Washington Flora Checklist

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

Family: Potamogetonaceae

22 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 <u>APG IV</u> 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 <u>2nd Edition of the Flora of the Pacific Northwest</u> except where superceded by new information.

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

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

Created from the Washington Flora Checklist Database on May 19th, 2024 at 11:01am PST. Available online at https://burkeherbarium.org/waflora/

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

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. <u>https://burkeherbarium.org/waflora/</u>. Accessed 19 May 2024.

Monocots:

Potamogetonaceae [FNA22, HC, HC2] Pondweed Family

Synonyms:

Zannichelliaceae [FNA22, HC] (Horned-Pondweed Family)

FNA22: "The family has historically been considered to consist of two genera, Potamogeton and Groenlandia. Recent molecular evidence (D. H. Les, unpublished), combined with existing morphologic evidence, indicates that Potamogeton in the broad sense actually represents two separate lineages. We recognize those lineages at the generic level, Potamogeton in the strict sense and Stuckenia. Consequently, we accept three genera in the family, Potamogeton, Stuckenia, and Groenlandia. Reproductive features are most important in separating species of Potamogeton (R. R. Haynes 1978), and we include the entire family here. The keys may not always utilize reproductive features, but they are based on fruiting individuals. We strongly recommend that no one collect specimens of Potamogetonaceae that are lacking reproductive structures. Leaves of Potamogetonaceae are stipulate. The stipules form a tubular sheath (stipular sheath) around the stem, free from or adnate to the base of the blade. In some species the leaf and sheath of submersed leaves are adnate for part of their length, and the leaf appears to have a sheathing base with an adaxial liqule at the junction of sheath and blade or petiole. Fruits of Potamogetonaceae are drupaceous. The fruits do have endocarps but do not have fleshy mesocarps. Mesocarps exist but never become fleshy. Consequently, the fruits are not true drupes, they are drupaceous, Many species of Potamogetonaceae undergo extensive vegetative reproduction either by turions or stem fragmentation. Turions are excellent modes of vegetative reproduction. The structures are produced at the stem tips and eventually fall to the substrate, either by a portion of the stem breaking off or by the stem itself falling to the substrate. The turions survive an unfavorable season, germinate, and grow into new plants during the next growing season. Because the unfavorable season is usually winter in North America, turions have been called "winter buds." At least one species. Potamogeton crispus, produces turions in early summer, and the turions survive the unfavorable season (summer, in this instance), germinating in the fall. The plant then survives the winter as a young individual, only a few centimeters long, even under ice, and begins growth as the water warms in the following spring. "Winter bud" is certainly not the correct term for P. crispus. The term "turions" designates all such structures, regardless of the unfavorable season."

References: (none)

Potamogeton [FNA22, HC, HC2]

Sp. Pl. 1: 126. 1753; Gen. Pl. ed. 5; 61, 1754. pondweed (see also *Stuckenia*)

Potamogeton alpinus Balbis [FNA22, HC, HC2]

Misc. Bot. 13. northern pondweed, reddish pondweed

Potamogeton alpinus Balbis ssp. tenuifolius (Raf.) Hultén [JPM] Potamogeton alpinus Balbis var. subellipticus (Fernald) Ogden [IMF6] Potamogeton alpinus Balbis var. tenuifolius (Raf.) Ogden [Peck] Potamogeton tenuifolius Raf. Potamogeton tenuifolius Raf. var. subellipticus Fernald

FNA22: "Plants of Potamogeton alpinus often are red whenever taken from the water, a feature that makes this species quite distinctive. Two varieties, Potamogeton alpinus var. tenuifolius and var. subellipticus, have been recognized in North America, based mainly on submersed leaf shape. Plants bearing both leaf types have been observed in the same population; hence the varieties are not recognized. Four hybrids, Potamogeton alpinus x P. nodosus (= P. xsubobtusus Hagström), P. alpinus x P. gramineus (= P. xnericius Hagström), P. alpinus x P. praelongus (= P. xgriffithii A. Bennett), and P. alpinus x P. perfoliatus (= P. xprussicus Hagström), have been described."

Potamogeton amplifolius Tuck. [FNA22, HC, HC2]

American Journal of Science, and Arts. ser. 2, 6:225. broad-leaved pondweed, large-leaved pondweed

FNA22: "Potamogeton amplifolius is common throughout much of North America. Its submersed leaves are larger than those of most other species of Potamogeton, are arcuate, and have more veins than do any other species. One hybrid, Potamogeton amplifolius $\hat{A}' P$. illinoensis (= P. \hat{A}' scoliophyllus Hagström), has been described."

Potamogeton berchtoldii Fieber [HC, HC2]

B.V.von Berchtold & P.M.Opiz, Oekon.-Techn. Fl. Böhm. 2(1): 277. Berchtold's pondweed

Potamogeton berchtoldii Fieber var. colpophilus (Fernald) Fernald Potamogeton berchtoldii Fieber var. lacunatus (Hagstr.) Fernald Potamogeton berchtoldii Fieber var. polyphyllus (Morong) Fernald Potamogeton berchtoldii Fieber var. tenuissimus (Mertens & W.D.J. Koch) Fernald Potamogeton pusillus L. ssp. tenuissimus (Mertens & W.D.J. Koch) R.R. Haynes & Hellq. [FNA22] Potamogeton pusillus L. var. tenuissimus Mertens & W.D.J. Koch [JPM]

FNA22: "Potamogeton pusillus subsp. tenuissimus is the most common linear-leaved subspecies of the family in temperate North America. Whenever one finds a linear-leaved pondweed with 1--5 rows of lacunae on each side of the midvein, chances are that it is subsp. tenuissimus. Only Potamogeton obtusifolius could be confused with the taxon, and it can be separated by having its cylindric inflorescence, whereas subsp. tenuissimus has a capitate inflorescence."

Potamogeton crispus L. [FNA22, HC, HC2]

Sp. Pl. 1: 126. (as crispum). curly pondweed

FNA22: "Potamogeton crispus, an introduced species, has spread throughout much of North America. The expansion of this species\\\'s range from its original collection in North America, apparently about 1840, has been discussed (R. L. Stuckey 1979). This is the only species of pondweeds in North America with serrate leaves and consequently it is easily recognized. Life history of Potamogeton crispus is unusual as it flowers and fruits in late spring and early summer, at which time it also produces turions. The plants decay shortly after those structures develop, leaving only fruits and turions, which survive the summer. No one has observed any seed germination, but the turions (referred to as dormant apices) germinate in late summer or fall, and the plants overwinter as small plants only a few cm centimeters in size, even under the ice in northern climates (R. L. Stuckey et al. 1978). Growth then continues as the water begins warming in the spring. One hybrid, Potamogeton crispus Â' P. praelongus (= P. Â' undulatus Wolfgang ex Schultes & Schultes f.), has been described."

Potamogeton epihydrus Raf. [FNA22, HC, HC2]

Medical Repository. 5: 354. ribbon-leaved pondweed

Potamogeton epihydrus Raf. ssp. nuttallii (Cham. & Schltdl.) Calder & Roy L. Taylor [JPM] Potamogeton epihydrus Raf. var. nuttallii (Cham. & Schltdl.) Fernald [VPPNW1] Potamogeton epihydrus Raf. var. ramosus (Peck) House

Peck has authorship incorrect: "C. & B." FNA22: "Two varieties, Potamogeton epihydrus var. epihydrus and var. ramosus, have been recognized. These prove not to be distinct. Both varieties often grow in the same body of water in the same population. The wider-leaved plants often occur in more alkaline waters. Two hybrids, P. epihydrus var. nuttallii × P. gramineus and P. epihydrus × P. nodosus (= P. ×subsessilis Hagström), have been described. Potamogeton epihydrus is a common species of lakes and streams of northern United States and southern Canada. It extends southward in the eastern United States to Louisiana and Alabama. Potamogeton epihydrus is one of our more easily recognized species: it has floating leaves, linear submersed leaves, and fruits with an embryo with one full spiral or less. The only other North American pondweed with a similar set of characteristics is P. tennesseensis, which differs from P. epihydrus by the former having long tapering apices in the submersed leaves whereas the latter has blunt to acute apices."

Potamogeton fibrillosus Fernald [HC, HC2]

Mem. Amer. Acad. Arts, n. s. 17: 51, plate 28, figs. a?c, plate 32, plate 28, fig. 5, plate 32. fibrous-stipuled pondweed

Potamogeton foliosus Raf. ssp. fibrillosus (Fernald) R.R. Haynes & Hellq. [FNA22] Potamogeton foliosus Raf. var. fibrillosus (Fernald) R.R. Haynes & Reveal [JPM] Known in WA from one collection in 1933 from Pierce Co. FNA22: "Potammogeton foliosus subsp. fibrillosus is known from the warm waters of the northwestern United States. It differs from subsp. foliosus by the stipular tissue between the veins decomposing, leaving only strands formed by the fibrous veins. In addition, nodal glands are quite common."

Potamogeton foliosus Raf. [FNA22, HC, HC2]

Medical Repository. hexade 2, 5:354. leafy pondweed

Potamogeton curtissii Morong Potamogeton foliosus Raf. ssp. foliosus [FNA22] Potamogeton foliosus Raf. var. foliosus [HC, JPM] Potamogeton foliosus Raf. var. macellus Fernald [HC]

FNA22: "Potamogeton foliosus subsp. foliosus is probably the most common linear-leaved species of the family in North America, and it is probably the easiest to determine. Any linear-leaved Potamogeton specimen with fruits having an undulating winglike abaxial keel most likely is this taxon."

Potamogeton friesii Rupr. [FNA22, HC, HC2]

Hist. Stirp. Fl. Petrop. 43. flat-stalked pondweed

FNA22: "Potamogeton friesii is a fairly common linear-leaved species, especially of calcareous waters of lakes and streams of the upper Midwest. Whenever turions are present, the species is easily identified, as it is the only one with the outer leaves of the turions having corrugate bases and the inner leaves turned at right angles to the outer leaves. Two hybrids, Potamogeton friesii x P. pusillus (= P. x pusilliformis Fischer [P. Å' intermedius Fischer]) and P. friesii x P. obtusifolius (= P. x semifructus A. Bennett ex Ascherson & Graebner), have been described."

Potamogeton gramineus L. [FNA22, HC, HC2]

Sp. Pl. 1: 127. (as gramineum). grassy pondweed, variable pondweed

Potamogeton gramineus L. var. maximus Morong [VPPNW1] Potamogeton gramineus L. var. myriophyllus J.W. Robbins [IMF6] Potamogeton heterophyllus Schreb.

FNA22: "Seven hybrids, Potamogeton gramineus ´ P. nodosus (= P. ´ argutulus Hagström), P. gramineus ´ P. richardsonii (= P. hagstroemii A. Bennett [as hagstromii]), P. alpinus ´ P. gramineus (= P. ´ nericius Hagström), P. gramineus ´ P. perfoliatus (= P. ´ nitens Weber [P. ´ subnitens Hagström]), P. gramineus ´ P. natans (= P. ´ sparganiifolius Laestadius ex Fries), P. gramineus ´ P. illinoensis [= P. ´ spathuliformis (J. W. Robbins) Morong)], and P. gramineus ´ P. praelongus (= P. ´ vilnensis Galinis), have been described. Three varieties were recognized (E. C. Ogden 19435) and treated (M. L. Fernald 1950). These varieties, Potamogeton gramineus var. gramineus, deletion}P. gramineus var. myriophyllus, and P. gramineus var. maximus, were said to be separated by the shape and size of the submersed leaves. We have studied many populations of this species in the field and have observed on several occasions that a single population has leaf morphology variable enough to include all three varieties. We have, , therefore , chosen not to recognize any infraspecific categories for this species." KZ99 mistakently places German P. heterophyllus as a synonym of New World P. illinoensis

Potamogeton illinoensis Morong [FNA22, HC, HC2]

Botanical Gazette. 5: 50. illinois pondweed

Potamogeton lucens L., misapplied

FNA22: "Potamogeton illinoensis and P. gramineus are often difficult to separate. Certainly, in the extreme of each they are easily separated, but they continually grade into each other. Features to look for are the acute-mucronate apex of the submersed leaves of P. illinoensis and the acuminate apex for P. gramineus. Also, the number of veins seems to work as well. Three hybrids, Potamogeton illinoensis x P. nodosus (= P. x faxonii Morong), P. amplifolius x P. illinoensis (= P. x scoliophyllus Hagström), and P. gramineus x P. illinoensis [= P. x spathuliformis (J. W. Robbins) Morong], have been described."

Potamogeton natans L. [FNA22, HC, HC2]

Sp. Pl. 1: 126.

floating pondweed, floating-leaved pondweed

FNA22: "Potamogeton natans is the common floating-leaved pondweed of the north temperate ure areas. It is essentially circumboreal and can easily be identified by floating leaves that are almost always cordate at the base of the blade, the petiole with a short band of light tissue at its apex, and the submersed phyllodial leaves. Also, the apex of the petiole usually is bent so that the blade appears oriented in the opposite direction from which the petiole appears to be oriented. One hybrid, Potamogeton natans x P. nodosus (= P. x schreberi Fischer [P. x perplexus A. Bennett]), has been described."

Potamogeton nodosus Poir. [FNA22, HC, HC2]

Encyclopedie Methodique. Botanique ... Supplement. 4(2): 5354. loddon's pondweed, long-leaved pondweed

Potamogeton americanus Cham. & Schltdl. [Abrams]

FNA22: "Six hybrids, Potamogeton gramineus x P. nodosus (= P. x argutulus Hagström), P. illinoensis x P. nodosus (= P. x faxonii Morong), P. nodosus x P. richardsonii (= P. x rectifolius A. Bennett), P. natans x P. nodosus (= P. x schreberi Fischer [P. x perplexus A. Bennett]), P. alpinus x P. nodosus (= P. x subotusus Hagström), and P. epihydrus x P. nodosus (= P. x subsessilis Hagström), have been described. Potamogeton nodosus is a common floating-leaved species throughout much of the United States and southern Canada. When both submersed and floating leaves are present, it is very easily recognized by the petioles of the submersed leaves being longer than 5 cm." Stem anatomy is useful to distinguish P. nodosus from the hybrid P. gramineus x natans (BCIL7)

Potamogeton obtusifolius Mertens & W.D.J. Koch [FNA22, HC, HC2]

Deutschl. Fl., ed. 3. 1: 855. blunt-leaved pondweed

Often mistaken for P. friesii. FNA22: "Potamogeton obtusifolius is a distinctive linear-leaved species with the leaf blades round at the apex, especially when fruiting inflorescences 5--7 mm wide are present. This is unusually wide for one of the linear-leaved species. Two hybrids, Potamogeton obtusifolius x P. pusillus (= P. x saxonicus Hagström) and P. friesii x obtusifolius (= P. x semifructus A. Bennett ex Ascherson & Graebner), have been described."

Potamogeton praelongus Wulfen [FNA22, HC, HC2]

Arch. Bot. (Leipzig). 3: 331.

white-stalked pondweed, whitestem pondweed

FNA22: "Potamogeton praelongus is one of the easiest pondweeds to identify with its submersed leaves only clasping the more or less zigzagged stem. The persistent, hugelarge, white stipules provide another clue to this species. Four hybrids, Potamogeton perfoliatus x P. praelongus (= P. x cognatus Ascherson & Graebner), P. alpinus x P. praelongus (= P. x griffithii A. Bennett), P. crispus x P. praelongus (= P. x undulatus Wolfgang ex Schultes & Schultes f.), and P. gramineus Â' P. praelongus (= P. x vilnensis Galinus), have been described." BCIL7 incorrectly gives author as: "Wolfg."

Potamogeton pusillus L. [FNA22, HC, HC2]

Sp. Pl. 1: 127. 1753 (as pusillum). small pondweed

Potamogeton panormitanus Biv. Potamogeton pusillus L. ssp. pusillus [FNA22] Potamogeton pusillus L. var. minor (Biv.) Fernald & B.G. Schubert Potamogeton pusillus L. var. pusillus [JPM]

FNA22: "Potamogeton pusillus subsp. pusillus is nearly worldwide. When it is in fruit, the inflorescence is interrupted. That character combined with its narrow, linear, 1--3-veined leaves makes this taxon easily recognized. The nodal glands are green, essentially the color of the stems. Often appearing only as bumps on the stem at the nodes, they are difficult to see. Also, because the glands frequently occur at only a few nodes per plant, one can easily overlook them."

Potamogeton richardsonii (A. Benn.) Rydb. [FNA22, HC, HC2]

Bulletin of the Torrey Botanical Club. 32: 599. clasping-leaved pondweed, Richardson's pondweed

Potamogeton perfoliatus L. ssp. richardsonii (A. Benn.) Hultén Potamogeton perfoliatus L. var. richardsonii A. Benn.

FNA22: "Potamogeton richardsonii is quite similar to P. perfoliatus. Specific characteristics to separate the two species are the shape of the leaf blade apex, acute in P. richardsonii and obtuse in P. perfoliatus, and the condition of the stipules, disintegrating between the veins leaving fibrous strands in P. richardsonii , and the entire stipule, including the veins, disintegrating in P. perfoliatus. Two hybrids, Potamogeton gramineus x P. richardsonii (= P. x hagstroemii A. Bennett [as hagstromii]) and P. nodosus x P. richardsonii (= P. x rectifolius A. Bennett), have been described."

Potamogeton robbinsii Oakes [FNA22, HC, HC2]

Magazine of horticulture, botany and all useful discoveries and improvements in rural affairs. 7: 180. fern pondweed, Robbin's pondweed

FNA22: "Potamogeton robbinsii is our most easily recognized species when it is fertile. It is the only species with branched inflorescences. The species, however, occurs in fairly deep water, forming large colonies that essentially cover the substrate. Only rarely do the plants flower. It also is the only species with truly auriculate leaves, the blades forming small lobes projecting past the stem on each side of the stem. Leaf blades of other Potamogeton species may have slightly rounded bases, but no others have lobes that actually protrude past the stem. The species has a fairly large disjunction; primarily known from the northern part of the flora, it also occurs in the Tensas River area, Baldwin County, Alabama. The Alabama population has been collected on at least two occasions over 40 years, once as recently as 1970.

Potamogeton strictifolius A. Benn. [FNA22, HC2]

J. Bot. 40: 148. narrowleaf pondweed

Potamogeton strictifolius A. Benn. var. rutiloides Fernald

First specimen for state collected in 2017 in Okanogan County.

Potamogeton zosteriformis Fernald [FNA22, HC, HC2]

Memoirs of the american academy of arts and science. n.s. 17:36. eel-grass pondweed, flat-stem pondweed

Potamogeton compressus L., misapplied

FNA22: "One hybrid, Potamogeton zosteriformis x P. strictifolius, has been described and has been given the name P. xhaynesii Hellquist & G. E. Crow and is known from northern Michigan, Minnesota, Vermont, and southern Canada."

Stuckenia [FNA22, HC2]

Botanisch-systematische notizen., Abh. Naturwiss. Vereine Bremen. 21: 258. 1912. pondweed

Stuckenia filiformis (Pers.) Börner [FNA22, HC2]

Flora fur das deutsche Volk. 713. 1912. slender-leaved pondweed, western pondweed, threadleaf-pondweed

Potamogeton borealis Raf.

Potamogeton filiformis Pers. [HC]
Potamogeton filiformis Pers. var. alpinus (Blytt) Asch. & Graebn.
Potamogeton filiformis Pers. var. borealis (Raf.) H. St. John [VPPNW1]
Potamogeton filiformis Pers. var. macounii (Morong ex Macoun) Morong [VPPNW1]
Potamogeton filiformis Pers. var. occidentalis (J.W. Robbins) Morong
Potamogeton marinus L. f. alpinus Blytt
Potamogeton marinus L. var. alpinus (J.W. Robbins) Morong
Potamogeton marinus L. var. macounii Morong
Potamogeton marinus L. var. occidentalis J.W. Robbins
Stuckenia filiformis (Pers.) Börner ssp. alpina (Blytt) R. R. Haynes, Les & M. Král
Stuckenia filiformis (Pers.) Börner ssp. occidentalis (J. W. Robbins) R. R. Haynes, Les & M. Král [FNA22]

Stuckenia pectinata (L.) Borner [FNA22, HC2]

Flora fur das deutsche Volk. 713. fennel-leaved pondweed, sago pondweed, sago-pondweed

Potamogeton pectinatus L. [HC]

FNA22: "The sago-pondweed is among the most important species as food for waterfowl (E. Moore 1913). The species reproduces vegetatively by underground tubers and is spread by various duck species, especially canvas backs. In a study of food for ducks, a population of canvas backs was observed feeding in aquatic vegetation comprised of several genera, including sago-pondweed. When the stomach contents were examined, they were found to contain essentially 100% tubers of sago-pondweed (E. Moore 1913). Two hybrids with this species as a putative parent have been described under the genus Potamogeton. These are P. pectinatus x P. vaginatus (= P. x bottnicus Hagström) and P. filiformis x P. pectinatus (= P. x suecicus K. Richter)."

Zannichellia [FNA22, HC, HC2]

Sp. Pl. 2: 969. 1753; Gen. Pl. ed. 5; 416, 1754. horned pondweed

Zannichellia palustris L. [FNA22, HC, HC2]

Sp. Pl. 2: 969. horned pondweed

Zannichellia palustris L. var. stenophylla Asch. & Graebn. [Peck]

FNA22: "Outside of Europe most Zannichellia are considered to be Z. palustris (W. Van Vierssen 1982). In Europe three species have been recognized based on stamen length, fruit length, podogyne length, and the rostrum to fruit length ratio. For Z. palustris in Europe the mean rostrum length is $0.78 \text{ Å} \pm 0.20$ deletion} mm, the mean podogyne length is $0.4 \text{ Å} \pm 0.19$ mm, and the rostrum to fruit ratio is less than 0.5 (W. Van Wierssen Vierssen 1982). North American Zannichellia does not match any of these figures exactly. In North America Zannichellia has been considered historically to comprise only one species, which has been called Z. palustris. Until further research determines the range of Zannichellia and species delimitations, we are continuing to consider all North American material to be monospecific and am are applying the name Z. palustris to our that material."

Zannichelliaceae (see Potamogetonaceae)