Carex rostrata* Stokes var. *ambigens* Fernald

*C. rostrata* misapplied to the taxon *C. utriculata* in H&C. FNA23: "Carex rostrata is infrequent and local in large portions of its range, often forming large colonies where found. Carex rostrata hybridizes with *C. oligosperma* and *C. saxatilis*; rare sterile intermediates with *C. utriculata* are likely hybrids. The vast majority of records of *C. rostrata* from North America are *C. utriculata*."

**Carex rostrata** Stokes [HC, HC2, FNA23, SPNW], misapplied

Fl. Bor. -Amer. 2: 173. 1803, not Stokes 1787  
northern beaked sedge

*Carex rostrata* Stokes var. *ambigens* Fernald

*C. rostrata* misapplied to the taxon *C. utriculata* in H&C. FNA23: "Carex rostrata is infrequent and local in large portions of its range, often forming large colonies where found. Carex rostrata hybridizes with *C. oligosperma* and *C. saxatilis*; rare sterile intermediates with *C. utriculata* are likely hybrids. The vast majority of records of *C. rostrata* from North America are *C. utriculata*."

**Carex saxatilis** L. [FNA23, HC, HC2, SPNW]

Sp. Pl. 2: 976. 1753.  
limestone sedge, russet sedge

*Carex ambusta* Boott

*Carex compacta* R. Br. ex Dewey

*Carex miliaris* Michx.

*Carex physocarpa* J. Presl & C. Presl

*Carex* × *physocarpoides* Lepage [KZ99]

*Carex rhomalea* (Fernald) Mack.

*Carex saxatilis* L. ssp. *laxa* (Trautv.) Kalela

FNA23: "Carex saxatilis is highly variable in North America. Plants from western North America, often named *C. physocarpa*, tend to be robust with long peduncles on the pistillate spikes, wide leaves, and large perigynia. These characters decrease in size eastward across North America with successively smaller plants usually referred to as *C. saxatilis* and *C. miliaris*. This weak east/west cline is confounded by large amounts of variation within small geographic areas and phenotypic plasticity. B. A. Ford et al. (1991) and B. A. Ford and P. W. Ball (1992) have demonstrated that these segregates represent elements in a continuum rather than discrete taxa. Hybrids between *Carex saxatilis* and *C. vesicaria* (= *C. xstenolepis* Lessing; = *C. xmainensis* Porter ex Britton) and *C. saxatilis* and *C. utriculata* (= *C. xphysocarpoides* Lepage) have been found in North America (B. A. Ford et al. 1993). These hybrids are infrequent, largely sterile, and intermediate in morphology between the two parents."

**Carex scirpoidea** Michx. [FNA23, HC, HC2]

Fl. Bor.-Amer. 2: 171. 1803.  
single-spike sedge

*Carex scirpiformis* Mack.

*Carex scirpina* Tuck.

ssp. **pseudoscirpoidea** (Rydb.) D.A. Dunlop [FNA23, HC2, SPNW]

Novon. 7: 355. 1998.  
western single-spiked sedge

*Carex pseudoscirpoidea* Rydb.

*Carex scirpoidea* Michx. var. *pseudoscirpoidea* (Rydb.) Cronquist [HC]

FNA shows this taxon occurring in WA, but SPNW does not. There are no specimens at WTU. Until a voucher is produced, this taxon is considered excluded.

ssp. **scirpoidea** [FNA23, HC2, SPNW]

Fl. Bor.-Amer. 2: 171.  
northern single-spike sedge

*Carex athabascensis* F.J. Herm.

*Carex michauxii* Schwein.

*Carex scirpoidea* Michx. var. *europaea* Kük.

*Carex scirpoidea* Michx. var. *scirpiformis* (Mack.) O'Neill & Duman

*Carex scirpoidea* Michx. var. *scirpoidea* [HC]

*Carex wormskioldiana* Hornem.

FNA23: "Subspecies of *Carex scirpoidea* grow in a variety of habitats in northern North America. Taxa previously recognized as varieties or separate species are treated here as subspecies of *C. scirpoidea*. Within the *C. scirpoidea* complex, all subspecies have the same chromosome number, possess similar achene micromorphology and leaf anatomy, interbreed in greenhouse experiments, and have morphologic characteristics that mostly fall within the normal range for *C. scirpoidea*. *Carex scirpoidea* subsp. *scirpoidea* is the widest ranging of the subspecies and includes taxa formerly recognized by other caricologists. G. Kükenthal (1909) recognized *C. scirpoidea* var. *europaea* from a single locality in Norway. These plants are short in stature, like plants of *C. scirpoidea* subsp. *scirpoidea* from alpine habitats, and values for most morphologic characters fall within the normal range for subsp. *scirpoidea*. Another taxon, *C. scirpiformis*, was recognized by K. K. Mackenzie (1908) and treated at the varietal rank by H. O'Neill and M. Duman (1941) based on wide, hyaline pistillate scale margins and light-colored pubescence. Width of the hyaline portion of the scale margins and the color of pubescence are extremely variable characters in the group. F. J. Hermann (1957) recognized *C. athabascensis* as a separate species based on the overall robust habit and small, ovoid achenes. Achenes from the type specimens fall at the wide end of the range of variation of achene width in *C. scirpoidea*. *Carex scirpoidea* subsp. *scirpoidea* is recognized by the lack of persistent leaf bases on the flowering shoots, ovate perigynia that are tightly enveloped by the perigynia on all sides, and leaves widely V-shaped in transverse section."

ssp. ***stenochlaena*** (Holm) Á. Löve & D. Löve [FNA23, HC2, SPNW]

Taxon. 13: 202. 1964.

Alaska singlespike sedge

*Carex scirpoidea* Michx. var. *stenochlaena* Holm [HC]

*Carex stenochlaena* (Holm) Mack.

FNA23: "Subspecies of *Carex scirpoidea* grow in a variety of habitats in northern North America. Taxa previously recognized as varieties or separate species are treated here as subspecies of *C. scirpoidea*. Within the *C. scirpoidea* complex, all subspecies have the same chromosome number, possess similar achene micromorphology and leaf anatomy, interbreed in greenhouse experiments, and have morphologic characteristics that mostly fall within the normal range for *C. scirpoidea*. *Carex scirpoidea* subsp. *stenochlaena* is distinguished by lanceolate perigynia that are longer than 3 mm, tapering gradually to a beak, and over 2.5 times as long as wide. The pistillate spikes are clavate, loosely flowered at the base and borne on slender, lax culms (the spikes droop). The pistillate scales are longer than 3 mm and subtend hirsute perigynia. Specimens of *Carex scirpoidea* subsp. *stenochlaena* from the Bitterroot Range in Ravalli County, Montana, best characterize the subspecies. Some specimens from Washington and northern British Columbia exhibit tendencies towards *C. scirpoidea* subsp. *scirpoidea*, in which perigynia are just 2.5 times as long as wide and spikes are less clavate, more loosely flowered. *Carex scirpoidea* subsp. *stenochlaena* from British Columbia and Yukon have a tendency to intergrade with subsp. *scirpoidea*."

***Carex scoparia*** Schkuhr ex Willd. [FNA23, HC, HC2]

Sp. Pl. 4(1): 230. 1805.

pointed broomsedge

*Carex scoparia* Schkuhr ex Willd. var. *scoparia* [FNA23, SPNW]

H&C does not recognize varieties. FNA23: "*Carex scoparia* is variable and may, in fact, be a complex of at least 2 species. Given current understanding, 2 varieties are recognized. Some populations of *Carex scoparia* from the central and southern Appalachian Mountains have unusually long beaks (greater than 3.7 mm). When long beaks occur in more robust plants with large spikes and spreading perigynia, the plants look remarkably different from typical lowland or western populations. *Carex scoparia* var. *scoparia* grows syntopically with other species from sect. *Ovales* and may form sterile hybrids. P. E. Rothrock et al. (1997) documented putative hybrids between *C. scoparia* and *C. alata*, *C. hormathodes*, *C. straminea*, and *C. suberecta*."

***Carex scopulorum*** T. Holm [FNA23, HC, HC2]

Amer. J. Sci. 164: 422, figs. 1?6. 1902.

var. ***bracteosa*** (L.H. Bailey) F.J. Herm. [FNA23, HC2, SPNW]

Leafl. W. Bot. 9: 16. 1959.

Sierra alpine sedge

*Carex campylocarpa* Holm  
*Carex gymnoclada* Holm  
*Carex scopulorum* T. Holm var. *scopulorum* [FNA23], misapplied

FNA23: "Carex scopulorum is the common species of sect. Phacocystis in subalpine, seasonally wet meadows in the western mountains. It is replaced on the western slope of the Cascade range by *C. spectabilis*, a member of sect. Scitae. Where sympatric with *C. aquatilis*, *C. scopulorum* occurs in drier portions of the habitat. Carex scopulorum is frequently confused with members of sect. Racemosae because of the similarity in habitat, size, inflorescence dimensions, and perigynium shape; it is distinguished by the two stigmas and flattened achenes. Carex scopulorum is probably most closely related to *C. bigelowii*, based on the similarity in vegetative morphology, hypostomic leaves, perigynia characteristics (absence of veins), and chromosome numbers. A common sedge of the central Rocky Mountains, Carex scopulorum var. bracteosa is distinguished from var. scopulorum by the scabrous stems and sheaths and by the narrower, more ellipsoid perigynia. It is usually distinguishable from var. prionophylla by the absence of bladeless, ladder-fibrillose sheaths; the two taxa may be difficult to identify in areas where both occur."

var. ***prionophyllum*** (Holm) L.A. Standl. [HC2]  
firethread sedge

*Carex scoparia* Schkuhr ex Willd. var. *tessellata* Fernald & Wiegand [FNA23]  
*Carex scopulorum* T. Holm var. *prionophylla* (Holm) L.A. Standl. [FNA23, SPNW], orthographic variant

FNA23: "Carex scopulorum var. prionophylla usually occurs at somewhat lower elevations than var. bracteosa. Where the two are sympatric, they can be distinguished by the bladeless, ladder-fibrillose basal sheaths and the narrower ellipsoid perigynia of var. prionophylla."

***Carex sheldonii*** Mack. [FNA23, HC, HC2]

Bull. Torrey Bot. Club. 42: 618. 1915.  
Sheldon's sedge

Recently (2015) collected in WA.

***Carex siccata*** Dewey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts. 10: 278, plate F, fig. 18. 1826.  
dry-spike sedge

*Carex aenea* Fernald [HC], misapplied  
*Carex foenea* Willd. [FNA23, HC2], misapplied  
*Carex foenea* Willd. var. *enervis* D.K. Evans & Mohlenbr.  
*Carex foenea* Willd. var. *foenea*, misapplied  
*Carex foenea* Willd. var. *tuberculata* F.J. Herm.

Taxonomy and nomenclature follows SPNW. SPNW: "Carex siccata can be a community dominant in the herbaceous layer of open conifer forest. Where common, it can furnish good forage for cattle and horses, but it is rare in the PNW. It reduces erosion, especially in sandy soils, and has been used in the habitat restoration projects outside the PNW, sometimes on old mine sites. This species has been involved in a three-way confusion of names involving *C. foenea* and *C. aenea*. Carex siccata is the only one of the three actually known to grow in the PNW." FNA23: "Though most frequently smooth adaxially and more or less distinctly veined, the perigynia of Carex siccata are quite variable in venation and surface texture. Throughout the range of the species, plants with perigynia veinless or, essentially so, occur occasionally. Those plants have been designated as *C. foenea* var. *enervis* Evans & Mohlenbrock. Less commonly, the perigynia are tuberculate adaxially. Such plants have been designated as *C. foenea* var. *tuberculata* F. J. Hermann and specimens have been seen from Washington, Colorado, Arizona, and Wisconsin, and reported from Alberta and New Mexico. They probably occur sporadically throughout the range. Rarely, plants are both veinless and tuberculate. Carex siccata is a very common species of open pinelands in portions of its western range; it becomes very local in much of the easternmost portions of its range. The name Carex foenea has, unfortunately, commonly been misapplied to the species in some recent literature."

***Carex simulata*** Mack. [FNA23, HC, HC2, SPNW]

Bull. Torrey Bot. Club. 34: 604. 1908.  
analogue sedge

**Carex spectabilis** Dewey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts. 29: 248, plate X, fig. 76. 1836.  
showy sedge

*Carex invis*a L.H. Bailey

*Carex nigella* Boott

*Carex spectabilis* Dewey var. *superba* Holm

*Carex tolmiei* Boott

*Carex tolmiei* Boott var. *invis*a (L.H. Bailey) Kük.

**Carex stenoptila** F.J. Herm. [FNA23, HC2]

Leafl. W. Bot. 4: 194. 1945.  
riverbank sedge

Recently (2013) collected for the first time in WA in Okanogan County. Previously only known from Rocky Mountains.

**Carex stipata** Muhl. ex Willd. [FNA23, HC, HC2]

Sp. Pl. 4(1): 233. 1805.

var. **stipata** [FNA23, HC2, SPNW]

Sp. Pl. 4(1): 233.

awl-fruited sedge, sawbeak sedge

*Carex stipata* Muhl. ex Willd. var. *crassicurta* Peck

*Carex stipata* Muhl. ex Willd. var. *subsecuta* Peck

**Carex straminiformis** L.H. Bailey [FNA23, HC, HC2, SPNW]

Mem. Torrey Bot. Club. 1: 24. 1889.  
Mt. Shasta sedge

**Carex stylosa** C.A. Mey. [FNA23, HC, HC2, SPNW]

Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans. 1: 222, plate 12. 1831.  
long-style sedge

*Carex beringiana* Cham. ex Steud.

*Carex nigritella* Drejer

*Carex stylosa* C.A. Mey. var. *nigritella* (Drejer) Fernald

**Carex subbracteata** Mack. [FNA23, HC2]

Bull. Torrey Bot. Club. 43: 612. 1917 (as sub-bracteata).  
small-bracted sedge

FNA23 lists this as endemic to California. Several collections in WA from San Juan County by Peter Zika, and found in British Columbia by Frank Lomer. These records represent introductions and not disjunct native populations. *Carex subbracteata* is very similar to and perhaps conspecific with *C. gracilior* (R. Whitkus 1988).

**Carex subfusca** W. Boott [FNA23, HC, HC2, SPNW]

Bot. California. 2: 234. 1880.  
rusty sedge

*Carex macloviana* d'Urv. ssp. *subfusca* (W. Boott) T. Koyama

*Carex teneraeformis* Mack

*Carex teneriformis* Mack.

Both SPNW and FNA23 show this species occurring in WA.

**Carex sychnocephala** J. Carey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts, ser. 2. 4: 24. 1847.  
many-headed sedge

FNA23: "Because *Carex sychnocephala* often lacks conspicuous rhizomes and has a small diffuse root system, it may appear to be annual. In some situations, it may actually grow as an annual."

**Carex sylvatica** Huds. [FNA23, HC2, SPNW]

Fl. Angl. 353. 1762.  
European woodland sedge

Native to Europe.

**Carex tahoensis** Smiley [FNA23, HC2, SPNW]

Univ. Calif. Publ. Bot. 9: 119. 1921.

Lake Tahoe sedge

*Carex eastwoodiana* Stacey

FNA23: "Carex tahoensis resembles *C. phaeocephala* somewhat, but often occurs at lower elevations, has longer achenes, and more coriaceous perigynia that are clearly veined adaxially. *Carex tahoensis* was originally described as a California endemic, but is much more widespread. The precise distribution is as yet unclear because of confusion with *C. phaeocephala* and *C. petasata*. Many reports of *C. xerantica* from the Rocky Mountain region are based on this species."

**Carex tenera** Dewey [FNA23, HC, HC2]

Amer. J. Sci. Arts. 8: 97. 1824.

quill sedge, slender sedge

*Carex tenera* Dewey var. *tenera* [FNA23, SPNW]

FNA23: "The name *Carex straminea* has been incorrectly applied at times to *C. tenera* var. *tenera*."

**Carex tenuiflora** Wahlenb. [FNA23, HC2, SPNW]

Kongl. Vetensk. Acad. Nya Handl. 24: 147. 1803.

sparse-flower sedge

Collected in Okanogan County.

**Carex tribuloides** Wahlenb. [FNA23, HC2]

Kongl. Vetensk. Acad. Nya Handl. 24: 145. 1803.

tribulation sedge

var. *tribuloides* [FNA23, HC2, SPNW]

Kongl. Vetensk. Acad. Nya Handl. 24: 145.

blunt broom sedge

*Carex projecta* Mack. [FNA23, SPNW], misapplied

Native to E. North America; naturalized in King and Pierce counties; not reported for WA in FNA.

**Carex tumulicola** Mack. [FNA23, HC, HC2, SPNW]

Bull. Torrey Bot. Club. 34: 154. 1907.

foothill sedge

**Carex unilateralis** Mack. [FNA23, HC, HC2, SPNW]

Erythea. 8: 43. 1922.

one-sided sedge

FNA23: "Carex unilateralis intergrades with *C. athrostachya*."

**Carex utriculata** Boott [FNA23, HC2, SPNW]

Fl. Bor.-Amer. 2: 221. 1839.

beaked sedge, inflated sedge, Northwest Territory sedge

*Carex laevirostris* (Blytt ex Fr.) Fr.

*Carex rhynchophysa* C.A. Mey.

*Carex rostrata* Stokes [HC, HC2, FNA23, SPNW], misapplied

*Carex rostrata* remains accepted in WA.

*Carex rostrata* Stokes var. *utriculata* (Boott) L.H. Bailey

This taxon keys to *C. rostrata* in H&C. FNA23: "Carex utriculata is abundant and variable and is often a dominant of wetlands in subarctic, boreal, and north-temperate wetlands. American authors usually treat the taxon as part of the variation of *Carex rostrata*, but it is a very different plant with a quite different leaf shape in cross section and very different leaf anatomy. Plants from the western and northern portions of the range often have perigynia strongly tinged with purple, though that coloration can also occur rarely elsewhere. Rarely, *Carex utriculata* forms hybrids with *C. exciccata*, *C. hystericina*, *C. lacustris*, *C. pellita*, *C. rostrata*, *C. rotundata*, *C. saxatilis*, and *C. vesicaria*. The hybrids are sterile and intermediate in morphology."

**Carex vallicola** Dewey [FNA23, HC, HC2, SPNW]

Amer. J. Sci. Arts, ser. 2. 32: 40. 1861.  
valley sedge

*Carex rusbyi* Mack.

*Carex vallicola* Dewey var. *rusbyi* (Mack.) F.J. Herm.

Discovered in after publication of H&C

**Carex vernacula** L.H. Bailey [FNA23, HC2, SPNW]

Bull. Torrey Bot. Club. 20: 417. 1893.  
foetid sedge

*Carex foetida* All. [HC]

*Carex foetida* All. var. *vernacula* (L.H. Bailey) Kük. [HC]

FNA23: "Carex vernacula is very similar to and often united with the European *C. foetida* Allioni, which has serrulate-margined perigynium beak and proportionately longer leaves. The numerous distinctions drawn between these two by K. K. Mackenzie (1931?1935, parts 2?3, pp. 29?30) have not proved consistent with examination of more material."

**Carex vesicaria** L. [FNA23, HC, HC2, SPNW]

Sp. Pl. 2: 979. 1753 (as *vesicariu*).  
inflated sedge, oxbow sedge  
(see also *Carex exsuccata*)

*Carex vesicaria* L. var. *vesicaria* [HC]

FNA23: "Carex vesicaria hybridizes with *C. saxatilis* and, very rarely, with *C. hystericina* and *C. utriculata*. Carex vesicaria as here treated broadly as a variable circumpolar species. K. K. Mackenzie (1931?1935) recognized a small segregate, *Carex raeana* Boott, but specimens referred here are either depauperate *C. vesicaria* or hybrids. T. V. Egorova (1999) recognized *C. vesicaria* as a Eurasian and North American species but also recognized a primarily North American *C. monile*, occurring locally in Asia as well. The two species were differentiated by characteristics of perigynium length and width, pistillate spike size, and beak and beak teeth size and proportions. The North American material is so variable in perigynium size and shape and inflorescence size that recognizing the two entities seems difficult. Further study of variation in North American material and the relationships of North American and Eurasian material are needed. Indeed, the complex is in need of detailed systematic study on a worldwide scale."

**Carex viridula** Michx. [FNA23, HC2]

Fl. Bor.-Amer. 2: 170. 1803.  
green sedge

ssp. **viridula** [FNA23, HC2, SPNW]

Fl. Bor.-Amer. 2: 170.  
greenish sedge, little green sedge

*Carex chlorophila* Mack.

*Carex irregularis* Schwein.

*Carex oederi* Ehrh. [HC]

*Carex oederi* Retz. var. *pumila* (Cosson & Germain) Fernald

*Carex oederi* Retz. var. *viridula* (Michx.) Kük. [HC]

*Carex pulchella* (Lönroth) Lindm.

*Carex scandinavica* E.W. Davies

*Carex serotina* Mérat

*Carex subglobosa* Miel.

*Carex viridula* Michx. var. *viridula* [FNA23]

FNA23: "Carex viridula subsp. *viridula* includes numerous variants, some of which have been treated as distinct species, such as *C. serotina* and *C. scandinavica*. The variation patterns are continuous across all of the segregates. Because of its ecologic amplitude, the taxon may occur with other members of the section, and in areas of sympatry hybrids often are formed. Hybrids between *C. viridula* and other species in the section are sterile hybrids among the subspecies of *C. viridula* are partially fertile (B. Schmid 1982)."

**Carex vulpinoidea** Michx. [FNA23, HC, HC2, SPNW]

Fl. Bor.-Amer. 2: 169. 1803.  
fox sedge

*Carex microsperma* Wahlenb.  
*Carex multiflora* Willd.  
*Carex multiflora* Willd. var. *microsperma* (Wahlenb.) Dewey  
*Carex scabrior* Dewey  
*Carex vulpinoidea* Michx. var. *microsperma* (Wahlenb.) Dewey  
*Carex vulpinoidea* Michx. var. *pycnocephala* F.J. Herm.  
*Carex vulpinoidea* Michx. var. *scabrior* (Dewey) Alph. Wood  
*Carex vulpinoidea* Michx. var. *segregata* Farw.  
*Carex vulpinoidea* Michx. var. *setacea* (Dewey) Kük.  
*Carex vulpinoidea* Michx. var. *vulpinoidea* [KZ99]

FNA23: "Carex vulpinoidea is widely distributed in North America and frequently grows as a weed in wet roadside ditches and fields. It is quite variable, particularly in the degree to which the spongy tissue lateral to the achene is developed. The development of that tissue determines the shape of the perigynium and the degree to which the perigynium appears to contract into the achene, as discussed by F. M. B. Boott (1858?1867). The flowering stems shorter than the leaves, the pale brown, elliptic perigynia, and the preference for moist substrates of *C. vulpinoidea* readily distinguish it from *C. annectens*."

***Carex xerantica* L.H. Bailey [FNA23, HC, SPNW]**

Bot. Gaz. 17: 151. 1892.  
dryland sedge, sage sedge

SPNW: Reported in error from OR and WA. Until proven otherwise, this species is considered excluded from WA.

***Carex zikae* E.H. Roalson & M.J. Waterway [HC2]**

Botanical Journal of the Linnean Society 179: 18.  
short-stemmed sedge, Zika's sedge

*Carex brevicaulis* Mack. [FNA23, HC, SPNW], illegitimate name  
*Carex deflexa* Hornem. var. *brevicaulis* (Mack.) B. Boivin

***Cyperus* [FNA23, HC, HC2]**

Sp. Pl. 1: 44. 1753; Gen. Pl. ed. 5, 26. 1754.  
cyperus, flatsedge

***Cyperus acuminatus* Torr. & Hook. [FNA23, HC, HC2]**

Ann. Lyceum Nat. Hist. New York. 3: 435. 1836.  
sharp-pointed flatsedge, taper-tip flatsedge

*Cyperus acuminatus* Torr. & Hook. var. *cyrtolepis* (Torr. & Hook.) Kük.  
*Cyperus cyrtolepis* Torr. & Hook.

Reported for WA by FNA.

***Cyperus bipartitus* Torr. [FNA23, HC2]**

Ann. Lyceum Nat. Hist. New York. 3: 257. 1836.  
shining flatsedge

*Cyperus niger* Ruiz & Pav. var. *rivularis* (Kunth) V.E. Grant  
*Cyperus rivularis* Kunth [HC]

***Cyperus eragrostis* Lam. [FNA23, HC2]**

Tabl. Encycl. 1: 146. 1791.  
tall flatsedge

*Cyperus vegetus* Willd.

Not in Hitchcock FNA8: "The distributions of *Cyperus eragrostis* in British Columbia, Alabama, Pennsylvania, South Carolina, and Texas represent introduced populations."

***Cyperus erythrorhizos* Muhl. [FNA23, HC, HC2]**

Descr. Gram. 20. 1817.  
redroot flatsedge

*Cyperus cupreus* J. Presl & C. Presl  
*Cyperus erythrorhizos* Muhl. var. *cupreus* (J. Presl & C. Presl) Kük.  
*Cyperus halei* Torr. ex Britton  
*Cyperus occidentalis* Torr.  
*Cyperus washingtonensis* Gand.

***Cyperus esculentus* L. [FNA23, HC, HC2]**

Sp. Pl. 1: 45. 1753.  
yellow nut-grass

var. ***leptostachyus* Boeckeler [FNA23, HC2]**

Linnaea. 36: 290. 1870.  
yellow nutgrass

*Chlorocyperus phymatodes* (Muhl.) Palla  
*Cyperus esculentus* L. var. *angustispicatus* Britton  
*Cyperus esculentus* L. var. *phymatodes* (Muhl.) Kük.  
*Cyperus fulvescens* Liebm.  
*Cyperus phymatodes* Muhl.  
*Cyperus repens* Elliott  
*Cyperus tuberosus* Pursh

A weed around the world; possibly not native to W. WA. FNA23: "*Cyperus esculentus* var. *leptostachyus* is the most common of the varieties nearly throughout the range of the species in North America. *Cyperus esculentus* is a widespread and polymorphic species. Although seven varieties have been recognized (G. Kükenthal (1935?1936), recent studies based primarily on spikelet features provided support for four varieties (P. Schippers et al. 1995). *Cyperus esculentus* var. *esculentus* is restricted to the Old World."

***Cyperus fuscus* L. [FNA23, HC2]**

Sp. Pl. 1: 46. 1753.  
brown galingale

Recently collected in Clark (2015) and Benton (2017) counties. Also known from the other side of the Columbia River just south of Rainier, OR.

***Cyperus lupulinus* (Spreng.) Marcks [FNA23, HC2]**

Trans. Wisconsin Acad. Sci. 62: 271. 1974.  
Great Plains flatsedge

*Scirpus lupulinus* Spreng.

ssp. ***lupulinus* [FNA23, HC2]**

Trans. Wisconsin Acad. Sci. 62: 271.  
Great Plains flatsedge

*Cyperus bushii* Britton

***Cyperus lupulinus* (Spreng.) Marcks × *Cyperus schweinitzii* Torr. [HC2]**

***Cyperus odoratus* L. [FNA23, HC2]**

Sp. Pl. 1: 46. 1753.  
scented flatsedge

Not in H&C; recently documented in King County by AJ/PZ

***Cyperus schweinitzii* Torr. [FNA23, HC, HC2]**

Ann. Lyceum Nat. Hist. New York. 3: 276. 1836.  
sand flatsedge

*Cyperus alterniflorus* Schwein.

FNA8: "*Cyperus schweinitzii* is introduced, but not naturalized, in Massachusetts and Washington."

***Cyperus squarrosus* L. [FNA23, HC2]**

Cent. Pl. II. 6. 1756.  
awned flatsedge

*Chlorocyperus inflexus* (Muhl.) Palla  
*Cyperus aristatus* Rottb. [HC]  
*Cyperus aristatus* Rottb. var. *runyonii* O'Neill  
*Cyperus inflexus* Muhl.  
*Dichostylis aristata* (Rottb.) Palla  
*Mariscus squarrosus* (L.) C.B. Clarke

FNA8: "Cyperus squarrosus can be recognized by its small size and annual habit combined with its oblong-lanceolate floral scales bearing five to eleven conspicuous ribs and excurved awns. Some collections have been misidentified as *C. acuminatus*, an annual species of subg. *Pycnostachys* that has ovate-lanceolate, three-ribbed floral scales and digitately clustered spikelets."

***Cyperus strigosus* L. [FNA23, HC, HC2]**

Sp. Pl. 1: 47. 1753.  
false flatsedge, straw-colored flatsedge

*Cyperus hansenii* Britton  
*Cyperus stenolepis* Torr.  
*Cyperus strigosus* L. var. *hansenii* (Britton) Kük.  
*Mariscus stenolepis* (Torr.) C.B. Clarke  
*Mariscus strigosus* (L.) C.B. Clarke

FNA23: "Cyperus strigosus is usually among the more common *Cyperus* species throughout its range. Small individuals flowering the first year may be difficult to distinguish from *C. polystachyos*, *C. odoratus*, *C. erythrorhizos*, and *C. esculentus*, which may be sympatric. *Cyperus strigosus* has trigonous achenes and three stigmas, unlike *C. polystachyos*; *C. strigosus* has flattened spikelets, unlike the subcylindric ones of *C. odoratus*; *C. strigosus* has floral scales usually 3 mm or more, unlike the smaller (1.2-1.5 mm) ones of *C. erythrorhizos*; *C. strigosus* has deciduous floral scales and a cornlike stem base with stolons, unlike *C. esculentus*. *Cyperus strigosus* appears to be closely related to the neotropical *C. camphoratus* Liebmann; both species have deciduous floral scales and deciduous spikelets (G. C. Tucker 1994). Plants segregated as *C. stenolepis* cannot be distinguished consistently from *C. strigosus* on any single character, rather they appear to be merely large individuals of *C. strigosus* with long floral scales and frequently septate inflorescence bracts (M. L. Horvat 1941)."

***Dulichium* [FNA23, HC, HC2]**

Syn. Pl. 1: 65. 1805.  
dulichium

***Dulichium arundinaceum* (L.) Britton [FNA23, HC, HC2]**

Bull. Torrey Bot. Club. 21: 29. 1894.  
three-way sedge

*Cyperus arundinaceus* L.  
*Dulichium arundinaceum* (L.) Britton var. *arundinaceum* [FNA23]  
*Dulichium arundinaceum* (L.) Britton var. *boreale* Lepage [FNA23]

***Eleocharis* [FNA23, HC, HC2]**

Prodr. 224. 1810.  
spike-rush

***Eleocharis acicularis* (L.) Roem. & Schult. [FNA23, HC, HC2]**

Syst. Veg. 2: 154. 1817.  
needle spikerush

*Eleocharis acicularis* (L.) Roem. & Schult. var. *gracilescens* Svenson  
*Eleocharis acicularis* (L.) Roem. & Schult. var. *occidentalis* Svenson  
*Eleocharis acicularis* (L.) Roem. & Schult. var. *porcata* S.G. Sm.  
*Eleocharis acicularis* (L.) Roem. & Schult. var. *submersa* (Nilsson) Svenson  
*Scirpus acicularis* L.

FNA8: "*Eleocharis acicularis* is abundant and ecologically important throughout much of its range. It occurs in a wide variety of habitats, including acid waters. I have not seen voucher specimens for reports from Alabama and Florida. I have not seen vouchers for the reported chromosome numbers of  $2n = 30-38$  or

50?58. *Eleocharis acicularis* often forms large rooted mats or floating masses, which when submerged, are often non-flowering. Submerged, usually nonflowering plants are abundant throughout much of the range of the species (H. K. Svenson 1929; P. E. Rothrock and R. H. Wagner 1975). They have been called *E. acicularis* forma *fluitans* (Doellinger) Svenson; *E. acicularis* forma *inundata* Svenson; *E. acicularis* forma *longicaulis* (Desmazières) Hegi; *E. acicularis* forma *submersa* (Nilsson) Norman; and *E. acicularis* var. *submersa* (Nilsson) Svenson. The culms of the submerged plants are terete, smooth, soft to flaccid, translucent, and the partitions of the air cavities within are clearly visible. Submerged plants may closely resemble aquatic forms of some other species, especially *Eleocharis parvula*, *E. robbinsii*, and *Schoenoplectus subterminalis* (Torrey) Sojak (N. C. Fassett 1957; E. G. Voss 1967, 1972?1996, vol. 3). Although *E. acicularis* is very variable, recognition of varieties is premature pending a worldwide taxonomic revision of subg. *Scirpidium*. Much of the variation is apparently due to phenotypic plasticity in response to environmental factors, especially water depth (P. E. Rothrock and R. H. Wagner 1975). The named varieties intergrade extensively, and achenes, which are important in defining the varieties, are often absent. H. K. Svenson (1929) recognized four varieties and two forms for North America, but later (1957) did not recognize infraspecific taxa. "

***Eleocharis atropurpurea* (Retz.) J. Presl & C. Presl [FNA23, HC, HC2]**

Reliq. Haenk. 1: 196. 1828.  
purple spikerush

*Eleocharis atropurpurea* (Retz.) Kunth., invalidly published  
*Scirpus atropurpureus* Retz.

H&C uses different authorship than FNA. FNA23 lists this species as occurring in WA, however no specimens at WTU as of 11/2009.

***Eleocharis bella* (Piper) Svenson [FNA23, HC, HC2]**

Rhodora. 31: 201. 1929.  
pretty spikerush

*Eleocharis acicularis* (L.) Roem. & Schult. var. *bella* Piper  
*Eleocharis acicularis* (L.) Roem. & Schult. var. *minima* Torr. ex Britton

FNA23: "*Eleocharis bella* and *E. acicularis* seem to be amply distinct; putative hybrids are unknown. The occasional plants of *E. bella* with evident rhizomes, which include the type, are otherwise identical to plants apparently without rhizomes. *Eleocharis bella* is very similar to *E. cancellata*. "

***Eleocharis bolanderi* A. Gray [FNA23, HC, HC2]**

Proc. Amer. Acad. Arts. 7: 392. 1868.  
Bolander's spikerush

Recently reported by C. Bjork near Goldendale; Not reported for WA by FNA.

***Eleocharis coloradoensis* (Britton) Gilly [FNA23, HC2]**

Amer. Midl. Naturalist. 26: 66. 1941.  
dwarf spike-rush

*Eleocharis parvula* (Roem. & Schult.) Link ex Bluff, Nees & Schauer var. *anachaeta* (Torr.) Svenson [HC]  
*Scirpus coloradoensis* Britton

One specimen at WTU annotated by Galen Smith (1999) with the following note: "Most probably. No flower in proximal scale. No achene or tubers." FNA23: "Most authors, except C. L. Gilly (1941), H. L. Mason (1957), and R. R. Yeo (1980), have included *Eleocharis coloradoensis* in *E. parvula* or *E. parvula* var. *anachaeta*. In typical *E. coloradoensis*, which occurs from Saskatchewan south to Kansas and in California to 2100 m elevation, the achenes are usually distinctly rugulose or rough, often pitted-cellular, their apices usually truncate, and the tubercles are usually brown, often rudimentary, clearly distinct from the achene, and apparently partly sunken into the achene summit. Some plants from the southern Great Plains to the Mexican border, including the type of *E. parvula* var. *anachaeta* from Louisiana, may deserve taxonomic recognition. They differ from typical *E. coloradoensis* in having nearly smooth achenes with the apex tapered to a tubercle that is difficult to distinguish from the achene. C. L. Gilly (1941) separated these plants as *E. membranacea* (Buckley) Gilly; application of that name is doubtful because achenes are lacking from the type. R. R. Yeo (1980) studied the life-history of *E. coloradoensis* in the Sacramento Valley, California, and showed that it can be used to control several aquatic weeds in irrigation canals. The n = 4 count reported from Kansas under *E. parvula* var. *anachaeta* (Anonymous 1964) and on voucher

specimens at GH and UC, is probably erroneous; the label on a duplicate voucher specimen at NDA includes the information "n = 3 II's + a chain of IV"\* (i.e., n = 5). The record from Washington is somewhat doubtful because the specimen lacks achenes. Literature reports of *E. parvula* from Illinois and Tennessee may refer to *E. coloradoensis*; I have not seen specimens."

\* Yeo, R. R. 1980. Life history of dwarf spikerush (*Eleocharis coloradoensis*). *Weed Sci.* 28: 263?272.

***Eleocharis elliptica* Kunth [FNA23, HC2]**

Enum. Pl. 2: 146. 1837.

elliptic spikerush

*Eleocharis capitata* (L.) R. Br. var. *borealis* Svenson

*Eleocharis compressa* Sull. var. *borealis* (Svenson) Drapalik & Mohlenbr.

*Eleocharis tenuis* (Willd.) Schult. var. *borealis* (Svenson) Gleason [HC]

KZ refers to H&C for WA record (under the synonym *E. tenuis*) but H&C provide no documentation for WA distribution; this taxon should not be considered part of WA flora without further research

***Eleocharis engelmannii* Steud. [FNA23, HC2]**

Syn. Pl. Glumac. 2: 79. 1855 (as engelmanni).

Engelman spikerush

*Eleocharis engelmannii* Steud. var. *detonsa* A. Gray

*Eleocharis engelmannii* Steud. var. *monticola* (Fernald) Svenson

*Eleocharis engelmannii* Steud. var. *robusta* Fernald

*Eleocharis monticola* Fernald

*Eleocharis monticola* Fernald var. *leviseta* Fernald

*Eleocharis ovata* (Roth) Roem. & Schult. var. *detonsa* (A. Gray) Mohlenbr.

H&C treat this as a synonym of *E. ovata* under the name *E. obtusus*

***Eleocharis erythropoda* Steud. [FNA23, HC2]**

Syn. Pl. Glumac. 2: 76. 1855.

bald spike-rush, redfoot spike-rush

Not in H&C; misapplied in WA?

***Eleocharis geniculata* (L.) Roem. & Schult. [FNA23, HC2]**

Syst. Veg. 2: 150. 1817.

capitate spike-rush

***Eleocharis macrostachya* Britton [FNA23, HC2]**

Fl. S.E. U.S. 184, 1327. 1903.

creeping spikerush

*Eleocharis perlonga* Fernald & Brackett

*Eleocharis xyridiformis* Fernald & Brackett

Not in H&C; probably lumped under *E. palustris*. FNA23: "*Eleocharis macrostachya* probably occurs in Saskatchewan; I have not seen specimens. It is extremely variable. Cytotaxonomic studies (S.-O. Strandhede 1967; L. J. Harms 1968) and morphology suggest that it is a diploid-polyploid complex at least partly of hybrid origin from *E. palustris* and both *E. erythropoda* and *E. uniglumis*. The  $2n = 38$  plants of *E. macrostachya* may comprise the American counterpart of the European *E. palustris* subsp. *vulgaris*, which presumably originated from *E. palustris* subsp. *palustris* and *E. uniglumis* (S.-O. Strandhede 1966). Although recognition of infraspecific taxa is premature, the following three intergrading variants are notable: Variant b is very variable in comparison with variant a. It differs from variant a in having culms terete or slightly compressed; distal leaf-sheath apices often obtuse, tooth rarely present, to 0.1 mm; spikelets broadly lanceoloid to ovoid; floral scales  $3.5?4(4.5) \times 1.7?2+$  mm; achenes 1.3?1.5 mm, rarely to 1.8 mm; culm stomates  $60?72 \text{ \AA}\mu\text{m}$ ; chromosome numbers (for which I have seen vouchers, all from Kansas and South Dakota),  $2n = \text{ca. } 38$ . It is wide-ranging, known from inland localities at 20?2300 m from Manitoba west to Yukon and British Columbia, south to Alabama, Mississippi, Louisiana, Texas, New Mexico, Arizona, and California, and in Mexico from Baja California. Intermediates between variant b and both *Eleocharis erythropoda* and *E. uniglumis* are widespread, and intermediates with *E. ambigens* occur in Louisiana. Most plants of variant b have floral scales to 4 mm and achenes to 1.5 mm; plants with scales to 4?5 mm and achenes sometimes more than 1.6 mm occur in California, Nevada, Oregon, and Washington. Variant c differs from variant b in having spikelet scales mostly uniformly dark chestnut-brown, not carinate,

(3.5?)4?5.5 × 2?2.5 mm. Its achenes are often unusually large, 1.3?1.8(?) × 1.1?1.5 mm. It is known from near sea level on the coasts of British Columbia, Ontario, and Quebec (James Bay and Magdalen Islands); Alaska, California, Oregon, and Washington. Some plants are intermediate between variant c and variant b. Several specimens I have seen from far eastern Russia are very similar to American plants of *Eleocharis macrostachya*, variant c. Except for having incompletely amplexicaulous proximal scales, and subproximal scales often without a flower, variant c closely resembles many Eurasian specimens of *E. uniglumis*."

***Eleocharis mamillata* (H. Lind.) H. Lind. [FNA23, HC2]**

Herb. Norm. 44: 108. 1902 (as *Heleocharis*).  
soft-stem spike-rush

*Scirpus mamillata* H. Lind.

***Eleocharis mamillata* (H. Lind.) H. Lind. [FNA23, HC2], misapplied**

Herb. Norm. 44: 108. 1902 (as *Heleocharis*).  
soft-stem spike-rush

*Scirpus mamillata* H. Lind.

**ssp. *mamillata* [FNA23, HC2]**

In l. Dörfler, Herb. Norm. 44: 108. (as *Heleocharis*).

FNA23: "*Eleocharis mamillata* has been confused in North America with *E. macrostachya* and *E. palustris*. In addition to the perianth bristle and achene differences as given in the key, *E. mamillata* differs from *E. palustris* in culm stomate shape and distance between epidermal collenchyma strands (S. M. Walters 1953b; S.-O. Strandhede and R. Dahlgren 1968). *Eleocharis mamillata* subsp. *mamillata*, with the tubercle mamillate, usually shorter than wide, and subsp. *austriaca* (Hayek) Strandhede, with the tubercle conic, longer than wide, are recognized in Europe; in North America only *E. mamillata* subsp. *mamillata* is thus far known. The stamen filaments usually remain attached to the shed achenes, and together with the bristles they keep the achenes in ball-like aggregates that drift with winds and water currents (S.-O. Strandhede 1966)."

***Eleocharis obtusa* (Willd.) Schult. [FNA23, HC2]**

Mant. 2: 89. 1824.  
blunt spikerush

*Eleocharis obtusa* (Willd.) Schult. var. *ellipsoidales* Fernald

*Eleocharis obtusa* (Willd.) Schult. var. *gigantea* Fernald

*Eleocharis obtusa* (Willd.) Schult. var. *jejuna* Fernald

*Eleocharis obtusa* (Willd.) Schult. var. *peasei* Svenson

*Scirpus obtusus* Willd.

FNA23: "Extremely uncommon plants of *Eleocharis obtusa* without perianth bristles may be called *E. obtusa* var. *peasei* (type from New Hampshire). Robust plants with distinct caudices, floral scales 2.5 mm, and achenes 1.2?1.3 mm (*Eleocharis obtusa* var. *gigantea* Fernald) are rare (specimens seen from the Washington-British Columbia border [type], Arkansas, and the Hawaiian Islands). Dwarf plants (*E. obtusa* var. *jejuna* Fernald, type from Maine), with unusually small achenes and floral scales, and tubercles often less than 0.5 mm wide, are occasional in the East and are easily confused with *E. ovata* and *E. aestuum*. A few specimens are intermediate with *E. engelmannii*. *Eleocharis obtusa* is sometimes treated as conspecific with *E. ovata*, which consistently differs in its mostly 2-fid styles, mostly two stamens, and especially its narrower tubercles (B. M. H. Larson and P. M. Catling 1996). *Eleocharis macounii* Fernald has been treated as a synonym of *E. obtusa* (H. K. Svenson 1957) but is more probably a hybrid between *E. intermedia* and *E. obtusa* (P. M. Catling and S. G. Hay 1993; see 34. *E. intermedia*)."

***Eleocharis ovata* (Roth) Roem. & Schult. [FNA23, HC, HC2]**

Syst. Veg. 2: 152. 1817.  
ovoid spikerush

*Eleocharis obtusa* (Willd.) Schult. var. *ovata* (Roth) Drepalik & Mohlenbr.

*Scirpus ovatus* Roth

*Scirpus ovatus* Roth var. *heuseri* Uetrichtz

FNA23: "Although *Eleocharis ovata* has often been confused with *E. obtusa*, B. M. H. Larson and P. M. Catling (1996) showed that these species may be distinguished by non-overlapping widths of the tubercles, at least in Canada. The records of *E. ovata* in New Brunswick, Newfoundland, Nova Scotia, and Prince

Edward Island are based on B. M. H. Larson and P. M. Catling (1996) and the records in Illinois, Indiana, Missouri, Montana, New Jersey, Oregon, and Washington are based on D. M. Hines (1975). *Eleocharis ovata* probably also occurs in Manitoba and Saskatchewan."

***Eleocharis palustris* (L.) Roem. & Schult. [FNA23, HC, HC2]**

Syst. Veg. 2: 151. 1817.

common spikerush

*Eleocharis smallii* Britton

*Scirpus palustris* L.

FNA23: "Eleocharis palustris is the most widespread and common species of the extremely difficult circumboreal "E. palustris complex,"\* which in North America comprises E. palustris, E. mamillata, E. macrostachya, E. erythropoda, E. uniglumis, E. kamtschatica, and E. ambigens. Two or more of these species have been combined by recent authors. The complex has been studied extensively only in northern Europe (S.-O. Strandhede 1965, 1966), where E. palustris, E. mamillata, and E. uniglumis are recognized (S.-O. Strandhede 1966). European studies and preliminary studies in North America by S.-O. Strandhede (1967) and L. J. Harms (1968) indicate that unstable chromosome structure and number as well as interspecific hybridization contribute to the taxonomic complexity of the E. palustris complex. Eleocharis palustris is extremely variable worldwide. Recognition of infraspecific taxa outside northwestern Europe is premature..... At least 4 variants are notable in North America: Variant d comprises most of the plants that cannot be placed in the preceding variants. Most of these plants closely resemble most specimens that I have seen from northern Eurasia and as described for Eleocharis palustris subsp. palustris by S.-O. Strandhede (1966). Variant d has distal leaf sheaths often splitting or disintegrating, the summit margins not reddish, and apices usually broadly obtuse. In North America variant d is mostly subarctic and boreal; it is known from Newfoundland and Labrador to Alaska, south to New York, Wisconsin, Minnesota, Iowa, New Mexico, and California. Some plants of variant d that have markedly narrow tubercles mostly much (to 2 times) higher than wide and narrow achenes only 0.9?1.1 mm wide may deserve taxonomic recognition; they are known from Manitoba west to British Columbia and Alaska, south to Colorado, Utah, and California. Specimens of variant d from scattered western localities from Alaska and Yukon south to California have floral scales 4?5 mm and achenes 1.6?1.9 mm and are very similar to variant c."

***Eleocharis parvula* (Roem. & Schultes) Link ex Bluff Nees, & Schauer [FNA23, HC, HC2]**

Comp. Fl. German. ed. 2. 1: 93. 1836.

little-head spikerush

(see also *Eleocharis coloradoensis*)

*Eleocharis parvula* (Roem. & Schult.) Link ex Bluff, Nees & Schauer var. *parvula* [HC]

*Eleocharis pygmaea* Torr.

*Scirpus nanus* Spreng.

*Scirpus parvulus* Roem. & Schult.

FNA23: "Plants without well-developed bristles are otherwise typical *Eleocharis parvula*. S.-O. Strandhede and R. M. T. Dahlgren (1968) provided a detailed description from Scandinavia; the mostly curved tubers of North American plants are differently shaped than the ovoid, mostly nearly straight tubers illustrated by them. *Eleocharis parvula* is very uncommon inland. Plants lacking spikelets and having rather broad culms with evident aerenchyma (*E. parvula* forma *spongiosa* Fassett) that are submerged in tidal zones closely resemble small plants of *Sagittaria graminea*. *Eleocharis parvula* has also been reported from North Dakota, South America, and Africa; I have not seen specimens. Plants without achenes or tubers cannot be reliably identified to species. Literature reports from Cuba, Mexico, and Venezuela may be based on specimens of *E. coloradoensis*. "

***Eleocharis quinqueflora* (Hartm.) O. Schwarz [FNA23, HC2]**

Mitt. Thüring. Bot. Ges. 1: 89. 1949.

few-flowered spike-rush

*Eleocharis fernaldii* (Svenson) Á. Löve

*Eleocharis pauciflora* (Lightf.) Link [HC, JPM]

*Eleocharis pauciflora* (Lightf.) Link var. *feraldii* Svenson

*Eleocharis quinqueflora* (Hartm.) O. Schwarz ssp. *feraldii* (Svenson) Hultén

*Scirpus quinqueflorus* Hartm.

The name *E. quinqueflora* does not appear in H&C. FNA23: "The chromosome numbers for *Eleocharis quinqueflora* reported for North America ( $2n = 80$ ) are in doubt because vouchers and other information are lacking. The often-cited  $n = 10$  is probably erroneous. S.-O. Strandhede and R. M. T. Dahlgren (1968) gave  $2n = 132$  and  $134$  from Scandinavia. Recognition of infraspecific taxa within *E. quinqueflora* is premature pending a worldwide revision of subg. *Zinserlingia*. It has been reported from North Dakota, although I have not seen specimens. About five varieties and subspecies of *E. quinqueflora* have been described worldwide. Most specimens from eastern North America and some from the West can be placed in *Eleocharis quinqueflora* subsp. *fernaldii* (Svenson) Hultén, which is characterized by its small size (culms to  $15\text{ cm} \times 0.5\text{ mm}$ ) and small bulbs. Specimens of *E. quinqueflora* from 2000?3600 m in California, which are atypical, especially in that the proximal scales of the spikelets do not subtend flowers, may deserve taxonomic recognition. Those plants are also small, with culms only to  $15\text{ cm} \times 0.5\text{ mm}$ ; hard caudices are often present at the culm-tuft bases; small, narrowly ovoid bulbs are sometimes present; and perianth bristles are absent or rudimentary. Very few specimens of *E. quinqueflora* are intermediate with *E. suksdorfiana*."

***Eleocharis rostellata* (Torr.) Torr. [FNA23, HC, HC2]**

Fl. New York. 2: 347. 1843.

walking sedge, beaked spikerush

*Scirpus rostellatus* Torr.

FNA23: "*Eleocharis rostellata* is highly competitive, often forming large monospecific colonies. The South American *E. platypus* C. B. Clarke is often treated as a synonym of *E. rostellata*. *Eleocharis rostellata* superficially closely resembles *E. suksdorfiana* in its culms, spikelets, and achenes, but differs in the absence of creeping rhizomes, presence of stoloniferous culms, absence of a flower in the proximal scale, and achene surface details. The collection of *E. rostellata* I have seen from Miami-Dade County, Florida, is from 1877. I have not seen vouchers for Archuleta County, Colorado, by H. D. Harrington (1954), or for the localities in Montana and South Carolina, which are based on the map in H. K. Svenson (1934)."

\* C. D. LaRue. 1936. Vegetative reproduction in *Eleocharis rostellata*. Pap. Michigan Acad. Sci., 21: 105?117.

***Eleocharis suksdorfiana* Beauverd [FNA23, HC2]**

Bull. Soc. Bot. Genève. 13: 267. 1922.

Suksdorf spikerush

*Eleocharis pauciflora* (Lightf.) Link var. *suksdorfiana* (Beauverd) Svenson

*Eleocharis quinqueflora* (Hartm.) O. Schwarz var. *suksdorfiana* (Beauverd) J.T. Howell

H&C treat this taxon as a synonym under *E. rostellata*. FNA23: "Although *Eleocharis suksdorfiana* is usually included in *E. quinqueflora*, it clearly differs qualitatively as given in the key. A collection from hot springs in Ruby Valley, Elko County, Nevada, has stout perianth bristles less than half of the achene length and may represent an undescribed taxon related to *E. suksdorfiana*. *Eleocharis suksdorfiana* closely resembles *E. rostellata* in its achenes, tubercles, culms, and caudices; it differs in the presence of long horizontal rhizomes and the absence of stoloniferous culms. The achenes of *E. suksdorfiana* are often finely longitudinally ridged, but in *E. rostellata* they are often rugulose. Specimens from Coconino and Santa Cruz counties, Arizona, are probably *E. suksdorfiana* but lack achenes so cannot be identified with certainty."

***Eleocharis uniglumis* (Link) Schult. [FNA23, HC2], misapplied**

Mant. 2: 88. 1824.

slender spike-rush

***Eleocharis uniglumis* (Link) Schult. [FNA23, HC2]**

Mant. 2: 88. 1824.

slender spike-rush

***Eriophorum* [FNA23, HC, HC2]**

Sp. Pl. 1: 52. 1753; Gen. Pl. ed. 5, 27. 1754.

bog cotton, cotton-grass

***Eriophorum angustifolium* Honck. [FNA23, HC2]**

Verz. Gew. Teutschl. 153. 1782.

many-spiked bog cotton, many-spiked cotton-grass

ssp. ***angustifolium*** [FNA23, HC2]

Verz. Gew. Teutschl. 153.  
many-spiked cottongrass

*Eriophorum polystachion* L. [HC]

***Eriophorum chamissonis*** C.A. Mey. [FNA23, HC, HC2]

Fl. Altaica. 1: 70. 1829.

Chamisso's cotton-grass, russet cottongrass

*Eriophorum altaicum* Meinsh. var. *neogeum* Raymond

*Eriophorum chamissonis* C.A. Mey. var. *aquatile* (Norman) Fernald

*Eriophorum rufescens* Andersson

*Eriophorum russeolum* Fr. ssp. *rufescens* (Andersson) Hyl.

*Eriophorum russeolum* Fr. var. *albidum* F. Nylander

*Eriophorum russeolum* Fr. var. *leucothrix* (Blomgren) Hultén

*Eriophorum russeolum* Fr. var. *majus* Sommier

FNA23: "The *Eriophorum chamissonis* complex contains taxa based mainly on stem size and bristle color (M. Raymond 1954). Much of the variation appears to be continuous with abundant intermediates; experimental studies are needed to determine the biological basis of the variation."

***Eriophorum gracile*** W.D.J. Koch ex Roth [FNA23, HC, HC2]

Catal. Bot. 2: 259. 1800.

slender cottongrass

*Eriophorum gracile* W.D.J. Koch var. *caurianum* Fernald [KZ99]

*Eriophorum gracile* W.D.J. Koch var. *gracile* [KZ99]

***Eriophorum virginicum*** L. [FNA23, HC2]

Sp. Pl. 1: 52. 1753.

tawny cottongrass

Not in Hitchcock; native to E. North America; recently documented in WA by FW/PZ.

***Eriophorum viridicarinatum*** (Engelm.) Fernald [FNA23, HC, HC2]

Rhodora. 7: 89. 1905.

tassel cottongrass

*Eriophorum latifolium* Hoppe var. *viridicarinatum* Engelm.

Not listed for by FNA; record needs to be verified.

***Isolepis*** [FNA23, HC2]

Prodr. 221. 1810.

club-rush

***Isolepis cernua*** (Vahl) Roem. & Schult. [FNA23, HC2]

Syst. Veg. 2: 106. 1817.

low clubrush, low lateral clubrush

*Scirpus cernuus* Vahl [HC]

*Scirpus cernuus* Vahl ssp. *californicus* (Torr.) Thorne

*Scirpus cernuus* Vahl var. *californicus* (Torr.) Beetle

FNA23: "*Isolepis cernua* is widespread and variable. Four varieties were recognized by A. M. Muasya and D. M. Simpson (2002). Only var. *cernua* is known from North America. The earliest collection I have seen from the Pacific Coast is from 1888; the earliest collection I have seen from Texas is from 1974."

***Isolepis setacea*** (L.) R. Br. [FNA23, HC2]

Prodr. 222. 1810.

Eurasian bulrush, bristle-leaf sedge

*Scirpus setaceus* L.

Not in H&C; Native to Eurasia. FNA23: "*Isolepis setacea* belongs to a distinct group of species characterized by ridged achenes (A. M. Muasya et al. 2001). *Isolepis setacea* was collected in 1874 on waste at Camden, New Jersey, and in the 1880s at Philadelphia, Pennsylvania; it has not persisted in the East. It has been known from the Pacific Coast since at least 1921. It is reported as native to Eurasia and

Africa. It is cultivated as an ornamental."

***Kobresia*** [FNA23, HC, HC2]

Sp. Pl. 4(1): 205. 1805.

*kobresia*

***Kobresia myosuroides*** (Vill.) Fiori [FNA23, HC, HC2]

Fl. Italia. 1: 125. 1896.

Bellard's kobresia, Pacific bog sedge

*Kobresia bellardii* (All.) Degl. ex Loisel. [JPM]

Neither H&C nor FNA list WA within the range of this species, however specimens from Okanogan County exist at Western Washington University Herbarium (WWB).

***Lipocarpa*** [FNA23, HC2]

Narr. Exped. Zaire. 459. 1818.

*hemicarpa*, *lipocarpa*

*Hemicarpa* [HC]

***Lipocarpa aristulata*** (Coville) G.C. Tucker [FNA23, HC2]

J. Arnold Arbor. 68: 410. 1987.

halfchaff sedge

*Cyperus aristulatus* (Coville) Bauters

*Hemicarpa aristulata* (Coville) Smyth

*Hemicarpa intermedia* Piper

*Hemicarpa micrantha* (Vahl) Pax var. *aristulata* Coville

***Lipocarpa micrantha*** (Vahl) G.C. Tucker [FNA23, HC2]

J. Arnold Arbor. 68: 410. 1987.

small-flowered halfchaff edge

*Cyperus subsquarrosus* (Muhl.) Bauters

*Hemicarpa micrantha* (Vahl) Pax [HC]

*Hemicarpa micrantha* (Vahl) Pax var. *minor* (Schrad.) Friedland

*Hemicarpa subsquarrosa* (Muhl.) Nees

*Hemicarpa subsquarrosa* (Muhl.) Nees var. *minor* (Schrad.) Nees

*Isolepis subsquarrosa* (Muhl.) Schrad.

*Isolepis subsquarrosa* (Muhl.) Schrad. var. *minor* Schrad.

*Scirpus micranthus* Vahl

*Scirpus subsquarrosus* Muhl.

***Lipocarpa occidentalis*** (A. Gray) G.C. Tucker [FNA23, HC2]

J. Arnold Arbor. 68: 410. 1987.

western halfchaff sedge

*Cyperus hemioccidentalis* Goetgh.

*Hemicarpa occidentalis* A. Gray [HC]

***Rhynchospora*** [FNA23, HC, HC2]

Enum. Pl. 2: 229. 1805 (as *Rynchospora*).

beakrush

***Rhynchospora alba*** (L.) Vahl [FNA23, HC, HC2]

Enum. Pl. 2: 236. 1805 (as *Rynchospora*).

white beakrush

*Dichromena alba* (L.) J.F. Macbr.

*Phaeocephalum album* (L.) House

*Rhynchospora luguillensis* Britton

*Schoenus albus* L.

*Triodon albus* (L.) Farw.

FNA23: "The smooth-bristled *Rhynchospora alba* forma *laeviseta* Gale mostly occurs with the typical

antrorsely barbellate type in Pennsylvania, the Great Lakes, British Columbia, Newfoundland, and Nova Scotia."

***Schoenoplectus*** [FNA23, HC2]

Verh. K.K. Zool.-Bot. Ges. Wien. 38(Sitzungsber.): 49. 1888.  
bulrush, naked-stem bulrush, club-rush

***Schoenoplectus acutus*** (Muhl. ex Bigelow) Á. Löve & D. Löve [FNA23, HC2]

Bull. Torrey Bot. Club. 81: 33. 1954.  
hardstem bulrush, viscous bulrush, common tule

*Schoenoplectus acutus* (Muhl. ex Bigelow) Á. Löve & D. Löve var. *acutus* [FNA23]

*Schoenoplectus acutus* (Muhl. ex Bigelow) Á. Löve & D. Löve var. *occidentalis* (S. Watson) S.G. Sm. [FNA23]

*Scirpus acutus* Muhl. ex Bigelow [HC]

*Scirpus acutus* Muhl. ex Bigelow var. *occidentalis* (S. Watson) Beetle

*Scirpus lacustris* L. var. *occidentalis* S. Watson

*Scirpus x rubiginosus* Beetle

***Schoenoplectus americanus*** (Pers.) Volkart ex Schinz & R. Keller [FNA23, HC2]

Fl. Schweiz ed. 2. 1: 75. 1905.  
Olney's three-square bulrush

*Scirpus americanus* Pers. [HC]

*Scirpus olneyi* A. Gray [HC]

FNA23: "The secondary involucral bracts of *Schoenoplectus americanus* lack blades and closely resemble floral scales, in contrast to *S. pungens* and *S. deltarum*. Although mostly very locally distributed, *S. americanus* is ecologically important in many coastal marshes. In recent years it has seriously declined (e.g., in Maryland and Louisiana). It may occur in southwestern Kansas; I have not seen a specimen. It probably has been extirpated from the Missouri station, based on one collection from 1886 (G. Yatskievych, pers. comm.). The report from New Hampshire is based on M. L. Fernald (1950). The stations on the Maine and Connecticut coasts, at Lake Champlain in Vermont, and in Oklahoma are based on putative *S. americanus* x *S. pungens* specimens. Some plants in the southwest are atypical in having nearly flat culm sides and leaf blades to 1.5 times as long as their sheaths as in the type of *Scirpus monophyllus* J. Presl & C. Presl from Peru. The name *Scirpus americanus* was long misapplied to *Schoenoplectus pungens*; *Schoenoplectus americanus* was known as *Scirpus olneyi* (A. E. Schuyler 1974)."

***Schoenoplectus heterochaetus*** (Chase) Soják [FNA23, HC2]

Cas. Nár. Mus., Odd. Prír. 140: 127. 1972.  
slender bulrush

*Scirpus heterochaetus* Chase [HC]

*Scirpus lacustris* L. var. *tenuiculmis* E. Sheldon

Not reported for WA by FNA. See Madrono 40(3) :179 article. Possibly all early H&C reports of this species in WA are incorrect identifications. C. Bjork reports recent collections from Pend Oreille R. Voucher at WS. FNA23: "*Schoenoplectus heterochaetus* hybridizes with *S. acutus* and *S. tabernaemontani* (see comment under 1. *S. tabernaemontani*). The Michigan record is dubious, the Oregon record is from 1895, and reports from Washington are apparently based on misidentified specimens. Some specimens from scattered localities in Eurasia may be *Schoenoplectus heterochaetus*."

***Schoenoplectus x kuekenthalianus*** (Junge) D.H. Kent [FNA23, HC2]

Watsonia 18(2): 213.  
Kuekenthal's bulrush

***Schoenoplectus mucronatus*** (L.) Palla [FNA23, HC2]

Verh. K.K. Zool.-Bot. Ges. Wien. 38(Sitzungsber.): 49. 1888.  
ricefield bulrush, rough-seed bulrush

*Scirpus mucronatus* L.

FNA23: "*Schoenoplectus mucronatus* was collected before 1900 in New Brunswick and New Jersey; apparently the plants did not persist. It has also been reported from New York and Pennsylvania; I have

not seen specimens. Elsewhere, it has become firmly established. It is an important ricefield weed in California (M. K. Bellue 1947), where it was first observed in 1942 and is called "ricefield bulrush."• It was first observed in the Midwest in 1971. *Schoenoplectus mucronatus* is cultivated for wildlife food near the Columbia River in Clark County, Washington, but apparently is not established in that area. *Schoenoplectus mucronatus* is very similar to *S. triangulatus* (Roxburgh) Soják of Asia, which differs in its larger spikelets, spikelet scales, and anthers."

***Schoenoplectus pungens* (Vahl) Palla [FNA23, HC2]**

Verh. K.K. Zool.-Bot. Ges. Wien. 38(Sitzungsber.): 49. 1888.  
chairmaker's clubrush, common three square

*Scirpus olneyi* A. Gray [HC], misapplied  
*Scirpus pungens* Vahl

The taxonomy of this species is confusing; see FNA for explanation. FNA3: "Three varieties of *Schoenoplectus pungens* (under *Scirpus americanus*) were recognized for North America by T. Koyama (1963), and three more or less equivalent varieties were recognized by S. G. Smith (1995). These varieties are described informally and illustrated here but not formally recognized because their morphologic delimitation should be evaluated and their exact ranges are still uncertain. "*Schoenoplectus americanus*, *S. pungens*, and *S. deltarum* belong to the small "*Scirpus americanus* complex"• T. Koyama (1963), in which the species are sometimes difficult to delimit. *Schoenoplectus pungens* was long known incorrectly as *S. americanus* Persoon; the type of that name is conspecific with plants formerly treated as *S. olneyi* A. Gray (A. E. Schuyler 1974). Putative *Schoenoplectus pungens* × *S. americanus* hybrids [= *S. xcontortus* (Eames) S. G. Smith] are locally common.  $2n = ca. 86?128$ ."

***Schoenoplectus saximontanus* (Fernald) J. Raynal [FNA23, HC2]**

Adansonia, n.s. 16: 141. 1976.  
Rocky Mountain bulrush

*Scirpus bergsonii* Schuyler  
*Scirpus saximontanus* Fernald  
*Scirpus supinus* L. var. *saximontanus* (Fernald) T. Koyama

FNA23: "The distribution of *Schoenoplectus saximontanus* is very scattered (local)."

***Schoenoplectus subterminalis* (Torr.) Soják [FNA23, HC2]**

Cas. Nár. Mus., Odd. Prír. 140: 127. 1972.  
swaying clubrush, water clubrush

*Scirpus subterminalis* Torr. [HC]

Not in H&C; collected by PZ/FW from Ridgefield NWR. FNA23: "*Schoenoplectus subterminalis* often forms lawnlike, underwater mats that are entirely vegetative or have only the inflorescences emergent. This species is probably extirpated from Illinois. *Schoenoplectus subterminalis* var. *terrestris* Paine [= *S. subterminalis* forma *terrestris* (Paine) Fernald] probably does not deserve taxonomic recognition."

***Schoenoplectus tabernaemontani* (C.C. Gmel.) Palla [FNA23, HC2]**

Verh. K.K. Zool.-Bot. Ges. Wien. 38(Sitzungsber.): 49. 1888.  
great bulrush, soft-stem bulrush

*Schoenoplectus validus* (Vahl) Á. Löve & D. Löve  
*Scirpus lacustris* L. ssp. *creber* (Fernald) T. Koyama  
*Scirpus lacustris* L. ssp. *glaucus* (Sm.) Hartm.  
*Scirpus lacustris* L. ssp. *tabernaemontani* (C.C. Gmel.) Syme  
*Scirpus lacustris* L. ssp. *validus* (Vahl) T. Koyama  
*Scirpus tabernaemontani* C.C. Gmel.  
*Scirpus validus* Vahl [HC]

FNA23: "*Schoenoplectus validus*, described from the Caribbean, and *S. tabernaemontani*, described from Europe, are here treated as one variable, cosmopolitan species without infraspecific taxa, pending further studies (J. Browning et al. 1995b; S. G. Smith 1995). Most North American plants have spikelets with reddish papillae or prickles on the scales, whereas some plants of coastal and boreal North America closely resemble most plants of northwestern Europe and southern Africa in their densely reddish prickly-papillose scales and are similar to the type of *Scirpus glaucus* J. E. Smith. *Schoenoplectus tabernaemontani*, *S. acutus*, *S. heterochaetus*, *S. lacustris*, and *S. triquetus* belong to the very difficult *S.*

lacustris complex. The entire complex except *S. triqueter* was treated as the single species *Scirpus lacustris* (T. Koyama 1962b). Many Old World authors treat *Schoenoplectus tabernaemontani* as *S. lacustris* var. *tabernaemontani* or subsp. *glaucus*. Much of the local infraspecific variation in the *Schoenoplectus lacustris* complex is probably because of hybridization. Some studies support the recognition of separate species in this group (J. Browning et al. 1995b). Hybrids in North America include *S. acutus* × *S. tabernaemontani*, widespread and common, especially in the east; *S. acutus* × *S. heterochaetus* = *S. xoblongus* (T. Koyama) Soják, widespread but uncommon; *S. heterochaetus* × *S. tabernaemontani* = *S. xsteinmetzii* (Fernald) S. G. Smith, eastern and most uncommon; *S. tabernaemontani* × *S. triqueter* = *S. xkuekenthalianus* (Junge) Kent, lower Columbia River in Oregon and probably Washington; and *S. acutus* var. *occidentalis* × *S. californicus*, local in California. Except for its trigonous culms, *S. triqueter* is very similar to the *S. lacustris* complex and freely hybridizes with *S. tabernaemontani*, both in North America and Europe."

*Schoenoplectus triqueter* (L.) Palla [FNA23, HC2]

Verh. K.K. Zool.-Bot. Ges. Wien. 38(Sitzungsber.): 49. 1888.

rounded three square

*Scirpus triqueter* L.

Not in H&C; Native to Europe; Occurs in WA on shores of Puget Island. FNA23: "In North America *Schoenoplectus triqueter* is known only from the tidal Columbia River system (B. W. Lightcap and A. E. Schuyler 1984), where it forms fertile hybrids with *S. tabernaemontani* [*S. xkuekenthalianus* (Junge) D. H. Kent = *Scirpus xscheuchzeri* Brugg]. Fertile hybrids between the same species also occur in Europe."

*Scirpus* [FNA23, HC, HC2]

Sp. Pl. 1: 47. 1753; Gen. Pl. ed. 5, 26. 1754.

bulrush

(see also *Amphiscirpus*, *Bolboschoenus*, *Isolepis*, *Schoenoplectus*, *Trichophorum*)

*Scirpus atrocinctus* Fernald [FNA23, HC2]

Proc. Amer. Acad. Arts. 34: 502. 1899.

common woolly sedge

*Scirpus cyperinus* (L.) Kunth var. *brachypodos* (Fern.) Gilly [HC], orthographic variant

*Scirpus cyperinus* (L.) Kunth var. *brachypodus* (Fernald) Gilly

FNA23: "*Scirpus atrocinctus* differs from *S. pedicellatus* by having more intense pigmentation in its inflorescence, both in the scales and the bases of the involucral bracts. Scales of *S. atrocinctus* are usually distinctly blackened, at least distally, and those of *S. pedicellatus* show either no black pigment at all or indistinct blackening beside the distal part of the midrib. Brown streaking throughout the scale is usually prominent in both species. The bases of the involucral bracts are almost always solid black in *S. atrocinctus* and reddish brown, brownish, or merely tinged or bordered with black in *S. pedicellatus*. The scales of *S. pedicellatus* also differ from those of *S. atrocinctus* in usually having a short mucro. All of these characteristics are variable. The two species are usually quite distinct when they grow close together, and they are not known to hybridize with each other (although each species hybridizes with *S. cyperinus*). It is often difficult to identify isolated herbarium specimens with confidence. *Scirpus atrocinctus* often hybridizes with *S. cyperinus* and forms hybrid swarms. The type of *S. pedicellatus* forma *viviparus* F. G. Bernard appears to be *S. atrocinctus* × *cyperinus*."

*Scirpus atrocinctus* Fernald [FNA23, HC2], misapplied

Proc. Amer. Acad. Arts. 34: 502. 1899.

common woolly sedge

*Scirpus cyperinus* (L.) Kunth var. *brachypodos* (Fern.) Gilly [HC], orthographic variant

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characteristics are variable. The two species are usually quite distinct when they grow close together, and they are not known to hybridize with each other (although each species hybridizes with *S. cyperinus*). It is often difficult to identify isolated herbarium specimens with confidence. *Scirpus atrocinctus* often hybridizes with *S. cyperinus* and forms hybrid swarms. The type of *S. pedicellatus* forma *viviparus* F. G. Bernard appears to be *S. atrocinctus* × *cyperinus*."

***Scirpus cyperinus* (L.) Kunth [FNA23, HC, HC2]**

Enum. Pl. 2: 170. 1837.

cottongrass bulrush

*Eriophorum cyperinum* L.

*Scirpus cyperinus* (L.) Kunth var. *andrewsii* (Fernald) Fernald

*Scirpus cyperinus* (L.) Kunth var. *pelius* Fernald

*Scirpus rubricosus* Fernald

Pacific Northwest populations are recently expanded and many new populations are found on roadsides, all suggesting a recent introduction from eastern North America and not a native species (Peter Zika). FNA23: "*Scirpus cyperinus* is extremely variable. A form common in the northern part of its range, south to Iowa, northern Ohio, Maryland, and (in the Appalachians) North Carolina and Tennessee, has bases of the involucral bracts and the involucels blackish, the spikelets sessile or nearly so in glomerules, and the scales relatively short, ovate, and brownish. This form has often been treated as *S. cyperinus* var. *pelius*. A more robust southern form, extending north to southern Missouri and Illinois, Kentucky, Virginia, and (along the coast) New Jersey and Massachusetts, has the bases of the involucral bracts and the involucels reddish brown, the spikelets mostly solitary, and the scales relatively long, narrowly elliptic, and reddish brown. This form has often been treated as a distinct species, *S. rubricosus* (or under the illegitimate name *S. eriophorum* Michaux). These two morphologies intergrade so extensively that it is not practical to recognize them taxonomically at any rank. *Scirpus cyperinus* often hybridizes with *S. atrocinctus* and *S. pedicellatus*, forming hybrid swarms. Some plants appear to have characteristics of all three species; the names *Scirpus atrocinctus* var. *grandis* Fernald and *S. atrocinctus* forma *grandis* (Fernald) D. S. Carpenter are based on such a specimen."

***Scirpus microcarpus* J. Presl & C. Presl [FNA23, HC, HC2]**

Reliq. Haenk. 1: 195. 1828.

panicled bulrush, small fruited bulrush

*Scirpus microcarpus* J. Presl & C. Presl var. *longispicatus* M. Peck

*Scirpus microcarpus* J. Presl & C. Presl var. *rubrotinctus* (Fernald) M.E. Jones

*Scirpus rubrotinctus* Fernald

*Scirpus sylvaticus* L. var. *digynus* Boeckeler

FNA23: "Populations of *Scirpus microcarpus* from eastern United States have been treated as a distinct species, *S. rubrotinctus* Fernald. Populations from the central part of the continent are intermediate for the characters Fernald used to separate *S. rubrotinctus*. The taxonomy of the group should be reinvestigated. Populations from the Queen Charlotte Islands (British Columbia) have a different chromosome number ( $2n = 64$ ; R. L. Taylor and G. A. Mulligan 1968) than populations from New York and Pennsylvania ( $2n = 66$ ; A. E. Schuyler 1967, 1976)."

***Scirpus pallidus* (Britton) Fernald [FNA23, HC, HC2]**

Rhodora. 8: 163. 1906.

pale bulrush

*Scirpus atrovirens* Willd. var. *pallidus* Britton

FNA23: "*Scirpus pallidus* has been confused with *S. atrovirens*. The awned rather than mucronate scales distinguish *S. pallidus* from all similar species. The perianth bristles are similar to those of *S. atrovirens*; the scales of *S. pallidus* are almost always black, rather than brownish as in *S. atrovirens*. Inflorescences of *S. pallidus* consist of relatively few, large glomerules (the largest glomerule in the inflorescence usually has 50 or more spikelets). Some individuals of *S. atrovirens* may have glomerules with as many as 65 spikelets. *Scirpus pallidus* occasionally hybridizes with *S. atrovirens*."

***Trichophorum* [FNA23, HC2]**

Syn. Pl. 1: 69. 1805.

deergrass

***Trichophorum cespitosum* (L.) Schur [FNA23, HC2]**

Verh. Mitth. Siebenbürg. Vereins Naturwiss. Hermannstadt. 4: 78. 1853.  
tufted clubrush

*Baeothyron cespitosum* (L.) A. Dietr.

*Scirpus bracteatus* Bigelow

*Scirpus cespitosus* L. [HC]

*Scirpus cespitosus* L. var. *callosus* Bigelow

*Scirpus cespitosus* L. var. *delicatulus* Fernald

FNA23: "Segregates defined on the basis of characters such as the number of flowers per spike and distal leaf sheath morphology have been recognized at varietal or subspecific ranks in North America and Europe. In North America, at least, these characters are variable within populations and appear to have no geographic integrity. North American plants of *Trichophorum cespitosum* appear to be identical to subsp. *cespitosum* (cf. R. A. DeFilipps 1980). No cytological differences have been detected between European and North American populations; all counted plants have  $2n = 104$  or  $n = 52$ ."

\* Fernald, M. L. 1921. The North American representatives of *Scirpus cespitosus*. *Rhodora* 23: 22?25.

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## Gramineae (see Poaceae)

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## Hydrocharitaceae [FNA22, HC, HC2] Frogbit Family, Tapegrass Family, Waterweed Family

### Synonyms:

Najadaceae [FNA22, HC] (Naiad Family, or Water-nymph Family)

Vallisneriaceae [Abrams]

FNA editors insisted on following Cronquist (1981) in recognizing Najadaceae, and the author's introduction to Najadaceae in FNA (Haynes 2000) protested Cronquist's treatment was outdated, citing recent papers investigating seed coat (Shaffer-Fehre 1991) and molecular relationships (Les & Haynes 1995). That evidence places Najadaceae within Hydrocharitaceae. Here we combine the two, as in JPM.

### References:

- \* Haynes, R. R. 1977. The Najadaceae in the southeastern United States. *J. Arnold Arbor.* 58: 161?170.
- \* Les, D. H. & R. R. Haynes. 1995. Systematics of subclass Alismatidae: A synthesis of approaches. In: P.J. Rudall et al., eds., 1995. *Monocotyledons: Systematics and Evolution*. 2 vols. Kew. Vol. 2, pp. 353-377.
- \* Shaffer-Fehre, M. 1991. The endotegmen tuberculae: An account of little-known structures from the seed coat of the Hydrocharitoideae (Hydrocharitaceae) and Najas (Najadaceae). *Bot. J. Linn. Soc.* 107: 169?188.
- \* Shaffer-Fehre, M. 1991b. The position of Najas within the subclass Alismatidae (Monocotyledones) in the light of new evidence from seed coat structures in the Hydrocharitoideae (Hydrocharitales). *Bot. J. Linn. Soc.* 107: 189?209.
- \* Thorne, R. F. 1993c. Hydrocharitaceae. In: J. C. Hickman, ed. 1993. *The Jepson Manual: Higher Plants of California*. Berkeley, Los Angeles, and London. Pp. 1150?1151.

### *Egeria* [FNA22, HC2]

Annales des Sciences Naturelles, Botanique. sér. 3, 11: 79. 1849.

brazilian waterweed

### *Egeria densa* Planch. [FNA22, HC2]

Annales des Sciences Naturelles, Botanique. sér. 3, 11: 80. 1849.

Brazilian waterweed, South American waterweed

*Elodea densa* (Planch.) Casp. [HC]

FNA22: "*Egeria densa* is native to southeastern Brazil and has been widely sold in the aquarium trade,

often becoming established in nature. Only staminate plants of *E. densa* have been observed outside its native range. Reproduction, then, occurs entirely by vegetative methods. No differentiated vegetative reproductive structures (turions, bulbils, etc.) are known (C. D. K. Cook and K. Urmi-König 1984b); however, the species is known to live temporarily under ice. The leaves of *Egeria densa*, which are only two cell-layers thick, are much used to demonstrate plant-cell structure and cytoplasmic streaming in introductory botany courses."

***Elodea*** [FNA22, HC, HC2]

Flora Boreali-Americana. 1: 20. 1803.  
ditchmoss, waterweed  
(see also *Egeria*)

***Elodea canadensis*** Michx. [FNA22, HC, HC2]

Flora Boreali-Americana. 1: 20. 1803.  
Canadian, Rocky Mountain, or common waterweed

*Elodea brandegeae* H. St. John  
*Elodea planchonii* Casp. [Abrams]

There has been disagreement and confusion regarding the author for this species. Online Jepson Manual has revised the treatment of authorship to Michx. on the following grounds: "..... indicates that an explanation of the author correction from Rich. [in The Jepson Manual [Ed. 1]] to Michx. [in this Index] is presented in the notes under Fl. bor.-amer. in Stafleu & Cowan, TL-2 3:459 (1981); essentially, all internal evidence in Fl. bor.-amer. indicates A. Michaux as the sole author even though it is thought that L. C. Richard wrote most or all of the descriptions."

***Elodea nuttallii*** (Planch.) H. St. John [FNA22, HC, HC2]

Rhodora. 22:29. 1920.  
Nuttall's waterweed, western waterweed  
*Anacharis nuttallii* Planch.

***Hydrilla*** [FNA22, HC2]

Memoires de la Classe des Sciences Mathematiques et Physiques de L'Institut National de France. 12(2): 9, 61, 73, plate 2a?k. 1814.

***Hydrilla verticillata*** (L. f.) Royle [FNA22, HC2]

Illustrations of the Botany ... of the Himalayan Mountains ... 1: 376. 1839.  
hydrilla, water thyme  
*Serpicula verticillata* L. f.

JPM gives authority as (L.f.) Casp., here we follow FNA and use (L. f.) Royle . FNA22: "*Hydrilla verticillata* is widely distributed in the Eastern Hemisphere but it is uncertain as to where it is truly native. It grows in a variety of aquatic habitats ranging from acidic to basic, oligotrophic to eutrophic, fresh to brackish, and from a few centimeters to a meter or more if light penetrates that deeply. Growth and spread often are rapid. Stem fragments become rooted by fine, unbranched adventitious roots and soon produce vegetative reproductive structures from both subterranean and erect stems. Tubers produced on subterranean stems are pale brown; those produced on erect stems are dark olive-green and covered with short, stiff scales. Both types germinate quickly to produce new stems."

***Hydrocharis*** [FNA22, HC2]

Sp. Pl. 2: 1036. 1753; Gen. Pl. ed. 5; 458, 1754.

***Hydrocharis morsus-ranae*** L. [FNA22, HC2]

Sp. Pl. 2: 1036. 1753.  
frogs's-bit

Known from Meadow Lake in Snohomish County.

***Limnobium*** [FNA22, HC2]

Memoires de la Classe des Sciences Mathematiques et Physiques de L'Institut National de France. 12(2): 66. 1814.

*Limnobium laevigatum* (Humb. & Bonpl. ex Willd.) Heine [HC2]

Adansonia, n.s. 8(3): 315.

frogbit

Recently (2016) collected in Pacific County.

***Najas*** [FNA22, HC, HC2]

Sp. Pl. 2: 1015. 1753; Gen. Pl. ed. 5: 445, 1754.

water-nymph

***Najas canadensis*** Michx. [HC2]

Flora Boreali-Americana 2: 220.

Canadian water nymph

Rather cryptic taxon for which historic and contemporary collections have been made.

***Najas flexilis*** (Willd.) Rostk. & W.L.E. Schmidt [FNA22, HC, HC2]

Flora Sedinensis. 382. 1824.

or slender naias, slender nymph, wavy water nymph

*Caulinia flexilis* Willd.

*Najas caespitosus* (Maguire) Reveal

Abrams uses the Greek spelling Naias L.; here, like FNA and all recent authors, we use *Najas* L. FNA22: "In habit, *Najas flexilis* is most similar to *N. guadalupensis*. When seeds are present, *N. flexilis* can be separated easily from the latter species by the glossy, smooth, yellowish seeds that are widest above the middle. In the northern United States and in Canada, *N. flexilis* is by far the most common species of *Najas*, although in the Ohio and surrounding areas, it is disappearing as eutrophication (depletion of oxygen from lakes) continues (W. A. Wentz and R. L. Stuckey 1971)."

***Najas guadalupensis*** (Spreng.) Magnus [FNA22, HC, HC2]

Beitrage zur Kenntniss der Gattung *Najas*. 8. 1870.

Guadalupe water-nymph

*Caulinia guadalupensis* Spreng.

ssp. ***guadalupensis*** [FNA22, HC2]

Beitrage zur Kenntniss der Gattung *Najas*. 8.

Guadalupe naias, common water nymph, Guadalupe nymph

We follow FNA in accepting the subspecies, but they seem poorly defined along arbitrary size differences in the seeds, stems, and leaves. Abrams & H&C uses the superfluous combination (Spreng.) Morong, made in 1893; we use the (Spreng.) Magnus combination made in 1870.

***Vallisneria*** [FNA22, HC, HC2]

Sp. Pl. 2: 1015. 1753; Gen. Pl. ed. 5: 446, 1754.

wild celery, tapegrass

***Vallisneria americana*** Michx. [FNA22, HC, HC2]

Flora Boreali-Americana. 2: 220. 1803.

wild celery, American eelgrass, tapegrass

*Vallisneria americana* Michx. var. *americana* [Crow & Hellquist 2000]

*Vallisneria neotropica* Vict.

*Vallisneria spiralis* L. [HC], misapplied

FNA22: "*Vallisneria americana* plus various species of *Sagittaria*, *Sparganium*, and *Blyxa aubertii* form usually sterile basal rosettes of long, linear leaves in shallow water in North America. *Vallisneria* can easily be separated from the others by the following combination of character states: base of leaves nearly flat in cross section, broad band of lacunae along each side of midvein, roots without cross septa, and absence of milky juice. The three other genera have a different combinations for these characters. *Vallisneria spiralis* Linnaeus has been reported in some of the older literature as being represented in North America. These reports are all based on a misapplication of the name *V. spiralis* and are actually *V. americana*. In warmer waters of southeastern United States are some populations of *Vallisneria* with much larger leaves that have been given the name *V. neotropicalis*. After considerable study of populations in the field, the plants formerly known as *V. neotropicalis* were determined to be just larger individuals of *V. americana* (R.

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## Iridaceae [FNA26, HC, HC2] Iris Family

**Synonyms:** (none)

**References:**

- \* Goldblatt, P. 1990. Phylogeny and classification of Iridaceae. *Ann. Missouri Bot. Gard.* 77: 607?627.
- \* Reeves, G. et al. 2001. Molecular systematics of Iridaceae: Evidence from four plastid DNA regions. *Amer. J. Bot.* 88: 2074?2087.

### *Crocasmia* [FNA26, HC2]

*Fl. Serres Jard. Eur.* 7: 161. 1851.  
montbretia

#### *Crocasmia xcrocosmiiflora* (Lemoine) N.E. Br. [FNA26, HC2]

*Trans. Roy. Soc. South Africa.* 20: 264. 1932 (as *crocosmiiflora*).  
montbretia

Recently (2007) collected in Grays Harbor Co.

### *Crocus* [HC2]

#### *Crocus xstellaris* Haw. [HC2]

yellow crocus

recently collected in San Juan Co. and King Co.

#### *Crocus tommasinianus* Herb. [HC2]

*In Journ. Hort. Soc.* ii. 273.

early crocus

Recently collected in King Co.

#### *Crocus vernus* (L.) Hill [HC2]

##### *ssp. vernus* [HC2]

spring crocus

TROPICOS shows Hill as the author of this combination but provides no publication information. IPNI lists several authors for this combination, however Hill is not one of them. Recently collected in San Juan Co.

### *Iris* [FNA26, HC, HC2]

*Sp. Pl.* 1: 38. 1753; *Gen. Pl.* ed. 5, 24. 1754.

flag, fleur-de-lis, iris

#### *Belamcanda* [FNA26]

#### *Iris foetidissima* L. [HC2]

*Sp. Pl.* 1: 38-40.

stinking iris

Recently collected in King Co.

#### *Iris germanica* L. [FNA26, HC2]

*Sp. Pl.* 1: 38. 1753.

bearded iris, German iris

Recently collected in a floodplain in Cowlitz Co., a rare member of the flora long-persistent at abandoned plantings and homesteads, and also at garden dumps, spreading vegetatively. FNA points out that *Iris germanica* was derived from a natural hybrid between *Iris pallida* Lam. and *Iris variegata* L. In 1889 additional Mediterranean species were hybridized with *I. germanica* in gardens (Wister 1927; Henderson

1992), and those crosses have been called *Iris* *xconglomerata* N. C. Hend. (Henderson 1993). It is possible the wild plants in Cowlitz Co. are *I. xconglomerata*, not true *I. germanica*.

- \* Henderson, N. C. 1992. What is *Iris germanica*? Bull. Amer. Iris Soc. 286: 6-11.
- \* Henderson, N. C. 1993. *Iris xconglomerata*. Bull. Amer. Iris Soc. 290: 17-22.
- \* Wister, J. C. 1927. *The Iris: A Treatise on the History, Development and Culture of the Iris for the Amateur Gardener*. Orange Judd Publ. Co., London. 122 p.

***Iris missouriensis* Nutt. [FNA26, HC, HC2]**

J. Acad. Nat. Sci. Philadelphia. 7: 58. 1834.  
western blue flag, Rocky Mountain iris

FNA26: "The ecological range of *Iris missouriensis* is probably more varied than that of any other North American species of the genus, extending from almost sea level in southern California to 3000 m in Montana and Wyoming. There is correspondingly wide variation in a number of characters, which has caused much confusion as to taxonomic circumscription. Homer Metcalf (pers. comm.) made a detailed study of this species. The basic requirement for its success seems to be an extremely wet area before flowering and then almost desertlike conditions for the rest of the summer. In large populations, sometimes covering hundreds of acres, *Iris missouriensis* may be found with either simple or branched stems, leaves from 4 mm to more than 1 cm wide, shorter than the stem or longer, only one flower to as many as three on a stem, and colors from deep blue to almost pure white. A single plant found on the Pariah Plateau in Kane County, Utah, with leaves only 3?4 mm wide and a single flower stem only 4 cm long, which meant that the flower was at almost ground level, was named *Iris pariensis*. No other such specimen has been located, and this entity must be considered as just an aberrant form that was due to the desertlike conditions in which it was growing."

***Iris pseudacorus* L. [FNA26, HC, HC2]**

Sp. Pl. 1: 38. 1753.  
pale yellow iris

An aggressive shoreline weed.

***Iris sibirica* L. [FNA26, HC2]**

Sp. Pl. 1: 39. 1753.  
Siberian iris

***Iris tenax* Douglas ex Lindl. [FNA26, HC, HC2]**

Edwards?s Bot. Reg. 15: plate 1218. 1829.  
flag, Oregon iris flag, tough-leaf iris

Taxonomy follows FNA, see Lenz (1958, 1959).

- \* Lenz, L. W. 1958. A revision of the Pacific Coast irises. *Aliso* 4: 1-72.
- \* Lenz, L. W. 1959. Hybridization and speciation in the Pacific Coast irises. *Aliso* 4: 237-309.

**var. *tenax* [HC2]**

*Iris tenax* Douglas ex Lindl. ssp. *klamathensis* L.W. Lenz [KZ99]  
*Iris tenax* Douglas ex Lindl. ssp. *tenax* [KZ99]

***Olsynium* [FNA26, HC2]**

New Fl. 1: 72. 1836.  
purple-eyed grass, grass-widow

***Olsynium douglasii* (A. Dietr.) E.P. Bicknell [FNA26, HC2]**

Bull. Torrey Bot. Club. 27: 237. 1900.

*Sisyrinchium douglasii* A. Dietr. [HC]

**var. *douglasii* [FNA26, HC2]**

Bull. Torrey Bot. Club. 27: 237.  
grass widows

*Sisyrinchium douglasii* A. Dietr. ssp. *douglasii*  
*Sisyrinchium douglasii* A. Dietr. var. *douglasii* [JPM]

Generic taxonomy tentatively follows FNA. This genus is differentiated from *Sisyrinchium* by its round leaves and fused filaments (Goldblatt et al. 1990). FNA26: var. *douglasii* - "Filament columns tapering

evenly to base or slightly flared."

\* Goldblatt, P., P. Rudall, and J. E. Henrich. 1990. The genera of the *Sisyrinchium* alliance (Iridaceae: Iridoideae): phylogeny and relationships. *Systematic Botany* 15: 497-510.

var. ***inflatum*** (Suksd.) Cholewa & Douglass M. Hend. [FNA26, HC2]

Madroño. 38: 232. 1991.

purple-eyed grass, grass widows

*Olysnium inflatum* Suks.

*Sisyrinchium douglasii* A. Dietr. var. *inflatum* (Suksd.) P.K. Holmgren

*Sisyrinchium inflatum* (Suksd.) H. St. John [HC]

The distinction between *S. douglasii* var. *douglasii* and var. *inflatum* is weak, and the complex needs further study. FNA26: var. *inflatum* - "Filament columns abruptly and broadly flared at base."

***Sisyrinchium*** [FNA26, HC, HC2]

Sp. Pl. 2: 954. 1753; Gen. Pl. ed. 5, 409. 1754.

blue-eyed grass, sisyrinchium

(see also *Olysnium*)

***Sisyrinchium bellum*** S. Watson [FNA26, HC2]

Proc. Amer. Acad. Arts. 12: 277. 1877.

beautiful blue-eyed grass, western blue-eyed grass

***Sisyrinchium californicum*** (Ker Gawl.) Dryander [FNA26, HC, HC2]

Hortus Kew. 4: 135. 1812.

golden-eyed grass

*Sisyrinchium boreale* (E.P. Bicknell) J.K. Henry

*Sisyrinchium brachypus* (E.P. Bicknell) J.K. Henry

*Sisyrinchium flavidum* Kellogg

*Sisyrinchium lineatum* Torr.

Following FNA, we treat the authorship as (Ker Gawler) Dryander in W. Aiton & W. T. Aiton, Hortus Kew. 4: 135 (1812), not (Ker-Gawl. ex Sims) Aiton as in KZ

***Sisyrinchium idahoense*** E.P. Bicknell [FNA26, HC2]

Bull. Torrey Bot. Club. 26: 445. 1899.

Idaho blue-eyed grass

var. ***idahoense*** [FNA26, HC2]

Bull. Torrey Bot. Club. 26: 445.

Idaho blue-eyed grass

*Sisyrinchium birameum* Piper [VPPNW1]

*Sisyrinchium halophilum* Greene [FNA26, HC2], misapplied

The varieties are poorly defined and need study, they may not be distinct. We provisionally follow the taxonomy of Henderson (1976).

\* Cholewa, A. F. & D. M. Henderson. 1984. Biosystematics of *Sisyrinchium* section Bermudiana (Iridaceae) of the Rocky Mountains. *Brittonia* 36: 342-363.

\* Henderson, D. M. 1976. A biosystematic study of Pacific Northwestern blue-eyed grasses (*Sisyrinchium*, Iridaceae). *Brittonia* 28: 149-176.

var. ***macounii*** (E.P. Bicknell) Douglass M. Hend. [FNA26, HC2]

*Brittonia*. 28: 172. 1976.

Macoun's blue-eyed grass

*Sisyrinchium macounii* E.P. Bicknell

Restricted to San Juan Co., the Gulf Islands, and southern Vancouver Island. The taxonomy of the varieties needs review.

var. ***occidentale*** (E.P. Bicknell) Douglass M. Hend. [FNA26, HC2]

*Brittonia*. 28: 174. 1976.

western blue-eyed grass

*Sisyrinchium occidentale* E.P. Bicknell

var. **segetum** (E.P. Bicknell) Douglass M. Hend. [FNA26, HC2]

Brittonia. 28: 174. 1976.

cornfield blue-eyed grass, prairie grass

*Sisyrinchium segetum* E.P. Bicknell

Endemic to NW Washington and a small area of adjacent BC. The taxonomy of the varieties needs review.

***Sisyrinchium littorale*** Greene [FNA26, HC2]

Pittonia. 4: 33. 1899.

Alaska blue-eyed grass, shore grass

***Sisyrinchium montanum*** Greene [FNA26, HC2]

Pittonia. 4: 33. 1899.

strict blue-eyed grass

var. **montanum** [FNA26, HC2]

***Sisyrinchium sarmentosum*** Suksd. ex Greene [FNA26, HC2]

Erythea. 3: 121. 1895.

pale grass, Suksdorf's blue-eyed grass

Endemic to a small area of the Cascade Mountains on the Oregon and Washington border. FNA26: "The pale blue flowers with rounded apices on the outer tepals set this species apart from others in the region."

***Sisyrinchium septentrionale*** E.P. Bicknell [FNA26, HC2]

Bull. Torrey Bot. Club. 26: 452. 1899.

northern blue-eyed grass

FNA26: "*Sisyrinchium septentrionale* is widespread but apparently not common in western Canada. In central Canada it intergrades with *S. mucronatum*, to which it appears closely related (see discussion, p. 367). It is confused also with *S. montanum* but can be distinguished by its very slender, very long outer spathe and nongibbous inner spathe. Fresh material will show lighter blue flowers and outer tepals with rounded apices."

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## Juncaceae [FNA22, HC, HC2] Rush Family

**Synonyms:** (none)

**References:**

- \* Brooks, R. E. and S. E. Clemants. 2000. Juncaceae. In: Flora of North America Editorial Committee, Eds. Flora of North America North of Mexico. Volume 22, Magnoliophyta: Alismatidae, Arecidae, Commelinidae (in part), and Zingiberidae. Oxford University Press, New York.
- \* Hämet-Ahti, L. 1971. A synopsis of the species of *Luzula*, subgenus *Anthelaea* Griseb. (Juncaceae) indigenous in North America. *Annales Botanici Fennici* 8: 368-381.
- \* Kirschner, J., Ed. 2002. Juncaceae 1: *Rostkovia* to *Luzula*, *Species Plantarum: Flora of the World Part 6*. Australian Biological Resources Study, Canberra, Australia. 237 p.
- \* Kirschner, J., Ed. 2002. Juncaceae 2: *Juncus* subg. *Juncus*, *Species Plantarum: Flora of the World Part 7*. Australian Biological Resources Study, Canberra, Australia. 336 p.
- \* Kirschner, J., Ed. 2002. Juncaceae 3: *Juncus* subg. *Agathryon*, *Species Plantarum: Flora of the World Part 8*. Australian Biological Resources Study, Canberra, Australia. 192 p.

***Juncus*** [FNA22, HC, HC2]

Sp. Pl. 1: 325. 1753; Gen. Pl. ed. 5: 152, 1754.

rush

***Juncus acuminatus*** Michx. [FNA22, HC, HC2]

Flora Boreali-Americana. 1: 192. 1803.

knotty leaf rush, sharp-fruited rush, tapered rush

*Juncus acuminatus* Michx. var. *legitimus* Engelm.  
*Juncus pallescens* E. Mey. ex Buchenau  
*Juncus pondii* A.W. Wood

***Juncus alpinoarticulatus* Chaix [FNA22, HC2]**

Hist. Pl. Dauphiné. 1: 378. 1786.  
alpine rush, northern rush

*Juncus alpinoarticulatus* Chaix ssp. *americanus* (Farw.) Hämet---Ahti  
*Juncus alpinoarticulatus* Chaix ssp. *fuscescens* (Fernald) Hämet---Ahti  
*Juncus alpinoarticulatus* Chaix ssp. *nodulosus* (Wahlenb.) Hämet-Ahti  
*Juncus alpinus* Vill. [HC], illegitimate name  
*Juncus richardsonianus* Schult. & Schult.f.

A. A. Reznicek notes there are typification problems with the Chaix name proposed by Hämet-Ahti (1980b); here it is retained until another name is proposed in the literature taxonomy here follows FNA (Brooks and Clemants 2000), not Lindquist (1932) or Hämet-Ahti (1986) FNA22: "Several attempts have been made to separate subspecies or varieties of this widespread and variable species. In one study, five varieties were recognized, with four in North America ( B. Lindquist 1932) . In another, at least six subspecies were recognized with two in North America (L. Hämet-Ahti 1986). The variation we .have encountered does not fit nicely into the subspecies Hämet-Ahti has recognized, and until a full account of the variation throughout the range of the species is presented, we are not recognizing subspecific or varietal divisions of this species. Recent evidence suggests that this species may be one of the parents of the tetraploid *Juncus articulatus*. *Juncus alpinus* hybridizes with *J. brevicaudatus* (= *J. Å´ xgracilescens* J. Hermann), *J. articulatus* (= *J. Å´ xalpiniformis* Fernald), *J. nodosus* (= *J. Å´ xnodosiformis* Fernald), and *J. torreyi* (= *Juncus**J. xstuckeyi* Reinking)."

- \* Brooks, R. E. and S. E. Clemants. 2000. Juncaceae. In: Flora of North America Editorial Committee, Eds. Flora of North America North of Mexico. Volume 22, Magnoliophyta: Alismatidae, Arecidae, Commelinidae (in part), and Zingiberidae. Oxford University Press, New York.
- \* Hämet-Ahti, L. 1980b. *Juncus alpinoarticulatus*: the legitimate name for *Juncus alpinus*. Ann. Bot. Fennici 17: 341-342.
- \* Hämet-Ahti, L. 1986. North American races of *Juncus alpinoarticulatus* (Juncaceae). Ann. Bot. Fennici 23:277-281.
- \* Lindquist, B. 1932. Taxonomic remarks on *Juncus alpinus* Villars and some related species. Bot. Not. 1932: 313-372.

***Juncus anhelatus* (Wiegand) R.E. Brooks [FNA22, HC2]**

Novon. 9: 11. 1999.  
giant path rush

*Juncus macer* Gray var. *anhelatus* (Wiegand) F.J. Herm.  
*Juncus tenuis* Willd. var. *anhelatus* Wiegand

Recently collected in King Co. We follow the taxonomy of FNA. Can be confused with *J. tenuis*, but is much larger and has slightly smaller fruits (Brooks and Whittemore 1999).

- \* Brooks, R. E. and A. T. Whittemore. 1999. *Juncus anhelatus* (Juncaceae, *Juncus* subg. *Poiphylli*), a new status for a North American taxon. Novon 9:11-12.

***Juncus articulatus* L. [FNA22, HC, HC2]**

Sp. Pl. 1: 327. 1753.  
joint-leaved rush, jointed rush

*Juncus articulatus* L. var. *obtusatus* Engelm.  
*Juncus articulatus* L. var. *stolonifer* (Wohlleben) House  
*Juncus lampocarpus* Ehrh. ex Hoffm.

**ssp. *articulatus* [HC2, JPM2]**

Sp. Pl. 1: 327.  
jointed rush, jointleaf rush

A second subsp. is found in eastern Asia. FNA22: "*Juncus articulatus* hybridizes with *J. brevicaudatus* (= *J. Å´ xfulvescens* Fernald), *J. alpinus* (= *J. Å´ xalpiniformis* Fernald), *J. nodosus*, and *J. canadensis*. *Juncus articulatus* var. *obtusatus* Engelman appears to be intermediate with *J. alpinus*. It has spreading inflorescence branches but obtuse inner tepals. This may represent a backcross with *J. alpinus*. Recent evidence suggests that *J. alpinus* is a polyploid species with *J. articulatus* as one of its

parents."

***Juncus balticus* Willd. [HC, HC2]**

Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesamten Naturk. 2: 298. 1809

Baltic rush

(see also *Juncus breweri*)

*Juncus arcticus* Willd. var. *balticus* (Willd.) Trautv. [FNA22]

**ssp. *ater* (Rydb.) Snogerup [HC2]**

Preslia 74(3): 258.

Baltic rush, valley rush

*Juncus balticus* Willd. ssp. *balticus*, misapplied

*Juncus balticus* Willd. ssp. *littoralis* (Engelm.) Snogerup, misapplied

*Juncus balticus* Willd. var. *balticus* [HC], misapplied

*Juncus balticus* Willd. var. *littoralis* Engelm., misapplied

*Juncus balticus* Willd. var. *montanus* Engelm. [HC]

*Juncus balticus* Willd. var. *vallicola* Rydb. [HC]

*Juncus vallicola* (Rydb.) Rydb.

The use of *J. arcticus* to include *J. balticus* (as treated in FNA22) is not accepted by European authors.

\* Snogerup, S., P. F. Zika, and J. Kirschner. 2002. Taxonomic and nomenclatural notes on *Juncus*. Preslia 74: 247-266.

***Juncus bolanderi* Engelm. [FNA22, HC, HC2]**

2:436, 470.

Bolander's rush

*Juncus bolanderi* Engelm. var. *riparius* Jeps.

***Juncus brachycarpus* Engelm. [FNA22, HC2]**

Manual of Botany of the Northern United States (ed. 5). 542. 1867.

short-fruit rush

***Juncus brevicaudatus* (Engelm.) Fernald [FNA22, HC2]**

Rhodora. 6: 35. 1904.

narrow-panicled rush

*Juncus canadensis* J. Gay ex Laharpe var. *brevicaudatus* Engelm.

*Juncus canadensis* J. Gay ex Laharpe var. *coarctatus* Engelm.

*Juncus canadensis* J. Gay ex Laharpe var. *kuntzei* Buchenau

*Juncus kuntzei* (Buchenau) Vierh.

*Juncus tweedyi* Rydb. [HC]

This species is primarily distributed east of the Mississippi River, from Minnesota to Newfoundland, south to Tennessee. Disjunct populations are known from interior and coastal western North America. The coastal populations are typically associated with cranberry cultivation.

***Juncus breweri* Engelm. [HC2, IFBC]**

Transactions of the Academy of Science of St. Louis 2: 440-441.

Brewer's rush, salt rush

*Juncus lesueurii* Bol. [FNA22, HC, HC2], misapplied

*Juncus lesueurii* orth. (misspelled, see Lint 1977, pp 149-150) The epithet *lescurii* was published by Bolander in 1862 as "*leseurii*", and indexed "*lesueurii*," both are typographical errors for the latinized version of Leo Lesquereaux, corrected under Article 73 of the ICBN to *lescurii*, which is how Bolander spelled the epithet in his 1870 catalogue of plants in the San Francisco area (Lint 1977). *Juncus lescurii* is endemic to the San Francisco area.

\* Lint, H. L. 1977. A revision of *Juncus* subgenus *Genuini* (Juncaceae) in the Pacific States. Unpublished PhD thesis, Oregon State University, Corvallis.

***Juncus bufonius* L. [FNA22, HC, HC2]**

Sp. Pl. 1: 328. 1753.

var. *bufonius* [HC2, JPM2]

Sp. Pl. 1: 328.

toad rush

FNA22: "Nearly worldwide, *Juncus bufonius* is found essentially throughout North America except north of the Alaskan and Canadian tTaiga. *Juncus bufonius* is a highly polymorphic complex that is poorly understood systematically. Insufficient evidence exists upon which to base the segregation of the plethora of taxa that have been recognized out of this group in the past."

var. *congestus* Wahlb. [HC2, JPM2]

clustered toad rush

var. *occidentalis* F.J. Herm. [HC2, JPM2]

western toad rush

*Juncus sphaerocarpus* Nees, misapplied

*Juncus bulbosus* L. [FNA22, HC2]

Sp. Pl. 1: 327. 1753.

bulbous rush, spreading rush

*Juncus kockii* F.W. Schultz

*Juncus supinus* Moench [HC]

*Juncus canadensis* J. Gay ex Laharpe [FNA22, HC2]

Essai Monogr. Jonc. 46. 1825.

Canadian rush

*Juncus canadensis* J. Gay ex Laharpe var. *longicaudatus* Engelm.

*Juncus canadensis* J. Gay ex Laharpe var. *sparsiflorus* Fernald

*Juncus longicaudatus* (Engelm.) Mack.

*Juncus polycephalus* Michx. var. *paradoxus* Torr.

Recently collected in Pacific Co.; we follow FNA and treat the authroship as J. Gay in J. J. C. de Laharpe, not J. Gay ex Laharpe as in KZ99. FNA22: "Two varieties and two forms occurring within the flora have been recognized (M. L. Fernald 1945b). *Juncus canadensis* var. *sparsiflorus* has stiffly erect inflorescence branches, and the flowers are generally longer than those of var. *canadensis*. These varieties simply serve to give name to parts of the broad morphologic range of variation encountered in *J. canadensis* and do not appear to represent any distinct biological entities. *Juncus canadensis* and the following three species form a distinctive group: they have ve been variously treated as species (as here), varieties of *J. canadensis*, or as two species, *J. canadensis* and a polymorphic species, *J. brachysephalus*, encompassing the other three species (B. Boivin 1967--1979, part IV). Most of the species are easily recognized at their extremes but show a fair amount of overlap."

\* <b>Buckingham et al. 1995</b> = Buckingham, N. M., E. G. Schreiner, T. N. Kaye, J. E. Burger, and E. L. Tisch. 1995. Flora of the Olympic Peninsula. Northwest Interpretive Association and the Washington Native Plant Society, Seattle, WA. 199 p.

*Juncus compressus* Jacq. [FNA22, HC2]

Enumeratio Stirpium Pleraumque, quae sponte crescung in agro Vindobonensi. 60, 235. 1762.

round-fruit rush

*Juncus confusus* Coville [FNA22, HC, HC2]

Proceedings of the Biological Society of Washington. 10: 127. 1896.

Colorado rush

*Juncus exilis* Osterh.

*Juncus conglomeratus* L. [HC2]

compact rush

*Juncus conglomeratus* L. var. *subuliflorus* (Drejer) Asch. & Graebn.

Recently collected in Lewis Co. Taxonomy follows Kirschner et al. (2002).

\* Kirschner, J., Ed. 2002. Juncaceae 3: *Juncus* subg. *Agathryon*, Species Plantarum: Flora of the World Part 8. Australian Biological Resources Study, Canberra, Australia. 192 p.

***Juncus covillei*** Piper [FNA22, HC, HC2, JPM2]

Contributions from the U. S. National Herbarium. 11: 182. 1906.  
Coville's rush

*Juncus covillei* Piper var. *covillei* [FNA22, HC]

*Juncus covillei* Piper var. *obtusatus* C.L. Hitchc. [FNA22, HC]

*Juncus falcatus* E. Mey. var. *paniculatus* Engelm.

*Juncus falcatus* E. Mey. var. *prominens* Buchenau

*Juncus latifolius* (Engelm.) Buchenau var. *paniculatus* (Engelm.) Buchenau

*Juncus obtusatus* Engelm., homonym (illegitimate)

***Juncus diffusissimus*** Buckley [FNA22, HC2]

Proceedings of the Academy of Natural Sciences of Philadelphia. 14: 9. 1862.  
diffuse rush, slimpod rush

Recently collected in Cowlitz Co.

***Juncus drummondii*** E. Mey. [FNA22, HC, HC2]

Flora Rossica. 4: 235. 1853.

Drummond's rush, threeflower rush

*Juncus compressus* Jacq. var. *subtriflorus* E. Mey.

*Juncus drummondii* E. Mey. var. *drummondii* [HC]

*Juncus drummondii* E. Mey. var. *longifructus* H. St. John

*Juncus drummondii* E. Mey. var. *subtriflorus* (E. Mey.) C.L. Hitchc. [HC]

*Juncus pauperculus* Schwarz

*Juncus subtriflorus* (E. Mey.) Coville

FNA22: "Plants with capsules distinctly longer than the perianth have been referred to as *Juncus drummondii* var. *subtriflorus*. Those plants frequently occur sympatrically with *J. drummondii* (strict sense) through most of its range, leaving considerable doubt as to the value of recognizing such variation."

***Juncus dudleyi*** Wiegand [FNA22, HC2]

Bulletin of the Torrey Botanical Club. 27: 524. 1900.

Dudley's rush

*Juncus tenuis* Willd. var. *dudleyi* (Wiegand) F.J. Herm. [HC]

*Juncus tenuis* Willd. var. *uniflorus* Farw.

***Juncus effusus*** L. [FNA22, HC, HC2]

Sp. Pl. 1: 326. 1753.

(see also *Juncus laccatus*)

**ssp. *effusus*** [HC2]

Sp. Pl. 1: 326.

soft rush

*Juncus effusus* L. var. *compactus* Lej. & Courtois [HC]

*Juncus effusus* L. var. *effusus*

*Juncus effusus* L. var. *subglomeratus* DC.

Taxonomy follows Kirschner et al. (2002). A common introduction on both the east and west sides of the Cascades.

\* Hämet-Ahti, L. 1980a. The *Juncus effusus* aggregate in eastern North America. *Ann. Bot. Fennici* 17: 183-191.

\* Kirschner, J., Ed. 2002. *Juncaceae* 3: *Juncus* subg. *Agathryon*, *Species Plantarum: Flora of the World Part 8*.

*Australian Biological Resources Study*, Canberra, Australia. 192 p.

\* Novikov, S. Snogerup, K. L. Wilson, and P. F. Zika. 2002. *Juncus* subg. *Agathryon* sect. *Juncotypos*. Pp. 57-145,

in: Kirschner, J., Ed. *Juncaceae* 3: *Juncus* subg. *Agathryon*, *Species Plantarum: Flora of the World Part 8*.

*Australian Biological Resources Study*, Canberra, Australia. 192 p.

**ssp. *pacificus*** (Fernald & Wiegand) Piper & Beattie [HC2]

*Brittonia* 55(2): 152.

common rush, Pacific rush

*Juncus effusus* L. var. *pacificus* Fernald & Wiegand [HC]

Taxonomy follows Zika (2003). The common native in western lowland WA, with a disjunct population in the Blue Mountains area.

\* Zika, P. F. 2003. The native subspecies of *Juncus effusus* (Juncaceae) in western North America. *Brittonia* 55: 150-156.

**ssp. *solutus* (Fernald & Wiegand) Hämet-Ahti [HC2]**

Ann. Bot. Fenn. 17: 188.

eastern soft rush

*Juncus effusus* L. var. *solutus* Fernald & Wiegand

Occasional introduction, usually in standing water. Taxonomy follows Hämet-Ahti (1980).

\* Hämet-Ahti, L. 1980a. The *Juncus effusus* aggregate in eastern North America. *Ann. Bot. Fennici* 17: 183-191.

***Juncus ensifolius* Wikstr. [FNA22, HC, HC2, JPM2]**

Kongl. Vetenskaps Academiens Handlingar. 2: 274. 1823.

dagger rush, daggerleaf rush

(see also *Juncus saximontanus*)

*Juncus ensifolius* Wikstr. var. *ensifolius* [FNA22, HC]

***Juncus falcatus* E. Mey. [FNA22, HC, HC2]**

Syn. Luzul. 34. 1823.

sickle-leaved rush

**ssp. *sitchensis* (Buchenau) Hultén [HC2, JPM2]**

Alaskan sickle leaved rush

*Juncus falcatus* E. Mey. ssp. *falcatus*, misapplied

*Juncus falcatus* E. Mey. var. *falcatus* [FNA22], misapplied

*Juncus falcatus* E. Mey. var. *sitchensis* Buchenau [FNA22, HC]

*Juncus menziesii* R. Br. ex Hook.

Typical subsp. *falcatus* is native on the coast of central California and in se Australia.

***Juncus filiformis* L. [FNA22, HC, HC2]**

Sp. Pl. 1: 326. 1753.

thread rush

***Juncus gerardi* Loisel. [HC2]**

black rush, mud rush

*Juncus bulbosus* L. var. *gerardii* (Loisel.) A. Gray

*Juncus gerardi* Loisel. [FNA22, HC], orthographic variant

**ssp. *gerardi* [HC2]**

black grass, Gerard's rush, mud rush

*Juncus fucensis* H. St. John

*Juncus gerardii* Loisel. ssp. *gerardii* [JPM2], orthographic variant

*Juncus gerardii* Loisel. var. *gerardii* [KZ99], orthographic variant

*Juncus gerardii* Loisel. var. *pedicellatus* Fernald [KZ99]

The correct spelling of the epithet is the original "gerardi" and not "gerardii." See IPNI

***Juncus hemiendytus* F.J. Herm. [FNA22, HC, HC2, Peck]**

Leaflets of Western Botany. 5: 118. 1948.

**var. *hemiendytus* [FNA22, HC2]**

Leaflets of Western Botany. 5: 118.

dwarf rush, Hermann's dwarf rush

*Juncus brachystylus* (Engelm.) Piper var. *uniflorus* (Engelm.) M. Peck

*Juncus triflorus* Engelm. var. *uniflorus* Engelm.

***Juncus hesperius* (Piper) Lint [HC2]**

Preslia 74(3): 262.

bog rush, coastal rush

*Juncus effusus* L. var. *bruneus* Engelm. [JPM]

Taxonomy follows Snogerup et al. (2002). Coastal and adjacent lowlands, including Puget Sound.

\* Snogerup, S., P. F. Zika, and J. Kirschner. 2002. Taxonomic and nomenclatural notes on *Juncus*. *Preslia* 74: 247-266.

***Juncus howellii*** F.J. Herm. [FNA22, HC, HC2]

Leaflets of Western Botany. 5: 182. 1949.

Howell's rush

reported for Washington by WNHP

***Juncus inflexus*** L. [FNA22, HC2]

Sp. Pl. 1: 326. 1753.

blue rush

*Juncus glaucus* Ehrh. ex Sibth.

Recently (2017) collected in Klickitat County.

ssp. *inflexus* [HC2]

***Juncus interior*** Wiegand [FNA22, HC, HC2]

Bulletin of the Torrey Botanical Club. 27: 516. 1900.

inland rush

*Juncus interior* Wiegand var. *interior* [KZ99]

*Juncus tenuis* Willd. var. *arizonicus* (Wiegand) F.J. Herm. [KZ99]

*Juncus tenuis* Willd. var. *neomexicanus* (Wiegand) F.J. Herm. [KZ99]

Seldom collected in WA, with specimens seen from Chelan, Grant, and Ferry Cos. Easily confused with *J. tenuis*, differing in its acuminate-aristate bracteoles and erect tepals (Hermann 1975; Catling and Spicer 1987).

\* Catling, P. M. and K. W. Spicer. 1987. The perennial *Juncus* of section *Poiophylli* in the Canadian prairie provinces. *Canadian Journal of Botany* 65: 750-760.

\* Hermann, F. J. 1975. Manual of the Rushes (*Juncus* spp.) of the Rocky Mountains and Colorado Basin. USDA Forest Service, General Technical Report RM-18, Fort Collins, CO.

***Juncus kelloggii*** Engelm. [FNA22, HC, HC2]

Kellogg's dwarf rush

(see also *Juncus hemiendytus* var. *hemiendytus*, *Juncus uncialis*)

*Juncus triformis* Engelm. var. *brachystylus* Engelm.

***Juncus laccatus*** Zika [HC2]

*Preslia* 74(3): 261-263.

shiny rush

(see also *Juncus hesperius*)

*Juncus effusus* L. var. *gracilis* Hook. [HC]

Taxonomy follows Snogerup et al. (2002). Common on the outer coast, and occasional in the southern Cascades.

\* Snogerup, S., P. F. Zika, and J. Kirschner. 2002. Taxonomic and nomenclatural notes on *Juncus*. *Preslia* 74: 247-266.

***Juncus longistylis*** Torr. [FNA22, HC, HC2]

Report on the United States and Mexican Boundary Survey, ... 2(1): 223. 1859.

long-styled rush

*Juncus longistylis* Torr. var. *longistylis* [KZ99]

***Juncus mertensianus*** Bong. [FNA22, HC, HC2]

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2: 167. 1833.

Mertens' rush

*Juncus duranii* Ewan

*Juncus mertensianus* Bong. var. *duranii* (Ewan) F.J. Herm.

*Juncus mertensianus* Bong. var. *filifolius* Suksd.  
*Juncus slwookorum* S. Young

FNA22: "This species passes into *Juncus nevadensis* and has often been combined with that species (F. J. Hermann 1964). The two species can generally be separated, and we are following those treatments (F. J. Hermann 1975; A. Cronquist et al. 1972+, vol. 6)."

***Juncus nevadensis*** S. Watson [FNA22, HC, HC2]

Proceedings of the American Academy of Arts and Sciences. 14: 303. 1879.  
Nevada rush

var. ***inventus*** (L.F. Hend.) C.L. Hitchc. [HC, HC2, JPM2]  
dune rush

Recently collected on Vancouver Island and on the outer coast of Washington.

var. ***nevadensis*** [HC, HC2]

Proceedings of the American Academy of Arts and Sciences. 14: 303.  
Sierra rush

*Juncus badius* Suksd. [Abrams]

*Juncus columbianus* Coville [Peck]

*Juncus nevadensis* S. Watson var. *badius* (Suksd.) C.L. Hitchc. [HC]

*Juncus nevadensis* S. Watson var. *columbianus* (Coville) H. St. John [HC]

***Juncus nodosus*** L. [FNA22, HC, HC2]

Sp. Pl., ed. 2. 1: 466. 1762.  
knotted rush, tuberous rush

*Juncus nodosus* L. var. *meridionalis* F.J. Herm.

*Juncus nodosus* L. var. *nodosus* [KZ99]

*Juncus rostkovii* E. Mey.

***Juncus occidentalis*** (Coville) Wiegand [FNA22, HC2]

Bulletin of the Torrey Botanical Club. 27: 521. 1900.  
western rush

*Juncus tenuis* Willd. var. *congestus* Engelm. [HC]

*Juncus tenuis* Willd. var. *occidentalis* Coville

The authorship is (Coville) Wiegand, not Wiegand as in Kz99. A west-side equivalent of *J. confusus*, often misidentified as *J. tenuis*, but differing in its retuse capsules and brown-striped tepals, and found in wetter habitats (Coville 1896; Wiegand 1900).

\* Coville, F. V. 1896. *Juncus confusus*, a new rush from the Rocky Mountain region. Proceedings of the Biological Society of Washington 10: 127-130.

\* Wiegand, K. M. 1900. *Juncus tenuis* Willd, and some of its North American allies. Bulletin of the Torrey Botanical Club 27: 511-527.

***Juncus orthophyllus*** Coville [FNA22, HC, HC2]

Contributions from the U. S. National Herbarium. 4: 207. 1893.  
straight-leaved rush

*Juncus latifolius* (Engelm.) Buchenau

*Juncus longistylis* Torr. var. *latifolius* Engelm.

***Juncus oxymiris*** Engelm. [FNA22, HC, HC2]

Transactions of the Academy of Science of St. Louis 2:483.  
pointed rush

*Juncus acutiflorus* Benth.

***Juncus parryi*** Engelm. [FNA22, HC, HC2]

Transactions of the Academy of Science of St. Louis 2: 446-447.  
Parry's rush

*Juncus drummondii* E. Mey. var. *parryi* (Engelm.) M.E. Jones

*Juncus hallii* Engelm. [FNA22, HC, HC2], misapplied

Brooks and Clemants (pers. comm.) state their FNA report of *Juncus hallii* in Washington is an error and there are no vouchers

***Juncus patens* E. Mey. [FNA22, HC, HC2]**

Syn. Luzul. 28. 1823.  
spreading rush

Several collections from Clark Co.

***Juncus pelocarpus* E. Mey. [FNA22, HC2]**

Syn. Luzul. 30. 1823.  
brown-fruited rush

*Juncus abortivus* Chapm.

*Juncus pelocarpus* E. Mey. var. *crassicaudex* Engelm.

*Juncus pelocarpus* E. Mey. var. *sabulonensis* H. St. John

Recently collected in Grays Harbor and Pacific Cos.

***Juncus pylaei* Laharpe [HC2]**

common rush

***Juncus regelii* Buchenau [FNA22, HC, HC2]**

Botanische Jahrbucher fur Systematik, Pflanzengeschichte und Pflanzengeographie. 12: 414. 1890.  
Regel's rush

*Juncus jonesii* Rydb.

***Juncus saximontanus* A. Nelson [HC2, JPM2]**

Bull. Torrey Bot. Club 29(6): 401.  
Rocky Mountain rush

*Juncus ensifolius* Wikstr. var. *brunnescens* (Rydb.) Cronquist [IMF6]

*Juncus ensifolius* Wikstr. var. *montanus* (Engelm.) C.L. Hitchc. [FNA22, HC]

*Juncus tracyi* Rydb. [HC, KZ99]

\* **FMR** = Biek, D. 2000. Flora of Mt. Rainier National Park. Oregon State University Press, Corvallis.

***Juncus supiniformis* Engelm. [FNA22, HC, HC2]**

Transactions of the Academy of Science of St. Louis 2: 461-462.  
hair-leaved rush, spreading rush

*Juncus oregonus* S. Watson [Abrams]

*Juncus paucicapitatus* Buchenau

FNA22: "the northern California and southern Oregon populations (*Juncus supiniformis* in the strict sense) form long filiform leaves before flowering, are shorter, and have smaller flowers than the northern populations. Except for the filiform leaves, the variation in sizes appears to follow a rough latitudinal cline with the largest plants and largest flowers in Alaska. Flowers of *Juncus supiniformis* often form bulbils."

***Juncus tenuis* Willd. [FNA22, HC, HC2]**

Sp. Pl. 2(1): 214. 1799.  
path rush, poverty rush, slender rush  
(see also *Juncus dudleyi*, *Juncus occidentalis*)

*Juncus bicornis* Michx.

*Juncus macer* Gray

*Juncus tenuis* Willd. var. *bicornis* (Michx.) E. Mey.

*Juncus tenuis* Willd. var. *multicornus* E. Mey.

*Juncus tenuis* Willd. var. *tenuis* [HC]

*Juncus tenuis* Willd. var. *williamsii* Fernald

FNA22: "*Juncus tenuis* occurs throughout North America. It is particularly abundant in northeastern United States and eastern Canada, although infrequent in the south and west. Through the use of isozyme electrophoresis, hybridization can be demonstrated between various members of the *Juncus tenuis* complex, including *Juncus tenuis*, *J. anthelatus*, *J. interior*, *J. secundus*, and *J. dichotomus* (R. E. Brooks, unpubl.). *Juncus xxoronensis* is thought to be a hybrid between *J. tenuis* and *J. vaseyi* in the northeast."

***Juncus tiehmii*** Ertter [FNA22, HC2]

Memoirs of the New York Botanical Garden. 39: 60, figs. 13f?g, 14. 1986.  
Tiehm's dwarf rush

***Juncus torreyi*** Coville [FNA22, HC, HC2]

Bulletin of the Torrey Botanical Club. 22:303. 1895.  
Torrey's rush

*Juncus megacephalus* (Torr.) Alph. Wood  
*Juncus nodosus* L. var. *megacephalus* Torr.

***Juncus trilocularis*** Zika [HC2]

Rhodora 114(959):309-329.  
foothill rush

*Juncus brachyphyllus* Wiegand [FNA22, HC], misapplied

\* Rhodora 114: 309-329. 2012.

***Juncus uncialis*** Greene [FNA22, HC, HC2]

Pittonia. 2: 105. 1890.  
inch-high rush

Not recorded N of OR in FNA; Ertter (1986) in her monograph of the group notes collections N as far as The Dalles, Wasco Co., OR, but none from WA. Several recent collections from central and eastern WA.

***Juncus vaseyi*** Engelm. [FNA22, HC, HC2]

Trans. Acad. Sci. St. Louis 2: 448.  
Vasey's rush

Recently collected (2104) by Peter Zika in northeastern WA.

***Luzula*** [FNA22, HC, HC2]

Fl. France, ed. 3. 1: 198; 3: 158. 1805.  
[name conserved]  
woodrush

***Luzula arcuata*** (Wahlenb.) Sw. [FNA22, HC, HC2]

Summa Veg. Scand. 13. 1814.  
curved woodrush

ssp. ***unalaschkensis*** (Buchenau) Hultén [FNA22, HC2]

Arkiv for Botanik utgivet av K. Svenska Vetenskapsakademien. n.s. 7:32.  
curved woodrush

*Luzula arcuata* (Wahlenb.) Sw. ssp. *unalaschkensis* (Buchenau) Hultén [FNA22], orthographic variant

*Luzula arcuata* (Wahlenb.) Sw. var. *kamtschadalarum* Sam.

*Luzula arcuata* (Wahlenb.) Sw. var. *unalaschkensis* Buchenau [VPPNW1]

*Luzula beringensis* Tolmachev

*Luzula kamtschadalarum* (Sam.) Gorodkov

*Luzula unalaschkensis* (Buchenau) Satake, orthographic variant

*Luzula unalaschkensis* (Buchenau) Satake ssp. *kamtschdalarum* (Sam.) Tolmachev

FNA22: "In *Luzula arcuata* subsp. *unalaschkensis* the sheath throats are rounded and densely pilose; basal leaves are flat with pubescent margins."

***Luzula campestris*** (L.) DC. [FNA22, HC, HC2]

Fl. France, ed. 3. 3: 161. 1805.  
field woodrush

(see also *Luzula cascadiensis*, *Luzula comosa*, *Luzula macrantha*, *Luzula multiflora*, *Luzula subsessilis*)

*Juncus campestris* L.

FNA22: "*Luzula campestris* may occur rarely elsewhere in Canada and the United States in lawns and cleared places (collected in Massachusetts in the 1920s). A common European species, the name is used in our floras for almost every species of the "multiflora--campestris" complex."

ssp. ***campestris*** [HC2]

In J. Lamarck and A. P. de Candolle, Fl. France, ed. 3. 3: 161.  
field woodrush

\* Kirschner, J., Ed. 2002. Juncaceae 1: Rostkovia to Luzula, Species Plantarum: Flora of the World Part 6.  
Australian Biological Resources Study, Canberra, Australia. 237 p.

***Luzula cascadiensis*** Zika [HC2]

Cascades woodrush

***Luzula comosa*** E. Mey. [FNA22, HC2]

Syn. Luzul. 21. 1823.

*Luzula congesta* (Thuill.) Lej., misapplied

var. ***comosa*** [HC2, JPM2]

pale woodrush

*Luzula campestris* (L.) DC. var. *congesta* (Thuill.) E. Mey. [HC], misapplied

*Luzula multiflora* (Ehrh.) Lej. ssp. *congesta* Hyl., misapplied

*Luzula multiflora* (Ehrh.) Lej. var. *comosa* (E. Mey.) H. St. John [Peck]

*Luzula multiflora* (Ehrh.) Lej. var. *congesta* W.D.J. Koch, misapplied

var. ***laxa*** Buchenau [HC2, JPM2]

Pacific woodrush

***Luzula forsteri*** (Sm.) DC. [HC2]

southern woodrush

ssp. ***forsteri*** [HC2]

southern woodrush

\* Kirschner, J., Ed. 2002. Juncaceae 1: Rostkovia to Luzula, Species Plantarum: Flora of the World Part 6.  
Australian Biological Resources Study, Canberra, Australia. 237 p.

***Luzula hitchcockii*** Hämet-Ahti [FNA22, HC, HC2]

Annales Botanici Fennici. 8: 368. 1971.

Hitchcock's woodrush, smooth woodrush

*Luzula glabrata* (Hoppe ex Rostk.) Desv., misapplied

*Luzula glabrata* (Hoppe ex Rostk.) Desv. var. *hitchcockii* (Hämet-Ahti) Dorn [KZ99]

FNA22: "Although *Luzula hitchcockii* has been reported from California, no convincing specimens have been seen by this author. The species resembles the European *L. glabrata* (Hoppe) Desvaux very closely; however, it is readily distinguished from all other North American species. Plants may be heavily infested with *Ustilago vujickii* Oudemans. and Beijerinck. complete last names??, which considerably alters their usual appearance."

***Luzula macrantha*** Zika & B.L. Wilson [HC2]

large-anthered woodrush, prairie woodrush

***Luzula multiflora*** (Ehrh.) Lej. [FNA22, HC2]

Flore des Environs de Spa. 1: 169. 1811.

common woodrush

*Luzula campestris* (L.) DC. var. *frigida* Buchenau [HC]

*Luzula campestris* (L.) DC. var. *multiflora* (Ehrh.) ?elak. [HC]

*Luzula multiflora* (Ehrh.) Lej. ssp. *frigida* (Buchenau) V.I. Krecztowicz [FNA22]

*Luzula multiflora* (Ehrh.) Lej. ssp. *frigida* (Buchenau) V.I. Krecztowicz [FNA22], misapplied

*Luzula multiflora* (Ehrh.) Lej. ssp. *multiflora* [FNA22]

*Luzula multiflora* (Ehrh.) Lej. var. *multiflora* [KZ99]

The most common meadow species in WA, montane or lowlands.

***Luzula nivea*** (L.) DC. [HC2]

Fl. Franc. (DC. & Lamarck), ed. 3. 3: 158.

snowy woodrush

*Juncus niveus* L.

Rarely spreading from garden plantings in King Co. Native to the Alps, often on calcareous soils, and here

found reseeding into cracks in concrete sidewalks. Note that authorship (Nathh.) DC is incorrect. From Werner Greuter: "I assume that the (erroneous!) date 1756 refers to publication of the original Linnean Thesis (defended by Nathhorst), which following Rothmaler's "rediscovery" of these theses has often been accepted as the place of valid publication for the included new names. See Art. 33 Ex. 1 for the rationale for rejecting the 1756 date. "

\* Kirschner, J., Ed. 2002. Juncaceae 1: Rostkovia to Luzula, Species Plantarum: Flora of the World Part 6. Australian Biological Resources Study, Canberra, Australia. 237 p.

\* Tutin, T. G., V. H. Heywood, N. A. Burges, D. M. Moore, D. H. Valentine, S. M. Walters and D.A. Webb, eds. 1980. Flora Europaea, Vol. 5, Alismataceae to Orchidaceae (Monocotyledones). Cambridge Univ. Press, Cambridge, UK. 452 p.

***Luzula parviflora* (Ehrh.) Desv. [FNA22, HC, HC2]**

J. Bot. (Desvaux). 1: 144. 1808.

small flowered woodrush

(see also *Luzula piperi*)

*Juncus parviflorus* Ehrh.

*Luzula divaricata* S. Watson [FNA22, HC, HC2], misapplied

*Luzula fastigiata* E. Mey. [KZ99]

*Luzula parviflora* (Ehrh.) Desv. ssp. *fastigiata* (E. Mey.) Hämet-Ahti [KZ94]

*Luzula parviflora* (Ehrh.) Desv. ssp. *melanocarpa* (Michx.) Hämet-Ahti

*Luzula parviflora* (Ehrh.) Desv. var. *melanocarpa* (Michx.) Buchenau [Peck]

FNA22: "The base of the culm of *Luzula parviflora* is often reddish and often distinctly so at the proximal internodes."

***Luzula piperi* (Coville) M.E. Jones [FNA22, HC, HC2]**

Bull. Biol. Ser. Bull. State Univ. Montana. 15: 22. 1910.

Piper's woodrush

*Juncoides piperi* Coville

*Luzula wahlenbergii* Rupr. [FNA22], misapplied

*Luzula wahlenbergii* Rupr. ssp. *piperi* (Coville) Hultén

\* Hämet-Ahti, L. 1965. *Luzula piperi* (Cov.) M. E. Jones. An overlooked wood rush in western North America and eastern Asia. *Aquilo*, Ser. Bot. 3: 11?21.

***Luzula spicata* (L.) DC. [FNA22, HC, HC2]**

Fl. France, ed. 3. 1: 161. 1805.

spiked woodrush

*Juncus spicatus* L.

ssp. *spicata* [HC2]

In J. Lamarck and A. P. de Candolle, Fl. France, ed. 3. 1: 161.

spiked woodrush

FNA22: "The culms of *Luzula spicata* are thick and reddish with bases extending 1--8 cm into the soil; sheath throats are densely hairy; basal leaves are erect, linear, and channeled; inflorescence bracts are conspicuous and often exceed glomerules; and bracteoles have narrow and extended apices."

\* Kirschner, J., Ed. 2002. Juncaceae 1: Rostkovia to Luzula, Species Plantarum: Flora of the World Part 6. Australian Biological Resources Study, Canberra, Australia. 237 p.

***Luzula subsessilis* (S. Watson) Buchenau [HC2, IFBC]**

Oesterreichische Botanische Zeitschrift 48: 290.

short-stalked wood-rush

Often confused with *L. comosa*.

***Luzula sylvatica* (Huds.) Gaudin [HC2]**

great woodrush

A rare and local escape from ornamental plantings. If the subspecies are recognized, ours is the subsp. *sylvatica*.

\* Kirschner, J., Ed. 2002. Juncaceae 1: Rostkovia to Luzula, Species Plantarum: Flora of the World Part 6. Australian

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## Juncaginaceae [FNA22, HC, HC2] Arrow-grass Family

### Synonyms:

Lilaeaceae [Abrams]

References: (none)

### *Triglochin* [FNA22, HC, HC2]

Sp. Pl. 1: 338. 1753; Gen. Pl. ed. 5; 157, 1754.

arrow-grass

*Lilaea* [FNA22, HC]

#### *Triglochin concinna* J.B. Davy [HC2]

graceful arrow-grass

*Triglochin concinnum* Burt Davy [HC]

var. *concinna* [HC2, ILBC6, JPM]

*Triglochin concinnum* Burt Davy var. *concinnum* [HC]

#### *Triglochin maritima* L. [FNA22, HC2]

Sp. Pl. 1: 339. 1753 (as *maritimum*).

seaside arrow-grass

*Triglochin elata* Nutt.

*Triglochin maritimum* L. [HC]

The plants are variable and the taxonomy is disputed; small plants with bilobed ligules are called *T. concinna*, but large plants can have bilobed or entire ligules, and we follow FNA in combining the two. H&C use the spellings *concinnum* and *debile*; here we follow FNA. FNA22: "This taxon has been separated into *Triglochin concinna* and *T. maritima* based upon the lobing of the ligule and the smaller size of the plants of the former (e.g., J. L. Reveal 1977; R. F. Thorne 1993). On a local basis such a separation seems warranted. Examination of the *T. maritima* complex throughout the Americas, however, reveals continuous variation from small, widely spaced plants with 2-lobed ligules to large, tufted plants with unlobed ligules, including plants with all combinations of those characters. *Triglochin maritima* is important in livestock management because it is quite toxic: it is a cyanide producer."

\* Löve, Å. and D. Löve. 1958. Biosystematics of *Triglochin maritimum* Agg. *Naturaliste Canad.* 85: 156?165.

#### *Triglochin palustris* L. [FNA22, HC2]

Sp. Pl. 1: 338. 1753 (as *palustre*).

marsh arrow-grass

*Triglochin palustre* L. [HC]

The one specimen at WTU previously assigned to this name was misidentified. That specimen is *T. striata*. Spelled *T. palustre* by H&C, here we follow FNA.

#### *Triglochin scilloides* (Poir.) von Mering & Kadereit [HC2, JPM2]

flowering quillwort

*Lilaea scilloides* (Poir.) Hauman [FNA22, HC]

*Lilaea subulata* Humb. & Bonpl. [Peck, Abrams]

Jepson, 2nd: "Previously in *Lilaea*, yet highly nested in *Triglochin*, a paraphyletic genus made monophyletic by inclusion of this sp. (von Mering & Kadereit 2010)."

\* Les, D. H. & R. R. Haynes. 1995. Systematics of subclass Alismatidae: A synthesis of approaches. In: P.J. Rudall et al., eds., 1995. *Monocotyledons: Systematics and Evolution*. 2 vols. Kew. Vol. 2, pp. 353-377.

#### *Triglochin striata* Ruiz & Pav. [FNA22, HC2]

Flora Peruviana. 3: 72. 1802 (as striatum).

\* Les, D. H. & R. R. Haynes. 1995. Systematics of subclass Alismatidae: A synthesis of approaches. In: P.J. Rudall et al., eds., 1995. Monocotyledons: Systematics and Evolution. 2 vols. Kew. Vol. 2, pp. 353-377.

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## Lemnaceae (see Araceae)

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## Lilaeaceae (see Juncaginaceae)

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## Liliaceae [FNA26, HC, HC2] Lily Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>). Members of Liliaceae s. l. have been placed in the Alstroemeriaceae, Amaryllidaceae, Asparagaceae, Melanthiaceae, Tofieldiaceae, and Xanthorrhoeaceae.

**References:** (none)

### *Calochortus* [FNA26, HC, HC2]

Fl. Amer. Sept. 1: 240. 1814.  
cats-ear, mariposa lily, sego lily, mariposa, star-tulip

### *Calochortus apiculatus* Baker [FNA26, HC, HC2]

J. Linn. Soc., Bot. 14: 305. 1874.  
Baker's mariposa, three-spot mariposa-lily

### *Calochortus elegans* Pursh [FNA26, HC, HC2]

Fl. Amer. Sept. 1: 240. 1814.  
elegant cats-ear, northwestern mariposa, elegant sego lily

#### var. *elegans* [FNA26, HC2]

Fl. Amer. Sept. 1: 240.  
elegant cat's ear, northwest mariposa lily

### *Calochortus eurycarpus* S. Watson [FNA26, HC, HC2]

Botany (Fortieth Parallel). 348. 1871.  
big-pod mariposa lily, wide-fruited mariposa

*Calochortus euumbellatus* A. Nels.  
*Calochortus nitidus* Douglas var. *eurycarpus* L.F. Hend.  
*Calochortus parviflorus* Baker

### *Calochortus longebarbatus* S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 17: 381. 1882.  
long-bearded sego lily

*Calochortus longebarbatus* S. Watson var. *longebarbatus* [FNA26]  
*Calochortus longebarbatus* S. Watson var. *peckii* Ownbey [FNA26]

FNA26: "Recent collections of *Calochortus longebarbatus* from Oregon exhibit intergradation in the characters that heretofore have been thought to distinguish the following two varieties (K. L. Chambers, pers. comm.), and their continued recognition may prove unwarranted."

### *Calochortus lyallii* Baker [FNA26, HC, HC2]

J. Linn. Soc., Bot. 14: 305. 1874.

Lyll's mariposa-lily

*Calochortus ciliatus* B.L. Rob. & Seaton

***Calochortus macrocarpus*** Douglas [FNA26, HC, HC2]

Trans. Hort. Soc. London. 7: 276, plate 8. 1828.  
sagebrush mariposa, green-banded star-tulip

*Mariposa macrocarpa* (Douglas) Hoover

var. ***macrocarpus*** [FNA26, HC2]

Trans. Hort. Soc. London. 7: 276, plate 8.  
sagebrush mariposa

*Calochortus douglasianus* Schult. f.

var. ***maculosus*** (A. Nelson & J.F. Macbr.) A. Nelson & J.F. Macbr. [FNA26, HC2]

Contr. Gray Herb. 56: 14. 1918.  
sagebrush mariposa

*Calochortus maculosus* A. Nelson & J.F. Macbr.

***Calochortus nitidus*** Douglas [FNA26, HC, HC2]

Trans. Hort. Soc. London. 7: 277, plate 9A. 1828.  
broad-fruited mariposa lily

*Calochortus pavonaceus* Fern.

***Calochortus subalpinus*** Piper [FNA26, HC, HC2]

Contr. U.S. Natl. Herb. 11: 195. 1906.  
mountain mariposa, subalpine mariposa-lily

*Calochortus lobbii* (Baker) Purdy

***Calochortus tolmiei*** Hook. & Arn. [FNA26, HC, HC2]

Bot. Beechey Voy. 398. 1840.  
cat's-ears, Tolmie's mariposa

*Calochortus caeruleus* (Kellogg) S. Watson var. *maweanus* (Leichtlin) Jeps., orthographic variant

*Calochortus elegans* Pursh var. *lobbii* Baker

*Calochortus purdyi* Eastw.

The specimens from Seattle from the late 1800s are considered as cultivated in origin.

***Clintonia*** [FNA26, HC, HC2]

Amer. Monthly Mag. & Crit. Rev. 2: 266. 1818.  
beadlily, bluebead, clintonia

***Clintonia uniflora*** (Menzies ex Schult.) Kunth [FNA26, HC, HC2]

Enum. Pl. 5: 159. 1850.  
bride's-bonnet, queen's cup

*Smilacina borealis* (Aiton) Ker Gawl. var. *uniflora* Menzies ex Schult.

*Smilacina uniflora* (Menzies ex Schult.) Hook.

***Erythronium*** [FNA26, HC, HC2]

Sp. Pl. 1: 305. 1753; Gen. Pl. ed. 5, 145. 1754.  
adder's-tongue, dogtooth-violet, fawn-lily, glacier-lily, trout-lily

***Erythronium grandiflorum*** Pursh [FNA26, HC, HC2]

Fl. Amer. Sept. 1: 231. 1814.  
yellow fawn-lily, glacier-lily  
(see also *Erythronium idahoense*)

*Erythronium parviflorum* (S. Watson) Goodd.

var. ***chrysandrum*** (Applegate) Scoggan [HC2]

*Erythronium grandiflorum* Pursh ssp. *chrysandrum* Applegate

var. **grandiflorum** [HC, HC2]

yellow fawn lily

*Erythronium giganteum* Lindl.

*Erythronium grandiflorum* Pursh ssp. *grandiflorum* [FNA26]

var. **pallidum** H. St. John [HC2]

***Erythronium idahoense*** H. St. John & G.N. Jones [HC2]

pale fawn lily, yellow fawn lily

*Erythronium grandiflorum* Pursh ssp. *candidum* Piper [FNA26]

*Erythronium grandiflorum* Pursh var. *candidum* (Piper) Abrams [HC]

*Erythronium grandiflorum* Pursh var. *idahoense* (H. St. John & G.N. Jones) R.J. Davis

Flowers: tepals white to creamy white, with yellow zone at base; anthers cream to yellow.

***Erythronium montanum*** S. Watson [FNA26, HC, HC2]

Proc. Amer. Acad. Arts. 26: 130. 1891.

white avalanche lily

FNA26: "his species occurs in the Coast Ranges of southern British Columbia, and disjunctly to southern Vancouver Island, the Olympic Peninsula, and Cascade Mountains from Mount Rainier National Park in Washington to central Oregon."

***Erythronium oregonum*** Applegate [FNA26, HC, HC2]

Madroño. 3: 99. 1935.

giant fawn lily, wild easter lily, deer's tongue

ssp. **oregonum** [HC2]

giant fawn lily, wild easter lily, deer's tongue

FNA26: "Forms from the southern part of the range with cream-white tepals and pale anthers have been described as subsp. *leucandrum*. This species is closely related to *E. revolutum* and occasionally hybridizes with it where their ranges meet. In addition, *E. citrinum* and *E. hendersonii* are reported to hybridize with *E. oregonum* in the southern part of its range."

***Erythronium quinaultense*** G.A. Allen [FNA26, HC2]

Syst. Bot. 26: 269, fig. 3. 2001.

Olympic fawn lily, quinault trout lily

Recently described from Grays Harbor and Jefferson Counties (Allen 2001). FNA26: "*Erythronium quinaultense* is a tetraploid species apparently derived from hybridization between *E. montanum* and *E. revolutum*. It is known only from the southwestern Olympic Peninsula."

\* Allen, G. A. 2001. Hybrid speciation in *Erythronium* (Liliaceae): a new allotetraploid species from Washington State. *Systematic Botany* 26: 263-272.

***Erythronium revolutum*** Sm. [FNA26, HC, HC2]

Cycl. 13: *Erythronium* no. 3. 1809.

coast fawn lily, mahogany fawn lily, pink fawn lily

*Erythronium johnsonii* Bol.

***Fritillaria*** [FNA26, HC, HC2]

Sp. Pl. 1: 303. 1753; Gen. Pl. ed. 5, 144. 1754.

fritillary, riceroot

***Fritillaria affinis*** (Schult. & Schult. f.) Sealy [FNA26, HC2]

Hooker's Icon. Pl. 39: 239. 1980.

checker lily, chocolate lily

*Fritillaria camschatcensis* (L.) Ker Gawl. var. *floribunda* (Benth.) B. Boivin

*Fritillaria eximia* Eastw.

*Fritillaria lanceolata* Pursh [HC]

*Fritillaria lanceolata* Pursh var. *gracilis* S. Watson

*Fritillaria lanceolata* Pursh var. *tristulis* A.L. Grant

*Fritillaria multiflora* Kellogg

*Fritillaria mutica* Lindl.  
*Fritillaria mutica* Lindl. var. *gracilis* (S. Watson) Jeps.  
*Fritillaria phaeanthera* Purdy  
*Lilium affine* Schult. & Schult. f.

FNA26: "Fritillaria affinis has one of the broadest geographical distributions of all the North American species of the genus. It is also highly variable, which has resulted in the naming of several supposedly distinct species as well as some infraspecific taxa, all but one of which are in fact only poorly differentiated, and all of which are treated here as synonyms. Among the latter, *F. lanceolata* var. *tristulis* may actually merit formal recognition as a variety, but the new combination under *F. affinis* remains to be made. This entity is restricted to coastal grassland in Marin County, California, and has a perianth that is scarcely if at all mottled, and more than 50 small bulb scales. *Fritillaria affinis* has long been known by the name *F. lanceolata*, which is illegitimate because when Pursh described it, he cited *Lilium camschatcense* (= *F. camschatcensis*) as a synonym but did not adopt that epithet. Actually, his synonymic reference was based on a misidentification, even though he stated that an illustration of *L. camschatcense* from a specimen in Pallas' herbarium was "an excellent figure" of his *F. lanceolata*."

***Fritillaria camschatcensis* (L.) Ker Gawl. [FNA26, HC, HC2]**

Bot. Mag. 30: under plate 1216. 1809.  
black lily, Indian rice

*Lilium camschatcense* L.

\* Matura, H. and H. Toyokuni. 1963. A karyological and taxonomical study of *Fritillaria camschatcensis*. Sci. Rep. Tohoku Imp. Univ., Ser. 4, Biol. 29: 239?245.

***Fritillaria pudica* (Pursh) Spreng. [FNA26, HC, HC2]**

Syst. Veg. 2: 64. 1825.  
yellow bells, yellow missionbells

*Lilium pudicum* Pursh  
*Ochrocodon pudicus* (Pursh) Rydb.

FNA26: "*Fritillaria pudica* is highly variable and has one of the widest distributions of all the North American species of the genus."

***Gagea***

*Gagea villosa* (M. Bieb.) Duby  
Bot. Gall., pars prima 467.  
hairy star-of-bethlehem

***Lilium* [FNA26, HC, HC2]**

Sp. Pl. 1: 302. 1753; Gen. Pl. ed. 5, 143. 1754.  
lily

***Lilium columbianum* Leichtlin [FNA26, HC, HC2]**

J. Soc. Centr. Hort. France, sér. 2. 5: 98. 1871.  
Columbian lily

*Lilium canadense* L. var. *parviflorum* Hook.  
*Lilium lucidum* Kellogg  
*Lilium parviflorum* (Hook.) Holz.

FNA26: "The author citations often seen for this species derive from Baker (1874), who published the name as *Lilium columbianum* "Hanson in hort., Leichtlin"; this authority is given by various later writers as Hanson, or Baker, or Hanson ex Baker. However, Ducharte's (1871) recapitulation of a letter from M. Leichtlin is apparently the first confirmed and valid publication of *L. columbianum*, and hence that citation is used here. This widespread lily is rather variable. In California plants the stamens are considerably less exerted than those of plants found farther north. *Lilium columbianum* may intergrade with *L. kelloggii* along Highway 199 at the border between California and Oregon; these plants are slightly fragrant, the stamens moderately exerted, and the bulb scales unsegmented. *Lilium columbianum* hybridizes with *L. pardalinum* subsp. *wigginsii* and *vollmeri*, and extensively with *L. occidentale* in Oregon."

***Lloydia* [FNA26, HC, HC2]**

Fl. Germ. Excurs. 102. 1830.  
[name conserved]  
lloydia

***Lloydia serotina*** (L.) Salisb. ex Rchb. [FNA26, HC, HC2]

Fl. Germ. Excurs. 102. 1830.  
alpine lily

*Bulbocodium serotinum* L.

var. ***serotina*** [FNA26, HC2]

Fl. Germ. Excurs. 102.  
alpine lily

*Lloydia serotina* (L.) Salisb. ex Rchb. ssp. *serotina* [KZ99]

***Prosartes*** [FNA26, HC2]

Proc. Linn. Soc. London. 1: 48. 1839.  
fairy-bell

***Prosartes hookeri*** Torr. [FNA26, HC2]

Pacif. Railr. Rep. 4(5): 144. 1857.  
Hooker's fairy bells, fairy-bells

*Disporum hookeri* (Torr.) G. Nicholson [HC]

*Disporum hookeri* (Torr.) G. Nicholson var. *oreganum* (S. Watson) Q. Jones [HC]

*Disporum hookeri* (Torr.) G. Nicholson var. *trachyandrum* (Torr.) Q. Jones

*Disporum oregonum* (S. Watson) W.T. Mill.

*Disporum parvifolium* (S. Watson) Britton

*Disporum trachyandrum* (Torr.) Britton

*Prosartes hookeri* Torr. var. *oregana* (S. Watson) Kartesz [KZ99]

*Prosartes oregana* S. Watson

FNA26: "The three geographical races recognized as varieties by Q. Jones (1951), i.e., var. *hookeri* (coastal California northwards), var. *oreganum* (northern California north and northwestward), and var. *trachyandrum* (Sierra Nevada northwest to Oregon), are highly variable and intergrade with respect to their purportedly diagnostic differences in pubescence on the anthers, ovaries, and styles, and in the degree of stamen exertion. This is especially true in their overlapping ranges in northern California and southern Oregon. Whereas the extremes may be distinctive, overall the varieties so intergrade that they are not here recognized. From this same area, where the Coastal, Sierra, and Cascade ranges meet, the purported, sterile hybrid *Prosartes parvifolia* was first reported. The few older collections attributed to *P. parvifolia* and recent dwarf ones of *P. hookeri* from this area are similar, especially those from serpentine substrata, and the known variation in *P. hookeri* unquestionably encompasses the morphology described for *P. parvifolia*. The recently discovered population of *Prosartes hookeri* in the Porcupine Mountains of upper Michigan (E. G. Voss 1972?1985, vol. 1) is a noteworthy disjunction for this otherwise western species."

***Prosartes smithii*** (Hook.) Utech, Shinwari & Kawano [FNA26, HC2]

Taxon. 43: 364. 1994.  
Smith's fairy bells

*Disporum smithii* (Hook.) Piper [HC]

*Prosartes menziesii* D. Don

*Uvularia smithii* Hook.

***Prosartes trachycarpa*** S. Watson [FNA26, HC2]

Botany (Fortieth Parallel). 344. 1871.  
wartberryfairy bells

*Disporum trachycarpum* (S. Watson) Benth. & Hook. f. [HC]

*Disporum trachycarpum* (S. Watson) Benth. & Hook. f. var. *subglabrum* E.H. Kelso

***Streptopus*** [FNA26, HC, HC2]

Fl. Bor.-Amer. 1: 200. 1803.  
twisted-stalk

***Streptopus amplexifolius* (L.) DC. [FNA26, HC, HC2]**

Fl. Franç. ed. 3. 3: 174. 1805.

cucumber root, clasping twisted stalk, clasp-leaf twisted-stalk, clasping twisted-stalk

*Streptopus amplexifolius* (L.) DC. ssp. *americanus* (Schult. & Schult. f.) Á. Löve & D. Löve

*Streptopus amplexifolius* (L.) DC. var. *americanus* Schult. & Schult. f. [HC]

*Streptopus amplexifolius* (L.) DC. var. *amplexifolius* [KZ99]

*Streptopus amplexifolius* (L.) DC. var. *chalazatus* Fassett [HC]

*Streptopus amplexifolius* (L.) DC. var. *denticulatus* Fassett

*Streptopus amplexifolius* (L.) DC. var. *grandiflorus* Fassett

*Streptopus fassettii* Á. Löve & D. Löve

*Tortipes amplexifolius* (L.) Small

*Uvularia amplexifolia* L.

FNA26: "Several poorly defined races described by N. C. Fassett (1935) as varieties based chiefly on minute difference in leaf-margin serration are not here recognized."

***Streptopus lanceolatus* (Aiton) Reveal [FNA26, HC2]**

Phytologia. 74: 187. 1993.

rosy twisted stalk

*Streptopus curvipes* Vail

*Streptopus lanceolatus* (Aiton) Reveal var. *curvipes* (Vail) Reveal [KZ99]

*Streptopus roseus* Michx. [HC]

*Streptopus roseus* Michx. ssp. *curvipes* (Vail) Hultén

*Streptopus roseus* Michx. var. *curvipes* (Vail) Fassett [HC]

*Uvularia lanceolata* Aiton

FNA26: "*Streptopus lanceolatus* has replaced the long-used name *S. roseus*, based on the recent lectotypification (J. L. Reveal 1993d) of Aiton's *Uvularia lanceolata*. This widespread North American species has been divided into four intergrading varieties or races (N. C. Fassett 1935) based on variation in rhizome internode lengths and density of leaf-margin ciliation. These include var. *roseus* in the southern Appalachians, var. *longipes* in the western Great Lakes region, var. *lanceolatus* (= var. *perspectus* Fassett) in the northeast, and var. *curvipes* in the west."

***Streptopus streptopoides* (Ledeb.) Frye & Rigg [FNA26, HC, HC2]**

N.W. Fl. 109. 1912.

*Kruhsea*, *kruhsea*

*Kruhsea streptopoides* (Ledeb.) Kearney

*Streptopus streptopoides* (Ledeb.) Frye & Rigg ssp. *brevipes* (Baker) Calder & Roy L. Taylor

*Streptopus streptopoides* (Ledeb.) Frye & Rigg var. *brevipes* (Baker) Fassett [HC]

FNA26: "The North American plants, usually referred to var. *brevipes* (N. C. Fassett 1935), differ from the typical Asiatic ones in lacking leaf-margin ciliation (F. H. Utech and S. Kawano 1975, 1976b; H. Takahashi 1976)."

***Tulipa* [FNA26]**

Sp. Pl. 1: 305. 1753; Gen. Pl. ed. 5, 145. 1754.

*Tulipa gesneriana* L.

Sp. Pl. 1: 306.

common garden tulip

collected several times on fallow ground, but not naturalized; not in H&C

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## Limnocharitaceae (see Alismataceae)

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## Melanthiaceae [HC2] False-Hellebore Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

### *Anticlea* [HC2]

death camas

#### *Anticlea elegans* (Pursh) Rydb. [HC2]

glaucous death camas

*Anticlea coloradensis* (Rydb.) Rydb.

*Zigadenus alpinus* Blank.

*Zigadenus elegans* Pursh ssp. *elegans* [KZ99]

FNA26: "Zigadenus elegans has been treated previously as comprising two varieties, or two subspecies (W. B. Zomlefer 1997b). The western var. or subsp. *elegans* tends to be a smaller plant with a raceme or a 1?2-branched panicle and glabrous, sometimes glaucous leaves and stems; while the eastern var. or subsp. *glaucus* tends to be a larger plant with a paniculate inflorescence and glaucous leaves and stems. Because there is considerable evidence of intergradation between the two entities toward the middle of the range, including overlapping flowering times, they have not been formally distinguished here"

#### *Anticlea occidentalis* (A. Gray) Zomlefer & Judd [HC2, OFP]

bronze bells, mission bells, western featherbells

*Stenanthella occidentalis* (A. Gray) Rydb.

*Stenanthium occidentale* A. Gray [FNA26, HC]

*Stenanthium rhombipetalum* Suksd.

FNA26: "Stenanthium occidentale is similar to a circum-northern Pacific and Sakhalin Island endemic, *S. sachalinense* F. Schmidt, which may be conspecific (S. M. Kupchan et al. 1961; F. H. Utech 1987)."

### *Toxicoscordion* [HC2]

death-camas, zigadenus, zygadene

#### *Toxicoscordion paniculatum* (Nutt.) Rydb. [HC2, JPM2]

panicled death camas, sand corn

*Helonias paniculatus* Nutt.

*Zigadenus paniculatus* (Nutt.) S. Watson [FNA26, HC]

#### *Toxicoscordion venenosum* (S. Watson) Rydb. [HC2]

meadow death-camas, deadly zygadene

*Zigadenus venenosus* S. Watson [FNA26, HC]

#### var. *gramineum* (Rydb.) Brasher [HC2]

Novon 19(3): 295.

common death camas, grassy death camas

*Toxicoscordion gramineum* (Rydb.) Rydb.

*Zigadenus gramineus* Rydb.

*Zigadenus intermedius* Rydb.

*Zigadenus venenosus* S. Watson var. *gramineus* (Rydb.) Walsh ex M. Peck [FNA26, HC]

#### var. *venenosum* [HC2, JPM2]

coastal death camas

*Toxicoscordion salinum* (A. Nelson) R.R. Gates

*Zigadenus diegoensis* Davidson

*Zigadenus salinus* A. Nelson

*Zigadenus venenosus* S. Watson var. *ambiguus* M.E. Jones

*Zigadenus venenosus* S. Watson var. *venenosus* [FNA26, HC]

FNA26: "The inflorescences of most plants in each population of var. *venenosus* are racemose, but those of a few individuals are paniculate, with a single short basal branch."

**Trillium** [FNA26, HC, HC2]

Sp. Pl. 1: 339. 1753; Gen. Pl. ed. 5, 158. 1754.  
trillium, wake-robin

**Trillium albidum** J.D. Freeman [FNA26, HC2]

Brittonia. 27: 48, fig. 11. 1975.  
giant trillium, sessile trillium

*Trillium chloropetalum* (Torr.) Howell [FNA26, HC], misapplied  
*Trillium chloropetalum* (Torr.) Howell var. *chloropetalum* [FNA26], misapplied

**Trillium albidum** J.D. Freeman [FNA26, HC2], misapplied

Brittonia. 27: 48, fig. 11. 1975.  
giant trillium, sessile trillium

*Trillium chloropetalum* (Torr.) Howell [FNA26, HC], misapplied  
*Trillium chloropetalum* (Torr.) Howell var. *chloropetalum* [FNA26], misapplied

ssp. **parviflorum** (V.G. Soukup) K.L. Chambers & S.C. Mey.s [HC2]

small-flowered trillium

*Trillium albidum* J.D. Freeman [FNA26, HC2], misapplied  
*Trillium parviflorum* V.G. Soukup

According to FNA Vol. 26 (Case), *T. parviflorum*, as now known, in northern OR and southern WA, *T. chloropetalum* only occurs in CA, and *T. albidum* is found in CA and OR.

\* **FNA26** = Flora of North America, Volume 26. page 113.

**Trillium ovatum** Pursh [FNA26, HC, HC2]

Fl. Amer. Sept. 1: 245. 1814.  
trillium, white trillium, western wake-robin

var. **ovatum** [FNA26, HC2]

Fl. Amer. Sept. 1: 245.  
wakerobin

FNA26: "two forms of *Trillium ovatum* should be noted. Form *hibbersonii* T. M. C. Taylor & Szczawinski, a dwarf, grows on sea cliffs on Vancouver Island, British Columbia. Plants range from 3 to 10 cm tall, with all parts proportionally diminished, and petals opening clear pink, fading to white. T. M. C. Taylor and A. F. Szczawinski (1974) stated that this form occurs occasionally throughout the range of the species. "

**Trillium petiolatum** Pursh [FNA26, HC, HC2]

Fl. Amer. Sept. 1: 244. 1814.  
purple trillium, purple wakerobin

**Veratrum** [FNA26, HC, HC2]

Sp. Pl. 2: 1044. 1753; Gen. Pl. ed. 5: 468. 1754.  
corn-lily, false hellebore, skunk-cabbage

**Veratrum californicum** Durand [FNA26, HC, HC2]

J. Acad. Nat. Sci. Philadelphia, ser. 2. 3: 103. 1855.  
California false hellebore

var. **californicum** [FNA26, HC, HC2]

J. Acad. Nat. Sci. Philadelphia, ser. 2. 3: 103.  
skunk cabbage, California wild hellebore

*Veratrum eschscholtzii* A. Gray var. *watsonii* Baker

*Veratrum jonesii* A. Heller

*Veratrum speciosum* Rydb.

*Veratrum tenuipetalum* A. Heller

FNA26: "N. Chiariello et al. (1980), using the snow-bank-emergent characteristics of *Veratrum californicum*, documented that the plants differing in open versus closed bud morphologies also have different leaf areas, internal temperatures, and rates of early expansion growth. These differences in life-history characteristics are inferentially similar to those of other alpine and northern *Veratrum* species."

var. ***caudatum*** (A. Heller) C.L. Hitchc. [FNA26, HC, HC2]

Vasc. Pl. Pacif. N.W. 1: 809. 1969.  
skunk cabbage, tailed wild hellebore

*Veratrum caudatum* A. Heller

FNA26: "*Veratrum californicum* var. *caudatum* occurs mostly west of the Cascade Mountains in the Pacific Northwest."

***Veratrum insolitum*** Jeps. [FNA26, HC, HC2]

Fl. Calif. 1: 266. 1921.  
siskiyou wild hellebore

FNA26: "The only other whitish-flowered species in North America, *Veratrum californicum*, which might be confused with *V. insolitum*, has entire, unfringed tepals, and only slightly hairy ovaries."

***Veratrum viride*** Aiton [FNA26, HC, HC2]

Hort. Kew. 3: 422. 1789.  
American false hellebore, green false hellebore, Indian-poke

var. ***eschschoztianum*** (Roem. & Schult.) Breitung [FNA26, HC2]

Canad. Field-Naturalist. 71: 49. 1957 (as *eschschoztzii*).  
American wild hellebore

*Veratrum eschschoztianum* (Roem. & Schult.) Rydb.

*Veratrum eschschoztzii* A. Gray

*Veratrum eschschoztzii* A. Gray var. *incriminatum* B. Boivin

*Veratrum viride* Aiton ssp. *eschschoztzii* (A. Gray) Á. Löve & D. Löve

*Veratrum viride* Aiton var. *eschschoztzii* (A. Gray) Breitung

***Xerophyllum*** [FNA26, HC, HC2]

Fl. Bor.-Amer. 1: 210. 1803.  
basket-grass, beargrass, turkey-beard

***Xerophyllum tenax*** (Pursh) Nutt. [FNA26, HC, HC2]

Gen. N. Amer. Pl. 1: 235. 1818.  
beargrass, western turkeybeard

*Helonias tenax* Pursh

*Xerophyllum douglasii* S. Watson

FNA26: "*Xerophyllum tenax*, variable in plant and flower size, is without evident geographic races (S. M. Maule 1959). Similar in most respects to *X. asphodeloides* but more robust, *X. tenax* typically has twice the number of flowers (F. H. Utech 1978c). The leaf fibers were used by native tribes for garments and decorative, watertight baskets. The bulbous rhizomes were roasted for several days before being eaten."

\* Maule, S. M. 1959. *Xerophyllum tenax*, squawgrass, its geographic distribution and its behavior on Mount Rainier, Washington. *Madroño* 15: 39?48.

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## Najadaceae (see Hydrocharitaceae)

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## Orchidaceae [FNA26, HC, HC2] Orchid Family

**Synonyms:** (none)

The taxonomy presented here follows that presented in Flora of North America Volume 26.

**References:** (none)

**Calypso** [FNA26, HC, HC2]

Parad. Lond. plate 89. 1807.

[name conserved]

fairy-slipper, Venus-slipper

**Calypso bulbosa** (L.) Oakes [FNA26, HC, HC2]

Nat. Hist. Vermont. 1: 200. 1842.

var. **americana** (R. Br.) Luer [FNA26, HC2]

Native Orchids U.S. & Canada. 336. 1975.

calypso, fairy-slipper

*Calypso americana* R. Br.

Taxonomy follows FNA. Reported in Washington by FNA.

var. **occidentalis** (Holz.) B. Boivin [FNA26, HC2]

Naturaliste Canad. 94: 522. 1967.

calypso, fairy-slipper

*Calypso bulbosa* (L.) Oakes f. *occidentalis* Holz.

There is some range overlap between this and var. *americana*, and the varieties need study.

Taxonomy follows FNA.

**Cephalanthera** [FNA26, HC2]

De Orchid. Eur. 29. 1817.

phantom-orchid, snow-orchid

*Eburophyton* [HC]

**Cephalanthera austiniae** (A. Gray) A. Heller [FNA26, HC2]

Cat. N. Amer. Pl. ed. 2. 4. 1900 (as *austinae*).

phantom orchid

*Chloraea austiniae* A. Gray

*Eburophyton austiniae* (A. Gray) A. Heller [HC]

**Corallorhiza** [FNA26, HC, HC2]

Acta Helv. Phys.-Math. 2: 61. 1755; orthography conserved.

coral-root

**Corallorhiza maculata** (Raf.) Raf. [FNA26, HC, HC2]

Amer. Monthly Mag. & Crit. Rev. 2: 119. 1817.

spotted coral-root

*Cladorhiza maculata* Raf.

var. **maculata** [FNA26, HC2]

mer. Monthly Mag. & Crit. Rev. 2: 119.

spotted coralroot

*Corallorhiza multiflora* Nutt.

*Corallorhiza multiflora* Nutt. var. *sulphurea* Suksd.

*Corallorhiza vancouveriana* Finet

Taxonomy follows FNA. Varieties weakly defined, intergradient with broadly overlapping ranges, and need more study. Variety *maculata* is reported to flower 2-4 weeks later than var. *occidentalis*.

\* Freudenstein, J. V. 1987. A preliminary study of *Corallorhiza maculata* (Orchidaceae) in eastern North America. Contrib. Univ. Michigan Herb. 16: 145-153.

var. **occidentalis** (Lindl.) Ames [FNA26, HC2]

Enum. Orchids U.S. & Canada. 22. 1924.  
western spotted coralroot

*Corallorhiza grab-hamii* Cockerell  
*Corallorhiza leimbachiana* Suksd.  
*Corallorhiza maculata* (Raf.) Raf. ssp. *occidentalis* (Lindl.) Cockerell  
*Corallorhiza multiflora* Nutt. var. *occidentalis* Lindl.

Taxonomy follows FNA. Varieties weakly defined, intergradient with broadly overlapping ranges, and need more study. Variety *maculata* is reported to flower 2-4 weeks later than var. *occidentalis*.

\* Freudenstein, J. V. and J. J. Doyle. 1994. Plastid DNA, morphological variation, and the phylogenetic species concept: the *Corallorhiza maculata* (Orchidaceae) complex. *Systematic Botany* 19: 273-290.

var. **ozettensis** E. Tisch [HC2]

Madroño 48(1): 40-42, f. 1.  
ozette coralroot

A recently described Clallam Co., WA endemic.

\* Tisch, E. L. 2001. *Corallorhiza maculata* var. *ozettensis* (Orchidaceae), a new coral-root from coastal Washington. *Madroño* 48: 40-42.

***Corallorhiza mertensiana*** Bong. [FNA26, HC, HC2]

Mém. Acad. Imp. Sci. St. Pétersbourg, Sér. 6, Sci. Math. 2: 165. 1832.  
Pacific coralroot, western coralroot

*Corallorhiza maculata* (Raf.) Raf. ssp. *mertensiana* (Bong.) Calder & Roy L. Taylor  
*Corallorhiza purpurea* L.O. Williams

FNA26: "In the Pacific Northwest *Corallorhiza mertensiana* is largely sympatric with *C. maculata* and occasionally intergrades with it. It frequently forms large clumps."

***Corallorhiza striata*** Lindl. [FNA26, HC, HC2]

Gen. Sp. Orchid. Pl. 534. 1840.  
striped coral-root

var. **striata** [FNA26, HC2]

Gen. Sp. Orchid. Pl. 534.  
hooded coralroot, striped coralroot

*Corallorhiza macraei* A. Gray

Weakly defined varieties that need more study, and were not recognized in JPM. Intermediates are known from Oregon and California, and could be expected in Washington. Taxonomy provisionally follows Freudenstein (1997) and FNA.

\* Freudenstein, J. V. 1997. A monograph of *Corallorhiza* (Orchidaceae). *Harvard Pap. Bot.* 1: 5-51.

var. **vreelandii** (Rydb.) L.O. Williams [FNA26, HC2]

Ann. Missouri Bot. Gard. 21: 343. 1934 (as *Corallorhiza*).  
vreeland's striped coralroot

*Corallorhiza bigelovii* S. Watson  
*Corallorhiza ochroleuca* Rydb.  
*Corallorhiza striata* Lindl. var. *flavida* Todsén & T.A. Todsén  
*Corallorhiza vreelandii* Rydb.

These are the slightly smaller flowered members of the species, reported for Washington by FNA. Intermediates are known from Oregon and California, and could be expected in Washington. Taxonomy provisionally follows Freudenstein (1997) and FNA.

\* Freudenstein, J. V. 1997. A monograph of *Corallorhiza* (Orchidaceae). *Harvard Pap. Bot.* 1: 5-51.

***Corallorhiza trifida*** Châtel. [FNA26, HC, HC2]

Specim. Inaug. *Corallorhiza*. 8. 1760.  
early coralroot, northern coralroot

*Corallorhiza corallorhiza* (L.) MacMill., invalidly published  
*Corallorhiza corallorhiza* (L.) MacMill. var. *coloradensis* Cockerell

*Corallorhiza innata* R. Br.  
*Corallorhiza verna* Nutt.  
*Corallorhiza wyomingensis* Hellmayr & K. Hellmayr

FNA26: "Corallorhiza trifida is largely autogamous, although a syrphid fly (*Syrphus cinctellus*) was reported as a pollinator by F. Silen (1906). Various floral morphs exist, some with weak geographic correlation; they do not appear to warrant taxonomic recognition. Variants of *C. odontorhiza*, *C. wisteriana*, and *C. maculata* without red and purple pigments in sepals and petals are occasionally misidentified as *C. trifida*."

***Corallorhiza wisteriana* Conrad [FNA26, HC, HC2]**

J. Acad. Nat. Sci. Philadelphia. 6: 145. 1829.  
wister coralroot

*Corallorhiza hortensis* Suksd.

Reported for Washington by FNA, however it is known only from cultivation by Suksdorf in his garden. The range of this species is from Montana eastward. Frequently confused with *Corallorhiza maculata*, see keys and illustrations in FNA and H&C.

***Cypripedium* [FNA26, HC, HC2]**

Sp. Pl. 2: 951. 1753; Gen. Pl. ed. 5, 408. 1754.  
lady's-slipper

***Cypripedium x columbianum* Sheviak [HC2]**

Columbia lady's-slipper, hybrid lady's-slipper

*Cypripedium x columbiana* Sheviak, orthographic variant

Described from British Columbia (Sheviak 1992). Reported for Washington by P. M. Brown in a personal communication to KZ, but no voucher has been located. The two parents do grow mixed together in Spokane Co., but no spontaneous hybrids have been confirmed.

- \* Brown, P. M. 1995. Checklist of the Orchids of North America North of Mexico. North American Native Orchid Journal Special Publication, Brighton, MA.
- \* Sheviak, C. J. 1992. Natural hybridization between *Cypripedium montanum* and its yellow-lipped relatives. Amer. Orchid Soc. Bull. 61: 546-559.

***Cypripedium fasciculatum* Kellogg ex S. Watson [FNA26, HC, HC2]**

Proc. Amer. Acad. Arts. 17: 380. 1882.  
clustered lady's-slipper

*Cypripedium knightiae* A. Nelson

- \* Brownell, V. R. and P. M. Catling. 1987. Notes on the distribution and taxonomy of *Cypripedium fasciculatum* Kellogg ex Watson (Orchidaceae). Lindleyana 2: 53-57.

***Cypripedium montanum* Douglas ex Lindl. [FNA26, HC, HC2]**

Gen. Sp. Orchid. Pl. 528. 1840.  
mountain lady's-slipper

FNA26: "Plants of *Cypripedium montanum* grown in exposed, relatively sunny situations have the ascending leaves inserted along the basal portion of the stem and the flowers displayed well above the leaves. In shadier, especially sheltered sites, the spreading leaves may be more evenly scattered along the stem. In this species the apical margin of the orifice of the lip is usually acute, in common with *C. candidum*, and in contrast to the usually obtuse margin in *C. parviflorum*; this difference can aid determination of discolored herbarium specimens. Hybrids of *C. montanum* and *C. parviflorum* have been designated *C. x columbianum* Sheviak. See 11. *C. parviflorum* for a general discussion of hybridization and variation within and between related species."

***Cypripedium parviflorum* Salisb. [FNA26, HC2]**

Trans. Linn. Soc. London, Bot. 1: 77, plate 2, fig. 2. 1791.  
fairy slipper, yellow lady's-slipper slipper

Recognition of varieties in this species is based on minor fragrance and pubescence differences and inconstant lip dimensions, and remains controversial. Sheviak (2002a) provides a key to the varieties, and reports from Washington both var. *pubescens* and var. *makasin*, but the two have broad and almost completely overlapping ranges across the width of North America. The FNA treatment unfortunately

provides the wrong maps for two of the three varieties recognized. "In the west it becomes very difficult to separate [var. makasin] from very small plants of var. pubescens that are common there," according to Sheviak (2002a).

- \* Crib, P. J. 1997. The Genus *Cypripedium*. Portland.
- \* Sheviak, C. J. 1993. *Cypripedium parviflorum* Salisb. var. *makasin* (Farwell) Sheviak. *Am. Orchid Soc. Bull.* 62:403.
- \* Sheviak, C. J. 1994. *Cypripedium parviflorum* Salisb. I: The small-flowered varieties. *Am. Orchid Soc. Bull.* 63:664-669.
- \* Sheviak, C. J. 1995. *Cypripedium parviflorum* Salisb. II: The larger-flowered plants and patterns of variation. *Am. Orchid. Soc. Bull.* 64:606-612 + cover 4.
- \* Sheviak, C. J. 2002a. *Cypripedium*, pp. 499-507, In: *Flora of North America* Editorial Committee, eds. 2002. *Flora of North America North of Mexico, Volume 26, Magnoliophyta: Liliidae: Liliales and Orchidales*. New York and Oxford.
- \* Wallace, L. E. and M. A. Case. 2000. Contrasting allozyme diversity between northern and southern populations of *Cypripedium parviflorum* (Orchidaceae): implications for Pleistocene refugia and taxonomic boundaries. *Systematic Botany* 25: 281-296.

var. ***pubescens*** (Willd.) O.W. Knight [FNA26, HC2]  
Rhodora. 8: 93. 1906.

### ***Dactylorhiza*** [FNA26, HC2]

Trudy Bot. Inst. S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 332. 1937.  
[conservation proposed]  
keyflower, marsh-orchid

*Coeloglossum* [FNA26]

### ***Dactylorhiza viridis*** (L.) R. M. Bateman, Pridgeon & M. W. Chase [HC2]

Pridgeon & M. W. Chase  
frog-orchis, Frog-orchis, long-bracted orchid

*Coeloglossum viride* (L.) Hartm. [FNA26]

*Coeloglossum viride* (L.) Hartm. var. *virescens* (Muhl.) Luer

*Habenaria viridis* (L.) R. Br. [HC]

*Habenaria viridis* (L.) R. Br. var. *bracteata* (Muhl. ex Willd.) A. Gray [HC]

*Habenaria viridis* (L.) R. Br. var. *interjecta* Fernald

*Satyrium viride* L.

From Devos et al.: Our results, which combine sequences of the internal and external transcribed spacers of the nuclear ribosomal DNA, support the monophyly of *Dactylorhiza*, with *Coeloglossum* being a sister clade. The position of *C. viride* in the phylogenetic tree, and the considerable morphological differences with respect to *Dactylorhiza*, incline us to retain both lineages as distinct genera.

- \* Bateman, R. M., A. M. Pridgeon, and M. W. Chase. 1997. Phylogenetics of subtribe Orchidinae (Orchidoideae, Orchidaceae) based on nuclear ITS sequences: 2. Infrageneric relationships and taxonomic revision to achieve monophyly of *Orchis* sensu stricto. *Lindleyana* 12: 113-141.
- \* Devos, N., O. Raspé, A.-L. Jacquemart, and D. Tyteca. 2006. On the monophyly of *Dactylorhiza* Necker ex Nevski (Orchidaceae): is *Coeloglossum viride* (L.) Hartman a *Dactylorhiza*? *Botanical Journal of the Linnean Society* 152: 261?269.
- \* Pridgeon, A. M. et al. 1997. Phylogenetics of subtribe Orchidinae (Orchidoideae, Orchidaceae) based on nuclear ITS sequences: 1. Intrageneric relationships and polyphyly of *Orchis* sensu lato. *Lindleyana* 12: 89-109.

### ***Epipactis*** [FNA26, HC, HC2]

Cat. Pl. Hort. Gott. 85. 1757.  
[name conserved]  
helleborine

### ***Epipactis gigantea*** Douglas ex Hook. [FNA26, HC, HC2]

Fl. Bor.-Amer. 2: 202, plate 202. 1839.  
giant helleborine

*Amesia gigantea* (Douglas ex Hook.) A. Nelson & J.F. Macbr.

*Epipactis gigantea* Douglas ex Hook. f. *citrina* P.M. Br.

*Epipactis gigantea* Douglas ex Hook. f. *rubrifolia* P.M. Br.

*Helleborine gigantea* (Douglas ex Hook.) Druce

FNA26: "Two very distinct color forms of this species have been published: *Epipactis gigantea* forma *rubrifolia* P. M. Brown, with deep red stems and leaves, and *E. gigantea* forma *citrina* P. M. Brown, with lemon-yellow flowers. Both are known from California. The occurrence of this wide-ranging species in India and Tibet is based on *Epipactis royaleana* Lindley ex Royle being given as a synonym in a study of the Monocotyledoneae of Karakorum (W. B. Dickoré 1995) and an embryologic study (S. P. Vij et al. 1999)."

*Epipactis helleborine* (L.) Crantz [FNA26, HC, HC2]

Stirp. Austr. Fasc. ed. 2: 2: 467. 1769.  
broad-leaved helleborine, garden helleborine

*Epipactis latifolia* (L.) All.  
*Serapias helleborine* L.

Naturalized in North America since 1879

**Goodyera** [FNA26, HC, HC2]

Hortus Kew. 5: 197. 1813.  
lattice-leaf, rattlesnake-plantain

**Goodyera oblongifolia** Raf. [FNA26, HC, HC2]

Herb. Raf. 76. 1833.  
giant rattlesnake-plantain, western rattlesnake-plantain

*Goodyera decipiens* (Hook.) F.T. Hubbard  
*Goodyera oblongifolia* Raf. var. *reticulata* B. Boivin  
*Peramium decipiens* (Hook.) Piper

*Goodyera oblongifolia* and *G. repens* are likely the parents of the allotetraploid *G. tessellata* (Kallunki 1976, 1981, 2002). Earlier checklist reports of *Goodyera repens* from WA are in error. FNA26: "In eastern North America, *Goodyera oblongifolia* is restricted to formerly glaciated areas. Plants with leaves white-reticulate on the lateral veins have been described as *Goodyera oblongifolia* var. *reticulata*. This segregate, essentially coastal in distribution, occurs from northern California to southeastern Alaska and is less frequent inland from British Columbia to New Mexico and in Michigan and Wisconsin. Because garden transplant experiments (J. A. Calder and R. L. Taylor 1968, vol. 1) have shown that both reticulate and non-reticulate leaves are found within the same clone, varieties are not recognized."

- \* Kallunki, J. A. 1976. Population studies in *Goodyera* (Orchidaceae) with emphasis on the hybrid origin of *G. tessellata*. *Brittonia* 28: 53-75.
- \* Kallunki, J. A. 1981. Reproductive biology of mixed-species populations of *Goodyera* (Orchidaceae) in northern Michigan. *Brittonia* 33: 137-155.
- \* Kallunki, J. A. 2002. *Goodyera*, pp. 514-517, In: *Flora of North America* Editorial Committee, eds. 2002. *Flora of North America North of Mexico*, Volume 26, Magnoliophyta: Liliidae: Liliales and Orchidales. New York and Oxford.

**Goodyera repens** (L.) R. Br. [FNA26, HC, HC2]

Hortus Kew. 5: 198. 1813.  
dwarf rattlesnake plantain

Earlier checklist reports of *Goodyera repens* from WA are in error.

**Liparis** [FNA26, HC, HC2]

De Orchid. Eur. 21, 30, 38. 1817.  
[name conserved]  
liparis, twayblade

**Liparis loeselii** (L.) Richardson [FNA26, HC, HC2]

De Orchid. Eur. 38. 1817.  
fen orchid, Loesel's twayblade

*Leptorchis loeselii* (L.) MacMill.  
*Liparis correana* (Barton) Spreng.  
*Malaxis correana* W. Barton  
*Malaxis longifolia* W. Barton  
*Ophrys loeselii* L.

Rare in Washington.

**Malaxis** [FNA26, HC, HC2]

Prodr. 8, 119. 1788.

adder's-mouth, malaxis

**Malaxis monophyllos** (L.) Sw. [FNA26, HC, HC2]

Kongl. Vetensk. Acad. Nya Handl. 21: 234. 1800.

white adder's-mouth, one-leaved malaxis

var. **brachypoda** (A. Gray) F. Morris & E.A. Eames [FNA26, HC2]

Our Wild Orchids. 358. 1929.

North American white adder's-mouth

*Malaxis brachypoda* (A. Gray) Fernald

Recently observed in Whatcom County. Plants documented with photographs; no specimen collected due to small size of population.

**Neottia** [HC2]

listera, twayblade

*Listera* [FNA26, HC]

**Neottia banksiana** (Lind.) Rchb. f. [HC2]

northwestern twayblade

*Listera banksiana* Lindl.

*Listera caurina* Piper [FNA26, HC]

*Listera retusa* Suksd.

*Neottia caurina* (Piper) Szlachetko

*Ophrys caurina* (Piper) Rydb.

**Neottia borealis** (Morong) Szlachetko [HC2]

northern twayblade

*Listera borealis* Morong [FNA26, HC]

*Ophrys borealis* (Morong) Rydb.

FNA26: "In Japan *Listera borealis* is replaced by *L. yatabei* Makino, which is nearly identical except for short basal auricles. *Listera borealis* and *L. auriculata* are very similar in overall appearance; the ovaries and pedicels in *L. borealis* are glandular-pubescent, and in *L. auriculata* they are glabrous."

**Neottia convallarioides** (Sw.) Richardson [HC2]

broad-lip twayblade

*Bifolium convallarioides* (Sw.) Nieuwl.

*Diphryllum convallarioides* (Sw.) Kuntze

*Epipactis convallarioides* Sw.

*Listera convallarioides* (Sw.) Nutt. ex Elliott [FNA26, HC]

*Listera eschscholzia* Cham.

*Ophrys convallarioides* (Sw.) W. Wight ex House

**Neottia cordata** (L.) Richardson [HC2]

heart-leaf twayblade

*Bifolium cordatum* (L.) Nieuwl.

*Diphryllum cordatum* (L.) Kuntze

*Distomaea cordata* (L.) Spenner

*Listera cordata* (L.) R. Br. [FNA26, HC]

*Listera cordata* (L.) R. Br. var. *cordata* [FNA26]

*Listera cordata* (L.) R. Br. var. *nephrophylla* (Rydb.) Hultén [FNA26]

*Ophrys cordata* L.

*Pollinirhiza cordata* (L.) Dulac

The FNA treatment by Magrath and Coleman (2002) notes the varietal taxonomy is controversial. They assign our material to var. *nephrophylla*. Their key separates the two proposed varieties on the basis of leaf shape, lip length, and flower color, while stating "the distinction is not sufficient to maintain the varieties." Magrath and Coleman (2002) also overlook the floral variation mentioned in H&C, yet another

reason to combine the varieties, which we do here, following the treatment in JPM and other regional manuals.

- \* Magrath, L. K. and R. A. Coleman. 2002. Listera, pp. 586-592, In: Flora of North America Editorial Committee, eds. 2002. Flora of North America North of Mexico, Volume 26, Magnoliophyta: Liliidae: Liliales and Orchidales. New York and Oxford.

***Platanthera*** [FNA26, HC2]

De Orchid. Eur. 20, 26, 35. 1817.

[name conserved]

bog-orchid, piperia, rein-orchid

*Piperia* [FNA26]

***Platanthera aquilonis*** Sheviak [FNA26, HC2]

Lindleyana. 14: 193, figs. 1?5. 1999.

eagle rein orchid, Sheviak's bog orchid

Recently described (Sheviak 1999b), and difficult to distinguish from *Platanthera huronensis*. FNA26: "Flowers of *Platanthera aquilonis* are usually scentless, but in the far northwest they have a sweet, pungent scent, like that of some related species. The flowers are commonly self-pollinating: the pollinia rotate forward and downward, contacting the stigma, and/or the pollen masses dissociate and are deposited on the stigma as if they had sifted downward. *Platanthera aquilonis* is a North American diploid species long confused with the tetraploid Icelandic *P. hyperborea* (Linnaeus) Lindley. Flowers of both species autopolinate, although the details of the mechanisms may differ. The two species differ in column structure and lip and viscidium shape. True *P. hyperborea* is similar to *P. huronensis*, and the relationship of these two species needs further study."

- \* Sheviak, C. J. 1999b. The identities of *Platanthera hyperborea* and *P. huronensis*, with the description of a new species from North America. *Lindleyana* 14: 193-203.
- \* Sheviak, C.J. 2001. A role for water droplets in the pollination of *Platanthera aquilonis* (Orchidaceae). *Rhodora* 103: 380-386.

***Platanthera chorisiana*** (Cham.) Rchb. f. [FNA26, HC2]

Icon. Fl. Germ. Helv. 13?14: 128. 1851.

choriso bog orchid

*Habenaria chorisiana* Cham. [HC]

*Limnorchis chorisiana* (Cham.) J.P. Anderson

*Pseudodiphryllum chorisianum* (Cham.) Nevski

Rare.

***Platanthera dilatata*** (Pursh) Lindl. ex L.C. Beck [FNA26, HC2]

Bot. North. Middle States. 347. 1833.

scent bottle, bog candle, boreal bog orchid, white orchid, white rein orchid

*Habenaria dilatata* (Pursh) Hook. [HC]

var. ***albiflora*** (Cham.) Ledeb. [FNA26, HC2]

Fl. Ross. 4: 71. 1853.

white bog orchid

*Habenaria dilatata* (Pursh) Hook. var. *albiflora* (Cham.) Correll [HC]

var. ***dilatata*** [FNA26, HC2]

white bog orchid

*Habenaria dilatata* (Pursh) Hook. var. *dilatata* [HC]

Sheviak (2002b) discusses variability in this species, with spur length modified by pollinators, and spur length defining the infraspecific taxa. However, extreme variability in spurs and their development can lead to a single plant "simulating all three varieties" (Sheviak 2002b). There is limited geographic sorting of the three proposed varieties, all of which are found in the same habitats and have broadly overlapping ranges in western North America. "Intermediates and populations with variable spur lengths are abundant" (Sheviak 2002b). Luer (1975) also questioned the taxonomic validity of the varieties, even as he was proposing a new combination for one of them. Wallace (2003) suggested the

species is "actively evolving" but failed to find molecular markers or consistent physical features to further resolve the three proposed varieties. We suggest more work is needed before the varieties can be reliably separated morphologically and recognized taxonomically.

- \* Luer, C. A. 1975. The Native Orchids of the United States and Canada Excluding Florida. The New York Botanical Garden, Bronx, NY.
- \* Sheviak, C. J. 2002b. *Platanthera*, pp. 551-571, In: Flora of North America Editorial Committee, eds. 2002. Flora of North America North of Mexico, Volume 26, Magnoliophyta: Liliidae: Liliales and Orchidales. New York and Oxford.
- \* Wallace, L. E. 2003. An evaluation of taxonomic boundaries in *Platanthera dilatata* (Orchidaceae) based on morphological and molecular variation. *Rhodora* 105: 322-336.

var. ***leucostachys*** (Lindl.) Luer [FNA26, HC2]

Native Orchids U.S. & Canada. 225. 1975.

white bog orchid

*Habenaria dilatata* (Pursh) Hook. var. *leucostachys* (Lindl.) Ames [HC]

*Habenaria leucostachys* (Lindl.) S. Watson

*Platanthera leucostachys* Lindl. [JPM]

FNA26: " *Platanthera dilatata* traditionally has been divided on the basis of spur length into three varieties, one of which, var. *leucostachys*, is sometimes treated as a distinct species. These infraspecific taxa seem to reflect differing pollination pressures. The moderate spur length and diurnal fragrance of var. *dilatata* suggests adaptation to diurnal Lepidoptera; the long spurs and primarily nocturnal fragrance of var. *leucostachys* indicates specialization for moth pollination, and the short spurs and often broader viscidia of var. *albiflora* suggest a broader range of pollinators or, in extreme cases, specialization for bee or fly pollination. Alone, these characteristics might support recognition at the specific level, but intermediates and populations with variable spur lengths are abundant. In some plants in western Canada, in particular, spurs that are very short when the flower is young grow to equal the lip as the flower ages, and in some they may eventually greatly exceed the lip, thereby simulating all three varieties. Plants with short spurs, either thick or variably slender, occur occasionally across the range of the species. In the southern Rocky Mountains spur reduction reaches an extreme, yet populations with moderate-length spurs occur there as well. In the broad sense, then, *P. dilatata* forms a cohesive unit in which spur length varies greatly, apparently in response to differing pollination pressures. The northwest is the center of variability of the species, and as it ranges eastward through the boreal forest, and southward down the Rockies and the more western ranges, it appears to have specialized for different pollinators. The recognized varieties of *P. dilatata* are evidentially merely endpoints in a very complex variation pattern. They have some utility for discussion purposes, but they are very simplistic representations of the underlying situation. Variety *leucostachys* and, to a lesser extent, var. *dilatata* appear to be real entities that have emerged from a background of variability that continues to produce similar plants. This variability is here treated within var. *albiflora*. *Platanthera dilatata* hybridizes with *P. huronensis* and *P. purpurascens*, and perhaps also does so with other related species; see the note under 10. *P. aquilonis*."

***Platanthera elegans*** Lindl. [HC2]

Gen. Sp. Orchid. Pl., 285. 1835

elegant rein-orchid

*Habenaria elegans* (Lindl.) Bol. [HC]

*Piperia elegans* (Lindl.) Rydb. [FNA26]

ssp. ***elegans*** [HC2]

elegant rein orchid, hillside rein orchid

(see also *Platanthera elongata*, *Platanthera transversa*)

*Habenaria greenei* Jeps. [HC]

*Habenaria unalascensis* (Spreng.) S. Watson var. *maritima* (Greene) Correll

*Piperia elegans* (Lindl.) Rydb. ssp. *elegans* [FNA26]

Taxonomy follows FNA. A second subspecies is endemic to the Pt. Reyes Peninsula in California.

***Platanthera elongata*** (Rydb.) R.M. Bateman [HC2]

dense orchid, dense-flower rein orchid

(see also *Platanthera elegans*, *Platanthera transversa*)

*Habenaria unalascensis* (Spreng.) S. Watson ssp. *elata* (Jeps.) Calder & Roy L. Taylor  
*Habenaria unalascensis* (Spreng.) S. Watson var. *elata* (Jeps.) Correll  
*Piperia elegans* (Lindl.) Rydb. var. *elata* (Jeps.) Luer  
*Piperia elongata* Rydb. [FNA26]

Taxonomy follows FNA & JPM. Similar to *Piperia unalascensis* but with a longer spur. Reports of *Piperia leptopetala* from Klickitat Co., Washington (WS) presumably belong here. FNA treats *Piperia leptopetala* as a California endemic.

***Platanthera ephemerantha* R.M. Bateman [HC2]**

white-lip rein orchid

*Piperia candida* Rand. Morgan & Ackerman [FNA26]

Taxonomy follows FNA and JPM. Recently described (1990, in *Lindleyana* 5:207), closely related to *P. transversa*. Not in H&C, where it would key to the green-flowered species *Habenaria unalascensis* because of its short spur, but differing in its white flowers. Illustrated in FNA.

***Platanthera huronensis* (Nutt.) Lindl. [FNA26, HC2]**

Gen. Sp. Orchid. Pl. 288. 1835.

northern green bog orchid

*Habenaria media* (Rydb.) Niles

*Limnorchis media* Rydb.

*Orchis huronensis* Nutt.

*Platanthera hyperborea* (L.) Lindl. [FNA26, JPM], misapplied

*Platanthera xmedia* (Rydb.) Luer

Hybridizes with *Platanthera dilatata* in Wallowa Co., Oregon. Difficult to distinguish from *Platanthera aquilonis*. *Platanthera hyperborea*, the name formerly used for members of this complex in the PNW, is a poorly understood species endemic to Greenland and Iceland. We follow FNA for taxonomy and treat the authorship of *H. hyperborea* as (L.) R. Br. in Ait., Hort. Kew. ed. 2. 5: 193 (1813); not (L.) R. Br. ex Ait. f. as in KZ. FNA26: "Northwestern plants commonly treated as *Platanthera hyperborea* var. *viridiflora* (Chamisso) Kitamura (note Kitamura's priority over Luer) are *P. huronensis*; Chamisso's name furthermore is synonymous with *P. stricta*. Aleutian and coastal Alaskan plants are often short, stout, and broad-leaved, and they have incorrectly been referred to 9. *P. convallariifolia*. *Platanthera huronensis* as here delimited does not auto-pollinate in the manner of *P. aquilonis*. Occasional plants and populations that may be referable to *P. huronensis*, however, exhibit the movement of pollinia typical of *P. aquilonis*. These plants might reflect infraspecific variation within an allotetraploid species, result from hybridization, or constitute a distinct taxon. The relationship of some of these plants to *P. hyperborea* needs study. *Platanthera huronensis* is typically intensely fragrant with the sweet, pungent scent of some related species. *Platanthera huronensis* is known to hybridize with *P. dilatata*; it may hybridize with other species as well. Although hybrids of *P. dilatata* and *P. aquilonis* may occur, the name traditionally used for them, *P. xmedia* (Rydb.) Luer is a synonym of *P. huronensis*. See notes under 10. *P. aquilonis* and 8. *P. hyperborea*."

\* Catling, P. M. & V. R. Catling. 1989. Observations of the pollination of *Platanthera huronensis* in southwest Colorado. *Lindleyana* 4: 78-84.

\* Sheviak, C. J. 1999a. *Platanthera hyperborea* and a reappraisal of green platantheras. No. Am. Native Orchid Journ. 5: 117-141; 198.

***Platanthera obtusata* (Banks ex Pursh) Lindl. [FNA26, HC2]**

Gen. Sp. Orchid. Pl. 284. 1835.

small northern bog-orchid, blunt-leaf rein-orchid, one-leaf rein-orchid

*Habenaria obtusata* (Banks ex Pursh) Richardson [HC]

*Orchis obtusata* Banks ex Pursh

**ssp. *obtusata* [FNA26, HC2]**

Gen. Sp. Orchid. Pl. 284.

blunt-leaf rein orchid, one-leaf rein orchid, small northern bog orchid

*Habenaria obtusata* (Banks ex Pursh) Richardson var. *collectanea* Fernald

Rare. Taxonomy follows FNA. FNA26: "The rare Eurasian *Platanthera obtusata* subsp. *oligantha* (Turczaninow) Hultén differs from the North American subsp. *obtusata* in its smaller dimensions and rhombic-lanceolate lip. It is also said to be densely few-flowered, although some Siberian material is

comparable to American plants. Supposedly intermediate plants are reported from Alaska, and much material from that area is reduced in stature and with smaller flowers than typical of American plants. In most cases, however, lips are relatively slender, and the plants seem merely to be stunted by their environment. One or two collections from the Alaskan Peninsula and Aleutians, however, seem entirely referable to subsp. *oligantha* with dense, few-flowered inflorescences of very small flowers with rhombic-lanceolate lips and shorter curved spurs. Eurasian plants are reported to be hexaploid or perhaps sometimes triploid, and if the apparent ploidy differences delimit the taxa, then it should be possible to unequivocally identify Alaskan plants."

***Platanthera orbiculata* (Pursh) Lindl. [FNA26, HC2]**

Gen. Sp. Orchid. Pl. 286. 1835.

large round-leaf orchid

*Habenaria orbiculata* (Pursh) Torr. [HC]

*Orchis orbiculata* Pursh

Taxonomy follows FNA. Closely related to *Platanthera macrophylla* of northeastern North America (Reddoch and Reddoch 1993). FNA26: "Considerable variation in size and shape of leaves occurs, and although to some extent regional in nature, intergradation is complete; recognition of infraspecific taxa is unwarranted. A few collections from isolated areas on the Pacific Coast of Canada are noteworthy, however. Those are small, few-flowered plants with rather narrow leaves borne alternately or suboppositely toward the base of the stem, as in some Asiatic species. They are in some respects very similar to *Platanthera freynii* Kränzlin, an Asiatic species distinguished primarily by its abruptly narrowed petals, in contrast to the generally broader, but variable, petals in North American plants. These western plants warrant further study to establish their identity and to elucidate relationships between North American and Asiatic species."

\* Reddoch, A. H. and J. M. Reddoch. 1993. The species pair *Platanthera orbiculata* and *P. macrophylla* (Orchidaceae): taxonomy, morphology, distributions and habitats. *Lindleyana* 8: 171-187.

***Platanthera sparsiflora* (S. Watson) Schltr. [FNA26, HC2]**

Bull. Herb. Boissier. 7: 538. 1899.

canyon bog orchid

*Habenaria sparsiflora* S. Watson [HC]

***Platanthera sparsiflora* (S. Watson) Schltr. [FNA26, HC2], misapplied**

Bull. Herb. Boissier. 7: 538. 1899.

canyon bog orchid

*Habenaria sparsiflora* S. Watson [HC]

***Platanthera stricta* Lindl. [FNA26, HC2]**

Gen. Sp. Orchid. Pl. 288. 1835.

canyon bog orchid, needle-spur green orchid, slender bog orchid

*Habenaria borealis* Cham. var. *viridiflora* Cham.

*Habenaria saccata* Greene [HC]

*Habenaria stricta* (Lindl.) Rydb., homonym (illegitimate)

*Limnorchis stricta* (Lindl.) Rydb.

*Platanthera gracilis* Lindl. [KZ99]

*Platanthera hyperborea* (L.) Lindl. var. *viridiflora* (Cham.) Luer

*Platanthera saccata* (Greene) Hultén

Taxonomy follows FNA. Hybrids between *Platanthera huronensis* and *P. stricta* may be the source of the incorrect report of *Platanthera* x *correllii* Schrenk (*P. hyperborea* x *stricta*) from WA, made by KZ on the strength of a personal communication by P. M. Brown, and not supported by specimens. FNA does not map *Platanthera sparsiflora* north of the Siskiyou Mountains, suggesting all WA reports (e.g., H&C from Skamania Co., and WNHP from Skamania, Yakima, Chelan & Whatcom Cos.) were misidentifications of the notoriously variable *Platanthera stricta*. Further work is needed support reports of *Platanthera sparsiflora* from Washington. FNA26: "The plants here treated as *Platanthera stricta* have in common more or less saccate spurs, orbiculate viscidia, and leaves that abruptly diverge from the stem, often at angles approaching 90° (this feature is sometimes obscured in sheltered, deeply shaded habitats). The plants described as *P. gracilis* Lindley are florally typical of the slender-spurred extreme of *P. stricta*; they differ only in peculiarly reduced, slenderly oblong but nonetheless abruptly wide-spreading leaves. The plants

figured by C. A. Luer (1975) as *P. hyperborea* var. *gracilis* (Lindley) Luer are not referable to *P. stricta* but rather are apparently hybrids of *P. stricta* and *P. dilatata*. Critical study of the description of *Habenaria borealis* var. *viridiflora* Chamisso and an evident isotype show this plant to be referable to *P. stricta*, although the name has been applied to *P. huronensis* in the Northwest and to *P. convallariifolia* in Japan. See also the discussion under 9. *P. convallariifolia*."

\* Sheviak, C. J. 2000d. Refinements in our understanding of some green platantheras. No. Am. Native Orchid Journ. 6: 88-92.

\* Sheviak, C. J. 2002c. *Platanthera* (Orchidaceae) in the Pacific Northwest. Botanical Electronic News (BEN) No. 292, June 28, 2002. [<http://www.ou.edu/cas/botany-micro/ben/>]

***Platanthera transversa* (Suksd.) R.M. Bateman [HC2]**

Botanical Journal of the Linnean Society 142(1): 21.  
royal rein orchid

*Piperia transversa* Suksd. [FNA26]

\* Ackerman, J. D. 1977. Biosystematics of the genus *Piperia* Rydb. (Orchidaceae). Botanical Journal of the Linnean Society 75: 245-270.

\* Bateman, Richard M. 2003. Botanical Journal of the Linnean Society 142(1): 21.

***Platanthera unalascensis* (Spreng.) Kurtz [HC2]**

Alaska rein orchid

*Habenaria schischmareffiana* Cham.

*Habenaria unalascensis* (Spreng.) S. Watson [HC]

*Habenaria unalascensis* (Spreng.) S. Watson, orthographic variant

*Piperia unalascensis* (Spreng.) Rydb. [FNA26]

*Platanthera foetida* Geyer ex Hook.

*Platanthera unalascensis* (Spreng.) Kurtz, orthographic variant

*Spiranthes unalascensis* Spreng.

Taxonomy follows FNA and Ackerman (1977). FNA26: "The racemes in *Piperia unalascensis* are usually slender and sparsely flowered; racemes of uncommon coastal populations (including the type) are short, stout, and densely flowered. Plants of the coast ranges and the Pacific Northwest are stouter and have broader sepals and petals than do interior and montane forms. Two sym-patric forms appear to be in the Sierra Nevada, differing in lip morphology and scent."

\* Ackerman, J. D. 1977. Biosystematics of the genus *Piperia* Rydb. (Orchidaceae). Botanical Journal of the Linnean Society 75: 245-270.

***Spiranthes* [FNA26, HC, HC2]**

De Orchid. Eur. 20, 28, 36. 1817.

[name conserved]

ladies-tresses, pearl-twist

***Spiranthes diluvialis* Sheviak [FNA26, HC2]**

Brittonia. 36: 11, figs. 1C, D, 2A?C, F. 1984.

diluvial ladies'-tresses

*Spiranthes romanzoffiana* Cham. var. *diluvialis* (Sheviak) S.L. Welsh

Rare, and recently described (Sheviak 1984). FNA notes it is an amphiploid hybrid derived from *S. romanzoffiana* and *S. magnicamporum* Sheviak, a species of central North America.

\* Sheviak, C. J. 1984. *Spiranthes diluvialis* (Orchidaceae), a new species from the western United States. Brittonia 36: 8-14.

***Spiranthes porrifolia* Lindl. [FNA26, HC2]**

Gen. Sp. Orchid. Pl. 467. 1840.

western ladies'-tresses

*Spiranthes romanzoffiana* Cham. var. *porrifolia* (Lindl.) Ames & Correll [HC]

Rare.

***Spiranthes romanzoffiana* Cham. [FNA26, HC, HC2]**

Linnaea. 3: 32. 1828.

hooded ladies'-tresses  
(see also *Spiranthes porrifolia*)

*Gyrostachys stricta* Rydb.  
*Ibidium strictum* (Rydb.) House  
*Spiranthes romanzoffiana* Cham. var. *romanzoffiana* [HC]  
*Spiranthes stricta* (Rydb.) A. Nelson

Taxonomy follows FNA. To the south of us a variable species,  $2n = 44,66,88$ , with different ploidy levels possible within a single population, and further complicated by crossing with *Spiranthes porrifolia* (Sheviak & Brown 2002). FNA26: "Plants of *Spiranthes romanzoffiana* vary considerably in habit but are usually quite consistent in floral morphology. The strongly hooded, ascending flowers with abruptly reflexed lips provide a distinctive geometric precision. The pandurate lip with typically three veins, the lateral with abruptly wide-spreading branches, is a key feature. In some areas, however, especially at the edges of the range of the species, some variation is apparent and is sometimes coincident with variability in ploidy level. In particular, in California and adjacent southwestern Oregon variability reaches its peak, with plants variously exhibiting yellowish flowers, loosely spiraled inflorescences, and spreading lateral sepals. Some of this variation may result from gene flow from *S. porrifolia*, but with various ploidy levels common in this area, even within populations, the situation is apparently more complex than simple hybridization."

- \* Catling, P. M. 1982. Breeding systems of northeastern North American *Spiranthes* (Orchidaceae). *Canadian journal of Botany* 60: 3017-3039.
- \* Catling, P. M. and J. R. Brown. 1983. Morphometrics and ecological isolation in sympatric *Spiranthes* (Orchidaceae) in southwestern Ontario. *Canadian journal of Botany* 61: 2747-2759.
- \* Sheviak, C. J. and P. M. Brown. 2002. *Spiranthes*, pp.530-545, In: *Flora of North America* Editorial Committee, eds. 2002. *Flora of North America North of Mexico*, Volume 26, Magnoliophyta: Liliidae: Liliales and Orchidales. New York and Oxford.

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## Poaceae [HC2] Grass Family

### Synonyms:

Gramineae [HC]

### References:

- \* Barkworth, M. E., K. M. Capels, S. Long, and M. B. Piep, eds. 2003. *Flora of North America North of Mexico*. Volume 25 Magnoliophyta: Commelinidae (in part): Poaceae, part 2. Oxford University Press, New York. 783 p.
- \* Hitchcock, A.S. 1950. *Manual of the grasses of the United States*. Misc. Publ. 200. USDA. (but title page says revised Feb., 1951!)

### *Achnatherum* [HC2]

needlegrass, ricegrass

#### *Achnatherum xbloomeri* (Bol.) Barkworth [FNA24]

*Phytologia* 74(1): 14.

Indian ricegrass

*Oryzopsis bloomeri* (Bol.) Ricker

*Stipa bloomeri* Bol.

*xStiporyzopsis bloomeri* (Bol.) B.L. Johnson

FNA24 does not show WA within the range of known collections. FNA24: "The name *Achnatherum xbloomeri* applies only to hybrids between *A. hymenoides* and *A. occidentale* subsp. *occidentale*,..." *O. caduca*, *Stipa* c., *S. bloomeri*, *O. b.*, *S. membranacea*, *O. m.*, *S. h.*, *O. cuspidata*.; the sp. tends to hybridize with various pops. of *Stipa* and has apparently produced several intermediate phases, . . . named as separate species. (Hitch); see also synonymy in [1] p. 909.

#### *Achnatherum hendersonii* (Vasey) Barkworth [FNA24, HC2]

*Phytologia* 74(1): 7.

Henderson's rice grass

*Oryzopsis hendersonii* Vasey [HC]  
*Stipa hendersonii* (Vasey) Mehlenb.

FNA24: "Achnatherum hendersonii grows in dry, rocky, shallow soil, in sagebrush or ponderosa pine associations. It is known from only three counties: Yakima and Kittitas counties, Washington, and Crook County, Oregon. Maze (1981) noted that, at one site, *A. hendersonii* was restricted to areas subject to frost heaving, although under cultivation, it can grow without such disturbance. He hypothesized that its survival in such sites is attributable to a competitive advantage gained by the structure of its root system. Unlike *Poa secunda*, which grew in the surrounding, undisturbed areas, the outer cortex and epidermis of the roots of *A. hendersonii* form a sheath around the stele and inner cortex. When the roots are pulled, this sheath slips and breaks but the internal structures remain intact. In *Poa secunda*, the outer part of the root is attached to the central core and, when the roots are pulled, they break. *Achnatherum hendersonii* also differs from *P. secunda* in having relatively few (9?12), evenly distributed roots that extend to 30 cm."

***Achnatherum hymenoides* (Roem. & Schult.) Barkworth [FNA24, HC2]**

Phytologia 74(1): 7-8.  
Indian rice grass

*Eriocoma cuspidata* Nutt.  
*Oryzopsis hymenoides* (Roem. & Schult.) Ricker ex Piper [HC]  
*Stipa hymenoides* Roem. & Schult.

FNA24: "Achnatherum hymenoides grows in dry, well-drained soils, primarily in the western part of the Flora region and northern Mexico. Specimens from further east may be introduced; it is unknown whether they have persisted. The roots of *A. hymenoides* are often surrounded by a rhizosheath formed by mucilaginous secretions to which soil particles attach. This rhizosheath harbors nitrogen-fixing organisms that probably contribute to the success of the species as a colonizer."

***Achnatherum lemmonii* (Vasey) Barkworth [HC2]**

Lemmon's needlegrass

*Stipa columbiana* Macoun  
*Stipa lemmonii* (Vasey) Scribn. [HC]

ssp. ***lemmonii* [FNA24, HC2]**

Phytologia 74(1): 8.  
Lemmon's needlegrass

*Stipa lemmonii* (Vasey) Scribn. var. *jonesii* Scribn.  
*Stipa lemmonii* (Vasey) Scribn. var. *lemmonii* [HC]

FNA24: "Achnatherum lemmonii grows in sagebrush and yellow pine associations, from southern British Columbia to California and east to Utah. It has been confused in the past with *A. nelsonii*; it differs in having narrower leaves, laterally compressed florets with a thick apical lobe, and longer paleas."

***Achnatherum nelsonii* (Scribn.) Barkworth [HC2]**

ssp. ***dorei* (Barkworth & J. Maze) Barkworth [FNA24, HC2]**

Phytologia 74(1): 9.  
Nelson's needlegrass

*Achnatherum lettermanii* (Vasey) Barkworth [HC2], misapplied  
*Achnatherum occidentale* (Thurb. ex S. Watson) Barkworth [HC2], misapplied  
*Stipa columbiana* Macoun, misapplied  
*Stipa nelsonii* Scribn. ssp. *dorei* Barkworth & J. Maze  
*Stipa nelsonii* Scribn. var. *dorei* (Barkworth & J. Maze) Dorn

FNA24: "Achnatherum nelsonii subsp. *dorei* grows from the southern Yukon Territory to California and Wyoming. In regions where both subspecies grow, subsp. *dorei* is at higher elevations than subsp. *nelsonii*."

ssp. ***nelsonii* [HC2]**

Nelson's needlegrass

*Stipa occidentalis* Thurb. ex S. Watson var. *nelsonii* (Scribn.) C.L. Hitchc. [HC]

***Achnatherum nevadense*** (B.L. Johnson) Barkworth [HC2]

Nevada needlegrass

*Stipa nevadensis* B.L. Johnson [HC]

***Achnatherum occidentale*** (Thurb. ex S. Watson) Barkworth [HC2], misapplied

common western needlegrass

(see also *Achnatherum nelsonii*)

*Stipa occidentalis* Thurb. ex S. Watson [HC]

***Achnatherum occidentale*** (Thurb. ex S. Watson) Barkworth [HC2], misapplied

common western needlegrass

(see also *Achnatherum nelsonii*)

*Stipa occidentalis* Thurb. ex S. Watson [HC]

***Achnatherum occidentale*** (Thurb. ex S. Watson) Barkworth [HC2]

common western needlegrass

(see also *Achnatherum nelsonii*)

*Stipa occidentalis* Thurb. ex S. Watson [HC]

ssp. ***californicum*** (Merr. & Burt Davy) Barkworth [FNA24, HC2]

Phytologia 74(1): 10.

California needlegrass

*Achnatherum nelsonii* (Scribn.) Barkworth ssp. *longiaristatum* (Barkworth & J. Maze) Barkworth

*Stipa californica* Merr. & Burt Davy

*Stipa nelsonii* Scribn. var. *longiaristata* Barkworth & J. Maze

*Stipa occidentalis* Thurb. ex S. Watson var. *californica* (Merr. & Burt Davy) C.L. Hitchc. [HC]

FNA24: "Achnatherum occidentale subsp. californicum grows from Washington through Idaho to southwestern Montana and south to California and Nevada, with disjunct records from south-central Wyoming and southwestern Utah. Its elevation range is 2000?4000 m. Johnson (1962) postulated that Achnatherum occidentale subsp. californicum is a hybrid derivative of A. nelsonii and A. occidentale; it intergrades with both. The scattering of longer hairs among shorter hairs on the basal awn segments, combined with the long apical lemma hairs, give florets of subsp. californicum a more untidy appearance than those of the other two subspecies. It resembles A. nevadense in this respect, but differs from that species in the shape of the boundary between the glabrous and strigose portions of the callus, in usually being glabrous below the lower cauline nodes, and in having paleas that are shorter in relation to the lemmas. Plants with scabrous awns are often confused with A. nelsonii subsp. nelsonii; they differ in having sharper calluses, a more elongated extension of the glabrous callus area into the strigose portion of the callus, and, usually, longer awns."

ssp. ***pubescens*** (Vasey) Barkworth [FNA24, HC2]

Phytologia 74(1): 10.

western needlegrass

*Stipa elmeri* Piper & Brodie ex Scribn.

*Stipa occidentalis* Thurb. ex S. Watson var. *pubescens* (Vasey) J. Maze, Roy L. Taylor & MacBryde

FNA24: "Achnatherum occidentale subsp. pubescens grows from Washington to California and eastward to Wyoming, at 1300?4700 m. It is the most widespread and variable subspecies of A. occidentale, intergrading with subsp. californicum, A. nelsonii, and A. lettermanii. It differs from the latter two in its shorter paleas and its pilose awns."

***Achnatherum richardsonii*** (Link) Barkworth [FNA24, HC2]

Phytologia 74(1): 12.

Richardson's rice grass

*Stipa richardsonii* Link [HC]

FNA24: "Achnatherum richardsonii grows in open woodlands and grasslands, often on sand or gravel, from the Yukon Territory to Washington and Manitoba, and south in the Rocky Mountains through Montana and Wyoming to western South Dakota and northern Colorado. Its elevation range is 1000?3100 m. It is readily recognized by its combination of flexuous panicle branches, drooping spikelets, and straight distal awn

segments. Scagel and Maze (1984) concluded that putative hybrids between *A. richardsonii* and *A. nelsonii* subsp. *dorei* were merely large plants of subsp. *dorei* that varied in the direction of *A. richardsonii*."

***Achnatherum thurberianum*** (Piper) Barkworth [FNA24, HC2]

Phytologia 74(1): 14.  
Thurber's rice grass

*Stipa thurberiana* Piper [HC]

FNA24: "*Achnatherum thurberianum* grows in canyons and foothills, primarily in sagebrush desert and juniper woodland associations, from Washington to southern Idaho and southwestern Montana and from California to Utah, at 900?3000 m. Its long ligules and pilose awns make it one of the easier North American species of *Achnatherum* to identify."

***Aegilops*** [HC, HC2]

goatgrass

***Aegilops cylindrica*** Host [FNA24, HC, HC2]

Icon. Descr. Gram. Austrac. 2: 6, pl. 7.  
jointed goat grass

*Aegilops cylindrica* Host var. *rubiginosa* Popova  
*Cylindropyrum cylindricum* (Host) Á. Löve  
*Triticum cylindricum* (Host) Ces., Pass. & Gibelli

FNA24: "*Aegilops cylindrica* is a widespread weed in North America, being particularly troublesome in winter wheat. It usually grows in disturbed sites such as roadsides, fields, and along railroad tracks. It is native to the Mediterranean region and central Asia, and is adventive in other temperate countries. Hybrids with *Triticum aestivum* have been found in various parts of North America. Being sterile annuals, they do not persist."

***Aegilops triuncialis*** L. [HC, HC2]

barbed goatgrass

*Aegilops triuncialis* L. var. *triuncialis*

FNA24: "North American collections of *Aegilops triuncialis* are from disturbed sites, mostly roadsides and railroads, in California and western Nevada. The native range of the species extends from the Mediterranean area east to central Asia and south to Saudi Arabia. Specimens from the Flora region belong to *Aegilops triuncialis* var. *triuncialis*, which has apical spikelets with 5-8 cm central awns on the glumes and 2 well-developed 1-3 cm lateral awns, and lateral spikelets with 2-3 well-developed 1.5-6 cm awns. It differs from *A. triuncialis* var. *persica* (Boiss.) Eig, which has apical spikelets with 2-5 cm central awns on the glumes and 2 lateral awns of 1-2 cm, sometimes reduced to teeth, and lateral spikelets with 1 awn to 1.5 cm and 1-2 teeth."

**×*Agropogon***

**×*Agropogon lutosus*** (Poir.) P. Fourn. [FNA24]

Monde Pl. Rev. Mens. 36(213): 20.  
perennial beardgrass

*Polypogon littoralis* Sm.  
*Polypogon lutosus* (Poir.) Hitchc.

FNA24: "×*Agropogon lutosus* is a sterile hybrid between *Agrostis stolonifera* and *Polypogon monspeliensis* that sometimes grows in locations where both parents occur, such as damp to wet, often alkaline soils on lakesides,. Some plants favor *A. stolonifera*, others *P. monspeliensis*. All differ from *Polygogon* in having more persistent spikelets, less blunt short-awned glumes, and lemmas with subterminal rather than terminal awns; and from *Agrostis* in having awned glumes and awned lemmas." In H&C, *Agrostis alba* [the hybrid × *Polypogon monspeliensis* (not *monospeliensis*) is not discussed under either sp., but these two species look totally un-like. *Agrostis articulata* above the glumes, *Polypogon*, "slightly below the glumes" for starters.]

***Agropyron*** [HC, HC2]

wheatgrass

(see also *Elymus*, *Eremopyrum*, *Pascopyrum*, *Pseudoroegneria*, *Thinopyrum*)

*Agropyron cristatum* (L.) Gaertn. [FNA24, HC, HC2]

Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae 14(1) 1770 I. 540.  
crested wheatgrass

FNA24: "Among the more commonly encountered variants of *Agropyron cristatum* in the Flora region are the cultivar 'Fairway', which was considered by Dillman (1946) and Dewey (1986) to belong to *A. cristatum* rather than *A. desertorum*, and its derivatives 'Parkway' and 'Ruff'. The name 'Fairway' is also widely used in agricultural circles to refer to any crested wheatgrass that looks like the cultivar 'Fairway'. 'Standard' crested wheatgrass, which Dewey (1986) and others placed in *A. desertorum*, originally referred to a particular seed lot (S.P.I. 19537) that the Montana Wheatgrowers' Association decided to use as a standard against which to compare the performance of other crested wheatgrass strains. The term is now applied by agronomists to all crested wheatgrasses that are less leafy and have more lanceolate spikes than 'Fairway' crested wheatgrasses. There are numerous cultivars of crested wheatgrass available. Because it is easy to establish, *Agropyron cristatum* has often been used to restore productivity to areas that have been overgrazed, burned, or otherwise disturbed. This ability, combined with its high seed production, tends to prevent establishment of most other species, both native and introduced."

*Agropyron fragile* (Roth) P. Candargy [HC2]

Siberian wheatgrass

*Agropyron sibiricum* (Willd.) P. Beauv. [HC]

*Agrostis* [HC, HC2]

bentgrass

(see also *Apera*, *Podagrostis*, *Polypogon*)

*Agrostis canina* L. [HC2]

velvet bentgrass

*Agrostis capillaris* L. [FNA24, HC2]

Sp. Pl. 1: 62

colonial bent

*Agrostis sylvatica* Huds.

*Agrostis tenuis* Sibth. [HC]

*Agrostis tenuis* Sibth. var. *aristata* (Parnell) Druce

*Agrostis tenuis* Sibth. var. *hispida* (Willd.) Philipson

*Agrostis tenuis* Sibth. var. *pumila* (L.) Druce

FNA24: "*Agrostis capillaris* grows along roadsides and in disturbed areas. It was introduced from Europe, and is now well established in western and eastern North America. It is often used for fine-leaved lawns; commercial seed sold as *Agrostis tenuis* 'Highland' usually contains *A. capillaris*. *Agrostis capillaris* differs from *A. gigantea* in its short ligules, especially on the vegetative shoots, and the open panicles that lack spikelets near the base of the branches. It differs from *A. castellana* in having diffuse rather than clustered spikelets, fewer rhizomes, divaricate panicle branches after anthesis, calluses that are glabrous or with hairs up to 0.1 mm long, and glabrous lemmas. It also tends to flower somewhat earlier than *A. castellana*. *Agrostis capillaris* readily hybridizes with *A. vinealis*, the hybrids being somewhat intermediate between the two parents."

*Agrostis castellana* Boiss. & Reut. [FNA24, HC2]

Diagn. Pl. Nov. Hisp. 26.

Highland bent, dryland browntop

FNA24: "*Agrostis castellana* is native to southern Europe. It was introduced to North America in the 1930s for use in lawns and golf greens, under the name *Agrostis tenuis* 'Highland'; commercial samples of 'Highland' often contain *A. capillaris*. Escaped plants were collected at least as early as the 1950s, but were not recognized as belonging to *A. castellana* until the 1990s, when several collections were identified as such in Oregon. Recorded habitats have ranged from sunny gravel roadsides to moist ground alongside cranberry bogs, at elevations from near sea level to over 600 m. In view of its extensive commercial use for over 70 years and its drought tolerance, it is likely that it is more widespread than shown. *Agrostis castellana* belongs to a Eurasian group that includes *A. gigantea*, *A. stolonifera*, and *A. capillaris*. It differs

from *A. gigantea* and *A. stolonifera* in having shorter, truncate ligules about as short as wide, and in not possessing extensive rhizomes and stolons. It differs from *A. capillaris* in having clustered rather than diffuse spikelets, more abundant rhizomes, somewhat constricted panicle branches after anthesis, abundantly hairy calluses with hairs up to 0.3(0.6) mm long, and lemmas that are sometimes dorsally pubescent. It also tends to flower somewhat later than *A. capillaris*."

***Agrostis exarata* Trin. [FNA24, HC, HC2]**

Gram. Unifl. Sesquifl. 207  
spiked bent

*Agrostis aenea* (Trin.) Trin.  
*Agrostis alaskana* Hultén  
*Agrostis ampla* Hitchc.  
*Agrostis asperifolia* Trin.  
*Agrostis exarata* Trin. ssp. *exarata* [HC]  
*Agrostis exarata* Trin. ssp. *minor* (Hook.) C.L. Hitchc. [HC]  
*Agrostis exarata* Trin. var. *exarata* [HC]  
*Agrostis exarata* Trin. var. *minor* Hook.  
*Agrostis exarata* Trin. var. *monolepis* (Torr.) Hitchc.  
*Agrostis exarata* Trin. var. *monolepis* (Torr.) Hitchc. [HC]  
*Agrostis exarata* Trin. var. *pacifica* Vasey  
*Agrostis exarata* Trin. var. *purpurascens* Hultén  
*Agrostis longiligula* Hitchc. [HC]  
*Agrostis longiligula* Hitchc. var. *australis* J.T. Howell  
*Agrostis melaleuca* (Trin.) Hitchc.  
*Agrostis microphylla* Steud. var. *major* Vasey

H&C recognizes subspecific taxa, whereas FNA24 regards this species as one highly variable taxon. FNA24: "*Agrostis exarata* is common and widely distributed in western North America, usually growing in moist ground in open woodlands, river valleys, tidal marshes, and swamp and lake margins; it also grows in dry habitats such as grasslands and shrublands. It extends from Alaska into Mexico, and is also found in Kamchatka and the Kuril Islands. Eastern North American records probably reflect introductions. It readily colonizes roadsides and bare soil, and exhibits ecological and developmental flexibility. *Agrostis exarata* is recognized here as a single, variable species that includes what others have treated as distinct species or varieties. Cytotaxonomic study might clarify the basis of the observed variation. *Agrostis exarata* appears to be related to *A. densiflora*."

***Agrostis gigantea* Roth [FNA24, HC2]**

Tent. Fl. Germ. 1: 31.  
black bent

*Agrostis gigantea* Roth var. *dispar* (Michx.) Philipson  
*Agrostis nigra* With.  
*Agrostis stolonifera* L. ssp. *gigantea* (Roth) Schübl. & G. Martens  
*Agrostis stolonifera* L. var. *major* (Gaudin) Farw.

FNA24: "*Agrostis gigantea* grows in fields, roadsides, ditches, and other disturbed habitats, mostly at lower elevations. It is a serious agricultural weed, as well as a valuable soil stabilizer. In the Flora region, its range extends from the subarctic to Mexico; it is considered to be native to Eurasia. It is more heat tolerant than most species of *Agrostis*. *Agrostis gigantea* has been confused with *A. stolonifera*, from which it differs in having rhizomes and a more open panicle. *Agrostis stolonifera* has elongated leafy stolons, mainly all above the surface, that root at the nodes, and the panicles are condensed and often less strongly pigmented than in *A. gigantea*. Its distribution tends to be more northern and coastal where ditches and pond margins are common habitats, and its stolons enable it to form loose mats. *Agrostis gigantea* is ecologically adapted to a more extreme climate?hot summers/cold winters and drought?than *A. stolonifera*. It is also similar to *A. capillaris* and *A. castellana*; it differs from both in its longer ligules, from *A. capillaris* in its less open panicles with spikelets near the base of the branches, and from *A. castellana* in being more extensively rhizomatous. When *Agrostis gigantea* grows in damp hollows under trees it becomes more like *A. stolonifera*, particularly when the inflorescence is young, not expanded, and pale. If the rootstock is not collected, identification is a major problem."

***Agrostis idahoensis* Nash [FNA24, HC, HC2]**

Bull. Torrey Bot. Club 24(1): 42-43.  
Idaho bent

*Agrostis bakeri* Rydb.  
*Agrostis borealis* Hartm. var. *recta* (Nash) B. Boivin  
*Agrostis clavata* Trin., misapplied  
*Agrostis filicumis* M.E. Jones, orthographic variant  
*Agrostis idahoensis* Nash var. *bakeri* (Rydb.) W.A. Weber

FNA24: "Agrostis idahoensis grows in western North America, from British Columbia to California and New Mexico, in alpine and subalpine meadows along wet seepage areas and bogs, and in wet openings with Sphagnum in coniferous forests. It was recently discovered in Chile and Argentina; it is not known whether it is native or introduced there (Rúgolo de Agrasar and Molina 1997). Agrostis idahoensis is often confused with *A. mertensii* and dwarf forms of *A. scabra*, both of which tend to grow in better-drained habitats."

***Agrostis mertensii* Trin. [FNA24, HC2]**

Linnaea 10: 302.  
northern bent

*Agrostis borealis* Hartm. [HC]  
*Agrostis borealis* Hartm. var. *americana* (Scribner ex Macoun) Fernald  
*Agrostis borealis* Hartm. var. *paludosa* (Scribn.) Fernald  
*Agrostis mertensii* Trin. ssp. *borealis* (Hartm.) Tzvelev

Known from single locality in Okanogan County. H&C: "Reports of its occurrence in Wash. appear to have been based upon material which I believe to be referable to *A. idahoensis*. There is a strong possibility that this is the same as *A. mertensii* Trin. (Linnaea 10:302. 1836)". FNA24: "Agrostis mertensii grows on banks and gravel bars in river and lake valleys, and on open grasslands and rocky slopes of mountains and cliffs. It has a circumboreal distribution. In the Flora region, it extends from Alaska across Canada to Newfoundland and Greenland, south in the mountains to Wyoming and Colorado in the west, and West Virginia, Tennessee, and North Carolina in the east. It also grows in arctic Europe, Scandinavia, the mountainous regions of Mexico, and northwestern South America, where some unusually robust specimens have been somewhat dubiously referred to this species. Agrostis mertensii is frequently confused with dwarf, awned forms of *A. scabra*, but has larger spikelets, more culm nodes, larger anthers, slightly wider, flatter leaves, and panicles that are less expanded and less than 1/3 the culm length. Agrostis mertensii is also often confused with *A. idahoensis*, but *A. mertensii* tends to grow in better-drained habitats. Agrostis mertensii differs from *A. anadyrensis* in being less robust, having narrower, less abundant basal leaves, smaller panicles, and minor differences in the insertion of the awns on the lemmas. In addition, the panicle branches are smooth to weakly scabrous, contrasting with the branches of *A. anadyrensis*, which are strongly scabrous, with long acicules throughout their length."

***Agrostis microphylla* Steud. [FNA24, HC, HC2]**

Syn. Pl. Glumac. 1: 164.  
small-leaf bent

*Agrostis inflata* Scribn.  
*Agrostis microphylla* Steud. var. *intermedia* Beetle

FNA24: "Agrostis microphylla grows in thin, rocky soils, sandy areas, cliffs, vernal pools, and serpentine areas. It is a winter annual, flowering in late winter to spring, adapted to low-competition habitats with summer drought. It may be related to, or conspecific with, *A. hendersonii*. Agrostis microphylla grows mostly along the Pacific coast from British Columbia to northern Baja California, Mexico. Reports of *A. microphylla* from the Humboldt Mountains, Nevada, reflect Vasey's treatment of a specimen of *A. exarata* as the type of a new variety, *A. microphylla* var. *major* Vasey."

***Agrostis xmurbeckii* Fouill. ex P. Fourn.**

***Agrostis oregonensis* Vasey [FNA24, HC, HC2]**

Bull. Torrey Bot. Club 13: 55.  
Oregon bent

*Agrostis oregonensis* Nutt. ex A. Gray. (Proc. Acad. Nat. Sci. Philadelphia 14: 334. 1862) is an illegitimate name according to TROPICOS. FNA24: "Agrostis oregonensis grows in wet habitats, such as stream and lake margins, damp woods, and meadows, in western North America, primarily in the Pacific Northwest

from British Columbia to California and Wyoming. It has not been found in Mexico."

***Agrostis pallens* Trin. [FNA24, HC, HC2]**

Mém. Acad. Imp. Sci. Saint-Pétersbourg, Sér. 6, Sci. Math., Seconde Pt. Sci. Nat. 6,4(3-4): 328.  
seashore bent

*Agrostis diegoensis* Vasey [HC]

*Agrostis lepida* Hitchc.

*Agrostis pallens* Trin. var. *vaseyi* H. St. John

FNA24: "Agrostis pallens grows on coastal sands and cliffs, in meadows, and in open, xeric woodlands to subalpine woodlands at 3500 m. It extends from British Columbia south into Baja California, Mexico, and east to western Montana and Utah. The relationship of the higher-elevation, more open-panicled plants to those of lower elevations merits further study."

***Agrostis perennans* (Walter) Tuck. [FNA24]**

Amer. J. Sci. Arts 45: 44.

upland bent

*Agrostis altissima* (Walter) Tuck.

*Agrostis elata* (Pursh) Trin.

*Agrostis oreophila* Trin.

*Agrostis perennans* (Walter) Tuck. var. *aestivalis* Vasey

*Agrostis perennans* (Walter) Tuck. var. *elata* (Pursh) Hitchc.

*Agrostis schweinitzii* Trin.

*Cornucopiae perennans* Walter

Not in H&C. FNA24: "Agrostis perennans grows along roadsides and in fields, fens, woodlands, and periodically inundated stream banks. It is widespread and common in eastern North America; it also grows from central Mexico to central South America. There are old records from Oregon and Washington, but A. perennans does not appear to be established in western North America. It is more tolerant of shade and moisture than Agrostis scabra, from which it differs in its later flowering, leafier culms, and its basal leaves that usually wither by anthesis." This species is considered excluded due to the lack of specimens indicating its presence in the flora.

***Agrostis scabra* Willd. [FNA24, HC, HC2]**

Sp. Pl. 1(1): 370.

rough bent

*Agrostis geminata* Trin.

*Agrostis hyemalis* (Walter) Britton, Sterns & Poggenb. var. *geminata* (Trin.) Hitchc.

*Agrostis hyemalis* (Walter) Britton, Sterns & Poggenb. var. *scabra* (Willd.) H.L. Blomq.

*Agrostis hyemalis* (Walter) Britton, Sterns & Poggenb. var. *tenuis* (Tuck.) Gleason

*Agrostis scabra* Willd. ssp. *septentrionalis* (Fernald) Á. Löve & D. Löve

*Agrostis scabra* Willd. var. *geminata* (Trin.) Swallen

*Agrostis scabra* Willd. var. *septentrionalis* Fernald

on synonymy: "A hiemalis (not hyemalis) of many authors, not of (Walt) B.S.P.", and "A hiemalis var geminata A.S. Hitchc. . . ." H&C - spelling and authority difference. FNA24: "Agrostis scabra grows in a wide variety of habitats, including grasslands, meadows, shrublands, wood-lands, marshes, and stream and lake margins, as well as disturbed sites such as roadsides, ditches, and abandoned pastures. It occurs throughout much of the Flora region, but is not common in the Canadian high arctic or the southeastern United States. It extends south into Mexico; it is also native to the Pacific coast from Kamchatka to Japan and Korea, and has been introduced elsewhere. Plants in the Agrostis scabra aggregate are variable. Awned and unawned plants often occur together, the difference presumably being caused by a single gene. At least three groups may be distinguished within the species as treated here: widespread, lowland, rather weedy plants capable of producing very large panicles that have been introduced into the southern United States; smaller, short-leaved, slow-growing plants of rocks and screes, which are widespread in the Rockies, the Appalachians, and much of Alaska, Canada, and Greenland; and luxuriant, broad-leaved plants that are characteristically found in sheltered, frost-free canyons of the southwestern United States. The second group has sometimes been called A. scabra var. geminata (Trin.) Swallen or A. geminata Trin. Tercek et al. (2003) found that annual forms of Agrostis scabra with inflated upper sheaths and open panicles that were collected around hot springs in western North America were

molecularly, and in some respects morphologically, more similar to plants identified as hot spring endemics such as *A. rossiae* and *A. pauzhetica* Prob., than they were to neighboring perennial plants of *A. scabra* that did not have inflated leaf sheaths. They differed, however, in having open, rather than contracted, panicles. *Agrostis scabra* is often confused with a number of other species; for comparisons, see under the appropriate species description: *A. mertensii*, *A. clavata*, *A. hyemalis*, *A. perennans*, and *A. idahoensis*."

*Agrostis stolonifera* L. [FNA24, HC2]

Sp. Pl. 1: 62.

spreading bent

*Agrostis alba* L. var. *palustris* (Huds.) Pers. [HC]

*Agrostis alba* L. var. *stolonifera* (L.) Sm. [HC]

*Agrostis maritima* Lam.

*Agrostis palustris* Huds.

*Agrostis stolonifera* L. var. *compacta* Hartm.

*Agrostis stolonifera* L. var. *palustris* (Huds.) Farw.

Probably introduced in our area, and perhaps not native to N. Am.[H&C p 465.] FNA24: "*Agrostis stolonifera* grows in areas that are often temporarily flooded, such as lakesides, marshes, salt marshes, lawns, and damp fields, as well as moist meadows, forest openings, and along streams. It will also colonize disturbed sites such as ditches, clearcuts, and overgrazed pastures. Its North American range extends from the subarctic into Mexico, mostly at low to middle elevations. *Agrostis stolonifera* has been confused with *A. gigantea*. It is considered to be Eurasian, but some northern salt marsh and lakeside populations may be native. *Agrostis stolonifera* is also similar to *A. castellana*; it differs in having longer, acute to truncate ligules that are longer than wide, and in possessing extensive stolons. The names *A. palustris* Huds. and *A. maritima* Lam. have been applied to plants with longer stolons; all forms intergrade. A hybrid between *A. stolonifera* and *Polypogon monspeliensis*, *xAgropogon lutosus*, has been found in the Flora region. It differs from *A. stolonifera* in having awned glumes and lemmas. *Agrostis stolonifera* readily hybridizes with *A. vinealis*, the hybrids being somewhat intermediate between the two parents."

*Agrostis variabilis* Rydb. [FNA24, HC, HC2]

Memoirs of the New York Botanical Garden 1: 32.

alpine bent

FNA24: "*Agrostis variabilis* grows in alpine and subalpine meadows and forests and on talus slopes, at elevations up to 4000 m, from British Columbia and Alberta south to California and New Mexico. It can appear similar to dwarf forms of *Podagrostis humilis*, but differs from that species in not having paleas."

*Aira* [HC, HC2]

hairgrass

*Aira caryophyllea* L. [HC, HC2]

silver hairgrass

*Aspris caryophyllea* (L.) Nash

var. *caryophyllea* [FNA24, HC2]

Sp. Pl. 1: 66.

silver hairgrass

FNA24: "*Aira caryophyllea* var. *caryophyllea* is native to the Mediterranean region. It usually grows in dry, sandy to rocky soil and on rock outcrops, in open and disturbed sites in woods, grassy flats, pastures, paths, and roadsides; it is occasionally found in damp ground at swamp or lagoon margins."

*Aira elegans* Roem. & Schult. [HC, HC2]

Syst. Veg., ed. 15 bis [Roemer & Schultes] 2: 682.

delicate hairgrass

*Aira capillaris* Host

*Aira caryophyllea* L. var. *capillaris* (Mert. & W.D.J. Koch) Mutel

*Aira elegans* Roem. & Schult. ssp. *ambigua* (Arcang.) Holub

*Aira elegantissima* Schur

*Aspris capillaris* (Mert. & W.D.J. Koch) Hitchc.

FNA24: "*Aira caryophyllea* var. *capillaris* is native to Europe, northern Africa, and western Asia. It usually

grows in dry to somewhat moist, sandy loam soils of grassy banks, woodland openings, and disturbed sites such as pastures and roadsides. *Aira caryophyllea* var. *capillaris* is the correct name for this taxon at the varietal level. If treated at the species level, its correct name is *Aira elegans* Willd. ex Roem. & Schult."

*Aira praecox* L. [FNA24, HC, HC2]

Sp. Pl. 1: 65-66.

early silver-hair grass

*Aspris praecox* (L.) Nash

FNA24: "*Aira praecox* is native to Europe. In the Flora region, it grows mainly along or near the Pacific and Atlantic coasts, in dry to vernal moist sand dunes or in sandy to rocky soils, on rock faces and ledges, and in disturbed areas such as the edges of roads, railways, and airports. It is usually found in lowland areas, though it occasionally grows at montane to subalpine elevations."

*Alopecurus* [HC, HC2]

foxtail, meadow-foxtail

*Alopecurus aequalis* Sobol. [HC, HC2]

little foxtail, short-awn foxtail

var. *aequalis* [FNA24, HC2]

Fl. Petrop. 16.

shortawn fescue

*Alopecurus aequalis* Sobol. var. *natans* (Wahlenb.) Fernald

*Alopecurus aristulatus* Michx.

*Alopecurus geniculatus* L. var. *aristulatus* (Michx.) Torr.

FNA24: "*Alopecurus aequalis* is native to temperate zones of the Northern Hemisphere. It generally grows in wet meadows, forest openings, shores, springs, and along streams, as well as in ditches, along roadsides, and in other disturbed sites, from sea level to subalpine elevations. *Alopecurus aequalis* is the most widespread and variable species of *Alopecurus* in the Flora region."

*Alopecurus arundinaceus* Poir. [FNA24, HC2]

Encycl. 8: 776.

creeping meadow-foxtail

*Alopecurus ventricosus* Pers.

FNA24: "*Alopecurus arundinaceus* is native to Eurasia, extending north of the Arctic Circle and south to the Mediterranean. It grows on wet, moderately acid to moderately alkaline soils, on flood plains, vernal ponds, and along rivers, streams, bogs, potholes, and sloughs. It was introduced for pasture in North Dakota and now occurs more widely, having been promoted as a forage species, and is sometimes used in seed mixtures for revegetation projects. It was evaluated for revegetation in Alberta, but there is no evidence that it was ever actually used in that province. *Alopecurus arundinaceus* was found to suppress *Hordeum jubatum*, a troublesome, unpalatable, weedy species, in irrigated pastures (Moyer and Boswall 2002)."

*Alopecurus carolinianus* Walter [FNA24, HC, HC2]

Fl. Carol. 74.

tufted meadow-foxtail

*Alopecurus macounii* Vasey

*Alopecurus ramosus* Poir.

FNA24: "*Alopecurus carolinianus* is native to the central plains, Mississippi valley, and southeastern United States, where it is common in wet meadows, ditches, wetland edges, and other moist, open habitats; it is occasionally a weed of rice fields. At the northern limit of its range it is clearly adventive, growing in gardens and nurseries. It also occurs in arid areas of the prairies and southwest, growing sporadically along sloughs and in ditches and vernal pools. Whether such populations are native or naturalized is not clear."

*Alopecurus geniculatus* L. [FNA24, HC, HC2]

Sp. Pl. 1: 60.

water fescue

*Alopecurus pallescens* Piper

FNA24: "*Alopecurus geniculatus* is native to Eurasia and parts of North America, growing in shallow water, ditches, open wet meadows, shores, and stream banks from the lowland to montane zones. It has been naturalized in eastern North America. The status of populations in the west, including the Queen Charlotte Islands, British Columbia, is less certain. Many occur in moist sites within native rangeland, but these areas have also been affected by European settlement, although less intensively and for a shorter period than those in eastern North America."

*Alopecurus myosuroides* Huds. [FNA24, HC, HC2]

Fl. Angl. 1: 23.

slender meadow-foxtail

*Alopecurus agrestis* L.

FNA24: "*Alopecurus myosuroides* is native to Eurasia and grows in moist meadows, deciduous forests, and cultivated or disturbed ground. A significant weed species in temperate cereal crops, it is one of the most damaging weeds of winter cereals in England. It has been introduced repeatedly as a weed of cultivation into many parts of the Flora region, but apparently has not spread to a large degree out of cultivation. *Alopecurus myosuroides* has been listed as a noxious weed in the state of Washington, one of the states where winter wheat is a major crop."

*Alopecurus pratensis* L. [FNA24, HC, HC2]

Sp. Pl. 1: 60.

field meadow-foxtail

FNA24: "*Alopecurus pratensis* is native from temperate northern Eurasia south to North Africa. It is now widely naturalized in temperate regions throughout the world. It grows in poorly to somewhat drained soils in meadows, riverbanks, lakesides, ditches, roadsides and fence rows. It has been widely introduced as a pasture grass; it may also have become established from ballast or imported hay. The earliest collections are from coastal New England; it is now known from most provinces and states."

*Alopecurus saccatus* Vasey [FNA24, HC, HC2]

Pacific meadow-foxtail

*Alopecurus howellii* Vasey

FNA24: "*Alopecurus saccatus* is a native annual that inhabits moist, open meadows, valley plains, and vernal pools at elevations below 700 m from Washington to California. Segregates have been treated as species in the past, but the variation between them appears to be continuous, and no habitat differentiation is evident."

*Ammophila* [HC, HC2]

beachgrass

*Ammophila arenaria* (L.) Link [HC, HC2]

European beachgrass

ssp. *arenaria* [FNA24, HC2]

Hort. Berol. 1: 105.

European beach grass

FNA24: "*Ammophila arenaria* is a European species that has become naturalized in most temperate countries. It was introduced along the Pacific coast and in the interior of western North America as a sand binder. North American plants belong to *Ammophila arenaria* (L.) Link subsp. *arenaria*, in which the glumes exceed the lemma and the callus hairs are about 2-3 mm long. It is native from northern and western Europe to northwestern Spain."

*Ammophila breviligulata* Fernald [HC2]

American beachgrass

ssp. *breviligulata* [FNA24, HC2]

Rhodora 22: 71.

American beachgrass

FNA24: "*Ammophila breviligulata* subsp. *breviligulata* grows on sand dunes and dry sandy shores from around the Great Lakes to the Atlantic coast from Newfoundland to South Carolina and, as an introduction, on the west coast."

**Andropogon** [HC, HC2]

(see also *Schizachyrium*)

*Andropogon gerardii* Vitman [FNA25, HC, HC2]

Summa Pl. 6: 16.  
big bluestem

FNA25: "Andropogon gerardii grows in prairies, meadows, and generally dry soils. It is a widespread species, extending from southern Canada to Mexico, and was once dominant over much of its range. It is frequently planted for erosion control, restoration, or as an ornamental; the records from Washington and central Montana reflect such plantings. It hybridizes with *A. hallii*, the two sometimes being treated as conspecific subspecies."

**Anthoxanthum** [HC, HC2]

vernalgrass

*Anthoxanthum aristatum* Boiss. [HC, HC2]

Voy. Bot. Espagne 2: 638.  
annual vernalgrass

*Anthoxanthum odoratum* L. var. *puellii* (Lecoq & Lamotte) Coss. & Durieu  
*Anthoxanthum puellii* Lecoq & Lamotte

ssp. *aristatum* [FNA24, HC2]

Fl. Centre France 2: 576.  
small sweet vernal grass

FNA24: "Anthoxanthum aristatum is native to Europe. It is now established but not common in the Flora region, being found in mesic to dry, open, disturbed habitats of western and eastern North America. North American plants belong to *Anthoxanthum aristatum* Boiss. subsp. *aristatum*, which differs from *Anthoxanthum aristatum* subsp. *macranthum* Valdes in having well-exserted awns and deeply bifid, sterile lemmas."

*Anthoxanthum odoratum* L. [FNA24, HC, HC2]

Sp. Pl. 1: 28.  
sweet vernalgrass

*Anthoxanthum odoratum* L. ssp. *alpinum* (Å. Löve & D. Löve) B.M.G. Jones & Melderis  
*Anthoxanthum odoratum* L. ssp. *odoratum*

FNA24: "Anthoxanthum odoratum is native to southern Europe. In the Flora, region it grows in meadows, pastures, grassy beaches, old hay fields, waste places, dense shade or as a weed in lawns.... In southern British Columbia, it is rapidly invading the moss-covered bedrock of coastal bluffs, and will soon exclude many native species."

**Apera** [HC2]

windgrass

*Apera interrupta* (L.) P. Beauv. [FNA24, HC2]

Ess. Agrostogr. 31, 151.  
dense silky-bent

*Agrostis interrupta* L. [HC]

FNA24: "Introduced from Europe, it now grows from British Columbia south to Arizona and New Mexico, as well as in Ontario and a few scattered locations in the eastern part of the Flora region."

*Apera spica-venti* (L.) P. Beauv. [HC2]

silky windgrass

*Agrostis spica-venti* L. [HC]

**Aristida** [HC, HC2]

aristida, threeawn

*Aristida purpurea* Nutt. [HC2]

var. *longiseta* (Steud.) Vasey [FNA25, HC2]

Rep. U.S. Geogr. Surv., Wheeler 6: 286 [1879].

red threeawn

*Aristida longespica* Poir. var. *longespica*, misapplied

*Aristida longiseta* Steud. [HC]

*Aristida longiseta* Steud. var. *longiseta*

*Aristida longiseta* Steud. var. *robusta* Merr. [HC]

FNA25: "Aristida purpurea var. longiseta grows on sandy or rocky slopes and plains, and in barren soils of disturbed ground from western Canada to northern Mexico. It is the most variable variety of *Aristida purpurea*, ranging from short plants with basal leaves and short panicles suggestive of var. *fendleriana*, to tall plants with long cauline leaves and long, drooping panicles resembling var. *purpurea*. The length of its glumes, width of its lemma apex, and the length and thickness of its awns distinguish it from all the other varieties. The callus and long, stiff awns are especially troublesome to sheep and cattle."

**Arrhenatherum** [HC, HC2]

oatgrass

*Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl [HC, HC2]

tall oatgrass

*Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl var. *biaristatum* (Peterm.) Peterm.

*Avena elatior* L.

ssp. *bulbosum* (Willd.) Schübl. & G. Martens [HC2]

bulbous oatgrass

*Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl var. *bulbosum* (Willd.) Spenn. [HC]

*Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl var. *tuberosum* (F.W. Schultz) Thielens

FNA24: "Arrhenatherum elatius is grown as a forage grass and yields a palatable hay; it does not withstand heavy grazing. It readily escapes from cultivation and can be found in mesic to dry meadows, the edges of woods, streamsides, rock outcrops, and disturbed areas such as fields, pastures, fence rows, and roadsides. Varigated forms with the leaves striped green and white or yellow are cultivated as ornamentals. There are two subspecies, both of which have been found in the Flora region. Plants in which both lemmas have long, geniculate awns have been called *A. elatius* var. *biaristatum* (Peterm.) Peterm., but do not merit formal taxonomic recognition. While both can be weedy, *Arrhenatherum elatius* subsp. *bulbosum* (Willd.) Schübl. & G. Martens is especially difficult to control in cultivated fields, as tilling the soil spreads the swollen internodes, which then propagate vegetatively."

ssp. *elatius* [HC2]

bulbous oatgrass

*Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl var. *elatius* [HC]

FNA24: "Arrhenatherum elatius is grown as a forage grass and yields a palatable hay; it does not withstand heavy grazing. It readily escapes from cultivation and can be found in mesic to dry meadows, the edges of woods, streamsides, rock outcrops, and disturbed areas such as fields, pastures, fence rows, and roadsides. Varigated forms with the leaves striped green and white or yellow are cultivated as ornamentals. There are two subspecies, both of which have been found in the Flora region. Plants in which both lemmas have long, geniculate awns have been called *A. elatius* var. *biaristatum* (Peterm.) Peterm., but do not merit formal taxonomic recognition. *Arrhenatherum elatius* subsp. *elatius* is more common than subsp. *bulbosum*. It is not known whether the two have different ecologic or geographic distributions in North America."

**Avena** [HC, HC2]

oats

*Avena barbata* Pott ex Link [FNA24, HC, HC2]

J. Bot. (Schrader) 1799(2,2): 314-315 [1800].

barbed oat

H&C uses *Avena barbata* Brot., which is an invalid/illegitimate name according to TROPICOS. FNA24: "*Avena barbata* is native to the Mediterranean region and central Asia. It has become naturalized in western North America, particularly California, displacing native grasses. It was collected once in Vancouver, British Columbia, but should be considered a weed there."

*Avena fatua* L. [FNA24, HC, HC2]

Sp. Pl. 1: 80.  
wild oat

*Avena fatua* L. var. *glabrata* Peterm.  
*Avena fatua* L. var. *vilis* (Wallr.) Hausskn.

FNA24: "*Avena fatua* is native to Europe and central Asia. It is known as a weed in most temperate regions of the world; in some parts of Canada and the United States it is considered a noxious weed. *Avena fatua* is sometimes confused with *A. occidentalis*, but differs in having shorter, wider spikelets, fewer florets, and a distal floret which does not have a heart-shaped disarticulation scar. Hybrids between *A. fatua* and *A. sativa* are common in plantings of cultivated oats. The hybrids resemble *A. sativa*, but differ in having the *fatua*-type lodicule; some also have a weak awn on the first lemma. They are easily confused with fatuoid forms of *A. sativa*."

*Avena sativa* L. [FNA24, HC, HC2]

Sp. Pl. 1: 79.  
oat

*Avena byzantina* K. Koch  
*Avena fatua* L. var. *sativa* (L.) Hausskn.  
*Avena sativa* L. var. *orientalis* (Schreb.) Alef.

FNA24: "*Avena sativa*, a native of Eurasia, is widely cultivated in cool, temperate regions of the world, including North America. Fall-sown oats are planted in the Pacific and southern states in United States; spring-sown oats are more important elsewhere in North America. It is sometimes planted as a fast-growing soil stabilizer along roadsides. Several forms are grown, of which the most distinctive are naked oats. These differ from typical forms as indicated in the description and in having caryopses that fall from the florets. Escapes from cultivation are common but rarely persist. *Avena sativa* hybridizes readily with *A. fatua*. The hybrids are easily confused with fatuoid forms of *A. sativa*, which differ in having the *sativa*-type lodicule."

*Beckmannia* [HC, HC2]

beckmannia, sloughgrass

*Beckmannia syzigachne* (Steud.) Fernald [FNA24, HC, HC2]

Rhodora 30(350): 27.  
American slough grass

*Beckmannia eruciformis* (L.) Host  
*Beckmannia eruciformis* (L.) Host ssp. *baicalensis* (V.A. Kusn.) Hultén  
*Beckmannia eruciformis* (L.) Host var. *uniflora* Scribn. ex A. Gray  
*Beckmannia syzigachne* (Steud.) Fernald ssp. *baicalensis* (V.A. Kusn.) Hultén  
*Beckmannia syzigachne* (Steud.) Fernald var. *uniflora* (Scribn. ex A. Gray) B. Boivin

FNA24: "*Beckmannia syzigachne* grows in damp habitats such as marshes, floodplains, the edges of ponds, lakes, streams, and ditches, and in standing water. It is a good forage grass, but frequently grows in easily damaged habitats."

*Bouteloua* [HC, HC2]

grama, mesquite-grass

*Buchloe* [HC]

*Bouteloua curtipendula* (Michx.) Torr. [HC, HC2]

sideoat grama

*Atheropogon curtipendulus* (Michx.) E. Fourn.  
*Chloris curtipendula* Michx.

var. *curtipendula* [FNA24, HC2]

Explor. Red River Louisiana 300.  
sideoats grama

Reported from WA in Brittonia (1964) according to Kartesz (1999); but not recorded in WA in FNA; occurrence in WA uncertain. FNA24: "Bouteloua curtipendula var. curtipendula is the common variety of *B. curtipendula* in most of the Flora region. It grows on rich, loamy, well-drained prairie soils. Its elevational range extends from below 100 m to 2500 m." No specimens of this taxon from Washington exist in any herbarium in the Pacific Northwest. This taxon is considered excluded until a specimen from Washington is generated.

***Brachypodium*** [HC, HC2]

false-brome

*Brachypodium sylvaticum* (Huds.) P. Beauv. [FNA, HC, HC2]

Ess. Agrostogr. 101, 155, pl. 3, f. 115.  
false brome

Recently (2013) collected for the first time in the wild in Washington (Cowlitz County).

***Briza*** [HC, HC2]

quaking-grass

*Briza maxima* L. [FNA24, HC2]

Sp. Pl. 1: 70.  
big quakinggrass

FNA24: "Briza maxima is native to the Mediterranean region. Cultivated as an ornamental, it is possibly one of the earliest grasses grown for other than edible purposes. It occasionally becomes naturalized in dry to somewhat moist but well-drained, fine or sandy soil on banks, rocky places, open woodlands, and cultivated areas such as roadsides and pastures. In the Flora region, it is known from scattered locations ... where it is an invader of coastal dune habitat."

*Briza minor* L. [FNA24, HC, HC2]

Sp. Pl. 1: 70.  
little quaking grass

FNA24: "Briza minor is native to the Mediterranean region. It is the most widespread species of Briza in the Flora region, growing in many habitats: swamp margins, seasonal wetlands and around vernal pools, open woodlands, sandhills, roadsides, and pastures. It appears to be established from southern British Columbia south through western Oregon to California and Arizona, and in the east from the Atlantic states to the Gulf Coast states, inland to Oklahoma and Arkansas."

***Bromus*** [HC, HC2]

brome

*Bromus arenarius* Labill. [FNA24, HC]

Nov. Holl. Pl. 1: 23, pl. 28. 1804 [1805].  
Australian brome

*Bromus briziformis* Fisch. & C.A. Mey. [FNA24, HC2]

Index Sem. (St. Petersburg) 3: 30.  
rattlesnake brome

*Bromus brizaeformis* Fisch. & C. Mey. [HC], orthographic variant

Note distinct spelling in H&C. FNA24: "Bromus briziformis grows in waste places, road verges, and overgrazed areas. It is native to southwest Asia and Europe, and is adventive in the Flora region, occurring from southern British Columbia to as far south as New Mexico, and in scattered locations eastward. The unique shape of its spikelets has led to its use in dried flower arrangements and as a garden ornamental. The common name may refer to the similarity of the spikelets to a rattlesnake's tail."

*Bromus catharticus* Vahl [HC2]

rescue grass

var. *elatus* (E. Desv.) Planchuelo [FNA24]

Sida 22(1): 556.

rescue grass

[not in H&C] FNA24 does not show this taxon occurring in Washington.

***Bromus ciliatus* L. [FNA24, HC, HC2]**

Sp. Pl. 1: 76-77  
fringed brome

*Bromopsis canadensis* (Michx.) Holub  
*Bromopsis ciliata* (L.) Holub  
*Bromus canadensis* Michx.  
*Bromus ciliatus* L. var. *genuinus* Fern.  
*Bromus ciliatus* L. var. *intonsus* Fernald  
*Bromus dudleyi* Fernald  
*Bromus richardsonii* Link var. *pallidus* (Hook.) Shear

FNA24: "Bromus ciliatus grows in damp meadows, thickets, woods, and stream banks across almost all of northern North America except the high arctic, extending further south mainly through the western United States to Mexico. Some taxonomists have named plants with different degrees of sheath pubescence as different forms. Because the variation is continuous, such differences are not formally recognized in this treatment."

***Bromus commutatus* Schrad. [FNA24, HC, HC2]**

Fl. Germ. 353.  
meadow brome

*Bromus commutatus* Schrad. var. *apricorum* Simonk.

FNA24: "Bromus commutatus grows in fields, waste places, and road verges. It is native to Europe and the Baltic region; in the Flora region, it is found mainly in the United States and southern Canada. Hildemar Scholz (pers. comm.) recognizes three subspecies of *B. commutatus* in Europe; no attempt has been made to determine which subspecies are present in the Flora region."

***Bromus diandrus* Roth [FNA24, HC2]**

Botanische Abhandlungen und Beobachtungen.  
great brome, ripgut brome, ripgut grass

*Anisantha rigida* (Roth) Hyl.  
*Bromus diandrus* Roth ssp. *rigidus* (Roth) Láinz  
*Bromus maximus* Desf.  
*Bromus rigidus* Roth [HC]

FNA24: "Bromus diandrus is native to southern and western Europe. It is now established in North America, where it grows in disturbed ground, waste places, fields, sand dunes, and limestone areas. It occurs from southwestern British Columbia to Baja California, Mexico, and eastward to Montana, Colorado, Texas, and scattered locations in the eastern United States. The common name "ripgut grass" indicates the effect it has on animals if they consume the sharp, long-awned florets of this species. *Bromus diandrus*, as treated here, includes *B. rigidus* Roth. Sales (1993) reduced these two taxa to varietal rank, pointing out that the differences between them in panicle morphology and callus and scar shape are subtle enough that identification of many specimens beyond *B. diandrus* sensu lato is often impossible."

\* Sales, F. 1993. Taxonomy and nomenclature of *Bromus* sect. *Genea*. *Edinburgh Journal of Botany* 50:1-31.

***Bromus erectus* Huds. [FNA24, HC]**

Fl. Angl. 39.  
upright brome

*Bromopsis erecta* (Huds.) Fourr.

FNA24: "Bromus erectus is native to Europe. In the Flora region, it grows on disturbed soils, often over limestone. It is established in the eastern United States and Canada, and has been reported from other locations where it has not persisted."

***Bromus hordeaceus* L. [HC2]**

soft chess

*Bromus hordeaceus* L. ssp. *hordeaceus*

*Bromus mollis* L. [HC]

FNA24: "Bromus hordeaceus subsp. hordeaceus grows throughout the range of the species, being most prevalent in southwestern British Columbia, the western United States, and the northeastern coast."

*Bromus inermis* Leyss. [FNA24, HC, HC2]

Fl. Halens. 16.

smooth brome

(see also *Bromus pumpellianus*)

*Bromopsis inermis* (Leyss.) Holub

*Bromus inermis* Leyss. ssp. *inermis* [HC]

*Bromus inermis* Leyss. var. *inermis*

FNA24: "Bromus inermis is native to Eurasia, and is now found in disturbed sites in Alaska, Greenland, and most of Canada as well as south throughout most of the contiguous United States except the southeast. It has also been used for rehabilitation, and is planted extensively for forage in pastures and rangelands from Alaska and the Yukon Territory to Texas. Bromus inermis is similar to *B. pumpellianus*, differing mainly in having glabrous lemmas, nodes, and leaf blades, but lack of pubescence is not a consistently reliable distinguishing character. Bromus inermis also resembles a recently introduced species, *B. riparius*, from which it differs primarily in its shorter or nonexistent awns."

*Bromus japonicus* Thunb. ex Murray [FNA24, HC, HC2]

Fl. Jap. 52, pl. 11.

Japanese brome

*Bromus japonicus* Thunb. ex Murray var. *porrectus* Hack.

*Bromus patulus* Mert. & W.D.J. Koch

FNA24: "Bromus japonicus grows in fields, waste places, and road verges. It is native to central and southeastern Europe and Asia, and is distributed throughout much of the United States and southern Canada, with one record from the Yukon Territory."

*Bromus laevipes* Shear [FNA24, HC2]

FNA24: "Folia Geobot. Phytotax. 8(2): 168".

woodland brome

FNA24: "Bromus laevipes grows from northern Oregon to southern California. It grows in shaded woodlands and on exposed brushy slopes, at 300?1500 m." Based on the note above and the lack of specimens from Washington, this species is considered excluded.

*Bromus madritensis* L. [HC, HC2]

Cent. Pl. I 5.

compact brome

*Bromus villosus* Forssk.

Recently (2013) collected in Douglas County, WA.

*Bromus orcuttianus* Vasey [FNA24, HC, HC2]

Folia Geobot. Phytotax. 8(2): 168.

chinook brome

*Bromopsis orcuttiana* (Vasey) Holub

FNA24: "Bromus orcuttianus grows on dry hillsides and rocky slopes, and in open pine woods and meadows in the mountains, from 500?3500 m. It is found in the western United States, including Washington, Oregon, California, Nevada, and Arizona. It is not known from Mexico."

*Bromus pacificus* Shear [FNA24, HC, HC2]

Bull. Div. Agrostol., U.S.D.A. 23: 38, f. 21.

Pacific brome

*Bromopsis pacifica* (Shear) Holub

FNA24: "Bromus pacificus grows in moist thickets, openings, and ravines along the Pacific coast from southeastern Alaska to northern California, with a few occurrences further inland."

*Bromus pumpellianus* Scribn. [HC2]

pumpelly brome

*Bromopsis inermis* (Leyss.) Holub ssp. *pumpelliana* (Scribn.) W.A. Weber

*Bromopsis pumpelliana* (Scribn.) Holub

*Bromus ciliatus* L. var. *coloradensis* Vasey ex Beal

*Bromus inermis* Leyss. ssp. *pumpellianus* (Scribn.) Wagnon [HC]

*Bromus inermis* Leyss. var. *pumpellianus* C.L. Hitchc. [HC]

*Bromus inermis* Leyss. var. *purpurascens* (Hook.) Wagnon

*Bromus inermis* Leyss. var. *tweedyi* (Scribn. ex Beal) C.L. Hitchc. [HC]

*Bromus pumpellianus* Scribn. var. *tweedyi* Scribn. ex Beal

*Bromus pumpellianus* Scribn. var. *villosissimus* Hultén

ssp. ***pumpellianus*** [FNA24, HC2]

Bull. Torrey Bot. Club 15(1): 9-10, f. s.n.; pl. D, f. 1-9

arctic brome

FNA24: "Bromus pumpellianus subsp. pumpellianus grows on sandy and gravelly stream banks and lake shores, sand dunes, meadows, dry grassy slopes, and road verges."

***Bromus racemosus*** L. [FNA24, HC2]

Sp. Pl. (ed. 2) 1: 114.

bald brome

FNA24: "Bromus racemosus grows in fields, waste places, and road verges. It is native to western Europe and the Baltic region, and occurs throughout much of southern Canada and the United States. Hitchcock (1951) included *B. hordeaceus* subsp. *pseudothominei* in *B. racemosus*."

***Bromus rubens*** L. [FNA24, HC, HC2]

Cent. Pl. I 5.

fox-tail brome

*Anisantha rubens* (L.) Nevski

*Bromus madritensis* L. ssp. *rubens* (L.) Husn.

FNA24: "Bromus rubens is native to southern and southwestern Europe. It now grows in North America in disturbed ground, waste places, fields, and rocky slopes, from southern Washington to southern California, eastward to Idaho, New Mexico, and western Texas. It was found in Massachusetts before 1900 in wool waste used on a crop field; it is not established there. The record from New York represents a rare introduction; it is not known whether it is established."

***Bromus secalinus*** L. [FNA24, HC, HC2]

Sp. Pl. 1: 76.

rye brome

*Bromus secalinus* L. var. *hirsutus* Kindb.

*Bromus secalinus* L. var. *hirtus* Asch. & Graebn.

FNA24: "Bromus secalinus is native to Europe. It is widespread in the Flora region, where it grows in fields, on waste ground, and along roadsides. Specimens with pubescent spikelets may be called *B. secalinus* var. *velutinus* (Schrad.) W.D.J. Koch."

***Bromus sitchensis*** Trin. [FNA24, HC, HC2]

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2(2): 173.

Alaska brome

FNA24: "Bromus sitchensis grows on exposed rock bluffs and cliffs, and in meadows, often in the partial shade of forests along the ocean edge, and on road verges and other disturbed sites. Its range extends from the Aleutian Islands and Alaska panhandle through British Columbia to southern California. *Bromus sitchensis* resembles *B. aleutensis*, the two sometimes being treated as conspecific varieties. *Bromus sitchensis* is predominantly outcrossing, while *B. aleutensis* is predominantly self-fertilizing (C.L. Hitchcock 1969)."

var. ***aleutensis*** (Trin. ex Griseb.) Hultén [HC, HC2]

Aleut brome

*Bromus aleutensis* Trin. ex Griseb.

FNA24: "Bromus aleutensis grows in sand, gravel, and disturbed soil along the Pacific coast, from the Aleutian Islands of Alaska to western Washington, and on some lake shores of central British Columbia. It has also been found further east in Canada and in northern Idaho, always in disturbed sites, such as road edges. Bromus aleutensis might represent a modified version of B. sitchensis, in which reproduction occurs at a relatively early developmental state in response to the climatic conditions of the Aleutian Islands (Hultén 1968). B. aleutensis is predominantly self-fertilizing, and B. sitchensis is predominantly outcrossing. Anther lengths close to 4.2 mm suggest that at least some plants of B. aleutensis are outcrossing (Hitchcock 1969). Bromus aleutensis intergrades with B. carinatus var. marginatus to the south."

var. **carinatus** (Hook. & Arn.) R.E. Brainerd & Otting [HC, HC2]

California brome

*Bromus carinatus* Hook. & Arn. [HC]

*Bromus carinatus* Hook. & Arn. var. *californicus* Shear

*Bromus carinatus* Hook. & Arn. var. *carinatus* [HC]

*Bromus carinatus* Hook. & Arn. var. *hookerianus* (Thurb.) Shear

*Ceratochloa carinata* (Hook. & Arn.) Tutin

FNA24: "Bromus carinatus var. carinatus is primarily coastal and grows in shrublands, grasslands, meadows, and openings in chaparral and oak and yellow pine woodlands. It ranges from southern British Columbia through Washington, Oregon, and California to Baja California, Mexico, and extends eastward through Arizona to New Mexico."

var. **marginatus** (Nees ex Steud.) B. Boivin [HC2]

large mountain brome

*Bromus breviaristatus* Buckley

*Bromus carinatus* Hook. & Arn. var. *linearis* Shear [HC]

*Bromus carinatus* Hook. & Arn. var. *marginatus* Hitchc. ex Scoggan

*Bromus marginatus* Nees ex Steud. var. *breviaristatus* (Buckley) Beetle

*Bromus marginatus* Nees ex Steud. var. *latior* Shear

*Bromus marginatus* Nees ex Steud. var. *seminudus* Shear

*Ceratochloa marginata* (Nees ex Steud.) W.A. Weber

FNA24: "Bromus carinatus var. marginatus is primarily an inland species and grows on open slopes, grass balds, shrublands, meadows, and open forests, in montane and subalpine zones. It grows from British Columbia to Saskatchewan, south throughout the western United States, and also extends into northern Mexico. Its elevational range is 350?2200 m in the northern part of its distribution, and 1500?3300 m in the south. Bromus carinatus var. marginatus is variable and intergrades with B. carinatus var. carinatus to the west, B. aleutensis to the north, and B. polyanthus to the southeast. As treated here, B. carinatus var. marginatus includes B. luzonensis J. Presl, which has been recognized mainly on the basis of its canescent sheaths and blades; this trait is highly variable and may be environmentally determined. Although the name Bromus carinatus var. marginatus was attributed to Hitchcock by Scoggan, there is no evidence that either A.S. or C.L. Hitchcock actually made the combination."

var. **polyanthus** (Scribn. ex Shear) R.E. Brainerd & Otting [HC2]

smooth brome

*Bromus laciniatus* Beal

*Bromus polyanthus* Scribn. ex Shear

*Ceratochloa polyantha* (Scribn. ex Shear) Tzvelev

Not in WA [FNA, H&C].

var. **sitchensis** [HC, HC2]

Sitka brome

*Bromus squarrosus* L. [HC2]

corn brome

*Bromus squarrosus* L. var. *squarrosus*

FNA24: "Bromus squarrosus grows in overgrazed pastures, fields, waste places, and road verges. Native to central Russia and southern Europe, it can be found mainly in southern Canada and the northern half of

the United States. Saarela (2008) reported the presence of the two varieties described below in his treatment of *Bromus* for British Columbia. The description in FNA 24 applied only to var. *squarrosus*.  
*Bromus japonicus* Thunb. "This species is but one element of a complex . . . and *B. squarrosus* L. The last known from E Mont. and characterized . . ." [H&C p. 509]

***Bromus sterilis* L. [FNA24, HC, HC2]**

Sp. Pl. 1: 77.  
poverty brome

*Anisantha sterilis* (L.) Nevski

FNA24: "*Bromus sterilis* is native to Europe, growing from Sweden southward. In the Flora region, it grows in road verges, waste places, fields, and overgrazed rangeland. It is widespread in western and eastern North America, but is mostly absent from the Great Plains and the southeastern states."

***Bromus suksdorfii* Vasey [FNA24, HC, HC2]**

Bot. Gaz. 10(2): 223.  
Suksdorf's brome

*Bromopsis suksdorfii* (Vasey) Holub

FNA24: "*Bromus suksdorfii* grows on open slopes and in open subalpine forests, at about 1300?3300 m, from southern Washington to southern California."

***Bromus tectorum* L. [FNA24, HC, HC2]**

Sp. Pl. 1: 77.  
cheat grass

*Anisantha tectorum* (L.) Nevski

*Bromus tectorum* L. var. *glabratus* Spenn.

*Bromus tectorum* L. var. *hirsutus* Regel

*Bromus tectorum* L. var. *nudus* Klett & Richt.

FNA24: "*Bromus tectorum* is a European species that is well established in the Flora region and other parts of the world. It grows in disturbed sites, such as overgrazed rangelands, fields, sand dunes, road verges, and waste places. In the southwestern United States, *Bromus tectorum* is considered a good source of spring feed for cattle, at least until the awns mature. It is highly competitive and dominates rapidly after fire, especially in sagebrush areas. The resulting dense, fine fuels permanently shorten the fire-return interval, further hindering reestablishment of native species. It now dominates large areas of the sagebrush ecosystem of the western Flora region. See Schahner et al. 2008 discuss the population genetics of this species in the midcontinental United States and cite earlier papers on a similar topic for other parts of the country. Specimens with glabrous spikelets have been called *Bromus tectorum* f. *nudus* (Klett & Richt.) H. St. John. They occur throughout the range of the species, and are not known to have any other distinguishing characteristics. For this reason, they are not given formal recognition in this treatment."

***Bromus vulgaris* (Hook.) Shear [FNA24, HC, HC2]**

Bull. Div. Agrostol., U.S.D.A. 23: 43.  
Columbian brome

*Bromopsis vulgaris* (Hook.) Holub

*Bromus vulgaris* (Hook.) Shear var. *eximius* Shear [HC]

*Bromus vulgaris* (Hook.) Shear var. *robustus* Shear

*Bromus vulgaris* (Hook.) Shear var. *vulgaris* [HC]

FNA24: "*Bromus vulgaris* grows in shaded or partially shaded, often damp, coniferous forests along the coast, and inland in montane pine, spruce, fir, and aspen forests, from sea level to about 2000 m. Its range extends from coastal British Columbia eastward to southwestern Alberta and southward to central California, northern Utah, and western Wyoming. Varieties have been described within *Bromus vulgaris*; because their variation is overlapping, none are recognized here."

***Calamagrostis* [HC, HC2]**

reedgrass

***Calamagrostis canadensis* (Michx.) P. Beauv. [HC, HC2]**

bluejoint reedgrass

(see also *Calamagrostis stricta*)

*Calamagrostis anomala* Suksd.

*Calamagrostis atropurpurea* Nash

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *imberbis* (Stebbins) C.L. Hitchc. [HC]

var. ***canadensis*** [FNA24, HC, HC2]

Ess. Agrostogr. 15, 152, 157.

bluejoint reedgrass

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *macouniana* (Vasey) Stebbins [FNA24, HC, HC2],  
misapplied

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *pallida* Stebbins [HC]

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *robusta* Vasey [HC]

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *typica* Stebbins

*Calamagrostis expansa* (Munro ex Hillebr.) Hitchc. var. *robusta* (Vasey) Stebbins

*Calamagrostis inexpansa* A. Gray var. *cuprea* Kearney

*Calamagrostis scribneri* Beal

var. ***langsдорffii*** (Link) Inman [HC2]

*Calamagrostis canadensis* (Michx.) P. Beauv. ssp. *langsdorffii* (Link) Hultén, orthographic variant

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *lactea* (Suksd. ex Beal) C.L. Hitchc. [HC]

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *langsdorffii* (Link) Inman

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *scabra* (J. Presl) Hitchc. [HC]

*Calamagrostis* × *lactea* Suksd. ex Beal

*Calamagrostis langsdorffii* (Link) Trin.

*Calamagrostis nubila* Louis-Marie

***Calamagrostis howellii*** Vasey [FNA24, HC, HC2]

Botanical Gazette 6(10): 271.

Howell's reed grass

FNA24: "*Calamagrostis howellii* grows on dry rocky slopes, banks, ledges, and in cliff crevices, sometimes on basalt, from 100-500m. It grows only in the Columbia River Gorge of Washington and Oregon."

***Calamagrostis koelerioides*** Vasey [FNA24, HC, HC2]

Bot. Gaz. 16(5): 147.

pineland reed grass

*Calamagrostis densa* Vasey

"I have seen no material referable to this species from n. Oreg. or from Wash." [H&C p. 529.]. FNA24 shows this species occurring in north-central Washington.

***Calamagrostis nutkaensis*** (J. Presl) Steud. [FNA24, HC, HC2]

Synopsis Plantarum Glumacearum 1: 190.

Nootka reed grass

*Deyeuxia nutkaensis* J. Presl

***Calamagrostis purpurascens*** R. Br. [FNA24, HC, HC2]

Bot. App. 731.

purple reedgrass

*Calamagrostis lepageana* Louis-Marie

*Calamagrostis maltei* (Polunin) Á. Löve & D. Löve

*Calamagrostis purpurascens* R. Br. ssp. *maltei* (Polunin) A.E. Porsild

*Calamagrostis purpurascens* R. Br. var. *maltei* Polunin

*Calamagrostis purpurascens* R. Br. var. *purpurascens*

*Calamagrostis vaseyi* Beal

*Calamagrostis yukonensis* Nash

*Deschampsia congestiformis* W.E. Booth

FNA24: "The hairy adaxial leaf surfaces are a reliable diagnostic characteristic for *C. purpurascens*. Many specimens from Washington and Oregon currently identified as *C. purpurascens* belong to *C. tacomensis*. In addition to differing in its leaf vestiture, *C. purpurascens* has shorter awns and panicle branches, and

more scabrous glumes, than *C. tacomensis*."

***Calamagrostis rubescens* Buckley [FNA24, HC, HC2]**

Proc. Acad. Nat. Sci. Philadelphia 14: 92.  
pinegrass

*Calamagrostis fasciculata* Kearney

FNA24: "*Calamagrostis rubescens* is similar to *C. koelerioides*. The two have traditionally been distinguished by the presence of hairs on the leaf collars of *C. rubescens*, and their absence from *C. koelerioides*; a more reliable differentiation is the shorter lemmas, glumes, and awns of *C. rubescens*."

***Calamagrostis stricta* (Timm) Koeler [HC2]**

slimstem reedgrass

*Calamagrostis neglecta* (Ehrh.) P.G. Gaertn., B. Mey. & Scherb. [HC]

*Calamagrostis robertii* A.E. Porsild

**ssp. *inexpansa* (A. Gray) C.W. Greene [FNA24, HC2]**

Amer. J. Bot. 71: 286.

narrow-spiked reedgrass

*Calamagrostis californica* Kearney

*Calamagrostis canadensis* (Michx.) Beauv. var. *acuminata* Vasey ex Shear & Rydb. [HC]

*Calamagrostis canadensis* (Michx.) P. Beauv. var. *arcta* Stebbins

*Calamagrostis chordorrhiza* A.E. Porsild

*Calamagrostis crassiglumis* Thurb. [HC]

*Calamagrostis expansa* Rickett & Gilly

*Calamagrostis fernaldii* Louis-Marie

*Calamagrostis hyperborea* Lange

*Calamagrostis hyperborea* Lange var. *americana* (Vasey) Kearney

*Calamagrostis hyperborea* Lange var. *elongata* Kearney

*Calamagrostis hyperborea* Lange var. *stenodes* Kearney

*Calamagrostis inexpansa* A. Gray [HC]

*Calamagrostis inexpansa* A. Gray var. *barbulata* Kearney [HC]

*Calamagrostis inexpansa* A. Gray var. *brevior* (Vasey) Stebbins

*Calamagrostis inexpansa* A. Gray var. *inexpansa* [HC]

*Calamagrostis inexpansa* A. Gray var. *novae-angliae* Stebbins

*Calamagrostis inexpansa* A. Gray var. *robusta* (Vasey) Stebbins

*Calamagrostis labradorica* Kearney

*Calamagrostis lacustris* (Kearney) Nash

*Calamagrostis lapponica* (Wahlenb.) Hartm. var. *brevipilis* Stebbins

*Calamagrostis pickeringii* A. Gray var. *lacustris* (Kearney) Hitchc.

*Calamagrostis stricta* (Timm) Koeler var. *brevior* Vasey

*Calamagrostis stricta* (Timm) Koeler var. *lacustris* (Kearney) C.W. Greene

FNA24: "*C. stricta* ssp. *inexpansa* differs from subsp. *stricta* in its more robust growth and coarse habit."

**ssp. *stricta* [FNA24, HC2]**

Saccardo 105.

narrow-spiked reedgrass

*Calamagrostis neglecta* (Ehrh.) P.G. Gaertn., B. Mey. & Scherb. ssp. *stricta* (Timm) Tzvelev

*Calamagrostis neglecta* (Ehrh.) P.G. Gaertn., B. Mey. & Scherb. var. *gracilis* Scribn. ex Kearney

*Calamagrostis neglecta* (Ehrh.) P.G. Gaertn., B. Mey. & Scherb. var. *micrantha* (Kearney) Stebbins

*Calamagrostis neglecta* (Ehrh.) P.G. Gaertn., B. Mey. & Scherb. var. *neglecta* [HC]

FNA24: "*C. stricta* ssp. *inexpansa* differs from subsp. *stricta* in its more robust growth and coarse habit."

***Calamagrostis tacomensis* K. Marr & Hebda [FNA24, HC2]**

Madroño 53(3): 293, f. 5.

Rainier reedgrass

*Calamagrostis sesquiflora* (Trin.) Tzvelev [FNA24, HC, HC2], misapplied

FNA24: "This species has previously been identified as either *C. purpurascens* or *C. sesquiflora*. It differs from *C. purpurascens* in having glabrous leaves, generally longer awns and inflorescence branches, and smoother glumes. It differs from *C. sesquiflora* in having narrower leaves, callus hairs that are longer relative to the lemmas, longer inflorescence branches, and glume apices that are not twisted, as well as in often preferring drier habitats."

***Calamagrostis tweedyi*** (Scribn.) Scribn. [FNA24, HC, HC2]

Contributions from the United States National Herbarium 3(1): 83.

Cascade reed grass

***Calamovilfa*** [HC, HC2]

sandreed

*Calamovilfa gigantea* (Nutt.) Scribn. & Merr. [HC2]

*Calamovilfa longifolia* (Hook.) Hack. ex Scribn. & Southw. [HC, HC2]

prairie sandreed

var. *longifolia* [FNA24, HC2]

True Grasses 113.

prairie sandgrass sandreed, prairie sandreed

Introduced in WA, probably for soil stabilization.

***Catabrosa*** [HC, HC2]

brookgrass, water whorlwort

*Catabrosa aquatica* (L.) P. Beauv. [FNA24, HC, HC2]

Ess. Agrostogr. 97, 149, 157, pl. 19.

brookgrass, water whorlgrass

*Aira aquatica* L.

*Catabrosa aquatica* (L.) P. Beauv. var. *uniflora* Gray

There are no Washington specimens of this species in any Pacific Northwest herbaria. It is considered excluded until a specimen is located confirming its occurrence here.

***Cenchrus*** [HC, HC2]

bur-grass, hedgehog-grass, sandbur

*Cenchrus longispinus* (Hack.) Fernald [FNA25, HC, HC2]

Rhodora 45(538): 388.

longspine sandbur, mat sandbur

*Cenchrus carolinianus* Walter

General uncertainty regarding whether native or introduced. However, earliest collections in our area date to 1920's, and the early floras (e.g., Piper and Beattie) do not include it. For a species with fruits that readily stick to human and beast, it is hard to envision that the early (i.e., 1800s) botanical explorers did not encounter this species. Differing in several bristle characters from *Cenchrus spinifex*; see FNA.

*Cenchrus spinifex* Cav. [FNA25, HC2]

Icon. 5: 38, t. 461.

coastal sandbur, common sandbur

(see also *Cenchrus longispinus*)

*Cenchrus pauciflorus* Benth.

Reported in WA & OR by FNA, often confused with *Cenchrus longispinus*. FNA25: "*Cenchrus spinifex* is common in sandy woods, fields, and waste places throughout the southern United States and southwards into South America. It may be more widespread than shown in the northern portion of the contiguous United States because it has often been confused with *C. tribuloides*. *Cenchrus spinifex* differs from *C. tribuloides* in its glabrous or less densely pubescent fascicles, narrower inner bristles, and larger number of bristles. It has also been confused with *C. longispinus*, but differs in having shorter spikelets, fewer bristles overall, wider inner bristles, and outer bristles that are usually flattened rather than usually terete."

### ***Cinna*** [HC, HC2]

wood reed-grass, woodreed

#### ***Cinna latifolia*** (Trevir. ex Göpp.) Griseb. [FNA24, HC, HC2]

Fl. Ross. 4(13): 435.  
slender wood-reed

FNA24: "*Cinna latifolia* is a circumboreal species, extending from Norway to the Kamchatka peninsula in Russia, and from Alaska to Newfoundland. It grows in moist to wet soil in open coniferous or mixed forests, swamps, thickets, bogs, and streamsides, at 0-2600 m. It flowers in late summer and fall. *Cinna latifolia* differs from *C. arundinacea* in its 1 (rarely 3)-veined upper glumes and its smaller spikelets. A collection from the Aleutian Islands had abnormally large (to 5.5 mm) and often 2-flowered spikelets (Brandenburg et al. 1991). *Cinna latifolia* is a variable species for which varietal names have been proposed; because the variation is continuous, no varieties are recognized in this treatment."

### ***Coix***

#### ***Coix lacryma-jobi*** L. [FNA25]

Sp. Pl. 2: 972.  
Job's-tears

Reported from WA in FNA. FNA25: "*Coix lacryma-jobi* is a tall, maize-like plant. In North America, it is usually grown as an ornamental, but it has become established at scattered locations in the Flora region. The involucre, which can be used as beads, may be white, blue, pink, straw, gray, brown, or black, with the color being distributed evenly, irregularly, or in stripes. Cultivars with easily removed involucre are grown for food and beverage, especially in Asia."

### ***Coleanthus*** [HC, HC2]

moss-grass

#### ***Coleanthus subtilis*** (Tratt.) Seidl [FNA24, HC, HC2]

Syst. Veg. 2: 276.  
moss grass

H&C locates it on sandbars of Columbia R. FNA24: "*Coleanthus subtilis* is an ephemeral pioneer species of wet, open habitats. It grows on wet, muddy to sandy, calcium-deficient soils on the shores of lakes, sandbars, and islands. In the Flora region, it is known from the Columbia River, and around Hatzic, Arrow and Shuswap lakes in British Columbia. It also grows in Europe, Russia, and China. Throughout its range, *C. subtilis* is known from relatively few, scattered locations. It is easily overlooked because of its diminutive size, and because it flowers in early spring or late fall. It is not clear whether it is native or introduced in the Flora region."

### ***Cortaderia*** [HC2]

pampas grass

#### ***Cortaderia jubata*** (Lemoine) Stapf [FNA25, HC2]

Botanical Magazine 124: pl. 7607.  
purple pampas grass

Recently collected as an escape from cultivation in King & Snohomish Cos. FNA25: "*Cortaderia jubata* is found on the west coast of the coterminus United States, growing in disturbed, open ground such as brushy slopes, eroded banks and cliffs, road cuts, cut-over timber areas, and sand dunes. It is native to mountainous areas of Bolivia, Peru, and Ecuador. It was grown in the past as an ornamental because of its attractive panicles, but is now a serious weed in California, reproducing apomictically and invading many open habitats. It was mistakenly called *Cortaderia rudiusscula* Stapf by Hitchcock (1951). The florets of *C. rudiusscula* differ from those of *C. jubata* in being longer and narrower, having shorter, less hairy calluses, and in having no hairs that extend beyond the top of the palea. *Cortaderia rudiusscula* is not known from North America."

#### ***Cortaderia selloana*** (Schult. & Schult. f.) Asch. & Graebn. [FNA25, HC2]

Synopsis der Mitteleuropäischen Flora 2(1): 325.  
pampas grass

*not in H&C*

Recently collected as an escape from cultivation in King & Snohomish Cos. FNA25: "Cortaderia selloana is native to central South America. It is cultivated as an ornamental in the warmer parts of North America. It was thought that it would not become a weed problem because most plants sold as ornamentals are unisexual, but it is now considered an aggressive weed in California and Bendigo, Australia. The weedy Australian plants are bisexual (Walsh 1994)."

### **Corynephorus** [HC, HC2]

#### *Corynephorus canescens* (L.) P. Beauv. [FNA24, HC, HC2]

Ess. Agrostogr. 90, 149, 159.  
gray club-awn grass

*Aira canescens* L.

FNA24: "Corynephorus canescens is native to Europe. It grows on coastal sand dunes and inland on sandy soils, as well as in disturbed areas such as waste ground and ballast dumps. It has been recorded from scattered locations in North America, but its current status in these locations is not known. Douglas et al. (1994) reported that it no longer occurred in British Columbia, but it was later found near the original collection site (Lomer 94-256; UBC 209521)."

### **Crypsis** [HC2]

prickle grass

#### *Crypsis alopecuroides* (Piller & Mitterp.) Schrad. [FNA25, HC2]

Fl. Germ. 1: 167.  
foxtail pricklegrass

*Heleochoa alopecuroides* (Piller & Mitterp.) Host ex Roem. [HC]

FNA25: "Crypsis alopecuroides is common to abundant in sandy soils around drying lake margins in Oregon and southern Washington, and within the last forty years has become widespread in northern California; it is also known from several other western states. It was first collected in the Western Hemisphere in the late 1800s from shipyard areas in and around Philadelphia, but has not been collected in the eastern United States since. In the Eastern Hemisphere, it extends from France and northern Africa to the Urals and Iraq."

#### *Crypsis vaginiflora* (Forssk.) Opiz [FNA25, HC2]

Naturalientausch 8: 83.  
modest pricklegrass

The Washington report in FNA is from Spokane County, though no specimens or basis for the report have been found. Several recent (2008, 2016) collections show it to be well established around the Potholes Reservoir in Grant County. Well established in California, and reported for WA, ID, and NV in FNA. FNA25: "Crypsis vaginiflora is common to abundant in clay or sandy clay soil in California, where it was first introduced in the late 1800s. It has since been found at a few locations in Washington, Idaho, and Nevada, and will probably spread to additional sites with suitable habitat in the future. It is native to Egypt and southwestern Asia."

### **Cynodon** [HC, HC2]

cynodon

#### *Cynodon dactylon* (L.) Pers. [FNA25, HC, HC2]

Synopsis Plantarum seu Encheridium Botanicum 1.  
bermuda grass

*Capriola dactylon* (L.) Kuntze

*Panicum dactylon* L.

FNA25: "The most commonly encountered variety, both in the Flora region and in other parts of the world, is *C. dactylon* var. *dactylon*, largely because it thrives in severely disturbed, exposed sites; it does not invade natural grasslands or forests. Determining how many other varieties are established in the Flora region is almost impossible, because there has been no global study of variation in the species. The presence of numerous cultivars complicates an already difficult problem. The two varieties keyed out below are the only two that grow in the Flora region according to de Wet and Harlan (1970), but these authors do

not appear to have considered the taxa recognized by Caro and Sánchez (1969). For most purposes, it is probably neither necessary nor feasible to identify the variety of *C. dactylon* encountered."

***Cynosurus*** [HC, HC2]

dogtail, dog's-tail grass

***Cynosurus cristatus*** L. [FNA24, HC, HC2]

Sp. Pl. 1: 72.

crested dogtail

FNA24: "*Cynosurus cristatus* is a European native that is now established in North America. It grows in a wide range of soils in dry or damp habitats. In Europe it is used for fodder and pasture, especially for sheep, but in North America it is regarded as a weedy species. It is self-incompatible."

***Cynosurus echinatus*** L. [FNA24, HC, HC2]

Sp. Pl. 1: 72.

bristly dog's-tail grass

FNA24: "*Cynosurus echinatus* native to southern Europe. It is now established in dry, open habitats in North America, South America, and Australia."

***Dactylis*** [HC, HC2]

cock's-foot grass, orchard-grass

***Dactylis glomerata*** L. [FNA24, HC, HC2]

Sp. Pl. 1: 71.

orchard grass

*Dactylis glomerata* L. var. *ciliata* Peterm.

*Dactylis glomerata* L. var. *detonsa* Fr.

*Dactylis glomerata* L. var. *vivipara* Parl.

FNA24: "*Dactylis glomerata* grows in pastures, meadows, fence rows, roadsides, and similar habitats throughout North America. Native to Eurasia and Africa, it has been introduced throughout most of the cool-temperate regions of the world as a forage grass. It provides nutritious forage that is relished by all livestock, as well as by deer, geese, and rabbits. When abundant, the pollen can be a major contributor to hay fever. The species includes both diploid and tetraploid populations. Although several infraspecific taxa have been described, based generally on the size of the stomata and pollen, variation in pubescence, and panicle features, formal taxonomic recognition does not seem warranted. Numerous cultivars have been developed for agricultural use."

***Danthonia*** [HC, HC2]

heathgrass, oatgrass

*Sieglingia* [HC]

***Danthonia californica*** Bol. [FNA25, HC, HC2]

Proc. Calif. Acad. Sci. 2: 182.

California oatgrass

*Danthonia americana* Scribn.

*Danthonia californica* Bol. var. *americana* (Scribn.) Hitchc.

*Danthonia californica* Bol. var. *palousensis* H. St. John

*Danthonia californica* Bol. var. *piperi* H. St. John

FNA25: "*Danthonia californica* grows in prairies, meadows, and open woods. It has a disjunct distribution, one portion of its range being located in western North America, the other in Chile. An introduced population has been found at Mansfield, Massachusetts. Plants with pilose foliage have been called *D. californica* var. *americana* (Scribn.) Hitchc. and plants with sparsely pilose lemma backs *D. californica* var. *macounii* Hitchc., but the variation does not appear to be taxonomically significant."

***Danthonia decumbens*** (L.) DC. [FNA25, HC2]

Fl. Franç. (ed. 3) 3: 33.

common heath-grass, mountain heath-grass

*Festuca decumbens* L.

*Sieglingia decumbens* (L.) Bernh. [HC]

FNA25: "Danthonia decumbens grows throughout most of Europe, the Caucasus, and northern Turkey, and is now established on the west and east coasts of North America. It grows in heath lands, sandy or rocky meadows, clearings, and sometimes along roadsides. The species is sometimes placed in the monotypic genus Sieglingia, as Sieglingia decumbens (L.) Bernh."

***Danthonia intermedia*** Vasey [FNA25, HC, HC2]

Bull. Torrey Bot. Club 10: 52.  
timber oatgrass

*Danthonia canadensis* B.R. Baum & Findlay  
*Danthonia intermedia* Vasey var. *cusickii* T.A. Williams

FNA25: "Danthonia intermedia grows in boreal and alpine meadows, open woods, and on rocky slopes and northern plains. Its range extends from Kamchatka, Russia, to North America, south along the cordillera, and east, through boreal and alpine regions, to Quebec and Newfoundland and Labrador. Its primarily cleistogamous reproduction has probably facilitated its establishment and spread through more boreal and alpine habitats than other members of the genus. Tzvelev (1976) treats the American plants as Danthonia intermedia Vasey subsp. intermedia and the Russian plants, which have  $2n = 18$ , as Danthonia intermedia subsp. riabuschinskii (Kom.) Tzvelev."

***Danthonia spicata*** (L.) P. Beauv. ex Roem. & Schult. [FNA25, HC, HC2]

poverty oatgrass

*Danthonia spicata* (L.) P. Beauv. ex Roem. & Schult. var. *longipila* Scribn. & Merr.  
*Danthonia spicata* (L.) P. Beauv. ex Roem. & Schult. var. *pinetorum* Piper [HC]  
*Danthonia thermalis* Scribn., orthographic variant

FNA25: "Danthonia spicata grows in dry rocky, sandy, or mineral soils, generally in open sunny places. Its range includes most of boreal and temperate North America and extends south into northeastern Mexico. Phenotypically, Danthonia spicata is quite variable, expressing different growth forms under different conditions (Dore and McNeill 1980; Darbyshire and Cayouette 1989). Slow clonal growth, extensive cleistogamy, and limited dispersal contribute to the establishment of morphologically uniform populations, some of which have been given scientific names. For instance, D. spicata var. pinetorum Piper is sometimes applied to depauperate plants and D allenii Austin misapplied to more robust or second growth plants (Dore and McNeill 1980). Plants of shady or moist habitats often lack the distinctive curled or twisted blades usually found on plants growing in open habits. Such plants, which tend to have smaller spikelets and pilose foliage, have been called D. spicata var. longipila Scribn. & Merr. The terminal inflorescence is usually primarily cleistogamous, but plants with chasmogamous inflorescences are found throughout the range of the species. Chasmogamous plants differ in having divergent inflorescence branches at anthesis, larger anthers, and well-developed lodicules."

***Danthonia unispicata*** (Thurb.) Munro ex Macoun [FNA25, HC, HC2]

Proc. Acad. Nat. Sci. Philadelphia 1863: 78  
few-flower oatgrass, one-spike oatgrass

Authority follows FNA, though TROPICOS indicates that this name under the authorship used here is illegitimately published. FNA25: "Danthonia unispicata is restricted to western North America, where it grows in prairies and meadows, on rocky slopes, and in dry openings up to timberline in the mountains. It differs from D. californica in its shorter stature, usually densely pilose foliage, short, erect pedicels, and the usually erect cauline leaf blades. It is closely related to D. californica, and some authors prefer to treat it as Danthonia californica var. unispicata Thurb."

***Deschampsia*** [HC, HC2]

hairgrass  
(see also *Vahlodea*)

***Deschampsia cespitosa*** (L.) P. Beauv. [HC, HC2]

bering hair grass, Pacific hair grass, tufted hair grass, Beringian hairgrass, tufted hairgrass

*Aira caespitosa* Muhl., orthographic variant  
*Aira holciformis* (J. Presl) Steud.  
*Deschampsia beringensis* Hultén

*Deschampsia caespitosa* (L.) P. Beauv. ssp. *genuina* (Reichenb.) Volk., orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. ssp. *glauca* (Hartm.) Hartm., orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. ssp. *orientalis* Hultén, orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. ssp. *parviflora* (Thuill.) K. Richt., orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *abbei* Boivin, orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *alpicola* (Rydb.) Á. & D. Löve & Kapoor, orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *glauca* (Hartm.) Lindm. f., orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *intercotidalis* Boivin, orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *littoralis* (Gaudin) Richter, orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *longiflora* Beal, orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *maritima* Vasey, orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. var. *parviflora* (Thuill.) Coss. & Germ., orthographic variant  
*Deschampsia caespitosa* (L.) P. Beauv. ssp. *beringensis* (Hultén) W.E. Lawr.  
*Deschampsia caespitosa* (L.) P. Beauv. ssp. *caespitosa*  
*Deschampsia caespitosa* (L.) P. Beauv. ssp. *holciformis* (J. Presl) W.E. Lawr.  
*Deschampsia caespitosa* (L.) P. Beauv. var. *arctica* Vasey [HC]  
*Deschampsia caespitosa* (L.) P. Beauv. var. *caespitosa* [HC]  
*Deschampsia caespitosa* (L.) P. Beauv. var. *longiflora* Beal [HC]  
*Deschampsia glauca* Hartm.  
*Deschampsia holciformis* J. Presl

***Deschampsia danthonioides* (Trin.) Munro [FNA24, HC, HC2]**

Pl. Hartw. 342.  
annual hair grass

*Aira danthonioides* Trin.

*Deschampsia calycina* J. Presl

*Deschampsia danthonioides* (Trin.) Munro var. *gracilis* (Vasey) Munz

FNA24: "*Deschampsia danthonioides* grows in temperate and cool-temperate regions, usually in open, wet to dry habitats and often in disturbed ground. Its primary range extends from southern British Columbia, through Washington and Idaho, to Baja California, Mexico. It also grows, as a disjunct, in Chile and Argentina."

***Deschampsia elongata* (Hook.) Munro [FNA24, HC, HC2]**

Pl. Hartw. 342.  
slender hair grass

*Aira elongata* Hook.

FNA24: "*Deschampsia elongata* grows in moist to wet habitats, from near sea level to alpine elevations, from Alaska and the Yukon south to northern Mexico and east to Montana, Wyoming, and Arizona. It also grows, as a disjunct, in Chile. The records from Maine and Colorado probably represent introductions."

***Dichanthelium* [HC2]**

perennial panicgrass

***Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark [HC2]**

hairy perennial panicgrass

ssp. ***fasciculatum* (Torr.) Freckmann & Lelong [FNA25, HC2]**

Sida 20(1): 167.  
hairy panicgrass

*Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark ssp. *acuminatum* [KZ99], misapplied

*Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark ssp. *thermale* (Bol.) Freckmann & Lelong [KZ99], misapplied

*Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark var. *fasciculatum* (Torr.) Freckmann [KZ99]

Taxonomy follows FNA; *Panicum ferventicola* Schmolli (mentioned in Fl. of the PNW, Vol. 1) is a synonym of a taxon not in WA, called by FNA *Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark ssp. *sericeum* (Schmolli) Freckman & Lelong. Reports of *Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark var. *acuminatum* (Kz99 and 1978 Annals of the Missouri Botanical Garden) are referred to *D. acuminatum* ssp. *fasciculatum*. Reports of *Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark

var. *thermale* (Bol.) Freckmann (Kz99 and Hitchcock & Chase 1971) are referred to *D. acuminatum* ssp. *fasciculatum*. FNA25: "*Dichantherium acuminatum* subsp. *fasciculatum* grows primarily in disturbed areas, open or cut-over woods, thickets, and grasslands, in dry to moist soils, including river banks, lake margins, and marshy areas. It is widespread in temperate North America, growing from Canada to Mexico, but it is somewhat less common in the western part of its range, where it often occurs on moister areas. *Dichantherium acuminatum* subsp. *fasciculatum* includes probably the most widespread, ubiquitous, and variable assemblages of forms in the species. It is not always clearly separable from the other subspecies of *D. acuminatum*, especially subsp. *acuminatum*, subsp. *implicatum*, and subsp. *lindheimeri*. Gene exchange with other *Dichantherium* species (including *D. dichotomum*, *D. laxiflorum*, *D. ovale*, *D. commutatum*, and *D. boreale*) probably occurs not infrequently."

\* Hitchcock, A. S. & A. Chase. 1971. *Manual of the Grasses of the United States*, 2nd ed. Dover Publ., New York.

### *Dichantherium oligosanthes* (Schult.) Gould [HC2]

Scribner's perennial panicgrass

ssp. *scribnerianum* (Nash) Freckmann & Lelong [FNA25, HC2]

Sida 20(1): 170.

Scribner's panicgrass witchgrass

*Dichantherium oligosanthes* (Schult.) Gould var. *helleri* (Nash) Mohlenbr.

*Dichantherium oligosanthes* (Schult.) Gould var. *scribnerianum* (Nash) Gould [KZ99]

*Panicum helleri* Nash

*Panicum oligosanthes* Schult. var. *helleri* (Nash) Fernald

*Panicum oligosanthes* Schult. var. *scribnerianum* (Nash) Fernald

*Panicum scribnerianum* Nash [HC]

Taxonomy follows FNA, but the genus *Dichantherium* is only weakly distinguished from the genus *Panicum*, and is probably best included in it. FNA25: "*Dichantherium oligosanthes* subsp. *scribnerianum* grows in sandy or clayey banks and prairies. Its range extends from southern British Columbia to the east coast of the United States, and south into northern Mexico. It is the most widespread of the two varieties."

### *Digitaria* [HC, HC2]

crabgrass

*Digitaria ischaemum* (Schreb.) Muhl. [FNA25, HC, HC2]

Descr. Gram. 131.

smooth crabgrass

*Digitaria ischaemum* (Schreb.) Muhl. var. *mississippiensis* (Gatt.) Fernald

*Panicum ischaemum* Schreb.

*Syntherisma ischaemum* (Schreb.) Nash

tropics of N and S America. FNA25: "*Digitaria ischaemum* is a Eurasian weed that is now common in lawns, gardens, fields, and waste ground in warm-temperate regions throughout the world, including much of the Flora region. Larger plants with 5-7 inflorescence branches 8-15 cm long have been called *D. ischaemum* var. *mississippiensis* (Gatt.) Fernald, but they intergrade with more typical plants, and so do not merit taxonomic recognition."

*Digitaria sanguinalis* (L.) Scop. [FNA25, HC, HC2]

Fl. Carniol. (ed. 2) 1: 52.

hairy crabgrass

*Panicum sanguinale* L.

*Syntherisma sanguinalis* (L.) Dulac

FNA25: "*Digitaria sanguinalis* is a weedy Eurasian species that is now found in waste ground of fields, gardens, and lawns throughout much of the world, including the Flora region."

### *Diplachne* [HC2]

sprangletop

*Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult. [HC2]

clustered salt-grassprangletop, loose-flowered sprangletop

*Leptochloa fusca* (L.) Kunth

ssp. ***fascicularis*** (Lam.) P.M. Peterson & N. Snow [HC2]

bearded sprangletop

*Diplachne acuminata* Nash

*Diplachne fascicularis* (Lam.) P. Beauv.

*Diplachne maritima* E.P. Bicknell

*Leptochloa acuminata* (Nash) Mohlenbr.

*Leptochloa fascicularis* (Lam.) A. Gray [HC]

*Leptochloa fascicularis* (Lam.) A. Gray var. *acuminata* (Nash) Gleason

*Leptochloa fascicularis* (Lam.) A. Gray var. *maritima* (E.P. Bicknell) Gleason

*Leptochloa fusca* (L.) Kunth ssp. *fascicularis* (Lam.) N.W. Snow

FNA24: "*Leptochloa fusca* subsp. *fascicularis* extends from southern British Columbia and Ontario to Argentina, although it has not yet been reported from Georgia. Coastal populations from Massachusetts to Florida with long lemma awns have been called *L. fascicularis* var. *maritima* (E.P. Bicknell) Gleason. They do not merit taxonomic recognition because long awns and salinity tolerance are common throughout the species. *Leptochloa fusca* subsp. *fascicularis* differs from *L. viscida*, which grows in the same region, in its longer panicles, frequently unawned or mucronate lemmas, and whitish florets."

### ***Distichlis*** [HC, HC2]

saltgrass

***Distichlis spicata*** (L.) Greene [FNA25, HC, HC2]

Bulletin of the Californis Academy of Sciences 2.

alkaline grass, coastal salt grass

*Distichlis spicata* (L.) Greene ssp. *stricta* (Torr.) Thorne

*Distichlis spicata* (L.) Greene var. *borealis* (J. Presl) Beetle [HC]

*Distichlis spicata* (L.) Greene var. *divaricata* Beetle

*Distichlis spicata* (L.) Greene var. *nana* Beetle

*Distichlis spicata* (L.) Greene var. *stolonifera* Beetle

*Distichlis spicata* (L.) Greene var. *stricta* (Torr.) Scribn.

*Distichlis stricta* (Torr.) Rydb. [HC]

*Distichlis stricta* (Torr.) Rydb. var. *dentata* (Rydb.) C.L. Hitchc. [HC]

*Distichlis stricta* (Torr.) Rydb. var. *stricta* [HC]

*Uniola spicata* L.

FNA 25: "*Distichlis spicata* grows in saline soils of the Western Hemisphere and Australia. Numerous infraspecific taxa have been recognized in the past, but none appears to be justified. Recent North American accounts of *Distichlis* have usually recognized plants from maritime coasts as distinct from those growing inland, supposedly having more congested inflorescences, but the range of variation is similar in the two habitats."

\* Beetle, A.A. 1943. The North American variations of *Distichlis spicata*. Bull. Torrey Bot. Club 70:638-650.

### ***Echinochloa*** [HC, HC2]

barnyard-grass

***Echinochloa colona*** (L.) Link [FNA25, HC2]

Hort. Berol. 2: 209.

awnless barnyard grass, or jungle-rice

*Echinochloa colonum* (L.) Link [HC]

*Panicum colonum* L.

Reported from WA in FNA; spelling of *colona* follows FNA, corrected from *colonom* in H&C. FNA25: "*Echinochloa colona* is widespread in tropical and subtropical regions. It is adventive and weedy in North America, growing in low-lying, damp to wet, disturbed areas, including rice fields. The unbranched, rather widely-spaced panicle branches make this one of the easier species of *Echinochloa* to recognize. Hitchcock (1913) considered that *colonom* was a non-declining contraction, but dictionaries of Linnaeus'

time treated it as a declining adjective. Because Linnaeus was the first to name the species (as *Panicum colonum*), it seems best to follow the practice considered correct in his day; hence *E. colona*. (See also Nicolson 1986.)"

*Echinochloa crus-galli* (L.) P. Beauv. [FNA25, HC2]

Ess. Agrostogr. 53, 161, 169, pl. 11, f. 2.  
barnyard grass, or large barnyard grass  
(see also *Echinochloa muricata* var. *microstachya*)

*Echinochloa crus-galli* (L.) P. Beauv. var. *mitis* (Pursh) Peterm.  
*Echinochloa crusgalli* (L.) P. Beauv. [HC]  
*Echinochloa muricata* (P. Beauv.) Fernald var. *occidentalis* Wiegand  
*Echinochloa occidentalis* (Wiegand) Rydb.

FNA25: "Echinochloa crus-galli is a Eurasian species that is now widely established in the Flora region, where it grows in moist, disturbed sites, including rice fields. Some North American taxonomists have interpreted Echinochloa crus-galli much more widely; others treat it as here, but recognize several infraspecific taxa based on such characters as trichome length and abundance, and awn length. There are several ecological and physiological ecotypes within the species, but the correlation between most of these and the species morphological variation has not been established, so no infraspecific taxa are recognized here."

*Echinochloa crus-pavonis* (Kunth) Schult. [HC2]

guleaf barnyard-grass

var. *crus-pavonis* [FNA25, HC2]

Mant. 2: 269  
gulf barnyard grass

Reported for WA in FNA, native from BS south to northern Mexico not in H&C. FNA25: "Echinochloa crus-pavonis is a native species found in scattered locations from British Columbia to Arizona, east to Florida, and south into South America. It favors marshes and wet places at lower elevations, often being found in the water....Echinochloa crus-pavonis var. *macera* extends south only as far as northern Mexico."

*Echinochloa muricata* (P. Beauv.) Fernald [HC2]

American barnyard-grass

var. *microstachya* Wiegand [FNA25, HC2]

Rhodora 17(198): 106.  
American barnyard grass, or watergrass

*Echinochloa muricata* (P. Beauv.) Fernald var. *wiegandii* (Fassett) Mohlenbr.  
*Echinochloa pungens* (Poir.) Rydb. var. *microstachya* (Wiegand) Fernald & Griscom  
*Echinochloa wiegandii* (Fassett) McNeill & Dore

FNA25: "Echinochloa muricata var. *microstachya* is the common variety in the western part of North America, extending east to the Missouri River and the Texas panhandle."

*Eleusine* [HC, HC2]

*Eleusine indica* (L.) Gaertn. [FNA25, HC, HC2]

Fruct. Sem. Pl. 1: 8.  
goosegrass

Reported in FNA for WA. FNA25: "Eleusine indica is a common weed in the warmer regions of the world. In the Flora region, it usually grows in disturbed areas and lawns, and has been found in most states of the contiguous United States."

\* Hilu, K. W. 2003. Eleusine Gaertn., p. 109-110, in: Barkworth, M. E., K. M. Capels, S. Long, and M. B. Piep, eds. 2003. Flora of North America North of Mexico. Volume 25 MagnoliophytA: Commelinidae (in part): Poaceae, part 2. Oxford University Press, New York. 783 p.

*Eleusine tristachya* (Lam.) Lam. [HC, HC2]

×*Elyhordeum*

×*Elyhordeum macounii* (Vasey) Barkworth & D.R. Dewey [FNA24]

Great Basin Naturalist 43(4): 570.

×*Agrohordeum macounii* (Vasey) Lepage

×*Agrohordeum macounii* (Vasey) Lepage var. *valencianum* Bowden

*Elymus* ×*macounii* Vasey

×*Elytesion macounii* (Vasey) Barkworth & D.R. Dewey

"These have been shown to be sterile hybrids of sporadic occurrence, in this case mostly of *Agropyron trachycaulum* (A. caninum) and *Hordeum jubatum* parentage" [H&C]. FNA24: "×*Elyhordeum macounii* consists of hybrids between *Elymus trachycaulus* and *Hordeum jubatum*. It is quite common in western and central North America. Backcrosses to *E. trachycaulus* may have non-disarticulating rachises; they are likely to be identified as *E. trachycaulus*, falling between subsp. *trachycaulus* and subsp. *subsecundus*.

Artificial, partially fertile octoploids were distributed to natural and experimental areas in several western states prior to 1960 (Bowden 1960); it is not known whether they have persisted."

×*Elyhordeum stebbinsianum* (Bowden) Bowden [FNA24]

×*Elymordeum stebbinsianum* Bowden

FNA24 map shows record from Klickitat County. FNA24: "×*Elyhordeum stebbinsianum* consists of hybrids between *Elymus glaucus* and *Hordeum brachyantherum*. Bowden (1985) reported that they appear to be completely sterile. They have been found at scattered locations in western North America."

×*Elyleymus*

×*Elyleymus aristatus* (Merr.) Barkworth & D.R. Dewey [FNA24]

*Elymus aristatus* Merr.

*Elymus glaucus* Buckley var. *aristatus* (Merr.) Hitchc.

×*Elysitanion aristatum* (Merr.) Bowden

The range map from FNA24 does not include WA within the range of this taxon. Until proven otherwise, this species should be considered excluded from the WA flora. FNA24: "Dewey and Holmgren (1962) argued that ×*Elyleymus aristatus* comprises hybrids between *Elymus elymoides* and *Leymus cinereus* or *L. triticoides*. It has been found at many locations where the parents are sympatric."

*Elymus* [HC, HC2]

squirreltail, wheatgrass, wild-rye

(see also *Leymus*, *Taeniatherum*)

*Sitanion* [HC]

*Elymus albicans* (Scribn. & J.G. Sm.) Á. Löve [FNA24, HC2]

Taxon 19(1): 166.

Montana wild rye

*Agropyron albicans* Scribn. & J.G. Sm.

*Agropyron albicans* Scribn. & J.G. Sm. var. *griffithii* (Scribn. & J.G. Sm. ex Piper) Beetle, orthographic variant

*Agropyron dasystachyum* (Hook.) Scribn. ssp. *albicans* (Scribn. & J.G. Sm.) D.R. Dewey

*Agropyron griffithii* Scribn. & J.G. Sm. ex Piper, orthographic variant

*Elymus albicans* (Scribn. & J.G. Sm.) Á. Löve var. *griffithii* (Scribn. & J.G. Sm. ex Piper) Dorn, orthographic variant

*Elymus griffithii* (Scribn. & J.G. Sm. ex Piper) Á. Löve, orthographic variant

*Elymus lanceolatus* (Scribn. & J.G. Sm.) Gould ssp. *albicans* (Scribn. & J.G. Sm.) Barkworth & D.R. Dewey

*Elytrigia dasystachya* (Hook.) Á. Löve & D. Löve ssp. *albicans* (Scribn. & J.G. Sm.) D.R. Dewey

*Roegneria albicans* (Scribn. & J.G. Sm.) Beetle

*Roegneria albicans* (Scribn. & J.G. Sm.) Beetle var. *griffithii* (Scribn. & J.G. Sm. ex Piper) Beetle, orthographic variant

FNA24: "*Elymus albicans* grows primarily in the central Rocky Mountains and the western portion of the Great Plains. It tends to grow in shallow, rocky soils on wooded or sagebrush-covered slopes, rather than in deep loams. It is derived from hybrids between *Pseudoroegneria spicata* and *E. lanceolatus*. In practice, it is probably restricted to hybrids involving the awned variant of *Pseudoroegneria spicata*, because the

hybrid origin of those involving the unawned variant would probably not be recognized. Populations of *E. albicans* differ in their reproductive abilities (Dewey 1970). In some, most plants yield good seed; in others, most plants are sterile. Some of the fertile populations appear to be self-perpetuating; others appear to consist of recent hybrids and some backcrosses. Although treated here as a species, *E. albicans* could equally well be treated as a hybrid, *Elymus xalbicans*. Plants with glabrous lemmas, presumed to be derived from crosses with glabrous individuals of *E. lanceolatus*, have sometimes been treated as a distinct taxon, e.g., *Agropyron albicans* var. *griffithsii* (Scribn. & J.G. Sm.) Beetle or *A. griffithsii* Scribn. & J.G. Sm.; they are not formally recognized here."

*Elymus bakeri* (E.E. Nelson) Á. Löve [FNA24]

Baker's wild rye

*Agropyron bakeri* E.E. Nelson

*Agropyron trachycaulum* (Link) Malte ex H.F. Lewis var. *bakeri* (E.E. Nelson) B. Boivin

*Elymus trachycaulus* (Link) Gould ex Shinners ssp. *bakeri* (E.E. Nelson) Á. Löve

Occurrence in Washington questioned - source of occurrence unknown. FNA 24 does not show this species occurring in Washington.

*Elymus canadensis* L. [HC, HC2]

Sp. Pl. 1: 83?84.

Canadian wild rye

*Elymus philadelphicus* L.

var. *canadensis* [FNA24, HC2]

Sp. Pl. 1: 83-84.

nodding wild rye

*Elymus canadensis* L. var. *glaucifolius* (Willd.) Torr.

*Elymus canadensis* L. var. *hirsutus* (Farw.) Dorn

*Elymus philadelphicus* L. var. *hirsutus* Farw.

FNA24: "*Elymus canadensis* var. *canadensis* is widespread across the northern range of the species, where anthesis is from late June to August, but it is also frequent as far south as Arizona, New Mexico, and Oklahoma. Tentatively included here are *E. canadensis* var. *glaucifolius* (Muhl.) Torr., which is strongly glaucous, with scabrous blades and hirsute or scabrous lemmas; plus *E. canadensis* var. *villosus* Bates, which has villous leaves and occurs rarely in the northern Great Plains."

*Elymus caninus* (L.) L. [FNA24]

Fl. Suec. (ed. 2) 39.

bearded wild rye

(see also *Elymus tsukushiensis*)

*Agropyron caninum* (L.) P. Beauv. [HC]

*Agropyron caninum* (L.) Beauv. ssp. *caninum* [HC]

*Triticum caninum* L.

FNA24: "*Elymus caninus* is native to Eurasia; it is not known to be established in the Flora region. A.S. Hitchcock (1935, 1951) reported that it had been collected on ballast dumps in Portland, Oregon, but the specimens concerned belong to *E. ciliaris* and *E. tsukushiensis*. *Elymus caninus* differs from *E. ciliaris* and *E. tsukushiensis* in having flatter glumes that are longer in relation to the lemmas, and palea keels that are straight or almost straight below the apices. Recent reports of its occurrence in the region reflect C.L. Hitchcock et al.'s (1969) treatment, in which *E. caninus* and *E. trachycaulus* were treated as conspecific subspecies. Because *E. caninus* is the older name, it is the correct name to use at the specific rank under such a treatment. The hairs on the inside of the glumes are difficult to see. Nevertheless, this is the single most reliable morphological character for distinguishing *Elymus caninus* from all other species of *Elymus* in this treatment. *Elymus caninus* is most likely to be confused with awned plants of *E. trachycaulus*. The two species also differ in their molecular characteristics, and in at least one chromosome interchange (Sun et al. 1998)."

*Elymus caninus* (L.) L. [FNA24], misapplied

Fl. Suec. (ed. 2) 39.

bearded wild rye

(see also *Elymus tsukushiensis*)

*Agropyron caninum* (L.) P. Beauv. [HC]  
*Agropyron caninum* (L.) Beauv. ssp. *caninum* [HC]  
*Triticum caninum* L.

FNA24: "Elymus caninus is native to Eurasia; it is not known to be established in the Flora region. A.S. Hitchcock (1935, 1951) reported that it had been collected on ballast dumps in Portland, Oregon, but the specimens concerned belong to *E. ciliaris* and *E. tsukushiensis*. *Elymus caninus* differs from *E. ciliaris* and *E. tsukushiensis* in having flatter glumes that are longer in relation to the lemmas, and palea keels that are straight or almost straight below the apices. Recent reports of its occurrence in the region reflect C.L. Hitchcock et al.'s (1969) treatment, in which *E. caninus* and *E. trachycaulus* were treated as conspecific subspecies. Because *E. caninus* is the older name, it is the correct name to use at the specific rank under such a treatment. The hairs on the inside of the glumes are difficult to see. Nevertheless, this is the single most reliable morphological character for distinguishing *Elymus caninus* from all other species of *Elymus* in this treatment. *Elymus caninus* is most likely to be confused with awned plants of *E. trachycaulus*. The two species also differ in their molecular characteristics, and in at least one chromosome interchange (Sun et al. 1998)."

***Elymus curvatus*** Piper [FNA24, HC2]

Bull. Torrey Bot. Club 30(4): 233.  
beardless wild rye, awnless wildrye

*Elymus submuticus* (Hook.) Smyth  
*Elymus virginicus* L. var. *jenkinsii* Bowden  
*Elymus virginicus* L. var. *submuticus* Hook. [HC]

FNA24: "*Elymus curvatus* grows in moist or damp soils of open forests, thickets, grasslands, ditches, and disturbed ground, especially on bottomland. It is widespread from British Columbia and Washington, through the Intermountain region and northern Rockies, to the northern Great Plains. It is infrequent or rare in the midwest, the Great Lakes region, and the northeast, and is virtually unknown in the southeast. It is similar to *Elymus virginicus*, and has sometimes been included in that species as *E. virginicus* var. *submuticus* Hook., but it is more distinct than the varieties of *E. virginicus* treated above. Although *E. virginicus* and *E. curvatus* overlap greatly in range, *E. curvatus* usually has a distinct growth form, and its anthesis is 1-2 weeks later (Brooks 1974). Its spikes range from being completely exerted, especially west of the Great Plains, to largely sheathed, especially east of the Mississippi River and in more stressed environments. This geographic trend parallels that within *E. virginicus*, but sheathed plants of *E. curvatus* can usually be distinguished by their short awns. Clear transitions to *E. virginicus*, usually var. *jejunus*, are rare, but, especially from Missouri to Wisconsin, there are occasional plants with 5-10 mm awns on a few lemmas, especially at the spike tips. Rarely, plants from Missouri and Iowa to Quebec have hispid to hirsute spikelets, suggesting introgression with *E. virginicus* var. *intermedius*. There are few records of apparent hybrids with other species."

***Elymus elymoides*** (Raf.) Swezey [HC2]

bottlebrush, squirreltail

*Elymus sitanion* Schult.  
*Sitanion elymoides* Raf.  
*Sitanion hystrix* (Nutt.) J.G. Sm. [HC]  
*Sitanion hystrix* (Nutt.) J.G. Sm. var. *hystrix* [HC]

ssp. ***brevifolius*** (J.G. Sm.) Barkworth [HC2]

longleaf squirreltail

*Sitanion hystrix* (Nutt.) J.G. Sm. var. *brevifolium* (J.G. Sm.) C.L. Hitchc. [HC]

ssp. ***elymoides*** [FNA24, HC2]

Nebraska Fl. Pl. 15.

bottlebrush squirreltail, California squirreltail

*Elymus elymoides* (Raf.) Swezey ssp. *californicus* (J.G. Sm.) Barkworth  
*Sitanion hystrix* (Nutt.) J.G. Sm. var. *californicum* (J.G. Sm.) F.D. Wils.

FNA24: "*Elymus elymoides* subsp. *elymoides* grows in desert and shrub-steppe areas of western North America, extending to the western edge of the Great Plains and, as an adventive, occasionally further east. It is frequently associated with disturbed sites."

ssp. **hordeoides** (Suksd.) Barkworth [FNA24, HC2]

Phytologia 83(4): 306 [1908].

bottlebrush squirreltail

*Elymus hordeoides* (Suksd.) Barkworth & D.R. Dewey

*Sitanion hordeoides* Suksd.

*Sitanion hystrix* (Nutt.) J.G. Sm. var. *hordeoides* (Suksd.) C.L. Hitchc. [HC]

FNA24: "Elymus elymoides subsp. hordeoides grows in dry, rocky, often shallow soils, particularly in Artemisia rigida?Poa secunda communities, from eastern Washington and Idaho to northern California and Nevada. It resembles some Elymus?Hordeum hybrids."

**Elymus glaucus** Buckley [HC, HC2]

blue wild-rye

ssp. **glaucus** [FNA24, HC2]

In Proc. Acad. Sc. Philad. 1862 (1863) 99.

blue wildrye

*Elymus glaucus* Buckley ssp. *jepsonii* (Burt Davy) Gould

*Elymus glaucus* Buckley var. *glaucus* [HC]

*Elymus glaucus* Buckley var. *jepsonii* Burt Davy [HC]

*Elymus glaucus* Buckley var. *tenuis* Vasey

FNA24: "Elymus glaucus subsp. glaucus grows throughout the range of the species, from sea level to 2500 m. It is absent from the area where E. glaucus subsp. mackenzii grows. It resembles E. hirsutus, differing in its erect spikes and in the pattern of its lemma pubescence. It also resembles the introduced E. dahuricus, from which it differs in its palea shape. Elymus glaucus subsp. glaucus grows throughout the range of the species, from sea level to 2500 m. It is absent from the area where E. glaucus subsp. mackenzii grows. It resembles E. hirsutus, differing in its erect spikes and in the pattern of its lemma pubescence. It also resembles the introduced E. dahuricus, from which it differs in its palea shape."

ssp. **virescens** (Piper) Gould [FNA24, HC2]

Madroño 9(4): 126.

blue wildrye

*Elymus glaucus* Buckley var. *breviaristatus* Burt Davy [HC]

*Elymus glaucus* Buckley var. *virescens* (Piper) Bowden

*Elymus virescens* Piper

FNA24: "Elymus glaucus subsp. virescens generally grows in relatively dry or rocky soils along cliffs, bluffs, slopes, shores, and river banks, and in coniferous forests, chaparral, and other woodlands along the coast from Alaska to central California, at elevations from sea level to 1200 m."

**Elymus xhansanii** Scribn. [FNA24]

Bull. Div. Agrostol., U.S.D.A. 11: 56, f. 12.

×*Elysitanion hansanii* (Scribn.) Bowden

*Sitanion anomalum* J.G. Sm.

*Sitanion hansanii* (Scribn.) J.G. Sm.

FNA24: "Elymus xhansanii refers to hybrids between E. glaucus and either E. elymoides or E. multisetus. It is not clear which of the latter two species is involved. It is a fairly common hybrid in those parts of western North America where both parents grow. The glumes of the type specimen are as wide as those in E. glaucus, and some are divided longitudinally, as in E. elymoides and E. multisetus. As in other hybrids involving E. elymoides and E. multisetus, the rachis of E. xhansanii disarticulates at maturity."

**Elymus hirsutus** J. Presl [FNA24, HC, HC2]

Reliq. Haenk. 1: 264.

boreal wild rye

FNA24: "Elymus hirsutus grows in moist to damp or dry soils in woods, thickets, and grasslands. Its range extends along the coastal mountains from the Aleutian Islands to northern Oregon, and inland to eastern British Columbia. Plants in the southern part of the range tend to have villous leaves and more erect spikes with shorter, straighter awns. Elymus hirsutus is similar to E. glaucus, but its more pendent spikes, lemma

pubescence pattern, and shorter glumes enable most specimens to be readily identified. Intermediates do exist; it is not known whether they reflect introgression or extremes of variation. It also forms occasional hybrids with *Leymus mollis* and *Hordeum brachyantherum*."

***Elymus lanceolatus* (Scribn. & J.G. Sm.) Gould [HC2]**

*Agropyron lanceolatum* Scribn. & J.G. Sm.

ssp. ***lanceolatus* [FNA24, HC2]**

Madroño 10: 94.

thick-spiked wheatgrass

*Agropyron dasystachyum* (Hook.) Scribn. [HC]

*Agropyron riparum* Scribn. & J.G. Sm.

*Elymus subvillosus* (Hook.) Gould

FNA24: "*Elymus lanceolatus* subsp. *lanceolatus* grows in clay, sand, loam, and rocky soils, and is widely distributed in the western Flora region. It is most likely to be confused with the octoploid *Pascopyrum smithii*; it differs morphologically from that species in having more evenly distributed leaves and acute glumes that tend to taper from midlength or higher, rather than acuminate glumes that tend to taper from below midlength. In addition, the midvein of the glumes of *E. lanceolatus* is straight, whereas that of *Pascopyrum smithii* "leans"• to the side distally."

ssp. ***psammophilus* (J.M. Gillett & H. Senn) Á. Löve [FNA24, HC2]**

Taxon 29(1): 167.

sand-dune wheatgrass

*Agropyron psammophilum* J.M. Gillett & H. Senn

FNA24: "*Elymus lanceolatus* subsp. *psammophilus* tends to grow in sandy soils. It was originally described from around the Great Lakes, but plants with similar vestiture have been found scattered throughout the western range of the species, almost always in association with sandy soils. Those from the Yukon and northern British Columbia tend to be shorter and have smaller spikelets and spikelet parts than those from Washington and Saskatoon, but there is considerable overlap in these characters. Plants from around the Great Lakes (Gillett and Senn 1960) were almost completely pollen sterile. Despite this, Gillett and Senn rejected the notion that they were hybrids."

ssp. ***riparius* (Scribn. & J.G. Sm.) Barkworth [HC2]**

stream bank wheatgrass

*Elytrigia ripara* (Scribn. & J.G. Sm.) Beetle

***Elymus multisetus* (J.G. Sm.) Burt Davy [FNA24, HC2]**

Univ. Calif. Publ. Bot. 1: 57.

big squirreltail

*Sitanion jubatum* J.G. Sm. [HC]

The name *Elymus multisetus* (J.G. Sm.) M.E. Jones is invalidly published according to TROPICOS. FNA24: "*Elymus multisetus* grows in dry, often rocky, open woods and thickets on slopes and plains, from central Washington and Idaho to southern California, Colorado, and northwestern Arizona, and from sea level to 2000 m. It has also been reported from Baja California, Mexico. It usually grows in less arid habitats than *E. elymoides* subsp. *elymoides*, but the two taxa are sometimes sympatric. Wilson (1963) reported a wide belt of introgression between *E. multisetus* and *E. elymoides* subsp. *elymoides* from southeastern California to southern Nevada, but not in other areas where they are sympatric. There are also probable hybrids with *Elymus glaucus* and *Pseudoroegneria spicata*."

***Elymus xpseudorepens* (Scribn. & J.G. Sm.) Barkworth & D.R. Dewey [FNA24]**

Great Basin Naturalist 43(4): 568 [1984].

false quackgrass

*Agropyron xpseudorepens* Scribn. & J.G. Sm.

*Agropyron pseudorepens* Scribn. & J.G. Sm. var. *magnum* Scribn. & J.G. Sm.

*Agropyron pseudorepens* Scribn. & J.G. Sm. var. *sennii* Boivin

FNA24: "*Elymus xpseudorepens* consists of hybrids between *E. lanceolatus* and *E. trachycaulus*. It appears to be fairly common, having been reported from Alberta to Michigan and south to Arizona, New

Mexico, and Arkansas."

***Elymus repens* (L.) Gould [FNA24, HC2]**

Madroño 9: 127.  
creeping wild rye

*Agropyron repens* (L.) P. Beauv. [HC]

*Agropyron repens* (L.) P. Beauv. var. *subulatum* Roem. & Schult.

*Agropyron vaillantianum* (Wulfen & Schreb.) Trautv.

*Elytrigia repens* (L.) Desv. ex B.D. Jacks.

*Elytrigia repens* (L.) Desv. ex B.D. Jacks. var. *vaillantiana* (Wulfen & Schreb.) Prokudin, orthographic variant

*Elytrigia vaillantiana* (Wulfen & Schreb.) Beetle, orthographic variant

*Triticum repens* L.

*Triticum vaillantianum* Wulfen & Schreb.

FNA24: "*Elymus repens* is native to Eurasia; it is now established through much of the Flora region, extending from Alaska to Greenland and south to California, Texas, and North Carolina. It grows well in disturbed sites, spreading rapidly via its long rhizomes, as well as by seed. It is also drought tolerant. Although it is listed a noxious weed in several states, it provides good forage. It differs from *E. hoffmannii* in having widely spaced, unequally prominent leaf veins and, usually, shorter awns. Godley (1947) demonstrated that lemma awn development, glaucousness, and the pubescence of the rachises are each effectively controlled by single genes. Long-awned plants are homozygous recessive, and awn-tipped plants homozygous dominant; glaucousness is dominant over non-glaucousness, and glabrous rachises over pubescent rachises. Awned plants appear to be established along the coasts of Newfoundland and Nova Scotia. They have generally been identified as *Agropyron pungens* (Pers.) Roem. & Schult., a species that has obtuse, mucronate lemmas. *Elymus repens* is almost always a hexaploid. Most studies indicate that its genomic constitution is StStH, but Mason-Gamer (2001) demonstrated that it is genetically more complex than is implied by such a simple formula."

***Elymus scribneri* (Vasey) M.E. Jones [FNA24, HC2]**

Contr. W. Bot. 14: 20.  
Scribner's wild rye

*Agropyron scribneri* Vasey [HC]

FNA24: "*Elymus scribneri* grows in rocky areas in open subalpine and alpine regions, at 2500?3200 m, often in windswept locations, in southwestern Alberta and the western United States. It is often confused with *E. elymoides*, but differs from that species in having only one spikelet per node, wider glumes, and more tardily disarticulating rachises. It also resembles *E. sierrae*, from which it differs in its disarticulating rachises, denser spikes, and shorter anthers. Several taxonomists have suggested that *Elymus scribneri* consists of fertile hybrids between *E. violaceus* and *E. elymoides*. This suggestion is supported by the frequency with which the three taxa are sympatric, the morphological variation exhibited by *E. scribneri*, and cytogenetic data (Dewey 1967)."

***Elymus sierrae* Gould [FNA24]**

Madroño 9(4): 125.  
Sierra wheatgrass

*Agropyron pringlei* (Scribn. & J.G. Sm.) Hitchc.

FNA24: "*Elymus sierrae* is best known from rocky slopes and ridge tops in the Sierra Nevadas, at 2130?3375 m, and is also found in Washington and Oregon. It resembles *E. scribneri*, differing in its non-disarticulating rachises, longer rachis internodes, and longer anthers. Hybrids with *E. elymoides* have glumes with awns 15+ mm long, and some spikelets with narrower glume bases and shorter anthers. Specimens with wide-margined glumes suggest hybridization with *E. violaceus*."

***Elymus trachycaulus* (Link) Gould ex Shinners [HC2]**

slender wheatgrass

*Agropyron caninum* (L.) P. Beauv. var. *mitchellii* S.L. Welsh

*Agropyron trachycaulum* (Link) Malte ex H.F. Lewis

*Roegneria trachycaula* (Link) Nevski

*Triticum trachycaulum* Link

ssp. *trachycaulus* [FNA24, HC2]

Rhodora 56(662): 28.

bearded wheatgrass

*Agropyron x brevifolium* Scribn.

*Agropyron caninum* (L.) P. Beauv. ssp. *majus* (Vasey) C.L. Hitchc. [HC]

*Agropyron caninum* (L.) P. Beauv. var. *majus* Scribn. [HC]

*Agropyron pauciflorum* (Schwein.) Hitchc. ex Silveus

*Agropyron pauciflorum* (Schwein.) Hitchc. ex Silveus ssp. *majus* (Vasey) Melderis

*Agropyron pauciflorum* (Schwein.) Hitchc. ex Silveus ssp. *novae-angliae* (Scribn.) Melderis

*Agropyron pauciflorum* (Schwein.) Hitchc. ex Silveus ssp. *teslinense* (A.E. Porsild & Senn) Melderis

*Agropyron pauciflorum* (Schwein.) Hitchc. ex Silveus var. *novae-angliae* (Scribn.) Taylor & MacBryde

*Agropyron tenerum* Vasey

*Agropyron teslinense* A.E. Porsild & Senn

*Agropyron trachycaulum* (Link) Malte ex H.F. Lewis var. *majus* (Vasey) Fernald

*Agropyron trachycaulum* (Link) Malte ex H.F. Lewis var. *novae-angliae* (Scribn.) Fernald

*Elymus pauciflorus* (Schwein.) Gould

*Elymus trachycaulus* (Link) Gould ex Shinners ssp. *novae-angliae* (Scribn.) Tzvelev

*Elymus trachycaulus* (Link) Gould ex Shinners ssp. *teslinensis* (A.E. Porsild & Senn) Á. Löve

*Elymus trachycaulus* (Link) Gould ex Shinners var. *majus* (Vasey) Beetle

*Roegneria pauciflora* (Schwein.) Hyl.

FNA24: "Elymus trachycaulus subsp. trachycaulus grows throughout the habitat and range of the species, and exhibits considerably more variation than subsp. subsecundus. Two aspects of the variation that seem particularly worthy of further study are the glume venation, and the spacing of spikelets in the spikes. Plants with glumes having 5-7 well-developed, narrowly spaced veins are restricted to lower elevations and the southern portion of the subspecies range; northern plants and plants at higher elevations generally have 3-5 weakly developed and widely spaced veins. The former glumes resemble those of *E. glaucus*, with which *E. trachycaulus* subsp. trachycaulus is often sympatric; the latter, those of *E. violaceus*. Spikelet spacing also varies considerably. In at least some instances, plants with widely spaced spikelets appear to be associated with more shady habitats."

*Elymus violaceus* (Hornem.) Feilberg [FNA24, HC2]

Meddel. Grønland, Biosci. 15: 12.

arctic wheatgrass, bearded wheatgrass

*Agropyron caninum* (L.) P. Beauv. var. *hornemannii* (W.D.J. Koch) Pease & A.H. Moore

*Agropyron caninum* (L.) P. Beauv. var. *latiglume* (Scribn. & J.G. Sm.) Pease & A.H. Moore [HC]

*Agropyron latiglume* (Scribn. & J.G. Sm.) Rydb.

*Agropyron trachycaulum* (Link) Malte ex H.F. Lewis var. *latiglume* (Scribn. & J.G. Sm.) Beetle

*Agropyron violaceum* (Hornem.) Lange

*Agropyron violaceum* (Hornem.) Lange var. *alboviride* (Hultén) Melderis

*Elymus alaskanus* (Scribn. & Merr.) Á. Löve ssp. *latiglumis* (Scribn. & J.G. Sm.) Á. Löve

*Elymus trachycaulus* (Link) Gould ex Shinners ssp. *latiglumis* Barkworth & D.R. Dewey

*Elymus trachycaulus* (Link) Gould ex Shinners ssp. *violaceus* (Hornem.) Á. Löve & D. Löve

*Elymus trachycaulus* (Link) Gould ex Shinners var. *latiglumis* (Scribn. & J.G. Sm.) Beetle

*Roegneria violacea* (Hornem.) Melderis

FNA24: "Elymus violaceus grows in arctic, subalpine, and alpine habitats, on calcareous or dolomitic rocks, from Alaska through arctic Canada to Greenland, and south in the Rocky Mountains to southern New Mexico. In western North America, it forms intermediates with *E. scribneri*, *E. trachycaulus*, and *E. alaskanus*. It is treated here as including *E. alaskanus* subsp. *latiglumis* [Agropyron latiglume], *E. alaskanus* being restricted to plants with relatively short glumes that are often found in valleys and at lower elevations than *E. violaceus*. Western plants of *E. violaceus* tend to be more glaucous, have shorter spikes and spikelets, and more obovate glumes than plants from Greenland but, until more is known about the extent and genetic basis of the variation in and among *E. violaceus*, *E. alaskanus*, and *E. trachycaulus*, formal taxonomic recognition seems inappropriate."

*Elymus wawawaiensis* J.R. Carlson & Barkworth [FNA24, HC2]

Phytologia 83: 327.

wawawai wild rye

Not in H&C. FNA24: "Elymus wawawaiensis grows primarily in shallow, rocky soils of slopes in coulees and reaches of the Salmon, Snake, and Yakima rivers of Washington, northern Oregon, and Idaho. There are also a few records from localities at some distance from the Snake River and its tributaries. These probably reflect deliberate introductions. C.V. Piper, who worked for the U.S. Department of Agriculture in southeastern Washington from 1892?1902, frequently distributed seed from populations that he considered superior to farmers in the region; he considered E. wawawaiensis to be a superior form of what is here called Pseudoroegneria spicata. Another source of introduced populations is "'Secar', a cultivar of E. wawawaiensis that is recommended as a forage grass for arid areas of the northwestern United States. Elymus wawawaiensis resembles a vigorous version of Pseudoroegneria spicata, and was long confused with that species. It differs in its more imbricate spikelets and narrower, stiff glumes. In its primary range, E. wawawaiensis is often sympatric with P. spicata, but the two tend to grow in different habitats, E. wawawaiensis growing in shallow, rocky soils and P. spicata in medium- to fine-textured loess soil. The two species also differ cytologically, E. wawawaiensis being an allotetraploid, and P. spicata consisting of diploids and autotetraploids."

***Eragrostis*** [HC, HC2]

lovegrass

***Eragrostis cilianensis*** (All.) Vignolo ex Janch. [FNA25, HC, HC2]

Mitt. Naturwiss. Vereins Univ. Wien, n.s., 5: 110.

stinkgrass

*Eragrostis major* Host

*Eragrostis megastachya* (Koeler) Link

*Poa cilianensis* All.

FNA25: "Eragrostis cilianensis is an introduced European species that now grows in disturbed sites such as pastures and roadsides, at 0-2300 m, through most of the contiguous United States and southern Canada. The English name refers to the odor of fresh plants."

***Eragrostis curvula*** (Schrud.) Nees [FNA25, HC2]

weeping lovegrass

Recently collected in King Co. (Jacobson et al. 2001). FNA25: "Eragrostis curvula is native to southern Africa. It is often used for reclamation because it provides good ground cover but, once introduced, it easily escapes. In the Flora region, it grows on rocky slopes, at the margins of woods, along roadsides, and in waste ground, at 20-2400 m, usually in pine-oak woodlands, and yellow pine and mixed hardwood forests."

***Eragrostis hypnoides*** (Lam.) Britton, Sterns & Poggenb. [FNA25, HC, HC2]

Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York 69.

teal love grass

*Poa hypnoides* Lam.

FNA25: "Eragrostis hypnoides grows along muddy or sandy shores of lakes and rivers and in moist, disturbed sites, at 10-1600 m. It is native to the Americas, extending from southern Canada to Argentina."

***Eragrostis lutescens*** Scribn. [FNA25, HC, HC2]

Circ. Div. Agrostol. U.S.D.A. 9: 7.

six-weeks love grass

FNA25: "Eragrostis lutescens grows on the sandy banks of streams and lakes and in moist alkaline flats of the western United States at 300-2000 m. It has not been reported from Mexico."

***Eragrostis mexicana*** (Hornem.) Link [HC2]

Mexican lovegrass

**ssp. *virescens*** (J. Presl) S.D. Koch & Sánchez Vega [FNA25, HC2]

Phytologia 58(6): 380.

Mexican lovegrass, orcutt's lovegrass

*Eragrostis orcuttiana* Vasey [HC]

*Eragrostis virescens* J. Presl

FNA25: "Eragrostis mexicana grows along roadsides, near cultivated fields, and in disturbed open

areas, at 100-3000 m. It is native to the Americas, its native range extending from the southwestern United States through Mexico, Central and northern South America, to Argentina. Within the Flora region, it has been introduced beyond its native range, often becoming an established part of the flora. *Eragrostis mexicana* subsp. *virescens* has a disjunct distribution, growing in California and western Nevada and, in South America, from Ecuador to Chile, southern Brazil, and northern Argentina. It has also been found, as an introduction, at various other locations in North America, including eastern North America."

*Eragrostis minor* Host [FNA25, HC2]

Icon. Descr. Gram. Austriac. 4: 15.  
little lovegrass

*Eragrostis eragrostis* (L.) P. Beauv.  
*Eragrostis poaeoides* P. Beauv. ex Roem. & Schult.

FNA25: "Eragrostis minor is a European species that now grows in gravelly roadsides and disturbed sites, especially near railroad yards, at 20-1600 m in southern Canada and the contiguous United States."

*Eragrostis pectinacea* (Michx.) Nees [HC, HC2]

tufted lovegrass

*Eragrostis caroliniana* (Biehler) Scribn.  
*Eragrostis purshii* hort. ex Schrad.  
*Poa pectinacea* Michx.

var. *pectinacea* [FNA25, HC2]

Fl. Afr. Austral. Ill. 406.  
purple eragrostis, tufted eragrostis

*Eragrostis diffusa* Buckley

FNA:25 "Eragrostis pectinacea is native from southern Canada to Argentina. In the Flora region, it grows in disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields, at 0-1200 m. Eragrostis pectinacea var. *pectinacea* grows throughout the range of the species, including most of the contiguous United States. Within the Flora region, it is most common in the eastern states and usually flowers from July-November."

*Eragrostis pilosa* (L.) P. Beauv. [HC, HC2]

India lovegrass

*Eragrostis multicaulis* Steud. [HC]  
*Poa pilosa* L.

var. *pilosa* [FNA25, HC2]

Ess. Agrostogr. 71, 162, 175.  
India lovegrass

FNA25: "Eragrostis pilosa is native to Eurasia but has become naturalized in many parts of the world. In the Flora region, it grows in forest margins and disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields, at 0-2500 m. Eragrostis pilosa var. *pilosa* is more common than var. *perplexa* in the Flora region."

*Eremopyrum* [HC2]

annual wheatgrass

*Eremopyrum triticeum* (Gaertn.) Nevski [FNA24, HC2]

Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 17: 52.  
annual false wheat grass

*Agropyron prostratum* (Pall.) P. Beauv.  
*Agropyron triticeum* Gaertn. [HC]

FNA24: "Eremopyrum triticeum is known primarily from scattered disturbed sites in western North America, from southern Canada to Arizona and New Mexico. Like most weeds, it is probably more widely distributed than herbarium records indicate. It is tolerant of alkaline soils, and is summer-dormant."

*Festuca* [HC, HC2]

fescue

(see also *Schedonorus*, *Vulpia*)

***Festuca brachyphylla*** Schult. & Schult. f. [HC2]

alpine fescue

*Festuca brevifolia* R. Br., homonym (illegitimate)

*Festuca ovina* L. ssp. *brevifolia* (S. Watson) Hack.

*Festuca ovina* L. var. *borealis* Lange

*Festuca ovina* L. var. *brachyphylla* (Schult. & Schult. f.) Hitchc.

*Festuca ovina* L. var. *brevifolia* S. Watson [HC]

ssp. ***brachyphylla*** [FNA24, HC2]

Mant. 3(Add. 1): 646.

alpine fescue

*Festuca brevifolia* R. Br. var. *genuina* St.-Yves

FNA24: "*Festuca brachyphylla* subsp. *brachyphylla* is circumpolar in its distribution. In the Flora region, it extends from Alaska to Newfoundland, south in the mountains to Washington in the west and in the high peaks of the Appalachian Mountains of eastern Quebec and New England in the east."

ssp. ***coloradensis*** Fred. [HC2]

***Festuca californica*** Vasey [HC, HC2]

California fescue

There is no evidence that this species has ever been reported for Washington. of this species from Washington, though herbarium records are known from just south of the Columbia River. Until proven otherwise, this species should be considered excluded from the WA flora.

ssp. ***californica*** [HC2]

***Festuca campestris*** Rydb. [FNA24, HC2]

Mem. New York Bot. Gard. 1: 57.

prairie fescue

*Festuca altaica* Trin., misapplied

*Festuca altaica* Trin. var. *major* (Vasey) Gleason

*Festuca scabrella* Torr. var. *major* Vasey

FNA24: "*Festuca campestris* is a common species in prairies and montane and subalpine grasslands, at elevations to about 2000 m. Its range extends from southern British Columbia, Alberta, and southwestern Saskatchewan south through Washington, Oregon, Idaho, and Montana. It is highly palatable and provides nutritious forage. *Festuca campestris* differs from *F. hallii* in having larger spikelets, less stiffly erect panicles and, usually, in lacking rhizomes. Where the two are sympatric, *F. campestris* tends to grow at higher elevations."

***Festuca filiformis*** Pourr. [FNA24, HC2]

Hist. & Mém. Acad. Roy. Sci. Toulouse 3: 319.

fine-leaf sheep fescue

*Festuca capillata* Lam.

*Festuca ovina* L. var. *capillata* (Lam.) Alef. [HC]

*Festuca ovina* L. var. *tenuifolia* (Sibth.) Sm.

*Festuca tenuifolia* Sibth.

FNA24: "*Festuca filiformis* is a European species that has been introduced to the Flora region as a turf grass. It grows well on poor, dry soils and is becoming a ruderal weed in some areas. It is particularly common in the northeastern United States and southeastern Canada, but has been reported from scattered locations elsewhere."

***Festuca idahoensis*** Elmer [FNA24, HC, HC2]

Bot. Gaz. 36(1): 53.

bluebunch fescue

(see also *Festuca roemer*)

*Festuca idahoensis* Elmer var. *idahoensis* [HC]

*Festuca idahoensis* Elmer var. *oregona* (Hack. ex Beal) C.L. Hitchc. [HC]  
*Festuca ingrata* (Hack. ex Beal) Rydb.  
*Festuca occidentalis* Hook. var. *ingrata* (Hack. ex Beal) B. Boivin  
*Festuca occidentalis* Hook. var. *oregona* (Hack. ex Beal) B. Boivin  
*Festuca ovina* L. var. *columbiana* Beal  
*Festuca ovina* L. var. *ingrata* Hack. ex Beal  
*Festuca ovina* L. var. *oregona* Hack. ex Beal

FNA24: "*Festuca idahoensis* grows in grasslands, open forests, and sagebrush meadow communities, mostly east of the Cascade Mountains, from southern British Columbia eastward to southwestern Saskatchewan and southward to central California and New Mexico. It extends up to 3000 m in the southern part of its range. It is often a dominant plant, and provides good forage. The young foliage is particularly palatable. *Festuca idahoensis* differs from *F. arizonica*, with which it is sometimes confused, in its less prominently ribbed blades and glabrous ovary apices. It has frequently been included in *F. ovina*."

***Festuca occidentalis* Hook. [FNA24, HC, HC2]**

Fl. Bor.-Amer. 2: 249.  
western fescue

*Festuca ovina* L. var. *polyphylla* Vasey ex Beal

FNA24: "*Festuca occidentalis* grows in dry to moist, open woodlands, forest openings, and rocky slopes, up to 3100 m. It extends from southern Alaska and northern British Columbia to southwestern Alberta, south to southern California and eastward to Wyoming, and, as a disjunct, around the upper Great Lakes in Ontario, eastern Wisconsin, and Michigan. It is sometimes important as a forage grass, but is usually not sufficiently abundant."

***Festuca ovina* L. [FNA24, HC]**

sheep fescue  
(see also *Festuca brachyphylla*, *Festuca filiformis*)

*Festuca ovina* L. var. *ovina* [HC]

*Festuca ovina* as treated in H&C is considered misapplied in FNA24. FNA24: "*Festuca ovina* was introduced from Europe as a turf grass. It is not presently used in the North American seed trade. The sporadic occurrences are mostly from old lawns and cemeteries, or sites seeded for soil stabilization. *Festuca ovina* used to be interpreted very broadly in North America, including almost any fine-leaved fescue that lacked rhizomes. Consequently, much of the information reported for *F. ovina*, and many of the specimens identified as such, belong to other species. The only confirmed recent reports are from Ontario (Dore & McNeill 1980); Piatt County, Illinois; and Okanogan County, Washington. Species in this treatment that have frequently been included in *F. ovina* are *F. arizonica*, *F. auriculata*, *F. baffinensis*, *F. brachyphylla*, *F. brevissima*, *F. calligera*, *F. edlundiae*, *F. frederikseniae*, *F. hyperborea*, *F. idahoensis*, *F. lenensis*, *F. minutiflora*, *F. saximontana*, *F. trachyphylla*, and *F. viviparoides*."

***Festuca roemerii* (Pavlick) E.B. Alexeev [FNA24, HC2]**

Novosti Sist, Vysa. Rast. 22: 23.  
Roemer's fescue

*Festuca idahoensis* Elmer var. *roemerii* Pavlick

In H&C this species is included within *F. idahoensis*. FNA24: "*Festuca roemerii* grows in grasslands and open forests, primarily west of the Cascade Mountains, from southeastern Vancouver Island southward to northwestern California."

var. ***roemerii*** [HC2]

***Festuca rubra* L. [HC, HC2]**

red fescue

*Festuca duriuscula* L.

*Festuca ovina* L. var. *duriuscula* (L.) W.D.J. Koch

ssp. ***arenaria*** (Osbeck) F. Aresch. [FNA24]

*Festuca arenaria* Osbeck

*Festuca rubra* L. var. *arenaria* (Osbeck) Fr.

*Festuca rubra* L. var. *lanuginosa* F. Mertens & W. Koch

FNA24: "Festuca rubra subsp. arenaria is a European taxon that grows in maritime sands and gravels. It is known in the Flora region only from one specimen collected on Vancouver Island; it is not known to have persisted. The description is based on the range of variation seen in Europe." "probably not reaching us" [H&C]

ssp. *juncea* (Hack.) K. Richt.  
rock fescue

*Festuca rubra* L. ssp. *pruinosa* (Hack.) Piper  
*Festuca rubra* L. var. *juncea* (Hack.) P. Fourn.

FNA24: "Festuca rubra subsp. pruinosa grows in the crevices of rocks, in pilings, and occasionally on pebble or sand beaches, extending upward from the upper littoral zone of the Pacific and Atlantic coasts of North America and Europe. Plants growing on coastal sands from California to Vancouver Island that are loosely caespitose and have abaxial sclerenchyma in large strands are sometimes distinguished as *F. rubra* subsp. *arenicola* E.B. Alexeev [= *F. ammobia* Pavlick]. The rhizomes are rarely present on herbarium specimens."

ssp. *mediana* (Pavlick) Pavlick [FNA24]  
Phytologia 82(2): 77.  
dune red fescue

*Festuca rubra* L. var. *littoralis* Vasey ex Beal [HC]

FNA24: "Festuca rubra subsp. mediana grows in sand beaches and dunes along exposed coasts, from Vancouver Island to Oregon."

ssp. *rubra* [FNA24]  
Sp. Pl. 1: 74.  
red fescue

*Festuca rubra* L. var. *rubra* [HC]

FNA24: "Festuca rubra subsp. rubra grows in disturbed soil. It is often planted as a soil binder, or as turf or forage grass, in mesic temperate parts of the Flora region. Originally from Eurasia, it has been widely introduced elsewhere in the world, including most of the Flora region, from southern Alaska east to Newfoundland and Greenland and south to California and Georgia. It also grows in Mexico. Because *F. rubra* subsp. *rubra* has often been misunderstood, confounded, and lumped with other taxa of the *F. rubra* complex, statements about its distribution, including that given here, should be treated with caution. It is to be expected throughout the Flora region, in all but the coldest and driest habitats."

ssp. *secunda* (J. Presl) Pavlick [FNA24]  
Phytologia 57(1): 6.  
red fescue

*Bromus secundus* J. Presl

FNA24: "Festuca rubra subsp. secunda grows on pebble beaches and in soil pockets on rocks, meadows, cliffs, banks, and stabilized sand dunes along seashores with high annual rainfall, on the Pacific coast of North America from Alaska south to Oregon."

***Festuca saximontana* Rydb. [HC2]**  
Rocky Mountain fescue

var. *purpusiana* (St.-Yves) Fred. & Pavlick [HC2]  
Bull. Torrey Bot. Club 36: 536.  
sheep fescue

*Festuca ovina* var. *purpusia* St. Yves  
*Festuca ovina* L. var. *purpusiana* St.-Yves  
*Festuca saximontana* Rydb. var. *purpusiana* (St.-Yves) Fred. & Pavlick [HC2]

FNA24: "Festuca saximontana grows in grasslands, meadows, open forests, and sand dune complexes of the northern plains and boreal, montane, and subalpine regions in the Flora region, extending from Alaska to Greenland, south to southern California, northern Arizona, and New Mexico in the west and to the Great Lakes region in the east. It is also reported from the Russian Far East."

*Festuca saximontana* provides good forage for livestock and wildlife. It is closely related to *F. brachyphylla*, and is sometimes included in that species as *F. brachyphylla* subsp. *saximontana* (Rydb.) Hultén. It has also frequently been included in *F. ovina*. *Festuca saximontana* var. *purpusiana* grows in subalpine or lower alpine habitats. The distribution of this taxon is poorly known; it probably extends from Alaska south to northern California. It is also reported from the Chukchi Peninsula in eastern Russia (Tzvelev 1976)."

var. *saximontana* [HC2]

Bull. Torrey Bot. Club 36: 536.  
sheep fescue

*Festuca brachyphylla* Schult. & Schult. f. var. *rydbergii* (St.-Yves) Cronquist

*Festuca ovina* L. var. *rydbergii* St.-Yves [HC]

*Festuca ovina* L. var. *saximontana* (Rydb.) Gleason

*Festuca saximontana* Rydb. var. *saximontana* [HC2]

FNA24: "*Festuca saximontana* grows in grasslands, meadows, open forests, and sand dune complexes of the northern plains and boreal, montane, and subalpine regions in the Flora region, extending from Alaska to Greenland, south to southern California, northern Arizona, and New Mexico in the west and to the Great Lakes region in the east. It is also reported from the Russian Far East. *Festuca saximontana* provides good forage for livestock and wildlife. It is closely related to *F. brachyphylla*, and is sometimes included in that species as *F. brachyphylla* subsp. *saximontana* (Rydb.) Hultén. It has also frequently been included in *F. ovina*. *Festuca saximontana* var. *saximontana* grows throughout the range of the species."

*Festuca subulata* Trin. [FNA24, HC, HC2]

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 2(2): 173.  
bearded fescue

FNA24: *Festuca subulata* grows on stream banks and in open woods, meadows, shady forests, and thickets, to about 2800 m. Its range extends from the southern Alaska panhandle eastward to southwestern Alberta and western South Dakota, and southward to central California and Colorado. *Festuca subulata* differs from *F. subuliflora* in having blunter, glabrous calluses and glabrous, often scabrous or puberulent leaf blades that are obscurely ribbed."

*Festuca subuliflora* Scribn. [FNA24, HC, HC2]

Cat. Canad. Pl. 2(5): 396.  
crinkle-awn fescue

FNA24: "*Festuca subuliflora* grows in shady sites in dry to moist forests, usually below 700 m. Its range extends from southwestern British Columbia to central California. Superficially, it resembles *F. subulata*; it differs in having more elongated and distinctly hairy calluses, and often in having softly pubescent foliage and more strongly ribbed blades."

*Festuca trachyphylla* (Hack.) Krajina [FNA24, HC2]

Acta Bot. Bohem. 9: 190.  
hard fescue

*Festuca brevipila* R. Tracey

*Festuca duriuscula* L., misapplied

*Festuca duriuscula* L. var. *trachyphylla* (Hack.) Richter

*Festuca longifolia* Thuill. var. *trachyphylla* (Hack.) Howarth

FNA24: "*Festuca trachyphylla* is native to open forests and forest edge habitats of Europe. It has been introduced and has become naturalized in many temperate regions. In the Flora region, *F. trachyphylla* is generally sold under the name "'Hard Fescue', and is popular as a durable turf grass and soil stabilizer. It is particularly common in the eastern United States and southeastern Canada, but is probably grown throughout the temperate parts of the region. Its naturalized distribution can be expected to expand. For many years, *Festuca trachyphylla* was known, inappropriately, under other names, e.g., *F. duriuscula* L., *F. ovina* var. *duriuscula* (L.) W.D.J. Koch, and *F. longifolia* Thuill. Some European authors treat it as *F. stricta* subsp. *trachyphylla* (Hack.) Patzke. It has frequently been included in *F. ovina*."

*Festuca valesiaca* Schleich. ex Gaudin [FNA24, HC2]

Agrost. Helv. 1: 242.

Valais fescue

FNA24: "Festuca valesiaca is widely distributed through central Europe and northern Asia, where it grows in steppes, dry meadows, and open rocky or sandy areas. It is sold in the North American seed trade as *F. pseudovina* Hack. ex Wiesb., and has been collected at a few scattered localities in the Flora region, apparently having become established from deliberate seeding. The taxonomy of the *Festuca valesiaca* complex is controversial, with different authors naming morphological variants and polyploid populations within it. No attempt has been made to determine which are present in the Flora region."

***Festuca viridula* Vasey [FNA24, HC, HC2]**

U.S.D.A. Div. Bot. Bull. 13(2): pl. 93.  
green-leaf fescue

FNA24: "Festuca viridula grows in low alpine and subalpine meadows, forest openings, and open forests, at (900)1500?3000 m, from southern British Columbia east to Montana and south to central California and Nevada. It is highly palatable to livestock, and is an important forage species in some areas."

***Festuca washingtonica* E.B. Alexeev [FNA24, HC2]**

Bjulleten Moskovskogo Oba&#269;estva Ispytatelej Prirody, Otdel Biologi&#269;eskij 87(2): 115.  
Washington fescue

FNA24: "Festuca washingtonica grows in subalpine to low alpine regions of British Columbia and Washington. It has also been reported from Oregon and northern California; these records have not been verified."

***Glyceria* [HC, HC2]**

mannagrass

***Glyceria borealis* (Nash) Batch. [FNA24, HC, HC2]**

Proc. Manchester Inst. Arts Sci. 1: 74.  
small floating manna grass

*Panicularia borealis* Nash

FNA24: "Glyceria borealis is a widespread native species that grows in the northern portion of the Flora region, extending southward through the western mountains into northern Mexico. It grows along the edges and muddy shores of freshwater streams, lakes, and ponds. In the southern portion of its range, *G. borealis* is restricted to subalpine and alpine areas. The midcauline leaves of *G. borealis* almost always have densely papillose upper leaf surfaces. Voss (1972) stated that such surfaces are non-wettable and develop on the floating leaves. *Glyceria borealis* differs from *G. notata* in having acute lemmas and, usually, densely papillose midcauline leaves."

***Glyceria canadensis* (Michx.) Trin. [HC2]**

Canada mannagrass, rattlesnake mannagrass

*Panicularia canadensis* (Michx.) Kuntze

**var. *canadensis* [FNA24, HC2]**

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 1(4): 366.  
rattlesnake manna grass

FNA24: "Glyceria canadensis is an attractive native species that grows in swamps, bogs, lakeshore marshes, and wet woods throughout much of eastern North America, extending from eastern Saskatchewan to Newfoundland, Illinois, and northeastern Tennessee. It is now established in western North America, having been introduced as a weed in cranberry farms. It forms sterile hybrids with *G. striata*; the hybrids are called *G. xottawensis* Bowden. For further comments, see the description of *Glyceria striata*."

***Glyceria declinata* Bréb. [FNA24, HC2]**

Fl. Normandie 354.  
low glyceria

FNA24: "Glyceria declinata is a European species that is established on the western seaboard of North America from southern British Columbia to southern California, and in northeastern Nevada, Arizona, the lower portion of the Mississippi valley, and on Long Island, New York. In Europe, it grows in low-calcium, acidic soils and tolerates drier conditions than other European species of *Glyceria* (Conert 1992). In

Denmark, it tends to grow in areas that are highly trampled (Niels Jacobsen and Signe Frederiksen, pers. comm.). It is invading vernal pools in California. In western North America, *G. declinata* has been confused with *G. occidentalis*. The most reliable distinguishing characteristics are the lateral lemma lobes of *G. declinata* and its rather short, straight panicle branches. The two species also differ in their ploidy level, *G. declinata* being diploid and *G. occidentalis* tetraploid (Church 1949). This is reflected in the length of their guard cells, those of *G. declinata* being 0.2?0.3 Åµm and those of *G. occidentalis* being 0.4?0.5 Åµm. S.F. Hrusa found plants (Hrusa 13681, 15858, 16267; specimens in CDA) that have an annual growth habit. Apart from this, they fit within the circumscription of *G. declinata*, except that two of the three specimens have narrower (2?3 mm) leaves than normal; they were also collected relatively early in the season. For now, it seems best to include the plants in *G. declinata* pending a better understanding of their relationship to perennial members of the species."

***Glyceria elata* (Nash) M.E. Jones [FNA24, HC, HC2]**

Biol. Ser. Bull. State Univ. Montana 15: 17  
tall mannagrass

FNA24: "*Glyceria elata* grows in wet meadows and shady moist woods, from British Columbia east to Alberta and south to California and New Mexico. It is not known from Mexico. The anomalous record from Georgia may represent an inadvertent introduction. It is very similar to, and sometimes confused with, *G. striata*, but the two sometimes grow together and show no evidence of hybridization. Their differences in growth habit and stature are evident in the field. Molecular data (Whipple et al. [in press]) confirm that *G. elata* and *G. striata* are distinct, closely related entities. *Glyceria elata* is also sometimes confused with *G. grandis*. It differs in having rounded glumes with veins that terminate below the apices, more readily disarticulating florets, and greener lemmas with more prow-shaped apices, as well as in having paleal keel tips that point towards each other. In its overall aspect, it also resembles *G. pulchella*, but has somewhat more lax panicle branches than that species, in addition to smaller spikelets and florets."

***Glyceria fluitans* (L.) R. Br. [HC2]**

water mannagrass

***Glyceria grandis* S. Watson [HC, HC2]**

American mannagrass

*Glyceria maxima* (Hartm.) Holmb. ssp. *grandis* (S. Watson) Hultén

*Glyceria maxima* (Hartm.) Holmb. var. *americana* (Torr.) B. Boivin

*Panicularia grandis* (S. Watson) Nash

**var. *grandis* [FNA24, HC2]**

Manual (ed. 6) 667.

reed mannagrass

FNA24: "*Glyceria grandis* grows on banks and in the water of streams, ditches, ponds, and wet meadows, from Alaska to Newfoundland and south in the mountains to California, Arizona, and New Mexico in the western United States, and to Virginia and Tennessee in the eastern United States. It is similar to *G. maxima*, differing primarily in its shorter, flatter lemmas and shorter anthers. It is also confused with *G. elata* and *Torreyochloa pallida*. It differs from the former in having acute glumes with long veins, more evenly dark florets, flatter lemma apices, and paleal keel tips that do not point towards each other. It differs from *Torreyochloa pallida* in its closed leaf sheaths and 1-veined glumes. *Glyceria grandis* var. *grandis* is the more widespread of the two varieties, growing throughout the range of the species."

***Glyceria leptostachya* Buckley [FNA24, HC, HC2]**

Proc. Acad. Nat. Sci. Philadelphia 14: 95.

slender-spike manna grass

*Panicularia davyi* Merr.

FNA24: "*Glyceria leptostachya* grows in swamps and along the margins of streams and lakes, on the western side of the coastal mountains from southern Alaska to San Francisco Bay. It is similar to the European *Glyceria notata*, differing primarily in its tendency to have fewer spikelets [3?8(10) vs. 5?15(19)] on its branches."

***Glyceria maxima* (Hartm.) Holmb. [FNA24, HC2]**

Bot. Not. 1919: 97.

tall mannagrass

Collected in King County.

***Glyceria xoccidentalis*** (Piper) J.C. Nelson [FNA24, HC, HC2]

Torrey 19: 224.

northwestern manna grass

FNA24: "Glyceria xoccidentalis has hitherto been considered an uncommon native species that grows along lakes, ponds, and streams, and in marshy areas of western North America. It differs from other species in the region primarily in its longer lemmas and anthers. Studies of chloroplast DNA in western North American species of Glyceria demonstrated that, contrary to C.L. Hitchcock's (1969) conclusion, G. fluitans is present in western North America, and that all specimens being identified as G. xoccidentalis had cpDNA resembling that of G. leptostachya or G. fluitans; there was no distinctive G. xoccidentalis cpDNA (Whipple et al. [in press]). This strongly suggests that G. xoccidentalis is a series of reciprocal hybrids, and probably backcrosses, between G. fluitans and G. leptostachya. As the key indicates, G. xoccidentalis is intermediate between its two putative parents. The cpDNA study also confirmed that G. declinata is distinct from G. xoccidentalis (see discussion under that species)."

***Glyceria striata*** (Lam.) Hitchc. [FNA24, HC, HC2]

Proc. Biol. Soc. Wash. 41: 157.

fowl manna grass

*Glyceria nervata* (Willd.) Trin.

*Glyceria striata* (Lam.) Hitchc. ssp. *stricta* (Scribn.) Hultén

*Glyceria striata* (Lam.) Hitchc. var. *stricta* (Scribn.) Fernald [HC]

*Panicularia nervata* (Willd.) Kuntze

*Panicularia striata* (Lam.) Hitchc.

FNA24: "Glyceria striata grows in bogs, along lakes and streams, and in other wet places. Its range extends from Alaska to Newfoundland and south into Mexico. Plants from the eastern portion of the range have sometimes been treated as G. striata var. striata, and those from the west as G. striata var. stricta (Scribn.) Fernald. Eastern plants tend to have somewhat narrower leaves and thinner culms than western plants, but the variation appears continuous. In the west, larger specimens are easy to confuse with G. elata. The two species are sometimes found growing together without hybridizing; this and molecular data (Whipple et al. [in prep.]) support their recognition as separate species. The differences between the two in growth habit and stature are evident in the field; they are not always evident on herbarium specimens. In its overall aspect, G. striata also resembles G. pulchella, but it has somewhat more lax panicle branches in addition to smaller spikelets and florets. Glyceria xgatineauensis Bowden is a sterile hybrid between G. striata and G. melicaria. It resembles G. melicaria but has longer (up to 12 cm), less appressed panicle branches and is a triploid with  $2n = 30$ . It was described from a population near Eardley, Quebec. An additional specimen, tentatively identified as G. xgatineauensis, was collected in 1929 from French Creek in Upshur County, West Virginia. Glyceria xottawensis Bowden is a sterile hybrid between G. striata and G. canadensis. It is intermediate between the two parents, and is known only from the original populations near Ottawa. It has sometimes been included in G. laxa (Scribn.) Scribn. [= G. canadensis var. laxa]; that taxon often produces viable seed, indicating that it is not a hybrid."

***Grapphephorum*** [HC2]

grapphephorum

***Grapphephorum wolfii*** (Vasey) Vasey ex Coult. [HC2]

beardless false oat

*Trisetum wolfii* Vasey [HC]

FNA24: "Trisetum wolfii grows in moist meadows, marshes, and stream banks in aspen groves and parks in the spruce-fir forest zone, at medium to high, but usually not alpine, elevations. It is native to southwestern Canada and the western United States."

***Hesperostipa*** [HC2]

needle grass, needle-and-thread, porcupine-grass

***Hesperostipa comata*** (Trin. & Rupr.) Barkworth [HC2]

needle-and-thread

*Stipa comata* Trin. & Rupr. [HC]

ssp. **comata** [FNA24, HC2]

Phytologia 74(1): 16.  
needle and thread

*Stipa comata* Trin. & Rupr. ssp. *intonsa* Piper  
*Stipa comata* Trin. & Rupr. var. *comata* [HC]

FNA24: "Hesperostipa comata subsp. comata grows on well-drained soils of cool deserts, grasslands, and sagebrush associations, at elevations of 200?2500 m. It is widespread and often abundant in western and central North America, particularly in disturbed areas. It is similar to *H. neomexicana*, differing primarily in having awns that are either not hairy or have hairs that are no more than 0.5 mm long, and in having thinner, longer ligules. Intermediates to *H. neomexicana* exist but are not common."

ssp. **intermedia** (Scribn. & Tweedy) Barkworth [FNA24, HC2]

Phytologia 74(1): 16.  
Tweedy's needlegrass

*Stipa comata* Trin. & Rupr. var. *falcata* B. Boivin  
*Stipa comata* Trin. & Rupr. var. *intermedia* Scribn. & Tweedy [HC]  
*Stipa comata* Trin. & Rupr. var. *suksdorfii* H. St. John

FNA24: "Hesperostipa comata subsp. intermedia is found in pinyon-juniper woodlands, at elevations of 2175?3075 m, in the Sierra Nevada and Rocky Mountains, from southern Canada to New Mexico. It resembles *H. curtisetia*, but differs in its evenly pubescent lemmas and its often lacerate ligules."

**Hierochloe** [HC, HC2]

sweetgrass, vanillagrass

*Hierochloe* [HC, HC2]

**Hierochloe occidentalis** Buckley [HC, HC2]

Proc. Acad. Nat. Sci. Philadelphia 14: 100.  
California sweet grass, California sweetgrass

*Anthoxanthum occidentale* (Buckley) Veldkamp  
*Hierochloe macrophylla* Thurb. ex Bol.

FNA24: "Anthoxanthum occidentale grows in moist to fairly dry forested areas, from Kickitat County, Washington south to the coastal mountains of San Juis Obispo County, California. Its long flag leaf blades and more elongate spikelet parts make it easier to distinguish from *A. hirtum* than the key suggests."

**Hierochloe odorata** (L.) P. Beauv. [HC, HC2]

hairy sweetgrass, vanillagrass

*Anthoxanthum hirtum* (Schrank) Y. Schouten & Veldkamp  
*Anthoxanthum hirtum* (Schrank) Y. Schouten & Veldkamp ssp. *arcticum* (J. Presl) G.C. Tucker  
*Hierochloe hirta* (Schrank) Borbás ssp. *arctica* (J. Presl) G. Weim.  
*Hierochloe odorata* (L.) P. Beauv. ssp. *arctica* (J. Presl) Tzvelev

**Holcus** [HC, HC2]

velvet-grass

**Holcus lanatus** L. [FNA24, HC, HC2]

Sp. Pl. 2: 1048.  
common velvet grass

*Nothoholcus lanatus* (L.) Nash

FNA24: "Holcus lanatus grows in disturbed sites, moist waste places, lawns, and pastures, in a wide range of edaphic conditions and at elevations from 0-2300 m. A native of Europe, it was widely distributed in North America by 1800. It is an ancestor of the polyploid complex represented by *Holcus mollis*."

**Holcus mollis** L. [HC, HC2]

creeping softgrass, creeping velvet-grass

*ssp. mollis* [FNA24, HC2]

Syst. Nat. (ed. 10) 2: 1305.  
creeping velvet grass

FNA24: "Holcus mollis grows in moist soil and disturbed sites, including lawns and damp pastures. It is a European introduction that has persisted in the Flora region, becoming a problematic weed in ungrazed pastures, prairie remnants, and oak savannahs in portions of the Pacific Northwest. It is also sold as an ornamental. There are two subspecies: *Holcus mollis* L. subsp. *mollis* (stems not thickened and tuberous at the base; panicles lax, brownish or purplish) and *H. mollis* subsp. *reuteri* (Boiss.) Malag. (stems thickened and tuberous at the base; panicles narrow, whitish). North American introductions belong to subsp. *mollis*."

***Hordeum*** [HC, HC2]

barley

***Hordeum brachyantherum*** Nevski [HC, HC2]

meadow barley

*Critesion brachyantherum* (Nevski) Barkworth & D.R. Dewey  
*Hordeum nodosum* L.

*ssp. brachyantherum* [FNA24, HC2]

Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 2: 61.  
meadow barley

*Critesion jubatum* (L.) Nevski *ssp. breviaristatum* (Bowden) Á. Löve & D. Löve  
*Hordeum boreale* Scribn. & J.G. Sm.  
*Hordeum jubatum* L. *ssp. breviaristatum* Bowden  
*Hordeum jubatum* L. var. *boreale* (Hitchc.) B. Boivin  
*Hordeum nodosum* L. var. *boreale* Hitchc.

FNA24: "*Hordeum brachyantherum* subsp. *brachyantherum* grows in pastures and along streams and lake shores, from sea level to 4000 m. Its range extends from Kamchatka through western North America to Baja California, Mexico. It is also known from disjunct locations in Newfoundland and Labrador and the eastern United States. The latter are probably recent introductions; the Newfoundland populations are harder to explain. One population from California is known to be hexaploid."

***Hordeum depressum*** (Scribn. & J.G. Sm.) Rydb. [FNA24, HC, HC2]

Bull. Torrey Bot. Club 36: 539.  
dwarf barley

*Critesion depressum* (Scribn. & J.G. Sm.) Á. Löve

FNA24: "*Hordeum depressum* grows in vernal pools and ephemeral habitats, often in alkaline soil. It is restricted to the western United States."

***Hordeum jubatum*** L. [HC, HC2]

foxtail barley

*Critesion jubatum* (L.) Nevski

*ssp. jubatum* [FNA24, HC2]

Sp. Pl. 1: 85.  
foxtail barley

FNA24: "*Hordeum jubatum* subsp. *jubatum* is the more widespread of the two subspecies, extending from eastern Siberia through most of North America to northern Mexico. Native in western and northern portions of the Flora region, it is considered to be adventive in the eastern and southeastern portion of its range. It grows in moist soil along roadsides and other disturbed areas, as well as in meadows, the edges of sloughs and salt marshes, and on grassy slopes."

***Hordeum marinum*** Huds. [HC2]

Mediterranean barley

*ssp. gussoneanum* (Parl.) Thell. [HC2]

Mediterranean barley

*Critesion geniculatum* (All.) Á. Löve  
*Critesion hystrix* (Roth) Á. Löve  
*Critesion marinum* (Huds.) Á. Löve ssp. *gussonianum* (Parl.) Barkworth & D.R. Dewey, orthographic variant  
*Hordeum geniculatum* All. [HC]  
*Hordeum gussonianum* Parl., orthographic variant  
*Hordeum hystrix* Roth  
*Hordeum marinum* Huds. ssp. *gussonianum* (Parl.) Thell., orthographic variant

FNA24: "Hordeum marinum subsp. gussoneanum grows in grassy fields, waste places, and open ground. It was introduced to North America from the Mediterranean area, and it is now an established weed, especially in western North America."

*Hordeum murinum* L. [HC, HC2]

mouse barley, smooth barley, wall barley

ssp. *glaucum* (Steud.) Tzvelev [FNA24, HC2]

Novosti Sist, Vysa. Rast. 8: 67.  
mouse barley

*Critesion glaucum* (Steud.) Á. Löve  
*Critesion murinum* (L.) Á. Löve ssp. *glaucum* (Steud.) W.A. Weber  
*Hordeum glaucum* Steud. [HC]  
*Hordeum stebbinsii* Covas

FNA24: "Hordeum murinum subsp. glaucum grows in grasslands, fields, and waste places. It is native to the eastern Mediterranean area. It is now common in arid areas of the western United States, and is also known from scattered locations elsewhere in the Flora region."

ssp. *leporinum* (Link) Arcang. [FNA24, HC2]

Comp. Fl. Ital. 805.  
mouse barley

*Critesion murinum* (L.) Á. Löve ssp. *leporinum* (Link) Á. Löve  
*Hordeum leporinum* Link [HC]

FNA24: "Hordeum murinum subsp. leporinum grows in waste places, roadsides, and disturbed areas in arid regions. It is native to the Mediterranean region. It is now established in the Flora region, being most common in the western United States. A hexaploid cytotype has been found in Turkey, Armenia, Turkmenistan, and Iran. It has been named *H. leporinum* var. *simulans* Bowden. It is treated here as part of *H. murinum* subsp. *leporinum*."

ssp. *murinum* [FNA24, HC2]

Sp. Pl. 1: 85.  
mouse barley

*Critesion murinum* (L.) Á. Löve ssp. *murinum*

FNA24: "Hordeum murinum subsp. murinum grows in waste places that are somewhat moist. It is native to Europe. Within the Flora region, it has the most restricted distribution of the three subspecies, being found from Washington to Arizona, and in scattered locations from Maine to Virginia."

*Hordeum pusillum* Nutt. [FNA24, HC, HC2]

Gen. N. Amer. Pl. 1: 87.  
little barley

*Critesion pusillum* (Nutt.) Á. Löve  
*Hordeum pusillum* Nutt. var. *pubens* Hitchc.

FNA24: "Hordeum pusillum grows in open grasslands, pastures, and the borders of marshes, and in disturbed places such as roadsides and waste places, often in alkaline soil. It is native, widespread, and often common in much of the Flora region. Its range extends into northern Mexico, but it is not common there."

*Hordeum vulgare* L. [HC, HC2]

barley

*Hordeum aegiceras* Nees ex Royle  
*Hordeum distichon* L.  
*Hordeum hexastichum* L.  
*Hordeum vulgare* L. var. *trifurcatum* (Schltdl.) Alef.

**ssp. *vulgare* [FNA24, HC2]**

Sp. Pl. 1: 84-85.  
common barley

FNA24: "*Hordeum vulgare* is native to Eurasia. Plants in the Flora region belong to the cultivated subspecies, *H. vulgare* L. subsp. *vulgare*. The progenitor of cultivated barley, *H. vulgare* subsp. *spontaneum* (K. Koch) Thell., has a brittle rachis, tough awn, and, often, shrunken seeds. It does not grow in the Flora region. *Hordeum vulgare* subsp. *vulgare* was first domesticated in western Asia. It is now grown in most temperate parts of the world. In the Flora region, it occurs as a cultivated species that is often found as an adventive in fields, roadsides, and waste places throughout the region, not just at the locations shown on the map. There are many distinctive, but interfertile, forms. Bothmer et al. (1995) presented an artificial classification of such forms."

***Koeleria* [HC, HC2]**

junegrass

***Koeleria macrantha* (Ledeb.) Schult. [FNA24, HC2]**

Mant. 2: 345.  
prairie Koeler's grass

*Koeleria cristata* Pers. [HC]  
*Koeleria cristata* Pers. var. *longifolia* Vasey ex Burt Davy  
*Koeleria cristata* Pers. var. *pinetorum* Abrams  
*Koeleria gracilis* Pers.  
*Koeleria nitida* Nutt.  
*Koeleria yukonensis* Hultén

H&C note that *Koeleria cristata* is an illegitimate name. FNA24: "*Koeleria macrantha* is widely distributed in temperate regions of North America and Eurasia. In North America, it grows in semi-arid to mesic conditions, on dry prairies or in grassy woods, generally in sandy soil, from sea level to 3900 m. It differs from *Sphenopholis intermedia*, with which it is frequently confused, in its less open panicles, and in having spikelets that disarticulate above the glumes. The species is treated here as a polymorphic, polyploid complex. North American plants have sometimes been treated as a separate species, *Koeleria nitida* Nutt., but no morphological characters for distinguishing them from Eurasian members of the complex are known (Greuter 1968). Some plants from Oregon and Washington have densely pubescent culms, and high-elevation populations from western North America often are densely cespitose, with very short culms and purple leaves and inflorescences, but both variants appear to intergrade with more typical plants."

***Leersia* [HC, HC2]**

cutgrass

***Leersia oryzoides* (L.) Sw. [FNA24, HC, HC2]**

Prodr. 21.  
rice cut grass

*Homalocenchrus oryzoides* (L.) Pollich  
*Phalaris oryzoides* L.

FNA24: "*Leersia oryzoides* grows in wet, heavy, clay or sandy soils, and is often aquatic. It is found across most of southern Canada, extending south throughout the contiguous United States into northern Mexico, and flowers from July to October. It has also become established in Europe and Asia."

***Leymus* [HC2]**

wildrye

***Leymus cinereus* (Scribn. & Merr.) Á. Löve [FNA24, HC2]**

Bulletin of the Torrey Botanical Club 29(7): 467.  
Great Basin lyme grass

*Aneurolepidium piperi* (Bowden) B.R. Baum  
*Elymus cinereus* Scribn. & Merr. [HC]  
*Elymus cinereus* Scribn. & Merr. var. *cinereus* [HC]  
*Elymus cinereus* Scribn. & Merr. var. *pubens* (Piper) C.L. Hitchc. [HC]  
*Elymus condensatus* J. Presl var. *pubens* Piper  
*Elymus piperi* Bowden

FNA24: "*Leymus cinereus* grows along streams, gullies, and roadsides, and in gravelly to sandy areas in sagebrush and open woodlands. It is widespread and common in western North America. *Leymus cinereus* also resembles *Psathyrostachys juncea*, differing in its non-disarticulating rachises, larger spikelets with more florets, and longer ligules. Spontaneous hybridization between *L. cinereus* and *L. triticoides* is known; the hybrids do not have a scientific name. The rhizomes found in some specimens may reflect introgression from *L. triticoides* through such hybrids."

\* Barkworth, M.E. and R.J. Atkins. 1984. *Leymus* Hochst. (Gramineae: Triticeae) in North America: Taxonomy and distribution. Amer. J. Bot. 71:609?625

***Leymus condensatus*** (J. Presl) Á. Löve [HC2]

giant wildrye

***Leymus flavescens*** (Scribn. & J.G. Sm.) Pilg. [FNA24, HC2]

Botanische Jahrbucher fur Systematik, Pflanzengeschichte und Pflanzengeographie 74: 6.  
sand lyme grass

*Elymus arenicola* Scribn. & J.G. Sm.  
*Elymus flavescens* Scribn. & J.G. Sm. [HC]  
*Leymus arenicola* (Scribn. & J.G. Sm.) Pilg.

FNA24: "*Leymus flavescens* grows on sand dunes and open sandy flats, and ditch- and roadbanks, of the Snake and Columbia river valleys [MARY: there are also 3 Montana counties shown on the map. KMC]. The central Washington population is growing on a road cut; it seems to be well established there. Plants identified as *Elymus arenicolus* Scribn. & J.G. Sm. have less densely pubescent lemmas than other specimens. Leckenby, the collector of the type specimen, noted that they grew on sand or sand drifts along the Columbia River, but could not withstand flooding. He could find no seed. Such specimens are included here, but they may represent hybrids between *L. flavescens* and *L. triticoides*."

***Leymus mollis*** (Trin.) Pilg. [HC2]

American dunegrass

*Elymus arenarius* L. ssp. *mollis* (Trin.) Hultén  
*Elymus arenarius* L. var. *scabrinervis* (Bowden) B. Boivin  
*Elymus mollis* Trin. [HC]  
*Leymus arenarius* (L.) Hochst. ssp. *mollis* (Trin.) Tzvelev

ssp. ***mollis*** [FNA24, HC2]

Bot. Jahrb. Syst. 74(1): 6.  
yellow ryegrass

*Elymus arenarius* L. var. *villosus* E. Mey.  
*Elymus capitatus* Scribn.

FNA24: "In the Flora region, *Leymus mollis* subsp. *mollis* grows primarily on the west coast; on the east coast, it grows in New Brunswick and Nova Scotia, particularly along the St. Lawrence River, and on the coast of Greenland. It does not grow along the arctic coast. Outside the Flora region, it is native in the coastal region of eastern Asia, growing primarily along the coast and in the mouths of larger rivers, and on the shores of large lakes near the coast from the Korean Peninsula to the Kamchatka Peninsula. It was introduced to Iceland, but is now rare there. *Leymus xvancooverensis* is thought to be a hybrid between *L. mollis* subsp. *mollis* and *L. triticoides*, although its range extends beyond the current range of *L. triticoides*."

***Leymus racemosus*** (Lam.) Tzvelev [FNA24, HC2]

Bot. Mater. Gerb. Bot. Inst. Komarova Acad. Nauk SSSR 20: 429.  
mammoth lyme grass

*Elymus arenarius* L. var. *giganteus* (Vahl) Schmalh.  
*Elymus giganteus* Vahl [HC]

*Elymus racemosus* Lam.  
*Leymus giganteus* (Vahl) Pilg.

FNA24: "*Leymus racemosus* is native to Europe and central Asia, where it grows on dry, sandy soils. It has been introduced into the Flora region, and collected at various locations, particularly in the northwestern contiguous United States; it is not clear how many of the populations represented by these specimens are still extant. Tsvelev (1976) recognized 4 subspecies. Because there are few North American specimens, and these are incomplete, no attempt has been made to determine to which subspecies the North American plants belong."

***Leymus triticoides* (Buckley) Pilg. [FNA24, HC2]**

Bot. Jahrb. Syst. 74: 6.  
beardless lyme grass

*Elymus condensatus* J. Presl var. *triticoides* (Buckley) Thurb.  
*Elymus orcuttianus* Vasey  
*Elymus triticoides* Buckley [HC]  
*Elymus triticoides* Buckley var. *pubescens* Hitchc. [HC]  
*Elymus triticoides* Buckley var. *triticoides* [HC]

FNA24: "*Leymus triticoides* grows in dry to moist, often saline meadows. Its range extends from southern British Columbia to Montana, south to California, Arizona, and New Mexico, but its populations are widely scattered. It is not known from Mexico. There is considerable variation within the species, but no pattern of variation suggesting the existence of infraspecific taxa is known. It is very similar to *L. multicaulis*, strains of which were initially released as *L. triticoides* by the U.S. Department of Agriculture. The most consistent differences between them appear to be in the venation of the leaf blades and the vestiture of the calluses. *Leymus triticoides* is also very similar to *L. simplex*, differing from it in the number of spikelets at the midspike nodes. *Leymus triticoides* hybridizes with other species of *Leymus*; hybrids with *L. mollis* are called *L. xancouverensis* (see p. ??), those with *L. condensatus* are called *L. xmultiflorus* (see p. ??). Hybrids with *L. cinereus* are known, but have not been formally named. Plants identified as *Elymus arenicolus* Scribn. & J.G. Sm. are here included in *L. flavescens*, but may represent hybrids between *L. triticoides* and *L. flavescens*."

***Leymus xancouverensis* (Vasey) Pilg. [FNA24, HC2]**

Bot. Jahrb. Syst. 74: 6.  
Vancouver wildrye

*Elymus vancouverensis* Vasey  
*Elymus vancouverensis* Vasey var. *californicus* Bowden  
*Elymus vancouverensis* Vasey var. *crescentianus* Bowden

FNA24: "*Leymus xancouverensis* grows at scattered locations on beaches along the Pacific coast, from southern British Columbia to California. It is a sterile hybrid, probably between *L. mollis* and *L. triticoides* (Bowden 1957). The northern populations are outside the current range of *L. triticoides*."

***Lolium* [HC, HC2]**

ryegrass

***Lolium multiflorum* Lam. [FNA24, HC, HC2]**

Fl. Franç. 3: 621.  
annual ryegrass, Italian ryegrass, perennial ryegrass

*Lolium multiflorum* Lam. ssp. *italicum* (A. Braun) Schinz & R. Keller  
*Lolium multiflorum* Lam. var. *diminutum* Mutel  
*Lolium multiflorum* Lam. var. *muticum* DC.  
*Lolium perenne* L. ssp. *italicum* (A. Braun) Husnot  
*Lolium perenne* L. ssp. *multiflorum* (Lam.) Husn.  
*Lolium perenne* L. var. *aristatum* Willd.  
*Lolium perenne* L. var. *multiflorum* (Lam.) Parnell

FNA24: "*Lolium multiflorum*, a European species, now grows in most of the Flora region. It is planted as a cover crop, as a temporary lawn grass, for roadside restoration, and for soil or forage enrichment; it often escapes from cultivation, becoming established in disturbed sites. *Lolium multiflorum* and *L. perenne* are interfertile and intergrade. *Lolium multiflorum* differs from *L. perenne* in being a taller, shorter-lived

perennial or annual with wider leaves that are rolled, rather than folded, in the bud. Hybrids between the two species are called *Lolium xhybridum* Hausskn. *Lolium multiflorum* also hybridizes with *L. rigidum*; those hybrids are called *Lolium xhubbardii* Jansen & Wacht. ex B.K. Simon."

*Lolium perenne* L. [FNA24, HC, HC2]

Sp. Pl. 1: 83.

English ryegrass, perennial ryegrass

*Lolium multiflorum* Lam. var. *ramosum* Guss. ex Arcang.

*Lolium perenne* L. var. *cristatum* Pers.

FNA24: "*Lolium perenne*, a Eurasian species, is now established in disturbed areas throughout much of the Flora region. It is commercially important, being included in lawn seed mixtures as well as being used for forage and erosion prevention. *Lolium perenne* intergrades and is interfertile with *L. multiflorum*; it also intergrades with *L. rigidum*. Typical *L. perenne* differs from *L. multiflorum* in being a shorter, longer-lived perennial with narrower leaves that are folded, rather than rolled, in the bud. Hybrids between the two species are called *Lolium xhybridum* Hausskn."

*Lolium temulentum* L. [HC, HC2]

darnel, tare

*Lolium arvense* With.

*Lolium temulentum* L. var. *leptochaeton* A. Braun

*Lolium temulentum* L. var. *macrochaeton* A. Braun

ssp. *temulentum* [FNA24, HC2]

Sp. Pl. 1: 83.

darnel

*Lolium temulentum* L. var. *arvense* (With.) Bab.

FNA24: "*Lolium temulentum* subsp. *temulentum* is found occasionally in disturbed sites throughout much of the Flora region. It is native to the Eastern Hemisphere, where it is known only as a weed, especially of grain fields. Awn presence or absence and length vary, and have no taxonomic significance. The seeds sometimes become infected with an endophytic fungus, assumed to be the source of the toxic pyrrolizidine alkaloids loline, 6-methyl loline, and lolinine, but not temuline, which is now considered an artifact of isolation (Dannhardt and Steindl 1985). Because primitive agricultural practices could not separate seeds of *Lolium temulentum* from those of wheat, infected seeds often resulted in poisonous flour."

*Melica* [HC, HC2]

melic, oniongrass

*Melica aristata* Thurb. ex Bol. [FNA24, HC, HC2]

Proc. Calif. Acad. Sci. 4: 103.

bearded melic grass

FNA24: "*Melica aristata* grows from 1000?3000 m in open fir and pine woods. It is restricted to the Flora region, being native from Washington to southern California. It has also been found in Kentucky, possibly as an introduction from contaminated seed. *Melica aristata* is easily distinguished from most species of *Melica* by its conspicuous awns."

*Melica bulbosa* Geyer ex Porter & J.M. Coult. [FNA24, HC, HC2]

Syn. Fl. Colorado 149.

onion grass

*Bromelica bulbosa* (Geyer ex Porter & J.M. Coult.) W.A. Weber

*Melica bella* Piper

*Melica bella* Piper ssp. *intonsa* Piper

*Melica bulbosa* Geyer ex Porter & J.M. Coult. var. *bulbosa* [HC]

*Melica bulbosa* Geyer ex Porter & J.M. Coult. var. *inflata* (Bol.) Boyle

*Melica bulbosa* Geyer ex Porter & J.M. Coult. var. *intonsa* (Piper) M. Peck [HC]

*Melica inflata* (Bol.) Vasey

FNA24: "*Melica bulbosa* grows from 1370?3400 m, mostly in open woods on dry, well-drained slopes and along streams. It is restricted to the western half of the Flora region. Two records from Texas, in Jeff Davis

and Sutton counties, have not been verified. *Melica bulbosa* differs from *M. spectabilis* in its sessile corm and longer glumes. In addition, in *M. bulbosa* the spikelets have purplish bands which appear to be concentrated towards the apices; in *M. spectabilis* the bands appear more regularly spaced. It differs from *M. californica* in its more narrowly acute spikelets, more strongly colored lemmas, and lack of corms, and from *M. fugax* in not having swollen rachilla internodes."

*Melica ciliata* L. [HC2]

silky melic

ssp. *taurica* (K. Koch) Tzvelev [HC2]

*Melica fugax* Bol. [FNA24, HC, HC2]

Proc. Calif. Acad. Sci. 4: 104.

small melic grass

*Melica fugax* Bol. ssp. *madophylla* Piper

*Melica fugax* Bol. var. *inexpansa* Suksd.

*Melica fugax* Bol. var. *macbridei* (Rowland ex A. Nelson) Beetle

FNA24: "*Melica fugax* grows at elevations to 2200 m on dry, open flats, hillsides, and woods, from British Columbia to California and east to Idaho and Nevada. It is usually found on soils of volcanic origin, and rarely below 1300 m. *Melica fugax* is often confused with *M. bulbosa*, but its rachilla internodes are unmistakable and unique among the species in the Flora region, being swollen when fresh and wrinkled when dry. One specimen, C.L. Hitchcock 15521 [WTU 114265] from Elmore County, Idaho, appears to be a hybrid. It has shrunken caryopses and combines the rachilla of *M. fugax* with the lemma pubescence, size, and overall appearance of *M. subulata*, but lacks corms."

*Melica harfordii* Bol. [FNA24, HC, HC2]

Proc. Calif. Acad. Sci. 4: 102.

Harford's melic grass

*Melica harfordii* Bol. var. *minor* Vasey

FNA24: "*Melica harfordii* grows primarily in the Pacific coast ranges from Washington to California, as well as in the Sierra Nevada and a few other inland locations, usually on dry slopes or in dry, open woods. The awns in *M. harfordii* often escape attention because they do not always extend beyond the lemma."

*Melica smithii* (Porter ex A. Gray) Vasey [FNA24, HC, HC2]

Bull. Torrey Bot. Club 15: 294.

Smith's melic grass

*Avena smithii* Porter ex A. Gray

*Bromelica smithii* (Porter ex A. Gray) Farw.

FNA24: "*Melica smithii* grows in cool, moist woods from British Columbia and Alberta south to Oregon and Wyoming and, as a disjunct, from the Great Lakes region to western Quebec. It often forms colonies in the eastern portion of its range. Its disjunct distribution pattern is unusual among North America's grasses."

*Melica spectabilis* Scribn. [FNA24, HC, HC2]

Proc. Acad. Nat. Sci. Philadelphia 1885: 45, t. 1, f. 11-13.

showy melic grass

*Bromelica spectabilis* (Scribn.) W.A. Weber

*Melica bulbosa* Geyer ex Porter & J.M. Coult. var. *spectabilis* (Scribn.) B. Boivin

FNA24: "*Melica spectabilis* grows in moist meadows, flats, and open woods, from 1200?2600 m, primarily in the Pacific Northwest and the Rocky Mountains. It is often confused with *M. bulbosa*, differing in its shorter glumes, "tailed"• corm, and the more marked and evenly spaced purplish bands of its spikelets."

*Melica subulata* (Griseb.) Scribn. [FNA24, HC, HC2]

Proc. Acad. Nat. Sci. Philadelphia 1885: 47.

Alaska oniongrass

*Melica subulata* (Griseb.) Scribn. var. *pammelii* (Scribn.) C.L. Hitchc. [HC]

*Melica subulata* (Griseb.) Scribn. var. *subulata* [HC]

FNA24: "*Melica subulata* grows from sea level to 2300 m in mesic, shady woods. Its range extends from the Aleutian Islands of Alaska through British Columbia to California, east to Lawrence County, South

Dakota, and into Colorado."

***Miscanthus*** [HC2]

*Miscanthus sinensis* Andersson [HC2]

Chinese silvergrass

***Molinia*** [HC, HC2]

moorgrass

*Molinia caerulea* (L.) Moench [FNA24, HC, HC2]

Methodus 183.

purple moor grass

Known in Washington from along beach just south of West Point lighthouse at Discovery Park in Seattle, King County. FNA24: "*Molinia caerulea* is established at scattered locations in the Flora region, but not at all the locations where it has been found. For instance, the record for Pennsylvania reflects a collection made in 1945 from an abandoned field; there are no extant populations known in the area. Most records are from southeastern Canada and the northeastern United States, but it has also been reported as being established in western Oregon. Plants with long, lax panicle branches have been called *Molinia caerulea* subsp. *arundinacea* (Schrank) H. Paul rather than *M. caerulea* (L.) Moench subsp. *caerulea*, but there are many intermediates."

***Muhlenbergia*** [HC, HC2]

muhlenbergia, muhly

*Muhlenbergia andina* (Nutt.) Hitchc. [FNA25, HC, HC2]

United States Department of Agriculture: Bulletin 772: 145.

foxtail muhly

*Muhlenbergia comata* (Thurb.) Thurb. ex Benth.

FNA25: "*Muhlenbergia andina* grows in damp places such as stream banks, gravel bars, marshes, lake margins, damp meadows, around springs, and in canyons, at elevations of 700-3000 m. It grows only in the western part of southern Canada and the contiguous United States."

*Muhlenbergia asperifolia* (Nees & Meyen ex Trin.) Parodi [FNA25, HC, HC2]

Revista Fac. Agron. Veterin. (Buenos Aires) 6: 117, f. 1.

or alkali muhly, scratchgrass

*Sporobolus asperifolius* (Nees & Meyen ex Trin.) Nees & Meyen

FNA25: "*Muhlenbergia asperifolia* grows in moist, often alkaline meadows, playa margins, and sandy washes, on grassy slopes, and around seeps and hot springs, at elevations of 55-3000 m. Its geographic range includes northern Mexico. *Muhlenbergia asperifolia* is morphologically similar to the southeastern *M. torreyana*, but differs in having glabrous, weakly compressed culms and more widely divergent panicle branches. The caryopses of *Muhlenbergia asperifolia* are frequently infected by a smut, *Tilletia asperifolia* Ellis & Everhart, which produces a globose body filled with blackish-brown spores."

*Muhlenbergia filiformis* (Thurb. ex S. Watson) Rydb. [FNA25, HC, HC2]

Bull. Torrey Bot. Club 32(11): 600.

pull-up muhly

*Muhlenbergia filiformis* (Thurb. ex S. Watson) Rydb. var. *fortis* E.H. Kelso

*Muhlenbergia idahoensis* H. St. John

*Muhlenbergia simplex* (Scribn.) Rydb.

FNA25: "*Muhlenbergia filiformis* grows in open, moist meadows, on gravelly lake shores, along stream banks, and in moist humus near thermal springs, at elevations of 1060-3050 m. It is usually associated with yellow pine forests, but also grows in many other plant communities. Its range extends into northern Mexico. *Muhlenbergia filiformis* resembles *M. richardsonis*, but differs in having glabrous internodes and subacute apices. Large, robust specimens have been referred to *M. simplex* Scribn. or *M. filiformis* var. *fortis* E.H. Kelso but, until there is more evidence to the contrary, it seems best to treat such plants as representing an extreme of the variation within *M. filiformis*."

*Muhlenbergia glomerata* (Willd.) Trin. [FNA24, HC, HC2]

Gram. Unifl. Sesquifl. 191, 297, t. 5, f. 10.  
spiked muhly

*Muhlenbergia glomerata* (Willd.) Trin. var. *cinnooides* (Link) F.J. Herm.

*Muhlenbergia racemosa* (Michx.) Britton, Sterns & Poggenb. var. *cinnooides* (Link) B. Boivin

FNA24: "Muhlenbergia glomerata grows in meadows, marshes, bogs, alkaline fens, lake margins, stream banks, beside irrigation ditches and hot springs, and on gravelly slopes, in many different plant communities, at elevations of 30-2300 m. It is most common in southern Canada and the northeastern United States, but grows sporadically throughout the western United States. It is not known from Mexico." H&C: "Although listed in Hitchcock's Manual for much of our area, the plant is rather rare. I have seen only one plant from Wash. and none from Oreg., and it is not at all common in Ida and w. Montana."

***Muhlenbergia mexicana*** (L.) Trin. [HC, HC2, JPM2]

Gram. Unifl. Sesquifl. 189, 190, 297, t. 5, f. 8.  
wirestem muhly

*Agrostis mexicana* L.

***Muhlenbergia minutissima*** (Steud.) Swallen [FNA24, HC, HC2]

Contr. U.S. Natl. Herb. 29(4): 207.  
annual muhly, least muhly

*Sporobolus confusus* (E. Fourn.) Vasey

*Sporobolus microspermus* (Lag.) Hitchc.

*Sporobolus minutissimus* (Steud.) Hitchc.

FNA24: "Muhlenbergia minutissima grows in sandy and gravelly drainages, rocky slopes, flats, road cuts, and open sites. It is usually found in yellow pine and oak-pine forests, pinyon-juniper woodlands, thorn-scrub forests, and oak-grama savannahs, at elevations of 1200-3000 m. Its range extends from the western United States to southern Mexico."

***Muhlenbergia racemosa*** (Michx.) Britton, Sterns & Poggenb. [FNA24, HC, HC2]

green muhly

*Agrostis racemosa* Michx.

although listed in Hitchcock's Manual for much of our area, the plant is rather rare. I have seen only one plant from Wash. and none from Oreg., and it is not at all common in Ida and w. Montana." [H&C]. See p. 627, H&C - where *M. glomerata*, listed above, by Kartesz, is 'lumped' with *M. racemosa*. Why not lump the two here?

***Muhlenbergia richardsonis*** (Trin.) Rydb. [FNA24, HC, HC2]

Bull. Torrey Bot. Club 32(11): 600.  
matted muhly

*Muhlenbergia squarrosa* (Trin.) Rydb.

*Sporobolus depauperatus* (Torr. ex Hook.) Scribn.

FNA24: "Muhlenbergia richardsonis grows in open sites in alkaline meadows, prairies, sandy arroyo bottoms, talus slopes, rocky flats and the shores of rivers, at elevations of 60-3300 m. It is the most widespread species of Muhlenbergia in the Flora region, extending from the Yukon Territory to Quebec in the north and to northern Baja California, Mexico, in the south. Morden and Hatch (1996) reported that it also grows in Alaska, but no voucher specimen has been located. Muhlenbergia richardsonis is often confused with *M. cuspidata*, which differs in lacking rhizomes and having shorter ligules, and sometimes with *M. filiformis*, which differs in being a weak annual with glabrous internodes and obtuse, erose glumes."

***Nassella*** [HC, HC2]

nassella, tussockgrass

***Nassella viridula*** (Trin.) Barkworth [HC2]

green nassella

*Stipa viridula* Trin. [HC]

***Oryzopsis*** [HC, HC2]

ricegrass

(see also *Achnatherum*, *Piptatheropsis*)

***Oryzopsis asperifolia* Michx. [FNA24, HC, HC2]**

Flora Boreali-Americana 1: 51, pl. 9.  
white-grain mountain-rice grass

FNA24: "*Oryzopsis asperifolia* grows in both deciduous and coniferous woods, generally on open, rocky ground in areas with well-developed duff. It is found from the Yukon and Northwest Territories south to New Mexico along the Rocky Mountains, and from British Columbia east to Newfoundland and Maryland. It is listed as endangered or threatened in Indiana, Ohio, New Jersey, Maryland, and Virginia."

***Panicum* [HC, HC2]**

panic grass, witchgrass  
(see also *Dichanthelium*, *Panicum*)

***Panicum capillare* L. [HC, HC2]**

witchgrass

**ssp. *capillare* [FNA24, HC2]**

Flora Boreali-Americana 1: 51, pl. 9.  
or common panicgrass, witchgrass

*Panicum capillare* L. var. *occidentale* Rydb.

*Panicum hirticaule* J. Presl ssp. *hirticaule* [KZ99], misapplied

FNA24: "*Panicum capillare* subsp. *capillare* is the common subspecies, growing in weedy and dry habitats throughout the range of the species. Plants in the western United States and Canada have spikelets over 2.6 mm long more often than those in the east. Robust plants germinating early in the season and growing on better soils tend to spread more, and have wider, shorter blades and more exserted panicles than plants in the eastern United States and Canada growing under comparable conditions. They are sometimes included in *P. capillare* var. *occidentale* Rydb., but these traits are not well correlated, and several environmental factors apparently affect their expression. Plants in the eastern part of the range with a well-exserted main panicle at anthesis usually arise from seeds germinating relatively late in the season." KZ99 (citing the 1996 Annals of the Missouri Botanical Garden) reports *Panicum hirticaule* J. Presl var. *hirticaule* from WA, but it is not found in the Pacific Northwest according to FNA.

***Panicum dichotomiflorum* Michx. [HC, HC2]**

fall panicum

**ssp. *dichotomiflorum* [FNA24, HC2]**

Fl. Bor.-Amer. 1: 48.  
fall panicum, western witchgrass

*Panicum dichotomiflorum* Michx. var. *dichotomiflorum* [KZ99]

S: *Panicum dichotomiflorum* Michx. var. *geniculatum* (Alph. Wood) Fernald

FNA24: "*Panicum dichotomiflorum* subsp. *dichotomiflorum* is the most common of the three subspecies and is found throughout the range of the species. In the past, members of this subspecies have been treated as two different taxa, var. *geniculatum* (Alph. Wood) Fernald and var. *dichotomiflorum*, with more erect, slender plants having fewer long-exserted panicles with slender, ascending branches and less crowded spikelets being placed in var. *dichotomiflorum*. Such plants are more common in the southern part of the subspecies range, but the traits are poorly correlated and the differences are at least in part affected by photoperiod, nighttime temperatures, and the time of seed germination."

***Panicum miliaceum* L. [HC, HC2]**

millet

**ssp. *miliaceum* [FNA24, HC2]**

Sp. Pl. 1: 58.  
broomcorn, hog millet, panic millet, proso millet

FNA24: "*Panicum miliaceum* subsp. *miliaceum* is the subspecies used in bird seed. It probably rarely persists because of the retention of the upper florets on the plant and, in northern states, poor seed survival over winter."

*ssp. ruderale* (Kitag.) Tzvelev [FNA24, HC2]

broomcorn, hog millet, panic millet

FNA24: "Panicum miliaceum subsp. ruderale is now naturalized over much of the Flora region. It may become a major weed, especially in corn fields."

***Parapholis*** [HC, HC2]

sickle-grass

*Parapholis incurva* (L.) C.E. Hubb. [HC, HC2]

Blumea Supplement 3.

sickle grass

***Pascopyrum*** [HC2]

wheatgrass

*Pascopyrum smithii* (Rydb.) Barkworth & D.R. Dewey [FNA24, HC2]

Amer. J. Bot. 72(5): 772.

western-wheat grass

*Agropyron molle* (Scribn. & J.G. Sm.) Rydb.

*Agropyron smithii* Rydb. [HC]

*Agropyron smithii* Rydb. var. *molle* (Scribn. & J.G. Sm.) M.E. Jones

*Agropyron smithii* Rydb. var. *palmeri* (Scribn. & J.G. Sm.) A. Heller

*Elymus smithii* (Rydb.) Gould

*Elytrigia smithii* (Rydb.) Nevski

*Elytrigia smithii* (Rydb.) Nevski var. *mollis* (Scribn. & J.G. Sm.) Beetle

FNA24: "Pascopyrum smithii is native to sagebrush deserts and mesic alkaline meadows, growing in both clay and sandy soils. Pascopyrum smithii is probably derived from a Leymus triticoides?Elymus lanceolatus cross (Dewey 1975); it is frequently confused with both. Leymus triticoides differs in usually having 2 spikelets per node and glumes that are narrower at the base. In E. lanceolatus, the leaves tend to be more evenly distributed and the glumes have straight midveins, become narrow beyond midlength, and tend to be wider at 3/4 length (0.35?1.6 mm). In addition, the first rachilla internodes of E. lanceolatus are often longer and narrower (the length/width ratio averaging 2.6, versus 1.8 in P. smithii). No infraspecific taxa of P. smithii are recognized here."

***Paspalum*** [HC, HC2]

*Paspalum distichum* L. [FNA25, HC, HC2]

Syst. Nat. (ed. 10) 855.

knotgrass, Thompsongrass

*Digitaria paspaloides* Michx., orthographic variant

*Paspalum distichum* L. var. *indutum* Shinnars

*Paspalum paspaloides* (Michx.) Scribn.

FNA25: "Paspalum distichum grows on the edges of lakes, ponds, rice fields, and wet roadside ditches. It is native in warm regions throughout the world, being most abundant in humid areas. In the Western Hemisphere, it grows from the United States to Argentina and Chile." We decide to consider P. distichum introduced in Washington due to the few collections that have been made over the years and its occurrence in human-disturbed localities.

***Pennisetum*** [HC2]

*Pennisetum glaucum* (L.) R. Br. [FNA25, HC2]

Prodr. 1: 195.

pearl millet

*Setaria glauca* (L.) P. Beauv. [ILBC7]

*Pennisetum glaucum* (L.) R. Br. [FNA25, HC2], misapplied

Prodr. 1: 195.

pearl millet

*Setaria glauca* (L.) P. Beauv. [ILBC7]

*Pennisetum setaceum* (Forssk.) Chiov. [FNA25]

Boll. Soc. Bot. Ital. 1923: 113.

tender fountaingrass

Recently collected as a very local escape from cultivation in King Co., not yet an established member of the flora. Further documentation of its establishment is needed before addition to the Flora Checklist. An invasive weed in the southern US. FNA25: "Pennisetum setaceum is a desert grass native to the eastern Mediterranean region. It is a popular ornamental throughout the southern United States, but it is also an invasive weed."

*Phalaris* [HC, HC2]

canarygrass

*Phalaris arundinacea* L. [FNA24, HC, HC2]

Sp. Pl. 1: 55.

reed canary grass

*Phalaris arundinacea* L. var. *picta* L. [HC]

*Phalaroides arundinacea* (L.) Rauschert

*Phalaroides arundinacea* (L.) Rauschert var. *picta* (L.) Tzvelev

FNA24: "Phalaris arundinacea is a circumboreal species, native to north temperate regions; it occurs, as an introduction, in the Southern Hemisphere. It grows in wet areas such as the edges of lakes, ponds, ditches, and creeks, often forming dense stands; in some areas it is a problematic weed. North American populations may be a mix of native strains, European strains, and agronomic cultivars (Merigliano and Lesica 1998). The interpretation adopted here is that of Baldini (1995), who treated Phalaris arundinacea sensu stricto as the most widespread species in a complex of three species. The other two species are P. rotgesii (Husn.) Baldini, a diploid that is restricted to France and Italy, and P. caesia Nees, a hexaploid that grows in southern Europe, western Asia, and eastern to southern Africa. Phalaris rotgesii has glumes 2-3.8 mm long, sterile florets 1-1.5 mm long, bisexual florets 2-3 mm long, and anthers about 2 mm long. The corresponding measurements for P. caesia are 6-7 mm, about 2.5 mm, 4-5 mm, and 3.5-4 mm, respectively. Other taxonomists have included P. rotgesii and P. caesia in P. arundinacea. Only P. arundinacea sensu stricto has been found in North America. A sterile form of Phalaris arundinacea with striped leaves? Phalaris arundinacea var. picta L., also referred to as Phalaris arundinacea forma variegata (Parnell) Druce? is known as 'Ribbon Grass' or 'Gardener's Gaiters' and is sometimes grown as an ornamental. Baldini (1995) noted that it sometimes appears to escape, and is never found far from a cultivated stand. Phalaris arundinacea hybridizes with other species of Phalaris. One hybrid, P. xmonspeiensis Daveau [= P. arundinacea x P. aquatica] is grown for forage. .

*Phalaris canariensis* L. [FNA24, HC, HC2]

Sp. Pl. 1: 54-55.

common canary grass

FNA24: "Phalaris canariensis is native to southern Europe and the Canary Islands, but is now widespread in the rest of the world, frequently being grown for birdseed. The exposed ends of the glumes are almost semicircular in outline, making this one of our easier species of Phalaris to identify."

*Phalaris paradoxa* L. [FNA24, HC, HC2]

Sp. Pl. (ed. 2) 2: 1665.

Mediterranean canary grass

*Phalaris paradoxa* L. var. *praemorsa* (Lam.) Coss. & Durieu

FNA24: "Phalaris paradoxa is native to the Mediterranean region; it is now found throughout the world, primarily in harbor areas and near old ballast dumps. It is an established weed in parts of Arizona and California. Within an inflorescence, the most reduced sterile spikelets are located near the base, and the most nearly normal spikelets are near the top."

*Phleum* [HC, HC2]

Timothy

*Phleum alpinum* L. [FNA24, HC, HC2]

Sp. Pl. 1: 59.  
mountain Timothy

***Phleum pratense* L. [HC, HC2]**

Timothy

**ssp. *pratense* [FNA24, HC2]**

Sp. Pl. 1: 59.  
common Timothy

*Phleum nodosum* L.

*Phleum pratense* L. ssp. *nodosum* (L.) Arcang.

*Phleum pratense* L. var. *nodosum* (L.) Huds.

FNA24: "Phleum pratense grows in pastures, rangelands, and disturbed sites throughout most of the mesic, cooler regions of North America. Originally introduced from Eurasia as a pasture grass, it is now well established in many parts of the world, including the Flora region. North American plants belong to the polyploid Phleum pratense L. subsp. pratense, which differs from the diploid P. pratense subsp. bertolonii (DC.) Bornm. in having obtuse ligules. Depauperate specimens of P. pratense are hard to distinguish from P. alpinum (see next species)."

***Phragmites* [HC, HC2]**

reed

***Phragmites australis* (Cav.) Trin. ex Steud. [HC2]**

common reed

*Phragmites phragmites* (L.) H. Karst.

**ssp. *americanus* Saltonst., P.M. Peterson, & Soreng [FNA25, HC2]**

Sida 21(2):683-692.

common reed

\* Saltonstall, K., P.M. Peterson, and R.J. Soreng. 2004. Recognition of Phragmites australis ssp. americanus (Poaceae: Arundinoideae) in North America: evidence from morphological and genetic analyses. Sida 21(2):683-692.

**ssp. *australis* [FNA25, HC2]**

Nomencl. Bot. (ed. 2) 1: 143.

common reed

FNA24 (online): "Phragmites australis is one of the most widely distributed flowering plants, growing in most temperate and tropical regions of the world, spreading quickly by rhizomes. Once established, it is difficult to eradicate. Phragmites australis (Invasive). The appropriate name for these plants is not clear although they probably originated in Europe. The name Phragmites australis, and hence the name Phragmites australis subsp. australis, is based on plants collected from what is now Sydney, Australia. Unfortunately, there has been no study of plants from Australia, nor of plants from Europe, so it is not clear what name to use for the European plants. Nevertheless because of the importance from a management point of view of being able to distinguish the invasive strain from the native strains, names have been treated for the strains in North America that are not invasive. For additional information, see the invasive plants network site and their page for distinguishing the invasive strain."

***Piptatheropsis* [HC2]**

piptatherum

***Piptatheropsis exigua* (Thurb.) Romasch., P.M. Peterson & Soreng [HC2]**

Taxon 60(6): 1713.

little mountain-ricegrass

*Oryzopsis exigua* Thurb. [HC]

*Piptatherum exiguum* (Thurb.) Dorn

FNA24: "Piptatherum exiguum grows on rocky slopes and outcrops in upper montane habitats, from central British Columbia to southwestern Alberta and south to northern California, Nevada, Utah, and northern Colorado. The limited DNA evidence available suggests that it is a basal species within Piptatherum (Jacobs et al. 2006)."

**Pleuropogon** [HC, HC2]

pleuropogon, semaphoregrass

**Pleuropogon refractus** (A. Gray) Benth. ex Vasey [FNA24, HC, HC2]

Grass. U.S. 40.

nodding false semaphore grass

*Lophochlaena refracta* A. Gray, superfluous renaming (illegitimate)

FNA24: "Pleuropogon refractus grows in wet meadows, riverbanks, and shady places, from sea level to about 1000 m. Its range extends from British Columbia south to California."

**Poa** [HC, HC2]

bluegrass

**Poa alpina** L. [HC, HC2]

alpine bluegrass

ssp. **alpina** [FNA24, HC2]

Sp. Pl. 1: 67.

alpine blue grass

FNA24: "Poa alpina is a fairly common circumboreal forest species of subalpine to arctic habitats, extending south in the Rocky Mountains to Utah and Colorado in the west, and to the northern Great Lakes region in the east. It often grows in disturbed ground and is calciphilic. *Poa xgaspensis* is a natural hybrid which seems to be between *P. alpina* and *P. pratensis* subsp. *alpigena*; it differs from *P. alpina* in its extravaginal branching, rhizomatous habit, and webbed calluses. The range of chromosome numbers suggests that *P. alpina* is predominantly apomictic. *Poa alpina* subsp. *alpina* is the more common of the two subspecies. In the Flora region, it grows throughout the range of the species."

**Poa annua** L. [FNA24, HC, HC2]

Sp. Pl. 1: 68.

annual blue grass

*Poa annua* L. var. *aquatica* Asch.

*Poa annua* L. var. *reptans* Hausskn.

FNA24: "Poa annua is one of the world's most widespread weeds. It thrives in anthropomorphic habitats outside of the arctic. A native of Eurasia, it is now well established throughout most of the Flora region. *Poa annua* is a gynomonocious tetraploid (possibly rarely polyhaploid), and is thought to have arisen from hybridization between *P. infirma* and *P. supina* (Tutin 1952). It is similar to *P. infirma*, differing in having larger anthers. It differs from *P. chapmaniana* in having glabrous calluses and three larger anthers, rather than one. Forms with glabrous lemmas occur sporadically within populations."

**Poa arctica** R. Br. [HC2]

arctic bluegrass

*Poa pratensis* L. var. *gelida* (Roem. & Schult.) Böcher

ssp. **arctica** [HC2]

**Poa bolanderi** Vasey [FNA24, HC, HC2]

Bot. Gaz. 7(3): 32-33.

Bolander's blue grass

*Poa horneri* H. St. John

FNA24: "Poa bolanderi grows mainly in pine to fir forest openings of mountain slopes in the western United States, from Washington to California and Utah. It differs from *P. howellii* in having smooth to scabrous, rather than puberulent, lemmas; it also grows at higher elevations, mostly at 1500?3000 m."

**Poa bulbosa** L. [HC, HC2]

bulbous bluegrass

ssp. **vivipara** (Koeler) Arcang. [FNA24, HC2]

Sp. Pl. 1: 70

bulbous blue grass

FNA24: "Poa bulbosa is a European species that is now established in the Flora region. In southern Europe and the Middle East, it is considered an important early spring forage. Poa bulbosa subsp. vivipara was introduced from Europe into the Pacific Northwest as a forage grass; it has since spread across temperate areas of the Flora region, particularly in the Pacific Northwest and northern Great Basin. It is highly tolerant of grazing and disturbance.

*Poa compressa* L. [FNA24, HC, HC2]

Sp. Pl. 1: 69.

flat-stem blue grass

FNA24: "Poa compressa is common in much of the Flora region. It is sometimes considered to be native, but this seems doubtful. It is rare and thought to be introduced in Siberia and only local in the Russian Far East, but is common in Europe. In the Flora region, it is often seeded for soil stabilization, and has frequently escaped. It grows mainly in riparian areas, wet meadows, and disturbed ground. Its distinctly compressed nodes and culms, exerted lower culm nodes, rhizomatous growth habit, and scabrous panicle branches make it easily identifiable."

*Poa confinis* Vasey [FNA24, HC, HC2]

U.S.D.A. Div. Bot. Bull. 13(2): pl. 75.

coastline blue grass

FNA24: "Poa confinis grows on sandy beaches and forest margins of the west coast, a habitat that is being lost to invasion by exotic species and development. It is closely related to *P. diaboli*, from which it differs by a suite of characters. The two species are ecologically and geographically distinct. *Poa confinis* differs from *P. pratensis* in having glabrous or sparsely hairy lemmas and diffusely webbed calluses. It is gynodioecious."

*Poa curtifolia* Scribn. [FNA24, HC, HC2]

Circ. Div. Agrostol. U.S.D.A. 16: 3.

little mountain blue grass

FNA24: "Poa curtifolia is endemic to upper serpentine slopes in the Wenatchee Mountains, Kittitas and Chelan counties, Washington. It has narrow panicles like *P. pringlei* and *P. suksdorfii*. It differs from *P. secunda*, with which it is sometimes confused, in having all blades short, flat, and firm, and few spikelets per branch."

*Poa cusickii* Vasey [HC, HC2]

Cusick's bluegrass

ssp. *cusickii* [FNA24, HC2]

Contr. U.S. Natl. Herb. 1(8): 271.

Cusick's bluegrass

*Poa cusickii* Vasey var. *cusickii* [HC]

*Poa filifolia* Vasey

*Poa hansenii* Scribn.

FNA24: "Poa cusickii grows in rich meadows in sagebrush scrub to rocky alpine slopes, from the southwestern Yukon Territory to Manitoba and North Dakota, south to central California and eastern Colorado. It is gynodioecious or dioecious. *Poa cusickii* subsp. *cusickii* grows mainly in mesic desert upland and mountain meadows, on and around the Columbia plateaus of northern California, Oregon, southern Washington, and adjacent Idaho and Nevada. It is highly variable, with fairly open- to contracted-panicle populations, and from gynodioecious to dioecious populations. The modal and mean longest branch lengths of the narrower-panicked populations of subsp. *cusickii* serve to distinguish it from subsp. *pallida* in most cases. It appears to have hybridized with *P. pringlei* around Mount Shasta, California, and Mount Rose, Nevada. *Poa stebbinsii*, an endemic in the high Sierra Nevada, is easily distinguished from *P. cusickii* subsp. *cusickii* by its long hyaline ligules."

ssp. *epilis* (Scribn.) W.A. Weber [FNA24, HC2]

Phytologia 51(6): 375.

skyline bluegrass

*Poa cusickii* Vasey var. *epilis* (Scribn.) C.L. Hitchc. [HC]

*Poa epilis* Scribn.

FNA24: "Poa cusickii grows in rich meadows in sagebrush scrub to rocky alpine slopes, from the

southwestern Yukon Territory to Manitoba and North Dakota, south to central California and eastern Colorado. It is gynodioecious or dioecious. *Poa cusickii* subsp. *epilis* tends to grow around timberline. It is strictly pistillate. It is usually quite distinct from subsp. *cusickii* and *pallida*, and differs from subsp. *purpurascens* in having on average more and shorter spikelets, lemmas that are shorter and rarely pubescent, and both intra- and extravaginal branching. It occurs throughout most of the range of the species, but is absent from the Yukon Territory, and uncommon in the Cascade Mountains. It is fairly uniform even though widespread.

ssp. *pallida* Soreng [FNA24, HC2]

Syst. Bot. 16(3): 518.

Cusick's bluegrass

FNA24: "*Poa cusickii* grows in rich meadows in sagebrush scrub to rocky alpine slopes, from the southwestern Yukon Territory to Manitoba and North Dakota, south to central California and eastern Colorado. It is gynodioecious or dioecious. *Poa cusickii* subsp. *pallida* grows in forb-rich mountain grasslands to alpine habitats, from the southern Yukon Territory to California, across the Great Basin and through the Rocky Mountains to central Colorado. It is found mainly east and north of subsp. *cusickii*, but pistillate plants extend into the range of that subspecies in the eastern alpine peaks of California, Nevada, and Oregon. The shorter branch length serves to distinguish it from the narrow-panicked subsp. *cusickii* forms in most cases. It hybridizes with *P. fendleriana*, forming *P. xnematophylla*. The hybrids may have hairy lemmas or, less often, broader leaf blades and glabrous lemmas. *Poa cusickii* subsp. *pallida* was included in Hitchcock's (1951) circumscription of *Poa pringlei*, along with *P. keckii* and *P. suksdorfii*."

ssp. *purpurascens* (Vasey) Soreng [FNA24, HC2]

Phytologia 71(5): 396 [1992].

Cusick's bluegrass

*Poa cusickii* Vasey var. *purpurascens* (Vasey) C.L. Hitchc. [HC]

FNA24: "*Poa cusickii* grows in rich meadows in sagebrush scrub to rocky alpine slopes, from the southwestern Yukon Territory to Manitoba and North Dakota, south to central California and eastern Colorado. It is gynodioecious or dioecious. *Poa cusickii* subsp. *purpurascens* grows in subalpine habitats in the coastal mountains from southern British Columbia to southern Oregon, with sporadic occurrences eastward in British Columbia to the Rocky Mountains and south to the central Sierra Nevada. It tends to differ from subsp. *epilis* in having predominantly extravaginal branching, fewer and longer spikelets, and longer lemmas that are usually sparsely hairy on the keel and marginal veins. It differs from *P. chambersii* in lacking rhizomes and in being strictly pistillate; and from *P. porsildii* in its longer spikelets and in tending to have longer panicles with more spikelets.

*Poa fendleriana* (Steud.) Vasey [HC, HC2]

muttongrass

ssp. *longiligula* (Scribn. & T.A. Williams) Soreng [FNA24, HC2]

Great Basin Naturalist 45(3): 408.

muttongrass

*Poa fendleriana* (Steud.) Vasey var. *longiligula* (Scribn. & T.A. Williams) Gould

*Poa longiligula* Scribn. & T.A. Williams

FNA24: "*Poa fendleriana* grows on rocky to rich slopes in sagebrush-scrub, interior chaparral, and southern (rarely northern) high plains grasslands to forests, and from desert hills to low alpine habitats. Its range extends from British Columbia to Manitoba and south to Mexico. It is one of the best spring fodder grasses in the eastern Great Basin, Colorado plateaus, and southern Rocky Mountains. It is dioecious. Each of the subspecies has regions of sexual reproduction in which staminate plants are common within populations, and extensive regions where only apomictic, pistillate plants are found. The sexual populations set little seed; the apomictic populations are highly fecund. *Poa fendleriana* subsp. *longiligula* tends to grow to the west of the other two subspecies, in areas where winter precipitation is more consistent and summer precipitation less consistent. Apomixis is far more common and widespread than sexual reproduction in this subspecies. Apomictic populations range from southwestern British Columbia to Baja California, Mexico, throughout the Great Basin and Colorado plateaus, and eastward across the Rocky Mountains. Sexual populations are mainly confined to northern Arizona, California, Nevada, and Utah."

***Poa glauca*** Vahl [HC2]

ssp. ***rupicola*** (Nash) W.A. Weber [FNA24, HC2]

Phytologia 51(6): 375.  
timberline bluegrass

*Poa glauca* Vahl var. *rupicola* (Nash) B. Boivin  
*Poa rupicola* Nash [HC]

"Mostly near or above timberline; Yuk., B.C., and Alta southward through the Rocky Mts., to Utah, Colo., and N. M., e. to S. D., w. to n. e. Oreg., Nev., the Sierra Nev., Calif." [H&C p 677] FNA24: "*Poa glauca* subsp. *rupicola* is endemic to dry alpine areas of western North America. It is often confused in herbaria with subsp. *glauca* and *P. interior*, but its calluses lack even a vestige of a web, and its lemmas have at least a few hairs between the lemma veins. It is often sympatric with both taxa outside of California. It is not common in the northern Rocky Mountains."

***Poa howellii*** Vasey & Scribn. [FNA24, HC, HC2]

U.S.D.A. Div. Bot. Bull. 13(2): pl. 78.  
Howell's blue grass

*Poa bolanderi* Vasey ssp. *howellii* D.D. Keck  
*Poa bolanderi* Vasey var. *howellii* (Vasey & Scribn.) M.E. Jones

FNA24: "*Poa howellii* grows primarily on rocky banks and wooded slopes, from the coastal ranges of southern British Columbia to southern California. It differs from *P. bolanderi* in having puberulent, rather than smooth or scabrous, lemmas, and in growing at lower elevations, mostly from near sea level to 1000 m."

***Poa infirma*** Kunth [HC2]

Nova Genera et Species Plantarum  
weak bluegrass

Collected once (2012) as sidewalk waif on San Juan Island, San Juan County. Perhaps more common than currently documented.

***Poa interior*** Rydb. [FNA24, HC, HC2]

Sp. Pl. 1: 69-70.  
interior bluegrass, woods blue grass

*Poa nemoralis* L. ssp. *interior* (Rydb.) W.A. Weber  
*Poa nemoralis* L. var. *interior* (Rydb.) Butters & Abbe

FNA24: "*Poa interior*, a native species, grows from Alaska to western Quebec and New York, south to Arizona and New Mexico. It is restricted to the Flora region. It is fairly common from boreal forests to low alpine habitats of the Rocky Mountains. It grows in subxeric to mesic habitats, such as mossy rocks and scree, usually in forests. It is usually tetraploid. In alpine habitats, *Poa interior* is often quite short, and often sympatric with *P. glauca*. It is most reliably distinguished from *P. glauca* by lemmas that are glabrous between the marginal veins and keels or, rarely, sparsely puberulent on the lateral veins. It usually also differs from *P. glauca* subsp. *rupicola* in having at least a few hairs on its calluses. It can be distinguished from *P. nemoralis* by its longer ligules, lower top culm node, and wider glumes and lemmas. It is sometimes difficult to distinguish from *P. palustris*, but differs in having lemmas with wider hyaline margins and straight or gradually arched keels, a densely tufted habit, and scantily webbed calluses."

***Poa laxiflora*** Buckley [FNA24, HC, HC2]

Proceedings of the Academy of Natural Sciences of Philadelphia 14: 96.  
loose-flower blue grass

FNA24: "*Poa laxiflora* is restricted to mesic, old growth, mixed conifer forests of the Pacific coast, from Alaska south through the western foothills of the northern Cascades to Oregon. It is not a common species. A bulbiferous specimen was collected in the Queen Charlotte Islands. Inclusion of *Poa laxiflora* in *Poa* sect. *Homalopoa* is tentative; it may belong to sect. *Sylvestres*."

***Poa leibergii*** Scribn. [FNA24, HC, HC2]

Bulletin, Division of Agrostology United States Department of Agriculture 8: 6, pl. 2.  
Leiberg's blue grass

*Poa vaseyochloa* Scribn.

FNA24: "Poa leibergii grows on mossy ledges and around vernal pools and the outer margins of Camassia swales, in sagebrush desert to low alpine habitats, especially where snow persists. It is found primarily on and around the basaltic Columbia plateaus, and is gynodioecious. All reports of *P. leibergii* from California, and most of those from Nevada, are based on misidentified specimens of *P. cusickii* subsp. *cusickii* and *P. stebbinsii*."

***Poa leptocoma* Trin. [FNA24, HC, HC2]**

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 1(4): 374.

marsh blue grass

(see also *Poa paucispicula*)

*Poa leptocoma* Trin. var. *leptocoma* [HC]

FNA24: "Poa leptocoma grows around lakes and ponds and along streams, in subalpine and alpine to low arctic habitats, in western North America from Alaska to California and New Mexico, and on the Kamchatka Peninsula, Russia. It often grows with or near *P. reflexa*, from which it differs in its more scabrous panicle branches, shorter anthers, glabrous or pectinately ciliate palea keels, and preference for wet sites. The two also differ in their ploidy level, *P. leptocoma* being hexaploid, and *P. reflexa* tetraploid. It differs from *P. paucispicula* in its more scabrous panicle branches, narrower glumes and lemmas, and its more sparsely hairy calluses and lemmas. Although its chloroplast haplotype is similar to that of species in sect. *Oreinos*, its ITS sequence is distinct and resembles that of *P. paucispicula*."

***Poa lettermanii* Vasey [FNA24, HC, HC2]**

Contributions from the United States National Herbarium 1(8): 273.

Letterman's blue grass

*Poa montevansii* E.H. Kelso

*Puccinellia lettermanii* (Vasey) Ponert

FNA24: "Poa lettermanii grows on rocky slopes of the highest peaks and ridges in the alpine zone, from northern British Columbia to western Alberta and south to California and Colorado, usually in the shelter of rocks or on mesic to wet, frost-scarred slopes. It is one of only three known diploid *Poa* species native to the Western Hemisphere. Its glabrous calluses and lemmas usually distinguish it from *P. abbreviata*; it also differs in having flat or folded leaf blades, and shorter spikelets with glumes that are longer than the adjacent florets. *Poa montevansii* E.H. Kelso is tentatively included here, although its slightly longer lemmas that slightly exceed the glumes suggest that it may represent rare, glabrous forms of *P. abbreviata*."

***Poa macrantha* Vasey [FNA24, HC, HC2]**

Bulletin of the Torrey Botanical Club 15: 11.

sand-dune blue grass

*Poa douglasii* Nees ssp. *macrantha* (Vasey) D.D. Keck

*Poa douglasii* Nees var. *macrantha* (Vasey) B. Boivin

FNA24: "Poa macrantha is a dioecious coastal sand dune species that grows from southern Alaska to northern California. It competes better than *P. douglasii* with the invasion of its habitat by *Ammophila* and other exotic species. It used to be treated as a subspecies of *P. douglasii*; a few intermediates with that species have been found around the mouth of Little River, California. Although clearly related, the two species are reasonably divergent in a number of characters. *Poa macrantha* is readily distinguished from *P. douglasii* by its glabrous rachises and usually longer glumes and lemmas." H&C suggest (p 669) treating *P. macrantha* as a geographic race of *P. douglasii* Nees.

***Poa marcida* Hitchc. [FNA24, HC, HC2]**

Proceedings of the Biological Society of Washington 41: 158.

withered blue grass

*Poa saltuensis* Fernald & Wiegand var. *marcida* (Hitchc.) B. Boivin

FNA24: "Poa marcida is an uncommon endemic of breaks in rich, mesic, generally old growth forests of the Pacific coast, from Vancouver Island through the western foothills of the northern Cascade Mountains to central Oregon. It differs from *P. saltuensis* in its closed sheaths and attenuate lemmas."

***Poa xmultnomae* Piper [HC2]**

*Poa gracillima* Vasey var. *multnomae* (Piper) C.L. Hitchc. [HC]

*Poa nemoralis* L. [FNA24, HC, HC2]

Sp. Pl. 1: 69-70

woodland bluegrass

FNA24: "Introduced from northern Eurasia, *Poa nemoralis* is established primarily at low elevations in deciduous and mixed conifer/deciduous forests. It is now common in southeastern Canada and the northeastern United States, and is spreading in the west. It can be distinguished from *P. glauca* and *P. interior* by its consistently short ligules, high top culm node, relatively long flag leaf blades, and narrow glumes and lemmas. It is usually hexaploid."

*Poa nervosa* (Hook.) Vasey [FNA24, HC, HC2]

U.S.D.A. Div. Bot. Bull. 13(2): pl. 81.

Hooker's blue grass

(see also *Poa wheeleri*)

*Poa nervosa* (Hook.) Vasey var. *nervosa* [HC]

FNA24: "*Poa nervosa* occurs infrequently at low elevations in the western foothills of the northern Cascade Mountains and adjacent coast ranges, extending eastward up the Columbia Gorge as far as Multnomah Falls. It usually grows in wet habitats, such as mossy cliffs with seeps and around waterfalls, but it is also found in rich, old growth, mixed deciduous and conifer forests. It appears to be sexually reproducing and sequentially gynomonocious. *Poa nervosa* differs from *P. wheeleri* in having densely pubescent leaf collar margins, and glabrous or more sparsely and shortly pubescent sheaths. It also differs in usually having well-developed anthers, and in being tetraploid. The two species are geographically isolated and ecologically distinct. Plants from the Columbia River Gorge in Oregon, including *P. xmultnomae* Piper, that approach *P. tenerrima* are presumed to be derived from hybridization between *P. nervosa* and *P. secunda*."

*Poa palustris* L. [FNA24, HC, HC2]

Syst. Nat. (ed. 10) 2: 874.

fowl blue grass

*Poa crocata* Michx.

*Poa eyerdamii* Hultén

*Poa glauca* Vahl var. *crocata* (Michx.) M.E. Jones

*Poa triflora* Gilib.

FNA24: "*Poa palustris* is native to boreal regions of northern Eurasia and North America, and is widespread in cool-temperate and boreal riparian and upland areas. European plants have also been introduced to other parts of North America. Plants in the Pacific Northwest and the southern United States are usually regarded as introduced, but some populations may be native. *Poa palustris* is used for soil stabilization and waterfowl feed. *Poa palustris* from drier woods and meadows tends to resemble *P. interior*. The best features for recognizing it include its loose growth habit, more steeply ascending leaf blades, well-developed callus webs, narrowly hyaline lemma margins, and incurving lemma keels. It also has a tendency to branch at the nodes above the base."

*Poa paucispicula* Scribn. & Merr. [FNA24, HC2]

Contributions from the United States National Herbarium 13(3): 69, pl. 15.

Alaska blue grass

*Poa leptocoma* Trin. ssp. *paucispicula* (Scribn. & Merr.) Tzvelev

*Poa leptocoma* Trin. var. *paucispicula* (Scribn. & Merr.) C.L. Hitchc. [HC]

*Poa merrilliana* Hitchc.

FNA24: "*Poa paucispicula* grows in arctic and alpine regions, from the north coast of Alaska and the western Northwest Territories south to Washington, Idaho, and Wyoming; it also grows in arctic far east Russia. It is a delicate species that prefers open, mesic, rocky slopes. It has sometimes been included in *P. leptocoma*, a member of *Poa* sect. *Oreinos*. It differs from *P. leptocoma* in having smoother branches, fewer spikelets, and broader glumes. Chloroplast DNA studies confirm that it is not closely related to species of sect. *Oreinos*; ITS data support its relationship to *P. leptocoma*."

*Poa pratensis* L. [HC, HC2]

Kentucky bluegrass

ssp. *angustifolia* (L.) Lej. [HC2]

ssp. *irrigata* (Lindm.) H. Lindb. [HC2]

ssp. *pratensis* [FNA24, HC2]

Sp. Pl. 1: 67-68.

Kentucky blue grass

*Poa pratensis* L. var. *domestica* Laest.

*Poa pratensis* L. var. *iantha* Laest.

FNA24: "More than 60 cultivars of *Poa pratensis* have been released in the Flora region. Plants grown from commercially distributed seed have generally been placed in subsp. *pratensis* by North American authors, but they appear to include genetic contributions from at least three major subspecies, e.g., subsp. *angustifolia*, *pratensis*, and *irrigata*. These and intermediate forms, especially those favoring subsp. *irrigata* and *pratensis*, are best simply referred to as *Poa pratensis* sensu lato or labeled as cultivated material. The chromosome counts listed here are numbers reported for the species that are probably not subsp. *alpigena*, *angustifolia*, or *colpodea*; they may represent subsp. *irrigata* or *pratensis*. *Poa pratensis* subsp. *pratensis* grows throughout most of the range of the species, but is absent from the high arctic, and only sporadic in the low arctic. It usually has a few narrow, flat or involute, intravaginal shoot leaves, in addition to some broader, extravaginal shoot leaves, and is intermediate between subsp. *angustifolia* and *irrigata*. For a comparison, see the descriptions of those subspecies."

***Poa secunda*** J. Presl [HC2]

ssp. *juncifolia* (Scribn.) Soreng [FNA24, HC2]

Phytologia 71(5): 401 [1992].

alkali bluegrass, big bluegrass, Nevada bluegrass

*Poa ampla* Merr.

*Poa brachyglossa* Piper

*Poa confusa* Rydb.

*Poa juncifolia* Scribn. [HC]

*Poa juncifolia* Scribn. ssp. *porteri* D.D. Keck

*Poa juncifolia* Scribn. var. *ampla* (Merr.) Dorn

*Poa nevadensis* Vasey ex Scribn. [HC]

*Poa nevadensis* Vasey ex Scribn. var. *juncifolia* (Scribn.) Beetle

FNA24: "*Poa secunda* subsp. *juncifolia* is usually more robust than subsp. *secunda*, and generally inhabits moister and sometimes saline habitats. It comprises two fairly distinct variants: a robust upland variant that is frequently used for revegetation (*P. ampla* Merr., Big Bluegrass) that grows in deep, rich, montane soils; and a riparian and wet meadow variant (*P. juncifolia* Scribn., Alkali Bluegrass). Apart from generally having glabrous lemmas, short ligules on the vegetative shoots, and leaf blades that hold their form better, *P. secunda* subsp. *juncifolia* differs anatomically in the predominance of sinuous-walled, rectangular long cells in the blade epidermis; smooth-walled, fusiform long cells are predominant in *P. secunda* subsp. *secunda*. Plants with glabrous lemmas and long ligules on the vegetative shoots have been called *P. nevadensis* Vasey ex Scribn.; they are intermediate between the subspecies. Chromosome numbers for *P. secunda* subsp. *juncifolia* center on  $2n = 63$ , indicating a high degree of apomixis."

ssp. ***secunda*** [FNA24, HC2]

Reliq. Haenk. 1(4-5): 271.

curly blue grass

(see also *Poa multnomae*)

*Poa buckleyana* Nash

*Poa buckleyana* Nash var. *sandbergii* (Vasey) M.E. Jones

*Poa canbyi* (Scribn.) Howell

*Poa gracillima* Vasey [HC]

*Poa gracillima* Vasey var. *gracillima* [HC]

*Poa incurva* Scribn. & T.A. Williams [HC]

*Poa laevigata* Scribn.

*Poa orcuttiana* Vasey

*Poa sandbergii* Vasey [HC]

*Poa scabrella* (Thurb.) Benth. ex Vasey [HC]  
*Poa secunda* J. Presl var. *elongata* (Vasey) Dorn  
*Poa secunda* J. Presl var. *incurva* (Scribn. & T.A. Williams) Beetle  
*Poa secunda* J. Presl var. *stenophylla* (Vasey ex Beal) Beetle  
*Poa stenantha* Trin. var. *sandbergii* (Vasey) B. Boivin

FNA24: "Poa secunda subsp. secunda comprises several forms or ecotypes which intergrade morphologically and overlap geographically. Its chromosome numbers are centered on  $2n = 84$ . It generally grows in more xeric habitats than subsp. *juncifolia*; it is also common in alpine habitats. Some of the major variants, and the names that have been applied to them, are: scabrous plants, primarily from west of the Cascade/Sierra Nevada axis (*P. scabrella* (Thurb.) Benth. ex Vasey, Pine Bluegrass); smoother, large plants extending eastward (*P. canbyi* (Scribn.) Howell, Canby Bluegrass); tiny, early-spring-flowering plants of stony and mossy ground (*P. sandbergii* Vasey, Sandberg Bluegrass); and slender, sparse plants, generally of mesic shady habitats, with panicles that remain open (*P. gracillima* Vasey, Pacific Bluegrass). Alpine plants have been called *P. incurva* Scribn. & T.A. Williams. *Poa secunda* subsp. *secunda* can be difficult to separate from *P. stenantha* var. *stenantha*. It differs in having more rounded lemma keels, hairs between the veins of the lemmas, and calluses that are glabrous or have hairs shorter than 0.2 mm. It also resembles *P. tenerrima*, but lacks that species' combination of persistently wide, open panicles, very scabrous branches, short-truncate ligules, and very fine foliage."

***Poa stenantha* Trin. [HC, HC2]**

narrow-flowered bluegrass

*Poa englishii* H. St. John & Hardin  
*Poa macroclada* Rydb.

var. ***stenantha* [FNA24, HC2]**

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 1(4): 376.  
narrow-flower blue grass

FNA24: "Poa stenantha grows in coastal meadows and on cliffs in subarctic and boreal forests; it is less common in moist, more southern subalpine and low alpine meadows and thickets. Its range extends from western Alaska to the northern Cascades and Rocky Mountains and, as a disjunct, to Patagonia. *Poa stenantha* was originally described as growing in Kamchatka, Russia, but the Russian plants have since been referred to other species. *Poa stenantha* var. *stenantha* can be difficult to separate from *P. secunda* subsp. *secunda*. Its main distinguishing features are its strongly keeled lemmas with glabrous intercostal regions, and, when present, callus hairs longer than 0.2 mm. Plants with large panicles and glabrous calluses have been called *P. macroclada* Rydb. Such plants grow infrequently in the U.S. Rocky Mountain portion of the species' range. They intergrade with the more compact typical form."

***Poa suksdorfii* (Beal) Vasey ex Piper [FNA24, HC, HC2]**

Contr. U.S. Natl. Herb. 11: 135.  
western blue grass

FNA24: "Poa suksdorfii is a high alpine species of open rocky ground in the Pacific Northwest. It used to be interpreted (Hitchcock 1951) as including California populations that are now placed in *Poa pringlei* or *P. keckii*. *Poa suksdorfii* has narrow panicles like *P. pringlei* and *P. curtifolia*."

***Poa trivialis* L. [FNA24, HC, HC2]**

Sp. Pl. 1: 67.  
rough-stalk blue grass

FNA24: "Poa trivialis is an introduced European species. Only *Poa trivialis* subsp. *trivialis* is present in the Flora region. Several cultivars have been planted for pastures and lawns, and have often escaped cultivation. *Poa trivialis* sometimes grows with *P. paludigena*, but has distinctly longer ligules and anthers. It is easily recognized by its flat blades, long ligules, sickle-shaped lower glumes, prominent callus webs, and lemmas with pubescent keels and pronounced lateral veins."

ssp. *trivialis* [HC2]

***Poa unilateralis* Scribn. ex Vasey [HC2]**

sea-bluff bluegrass

ssp. *pachypholis* (Piper) D.D. Keck ex Soreng [FNA24, HC2]

Novon 8(2): 199.

San Francisco blue grass

*Poa pachypholis* Piper [HC]

FNA24: "Poa unilateralis subsp. pachypholis is known from populations in Lincoln County, Oregon, and Pacific County, Washington."

*Poa wheeleri* Vasey [FNA24, HC2]

Cat. Pl. 55.

Wheeler's blue grass

*Poa curta* Rydb. [HC]

*Poa nervosa* (Hook.) Vasey var. *wheeleri* (Vasey) C.L. Hitchc. [HC]

FNA24: "Poa wheeleri is common at mid- to high elevations, generally on the east side of the coastal mountains from British Columbia to California, and from Manitoba to New Mexico. It generally grows in submesic coniferous forests to subalpine habitats. Most plants have densely retrorsely pubescent or scabrous sheaths, involute innovation blades that are pubescent adaxially, and pistillate florets. Poa wheeleri, a high polyploid apomictic species, probably arose from hybridization between P. cusickii and another member of the Poa nervosa complex. It resembles P. rhizomata and P. chambersii more than P. nervosa sensu stricto. It differs from P. chambersii in having at least some proximal sheaths that are densely retrorsely scabrous or pubescent (sometimes obscurely so), and folded or involute innovation blades that are scabrous to hispidulous on the adaxial surfaces. For a comparison with P. nervosa, see description. Natural hybrids have been found between P. wheeleri and P. pratensis."

*Podagrostis* [HC2]

bent, bentgrass

*Podagrostis aequivalvis* (Trin.) Scribn. & Merr. [FNA24, HC2]

Symb. Bot. Upsal. 17: 15.

arctic bent

*Agrostis aequivalvis* (Trin.) Trin. [HC]

FNA24: "Podagrostis aequivalvis grows along lake, bog, and stream margins, and in forest fens. it is common in the coastal regions of Alaska and British Columbia, and occurs less frequently inland, as well as to about 1500 m in the Cascade Mountains south to Oregon."

*Podagrostis humilis* (Vasey) Björkman [FNA24, HC2]

Symb. Bot. Upsal. 17: 15.

alpine bent, mountain bent

*Agrostis humilis* Vasey [HC]

FNA24: "Podagrostis humilis is a western North American species that grows in undisturbed alpine and subalpine meadows and screes at over 3500 m, down to meadows, fens, and open woodlands at less than 200 m. It usually differs from P. thurberiana in overall size and in having narrower, more basally concentrated leaves. In the field, dwarf forms of P. humilis mimic Agrostis variabilis; they differ from that species in having paleas."

*Podagrostis thurberiana* (Hitchc.) Hultén [FNA24, HC2]

Flora of the Aleutian Islands 75.

Thurber's bent

*Agrostis thurberiana* Hitchc. [HC]

FNA24: "Podagrostis thurberiana is a western North American species that grows in undisturbed alpine and subalpine meadows and screes at over 3500 m, down to meadows, fens, and open woodlands at less than 200 m, sometimes growing with P. humilis. It usually differs from that species in being taller in having wider, less basally concentrated leaves."

*Polypogon* [HC, HC2]

beard-grass, polypogon

*Polypogon australis* Brongn. [FNA24, HC, HC2]

Voy. Monde 2: 21.  
Chilean rabbit's-foot grass

FNA24: "Polypogon australis is native to South America. It has become established in western North America, where it grows alongside ditches and streams. The records from Washington and Oregon are from ballast dumps; it is not known from recent collections in those states." Introduced and collected once, near Bingen, Kilicktat Co., Wash, (Suksdorf, 10091, in 1919) but not otherwise known from our area. [H&C p 683].

*Polypogon fugax* Nees ex Steud. [HC2]

Synopsis Plantarum Glumacearum 1: 184. 1854.  
Asia Minor bluegrass

An uncommon escape in large cities, including Seattle.

*Polypogon interruptus* Kunth [FNA24, HC, HC2]

Nov. Gen. Sp. (quarto ed.) 1: 134, pl. 44 [1816].  
ditch rabbit's-foot grass

*Polypogon lutosus* (Poir.) Hitchc., misapplied

FNA24: "Polypogon interruptus grows in moist soil at lower elevations. It is native to the Western Hemisphere, extending south from the western United States into northern Mexico, and through the American tropics to Argentina and Bolivia. The more eastern records may indicate introductions; it is not known whether or not the species persists at these locations."

*Polypogon monspeliensis* (L.) Desf. [FNA, HC, HC2]

Fl. Atlant. 1: 67.  
annual rabbit's-foot grass

*Alopecurus monspeliensis* L.

FNA24: "Polypogon monspeliensis is native to southern Europe and Turkey. It is now a common weed throughout the world, including much of the Flora region. It grows in damp to wet, often alkaline soils, particularly in disturbed areas."

*Polypogon viridis* (Gouan) Breistr. [FNA24, HC2]

Bull. Soc. Bot. France 110(89): 56.  
beardless rabbit's-foot grass

*Agrostis semiverticillata* (Forssk.) C. Chr. [HC]

*Agrostis verticillata* Vill.

*Agrostis viridis* Gouan

*Polypogon semiverticillatus* (Forssk.) Hyl.

FNA24: "Polypogon viridis grows in mesic habitats associated with rivers, streams, and irrigation ditches. It is native from southern Europe to Pakistan, but is now established in the Flora region, particularly the southwestern United States. Records from the Atlantic coast are based on plants found on ballast dumps; there have been no recent collections from these locations. In Europe, Polypogon viridis hybridizes with P. monspeliensis, forming P. xadscendens Guss. ex Bertol.; no such hybrids have been reported from the Flora region."

*Psathyrostachys* [HC2]

*Psathyrostachys juncea* (Fisch.) Nevski [FNA24, HC2]

Fl. URSS 2: 714.  
Russian-wild rye

*Elymus junceus* Fisch.

×*Leymostachys korovinii* Tzvelev

FNA24: "Psathyrostachys juncea is native to central Asia, primarily to the Russian and Mongolian steppes. It was introduced into North America as a forage grass. It has become established at various locations from the Yukon Territory through the prairie provinces to Arizona. It is drought resistant and tolerant of saline soils. In its native range, it grows on stony slopes and adjacent to roads, at elevations up to 5500 m. Psathyrostachys juncea closely resembles Leymus cinereus, differing primarily in having a rachis that breaks up at maturity. Immature plants can be identified by their shorter ligules and the more uniform

appearance of the spikelets compared to *Leymus cinereus*. Plants with pilose florets have been treated as a distinct taxon; such recognition is not merited." Not in H&C

#### ×*Pseudelymus* [HC2]

##### ×*Pseudelymus saxicola* (Scribn. & J.G. Sm.) Barkworth & D.R. Dewey [FNA24, HC2]

Great Basin Naturalist 43(4): 570.

*Agropyron saxicola* (Scribn. & J.G. Sm.) Piper

×*Agrositanion saxicola* (Scribn. & J.G. Sm.) Bowden

*Elymus* ×*saxicola* Scribn. & J.G. Sm.

FNA24: "×*Pseudelymus saxicola* consists of a hybrid between *Pseudoroegneria spicata* and *Elymus elymoides*. It is a rather common hybrid in western North America. It differs from *E. albicans*, which is thought to be derived from hybrids between *P. spicata* and *E. lanceolatus*, in lacking rhizomes, having longer awns on its glumes and lemmas, and having disarticulating rachises. It is more likely to be confused with *E. xsaundersii*, but differs in its longer glume and lemma awns." See ref. to *E. saxicola* under *Agropyron scribneri* Vasey, H&C p 457.

#### *Pseudoroegneria* [HC2]

wheatgrass

##### *Pseudoroegneria spicata* (Pursh) Á. Löve [FNA24, HC2]

Taxon 29(1): 168.

?bluebunch wheatgrass

*Agropyron inerme* (Scribn. & J.G. Sm.) Rydb.

*Agropyron spicatum* (Pursh) Scribn. & J.G. Sm. [HC]

*Agropyron spicatum* (Pursh) Scribn. & J.G. Sm. var. *inerme* (Scribn. & J.G. Sm.) A. Heller

*Agropyron spicatum* (Pursh) Scribn. & J.G. Sm. var. *pubescens* Elmer [HC]

*Agropyron spicatum* (Pursh) Scribn. & J.G. Sm. var. *spicatum* [HC]

*Agropyron vaseyi* Scribn. & J.G. Sm.

*Elymus spicatus* (Pursh) Gould

*Elytrigia spicata* (Pursh) D.R. Dewey

*Pseudoroegneria spicata* (Pursh) Á. Löve ssp. *inermis* (Scribn. & J.G. Sm.) Á. Löve

*Pseudoroegneria spicata* (Pursh) Á. Löve ssp. *spicata*

*Roegneria spicata* (Pursh) Beetle

FNA24: "*Pseudoroegneria spicata* is primarily a western North American species, extending from the east side of the coastal mountains to the western edge of the Great Plains, and from the Arctic Ocean to northern Mexico. It was also collected by Farwell in Keenewaw County, Michigan in 1895 (Voss 1972). It grows on medium-textured soils in arid and semiarid steppe, shrub-steppe, and open woodland communities, and was one of the dominant species in grassland communities of the Columbia and Snake river plains (Daubenmire 1939, 1960). It is still an important forage plant in the northern portion of the Intermountain region. Several cultivars have been developed. Rhizomatous plants are favored in relatively moist habitats, and caespitose plants in dry habitats (Daubenmire 1960). Daubenmire noted that rhizomatous plants produce few inflorescences and, possibly for this reason, are collected less frequently than caespitose plants. Daubenmire also found that awn length varies continuously within plants grown from seed. He concluded that the ability to produce rhizomes and unawned plants is heritable, that the two characters are not linked, and that the form which becomes dominant at a local site is determined by environmental conditions. The unawned phase tends to be more restricted in its distribution than the awned phase, being dominant in the native grasslands of southern British Columbia, eastern Washington, northern Idaho, and northern and eastern Oregon; the awned phase is found throughout the range of the species. Many populations include awned and unawned plants, as well as some that have poorly developed awns on some lemmas. Awned autotetraploid populations grow in mesic grassland and woodland communities of the hills and mountains of southern British Columbia and eastern Washington. Based on informal observations, plant breeders working with *Pseudoroegneria spicata* consider that awn presence is determined by a single major gene, and modified by some minor genes. The unawned condition is apparently dominant, as seed from crosses of heterozygotic, diploid, unawned parents gives rise to around 50% awned offspring. The above observations make it clear that the awned and unawned phases of *Pseudoroegneria spicata* are of little taxonomic significance, despite their evident morphological difference. If it is considered necessary to distinguish between them, the awned phase can be called

*Pseudoroegneria spicata* (Pursh) Á. Löve forma *spicata* and the unawned phase *P. spicata* forma *inermis* (Scribn. & J.G. Sm.) Barkworth. Plants with densely pubescent leaves are known from the east slope of the Cascade Mountains in Washington. Plants with nearly as densely pubescent leaves are found elsewhere in southern Washington and northeastern Oregon. Such pubescent plants may be called *Pseudoroegneria spicata* forma *pubescens* (Elmer) Barkworth. *Pseudoroegneria spicata* used to be confused with *Elymus wawawaiensis*, from which it differs in its more widely spaced spikelets and wider, less stiff glumes. The two species are geographically sympatric, but *P. spicata* grows in medium- to fine-textured loess soils, and *E. wawawaiensis* in shallow, rocky soils. *Pseudoroegneria spicata* may also be confused with *Elymus arizonicus*, particularly with immature specimens of that species or specimens mounted so that they appear to have erect, rather than drooping, spikes. It differs in having shorter, truncate ligules and generally thicker culms than *E. arizonicus*, and in having a distribution that extends much further north. *Pseudoroegneria spicata* has been suggested as one of the parents in numerous natural hybrids with species of *Elymus* in the Flora region. These hybrids are usually mostly sterile, but development of even a few viable seeds permits introgression to occur, as well as the formation of distinctive populations. It is often difficult to detect such hybrids, particularly if they involve the unawned form of *Pseudoroegneria*. The named hybrids are treated under *xPseudelymus* (p. ??). Others are discussed under the *Elymus* parent."

***Puccinellia*** [HC, HC2]

alkaligrass

(see also *Torreyochloa*)

***Puccinellia distans*** (Jacq.) Parl. [FNA24, HC, HC2]

Fl. Ital. 1: 367.

weeping alkaligrass, European alkali grass

*Poa distans* Jacq.

*Puccinellia distans* (Jacq.) Parl. ssp. *distans*

*Puccinellia distans* (Jacq.) Parl. var. *tenuis* (Uechtr.) Fernald & Weath.

*Puccinellia retroflexa* (Curtis) Holmb.

*Puccinellia suksdorfii* H. St. John

*Puccinellia distans* (L.) Parl

Note different authority for specific name, H&C vs. FNA. FNA24: "*Puccinellia distans* is a Eurasian native, reportedly introduced in North America, where it is widespread, particularly as a weed in non-littoral environments, including the margins of salted roads. It is also found occasionally in coastal environments."

***Puccinellia lemmonii*** (Vasey) Scribn. [FNA24, HC, HC2]

Botanical Gazette 3(2): 13.

Lemmon's alkali grass

FNA24: "*Puccinellia lemmonii* grows in non-littoral saline environments in the western portion of the contiguous United States. Reports from Saskatchewan are probably based on depauperate specimens of *P. nuttalliana*."

***Puccinellia maritima*** (Huds.) Parl. [HC, HC2]

coast alkaligrass

*Glyceria maritima* (Huds.) Wahlenb.

***Puccinellia nutkaensis*** (J. Presl) Fernald & Weath. [FNA24, HC, HC2]

Rhodora 18: 22.

Nootka alkali grass, shining alkali grass

*Phippsia nutkaensis* (J. Presl) Á. Löve & D. Löve

*Poa nutkaensis* J. Presl

*Puccinellia coarctata* Fernald & Weath.

*Puccinellia glabra* Swallen

*Puccinellia grandis* Swallen

*Puccinellia lucida* Fernald & Weath. [HC]

Likely to be more common in WA than previous thought based on results from 2005-09 San Juan Island surveys. H&C (1973) notes "... PS to Seattle and Silverdale where prob no longer persistent". FNA24: "*Puccinellia nutkaensis* grows in coastal habitats of continental North America and Greenland, generally in sand and stones in protected intertidal environments. It is variable in form, ranging from diminutive plants

that resemble *P. pumila* to tall, erect plants, often with dense or open inflorescences, resembling *P. nuttalliana*. Larger plants on the Pacific coast have been called *P. grandis* Swallen, and those on the Atlantic coast *P. lucida* Fernald & Weath., but there are many plants of intermediate stature."

***Puccinellia nuttalliana* (Schult.) Hitchc. [FNA24, HC, HC2]**

A Flora of California 1: 162.

Nuttall's alkali grass

*Puccinellia airoides* S. Watson & J.M. Coult.

*Puccinellia cusickii* Weath. [HC]

FNA24: "*Puccinellia nuttalliana* is a widespread and variable species, restricted to the Flora region. It grows principally in the interior, but is also found in coastal settings, where it is difficult to distinguish from *P. nutkaensis*. Northern, primarily boreal or southern arctic populations with relatively short lemmas and anthers (2.2-2.8 mm and 0.6-0.9 mm, respectively), and with a few long hairs on the lower palea veins, have sometimes been recognized as *P. borealis* Swallen."

***Puccinellia pumila* (Vasey) Hitchc. [FNA24, HC, HC2]**

Amer. J. Bot. 21(3): 129.

dwarf alkali grass

*Puccinellia ambigua* T.J. Sørensen

*Puccinellia paupercula* (Holm) Fernald & Weath.

*Puccinellia paupercula* (Holm) Fernald & Weath. var. *alaskana* (Scribn. & Merr.) Fernald & Weath.

*Puccinellia tenella* (Lange) Holmb. ssp. *alaskana* (Scribn. & Merr.) Tzvelev

FNA24: "*Puccinellia pumila* is primarily North American, growing on the Pacific, Arctic, and Atlantic coasts. It also grows in Kamchatka, Russia (Tzvelev 1995). It generally grows in sand and among stones in protected intertidal environments. A few specimens with exceptionally long glumes and lemmas were treated by Fernald and Weatherby (1916) as *P. paupercula* var. *longiglumis* Fernald & Weath.; they are regarded here as representing extremes of *P. pumila*. *Puccinellia alaskana* Scribn. & Merr., here included in *P. pumila*, was considered a subspecies of *P. langeana* (Berlin) T.J. Sørensen ex Hultén [= *P. tenella*] by Sørensen (1953), but more closely resembles *P. pumila*. It differs morphologically from *P. pumila* mainly in its relatively distinct lemma veins. It also differs from most specimens of *P. pumila* in having smaller lemmas (2.5-3 mm) and anthers (0.5-0.9 mm), and in being diploid. It represents the Aleutian Islands component of the geographic distribution given for *P. pumila*. Its status is currently under investigation. Molecular data obtained as this volume went to press (Consaul et al. [in prep.]) tend to support recognition of *P. alaskana* as a distinct species."

***Redfieldia* [HC2]**

***Redfieldia flexuosa* (Thurb. ex A. Gray) Vasey [FNA25, HC2]**

Bulletin of the Torrey Botanical Club 14: 133.

blowout grass

FNA25: "*Redfieldia flexuosa* grows on sand hills and dunes. It is a common and important soil binder in blowout areas and has been planted for that purpose beyond its native range. It is only fair livestock forage but, because it grows in areas subject to blowout, this should not be of concern." Not in H&C Reported as an introduction in Washington for erosion control by Hatch (2003).

\* Hatch, S. L. 2003. *Redfieldia* Vasey, p. 41 in: Barkworth, M. E., K. M. Capels, S. Long, and M. B. Piep, eds. 2003. Flora of North America North of Mexico. Volume 25 Magnoliophyta: Commelinidae (in part): Poaceae, part 2. Oxford University Press, New York.

***Sasa***

***Sasa palmata* (hort. ex Burb.) E.G. Camus**

Bambusées 25.

broadleaf bamboo

Collected as a garden escape along roadsides in lowland western Washington. Not considered to be a naturalized element of the flora at this time based on specimens collected.

***Schedonorus* [HC2]**

fescue, tall fescue

*Schedonorus arundinaceus* (Schreb.) Dumort. [FNA24, HC2]

Observ. Gramin. Belg. 106. 1824.  
tall fescue, tall rye grass

*Festuca arundinacea* Schreb. [HC]

*Festuca elatior* L.

*Festuca elatior* L. ssp. *arundinacea* (Schreb.) Hack.

*Festuca elatior* L. var. *arundinacea* (Schreb.) Wimm.

*Lolium arundinaceum* (Schreb.) Darbysh.

FNA24: "*Schedonorus arundinaceus* is a Eurasian species that has been introduced to the Flora region. It is grown for forage, soil stabilization, and coarse turf. It is now cultivated in all but the coldest and most arid parts of North America, and often escapes. It is frequently infected with the endophytic fungi *Neotyphodium coenophialum*, which confers insect and drought resistance to the plant, among other benefits; it also produces ergot alkaloids that are toxic to livestock. Varieties with endophyte strains that do not produce toxic ergot alkaloids have been developed (Nihsen et al. 2004). NOTE ADDED May 2009: The name *Schedonorus arundinaceus* is correct, not *S. phoenix*. There is a potential problem with the name *S. arundinaceus* but Drs. Kanchi Gandhi and Mary Barkworth will take action to address it in the near future. The grass portion of the PLANTS database, which shows *S. phoenix* as the correct name, has not been updated to reflect nomenclatural and taxonomic changes since 2006 although many changes to other parts of the database have been made. Keeping any web site current, including this one, is a problem. "

*Schedonorus pratensis* (Huds.) P. Beauv. [FNA24, HC2]

Ess. Agrostogr. 99, 163, 177.  
meadow fescue, meadow rye grass

*Festuca pratensis* Huds. [HC]

*Lolium pratense* (Huds.) Darbysh.

FNA24: "*Schedonorus pratensis* is a Eurasian species that is now widely established in the Flora region. It used to be a popular forage grass in the contiguous United States and southern Canada, but is now rarely planted."

*Schizachyrium* [HC2]

bluestem

*Schizachyrium scoparium* (Michx.) Nash [HC2]

broom bluestem, little bluestem

*Andropogon scoparius* Michx. [HC]

var. *scoparium* [FNA25, HC2]

Fl. S.E. U.S. 59, 1326.  
broom beardgrass, broom bluestem, little bluestem

FNA24: "*Schizachyrium scoparium* var. *scoparium* grows in a variety of soils and in open habitats. It was once a dominant component of the prairie grasslands that extended through the central plains of North America and into Mexico, but it has largely been replaced by fields of maize, wheat, sorghum, sunflowers, and field mustard. It is the most variable of the varieties recognized within *S. scoparium*, with morphological features that vary independently and continuously across its range, coming together in distinctive combinations in some regions. Some of these phases have been named as varieties, or even species, but they have proven to be untenable taxonomic entities when plants from throughout the range of the species are considered."

*Sclerochloa* [HC, HC2]

hardgrass

*Sclerochloa dura* (L.) P. Beauv. [FNA24, HC, HC2]

Ess. Agrostogr. 98, 174, 177, pl. 19, f. 4.  
common hard grass

*Cynosurus durus* L.

FNA24: "First collected in the United States in 1895, *Sclerochloa dura* is probably more widespread than indicated, because it is easily overlooked. It grows in lawns, campsites, roadsides, athletic fields,

fairgrounds, and other disturbed sites. It is frequently found in severely compacted soils, because it can withstand heavy traffic by vehicles and pedestrians. *Sclerochloa dura* is sometimes confused with *Poa annua*. The two species are superficially similar, occupy similar habitats, and have a similar phenology, but *S. dura* has blunt, glabrous lemmas and racemose inflorescences, whereas *P. annua* has obtuse to acute lemmas that are smooth and usually sericeous or crisply puberulent over the veins, and paniculate inflorescences. Plants of *S. dura* become stramineous in age, making them easy to locate because areas dominated by this species change color."

### ***Scleropoa*** [HC, HC2]

*Scleropoa rigida* (L.) Griseb. [HC, HC2]

fern grass

*Catapodium rigidum* (L.) C.E. Hubb.

*Desmazeria rigida* (L.) Tutin

*Poa rigida* L.

[Europe] In our area known only from Oreg., in Baker County and from near Portland and Salem [H&C p. 693]. FNA24: "*Desmazeria rigida* is native to Europe, and appears to have no distinctive habitat preferences. In the Flora region, it is now established as a weed in disturbed sites such as roadsides, ditches, and the edges of fields. It is probably more widespread than indicated on the map because herbarium records of weed distributions are often poor."

### ***Scribneria*** [HC, HC2]

*Scribneria bolanderi* (Thurb.) Hack. [FNA24, HC, HC2]

Botanical Gazette 11(5): 105.

Scribner's grass

FNA24: "*Scribneria* is a monospecific genus that is native from Washington to Mexico. *Scribneria bolanderi* grows between 500-3000 m. It grows in diverse habitats, ranging from dry, sandy or rocky soils to seepages and vernal pools. It is often overlooked because it is relatively inconspicuous. Its range extends south into Baja California, Mexico."

### ***Secale*** [HC, HC2]

rye

*Secale cereale* L. [FNA24, HC, HC2]

Sp. Pl. 1: 84

cultivated rye

*Triticum cereale* (L.) Salisb.

FNA24: "*Secale cereale* is one of the world's most important cereal grasses; it is also widely used in North America for soil stabilization and, particularly in Canada, for whisky. When dry, the spike is often distinctly nodding. Frederiksen and Petersen (1998) placed cultivated plants with a nondisarticulating rachis into *Secale cereale* L. subsp. *cereale*, and wild or weedy plants with a more fragile rachis into *Secale cereale* subsp. *ancestrale* Zhuk."

*Secale strictum* (C. Presl) C. Presl [HC2]

*Secale montanum* Guss. [HC]

### ***Setaria*** [HC, HC2]

bristlegrass, foxtail

*Setaria faberi* R.A.W. Herrm. [FNA25, HC2]

Beitr. Biol. Pflanzen 10(1): 51.

Chinese foxtail

Recently collected in King Co.

*Setaria italica* (L.) P. Beauv. [FNA25, HC, HC2]

Ess. Agrostogr. 51, 170, 178

Italian bristlegrass, foxtail millet

FNA24: "Setaria italica was cultivated in China as early as 2700 B.C. and during the Stone Age in Europe. Nowadays it is grown mostly for hay or as a pasture grass, but it has been used as a substitute for rice in northern China. It is sometimes cultivated in North America, but it is better known as a weed in moist ditches, mostly in the northeastern United States. It is closely related to *S. viridis*, differing in the longer (3 mm) spikelets and smooth, shiny upper florets which readily disarticulate above the lower florets. It exhibits considerable variation in seed and bristle color, bristle length, and panicle shape. Using these characters, Hubbard (1915) recognized several infraspecific taxa; they are not treated here."

*Setaria pumila* (Poir.) Roem. & Schult. [HC2]

ssp. *pallide-fusca* (Schumach.) B.K. Simon [HC2]

yellow foxtail, pigeon grass

*Setaria pumila* (Poir.) Roem. & Schult. ssp. *pallidefusca* (Schum.) B.K. Simon, orthographic variant

FNA25: "Setaria pumila subsp. pallidefusca is native to tropical Africa. It is now established as a weed in southeastern Louisiana, but it has also been collected in the past on ballast dumps in Portland, Oregon."

ssp. *pumila* [FNA25, HC2]

Syst. Veg. 2: 891.

yellow foxtail

*Pennisetum glaucum* (L.) R. Br. [FNA25, HC2], misapplied

*Setaria glauca* (L.) P. Beauv. [ILBC7], misapplied

*Setaria lutescens* (Weigel ex Stuntz) F.T. Hubb. [HC]

FNA25: "Setaria pumila subsp. pumila is a European adventive that has become a common weed in lawns and cultivated fields throughout temperate North America."

*Setaria verticillata* (L.) P. Beauv. [FNA25, HC, HC2]

Ess. Agrostogr. 51, 171, 178.

hooked bristlegrass, rough bristlegrass

*Chaetochloa verticillata* (L.) Scribn.

*Panicum verticillatum* L.

*Setaria carnei* Hitchc.

FNA25: "Setaria verticillata is a European adventive that is now common throughout the cooler regions of the contiguous United States and in southern Canada. It is an aggressive weed in the vineyards of central California. Reports of *S. carnei* Hitchc. from North America are based on misidentification of this species. *Setaria verticillata* resembles *S. adhaerans*, but differs in having longer panicles and spikelets, sheath margins that are ciliate distally, and blades that are scabrous, not hairy. *Setaria verticillata* is a more northern species than *S. adhaerans*, but their ranges overlap in the Flora region."

*Setaria viridis* (L.) P. Beauv. [HC, HC2]

*Chaetochloa viridis* (L.) Scribn.

*Panicum viride* L.

*Setaria viridis* (L.) P. Beauv. var. *breviseta* (Döll) Hitchc.

*Setaria viridis* (L.) P. Beauv. var. *weinmannii* (Roem. & Schult.) Borbás

var. *viridis* [FNA25, HC2]

Ess. Agrostogr. 51, 171, 178.

green bristlegrass

FNA25: "Setaria viridis var. viridis is an aggressive adventive weed throughout temperate North America. It is the most common annual representative of Setaria in the Flora region."

*Sorghum* [HC, HC2]

sorghum

*Sorghum bicolor* (L.) Moench [FNA25, HC2]

Methodus 207.

sorghum

*Sorghum vulgare* Pers. [HC]

FNA25: "Sorghum bicolor was domesticated in Africa 3000 years ago, reached northwestern India before 2500 B.C., and became an important crop in China after the Mongolian conquest. It was introduced to the Western Hemisphere in the early sixteenth century, and is now an important crop in the United States and Mexico. Numerous cultivated strains exist, some of which have been formally named. They are all interfertile with each other and with other wild species of Sorghum. All the cultivated sorghums are placed in Sorghum bicolor subsp. bicolor. Grain sorghums have short panicles and panicle branches, broomcorns have elongate panicles and panicle branches, and sweet sorghums or sorgho produce an abundance of sweet juice in their stems. For a more detailed treatment, see Harlan and de Wet (1972)."

\* de Wet, J. M. J. 1978. Systematics and evolution of Sorghum sect. Sorghum (Gramineae). American journal of Botany 65: 477-484.

*Sorghum halepense* (L.) Pers. [FNA25, HC, HC2]

Revisio Generum Plantarum 3: 368.

Johnson grass

*Holcus halepensis* L.

Rhizomatous noxious weed. FNA25: "Sorghum halepense is native to the Mediterranean region. It is sometimes grown for forage in North America, but it is considered a serious weed in warmer parts of the United States. It hybridizes readily with *S. bicolor*, and derivatives of such hybrids are widespread. The annual Sorghum alnum Parodi, which has wider (2-2.8 mm) sessile spikelets with more veins in the lower glumes (13-15 versus 10-13) than *S. halepense*, is one such derivative."

*Spartina* [HC, HC2]

cordgrass

*Spartina alterniflora* Loisel. [FNA25, HC, HC2]

Fl. Gall. 719.

saltwater cordgrass, smooth cordgrass

*Spartina alterniflora* Loisel. var. *glabra* (Muhl. ex Elliott) Fernald

*Spartina alterniflora* Loisel. var. *pilosa* (Merr.) Fernald

FNA25: "*Spartina alterniflora* is found on muddy banks, usually of the intertidal zone, in eastern North and South America, but it is not known from Central America. In addition, it has become established on the west coast of North America, England, southeastern France, and China. It hybridizes with *S. maritima* in Europe, with *S. pectinata* in Massachusetts, and with *S. foliosa* in California. The rhizomes and scales of *S. alterniflora* have large air spaces, presumably an adaptation to the anaerobic soils of its usual habitat. Decaploid plants tend to be larger than octoploids, but they cannot be reliably distinguished without a chromosome count. *Spartina alterniflora* is considered a serious threat to coastal ecosystems in Washington and California. It out-competes many of the native species in these habitats and frequently invades mud flats and channels, converting them to marshlands. Pure *S. alterniflora* grows within the lower elevational marsh zones in its native range but, in San Francisco Bay, its hybrids with *S. foliosa* grow both below and above the range of that species."

*Spartina anglica* C.E. Hubb. [FNA25, HC2]

Bot. J. Linn. Soc. 76(4): 364.

English cordgrass

FNA25: "*Spartina anglica* is a naturally formed amphidiploid, derived from *S. xtownsendii*, that was first recognized as a separate species in 1968. It has been introduced (like *S. xtownsendii*) for reclamation of tidal mudflats. It differs from *Spartina xtownsendii* in its wider and more widely divergent upper blades, longer ligules, longer, more hairy spikelets, and longer, well-filled anthers."

*Spartina densiflora* Brongn. [FNA25, HC2]

Voy. Monde 2(2): 14.

Chilean cordgrass

Recently reported from Grays Harbor County, WA. FNA25: "*Spartina densiflora* is native to South America, where it grows in coastal marshes and at inland sites. It was introduced to Humboldt Bay, Humboldt County, California, possibly during the nineteenth century. It is now established there and in several locations around San Francisco Bay and in Washington, Oregon, and Texas, as well as the Mediterranean coast of Europe. In California, it has often been mistaken for *S. foliosa*, from which it differs in its indurate culms, narrow, inrolled leaves, and cespitose growth habit and tendency to grow among *Salicornia* in the

upper intertidal zone or in open mud. The chromosome count was obtained by Gerish (1979), who reported it for *Spartina foliosa*, but Spicher and Josselyn (1985) demonstrated that the plants he worked with were almost certainly *S. densiflora*, a species that hitherto had been misidentified as the native *S. foliosa*."

***Spartina gracilis* Trin. [FNA25, HC, HC2]**

Mém. Acad. Imp. Sci. Saint-Pétersbourg, Sér. 6, Sci. Math., Seconde Pt. Sci. Nat. 6,4(1-2): 110.  
alkali cordgrass

FNA25: "*Spartina gracilis* is found on the margins of alkaline lakes and along stream margins and river bottoms. Its range extends from the southern portion of the Northwest Territories, Canada, to central Mexico."

***Spartina patens* (Aiton) Muhl. [FNA25, HC2]**

Descr. Gram. 55.  
saltmeadow cordgrass

*Spartina patens* (Aiton) Muhl. var. *juncea* (Michx.) Hitchc.  
*Spartina patens* (Aiton) Muhl. var. *monogyna* (M.A. Curtis) Fernald

FNA25: "*Spartina patens* grows in coastal salt and brackish waters. It is native to the east coast of North and Central America, extending through the Caribbean Islands to the north coast of South America, but is now established at scattered locations on the west coast of Canada and the United States. On the east coast, it is usually one of the dominant components of coastal salt marshes, frequently extending from the dry, sandy beach above the intertidal zone well up into the drier portions of the marshes. The older inland collections are from areas associated with brine deposits or saline soils, but there is some indication that the species range is increasing inland because of the use of salt to de-ice roads in winter. The inflorescence of *Spartina patens* is similar to that of *S. bakeri* when young, but its inflorescence branches usually diverge at maturity, whereas those of *S. bakeri* remain appressed. *Spartina patens* is probably one of the parents of *S. xcaespitosa*, *S. pectinata* being the other. Unlike *S. xcaespitosa*, *S. patens* grows in both disturbed and undisturbed habitats."

***Spartina pectinata* Link [FNA25, HC, HC2]**

Jahrb. Gewächsk. 1(3): 92-93.  
freshwater cordgrass, prairie cordgrass

*Spartina michauxiana* Hitchc.  
*Spartina pectinata* Link var. *suttiei* (Farw.) Fernald

FNA25: "*Spartina pectinata* is native to Canada and the United States, but it has been introduced at scattered locations on other continents. On the Atlantic coast, it grows in marshes, sloughs, and flood plains, being a common constituent of ice-scoured zones of the northeast and growing equally well in salt and fresh water habitats. In western North America, it grows in both wet and dry soils, including dry prairie habitats and along roads and railroads. *Spartina pectinata* is thought to be one of the parents of *S. xcaespitosa*, the other parent being *S. patens*."

***Spartina xtownsendii* H. Groves & J. Groves [FNA25, HC, HC2]**

Rep. Bot. Exch. Club 1880: 37.  
Townsend's cordgrass

Sterile hybrid often confused with *Spartina anglica*, reported in H&C from Stanwood, Snohomish Co. FNA25: "*Spartina xtownsendii* is a sterile hybrid between the European *S. maritima* and the American *S. alterniflora*. It seems to have formed spontaneously at several locations in Europe, often taking over the areas formerly occupied by its progenitors. At some locations it has given rise to the fertile amphiploid *S. anglica*, from which it differs morphologically in its narrower, less divergent upper blades, shorter ligules, shorter, less hairy spikelets, and poorly filled, indehiscent anthers. *Spartina xtownsendii* has been used throughout the world for tideland reclamation because it is easy to establish, but it displaces native species."

***Sphenopholis* [HC, HC2]**

prairie-grass, wedgegrass

***Sphenopholis intermedia* (Rydb.) Rydb. [FNA24, HC2]**

Bull. Torrey Bot. Club 36: 533.  
slender wedgescale

*Sphenopholis intermedia* (Rydb.) Rydb. var. *pilosa* Dore  
*Sphenopholis obtusata* (Michx.) Scribn. var. *major* (Torr.) Erdman

FNA24: "Sphenopholis intermedia grows at 0?2500 m in wet to damp sites, sites that dry out after the growing season, and sites with clay soils that retain moisture. Restricted to the Flora region, it is found in forests, meadows, and waste places throughout most of the region other than the high arctic. It differs from *Koeleria macrantha*, with which it is sometimes confused, in its more open panicles and in having spikelets that disarticulate below the glumes."

***Sphenopholis obtusata* (Michx.) Scribn. [FNA24, HC, HC2]**

Rhodora 8(92): 144.  
prairie wedgescale

*Aira obtusata* Michx.

*Sphenopholis obtusata* (Michx.) Scribn. var. *lobata* (Trin.) Scribn. ex B.L. Rob.

*Sphenopholis obtusata* (Michx.) Scribn. var. *pubescens* (Scribn. & Merr.) Scribn. ex B.L. Rob.

FNA24: "Sphenopholis obtusata grows in prairies, marshes, dunes, forests, and waste places, at 0?2500 m. Its range extends from British Columbia to New Brunswick, through most of the United States, to southern Mexico and the Caribbean. The distal lemmas of *S. obtusata* are occasionally somewhat scabrous. Such plants can be distinguished from *S. nitida* by their narrower lower glumes, from *S. filiformis* by their wider leaves, and from *S. pennsylvanica* by their shorter, unawned spikelets. Hybrids with *S. pennsylvanica*, called *Sphenopholis xpallens*, have short (0.1?4 mm) awns on the distal lemmas."

***Sporobolus* [HC, HC2]**

dropseed

***Sporobolus airoides* (Torr.) Torr. [FNA25, HC, HC2]**

Pacif. Railr. Rep. Parke, Bot. 7(3/1): 21.  
alkali-sacaton

*Agrostis airoides* Torr.

rare in WA? FNA25: "*Sporobolus airoides* grows on dry, sandy to gravelly flats or slopes, at elevations from 50-2350 m. It is usually associated with alkaline soils. Its range extends into northern Mexico."

***Sporobolus compositus* (Poir.) Merr. [HC2]**

composite dropseed, tall dropseed

*Sporobolus asper* (P. Beauv.) Kunth [HC]

*Sporobolus asper* (P. Beauv.) Kunth var. *asper*

*Sporobolus asper* (P. Beauv.) Kunth var. *hookeri* (Trin.) Vasey

**var. *compositus* [FNA25, HC2]**

Circ. Div. Agrostol. U.S.D.A. 35: 6.  
rough dropseed

FNA25: "*Sporobolus compositus* grows along roadsides and railroad right of ways, on beaches, and in cedar glades, pine woods, live oak-pine forests, prairies, and other partially disturbed, semi-open sites at 0-1600 m. Its range lies entirely within the Flora region. The *Sporobolus compositus* complex is a difficult assemblage of forms, perhaps affected by their primarily autogamous breeding system (Riggins 1977). Asexual proliferation via rhizomes adds to the species ability to maintain local population structure and to perpetuate unique character combinations.

***Sporobolus cryptandrus* (Torr.) A. Gray [FNA25, HC, HC2]**

Manual 576.  
sand dropseed

*Agrostis cryptandra* Torr.

*Sporobolus cryptandrus* (Torr.) A. Gray ssp. *fuscicola* (Hook.) E.K. Jones & Fassett, orthographic variant

*Sporobolus cryptandrus* (Torr.) A. Gray var. *fuscicola* (Hook.) R.W. Pohl, orthographic variant

*Sporobolus cryptandrus* (Torr.) A. Gray var. *occidentalis* E.K. Jones & Fassett

Reports by Fernald (1950) and Kartesz (1999) of *Sporobolus contractus* Hitchc. (as *Sporobolus cryptandrus* var. *strictus* Scribn.) in WA are not supported by a voucher, and probably belong here. FNA does not credit *Sporobolus contractus* to the Pacific Northwest. FNA25: "*Sporobolus cryptandrus* is a

widespread North American species, extending from Canada into Mexico. It grows in sandy soils and washes, on rocky slopes and calcareous ridges, and along roadsides in salt-desert scrub, pinyon-juniper woodlands, yellow pine forests, and desert grasslands. Its elevational range is 0-2900 m."

***Sporobolus neglectus* Nash [FNA25, HC, HC2]**

Bull. Torrey Bot. Club 22(11): 464.

small dropseed

*Sporobolus vaginiflorus* (Torr. ex A. Gray) Alph. Wood var. *neglectus* (Nash) Scribn.

Treated in FNA as native, commonly in disturbed sites, rare in WA? FNA25: "*Sporobolus neglectus* is native to the Flora region, and grows at 0-1300 m in sandy soils, on river shores, and in dry, open areas within many plant communities, often in disturbed sites. It appears to have been extirpated from Maine and Maryland and is considered endangered or of special concern in Connecticut, Massachusetts, New Hampshire, and New Jersey. *Sporobolus vaginiflorus* is very similar to *S. neglectus*, but it differs in having strigose lemmas, sheaths that are sparsely hairy towards the base and, usually, longer spikelets."

***Taeniatherum* [HC2]**

medusahead

***Taeniatherum caput-medusae* (L.) Nevski [FNA24, HC2]**

Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 17: 38.

medusa-head

*Elymus caput-medusae* L. [HC]

*Taeniatherum asperum* (Simonk.) Nevski

FNA24: "*Taeniatherum caput-medusae* is native from Portugal and Morocco east to Kyrgyzstan. It usually grows on stony soils, and flowers from May?June (July). It is an aggressive invader of disturbed sites in the western United States, where it has become a serious problem on rangelands. It has been found as a rare introduction at several sites in the eastern United States, but may not persist there. It is listed as a noxious weed by the U.S. Department of Agriculture. Frederiksen (1986) recognized three subspecies within *Taeniatherum caput-medusae*, distinguishing among them on the basis of morphology and geography. Plants in the Flora region belong to *Taeniatherum caput-medusae* (L.) Nevski subsp. *caput-medusae*. It differs from the other two subspecies in its longer glumes and shorter lemmas."

***Thinopyrum* [HC2]**

wheatgrass

***Thinopyrum intermedium* (Host) Barkworth & D.R. Dewey [HC2]**

intermediate wheatgrass

*Agropyron intermedium* (Host) P. Beauv. [HC]

*Elymus hispidus* (Opiz) Melderis

*Elymus hispidus* (Opiz) Melderis var. *ruthenicus* (Griseb.) Dorn

*Elytrigia intermedia* (Host) Nevski

**ssp. *barbulatum* (Schur) Barkworth & D.R. Dewey [FNA24, HC2]**

Amer. J. Bot. 72(5): 772.

pubescent wheatgrass

*Agropyron intermedium* (Host) P. Beauv. var. *trichophorum* (Link) Halácsy, orthographic variant

*Agropyron trichophorum* (Link) K. Richt.

*Elymus hispidus* (Opiz) Melderis ssp. *barbulatus* (Schur) Melderis

*Elytrigia intermedia* (Host) Nevski ssp. *barbulata* (Schur) Á. Löve

*Elytrigia intermedia* (Host) Nevski ssp. *trichophora* (Link) Tzvelev

FNA24: "*Thinopyrum intermedium* is native to Europe and western Asia. It has been widely introduced in western North America for erosion control, revegetation, forage, and hay. One of its advantages for erosion control and revegetation is that it establishes rapidly in many different habitats. In its native range, it grows in dry areas with sandy or stony soils. In Europe, it forms sterile hybrids with *Elymus* repens; no such hybrids are known from North America. Several subspecies have been recognized within *Thinopyrum intermedium*, usually based on differences in vestiture of the glumes and lemmas, presence or absence of lemma awns, and color of the plants. Assadi (1994) commented that there

was little correlation between the different character states. He grew seeds from several wild plants and, even when most of the offspring resembled the parent plant, there was often segregation of other variants. Crossing experiments showed that hybrids between the morphological variants were fertile and usually had regular meiosis. He noted, however, that the plants with glabrous spikelets tended to grow in mesophytic habitats, those with hairy glumes and lemmas on dry slopes, and those with ciliate glumes and lemmas at the edges of fields and in wet places. This difference in habitat preference was reiterated by Ogle (2001). Because of this ecological distinction, they are formally recognized here as subspecies. Plants with hairs only on the outer edges of their lemmas are included under *T. intermedium* subsp. *intermedium*. They may be derived from crosses between the hairy and glabrous plants, a possibility that has not been experimentally evaluated. There seems to be little correlation between spikelet vestiture and that of the leaves and stems. There is no known difference in geographic distribution between subsp. *intermedium* and subsp. *barbulatum*. Ogle (2001) states that *T. intermedium* subsp. *intermedium* is adapted to areas with 12-13 inches of rainfall per year."

ssp. *intermedium* [FNA24, HC2]

Amer. J. Bot. 72(5): 772.  
intermediate wheatgrass

FNA24: "*Thinopyrum intermedium* is native to Europe and western Asia. It has been widely introduced in western North America for erosion control, revegetation, forage, and hay. One of its advantages for erosion control and revegetation is that it establishes rapidly in many different habitats. In its native range, it grows in dry areas with sandy or stony soils. In Europe, it forms sterile hybrids with *Elymus repens*; no such hybrids are known from North America. Several subspecies have been recognized within *Thinopyrum intermedium*, usually based on differences in vestiture of the glumes and lemmas, presence or absence of lemma awns, and color of the plants. Assadi (1994) commented that there was little correlation between the different character states. He grew seeds from several wild plants and, even when most of the offspring resembled the parent plant, there was often segregation of other variants. Crossing experiments showed that hybrids between the morphological variants were fertile and usually had regular meiosis. He noted, however, that the plants with glabrous spikelets tended to grow in mesophytic habitats, those with hairy glumes and lemmas on dry slopes, and those with ciliate glumes and lemmas at the edges of fields and in wet places. This difference in habitat preference was reiterated by Ogle (2001). Because of this ecological distinction, they are formally recognized here as subspecies. Plants with hairs only on the outer edges of their lemmas are included under *T. intermedium* subsp. *intermedium*. They may be derived from crosses between the hairy and glabrous plants, a possibility that has not been experimentally evaluated. There seems to be little correlation between spikelet vestiture and that of the leaves and stems. There is no known difference in geographic distribution between subsp. *intermedium* and subsp. *barbulatum*. Ogle (2001) states that *T. intermedium* subsp. *intermedium* is adapted to areas with 12-13 inches of rainfall per year."

*Thinopyrum ponticum* (Podp.) Barkworth & D.R. Dewey [HC2]

Eurasian quack grass

*Agropyron varnense* (Velen.) Hayek

*Elymus elongatus* (Host) Runemark var. *ponticus* (Podp.) Dorn

*Elymus varnensis* (Velen.) Runemark

*Elytrigia pontica* (Podp.) Holub

*Thinopyrum ponticum* (Podp.) Z.-W. Liu & R.R.-C. Wang

FNA24: "*Thinopyrum ponticum* is native to southern Europe and western Asia. In the Flora region, it is planted along roadsides for soil stabilization and is spreading naturally, in cooler areas, because of its tolerance of the saline conditions caused by salting roads in winter. In its native range, *Thinopyrum ponticum* grows in dry and/or saline soils. It is sometimes treated as a subspecies of *T. elongatum* (Host) D.R. Dewey, a diploid species that grows in maritime regions of western Europe."

*Torreyochloa* [HC2]

false manna grass

*Torreyochloa pallida* (Torr.) G.L. Church [HC2]

pale false manna grass

var. *pauciflora* (J. Presl) J.I. Davis [HC2]

weak alkaligrass

*Glyceria otisii* Hitchc.  
*Glyceria pauciflora* J. Presl  
*Puccinellia pauciflora* (J. Presl) Munz [HC]  
*Puccinellia pauciflora* (J. Presl) Munz var. *holmii* (Beal) C.L. Hitchc. [HC]  
*Puccinellia pauciflora* (J. Presl) Munz var. *microtheca* (Buckley) C.L. Hitchc. [HC]  
*Puccinellia pauciflora* (J. Presl) Munz var. *pauciflora* [HC]  
*Torreyochloa pauciflora* (J. Presl) G.L. Church  
*Torreyochloa pauciflora* (J. Presl) G.L. Church var. *holmii* (Beal) Roy L. Taylor & MacBryde  
*Torreyochloa pauciflora* (J. Presl) G.L. Church var. *microtheca* (Buckley) Roy L. Taylor & MacBryde

### ***Tripidium* [HC2]**

*Tripidium ravennae* (L.) H. Scholz [HC2]

Willdenowia 36(2): 664.

ravennagrass

*Saccharum ravennae* (L.) L.

### ***Triplasis* [HC2]**

sandgrass

*Triplasis purpurea* (Walter) Chapm. [HC2]

purple sandgrass

var. *purpurea* [FNA25, HC2]

Fl. South. U.S. 560.

purple sandgrass

FNA25: "*Triplasis purpurea* grows in sandy soils throughout the eastern and central portion of the Flora region, extending southward through Mexico to Costa Rica. It is far more common in maritime dunes than *T. americana*. Plants in the Flora region belong to *Triplasis purpurea* (Walter) Chapm. var. *purpurea*." Not in H&C; recently collected as a weed on the silty shores of the lower Columbia River in Clark Co.

### ***Trisetum* [HC, HC2]**

oatgrass, trisetum

(see also *Graphephorum*)

*Trisetum canescens* Buckley [FNA24, HC, HC2]

Proc. Acad. Nat. Sci. Philadelphia 14: 100.

tall false oat

*Trisetum cernuum* Trin. ssp. *canescens* (Buckley) Calder & Roy L. Taylor

*Trisetum cernuum* Trin. var. *canescens* (Buckley) Beal

*Trisetum cernuum* Trin. var. *projectum* (Louis-Marie) Beetle

*Trisetum spicatum* (L.) K. Richt. var. *projectum* (Louis-Marie) J.T. Howell

FNA24: "*Trisetum canescens* grows at or near stream banks, and in forest margins or interiors, in moist to dry areas in the western Flora region. It is especially abundant in ponderosa pine stands and spruce-fir forests. The vestiture of different parts varies throughout the range of the species. Plants from California with conspicuously interrupted panicles have been called *Trisetum cernuum* var. *projectum* (Louis-Marie) Beetle."

*Trisetum cernuum* Trin. [FNA24, HC, HC2]

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 1(1): 61

nodding *Trisetum*

FNA24: "*Trisetum cernuum* grows in moist woods, stream banks, lake and pond shores, and floodplains of the western Flora region. The hairiness of the leaf sheaths varies, often within a plant."

*Trisetum flavescens* (L.) P. Beauv. [FNA24, HC, HC2]

Enum. Stirp. Transsilv. 3: 263.

yellow false oat

*Avena flavescens* L.

"This European species has been introduced in many areas of the U. S. and is reported for Wash." [H&C]. FNA24: "Trisetum flavescens grows in seeded pastures, roadsides, and as a weed in croplands. Native to Europe, west Asia, and north Africa, it was introduced into the Flora region because of its drought resistance, wide soil tolerance, and high palatability to domestic livestock. It is one of the few range plants known to contain calcinogenic glycosides, which can lead to vitamin D toxicity in grazing animals (Dixon 1995). This species seems not to have persisted in southern Ontario (Michael Oldham, pers. comm.). Several infraspecific taxa have been recognized; no attempt has been made to determine which are present in the Flora region."

**Trisetum spicatum** (L.) K. Richt. [FNA24, HC, HC2]

Pl. Eur. 1: 59  
narrow false oat

*Aira spicata* L.

*Trisetum montanum* Vasey

*Trisetum montanum* Vasey var. *shearii* (Scribn.) Louis-Marie

*Trisetum spicatum* (L.) K. Richt. ssp. *alaskanum* (Nash) Hultén

*Trisetum spicatum* (L.) K. Richt. ssp. *congdonii* (Scribn. & Merr.) Hultén

*Trisetum spicatum* (L.) K. Richt. ssp. *majus* (Vasey ex Rydb.) Hultén

*Trisetum spicatum* (L.) K. Richt. ssp. *molle* (Kunth) Piper

*Trisetum spicatum* (L.) K. Richt. ssp. *montanum* (Vasey) W.A. Weber

*Trisetum spicatum* (L.) K. Richt. ssp. *pilosiglume* (Fernald) Hultén

*Trisetum spicatum* (L.) K. Richt. var. *alaskanum* (Nash) Malte ex Louis-Marie

*Trisetum spicatum* (L.) Richter var. *congdonii* (Scribn. & Merr.) A.S. Hitchc.

*Trisetum spicatum* (L.) K. Richt. var. *maidenii* (Gand.) Fernald

*Trisetum spicatum* (L.) K. Richt. var. *majus* (Rydb.) Farw.

*Trisetum spicatum* (L.) K. Richt. var. *molle* (Kunth) Beal

*Trisetum spicatum* (L.) K. Richt. var. *pilosiglume* Fernald

*Trisetum spicatum* (L.) K. Richt. var. *spicatiforme* Hultén

*Trisetum spicatum* (L.) K. Richt. var. *villosissimum* (Lange) Louis-Marie

*Trisetum subspicatum* (L.) P. Beauv.

*Trisetum triflorum* (Bigelow) Á. Löve & D. Löve

*Trisetum triflorum* (Bigelow) Á. Löve & D. Löve ssp. *molle* (Kunth) Á. Löve & D. Löve

*Trisetum villosissimum* (Lange) Louis-Marie

FNA24: "Many infraspecific taxa have been based on the variation in vestiture and openness of the panicle, but none appears to be justified (see Finot et al. 2004 for a different opinion)."

**Triticum** [HC, HC2]

wheat

**Triticum aestivum** L. [FNA24, HC, HC2]

Sp. Pl. 1: 85.  
bread wheat

*Triticum hybernum* L.

*Triticum macha* Dekapr. & Menabde

*Triticum sativum* Lam.

*Triticum sphaerococcum* Percival

*Triticum vulgare* Vill.

FNA24: "Triticum aestivum is the most widely cultivated wheat. Both winter and spring types are grown in the Flora region. In addition to being grown for bread flour, T. aestivum cultivars are used for pastry-grade flour, Oriental-style soft noodles, and cereals. Club wheats, sometimes called Triticum compactum Host, are cultivated in the Pacific Northwest for export to Asian markets. They have short (3.5?6 cm), compressed spikes, with up to 25 spikelets having 2?6 florets. Their spike shape varies from oblong or oval with uniformly distributed spikelets to club-shaped with spikelets crowded towards the apex. No wild hexaploid progenitors of Triticum aestivum are known, but the two distinguishing characteristics of wild Triticum species, fragile rachises breaking into wedge-shaped units and closely appressed glumes, are found in plants cultivated in Tibet and named T. aestivum subsp. tibetanum J.Z. Shao."

**Vahlodea** [HC2]

hairgrass, mountain hairgrass

***Vahlodea atropurpurea* (Wahlenb.) Fr. ex Hartm. [FNA24, HC2]**

Handb. Skand. Fl. (ed. 4) 30.

arctic-hair grass

*Aira atropurpurea* Wahlenb.

*Deschampsia atropurpurea* (Wahlenb.) Scheele [HC]

*Deschampsia atropurpurea* (Wahlenb.) Scheele var. *latifolia* (Hook.) Scribn. ex Macoun [HC]

*Deschampsia atropurpurea* (Wahlenb.) Scheele var. *paramushirensis* Kudô

*Deschampsia atropurpurea* (Wahlenb.) Scheele var. *payettii* Lepage

*Deschampsia pacifica* Tatew. & Ohwi

*Vahlodea atropurpurea* (Wahlenb.) Fr. ex Hartm. ssp. *latifolia* (Hook.) A.E. Porsild

*Vahlodea atropurpurea* (Wahlenb.) Fr. ex Hartm. ssp. *paramushirensis* (Kudô) Hultén

*Vahlodea flexuosa* (Honda ex Nakai) Ohwi

*Vahlodea latifolia* (Hook.) Hultén

FNA24: "*Vahlodea atropurpurea* grows in moist to wet, open woods, forest edges, streamsides, snowbeds, and meadows, in montane to alpine and subarctic habitats. Plants from northwestern North America tend to have wider, more pubescent leaves and shorter lemma hairs than those elsewhere. They are sometimes treated as a distinct taxon, but the variation is continuous."

***Ventenata* [HC, HC2]**

north Africa grass, ventenata

***Ventenata dubia* (Leers) Coss. [FNA24, HC, HC2]**

Expl. Sci. Algérie 2: 104.

*Ventenata*

*Avena dubia* Leers

*Ventenata avenacea* Koel., superfluous renaming (illegitimate)

Europe. FNA24: "The first North American collection of *Ventenata dubia* was made in Washington in 1952. It is now established in crop and pasture lands of eastern Washington and western Idaho (Old and Callihan 1986) and has been found, but has not necessarily become established, at scattered locations elsewhere. Mature specimens can be confusing because the first, straight-awned floret remains after the distal, bisexual florets have disarticulated (Chambers 1985)."

***Vulpia* [HC2]**

annual fescue

***Vulpia bromoides* (L.) Gray [FNA24, HC2]**

Nat. Arr. Brit. Pl. 2: 124.

brome fescue

*Bromus dertonensis* All.

*Festuca bromoides* L. [HC]

*Festuca dertonensis* (All.) Asch. & Graebn.

*Vulpia dertonensis* (All.) Gola

Europe. FNA24: "*Vulpia bromoides* is a common European species that grows in wet to dry, open habitats. It is adventive and naturalized in North and South America. In North America, it is most common on the west coast, where it grows from British Columbia to northern Baja California; it occurs sparingly in other regions."

***Vulpia microstachys* (Nutt.) Munro [FNA24, HC2]**

Pl. Hartw. 342.

small fescue

*Festuca arida* Elmer

*Festuca microstachys* Nutt. [HC]

*Vulpia arida* (Elmer) Henrard

See H&C p 580-581 for table of names applied to this species complex, which is not considered divisible into races. FNA24: "FNA24: "*Vulpia microstachys* is native to western North America, growing from British

Columbia south through the western United States into Baja California. Four varieties are recognized here on the basis of spikelet indumentum, but they frequently occur together, and intergrading forms are known. No difference in their geographic or ecological distribution is known." In light of the lack of distinction among varieties, we are recognizing only the species level taxon."

*Vulpia myuros* (L.) C.C. Gmel. [FNA24, HC2]

Fl. Bad. 1: 8.

rat-tail six-weeks grass

*Festuca megalura* Nutt. [HC]

*Festuca megalura* Nutt. var. *hirsuta* (Hack.) Aschers. & Graebn.

*Festuca myuros* L. [HC]

*Vulpia megalura* (Nutt.) Rydb.

*Vulpia myuros* (L.) C.C. Gmel. var. *hirsuta* Hack.

FNA24: "Vulpia myuros grows in well-drained, sandy soils and disturbed sites. It is native to Europe and North Africa. Vulpia myuros f. megalura (Nutt.) Stace & R. Cotton differs from Vulpia myuros (L.) C.C. Gmel. f. myuros in having ciliate lemma margins. It was once thought to be native to North America, but it occurs throughout the European and North African range of f. myuros, even in undisturbed areas."

*Vulpia octoflora* (Walter) Rydb. [HC2]

six?weeks fescue

*Festuca octoflora* Walter [HC]

*Festuca octoflora* Walter var. *aristulata* Torr. ex L.H. Dewey

var. *hirtella* (Piper) Henrard [FNA24, HC2]

Blumea 2: 320.

six-weeks fescue

*Festuca octoflora* Walter ssp. *hirtella* Piper

*Festuca octoflora* Walter var. *hirtella* (Piper) Hitchc. [HC]

FNA24: "Vulpia octoflora, a widespread native species, tends to be displaced by the introduced Bromus tectorum in the Pacific Northwest. It grows in grasslands, sagebrush, and open woodlands, as well as in disturbed habitats and areas of secondary succession, such as old fields, roadsides, and ditches. Three varieties are recognized here, but their characterization is not completely satisfactory, e.g., plants of the southwestern United States with spikelets in the size range of var. glauca often have densely pubescent lemmas, the distinguishing characteristic of var. hirtella. Vulpia octoflora var. hirtella is most frequent from British Columbia south through the western United States and into Mexico. It is the most common variety of V. octoflora in the southwest.

var. *octoflora* [FNA24, HC2]

Bull. Torrey Bot. Club 36: 538.

six-weeks fescue

*Festuca octoflora* Walter var. *octoflora* [HC]

FNA24: "Vulpia octoflora, a widespread native species, tends to be displaced by the introduced Bromus tectorum in the Pacific Northwest. It grows in grasslands, sagebrush, and open woodlands, as well as in disturbed habitats and areas of secondary succession, such as old fields, roadsides, and ditches. Three varieties are recognized here, but their characterization is not completely satisfactory, e.g., plants of the southwestern United States with spikelets in the size range of var. glauca often have densely pubescent lemmas, the distinguishing characteristic of var. hirtella. Vulpia octoflora var. octoflora is widespread throughout southern Canada, the United States, and Mexico, and has been introduced into temperate regions of South America, Europe, and Asia. It is most common from northern Oklahoma to Virginia, south to the Texas Gulf prairie and Florida."

*Zea* [HC2]

*Zea mays* L. [HC2]

corn

ssp. *mays* [FNA24, HC2]

Sp. Pl. 2: 971-972.

corn, Indian corn, maize

All records are waifs where grain or birdseed was spilled.

**Zizania** [HC, HC2]

Indian rice, wild rice

*Zizania palustris* L. [HC2]

northern wild rice

var. *palustris* [FNA24, HC2]

Mant. Pl. 295.

northern wild rice

*Zizania aquatica* L. ssp. *angustifolia* (Hitchc.) Tzvelev

*Zizania aquatica* L. var. *angustifolia* Hitchc.

Introduced throughout western North America for waterfowl food. FNA24: "Zizania palustris var. palustris grows in the shallow water of lakes and streams, often forming extensive stands in northern lakes. It has been introduced to British Columbia, Nova Scotia, Idaho, Arizona, and West Virginia for waterfowl food; some of the stands in the Canadian prairies may also have resulted from planting (Aiken et al. 1988)."

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## Pontederiaceae [FNA26, HC, HC2] Pickerelweed Family

**Synonyms:** (none)

**References:** (none)

**Eichhornia** [FNA26, HC2]

Eichhornia. 3. 1842.

[name conserved]

*Eichhornia crassipes* (Mart.) Solms [FNA26, HC2]

Monogr. Phan. 4: 527. 1883.

water hyacinth

reported from Cowlitz Co. in 1996 by Richard Old (KZ99)

**Heteranthera** [FNA26, HC, HC2]

Fl. Peruv. Prodr. 9, plate 2. 1794.

[name conserved]

**Heteranthera dubia** (Jacq.) MacMill. [FNA26, HC, HC2]

Metasp. Minnesota Valley. 138. 1892.

grassleaf mud-plantain, water stargrass

*Zosterella dubia* (Jacq.) Small [ILBC7]

**Pontederia** [FNA26, HC2]

Sp. Pl. 1: 288. 1753; Gen. Pl. ed. 5, 140. 1754.

*Pontederia cordata* L. [FNA26, HC2]

Sp. Pl. 1: 208. 1753.

Pickerel-weed

Specimen collected by WA Dept. of Ecology in Snohomish County but not deposited in a herbarium.

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## Potamogetonaceae [FNA22, HC, HC2] Pondweed Family

**Synonyms:**

## Zannichelliaceae [FNA22, HC] (Horned-Pondweed Family)

FNA22: "The family has historically been considered to consist of two genera, Potamogeton and Groenlandia. Recent molecular evidence (D. H. Les, unpublished), combined with existing morphologic evidence, indicates that Potamogeton in the broad sense actually represents two separate lineages. We recognize those lineages at the generic level, Potamogeton in the strict sense and Stuckenia. Consequently, we accept three genera in the family, Potamogeton, Stuckenia, and Groenlandia. Reproductive features are most important in separating species of Potamogeton (R. R. Haynes 1978), and we include the entire family here. The keys may not always utilize reproductive features, but they are based on fruiting individuals. We strongly recommend that no one collect specimens of Potamogetonaceae that are lacking reproductive structures. Leaves of Potamogetonaceae are stipulate. The stipules form a tubular sheath (stipular sheath) around the stem, free from or adnate to the base of the blade. In some species the leaf and sheath of submersed leaves are adnate for part of their length, and the leaf appears to have a sheathing base with an adaxial ligule at the junction of sheath and blade or petiole. Fruits of Potamogetonaceae are drupaceous. The fruits do have endocarps but do not have fleshy mesocarps. Mesocarps exist but never become fleshy. Consequently, the fruits are not true drupes, they are drupaceous. Many species of Potamogetonaceae undergo extensive vegetative reproduction either by turions or stem fragmentation. Turions are excellent modes of vegetative reproduction. The structures are produced at the stem tips and eventually fall to the substrate, either by a portion of the stem breaking off or by the stem itself falling to the substrate. The turions survive an unfavorable season, germinate, and grow into new plants during the next growing season. Because the unfavorable season is usually winter in North America, turions have been called "winter buds." At least one species, Potamogeton crispus, produces turions in early summer, and the turions survive the unfavorable season (summer, in this instance), germinating in the fall. The plant then survives the winter as a young individual, only a few centimeters long, even under ice, and begins growth as the water warms in the following spring. "Winter bud" is certainly not the correct term for P. crispus. The term "turions" designates all such structures, regardless of the unfavorable season."

### References:

- \* Campbell, D. H. 1897. A morphological study of Naias and Zannichellia. Proc. Calif. Acad. Sci., ser. 3, 1: 1?70.
- \* Haynes, R. R. and L. B. Holm-Nielsen. 1987. The Zannichelliaceae in the southeastern United States. J. Arnold Arbor. 68: 259?268.
- \* Posluszny, U. and P. B. Tomlinson. 1977. Morphology and development of floral shoots and organs in certain Zannichelliaceae. Bot. J. Linn. Soc. 75: 21?46.
- \* Taylor, N. 1909. Zannichelliaceae. In: N. L. Britton et al., eds. 1905+. North American Flora.... 47+ vols. New York. Vol. 17, pp. 13?27.
- \* Tomlinson, P. B. and U. Posluszny. 1976. Generic limits in the Zannichelliaceae (sensu Dumortier). Taxon 25: 273?279.

### Potamogeton [FNA22, HC, HC2]

Sp. Pl. 1: 126. 1753; Gen. Pl. ed. 5; 61, 1754.

pondweed

(see also *Stuckenia*)

### Potamogeton alpinus Balbis [FNA22, HC, HC2]

Misc. Bot. 13. 1804.

northern pondweed, reddish pondweed

*Potamogeton alpinus* Balbis ssp. *tenuifolius* (Raf.) Hultén [JPM]

*Potamogeton alpinus* Balbis var. *subellipticus* (Fernald) Ogden [IMF6]

*Potamogeton alpinus* Balbis var. *tenuifolius* (Raf.) Ogden [Peck]

*Potamogeton tenuifolius* Raf.

*Potamogeton tenuifolius* Raf. var. *subellipticus* Fernald

FNA22: "Plants of *Potamogeton alpinus* often are red whenever taken from the water, a feature that makes this species quite distinctive. Two varieties, *Potamogeton alpinus* var. *tenuifolius* and var. *subellipticus*, have been recognized in North America, based mainly on submersed leaf shape. Plants bearing both leaf types have been observed in the same population; hence the varieties are not recognized. Four hybrids, *Potamogeton alpinus* × *P. nodosus* (= *P. xsubobtusus* Hagström), *P. alpinus* × *P. gramineus* (= *P. xnericus* Hagström), *P. alpinus* × *P. praelongus* (= *P. xgriffithii* A. Bennett), and *P. alpinus* × *P. perfoliatus* (= *P. xprussicus* Hagström), have been described."

### Potamogeton amplifolius Tuck. [FNA22, HC, HC2]

American Journal of Science, and Arts. ser. 2, 6:225. 1848.  
broad-leaved pondweed, large-leaved pondweed

FNA22: "Potamogeton amplifolius is common throughout much of North America. Its submersed leaves are larger than those of most other species of Potamogeton, are arcuate, and have more veins than do any other species. One hybrid, Potamogeton amplifolius  $\hat{A}$  P. illinoensis (= P.  $\hat{A}$  scoliophyllus Hagström), has been described."

**Potamogeton berchtoldii** Fieber [HC, HC2]

Berchtold's pondweed

*Potamogeton berchtoldii* Fieber var. *colpophilus* (Fernald) Fernald

*Potamogeton berchtoldii* Fieber var. *lacunatus* (Hagstr.) Fernald

*Potamogeton berchtoldii* Fieber var. *polyphyllus* (Morong) Fernald

*Potamogeton berchtoldii* Fieber var. *tenuissimus* (Mertens & W.D.J. Koch) Fernald

*Potamogeton pusillus* L. ssp. *tenuissimus* (Mertens & W.D.J. Koch) R.R. Haynes & Hellq. [FNA22]

*Potamogeton pusillus* L. var. *tenuissimus* Mertens & W.D.J. Koch [JPM]

FNA22: "Potamogeton pusillus subsp. tenuissimus is the most common linear-leaved subspecies of the family in temperate North America. Whenever one finds a linear-leaved pondweed with 1--5 rows of lacunae on each side of the midvein, chances are that it is subsp. tenuissimus. Only Potamogeton obtusifolius could be confused with the taxon, and it can be separated by having its cylindrical inflorescence, whereas subsp. tenuissimus has a capitate inflorescence."

**Potamogeton crispus** L. [FNA22, HC, HC2]

Sp. Pl. 1: 126. 1753 (as crispum).

curly pondweed

FNA22: "Potamogeton crispus, an introduced species, has spread throughout much of North America. The expansion of this species's range from its original collection in North America, apparently about 1840, has been discussed (R. L. Stuckey 1979). This is the only species of pondweeds in North America with serrate leaves and consequently it is easily recognized. Life history of Potamogeton crispus is unusual as it flowers and fruits in late spring and early summer, at which time it also produces turions. The plants decay shortly after those structures develop, leaving only fruits and turions, which survive the summer. No one has observed any seed germination, but the turions (referred to as dormant apices) germinate in late summer or fall, and the plants overwinter as small plants only a few cm centimeters in size, even under the ice in northern climates (R. L. Stuckey et al. 1978). Growth then continues as the water begins warming in the spring. One hybrid, Potamogeton crispus  $\hat{A}$  P. praelongus (= P.  $\hat{A}$  undulatus Wolfgang ex Schultes & Schultes f.), has been described."

\* Sastroutomo, S. S. 1981. Turion formation, dormancy and germination of curly pondweed, Potamogeton crispus L. Aquatic Bot. 10: 161?173.

\* Stuckey, R. L. 1979. Distributional history of Potamogeton crispus (curly pondweed) in North America. Bartonia 46: 22?42.

\* Stuckey, R. L., J. R. Wehrmeister, and R. J. Bartolotta. 1978. Submersed aquatic vascular plants in ice-covered ponds of central Ohio. Rhodora 80: 203?208.

**Potamogeton epihydrus** Raf. [FNA22, HC, HC2]

Medical Repository. 5: 354. 1808, hexade hexade 2; 3; 2:409. 1811.

ribbon-leaved pondweed

*Potamogeton epihydrus* Raf. ssp. *nuttallii* (Cham. & Schltl.) Calder & Roy L. Taylor [JPM]

*Potamogeton epihydrus* Raf. var. *nuttallii* (Cham. & Schltl.) Fernald [VPPNW1]

*Potamogeton epihydrus* Raf. var. *ramosus* (Peck) House

Peck has authorship incorrect: "C. & B." FNA22: "Two varieties, Potamogeton epihydrus var. epihydrus and var. ramosus, have been recognized. These prove not to be distinct. Both varieties often grow in the same body of water in the same population. The wider-leaved plants often occur in more alkaline waters. Two hybrids, P. epihydrus var. nuttallii  $\times$  P. gramineus and P. epihydrus  $\times$  P. nodosus (= P. xsubsessilis Hagström), have been described. Potamogeton epihydrus is a common species of lakes and streams of northern United States and southern Canada. It extends southward in the eastern United States to Louisiana and Alabama. Potamogeton epihydrus is one of our more easily recognized species: it has floating leaves, linear submersed leaves, and fruits with an embryo with one full spiral or less. The only other North American pondweed with a similar set of characteristics is P. tennesseensis, which differs from

P. epihydrous by the former having long tapering apices in the submersed leaves whereas the latter has blunt to acute apices."

**Potamogeton fibrillosus** Fernald [HC, HC2]

Mem. Amer. Acad. Arts, n. s. 17: 51, plate 28, figs. a?c, plate 32, plate 28, fig. 5, plate 32. 1932  
fibrous-stipuled pondweed

*Potamogeton foliosus* Raf. ssp. *fibrillosus* (Fernald) R.R. Haynes & Hellq. [FNA22]

*Potamogeton foliosus* Raf. var. *fibrillosus* (Fernald) R.R. Haynes & Reveal [JPM]

Known in WA from one collection in 1933 from Pierce Co. FNA22: "Potamogeton foliosus subsp. fibrillosus is known from the warm waters of the northwestern United States. It differs from subsp. foliosus by the stipular tissue between the veins decomposing, leaving only strands formed by the fibrous veins. In addition, nodal glands are quite common."

**Potamogeton foliosus** Raf. [FNA22, HC, HC2]

Medical Repository. hexade 2, 5:354. 1808.

leafy pondweed

*Potamogeton curtissii* Morong

*Potamogeton foliosus* Raf. ssp. *foliosus* [FNA22]

*Potamogeton foliosus* Raf. var. *foliosus* [HC, JPM]

*Potamogeton foliosus* Raf. var. *macellus* Fernald [HC]

FNA22: "Potamogeton foliosus subsp. foliosus is probably the most common linear-leaved species of the family in North America, and it is probably the easiest to determine. Any linear-leaved Potamogeton specimen with fruits having an undulating winglike abaxial keel most likely is this taxon."

**Potamogeton friesii** Rupr. [FNA22, HC, HC2]

Hist. Stirp. Fl. Petrop. 43. 1845.

flat-stalked pondweed

FNA22: "Potamogeton friesii is a fairly common linear-leaved species, especially of calcareous waters of lakes and streams of the upper Midwest. Whenever turions are present, the species is easily identified, as it is the only one with the outer leaves of the turions having corrugate bases and the inner leaves turned at right angles to the outer leaves. Two hybrids, Potamogeton friesii x P. pusillus (= P. x pusilliformis Fischer [P. Å' intermedius Fischer]) and P. friesii x P. obtusifolius (= P. x semifructus A. Bennett ex Ascherson & Graebner), have been described."

**Potamogeton gramineus** L. [FNA22, HC, HC2]

Sp. Pl. 1: 127. 1753 (as gramineum).

grassy pondweed, variable pondweed

*Potamogeton gramineus* L. var. *maximus* Morong [VPPNW1]

*Potamogeton gramineus* L. var. *myriophyllus* J.W. Robbins [IMF6]

*Potamogeton heterophyllus* Schreb.

FNA22: "Seven hybrids, Potamogeton gramineus Å' P. nodosus (= P. Å' argutulus Hagström), P. gramineus Å' P. richardsonii (= P. hagstroemii A. Bennett [as hagstromii]), P. alpinus Å' P. gramineus (= P. Å' nericius Hagström), P. gramineus Å' P. perfoliatus (= P. Å' nitens Weber [P. Å' subnitens Hagström]), P. gramineus Å' P. natans (= P. Å' sparganiifolius Laestadius ex Fries), P. gramineus Å' P. illinoensis [= P. Å' spathuliformis (J. W. Robbins) Morong]), and P. gramineus Å' P. praelongus (= P. Å' vilnensis Galinis), have been described. Three varieties were recognized (E. C. Ogden 19435) and treated (M. L. Fernald 1950). These varieties, Potamogeton gramineus var. gramineus, deletion}P. gramineus var. myriophyllus, and P. gramineus var. maximus, were said to be separated by the shape and size of the submersed leaves. We have studied many populations of this species in the field and have observed on several occasions that a single population has leaf morphology variable enough to include all three varieties. We have, , therefore, chosen not to recognize any infraspecific categories for this species." KZ99 mistakenly places German P. heterophyllus as a synonym of New World P. illinoensis

**Potamogeton illinoensis** Morong [FNA22, HC, HC2]

Botanical Gazette. 5: 50. 1880.

illinois pondweed

*Potamogeton lucens* L., misapplied

FNA22: "Potamogeton illinoensis and *P. gramineus* are often difficult to separate. Certainly, in the extreme of each they are easily separated, but they continually grade into each other. Features to look for are the acute-mucronate apex of the submersed leaves of *P. illinoensis* and the acuminate apex for *P. gramineus*. Also, the number of veins seems to work as well. Three hybrids, *Potamogeton illinoensis* x *P. nodosus* (= *P. x faxonii* Morong), *P. amplifolius* x *P. illinoensis* (= *P. x scoliophyllus* Hagström), and *P. gramineus* x *P. illinoensis* [= *P. x spatuliformis* (J. W. Robbins) Morong], have been described."

***Potamogeton natans* L. [FNA22, HC, HC2]**

Sp. Pl. 1: 126. 1753.

floating pondweed, floating-leaved pondweed

FNA22: "*Potamogeton natans* is the common floating-leaved pondweed of the north temperate ure areas. It is essentially circumboreal and can easily be identified by floating leaves that are almost always cordate at the base of the blade, the petiole with a short band of light tissue at its apex, and the submersed phyllodial leaves. Also, the apex of the petiole usually is bent so that the blade appears oriented in the opposite direction from which the petiole appears to be oriented. One hybrid, *Potamogeton natans* x *P. nodosus* (= *P. x schreberi* Fischer [*P. x perplexus* A. Bennett]), has been described."

***Potamogeton xnericus* Hagstr.**

hybrid pondweed

*Potamogeton xnericus* Hagstr., orthographic variant

reported for WA in 1943 Contributions from the Gray Herbarium (KZ99)

***Potamogeton nodosus* Poir. [FNA22, HC, HC2]**

Encyclopédie Methodique. Botanique ... Supplement. 4(2): 5354. 1816.

lodon's pondweed, long-leaved pondweed

*Potamogeton americanus* Cham. & Schldl. [Abrams]

FNA22: "Six hybrids, *Potamogeton gramineus* x *P. nodosus* (= *P. x argutulus* Hagström), *P. illinoensis* x *P. nodosus* (= *P. x faxonii* Morong), *P. nodosus* x *P. richardsonii* (= *P. x rectifolius* A. Bennett), *P. natans* x *P. nodosus* (= *P. x schreberi* Fischer [*P. x perplexus* A. Bennett]), *P. alpinus* x *P. nodosus* (= *P. x subotus* Hagström), and *P. epihydrus* x *P. nodosus* (= *P. x subsessilis* Hagström), have been described. *Potamogeton nodosus* is a common floating-leaved species throughout much of the United States and southern Canada. When both submersed and floating leaves are present, it is very easily recognized by the petioles of the submersed leaves being longer than 5 cm." Stem anatomy is useful to distinguish *P. nodosus* from the hybrid *P. gramineus* x *natans* (BCIL7)

***Potamogeton obtusifolius* Mertens & W.D.J. Koch [FNA22, HC, HC2]**

Deutschl. Fl., ed. 3. 1: 855. 1823.

blunt-leaved pondweed

Often mistaken for *P. friesii*. FNA22: "*Potamogeton obtusifolius* is a distinctive linear-leaved species with the leaf blades round at the apex, especially when fruiting inflorescences 5--7 mm wide are present. This is unusually wide for one of the linear-leaved species. Two hybrids, *Potamogeton obtusifolius* x *P. pusillus* (= *P. x saxonicus* Hagström) and *P. friesii* x *obtusifolius* (= *P. x semifructus* A. Bennett ex Ascherson & Graebner), have been described."

***Potamogeton praelongus* Wulfen [FNA22, HC, HC2]**

Arch. Bot. (Leipzig). 3: 331. 1805.

white-stalked pondweed, whitestem pondweed

FNA22: "*Potamogeton praelongus* is one of the easiest pondweeds to identify with its submersed leaves only clasping the more or less zigzagged stem. The persistent, hugelarge, white stipules provide another clue to this species. Four hybrids, *Potamogeton perfoliatus* x *P. praelongus* (= *P. x cognatus* Ascherson & Graebner), *P. alpinus* x *P. praelongus* (= *P. x griffithii* A. Bennett), *P. crispus* x *P. praelongus* (= *P. x undulatus* Wolfgang ex Schultes & Schultes f.), and *P. gramineus* x *P. praelongus* (= *P. x vilmensis* Galinus), have been described." BCIL7 incorrectly gives author as: "Wolfg."

***Potamogeton pusillus* L. [FNA22, HC, HC2]**

Sp. Pl. 1: 127. 1753 (as *pusillum*).

small pondweed

*Potamogeton panormitanus* Biv.

*Potamogeton pusillus* L. ssp. *pusillus* [FNA22]  
*Potamogeton pusillus* L. var. *minor* (Biv.) Fernald & B.G. Schubert  
*Potamogeton pusillus* L. var. *pusillus* [JPM]

FNA22: "Potamogeton pusillus subsp. pusillus is nearly worldwide. When it is in fruit, the inflorescence is interrupted. That character combined with its narrow, linear, 1--3-veined leaves makes this taxon easily recognized. The nodal glands are green, essentially the color of the stems. Often appearing only as bumps on the stem at the nodes, they are difficult to see. Also, because the glands frequently occur at only a few nodes per plant, one can easily overlook them."

***Potamogeton richardsonii* (A. Benn.) Rydb. [FNA22, HC, HC2]**

Bulletin of the Torrey Botanical Club. 32: 599. 1905.  
clasping-leaved pondweed, Richardson's pondweed

*Potamogeton perfoliatus* L. ssp. *richardsonii* (A. Benn.) Hultén  
*Potamogeton perfoliatus* L. var. *richardsonii* A. Benn.

FNA22: "Potamogeton richardsonii is quite similar to P. perfoliatus. Specific characteristics to separate the two species are the shape of the leaf blade apex, acute in P. richardsonii and obtuse in P. perfoliatus, and the condition of the stipules, disintegrating between the veins leaving fibrous strands in P. richardsonii, and the entire stipule, including the veins, disintegrating in P. perfoliatus. Two hybrids, Potamogeton gramineus x P. richardsonii (= P. x hagstroemii A. Bennett [as hagstromii]) and P. nodosus x P. richardsonii (= P. x rectifolius A. Bennett), have been described."

***Potamogeton robbinsii* Oakes [FNA22, HC, HC2]**

Magazine of horticulture, botany and all useful discoveries and improvements in rural affairs. 7: 180. 1841.  
fern pondweed, Robbin's pondweed

FNA22: "Potamogeton robbinsii is our most easily recognized species when it is fertile. It is the only species with branched inflorescences. The species, however, occurs in fairly deep water, forming large colonies that essentially cover the substrate. Only rarely do the plants flower. It also is the only species with truly auriculate leaves, the blades forming small lobes projecting past the stem on each side of the stem. Leaf blades of other Potamogeton species may have slightly rounded bases, but no others have lobes that actually protrude past the stem. The species has a fairly large disjunction; primarily known from the northern part of the flora, it also occurs in the Tensas River area, Baldwin County, Alabama. The Alabama population has been collected on at least two occasions over 40 years, once as recently as 1970."  
"

***Potamogeton strictifolius* A. Benn. [FNA22, HC2]**

J. Bot. 40: 148. 1902.  
narrowleaf pondweed

*Potamogeton strictifolius* A. Benn. var. *rutiloides* Fernald

First specimen for state collected in 2017 in Okanogan County.

***Potamogeton zosteriformis* Fernald [FNA22, HC, HC2]**

Memoirs of the American Academy of Arts and Science. n.s. 17:36. 1932.  
eel-grass pondweed, flat-stem pondweed

*Potamogeton compressus* L., misapplied

FNA22: "One hybrid, Potamogeton zosteriformis x P. strictifolius, has been described and has been given the name P. xhaynesii Hellquist & G. E. Crow and is known from northern Michigan, Minnesota, Vermont, and southern Canada."

\* Hellquist, C. B. and G. E. Crow. 1986. Potamogeton x haynesii (Potamogetonaceae), a new species from northeastern North America. Brittonia 38: 415-419.

***Stuckenia* [FNA22, HC2]**

Botanisch-systematische Notizen., Abh. Naturwiss. Vereine Bremen. 21: 258. 1912.  
pondweed

***Stuckenia filiformis* (Pers.) Börner [FNA22, HC2]**

Flora für das deutsche Volk. 713. 1912.  
slender-leaved pondweed, western pondweed, threadleaf-pondweed

*Potamogeton borealis* Raf.  
*Potamogeton filiformis* Pers. [HC]  
*Potamogeton filiformis* Pers. var. *alpinus* (Blytt) Asch. & Graebn.  
*Potamogeton filiformis* Pers. var. *borealis* (Raf.) H. St. John [VPPNW1]  
*Potamogeton filiformis* Pers. var. *macounii* (Morong ex Macoun) Morong [VPPNW1]  
*Potamogeton filiformis* Pers. var. *occidentalis* (J.W. Robbins) Morong  
*Potamogeton marinus* L. f. *alpinus* Blytt  
*Potamogeton marinus* L. var. *alpinus* (J.W. Robbins) Morong  
*Potamogeton marinus* L. var. *macounii* Morong  
*Potamogeton marinus* L. var. *occidentalis* J.W. Robbins  
*Stuckenia filiformis* (Pers.) Börner ssp. *alpina* (Blytt) R. R. Haynes, Les & M. Král  
*Stuckenia filiformis* (Pers.) Börner ssp. *filiformis* [FNA22]  
*Stuckenia filiformis* (Pers.) Börner ssp. *occidentalis* (J. W. Robbins) R. R. Haynes, Les & M. Král [FNA22]

***Stuckenia pectinata* (L.) Borner [FNA22, HC2]**

Flora für das deutsche Volk. 713. 1912.  
fennel-leaved pondweed, sago pondweed, sago-pondweed

*Potamogeton pectinatus* L. [HC]

FNA22: "The sago-pondweed is among the most important species as food for waterfowl (E. Moore 1913). The species reproduces vegetatively by underground tubers and is spread by various duck species, especially canvas backs. In a study of food for ducks, a population of canvas backs was observed feeding in aquatic vegetation comprised of several genera, including sago-pondweed. When the stomach contents were examined, they were found to contain essentially 100% tubers of sago-pondweed (E. Moore 1913). Two hybrids with this species as a putative parent have been described under the genus *Potamogeton*. These are *P. pectinatus* x *P. vaginatus* (= *P. x bottnicus* Hagström) and *P. filiformis* x *P. pectinatus* (= *P. x suecicus* K. Richter)."

***Stuckenia vaginata* (Turcz.) Holub [FNA22, HC2]**

Folia Geobot. Phytotax. 19: 215. 1984.  
bigsheath-pondweed

*Potamogeton vaginatus* Turcz. [HC]

FNA22: "One hybrid, *P. pectinatus* × *P. vaginatus* (= *P. × bottnicus* Hagström), with this species as a putative parent has been described under the genus *Potamogeton*."

***Zannichellia* [FNA22, HC, HC2]**

Sp. Pl. 2: 969. 1753; Gen. Pl. ed. 5: 416, 1754.  
horned pondweed

***Zannichellia palustris* L. [FNA22, HC, HC2]**

Sp. Pl. 2: 969. 1753.  
horned pondweed

*Zannichellia palustris* L. var. *stenophylla* Asch. & Graebn. [Peck]

FNA22: "Outside of Europe most *Zannichellia* are considered to be *Z. palustris* (W. Van Vierssen 1982). In Europe three species have been recognized based on stamen length, fruit length, podogyne length, and the rostrum to fruit length ratio. For *Z. palustris* in Europe the mean rostrum length is  $0.78 \pm 0.20$  mm, the mean podogyne length is  $0.4 \pm 0.19$  mm, and the rostrum to fruit ratio is less than 0.5 (W. Van Vierssen 1982). North American *Zannichellia* does not match any of these figures exactly. In North America *Zannichellia* has been considered historically to comprise only one species, which has been called *Z. palustris*. Until further research determines the range of *Zannichellia* and species delimitations, we are continuing to consider all North American material to be monospecific and are applying the name *Z. palustris* to our that material."

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## Ruppiaceae [FNA22, HC, HC2] Ditch-Grass Family

**Synonyms:** (none)

**References:** (none)

**Ruppia** [FNA22, HC, HC2]

Sp. Pl. 1: 127. 1753; Gen. Pl. ed. 5; 61, 1754.  
ditch-grass

**Ruppia maritima** L. [FNA22, HC, HC2]

Sp. Pl. 1: 127. 1753.  
beaked ditch-grass, spiral ditch-grass, western ditch-grass

*Ruppia cirrhosa* (Petagna) Grande [FNA22]

*Ruppia maritima* L. var. *obliqua* (Schur) Asch. & Graebn. [Peck]

*Ruppia maritima* L. var. *rostrata* Agardh [Peck]

*Ruppia occidentalis* S. Watson [Abrams]

Recent phylogenetic study (Ito et al., 2010) suggests recognition of *R. cirrhosa* renders *R. maritima* paraphyletic. Moreover, the primary character used to separate these species is the number of coils in the peduncle, which likely is a plastic trait.

- \* Graves, A. H. 1908. The morphology of *Ruppia maritima*. Trans. Connecticut Acad. Arts 14: 59?170.
- \* Ito, Y., et al. 2010. Hybridization and polyploidy of an aquatic plant, *Ruppia* (Ruppiales), inferred from nuclear and plastid DNA phylogenies. American Journal of Botany 97(7): 1156?1167.
- \* Richardson, F. D. 1980. Ecology of *Ruppia maritima* L. in New Hampshire (U.S.A.) tidal marshes. Rhodora 82: 403?439.

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## **Scheuchzeriaceae** [FNA22, HC, HC2] Rannoch-rush Family, Scheuchzeria Family

**Synonyms:** (none)

**References:** (none)

**Scheuchzeria** [FNA22, HC, HC2]

Sp. Pl. 1: 338. 1753; Gen. Pl. ed. 5; 157, 1754.  
scheuchzeria

**Scheuchzeria palustris** L. [FNA22, HC, HC2]

Sp. Pl. 1: 338. 1753.  
scheuchzeria

*Scheuchzeria americana* (Fernald) G.N. Jones

*Scheuchzeria palustris* L. ssp. *americana* (Fernald) Hultén [JPM]

*Scheuchzeria palustris* L. var. *americana* Fernald [HC]

FNA22: "North American representatives of this species have been regarded as being varietally distinct from Eurasian plants on the basis of follicle and stigma characters (M. L. Fernald 1923). Variability in those characters, in specimens from both hemispheres, vitiates their worth for varietal distinction."

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## **Smilacaceae** [FNA26, HC2]

**Synonyms:** (none)

**References:** (none)

**Smilax** [FNA26, HC2]

Sp. Pl. 2: 1028. 1753; Gen. Pl. ed. 5, 455. 1754.

*Smilax glauca* Walter [FNA26, HC2]  
Fl. Carol. 245. 1788.

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## Sparganiaceae (see Typhaceae)

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## Tofieldiaceae [HC2] False-Asphodel Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

### *Triantha* [FNA26, HC2]

J. Linn. Soc., Bot. 17: 490. 1879.  
false-asphodel, tofieldia

### *Triantha occidentalis* (S. Watson) R.R. Gates [FNA26, HC2]

J. Linn. Soc., Bot. 44: 137. 1918.  
western tofieldia

### ssp. *brevistyla* (C.L. Hitchc.) Packer [FNA26, HC2]

Novon. 3: 279. 1993.  
sticky asphodel, sticky tofieldia

*Tofieldia glutinosa* (Michx.) Pers. ssp. *absona* C.L. Hitchc.

*Tofieldia glutinosa* (Michx.) Pers. ssp. *brevistyla* C.L. Hitchc.

*Tofieldia glutinosa* (Michx.) Pers. var. *absona* (C.L. Hitchc.) R.J. Davis [HC]

*Tofieldia glutinosa* (Michx.) Pers. var. *brevistyla* (C.L. Hitchc.) C.L. Hitchc. [HC]

*Tofieldia glutinosa* (Michx.) Pers. var. *intermedia* (Rydb.) B. Boivin

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## Typhaceae [FNA22, HC, HC2] Cat-Tail Family

**Synonyms:**

Sparganiaceae [FNA22, HC] (Burr-Reed Family)

**References:** (none)

### *Sparganium* [FNA22, HC, HC2]

Sp. Pl. 2: 971. 1753; Gen. Pl. ed. 5; 418, 1754.  
bur-reed

### *Sparganium angustifolium* Michx. [FNA22, HC, HC2]

Flora Boreali-Americana. 2: 189. 1803.  
floating bur-reed, narrow-leaved bur-reed

*Sparganium angustifolium* Michx. var. *multipedunculatum* (Morong) Brayshaw

*Sparganium emersum* Rehmman var. *multipedunculatum* (Morong) Reveal [HC]

*Sparganium multipedunculatum* (Morong) Rydb.

*Sparganium simplex* Huds. var. *multipedunculatum* Morong [VPPNW1]

### *Sparganium emersum* Rehmman [FNA22, HC, HC2]

Verhandlungen des Naturforschenden Vereins in Brunn. 10: 80. 1872.  
simplestem bur-reed

(see also *Sparganium angustifolium*)

*Sparganium angustifolium* Michx. ssp. *emersum* (Rehmann) Brayshaw

*Sparganium emersum* Rehmann var. *emersum* [HC]

*Sparganium simplex* Huds. var. *simplex*

***Sparganium eurycarpum* Engelm. [FNA22, HC, HC2]**

Manual of Botany of the Northern United States (ed. 2). 430. 1856.

broadfruted bur-reed

*Sparganium californicum* Greene [Abrams]

*Sparganium erectum* L. ssp. *stoloniferum* (Buch.-Ham. ex Graebn.) C.D.K. Cook & M.S. Nicholls [JPM],  
homonym (illegitimate)

*Sparganium eurycarpum* Engelm. ssp. *eurycarpum* [JPM]

*Sparganium greenei* Morong [Peck]

We follow Abrams, FNA, and Kew Index, treating the author as Engelm. in A. Gray, and not Engelm. ex A. Gray, as in KZ99; perhaps not distinct from the European *S. erectum* L. H. Hara published this combination in 1976; Cook & Nichols combination in 1987 is superfluous

***Sparganium fluctuans* (Morong) B.L. Rob. [FNA22, HC, HC2]**

Rhodora. 7: 60. 1905.

floating bur-reed, water bur-reed

*Sparganium androcladum* (Engelm.) Morong var. *fluctuans* Engelm. ex Morong

***Sparganium natans* L. [FNA22, HC2]**

Sp. Pl. 2: 971. 1753.

arctic bur-reed, small bur-reed

*Sparganium minimum* Wallr. [HC]

*Sparganium minimum* (L.) Fr., homonym (illegitimate)

***Typha* [FNA22, HC, HC2]**

Sp. Pl. 2: 971. 1753; Gen. Pl. ed. 5; 418, 1754.

cat-tail, reedmace

***Typha angustifolia* L. [FNA22, HC, HC2]**

Sp. Pl. 2: 971. 1753.

narrow-leaf cat-tail

FNA22: "Prior to N. Hotchkiss and H. L. Dozier (1949), *Typha domingensis* was generally included within *T. angustifolia* in North America. Because of many misidentified specimens, range expansion in recent years, and undercollecting, the distribution on the margins of the main range is somewhat uncertain. Many literature reports are based on misidentified specimens. Some workers suggested *T. angustifolia* was early introduced from Europe into Atlantic Coastal North America and migrated westward (R. L. Stuckey and D. P. Salamon 1987). In recent decades it has expanded its range in many regions and become much more abundant, especially in roadside ditches and other highly disturbed habitats. For example, although it was known only from one Wisconsin station in 1929 (N. C. Fassett 1930) and was very local in Iowa in 1939 (A. Hayden 1939), it is now common and widespread in both states. As it often out-competes many native marsh species to produce very dense, pure stands, and hybridizes with *T. latifolia* to form the probably even more competitive *T. angustifolia* and *T. angustifolia* should perhaps be classified as noxious weeds in parts of North America. Beyond the main range of *T. angustifolia*, there are specimens of *T. angustifolia* from north-central Montana (Phillips County.), west-central Manitoba (La Pas), and Anticosti Island, Quebec. There are many erroneous reports have come from outside of Europe and North America. For hybrids see also genus and key."

\* Fassett, N. C. 1930. Preliminary Reports of the Flora of Wisconsin. Pandanales. Proc. Wis. Trans. Wisconsin Acad. Sci. 25 Acad. Sci., Arts and Letters 25: 183?187.

\* Hayden, A. 1939. Notes on *Typha angustifolia* in Iowa. Iowa State Coll. J. Sci. 13: 341?351.

\* Stuckey, R. L. and D. P. Salamon. 1987. *Typha angustifolia* in North America: A foreigner masquerading as a native. [Abstract.] Ohio J. Sci. 87: 4. [Abstract.]

***Typha domingensis* Pers. [FNA22, HC2]**

Syn. Pl. 2: 532. 1807.

southern cat-tail

Historically in our area this species has not been known north of California and Nevada. In addition to the WA specimens, it has recently (2017) been collected along the Columbia River in Oregon. Whether these populations should be considered range expansions of a native species or dispersal events of an introduced species can't be clearly resolved with the information currently available. FNA22: "Typha domingensis probably should be treated as a highly variable pantropic and warm temperate species, occurring to 40° E north and south latitude worldwide, and needing study to determine infraspecific taxa and delimitation from related species (B. G. Briggs and L. A. S. Johnson and B. G. Briggs 1968; S. G. Smith 1987)."

*Typha xglauca* Godr. [FNA22, HC2]

Fl. Lorraine 3: 20.

Not in HC

*Typha latifolia* L. [FNA22, HC, HC2]

Sp. Pl. 2: 971. 1753.

broad-leaf cat-tail, common cattail

FNA22: "The erect shoots of *Typha latifolia* are more fanlike when young than in other North American species because the proximal leaves (dying by mid season) spread more widely. Undoubtedly native throughout its North American range, where it is often a codominant or minor component of marshes, wet meadows, fens, and other communities. In many places it is apparently being replaced by *T. angustifolia* and *T. angustifolia* &#61620; *T. latifolia* (*T.* &#61620;*glauca*) at least partly due to human disturbance of habitats. There is a specimen of *T. xglauca* from Anticosti Island, Quebec. Locally in California and perhaps elsewhere where hybrids are common, the pollen grains of some *T. latifolia* plants separate slightly and may be shed partly as mixtures of triads, dyads, and monads, perhaps due to introgression ([S. G. Smith, unpublisheddeletion.]. Ph.D. thesis]. See also hybrids in key and genus."

\* Kaul, R. B. 1974. Ontogeny of foliar diaphragms in *Typha latifolia*. *Amer. J. Bot.* 61: 318?323.

\* Rowlatt, U. and H. Morshead. 1992. Architecture of the leaf of the greater reed mace, *Typha latifolia* L. *Bot. J. Linn. Soc.* 110: 161?170.

\* Yeo, R. R. 1964. Life history of common cattail. *Weeds* 12: 284?288.

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## Vallisneriaceae (see Hydrocharitaceae)

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## Asphodelaceae Grasstree Family

**Synonyms:** (none)

Taxonomy follows APG III (<http://www.mobot.org/mobot/research/apweb/welcome.html>).

**References:** (none)

*Hemerocallis* [FNA26, HC2]

Sp. Pl. 1: 324. 1753; Gen. Pl. ed. 5, 151. 1754.

daylily

*Hemerocallis fulva* (L.) L. [FNA26, HC2]

Sp. Pl., ed. 2. 1: 462. 1762.

orange daylily

*Hemerocallis lilioasphodelus* L. var. *fulvus* L.

Need documentation that this species is naturalized in WA, included here based on map in FNA, and on the authority of Richard Old, as reported in KZ99. FNA26: "Following an earlier European introduction from Asia, *Hemerocallis fulva* was brought to North America in the seventeenth century. This commonly

cultivated daylily, the wild type, is distinguished as cultivar "'Europa' Stout and is a self-sterile triploid producing no seed. Essentially, it is a large, complex clone. Plants persist from cultivation or have arisen from root or rhizome fragments, which are capable of plant regeneration. Cultivar "'Kwanso' Regel, another ancient garden selection, persists in many areas along with the wild type and has fully doubled flowers. In eastern Asia, both diploids and triploids occur in the *H. fulva* complex and have been the basis for extensive breeding and tetraploid cultivar selection (A. B. Stout 1934)."

*Hemerocallis lilioasphodelus* L. [FNA26, HC2]

Sp. Pl. 1: 324. 1753.

yellow daylily

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## Zannichelliaceae (see Potamogetonaceae)

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## Zosteraceae [FNA22, HC, HC2] Eel-Grass Family

**Synonyms:** (none)

**References:** (none)

### *Nanozostera* [HC2]

dwarf eel-grass

#### *Nanozostera japonica* (Asch. & Graebn.) Toml. & Posl. [HC2]

Taxon 50: 432.

dwarf eelgrass, narrow-bladed eelgrass

*Zostera americana* Hartog

*Zostera japonica* Asch. & Graebn. [FNA22]

FNA22: "The name *Zostera americana* was proposed for some of the collections by Neil Hotchkiss from Pacific County, Washington (C. den Hartog 1970). Because *Z. americana* resembled a previously published species, it was suggested the name should be placed in synonymy, at least until further study could be undertaken of at least the ecology and genetics of the complex (R. C. Phillips and R. F. Shaw 1976; P. G. Harrison 1976). A proposal that *Z. americana* was synonymous with *Z. noltii* was based upon the identical or overlapping ranges of most characteristics (R. C. Phillips and R. F. Shaw 1976). *Zostera noltii* is native to the Atlantic coasts of Europe and Africa and to the Mediterranean Sea area. Therefore, the suggestion implies that *Z. noltii* has been introduced into North America. No mode of introduction was discussed, however. Similarly P. G. Harrison (1976) suggested an introduction of an exotic species, but he suggested *Zostera japonica* instead. A study of populations of *Z. americana* from Boundary Bay, south of Vancouver, British Columbia revealed no obvious differences between those plants and individuals of *Z. japonica* and *Z. noltii*. A comparison of the British Columbia specimens with illustrations by C. den Hartog (1970) of both *Z. japonica* and *Z. noltii* indicated the British Columbia plants resembled more the illustrations of *Z. japonica* than those of *Z. noltii*. A discussion of possible modes of introduction noted that a brown alga, *Sargassum muticum*, was introduced into the North American Pacific coast area with seed oysters. *Zostera japonica* occurs in areas where the oysters were obtained in Japan, and oysters were packed in *Zostera* species during shipment. Such shipments were possibly the means by which the species was introduced into North America. Harrison's explanation is quite plausible, and I am accepting it until further research solves the problem."

\* Bigley, R. E. and J. L. Barreca. 1982. Evidence for synonymizing *Zostera americana* den Hartog with *Zostera japonica* Aschers. & Graebn. *Aquatic Bot.* 14: 349?356.

\* Harrison, P. G. 1976. *Zostera japonica* (Aschers. & Graebn.) in British Columbia, Canada. *Syesis* 9: 359?360.

\* Phillips, R. C. and R. F. Shaw. 1976. *Zostera noltii* Hornem. in Washington, U.S.A. *Syesis* 9: 355?358.

\* Taxon 50(2): 429-437.

### *Phyllospadix* [FNA22, HC, HC2]

Flora Boreali-Americana. 2: 171. 1838.  
surf-grass

***Phyllospadix scouleri*** Hook. [FNA22, HC, HC2]

Flora Boreali-Americana. 2: 171. 1838.  
Scouler's surf-grass

- \* Barnabas, A. D. 1994. Anatomical, histochemical and ultrastructural features of the seagrass *Phyllospadix scouleri* Hook. Aquatic Bot. 49: 167?182.

***Phyllospadix serrulatus*** Rupr. ex Asch. [FNA22, HC2]

Linnaea. 35: 169. 1868.  
toothed surf-grass

Not in H&C.

- \* Felger, R. and M. B. Moser. 1973. Eelgrass (*Zostera marina* L.) in the Gulf of California: Discovery of its nutritional value by the Seri Indians. Science, ser. 2, 181: 355?356.
- \* Ostenfeld, C. H. 1905. Preliminary remarks on the distribution and the biology of the *Zostera* of the Danish seas. Bot. Tidsskr. 27: 123?125.

***Phyllospadix torreyi*** S. Watson [FNA22, HC, HC2]

Proceedings of the American Academy of Arts and Sciences. 14: 303. 1879.  
Torrey's surf-grass

- \* Williams, S. L. 1995. Surfgrass (*Phyllospadix torreyi*) reproduction: Reproductive phenology, resource allocation, and staminate rarity. Ecology 76: 1953?1970.

***Zostera*** [FNA22, HC, HC2]

Sp. Pl. 2: 968. 1753; Gen. Pl. ed. 5; 415, 1754.  
eel-grass  
(see also *Nanozostera*)

***Zostera marina*** L. [FNA22, HC, HC2]

Sp. Pl. 2: 968. 1753.  
common eelgrass, seawrack

*Zostera marina* L. var. *stenophylla* Asch. & Graebn.

FNA22: "*Zostera marina* is adapted to the cold waters of the North Atlantic and North Pacific. It extends southward to North Carolina in the Atlantic and Baja California in the Pacific. At the southern limits of its range, active growth mostly is in the cooler months of autumn and spring, with flowering and fruiting mostly in the spring and the plants dying in the hotter summer months, the vegetation becoming dislodged from the substrate and floating to the water surface. The fruits apparently remain in the floating vegetation for a period of time, eventually falling from the shoots to the substrate. Movement in dislodged vegetative material is the only adaptation the fruits have for dispersal (C. den Hartog 1970). The species is found mostly in the sublittoral region, only rarely being exposed at low tide. It occurs in more or less sheltered areas on soft mud or firm sand. Plants of sandy substrates had narrower leaves than plants growing on muddy substrates (C. H. Ostenfeld 1905). Fruits fall from the floating vegetation to the substrate and settle on the substrate ripple marks, which run more or less perpendicular to the direction of current. Seedling establishment is parallel with the ripple marks, forming vegetated ridges separated by depressions, which gradually fill with sediments, and the plants then grow laterally into them, forming a meadow (C. den Hartog 1970). The vegetation lowers the velocity of current flow, causing some suspended particles to settle out and accumulate around the base of the plants, slowly building the substrate. As more particles accumulate, the substrate gets deeper over the rhizomes, since the rhizomes grow horizontally, not vertically. Eventually, the rhizomes are too deep, and the plants begin to die back, a phenomenon followed by erosion."

- \* Backman, T. W. H. 1991. Genotypic and phenotypic variability of *Zostera marina* on the west coast of North America. Canad. J. Bot. 69: 1361?1371.
- \* Cock, A. W. A. M. de. 1980. Flowering, pollination and fruiting in *Zostera marina* L. Aquatic Bot. 9: 201?220.
- \* Phillips, R. C. 1964. Comprehensive Bibliography of *Zostera marina*. Washington. U.S.D.I. Fish Wildlife Serv., Special Sci. Rep. Wildlife 79.