# Washington Flora Checklist

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

## Family: Poaceae

332 terminal taxa (species, subspecies, and varieties).

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.

**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and synonymy at the rank of genus and below follows the 2nd Edition of the Flora of the Pacific Northwest except where superceded by new information.

Accepted names are indicated with blue type, synonyms with gray type.
Native species and infraspecies are marked with **bold-face type**.
*Non-native and introduced taxa are preceded by an asterisk.

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

Created from the Washington Flora Checklist database on August 30th, 2025 at 8:16pm PT.
Available online at https://burkeherbarium.org/waflora/

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

**Suggested citation:**

Weinmann, F., P.F. Zika, D.E. Giblin, B. Legler. 2002+. Checklist of the Vascular Plants of Washington State. University of Washington Herbarium. https://burkeherbarium.org/waflora/. Accessed Aug 30, 2025.

# Monocots:

## **Gramineae**: see Poaceae

---

## **Poaceae** [HC2] Grass Family

**Synonyms:**
Gramineae [HC]

***Achnatherum*** [HC2]
needlegrass, ricegrass

***Achnatherum hendersonii*** (Vasey) Barkworth [FNA24, HC2]
Phytologia 74(1): 7. 1993.
Henderson's needlegrass

*Eriocoma hendersonii* (Vasey) Romasch.
*Oryzopsis hendersonii* Vasey [HC]
*Stipa hendersonii* (Vasey) Mehlenb.

***Achnatherum hymenoides*** (Roem. & Schult.) Barkworth [FNA24, HC2]
Phytologia 74(1): 7-8. 1993.
Indian ricegrass

*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]
Phytologia 74(1): 8. 1993.
Lemmon's needlegrass

*Eriocoma lemmonii* (Vasey) Romasch.
*Stipa columbiana* Macoun
*Stipa lemmonii* (Vasey) Scribn. [HC]

**ssp. *lemmonii*** [FNA24, HC2]
Phytologia 74(1): 8. 1993.

*Eriocoma lemmonii* (Vasey) Romasch. ssp. *lemmonii*
*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]
Phytologia 74(1): 9. 1993.
Nelson's needlegrass

*Eriocoma nelsonii* (Scribn.) Romasch.

**ssp. *dorei*** (Barkworth & J. Maze) Barkworth [FNA24, HC2]
Phytologia 74(1): 9. 1993.
Nelson's needlegrass

*Achnatherum lettermanii* (Vasey) 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 occidentale*** (Thurb. ex S. Watson) Barkworth [HC2]
(Piper) Barkworth, Phytologia 74: 10. 1993.
western needlegrass
(see also *Achnatherum nelsonii*)

*Eriocoma occidentalis* (Thurb. ex S.Watson) Romasch.
*Eriocoma occidentalis* (Thurb. ex S.Watson) Romasch., unresolved
*Stipa occidentalis* Thurb. ex S. Watson [HC]

**ssp. *californicum*** (Merr. & Burtt Davy) Barkworth [FNA24, HC2]
Phytologia 74(1): 10. 1993.
California needlegrass

*Achnatherum nelsonii* (Scribn.) Barkworth ssp. *longiaristatum* (Barkworth & J. Maze) Barkworth
*Stipa californica* Merr. & Burtt Davy
*Stipa nelsonii* Scribn. var. *longiaristata* Barkworth & J. Maze
*Stipa occidentalis* Thurb. ex S. Watson var. *californica* (Merr. & Burtt 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. 1993.
western needlegrass

*Eriocoma occidentalis* (Thurb. ex S.Watson) Romasch. ssp. *pubescens* (Vasey) Romasch.
*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. 1993.
Richardson's ricegrass

*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. 1993.
Thurber's ricegrass

*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. Austriac. 2: 6, pl. 7. 1802.
jointed goatgrass

*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."

**×Agropogon*

**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. 1770.
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]

Étude Monogr. Hordées: 58. 1901.
Siberian wheatgrass

*Agropyron sibiricum* (Willd.) P. Beauv. [HC]

***Agrostis*** [HC, HC2]
bentgrass
(see also *Apera*, *Podagrostis*, *Polypogon*)

**Agrostis capillaris* L. [FNA24, HC2]
Sp. Pl. 1: 62. 1753 1753.
colonial bentgrass

*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. 1842.
Highland bentgrass, 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 densiflora*** Vasey [HC2]
Contr. U.S. Natl. Herb. 3(1): 72. 1892.
California bentgrass

Collection from 2013 from Jefferson County confirmed by Barbara Wilson. 1902 collection from Grays Harbor at WS but not examined.

***Agrostis exarata*** Trin. [FNA24, HC, HC2]
Gram. Unifl. Sesquifl. 207. 1824.
spiked bentgrass

*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. *monolepsis* (Torr.) Hitch. [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

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. 1788.
black bentgrass

*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. 1897.
Idaho bentgrass

*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. 1836.
Merten's bentgrass, northern bentgrass

*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
*Agrostis rupestris* All., misapplied

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 n

***Agrostis microphylla*** Steud. [FNA24, HC, HC2]
Syn. Pl. Glumac. 1: 164. 1854.
small-leaf bentgrass

*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 oregonensis*** Vasey [FNA24, HC, HC2]
Bull. Torrey Bot. Club 13: 55. 1886.
Oregon bentgrass

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. 1841.
seashore bentgrass

*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 scabra*** Willd. [FNA24, HC, HC2]
Sp. Pl. 1(1): 370. 1797.
rough bentgrass

*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

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 aban-doned 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 w

*_Agrostis stolonifera_ L. [FNA24, HC2]

Sp. Pl. 1: 62. 1753.

spreading bentgrass

_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.

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, ×Agropogon 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. 1900.

alpine bentgrass

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]

Sp. Pl. 1: 66. 1753.

silver hairgrass

_Aspris caryophyllea_ (L.) Nash

*var. _caryophyllea_ [FNA24, HC2]

Sp. Pl. 1: 66. 1753.

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 praecox_ L. [FNA24, HC, HC2]

Sp. Pl. 1: 65-66. 1753.

early silver hairgrass

*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 vernally 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]
Fl. Petrop. 16. 1799.
little foxtail, short-awn foxtail

**var. *aequalis***
Fl. Petrop. 16. 1799.
little foxtail, short-awn foxtail

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. 1808.
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. 1788.
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. 1753.
water foxtail

*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. 1762.
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. 1753.
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]
Bot. Gaz. 6: 290. 1881.
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]
Hort. Berol. [Link] 1: 105. 1827.
European beachgrass

*ssp. *arenaria* [FNA24, HC2]
Hort. Berol. 1: 105. 1827.
European beachgrass

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]
Rhodora 22: 71. 1920.
American beachgrass

*ssp. *breviligulata* [FNA24, HC2]
Rhodora 22: 71. 1920.
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."

**Anthoxanthum* [HC, HC2]
vernalgrass

**Anthoxanthum aristatum* Boiss. [HC, HC2]

Voy. Bot. Espagne 2: 638. 1842.
annual vernalgrass

*Anthoxanthum odoratum* L. var. *puelii* (Lecoq & Lamotte) Coss. & Durieu
*Anthoxanthum puelii* Lecoq & Lamotte

*ssp. *aristatum* [FNA24, HC2]
Fl. Centre France 2: 576. 1849.
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. 1753.
sweet vernalgrass

*Anthoxanthum odoratum* L. ssp. *alpinum* (Á. 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. 1812.
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."

***Aristida*** [HC, HC2]
aristida, threeawn

***Aristida purpurea*** Nutt. [HC2]
Trans. Amer. Philos. Soc. ser. 2, 5: 145. 1835.
threeawn

**var. *longiseta*** (Steud.) Vasey [FNA25, HC2]
Rep. U.S. Geogr. Surv., Wheeler 6: 286 [1879]. 1878.
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]
Fl. Cech. 17. 1819.
bulbous oatgrass

_Arrhenatherum elatius_ (L.) P. Beauv. ex J. Presl & C. Presl ssp. _bulbosum_ (Willd.) Schübl. & G. Martens [HC2]
_Arrhenatherum elatius_ (L.) P. Beauv. ex J. Presl & C. Presl ssp. _elatius_ [HC2]
_Arrhenatherum elatius_ (L.) P. Beauv. ex J. Presl & C. Presl var. _biaristatum_ (Peterm.) Peterm.
_Avena elatior_ L.

*_Avena_ [HC, HC2]
oats

*_Avena barbata_ Pott ex Link [FNA24, HC, HC2]
J. Bot. (Schrader) 1799(2,2): 314-315 [1800]. 1799.
barbed oats

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 waif there."

*_Avena fatua_ L. [FNA24, HC, HC2]
Sp. Pl. 1: 80. 1753.
wild oats

_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. 1753.
cultivated oats

_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. 1928.
American sloughgrass

_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."

**Brachypodium* [HC, HC2]
false-brome

**Brachypodium sylvaticum* (Huds.) P. Beauv. [FNA, HC, HC2]
Ess. Agrostogr. 101, 155, pl. 3, f. 115. 1812.
false brome

**ssp. sylvaticum*
false brome

**Briza* [HC, HC2]
quaking-grass

**Briza maxima* L. [FNA24, HC2]
Sp. Pl. 1: 70. 1753.
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."

***Bromus*** [HC, HC2]
brome

**Bromus arenarius* Labill. [FNA24, HC]
Nov. Holl. Pl. 1: 23, pl. 28. 1804 [1805]. 1804.
Australian brome

**Bromus briziformis* Fisch. & C.A. Mey. [FNA24, HC2]
Index Sem. (St. Petersburg) 3: 30. 1837.
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 ciliatus*** L. [FNA24, HC, HC2]
Sp. Pl. 1: 76-77. 1753.
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. 1806.
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. 1787.
great brome, ripgut brome, ripgut grass

_Anisantha rigida_ (Roth) Hyl.
_Bromus diandrus_ Roth ssp. _rigidus_ (Roth) Laínz
_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."

*_Bromus hordeaceus_ L. [HC2]

Sp. Pl. 1: 77. 1753.
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. 1761.
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 toTexas. 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. 1784.
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 orcuttianus*** Vasey [FNA24, HC, HC2]
Folia Geobot. Phytotax. 8(2): 168. 1973.
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. 1900.
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]
Bull. Torrey Bot. Club 15(1): 9, t. 76D. 1888.
arctic 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 1888.
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. 1762.
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. 1755.
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. 1753.
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. 1832.
Alaska brome, Sitka 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]
Acta Univ. Lund. 2, 38, no. 1: 254. 1942.
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]
Phytoneuron 2016-36: 2. 2016.
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]
Naturaliste Canad. 94: 521. 1967.
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]
Phytoneuron 2016-36: 2. 2016.
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]
Sp. Pl. 1: 76. 1753.
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 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. 1753.
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. 1885.
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. 1753.
soft brome, cheatgrass

*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. 1900.
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]

*Greeneochloa*

***Calamagrostis canadensis*** (Michx.) P. Beauv. [HC, HC2]
Ess. Agrostogr. 157 (15, 152). 1812.
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. 1812.
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. *langsdorffii*** (Link) Inman [HC2]
Rhodora 24: 143. 1922.
Langsdorff's jointed reedgrass

*Calamagrostis canadensis* (Michx.) P. Beauv. ssp. *langsdorfii* (Link) Hultén, orthographic variant
*Calamagrostis canadensis* (Michx.) P. Beauv. var. *lactea* (Suksd. ex Beal) C.L. Hitchc. [HC]
*Calamagrostis canadensis* (Michx.) P. Beauv. var. *langsdorfii* (Link) Inman
*Calamagrostis canadensis* (Michx.) P. Beauv. var. *scabra* (J. Presl) Hitchc. [HC]
*Calamagrostis* ×*lactea* Suksd. ex Beal
*Calamagrostis langsdorfii* (Link) Trin.
*Calamagrostis nubila* Louis-Marie

***Calamagrostis howellii*** Vasey [FNA24, HC, HC2]
Botanical Gazette 6(10): 271. 1881.
Howell's reedgrass

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 nutkaensis*** (J. Presl) Steud. [FNA24, HC, HC2]
Synopsis Plantarum Glumacearum 1: 190. 1854.
Nootka reedgrass

*Deyeuxia nutkaensis* J. Presl

***Calamagrostis purpurascens*** R. Br. [FNA24, HC, HC2]
Bot. App. 731. 1823.
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. 1862.
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]
Descr. Gram. [Koeler] 105. 1802.
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. 1984.
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]
Saccardoa 105. 1802.
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. 2006.
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. 1892.
Cascade reedgrass

*Greeneochloa tweedyi* P.M.Peterson, Soreng, Romasch. & Barberá

**Calamovilfa* [HC, HC2]
sandreed

**Calamovilfa longifolia* (Hook.) Hack. ex Scribn. & Southw. [HC, HC2]
True Grasses 113 (216). 1890.
prairie sandreed

*var. *longifolia* [FNA24, HC2]
True Grasses 113. 1890.
prairie sandgrass, prairie sandreed

***Cenchrus*** [HC, HC2]
bur-grass, hedgehog-grass, sandbur

**Cenchrus longispinus* (Hack.) Fernald [FNA25, HC, HC2]
Rhodora 45(538): 388. 1943.
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.

***Cinna*** [HC, HC2]
wood reed-grass, woodreed

***Cinna latifolia*** (Trevir. ex Göpp.) Griseb. [FNA24, HC, HC2]
Fl. Ross. 4(13): 435. 1852.
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*

***Coleanthus*** [HC, HC2]
moss-grass

***Coleanthus subtilis*** (Tratt.) Seidl [FNA24, HC, HC2]
Syst. Veg. 2: 276. 1917.
moss grass

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. 1898.
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 rudiuscula Stapf by Hitchcock (1951). The florets of C. rudiuscula 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 rudiuscula is not known from North America."

**Cortaderia selloana* (Schult. & Schult. f.) Asch. & Graebn. [FNA25, HC2]
Synopsis der Mitteleuropäischen Flora 2(1): 325. 1900.
pampas grass

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. 1812.
gray hairgrass

*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. 1806.
foxtail pricklegrass

_Heleochloa 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. 1823. 1823.
modest pricklegrass

Several recent (2008, 2016, 2021) collections show it to be well established around the Potholes Reservoir in Grant County. 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. 1805.
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. 1753.
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. 1753.
bristly dog's-tail grass

FNA24: "Cynosurus echinatusis 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. 1753.
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. 1863.
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. 1806.
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. 1833.
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. [FNA25, HC, HC2]
Syst. Veg., ed. 15 bis [Roemer & Schultes] 2: 690. 1817.
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. 1863.
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]
Ess. Agrostogr. 91, 160, t. 18. f. 3. 1812.
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 cespitosa* (L.) P. Beauv. ssp. *beringensis* (Hultén) W.E. Lawr.
*Deschampsia cespitosa* (L.) P. Beauv. ssp. *cespitosa*

*Deschampsia cespitosa* (L.) P. Beauv. ssp. *holciformis* (J. Presl) W.E. Lawr.
*Deschampsia cespitosa* (L.) P. Beauv. var. *arctica* Vasey [HC]
*Deschampsia cespitosa* (L.) P. Beauv. var. *cespitosa* [HC]
*Deschampsia cespitosa* (L.) P. Beauv. var. *longiflora* Beal [HC]
*Deschampsia glauca* Hartm.
*Deschampsia holciformis* J. Presl

***Deschampsia danthonioides*** (Trin.) Munro [FNA24, HC, HC2]
Pl. Hartw. 342. 1857.
annual hairgrass

*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. 1857.
slender hairgrass

*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]
Ann. Missouri Bot. Gard. 65: 1121. 1979.
hairy perennial panicgrass

**ssp. *fasciculatum*** (Torr.) Freckmann & Lelong [FNA25, HC2]
Sida 20(1): 167. 2002.
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]

FNA25: "Dichanthelium 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. Dichanthelium 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 Dichanthelium species (including D. dichotomum, D. laxiflorum, D. ovale, D. commutatum, and D. boreale) probably occurs not infrequently."

***Dichanthelium oligosanthes*** (Schult.) Gould [HC2]
Brittonia 26: 60. 1974.
Scribner's perennial panicgrass

**ssp. *scribnerianum*** (Nash) Freckmann & Lelong [FNA25, HC2]
Sida 20(1): 170. 2002.
Scribner's panicgrass witchgrass

*Dichanthelium oligosanthes* (Schult.) Gould var. *helleri* (Nash) Mohlenbr.
*Dichanthelium 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 Dichanthelium is only weakly distinguished from the genus Panicum, and is probably best included in it. FNA25: "Dichanthelium 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. 1817.
smooth crabgrass

*Digitaria ischaemum* (Schreb.) Muhl. var. *mississippiensis* (Gatt.) Fernald
*Panicum ischaemum* Schreb.
*Syntherisma ischaemum* (Schreb.) Nash

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. 1771.
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. 1887.
alkaline grass, coastal

*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."

***Echinochloa*** [HC, HC2]
barnyard-grass

**Echinochloa crus-galli* (L.) P. Beauv. [FNA25, HC2]
Ess. Agrostogr. 53, 161, 169, pl. 11, f. 2. 1812.
barnyard grass, 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 muricata*** (P. Beauv.) Fernald [HC2]
Rhodora 17: 106. 1915.
American barnyard-grass

**var. *microstachya*** Wiegand [FNA25, HC2]
Rhodora 17(198): 106. 1915.
American barnyard grass, American 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]

***×Elyhordeum***

**×*Elyhordeum macounii*** (Vasey) Barkworth & D.R. Dewey [FNA24]
Great Basin Naturalist 43(4): 570. 1983.

×*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: "xElyhordeum 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]
(= *Elymus glaucus* × *Hordeum jubatum*)

×*Elymordeum stebbinsianum* Bowden

FNA24 map shows record from Klickitat County. FNA24: "xElyhordeum 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 xElyleymus 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): 166.1980. 1980.
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 ×albicans. 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 canadensis*** L. [HC, HC2]
Sp. Pl. 1: 83?84. 1753.
Canadian wild rye

*Elymus philadelphicus* L.

**var. *canadensis*** [FNA24, HC2]
Sp. Pl. 1: 83-84. 1753.
Canadian wild rye, 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 curvatus*** Piper [FNA24, HC2]
Bull. Torrey Bot. Club 30(4): 233. 1903.
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 exserted, 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]
Nebraska Fl. Pl. 15 . 1891.
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]

Phytologia 83(4): 305. 1998.
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. 1891.
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 [1998]. 1997.
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]
Proc. Acad. Nat. Sci. Philadelphia 1862: 99. 1862.
blue wild-rye

**ssp. *glaucus*** [FNA24, HC2]
In Proc. Acad. Sc. Philad. 1862 (1863) 99. 1863.
blue wildrye

*Elymus glaucus* Buckley ssp. *jepsonii* (Burtt Davy) Gould
*Elymus glaucus* Buckley var. *glaucus* [HC]
*Elymus glaucus* Buckley var. *jepsonii* Burtt 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. 1947.
blue wildrye

*Elymus glaucus* Buckley var. *breviaristatus* Burtt 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 ×hansenii*** Scribn. [FNA24]
Bull. Div. Agrostol., U.S.D.A. 11: 56, f. 12. 1898.

×*Elysitanion hansenii* (Scribn.) Bowden
*Sitanion anomalum* J.G. Sm.

*Sitanion hansenii* (Scribn.) J.G. Sm.

FNA24: "Elymus ×hansenii 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. ×hansenii disarticulates at maturity."

***Elymus hirsutus*** J. Presl [FNA24, HC, HC2]
Reliq. Haenk. 1: 264. 1830.
boreal wildrye, Northwest wildrye

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]
Madroño 10: 94. 1949.
thick-spiked wheatgrass

*Agropyron lanceolatum* Scribn. & J.G. Sm.

**ssp. *lanceolatus*** [FNA24, HC2]
Madroño 10: 94. 1949.
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. 1980.
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]
Taxon 29: 167. 1980.
stream bank wheatgrass

*Elytrigia ripara* (Scribn. & J.G. Sm.) Beetle

***Elymus multisetus*** (J.G. Sm.) Burtt Davy [FNA24, HC2]
Univ. Calif. Publ. Bot. 1: 57. 1902.
big squirreltail

*Sitanion jubatum* J.G. Sm. [HC]

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 repens* (L.) Gould [FNA24, HC2]
Madroño 9: 127. 1947.
creeping wildrye

*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. 1912.
Scribner's wildrye

*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 trachycaulus*** (Link) Gould ex Shinners [HC2]
Rhodora 56: 28 (1954). 1954.
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. 1954.
bearded wheatgrass

*Agropyron ×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. 1984.
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. violaceous 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. 1998.
wawawai wildrye

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. 1907.
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* (Schrad.) Nees [FNA25, HC2]
Fl. Afr. Austral. Ill. 397. 1841.
weeping lovegrass

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. 1888.
teal lovegrass

*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. 1899.
six-weeks lovegrass

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]
Hort. Berol. [Link] 1: 190. 1827.
Mexican lovegrass

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."

*ssp. *virescens* (J. Presl) S.D. Koch & Sánchez Vega [FNA25, HC2]
Phytologia 58(6): 380. 1985.

Mexican lovegrass, orcutt's lovegrass

*Eragrostis orcuttiana* Vasey [HC]
*Eragrostis virescens* J. Presl

FNA25: "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. 1809.
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]
Fl. Afr. Austral. Ill. 406. 1841.
tufted lovegrass

*Eragrostis caroliniana* (Biehler) Scribn.
*Eragrostis purshii* hort. ex Schrad.
*Poa pectinacea* Michx.

**var. *pectinacea*** [FNA25, HC2]
Fl. Afr. Austral. Ill. 406. 1841.
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]
Ess. Agrostogr. 71 (162, 175) 1812.
India lovegrass

*Eragrostis multicaulis* Steud. [HC]
*Poa pilosa* L.

**var. pilosa* [FNA25, HC2]
Ess. Agrostogr. 71, 162, 175. 1812.
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. 1934.
annual false wheatgrass

*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]
Mant. 3 (Schultes & Schultes f.) 646. 1827.
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]

FNA24: "Festuca brachyphylla is a variable, circumpolar, arctic, alpine, and boreal species of open, rocky places. It is palatable to livestock, and is important in some areas as forage for wildlife. The spikelets are usually tinged red to purple by anthocyanin pigments; plants which lack anthocyanins in the spikelets have been named F. brachyphylla f. flavida Polunin. Festuca brachyphylla has frequently been included in F. ovina (p. 422), and it is closely related to F. saximontana (p. 430), F. hyberborea (p. 432), F. edlundiae (p. 432), F. groenlandica (p. 434), and F. minutiflora (p. 434). It may hybridize with F. baffinensis and/or other species to form F. viviparoidea (p. 436).

Three subspecies have been recognized in North America. Festuca brachyphylla subsp. brachyphylla is circumpolar and primarily arctic, subarctic, and boreal, extending southward in the northern Rocky Mountains. The other two subspecies are restricted to alpine regions in the western mountains."

**ssp. *brachyphylla*** [FNA24, HC2]
Mant. 3(Add. 1): 646. 1827.
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]
Nordic J. Bot. 2(6): 529 (figs.). 1983.
Colorado alpine fescue

***Festuca campestris*** Rydb. [FNA24, HC2]
Mem. New York Bot. Gard. 1: 57. 1900.
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. 1788.
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. 1903.
bluebunch fescue, Idaho fescue
(see also *Festuca roemeri*)

*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. 1840.
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 roemeri*** (Pavlick) E.B. Alexeev [FNA24, HC2]
Novosti Sist, Vysa. Rast. 22: 23. 1985.
Roemer's fescue

*Festuca idahoensis* Elmer var. *roemeri* Pavlick

In H&C this species is included within F. idahoensis. FNA24: "Festuca roemeri grows in grasslands and open forests, primarily west of the Cascade Mountains, from southeastern Vancouver Island southward to northwestern California."

**var. *roemeri*** [HC2]
Roemer's fescue

***Festuca rubra*** L. [HC, HC2]
Sp. Pl. 1: 74. 1753.
sand fescue

*Festuca ammobia* Pavlick [HC2]
*Festuca duriuscula* L.
*Festuca ovina* L. var. *duriuscula* (L.) W.D.J. Koch
*Festuca rubra* L. ssp. *arenaria* (Osbeck) F. Aresch. [FNA24]
*Festuca rubra* L. ssp. *juncea* (Hack.) K. Richt.
*Festuca rubra* L. ssp. *mediana* (Pavlick) Pavlick [FNA24]
*Festuca rubra* L. ssp. *rubra* [FNA24]
*Festuca rubra* L. ssp. *secunda* (J. Presl) Pavlick [FNA24]

***Festuca saximontana*** Rydb. [HC2]
Bull. Torrey Bot. Club 36: 536 (1909). 1909.

Rocky Mountain fescue

**var. *purpusiana*** (St.-Yves) Fred. & Pavlick [HC2]
Bull. Torrey Bot. Club 36: 536. 1909.
Rocky Mountain fescue

*Festuca ovina* var. *purpusia* St. Yves
*Festuca ovina* L. var. *purpusiana* St.-Yves

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. 1909.

*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

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. 1832.
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. 1890.
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. 1930.
hard fescue

*Festuca brevipila* R. Tracey
*Festuca cinerea* Vill., misapplied
*Festuca duriuscula* L., misapplied
*Festuca duriuscula* L. var. *cinerea* (Vill.) Krajina, 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. 1811.
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. 1893.
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?estva Ispytatelej Prirody, Otdel Biologi?eskij 87(2): 115. 1982.
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. 1900.
small floating mannagrass

_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]
Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. i. 366. 1830.
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. 1830.
rattlesnake mannagrass

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. ×ottawensis Bowden. For further comments, see the description of Glyceria striata."

**Glyceria declinata* Bréb. [FNA24, HC2]

Fl. Normandie 354. 1859.

low glyceria, waxy mannagrass

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 Âµm and those of G. ×occidentalis being 0.4?0.5 Âµm. 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. 1910.

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]

Prodr. Fl. Nov. Holland. 179. 1810.

water mannagrass

***Glyceria grandis*** S. Watson [HC, HC2]

Manual (Gray), ed. 6. 667. 1890.

American mannagrass, reed 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. 1890.

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. 1862.
slender-spike mannagrass

*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. 1919.
tall mannagrass

FNA24:"Glyceria maxima is native to Eurasia. It grows in wet areas, including shallow water, at scattered locations in the flora region. It is an excellent fodder grass, and may have been planted deliberately at one time (Dore and McNeill 1980). At some sites, the species appears to be spreading, largely vegetatively. It is easily confused with large specimens of G. grandis, but differs in its firmer, more prow-tipped lemmas as well as its larger lemmas and usually larger anthers."

***Glyceria ×occidentalis*** (Piper) J.C. Nelson [FNA24, HC, HC2]
Torreya 19: 224. 1919.
northwestern mannagrass

FNA24: "Glyceria ×occidentalis 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. ×occidentalis had cpDNA resembling that of G. leptostachya or G. fluitans; there was no distinctive G. ×occidentalis cpDNA (Whipple et al. [in press]). This strongly suggests that G. ×occidentalis is a series of reciprocal hybids, and probably backcrosses, between G. fluitans and G. leptostachya. As the key indicates, G. ×occidentalis is intermediate between its two putative parents. The cpDNA study also confirmed that G. declinata is distinct from G. ×occidentalis (see discussion under that species)."

***Glyceria striata*** (Lam.) Hitchc. [FNA24, HC, HC2]
Proc. Biol. Soc. Wash. 41: 157. 1928.
fowl mannagrass

*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 ×gatineauensis 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. ×gatineauensis, was collected in 1929 from French Creek in Upshur County, West Virginia. Glyceria ×ottawensis 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."

***Graphephorum*** [HC2]
graphephorum

***Graphephorum wolfii*** (Vasey) Vasey ex Coult. [HC2]
Manual of the Botany . . . of the Rocky Mountain Region . . 423. 1885.
beardless graphephorum

*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]
Phytologia 74(1): 16. 1993.
needle-and-thread

*Stipa comata* Trin. & Rupr. [HC]

**ssp. *comata*** [FNA24, HC2]
Phytologia 74(1): 16. 1993.
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."

***Hierochloe occidentalis*** Buckley [HC, HC2]
Proc. Acad. Nat. Sci. Philadelphia 14: 100. 1862.
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]
Ess. Agrostogr. 164, t. 9, fig. 5. 1812.
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. 1753.
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]
Syst. Nat., ed. 10. 2: 1305. 1759.
creeping softgrass, creeping velvet-grass

*ssp. _mollis_ [FNA24, HC2]
Syst. Nat. (ed. 10) 2: 1305. 1759.
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]
Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 2: 61. 1936.
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. 1936.
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 Sates. 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. 1909.
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]
Sp. Pl. 1: 85. 1753.
foxtail barley

_Critesion jubatum_ (L.) Nevski

**ssp. *jubatum*** [FNA24, HC2]
Sp. Pl. 1: 85. 1753.
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]
Fl. Angl. (Hudson) (ed. 2) 1: 57. 1778.
Mediterranean barley

*ssp. _gussoneanum_ (Parl.) Thell. [HC2]
Vierteljahrsschr. Naturf. Ges. Zürich 52:441. 1908.
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]
Sp. Pl. 1: 85. 1753.
mouse barley, smooth barley, wall barley

*ssp. _glaucum_ (Steud.) Tzvelev [FNA24, HC2]
Novosti Sist, Vysa. Rast. 8: 67. 1971.
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. 1882.
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. 1753.
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 vulgare_ L. [HC, HC2]

Sp. Pl. 1: 84. 1753.
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. 1753.
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. 1824.
Koeler's prairie grass, prairie Junegrass

*Koeleria cristata* Pers. [HC]
*Koeleria cristata* Pers. var. *longifolia* Vasey ex Burtt Davy
*Koeleria cristata* Pers. var. *pinetorum* Abrams
*Koeleria gracilis* Pers.
*Koeleria nitida* Nutt.
*Koeleria yukonensis* Hultén

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. 1788.
rice cutgrass

*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. 1902.
Great Basin wildrye

*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."

**Leymus condensatus* (J. Presl) Á. Löve [HC2]
Taxon 29: 168. 1980.
giant wildrye

***Leymus flavescens*** (Scribn. & J.G. Sm.) Pilg. [FNA24, HC2]
Botanische Jahrbucher fur Systematik, Pflanzengeschichte und Pflanzengeographie 74: 6. 1947.
sand wildrye

*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]
Bot. Jahrb. Syst. 74(1): 6. 1947.
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. 1947.
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 ×vancouverensis 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. 1960.
mammoth lyme grass, mammoth wildrye

*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. 1947.
beardless lyme grass, beardless wildrye

*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. ×vancouverensis (see p. ??), those with L. condensatus are called L. ×multiflorus (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 ×vancouverensis*** (Vasey) Pilg. [FNA24, HC2]
Bot. Jahrb. Syst. 74: 6. 1946.
Vancouver wildrye

*Elymus vancouverensis* Vasey
*Elymus vancouverensis* Vasey var. *californicus* Bowden
*Elymus vancouverensis* Vasey var. *crescentianus* Bowden

FNA24: "Leymus ×vancouverensis 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. 1779.
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 ×hybridum Hausskn. Lolium multiflorum also hybridizes with L. rigidum; those hybrids are called Lolium ×hubbardii Jansen & Wacht. ex B.K. Simon."

*_Lolium perenne_ L. [FNA24, HC, HC2]

Sp. Pl. 1: 83. 1753.

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 ×hybridum Hausskn."

*_Lolium persicum_ Boiss. & Hohen.

Diagn. Pl. Orient. ser. 1, 13: 66. 1854.

Persian ryegrass

Recently (2018) collected in Clark County, WA.

*_Lolium temulentum_ L. [HC, HC2]

Sp. Pl. [Linnaeus] 1: 83. 1753.

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. 1753.

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. 1870.

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." This species has not been collected in Washington in over 100 years. It is best considered extirpated at this time.

***Melica bulbosa*** Geyer ex Porter & J.M. Coult. [FNA24, HC, HC2]

Syn. Fl. Colorado 149. 1874.

bulbous onion grass, bulbous oniongrass

*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 fugax*** Bol. [FNA24, HC, HC2]
Proc. Calif. Acad. Sci. 4: 104. 1870.
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. 1870.
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. 1888.
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. 1886.
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. 1886.

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]**
Öfvers. Kongl. Vetensk.-Akad. Förh. 166. 1855.
Chinese silvergrass

**Molinia* [HC, HC2]
moorgrass

***Muhlenbergia*** [HC, HC2]
muhlenbergia, muhly

***Muhlenbergia andina* (Nutt.) Hitchc. [FNA25, HC, HC2]**
United States Department of Agriculture: Bulletin 772: 145. 1920.
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. 1928.
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. 1905.
pullup muhly

*Muhlenbergia filiformis* (Thurb. ex S. Watson) Rydb. var. *fortis* E.H. Kelso
*Muhlenbergia idahoensis* H. St. John
*Muhlenbergia simplex* (Scribn.) Rydb.

***Muhlenbergia glomerata* (Willd.) Trin. [FNA24, HC, HC2]**
Gram. Unifl. Sesquifl. 191, 297, t. 5, f. 10. 1824.
spiked muhly

*Muhlenbergia glomerata* (Willd.) Trin. var. *cinnoides* (Link) F.J. Herm.
*Muhlenbergia racemosa* (Michx.) Britton, Sterns & Poggenb. var. *cinnoides* (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. 1824.
wirestem muhly

*Agrostis mexicana* L.

***Muhlenbergia minutissima*** (Steud.) Swallen [FNA24, HC, HC2]
Contr. U.S. Natl. Herb. 29(4): 207. 1947.
annual muhly, least muhly

*Sporobolus confusus* (E. Fourn.) Vasey
*Sporobolus microspermus* (Lag.) Hitchc.
*Sporobolus minutissumus* (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 richardsonis*** (Trin.) Rydb. [FNA24, HC, HC2]
Bull. Torrey Bot. Club 32(11): 600. 1905.
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

***Oryzopsis*** [HC, HC2]
ricegrass
(see also *Achnatherum*, *Piptatheropsis*)

***Oryzopsis asperifolia*** Michx. [FNA24, HC, HC2]
Flora Boreali-Americana 1: 51, pl. 9. 1803.
white-grain mountain ricegrass

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]
Sp. Pl. [Linnaeus] 1: 58. 1753.
witchgrass

**ssp. *capillare*** [FNA24, HC2]
Flora Boreali-Americana 1: 51, pl. 9. 1803.
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 acording to FNA.

*_Panicum dichotomiflorum_ Michx. [HC, HC2]
, Fl. Bor.-Amer. (Michaux) 1: 48. 1803.
fall panicum

*ssp. _dichotomiflorum_ [FNA24, HC2]
Fl. Bor.-Amer. 1: 48. 1803.
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 subspeciesrange, 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]
Sp. Pl. 1: 58. 1753.
millet

*ssp. _miliaceum_ [FNA24, HC2]
Sp. Pl. 1: 58. 1753.
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]
Novosti Sist. Vyssh. Rast. 1968: 18. 1968.
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."

***Panicum virgatum*** L. [FNA]
Sp. Pl. 1. 1753.

*_Parapholis_ [HC, HC2]
sickle-grass

*_Parapholis incurva_ (L.) C.E. Hubb. [HC, HC2]
Blumea Supplement 3. 1946.
sicklegrass

***Pascopyrum*** [HC2]
wheatgrass

***Pascopyrum smithii*** (Rydb.) Barkworth & D.R. Dewey [FNA24, HC2]
Amer. J. Bot. 72(5): 772. 1985.
western wheatgrass

*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. 1759.
knotgrass, Thompsongrass

*Digitaria paspaloides* Michx., orthographic variant
*Paspalum distichum* L. var. *indutum* Shinners
*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.

***Phalaris*** [HC, HC2]
canarygrass

**Phalaris arundinacea* L. [FNA24, HC, HC2]
Sp. Pl. 1: 55. 1753.
reed canarygrass

*Phalaris arundinacea* L. var. *picta* L. [HC]
*Phalaroides arundinacea* (L.) Rauschert
*Phalaroides arundinacea* (L.) Rauschert var. *picta* (L.) Tzvelev

Flora PNW 2nd: "collections by D. Douglas (e Cascades along Columbia River), D. Lyall (WA Cascades), and others from before 1860 are apparently the native North American race, but inseparable morphologically from the invasive European intro race in our area used for rangeland improvement by ± 1885.".

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

**Phalaris canariensis* L. [FNA24, HC, HC2]
Sp. Pl. 1: 54-55. 1753.

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."

***Phleum*** [HC, HC2]
Timothy

***Phleum alpinum*** L. [FNA24, HC, HC2]
Sp. Pl. 1: 59. 1753.
mountain timothy

**Phleum pratense* L. [HC, HC2]
Sp. Pl. 1: 59. 1753.
timothy

*ssp. *pratense* [FNA24, HC2]
Sp. Pl. 1: 59. 1753.
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]
Nomencl. Bot. [Steudel], ed. 2. 1: 143. 1840.
common reed

*Phragmites phragmites* (L.) H. Karst.

**ssp. *americanus*** Saltonst., P.M. Peterson, & Soreng [FNA25, HC2]
Sida 21(2):683-692. 2004.
common reed

*ssp. *australis* [FNA25, HC2]
Nomencl. Bot. (ed. 2) 1: 143. 1840.
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 Pragmites australis, and hence the name Phragmites australis subsp. australis, is based on plants collected from what is now Sydney, Autralia. 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. 1883.
nodding 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]
Sp. Pl. [Linnaeus] 1: 67. 1753.
alpine bluegrass

**ssp. *alpina*** [FNA24, HC2]
Sp. Pl. 1: 67. 1753.
alpine bluegrass

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 ×gaspensis 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. 1753.
annual bluegrass

*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 gynomonoecious 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]
Chlor. Melvill. 30. 1823.
Arctic bluegrass

*Poa pratensis* L. var. *gelida* (Roem. & Schult.) Böcher

**ssp. *arctica*** [HC2]
arctic bluegrass

***Poa bolanderi*** Vasey [FNA24, HC, HC2]
Bot. Gaz. 7(3): 32-33. 1882.

Bolander's bluegrass

*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]
Sp. Pl. [Linnaeus] 1: 70. 1753.
bulbous bluegrass

*ssp. *vivipara* (Koeler) Arcang. [FNA24, HC2]
Sp. Pl. 1: 70 1753.
bulbous bluegrass

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. 1753.
flat-stem bluegrass

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, exserted 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. 1893.
coastline bluegrass

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. 1899.
little mountain bluegrass, Wenatchees bluegrass

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]
Contr. U.S. Natl. Herb. 1: 271. 1893.
Cusick's bluegrass

**ssp. *cusickii*** [FNA24, HC2]
Contr. U.S. Natl. Herb. 1(8): 271. 1893.
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-panicled 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 distin-guished from P. cusickii subsp. cusickii by its long hyaline ligules."

**ssp. *epilis*** (Scribn.) W.A. Weber [FNA24, HC2]
Phytologia 51(6): 375. 1982.
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 subspp. 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. 1991.
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-panicled subsp. cusickii forms in most cases. It hybridizes with P. fendleriana, forming P. ×nematophylla. The hybrids may have hairy lemmas or, less often, broader leaf blades and glabrous lemmas. Poa cusickii subsp. pallida was included in Hitchock\'s (1951) circumscription of Poa pringlei, along with P. keckii and P. suksdorfii."

**ssp. *purpurascens*** (Vasey) Soreng [FNA24, HC2]
Phytologia 71(5): 396 [1992]. 1991.
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]
Grasses Southw. 2(2): no. 74. 1893.
muttongrass

**ssp. *fendleriana*** [HC2]
Vasey's muttongrass

FNA24: "Poa fendleriana subsp. fendleriana grows chiefly in the southern and middle Rocky

Mountains, and in the mountains surrounding the Colorado plateaus. Sexually reproducing populations are mainly confined to Arizona, New Mexico, and Texas, are rare in California, and infrequent in Colorado and Utah. Pistillate populations are common from southern British Columbia to Manitoba and south to northern Mexico, but infrequent in the Great Basin. Poa fendleriana subsp. fendleriana intergrades with subspp. albescens and longiligula where sexual or partially sexual populations have come into contact."

**ssp. *longiligula*** (Scribn. & T.A. Williams) Soreng [FNA24, HC2]
Great Basin Naturalist 45(3): 408. 1985.
muttongrass

*Poa fendleriana* (Steud.) Vasey var. *longiligula* (Scribn. & T.A. Williams) Gould
*Poa longiligula* Scribn. & T.A. Williams

FNA24: "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]
Fl. Dan. [Oeder] 6(17): 3 (plate 964). 1790.
glaucous bluegrass

**ssp. *rupicola*** (Nash) W.A. Weber [FNA24, HC2]
Phytologia 51(6): 375. 1982.
timberline bluegrass

*Poa glauca* Vahl var. *rupicola* (Nash) B. Boivin
*Poa rupicola* Nash [HC]

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. 1893.
Howell's bluegrass

*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 1816.
weak bluegrass

Perhaps more common than currently documented.

***Poa interior*** Rydb. [FNA24, HC, HC2]
Sp. Pl. 1: 69-70. 1753.
interior bluegrass, woods bluegrass

*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 scantly webbed calluses."

***Poa laxiflora*** Buckley [FNA24, HC, HC2]
Proceedings of the Academy of Natural Sciences of Philadelphia 14: 96. 1862.
loose-flower bluegrass

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. 1897.
Leiberg's bluegrass

*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. 1830.
marsh bluegrass
(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. 1893.
Letterman's bluegrass

*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. 1888.
sand-dune bluegrass

*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. 1928.
withered bluegrass

*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 ×multnomae*** Piper [HC2]

*Poa gracillima* Vasey var. *multnomae* (Piper) C.L. Hitchc. [HC]

**Poa nemoralis* L. [FNA24, HC, HC2]
Sp. Pl. 1: 69-70 1753.
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. 1893.
Hooker's bluegrass

*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 gynomonoecious. 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. ×multnomae 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. 1759.
fowl bluegrass

*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. 1910.
Alaska bluegrass

*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]
Sp. Pl. 1: 67. 1753.
Kentucky bluegrass

**ssp. *angustifolia*** (L.) Lej. [HC2]
Observ. Gramin. Belg. 112. 1824.
Kentucky bluegrass

*ssp. *irrigata* (Lindm.) H. Lindb. [HC2]
Exsicc. (Pl. Finland.) 2: 20. 1916.
Kentucky bluegrass

*ssp. *pratensis* [FNA24, HC2]
Sp. Pl. 1: 67-68. 1753.
Kentucky bluegrass

*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., subspp. angustifolia, pratensis, and irrigata. These and intermediate forms, especially those favoring subspp. 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 subspp. alpigena, angustifolia, or colpodea; they may represent subspp. 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 subspp. angustifolia and irrigata. For a comparison, see the descriptions of those subspecies."

***Poa secunda*** J. Presl [HC2]
secund bluegrass

**ssp. *juncifolia*** (Scribn.) Soreng [FNA24, HC2]
Phytologia 71(5): 401 [1992]. 1991.
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. 1830.
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]

Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. i. 376. 1831.
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. 1831.
narrow-flower bluegrass

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. 1906.
Suksdorf's bluegrass, western bluegrass

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. 1753.
rough-stalk bluegrass

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]
rough-stalk bluegrass

***Poa unilateralis*** Scribn. ex Vasey [HC2]
Illustr. N. Am. Grass. ii. 1893.
sea-bluff bluegrass

**ssp. *pachypholis*** (Piper) D.D. Keck ex Soreng [FNA24, HC2]
Novon 8(2): 199. 1998.
San Francisco bluegrass

*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. 1874.
Wheeler's bluegrass

*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. 1960.
Alaska bent, 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." Note that the reference here to plants in Oregon is incorrect. This species goes no further south than Mount Rainier.

***Podagrostis humilis*** (Vasey) Björkman [FNA24, HC2]
Symb. Bot. Upsal. 17: 15. 1960.
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. 1937.
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 interruptus* Kunth [FNA24, HC, HC2]
Nov. Gen. Sp. (quarto ed.) 1: 134, pl. 44 [1816]. 1815.
ditch rabbit's-foot grass

*Polypogon lutosus* (Poir.) Hitchc., misapplied

We follow several floras (e.g., Jepson 2nd, Intermountain Flora), which treats this as native to South America, but see comments from FNA below.

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 maritimus* Willd.
Neue Schriften Ges. Naturf. Freunde Berlin iii. (1801) 442. 1801.
Mediterranean rabbit's-foot grass

First collected in WA in 2019 in Klickitat County.

**Polypogon monspeliensis* (L.) Desf. [FNA, HC, HC2]
Fl. Atlant. 1: 67. 1798.
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. 1963.
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. ×adscendens 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. 1934.
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. 1983.

*Agropyron saxicola* (Scribn. & J.G. Sm.) Piper
×*Agrositanion saxicola* (Scribn. & J.G. Sm.) Bowden
*Elymus* ×*saxicola* Scribn. & J.G. Sm.

FNA24: "xPseudelymus 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. 1980.
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 cespitose plants in dry habitats (Daubenmire 1960). Daubenmire noted that rhizomatous plants produce few inflorescences and, possibly for this reason, are collected less frequently than cespitose 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 ×Pseudelymus (p. ??). Others are discussed under the Elymus parent."

*_Pseudosasa japonica_ (Siebold & Zucc. ex Steud.) Makino ex Nakai [WTU]

J. Arnold Arbor. 6: 150. 1925.

Japanese bamboo

_Sasa japonica_ (Siebold & Zucc. ex Steud.) Makino

Likely more common than currently documented.

**_Puccinellia_** [HC, HC2]

alkaligrass

(see also _Torreyochloa_)

*_Puccinellia distans_ (Jacq.) Parl. [FNA24, HC, HC2]

Fl. Ital. 1: 367. 1848.

European alkaligrass, weeping alkaligrass

_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
_Pucciniella 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 maritima* (Huds.) Parl. [HC, HC2]
Fl. Ital. (Parlatore) 1(2): 370. 1850.
coast alkaligrass

*Glyceria maritima* (Huds.) Wahlenb.

***Puccinellia nutkaensis*** (J. Presl) Fernald & Weath. [FNA24, HC, HC2]
Rhodora 18: 22. 1916.
Nootka alkaligrass, shining alkaligrass

*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. 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. 1912.
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?2.8 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. 1934.
small alkaligrass

*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 (Tsvelev 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. 1887.
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).

*_Sasa_

*_Sasa palmata_ (hort. ex Burb.) E.G. Camus
Bambusées 25. 1913.
broadleaf bamboo

*_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: "chedonorus 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. 1812.
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]
Fl. S.E. U.S. [Small]. 59. 1903.
broom bluestem, little bluestem

_Andropogon scoparius_ Michx. [HC]
_Andropogon scoparius_ J. Presl, misapplied

**var. *scoparium*** [FNA25, HC2]
Fl. S.E. U.S. 59, 1326. 1903.
broom beardgras, 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. 1812.
common hardgrass

_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]

***Scribneria*** [HC, HC2]

***Scribneria bolanderi*** (Thurb.) Hack. [FNA24, HC, HC2]
Botanical Gazette 11(5): 105. 1886.
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 1753.
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]
Fl. Sicul. (Presl) 1: p. xlvi . 1826.
narrow rye

_Secale montanum_ Guss. [HC]

*_Setaria_ [HC, HC2]
bristlegrass, foxtail

*_Setaria faberi_ R.A.W. Herrm. [FNA25, HC2]
Beitr. Biol. Pflanzen 10(1): 51. 1910.
Chinese foxtail

*_Setaria italica_ (L.) P. Beauv. [FNA25, HC, HC2]
Ess. Agrostogr. 51, 170, 178 1812.
Italian bristlegrass, foxtail millet

FNA24: "Setaria italica was cultivated in China as early as 2700 B.C. and during the Stone Age in Europe. Nowdays 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]
Syst. Veg., ed. 15 bis [Roemer & Schultes] 2: 891. 1817.
yellow bristlegrass, yellow foxtail

*ssp. _pallide-fusca_ (Schumach.) B.K. Simon [HC2]
Austrobaileya 2(1): 22. 1984.
cattail 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. 1817.
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. 1812.
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]
Ess. Agrostogr. 51, 171, 178. 1812.
green bristlegrass, green foxtail

_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. 1812.

green bristlegrass, green foxtail

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. 1794.
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)."

*_Sorghum halepense_ (L.) Pers. [FNA25, HC, HC2]
Revisio Generum Plantarum 3: 368. 1898.
Johnson grass, Johnsongrass

_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 almum 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. 1807.
saltwater cordgrass, smooth cordgrass

_Spartina alterniflora_ Loisel. var. _glabra_ (Muhl. ex Elliott) Fernald
_Spartina alterniflora_ Loisel. var. _pilosa_ (Merr.) Fernald

FNA25: "partina 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. 1978.
English cordgrass

FNA25: "Spartina anglica is a naturally formed amphidiploid, derived from S. ×townsendii, that was first recognized as a separate species in 1968. It has been introduced (like S. ×townsendii) for reclamation of tidal mudflats. It differs from Spartina ×townsendii 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. 1829.
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. 1840.
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. 1817.
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. ×caespitosa, S. pectinata being the other. Unlike S. ×caespitosa, S. patens grows in both disturbed and undisturbed habitats."

***Spartina pectinata*** Link [FNA25, HC, HC2]
Jahrb. Gewächsk. 1(3): 92-93. 1820.
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. ×caespitosa, the other parent being S. patens."

*_Spartina ×townsendii_ H. Groves & J. Groves [FNA25, HC, HC2]
Rep. Bot. Exch. Club 1880: 37. 1881.
Townsend's cordgrass

Sterile hybrid often confused with Spartina anglica, reported in H&C from Stanwood, Snohomish Co. FNA25: "Spartina ×townsendii 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 ×townsendii 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. 1909.
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. 1906.
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. pensylvanica by their shorter, unawned spikelets. Hybrids with S. pensylvanica, called Sphenopholis ×pallens, 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. 1856.
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]
Circ. Div. Agrostol. U.S.D.A. 35: 6. 1901.
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. 1901.
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. 1848.
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

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. 1895.
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."

**Sporobolus vaginiflorus* (Torr. ex A. Gray) Alph. Wood [HC2]
Class-book Bot. (ed. 1861). 775. 1861.
poverty dropseed

First collected in WA in 2019 in Pend Oreille County.

**var. vaginiflorus* [HC2]
poverty dropseed

Collected in Pend Oreille County in 2019.

**Taeniatherum* [HC2]
medusahead

**Taeniatherum caput-medusae* (L.) Nevski [FNA24, HC2]
Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 17: 38. 1934.
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]
Amer. J. Bot. 72(5): 772. 1985.
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. 1985.
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. intemedium 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. 1985.
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. intemedium 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]
Amer. J. Bot. 72(5): 772. 1985.
Eurasian wheatgrass

*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]
Amer. J. Bot. 36: 164. 1949.
pale false manna grass

**var. *pauciflora*** (J. Presl) J.I. Davis [HC2]
Phytologia 70(5): 364. 1991.
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. 2006.
ravennagrass

*Saccharum ravennae* (L.) L.

**Triplasis* [HC2]
sandgrass

**Triplasis purpurea* (Walter) Chapm. [HC2]
Fl. South. U.S. 560. 1860.
purple sandgrass

*var. *purpurea* [FNA25, HC2]
Fl. South. U.S. 560. 1860.
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. 1862.

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 1830.
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 spicatum*** (L.) K. Richt. [FNA24, HC, HC2]
Pl. Eur. 1: 59. 1890.
narrow false oat, spike trisetum

*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. 1753.
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 Tritcum 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. 1843.
mountain hairgrass

*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. 1855.
ventenata

*Avena dubia* Leers
*Ventenata avenacea* Koel., superfluous renaming (illegitimate)

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. 1821.
brome fescue

*Bromus dertonensis* All.
*Festuca bromoides* L. [HC]
*Festuca dertonensis* (All.) Asch. & Graebn.
*Vulpia dertonensis* (All.) Gola

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. 1857.
small fescue

*Festuca arida* Elmer
*Festuca microstachys* Nutt. [HC]
*Vulpia arida* (Elmer) Henrard

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. 1805.
rattail fescue, rattail 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]
Bull. Torrey Bot. Club 36: 538. 1909.
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. 1937.
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 variey of V. octoflora in the southwest.

**var. *octoflora*** [FNA24, HC2]
Bull. Torrey Bot. Club 36: 538. 1909.
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]

***Zizania*** [HC, HC2]
Indian rice, wild rice

**Zizania palustris* L. [HC2]
Mant. Pl. 295. 1771.
northern wild rice

*var. *palustris* [FNA24, HC2]
Mant. Pl. 295. 1771.
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)."