

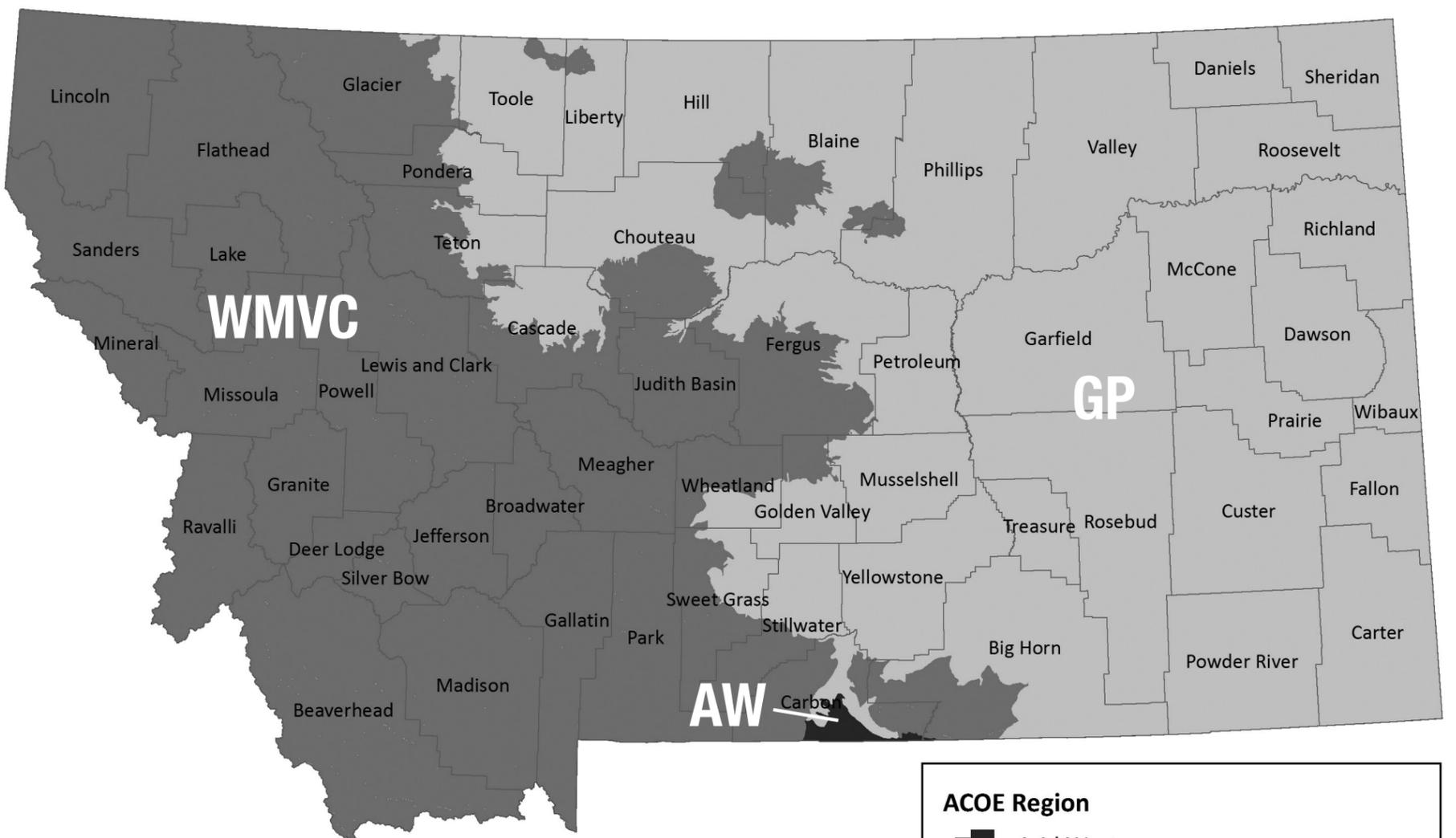
Field Guide to Montana's Wetland Vascular Plants

A NON-TECHNICAL KEY TO THE GENERA WITH
KEYS TO THE SPECIES OF SEDGES AND RUSHES



PETER LESICA & PETER HUSBY

2015 Second Edition



Location of USACE regions in Montana.

Field Guide to Montana's Wetland Vascular Plants

*A non-technical key to the genera with keys to the
species of sedges and rushes*

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Digital Navigation

The current version of this document has been updated with navigational links and definitions for glossary terms. To easily locate a species, please use the navigational links located in the table of contents or in keys throughout the document to quickly access information. Additionally, hover over highlighted terms throughout the text to view the definition of the term.

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Cover photo of a wetland in Sheridan County © by Peter Lesica

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Acknowledgments

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Introduction

Wetlands are important for protecting water quality and quantity as well as conserving biological diversity in arid western landscapes. They provide essential habitat for numerous species of plants and animals. During the last century wetlands were lost to agricultural, industrial, and residential development at an alarming rate. Recently enacted laws and regulations are aimed at protecting our remaining wetlands. In addition, many private organizations are striving to conserve wetlands for future generations.

We must be able to identify and classify wetlands in order to conserve them. Wetland delineation and classification depends, among other things, on knowledge of wetland plants. Identifying plants, especially wetland plants, has long been the domain of botanists who employ manuals and keys rife with technical jargon. Many of these floristic manuals are excellent sources of information, but they can be difficult for all but botanical specialists to use. Furthermore, most manuals require that plants be in flowering condition for identification. The keys in this manual emphasize easy-to-recognize vegetative characters described in non-technical terms. These keys will make it easier for land managers, field biologists and amateur botanists to correctly identify wetland plants. In addition, the emphasis on vegetative characters often allows identification even when plants are not in flower, prolonging the season during which determinations are possible.

Geographic Area

This manual covers the entire state of Montana. The eastern two-thirds of the state is in the U. S. Army Corps of Engineers' (USACE) Great Plains Region (GP). Most of the mountainous portion of Montana is in the USACE Western Mountains, Valleys, and Coast Region (WMVC). The Pryor Mountains Desert in the southern portion of Carbon County is in the USACE Arid West Region (AW). Refer to the map in Appendix A or the inside back cover. The wetland indicator categories for plants in these three regions are also given in Appendix A.

Wetland plants generally occur in habitats that receive more moisture than the typical upland site in the same area. This may be ponded surface water from rain or melted snow or shallow groundwater (palustrine) or groundwater associated with a permanent stream (riverine) or lake (lacustrine). Wetland habitats can be characterized by (1) the relative amount of extra moisture received, (2) whether the soil is derived mainly from geologic parent material (mineral) or dead plants (organic), and (3) whether the dominant vegetation is woody or not. Habitats include open water (ponds, lakes, sloughs and streams), drawdown zones (temporarily wet soil adjacent to open water), wet meadows (little extra moisture, dominated by herbaceous plants on mineral soil), moist or wet forests or woodlands (little extra moisture, dominated by woody plants on mineral soil), marshes (much extra moisture, dominated by herbaceous plants on mineral soil), swamps (much extra moisture, dominated by woody plants on mineral soil), fens (much extra moisture, dominated by herbaceous plants on organic soil), and carrs (much extra moisture, dominated by woody plants on organic soil). Usually habitats receiving a great deal of extra moisture will be dominated by obligate wetland plants, while facultative wetland plants will be more common in drier habitats or on the edge of wetter ones (see below).

What plants are included

This manual includes only vascular plants; algae, mosses and liverworts are not included. Appendix A is the 2014 National Wetland Plant List for Montana developed by the U.S. Army Corps of Engineers

(USACE) (Lichvar et al. 2014; <http://rsgisias.crrel.usace.army.mil/NWPL/>). The keys in our manual include all genera of plants on the USACE list and known to occur in Montana according to *Manual of Montana Vascular Plants* (Lesica 2012) in the following wetland indicator categories in at least one of the three wetland regions in Montana:

Obligate Wetland (OBL); almost always is a hydrophyte, rarely in uplands

Facultative Wetland (FACW); usually is a hydrophyte but occasionally found in uplands

Facultative (FAC); commonly occurs as either a hydrophyte or non-hydrophyte

Plants in Facultative Upland (FACU) and Obligate Upland (UPL) categories across the state are not included in our keys. Plants that are very rare or occur exclusively at high elevations (near or above treeline) are included in the list of Montana wetland plants (Appendix A), but most of these are not included in the keys. These species will rarely be encountered by people doing wetlands inventory or delineation work, so they have been omitted to shorten the keys.

Coefficients of conservatism

Coefficients of conservatism form the basis of a method for ranking the relative ability of a plant to tolerate disturbance. The method, called the floristic quality assessment index (FQAI), was developed by Swink and Wilhelm (1979) to assess plant communities in the Chicago area. It has since been widely adapted to other regions and been found to be a reliable indicator of site condition (Francis et al. 2000; Lopez and Fennessy 2002; Mushet et al. 2002; DeKeyser et al. 2003; Cohen et al. 2004; Mack 2004; Jones 2004; Zomlefer et al. 2013). For example, a site dominated by disturbance-tolerant plants would be assumed to be in relatively low ecological condition compared to a site dominated by plants requiring relatively pristine conditions. The coefficient of conservatism (C. of C.) is a number from 0 to 10 that quantifies a plant species' requirement for relatively undisturbed conditions versus its tolerance of disturbance.

Coefficients of conservatism were assigned to 747 plant species known to occur in wetlands in western Montana by a panel of expert botanists in 2005. Panel members were Stephen Cooper (ecologist, Montana Natural Heritage Program), Marc Jones (ecologist, Montana Natural Heritage Program), Peter Lesica (botanical consultant), Mary Manning (ecologist, U.S. Forest Service), Scott Mincemoyer (botanist, Montana Natural Heritage Program), John Pierce (botanical consultant), and Steve Shelly (regional botanist, U.S. Forest Service). Coefficients of conservatism were assigned to an additional 308 Montana wetland plant species in 2015 by a panel consisting of Andrea Pipp (botanist, Montana Natural Heritage Program), Karen Newlon (ecologist, Montana Natural Heritage Program), Ken Scow (biologist, Westech Environmental Services), Tara Luna (botanical consultant), Peter Husby (retired biologist, Natural Resources Conservation Service), Scott Mincemoyer and Peter Lesica. Scoring criteria used to assign the coefficients follow those developed for Georgia (Zomlefer et al. 2013) and are shown in Table 2 of Appendix A.

An example of the use of the coefficient of conservatism from Appendix A is field horsetail (*Equisetum arvense*). It has a coefficient of conservatism of "2", which indicates the plant is native but opportunistic with a broad range of ecological tolerance and mainly restricted to areas subject to human disturbance. A site dominated by field horsetail is subjected to significant disturbance such as heavy grazing, tillage, vehicle traffic, etc., and is in relatively low ecological condition. On the other hand, cutleaf waterparsnip (*Berula erecta*), with a

coefficient of conservatism of “7” typifies a stable or near climax community, tolerates little to no disturbance, and has a somewhat narrow range of ecological tolerance. A wetland site with a significant component of this plant can be assumed to be in a relatively undisturbed condition (relatively high ecological condition).

Nomenclature and taxonomic considerations

The scientific names of plants are in a state of flux. It is common for a plant to have different names in different floristic manuals, especially if a good deal of time has elapsed between publication dates of the manuals. The primary generic and specific names used in the keys are those most commonly employed by state and regional floras: **Vascular Plants of Montana** (Dorn 1984), **Flora of the Great Plains** (Great Plains Flora Association 1986), **Flora of the Pacific Northwest** (Hitchcock and Cronquist 1973), and **Manual of Montana Vascular Plants** (Lesica 2012). When different, names used in the USACE list (Appendix A) are provided in parentheses. Lists of taxonomic synonyms, organized by both USACE names and names commonly used in local floras are provided in Appendix B. Taxonomic information can also be found at the Montana Natural Heritage Program’s Montana Field Guide (<http://fieldguide.mt.gov/displayClasses.aspx?Kingdom=Plantae>).

How To Use This Manual

The keys in this manual are meant to be used with a regional floristic manual, not in place of one. Once a plant has been keyed to genus in this manual, one of the floristic manuals listed below must be consulted in order to key the plant to species (a key to the wetland species of *Carex* and *Juncus* is provided in this manual). Positive identification can only be assured after comparing the specimen with descriptions in a floristic manual. Floristic manuals appropriate for Montana are:

Dorn, R.D. 1984. *Vascular plants of Montana*. Mountain West Publishing, Cheyenne, WY.

Great Plains Flora Association. 1986. *Flora of the Great Plains*. University Press of Kansas, Lawrence.

Hitchcock et al. 1955-69. *Vascular plants of the Pacific Northwest*. Parts 1-5. University of Washington Press, Seattle.

Hitchcock, C. L. and A. Cronquist. 1973. *Flora of the Pacific Northwest*. University of Washington Press, Seattle.

Lackschewitz, K. 1991. *Vascular plants of west-central Montana- identification handbook*. USDA Forest Service General Technical Report INT-277, Ogden, UT.

Lesica, P. 2012. *Manual of Montana Vascular Plants*. Botanical Research Institute of Texas Press, Fort Worth.

Upland species not covered by this manual sometimes occur in wetlands. If you key one of these upland plants in this manual, you will arrive at a genus, albeit incorrect. However, this misidentification will often only become apparent after comparing the specimen to descriptions or illustrations. **Keying a plant is only the first step in identification. Presumed determinations must be checked.**

This manual is meant to be used in the field with fresh specimens. It will be more difficult to use with dried, pressed specimens. Odor may be an important character that can be lost with drying. Shapes of stems and fruits may be distorted with pressing. It may sometimes be necessary to use a 10 x hand lens to observe small characters. It is always good to take measurements from more than one specimen if possible. Aberrant specimens occur in most populations and the vegetative characters used in this manual are more variable than the floral characters used in more technical treatments.

Plants are identified by means of “dichotomous keys.” A “couplet” (a pair of statements with identical numbers; e.g., 1a and 1b) consists of two alternate, mutually exclusive statements. The reader must choose the statement that best describes the plant in hand. Start with the first couplet. At the end of the correct statement is either the name of the genus the plant belongs to or the number of another couplet. For example:

- 1a. Leaves reduced to scales or lacking; stems red and succulent *Salicornia*
- 1b. Leaves apparent; stems usually not red and succulent..... 2

If 1a is correct then the plant is in the genus *Salicornia*. If 1b is correct then the reader must go to the second couplet (beginning with 2) and again choose the correct statement and continue until a name rather than a number is obtained. This is probably the name of the genus your plant belongs to. Always read both statements of the couplet. The illustrations will aid in this process (illustrations for a few genera were not available). A floristic manual with keys to species and descriptions is then employed to make a positive identification (see above). A small number of abbreviations are used in the keys and descriptions: > – greater than, more than; ≥ – greater than or equal to; < – less than, fewer than; ≤ – less than or equal to.

Non-Technical Key to Montana's Wetland Vascular Plant Genera

Inexperienced users may have difficulty distinguishing the difference between leaves and leaflets. A leaflet is a division of a compound leaf. Leaves are attached to stems that have a bud at the tip; leaflets are attached to the axis (rachis) of a compound leaf, which has a leaflet or coiled tendril at the tip instead of a bud.

- 1a. Plants truly aquatic, submergent or with leaves and stems floating on the water's surface; stems usually weak and unable to support the plant without the aid of the water (*Chara*, algae of hard water with reddish, spherical nodes along its branches may appear to be a vascular plant)..... [Key 1 \(p. 2\)](#)
- 1b. Plants emergent; stems rigid with at least upper portions held above water; sometimes growing with the base of the plant in water but more often the plant growing in moist to saturated soil that is not inundated during most of the growing season 2

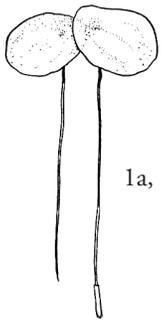
- 2a. Shrubs, vines or trees with perennial woody stems..... [Key 2 \(p. 6\)](#)
- 2b. Annual or perennial herbaceous plants with stems that die back to the ground every year 3

- 3a. Plants not producing flowers; horsetails, ferns, fern allies [Key 3 \(p. 10\)](#)
- 3b. Plants producing flowers (flowering plants) 4

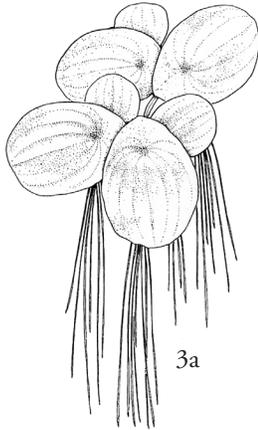
- 4a. Leaves undivided with parallel veins; flower parts usually in 3s or 6s (monocots; e.g., grasses, sedges, rushes, lilies)..... [Key 4 \(p. 12\)](#)
- 4b. Leaves simple or divided, with net-like venation; flower parts usually in 2s or 4s or 5s (dicots; i.e., broad-leaved plants)..... [Key 5 \(p. 23\)](#)

Key 1

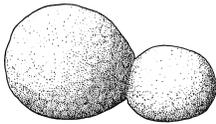
Submergent or Floating-leaved Plants



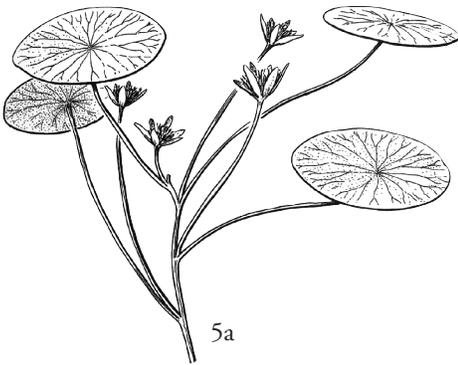
1a, 3b



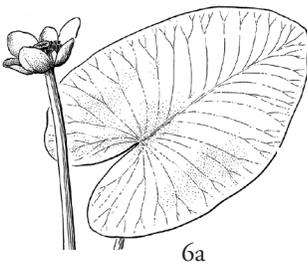
3a



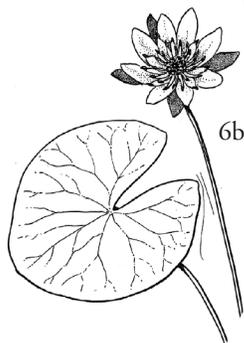
2a



5a



6a



6b



8a

Azolla microphylla is known only from 1-2 locations in Ravalli Co. and is not included.

- 1a. Entire plant floating and smaller than 1 cm in diameter, stems lacking2
- 1b. Plants larger, usually with obvious stems4

- 2a. Plants <2 mm and egg-shaped or bead-like *Wolffia*
- 2b. Plants flattened and larger3

- 3a. Plants consisting of many elliptic fronds attached together at the edges with numerous roots hanging from each frond..... *Spirodella*

- 3b. Plants consisting of 2 to many round to oar-shaped fronds, each with a single root or roots lacking..... *Lemna*

- 4a. Leaves large and broadly elliptic to circular, borne on the end of long stalks and floating on the surface of the water (water lilies)5
- 4b. Leaves divided or linear to narrowly elliptic in outline.....7

- 5a. Petiole attached in the center of the leaf; flowers purplish *Brasenia*
- 5b. Petioles attached in the sinus at edge of leaf; flowers yellow or white to pinkish6

- 6a. Flowers yellow; leaves with most veins originating from the midrib..... *Nuphar*
- 6b. Flowers white or pinkish; most veins originating from point of petiole attachment *Nyphaea*

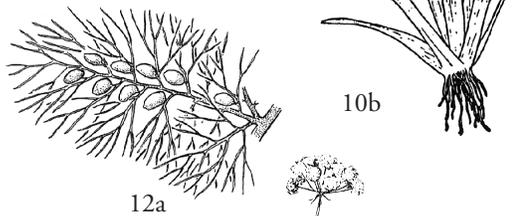
- 7a. Plants without flowering or leafy stems, all leaves basal8
- 7b. Plants with leafy or flowering stems.....[11](#)

- 8a. Leaves with 4 leaflets, resembling a 4-leaf clover..... *Marsilea*
- 8b. Leaves not divided into leaflets.....[9](#)



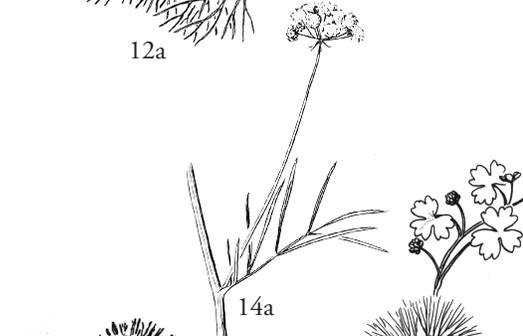
9a. Each leaf with a sac of white spores at the base *Isoetes*
 9b. Leaves without spore sac at the base 10

10a. Leaves broadest near the tip..... *Limosella*
 10b. Leaves tapered to the tip and grass-like or floating leaves arrow-shaped..... vegetative *Sagittaria*, *Sparganium* or *Alisma*



11a. Lowest underwater leaves dissected into filiform segments 12
 11b. Underwater leaves linear to elliptic or divided into broad segments 16

12a. Leaves with egg-shaped bladders among the leaflets..... *Utricularia*
 12b. Leaves without bladders 13



13a. Leaves and buds alternate on the stem; flowers yellow or white..... 14
 13b. Leaves and buds opposite or whorled; flowers without petals..... 15

14a. Leaflets with toothed margins *Sium*
 14b. Ultimate leaf segments with smooth margins *Ranunculus*

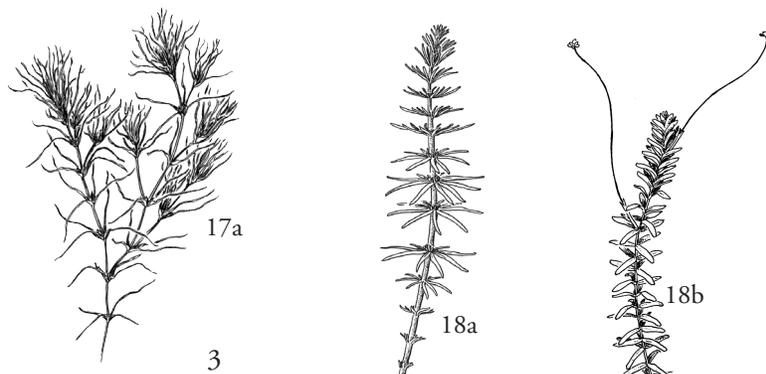


15a. Ultimate leaf segments with sparsely toothed margins; stems usually green *Ceratophyllum*
 15b. Ultimate leaf segments entire-margined; stems often reddish..... *Myriophyllum*

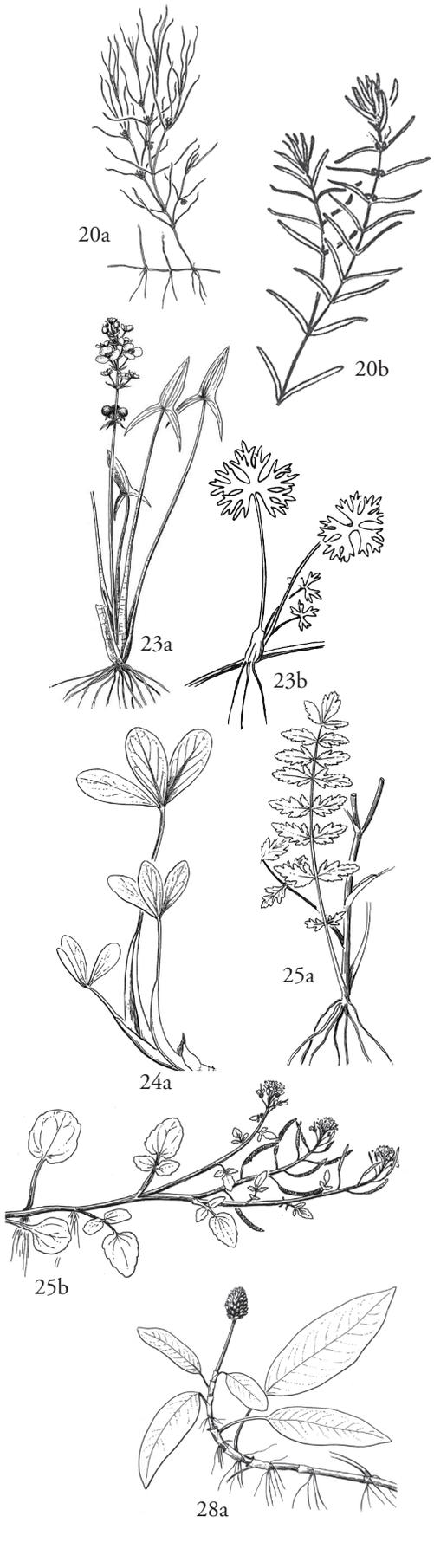
16a. At least some nodes with >2 leaves attached 17
 16b. Leaves 1 or 2 per node or all basal 19

17a. Leaves scarcely 1 mm wide..... *Najas*
 17b. Leaves >1.5 mm wide..... 18

18a. Leaves mostly 6 per node. *Hippuris*
 18b. Leaves mostly 2-4 per node *Elodea*



Key 1: Aquatic Plants



- 19a. Submersed leaves opposite (2 per node)20
- 19b. Submersed leaves alternate (1 per node) or all basal.....21
- 20a. Some leaves ≥ 2 cm long.....*Zannichellia*
- 20b. Leaves < 2 cm long..... *Callitriche*
- 21a. Leaves lobed or divided into leaflets22
- 21b. Leaves unlobed and undivided26
- 22a. Upper leaves lobed but not fully divided into leaflets23
- 22b. Leaves divided into ≥ 3 leaflets.....24
- 23a. Floating leaves arrow-shaped in outline..... *Sagittaria*
- 23b. Floating leaves fan-shaped in outline..... *Ranunculus*
- 24a. Leaflets 3, with smooth margins..... *Menyanthes*
- 24b. Leaflets with toothed or lobed margins.....25
- 25a. Leaf stalks (petioles) broadened at the base..... *Berula*
- 25b. Leaf petioles not dilated at the base *Nasturtium*
- 26a. Submersed leaves lance-shaped to nearly round in outline.27
- 26b. Submersed leaves strap-shaped to linear and grass-like.....30
- 27a. Veins of leaf branched off of midrib28
- 27b. Veins of leaves arising from the point of petiole attachment.....29
- 28a. Stems with membranous sheaths (stipules) at point of leaf attachment..... *Polygonum*
- 28b. Leaves without sheathing stipules..... *Myosotis*
- 29a. Leaves all attached at the base of the plant.....*Alisma*
- 29b. Leaves attached along a stem*Potamogeton* (includes *Stuckenia*)



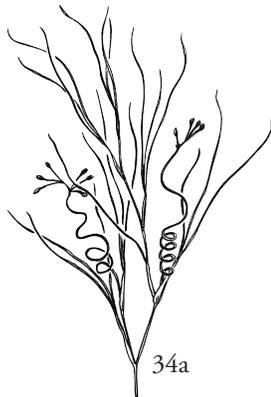
- 30a. Leaves all attached at the base of the plant.....31
- 30b. Plants with leafy stems32

- 31a. Inflorescence branched.....*Alisma*
- 31b. Inflorescence unbranched and spike-like*Lilaea*

- 32a. Leaves lance- or strap-shaped *Myosotis*
- 32b. Leaves linear, often grass-like.....33



- 33a. Flowers and fruits solitary in leaf axils or few at the ends of coiled stalks.....34
- 33b. Flowers and fruits in globose to cylindrical clusters36



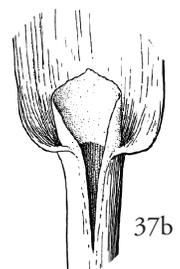
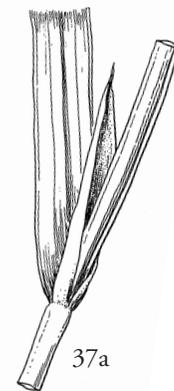
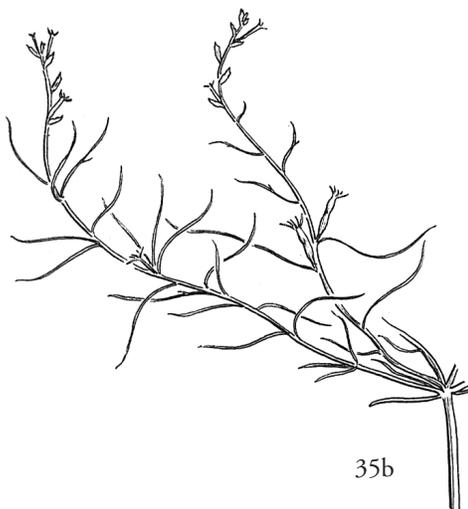
- 34a. Flowers and fruits few at the ends of branches of an open inflorescence borne on a coiled stalk; salty water *Ruppia*
- 34b. Flowers and fruits solitary in leaf axils.....35

- 35a. Leaves with a membranous stipule at the base*Heteranthera*
- 35b. Leaves lacking a membranous stipule*Howellia*



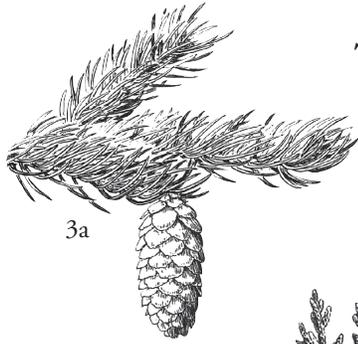
- 36a. Leaves lacking a ligule or stipule but with an expanded membranous base..... *Sparganium*
- 36b. Leaves with a pale membranous appendage on the inside where it joins the stem (ligule or stipule)37

- 37a. Membranous appendage at leaf base (stipule) usually >1 cm long *Potamogeton* (includes *Stuckenia*)
- 37b. Membranous appendage at leaf base (ligule) <1 cm long*Alopecurus* or *Glyceria* ([grasses see Key 4A, p. 17](#))



Key 2

Trees, Shrubs, or Woody Vines

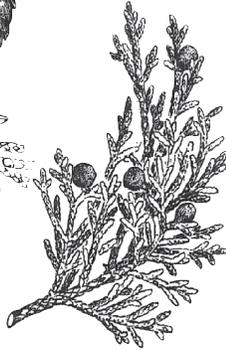


3a

Pinus contorta rarely occurs in wetlands in Montana; *Gleditsia tricanthos* is not naturalized in Montana; *Sorbus sitchensis* occurs only in high subalpine habitats in Montana; they are not included in the key.



4a



4b

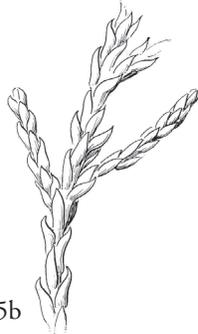
- 1a. Leaves scale-like or needle-like2
- 1b. Leaves not hardened or minute6

- 2a. Coniferous trees3
- 2b. Flower-bearing small trees, shrubs or creeping shrubs.....5

- 3a. Leaves are needles ≥ 1 cm long; cones > 2 cm long..... *Picea*
- 3b. Leaves scale-like, < 1 cm long; cones or berries < 2 cm long4



5a



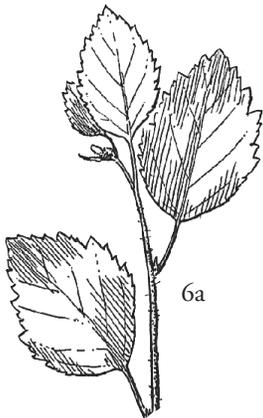
5b

- 4a. Cones brown and woody; bark in long strips..... *Thuja*
- 4b. Cones blue and berry-like; bark not in strips.....*Juniperus*

- 5a. Low subalpine subshrubs *Phyllodoce*
- 5b. Low-elevation, riparian tree or shrubs *Tamarix*

- 6a. Leaves and buds alternate each other on the twigs7
- 6b. Leaves and buds opposite each other[37](#)

- 7a. Leaves lobed or divided $\geq 1/3$ way to midrib.....8
- 7b. Leaf margins entire or toothed $< 1/3$ way to the midrib[16](#)



6a

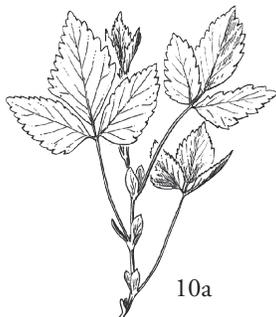


6b

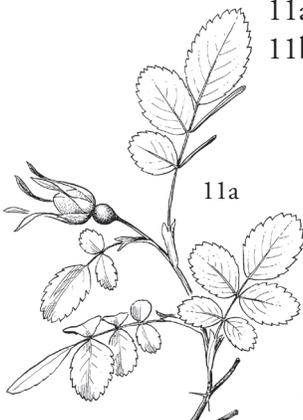
- 8a. Leaves divided into distinct leaflets.....9
- 8b. Leaves lobed but not fully divided into leaflets[14](#)

- 9a. Plant a shrub10
- 9b. Plant a vine[12](#)

- 10a. Leaves with 3 leaflets *Rubus*
- 10b. Leaves with > 3 leaflets11



10a

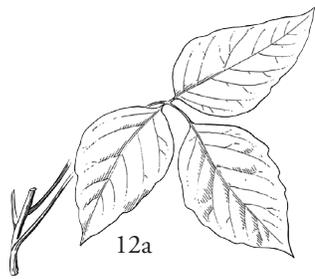


11a

- 11a. Stems with spines *Rosa*
- 11b. Stems without spines*Potentilla (Dasiphora)*

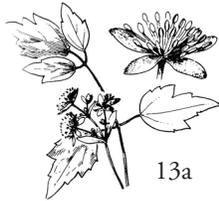


11b



12a

- 12a. All leaves with 3 leaflets *Toxicodendron*
- 12b. Some leaves with >3 leaflets 13



13a

- 13a. Leaflets ternately and pinnately divided *Clematis*
- 13b. Leaflets palmately arranged *Parthenocissus*



14a

- 14a. Shrubs with rigid stems *Ribes*
- 14b. Vines, rigid stems lacking 15

- 15a. Some leaves with 1-2 basal lobes; ripe berries red *Solanum*
- 15b. Leaves lobed like a maple; berries purple *Vitis*



15a

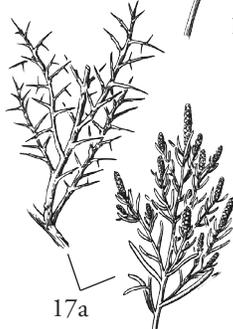
- 16a. Branches with spines or spine-like branchlets 17
- 16b. Branches unarmed 19



15b

- 17a. Leaves fleshy and tubular *Sarcobatus*
- 17b. Leaves otherwise 18

- 18a. Leaves green, without dense hair *Crataegus*
- 18b. Leaves covered with dense white or silvery hair *Elaeagnus*

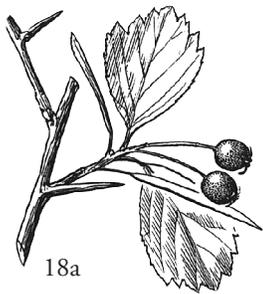


17a

- 19a. Upper leaf surface whitish or grayish hairy 20
- 19b. Upper leaf surface green 22

- 20a. Leaves with flake-shaped hairs *Elaeagnus*
- 20b. Leaves with fine linear hairs or hair lacking 21

- 21a. Leaves solitary at each node *Salix*
- 21b. Lower leaves often clustered at the alternate nodes ... *Artemisia*



18a

- 22a. Flowers and fruits borne in congested, cylindrical clusters (catkins); flowers without petals 23
- 22b. Flowers and fruits borne in simple or branched, more open inflorescences; flowers mostly with petals 26



18b



20a

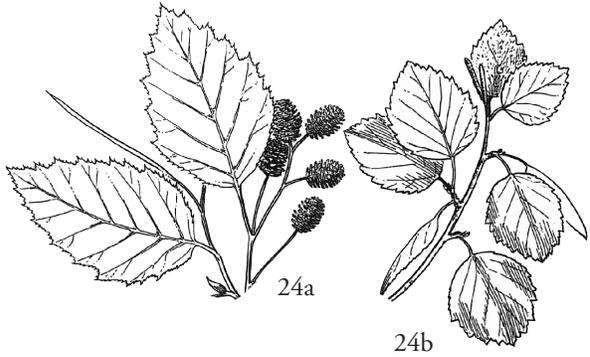


21a



21b

Key 2: Woody Plants



- 23a. Leaf margins with large and small teeth.....24
- 23b. Leaf margins entire or evenly **toothed**.....25

- 24a. Female **catkins** cone-like and persisting on the twigs*Alnus*
- 24b. Female catkins not cone-like, usually disintegrating in the spring or early summer..... *Betula*

- 25a. Trees with pendent **catkins** and gluey, resinous buds... *Populus*
- 25b. Mainly shrubs, usually with erect or spreading **catkins**.....*Salix*



- 26a. Leaves thick and leathery27
- 26b. Leaves thinner, not leathery.....30

- 27a. Leaf margins smooth and rolled under28
- 27b. Leaf margins shallowly **toothed** and not inrolled29

- 28a. Twigs with small resinous dots (**glands**)*Ledum*
- 28b. Twigs without **glands***Kalmia*

- 29a. Stems prostrate and trailing.....*Gaultheria*
- 29b. Stems erect 0.5-1.5 m tall.....*Rhododendron*

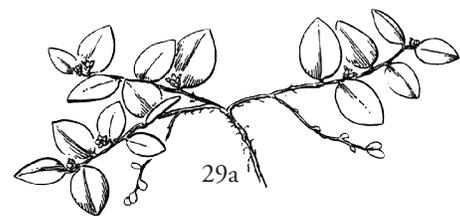
- 30a. Tree, mainly occurring in the eastern tier of counties.... *Ulmus*
- 30b. Shrubs, **vines** or occasionally small trees31

- 31a. Leaves linear to linear-lanceolate *Lorandersonia*
- 31b. Leaves broader32

- 32a. Fruit a dry **capsule**.....33
- 32b. Fruit a **berry**[34](#)

- 33a. Flowers and fruits numerous, clustered on branch tips.....*Spiraea*
- 33b. Flowers and fruits several, below **terminal** leaf cluster*Rhododendron*

- 33b. Flowers and fruits several, below **terminal** leaf cluster*Rhododendron*





34a



35a

34a. Vines; some leaves usually with 1-2 basal lobes.....*Solanum*

34b. Shrubs; leaves unlobed35

35a. Berry with 1 large seed *Prunus*

35b. Berry with >1 small seeds36

36a. Larger leaves >4 cm long; flowers and fruits >1 per leaf axil..... *Rhamnus (Frangula)*

36b. Leaves mostly <4 cm long; flowers and fruits 1 per leaf axil..... *Vaccinium*

37a. Leaves of older twigs with entire margins38

37b. Leaves lobed or divided41

38a. Leaves silvery with flake-like hairs *Shepherdia*

38b. Leaves green and mostly glabrous.....39

39a. Flowers and fruits in a hemispheric cluster at stem tips..... *Cornus*

39b. Flowers and fruits few, arising from leaf axils.....40

40a. Stems hollow *Symphoricarpos*

40b. Stems solid *Lonicera*

41a. Leaves with 5-7 unlobed leaflets.....*Fraxinus*

41b. Leaves with lobes or 3 leaflets.....42

42a. Terminal leaves of twigs with toothed but unlobed margins.....*Virburnum*

42b. Terminal leaves lobed or divided*Acer*



36a



36b



38a



39a



40a



40b



41a



42a



42b

Key 3

Ferns and Allies

Cystopteris montana and *Asplenium trichomanes* have each been found in Montana only once; they are not included in the key.

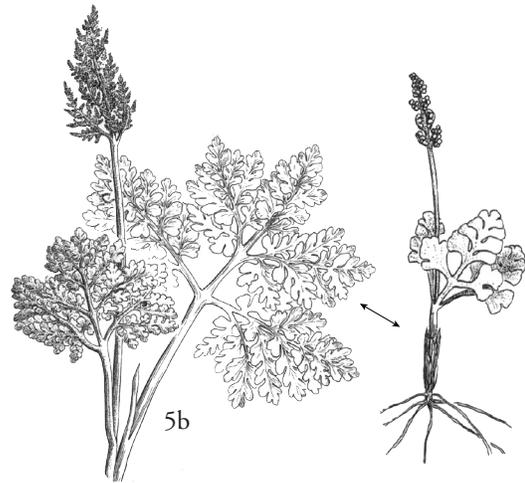
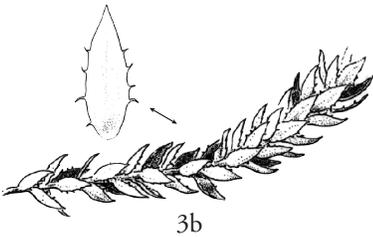
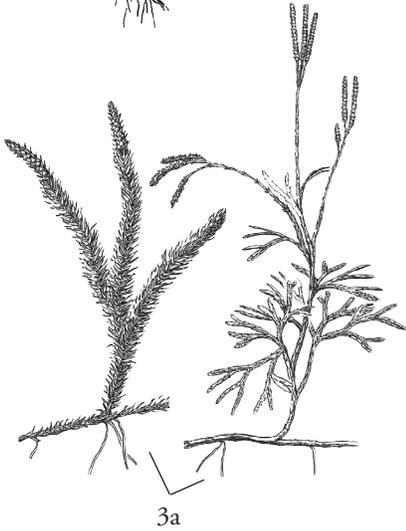
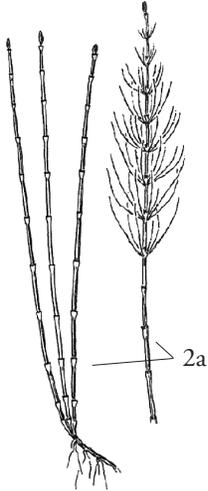
- 1a. Leaves small (<1 cm) and scale-like or lacking2
- 1b. Leaves larger and usually divided into segments4

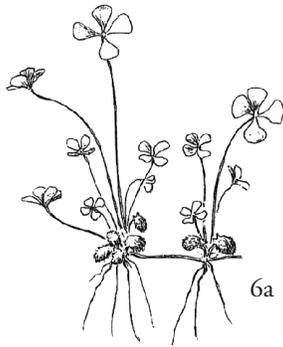
- 2a. Stems segmented, grooved lengthwise, mostly erect (horsetails) *Equisetum*
- 2b. Stems not segmented or grooved lengthwise, creeping.....3

- 3a. Leaves narrowly lance-shaped with entire margins ...*Lycopodium* (includes *Dendrolycopodium*, *Diphasiastrum*, *Lycopodiella*, *Spinulum*)
- 3b. Leaves lance-shaped with a few pointed teeth..... *Selaginella*

- 4a. Leaf solitary and arising from the stem below the spore-bearing, stem-like portion of the plant.....5
- 4b. Leaves all similar, arising from the base, usually several and fern or clover-like6

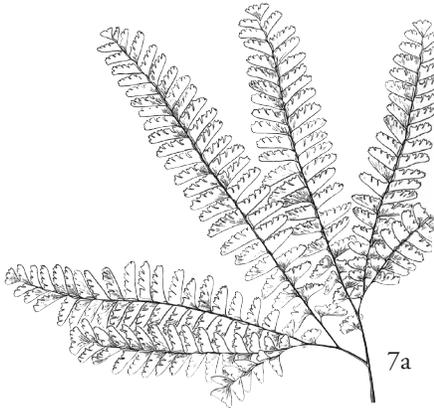
- 5a. Solitary, sterile (not spore-bearing) leaf elliptic with entire margins *Ophioglossum*
- 5b. Sterile leaf divided into few to many segments *Botrychium* (includes *Botrypus*, *Sceptridium*)





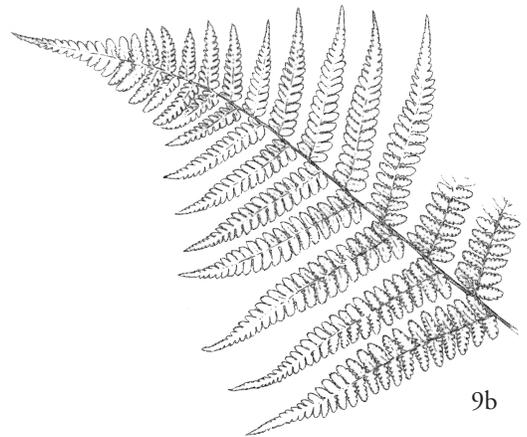
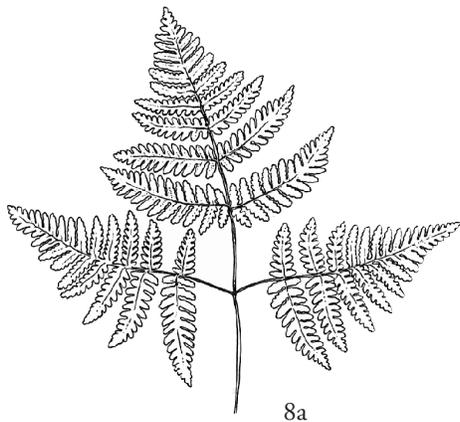
- 6a. Leaves 4-lobed, clover-like.....*Marsilea*
- 6b. Leaves fern-like, not clover-like7

- 7a. Each frond (leaf) a wire-like purple stalk divided like the fingers of a hand (palmate) into several leaflet-bearing branches.....*Adiantum*
- 7b. Fronds pinnately divided (like the main branches of a pine tree); stalks not dark purple except at the base.....8



- 8a. Each frond divided first into 3 parts..... *Gymnocarpium*
- 8b. Fronds first deeply divided into many pinnate segments.....9

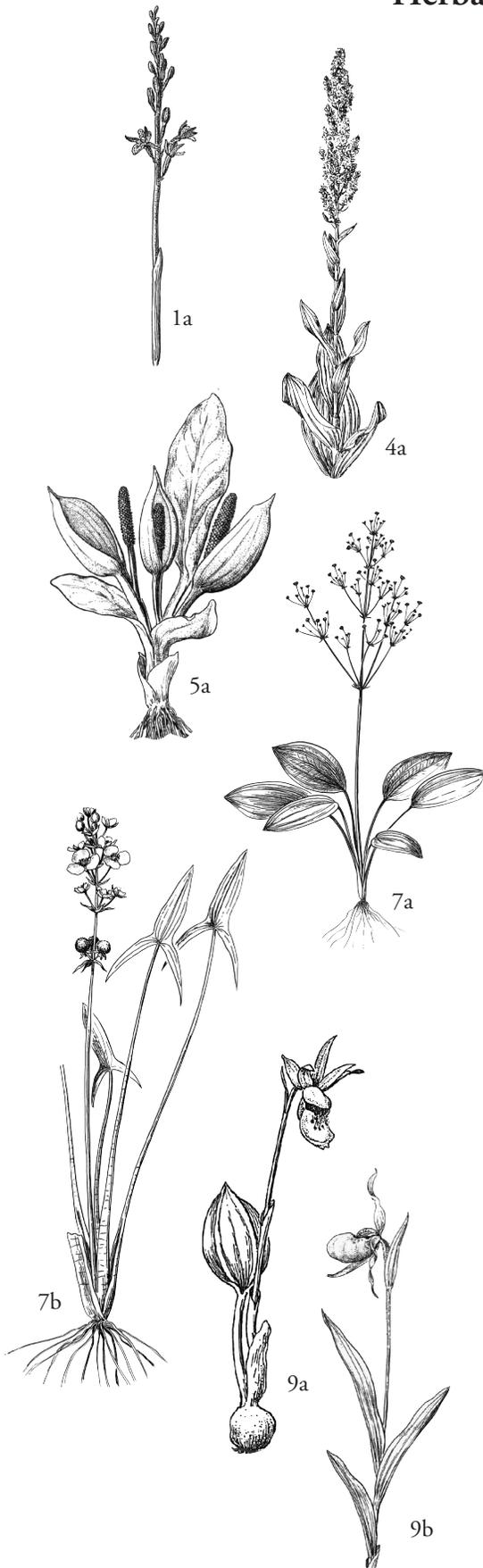
- 9a. Fronds once divided into deeply lobed segments..... *Dryopteris*
- 9b. Fronds deeply divided into segments that are again deeply divided into lobed segments.....*Athyrium*



Key 4

Herbaceous, Emergent Monocots

Luzula wahlenbergii occurs only near or above treeline and is not included in the following key. *Damasonium californicum*, *Bulbostylis capillaris* and *Lipocarpa micrantha* have each been collected only once in Montana and are not included here.



- 1a. Leaves and stems not green; leaves reduced to sheaths *Corallorhiza*
- 1b. Leaves and/or stems green; at least lower leaves not reduced ...2

- 2a. Leaves elliptic or broader in outline, sometimes with a pair of basal lobes3
- 2b. Leaves absent or strap-shaped to linear in outline (grass-like)..... 15

- 3a. Plants with coiled side branches, vine-like; hemispheric inflorescences (umbels) arising in leaf axils *Smilax*
- 3b. Plants not vine-like; flowers not in axillary umbels4

- 4a. Plants usually >1 m tall; some leaves >10 cm wide *Veratrum*
- 4b. Emergent portion of the stem usually <1 m tall.....5

- 5a. Flowers and fruits borne in a tight, cylindrical spike within a yellow, hood-like bract (spathe); leaves often >15 cm wide *Lysichiton*
- 5b. Inflorescence not as above; leaves smaller.....6

- 6a. Numerous flowers and fruits borne in open, branched inflorescences.....7
- 6b. Flowers and fruits few or borne in narrow unbranched inflorescences8

- 7a. Fruit wheel-shaped, flat on top..... *Alisma*
- 7b. Fruit hemispheric, round on top *Sagittaria*

- 8a. Flowers 1-3 and > 1 cm long, each with a large pouch-shaped lip9
- 8b. Flowers usually >3, smaller..... 10

- 9a. Plants with a single basal leaf..... *Calypso*
- 9b. Plants with >1 leaf..... *Cypripedium*

10a. Leaves 2, opposite near middle of stem *Listera* (includes *Neottia*)

10b. Leaves otherwise.....11

11a. Flowers star-shaped, petals and sepals all similar; fruit a berry

11b. Petals and sepals not all the same shape; fruit a dry capsule..13

12a. Flowers and fruits solitary in leaf axils, the pendent stalks kinked in the middle.....*Streptopus*

12b. Flower and fruit stalks spreading in a terminal inflorescence *Smilacina* (= *Maianthemum*)

13a. Stem with an enlarged, bulb-like base

13b. Stem not greatly enlarged at the base.....14

14a. Leaf one, broadly elliptic; lip of flower spotted..... *Amerorchis*

14b. Leaves >1; flower lip not spotted *Habenaria* (= *Coeloglossum*, *Piperia*, *Platanthera*)

15a. Fruit wheel-shaped, flat on top..... *Alisma*

15b. Fruit not wheel-shaped and flat on top.....16

16a. Flowers lacking perianth parts (petals and sepals), pistils and stamens subtended only by 1-2 bracts or naked.....17

16b. Flowers with a perianth, sometimes inconspicuous.....30

17a. Flowers and fruits born in a very tight, cylindrical spike....18

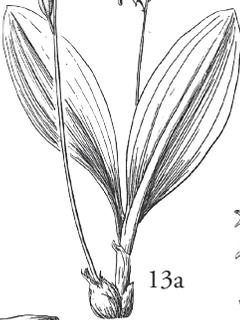
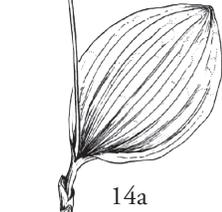
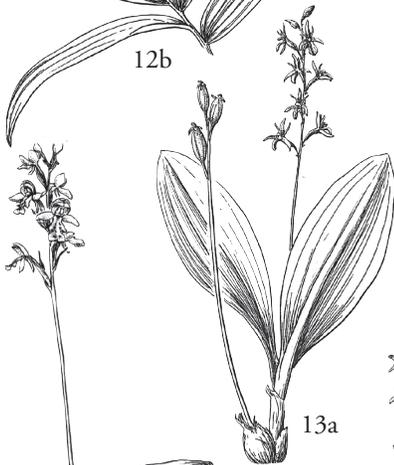
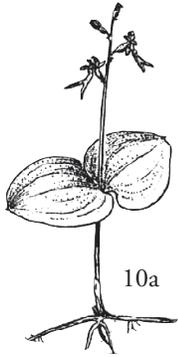
17b. Inflorescence not as above

18a. Male and female flowers in separate spikes on top of each other, not subtended by a leaf-like bract..... *Typha*

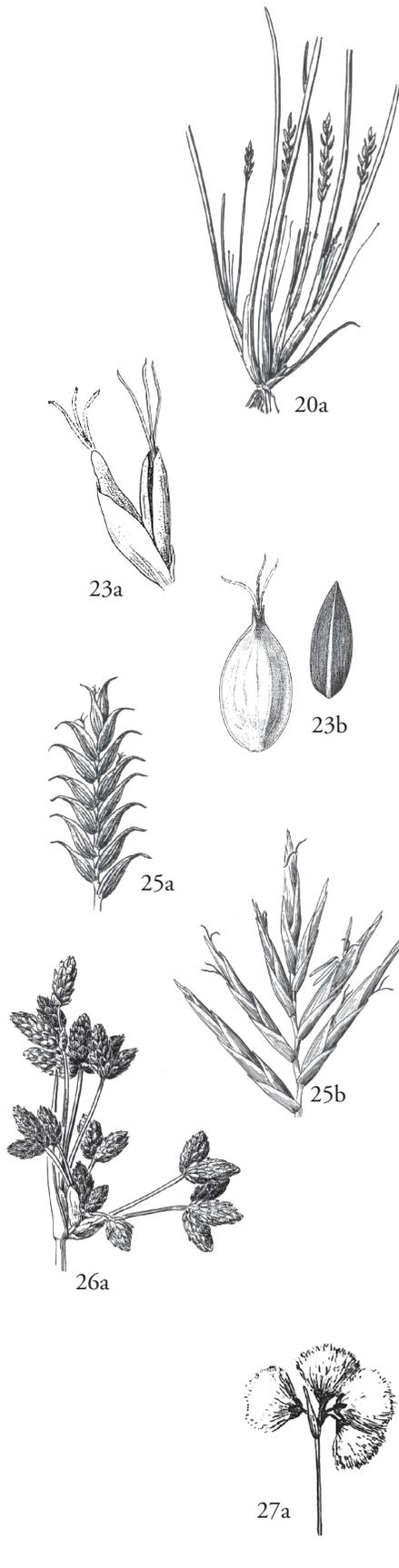
18b. Flowers bisexual in a single spike subtended by a long, leaf-like bract

19a. Male and female flowers in globose clusters, the female clusters bur-like..... *Sparganium*

19b. Flowers not clustered or clusters cylindrical and not bur-like



Key 4: Emergent Monocots



- 20a. Leaves long-tubular, round in cross-section *Lilaea*
- 20b. Leaves flat or v-shaped in cross-section 21
- 21a. Stems round in cross-section; leaves 2-ranked (2 leaves for each full turn around the stem); each flower subtended by 2 bracts (grasses) [Key 4A \(p. 17\)](#)
- 21b. Stems usually triangular in cross-section; leaves 3-ranked; each flower usually subtended by 1 bract 22
- 22a. Seed enclosed or wrapped in a sac-like perigynium in addition to being subtended by a scale-like bract; flowers unisexual 23
- 22b. Seed subtended by a scale-like bract but not enclosed in a perigynium; flowers bisexual 24
- 23a. Perigynium open on one side; i.e., not fully closed; rare plants *Kobresia*
- 23b. Perigynium fully closed except for the minute pore at the apex *Carex* ([see key to the species, p. 55](#))
- 24a. Scale-like bracts arranged in 2 ranks 25
- 24b. Scale-like bracts spirally arranged 26
- 25a. Spikelets flattened; annual plants of gravel bars *Cyperus*
- 25b. Spikelets cylindrical; perennial plants of peatlands *Dulichium*
- 26a. Spikelets more than 1 per stem 27
- 26b. Spikelets solitary at the tip of the stem 28
- 27a. Bristles at the base of seed >5 times as long as seed *Eriophorum*
- 27b. Bristles at base of seed 1-2 times as long as seed *Scirpus* (includes *Schoenoplectus*)
- 28a. Bristles at base of seed >5 times as long as the seed and forming a cotton-like tuft *Eriophorum*
- 28b. Bristles at the base of seed 1-2 times as long as the seed [29](#)

29a. Stem with at least 1 small leaf..... *Scirpus* (includes *Schoenoplectus*, *Tricophorum*)

29b. Stem leaves lacking..... *Eleocharis*

30a. Male and female flowers in separate, globose clusters; perianth (petals and sepals) inconspicuous *Sparganium*

30b. Plants not as above.....31

31a. Flowers densely clustered in a cylindrical spike subtended by a long, leaf-like bract..... *Acorus*

31b. Plants not as above.....32

32a. Flowers with 1 petal distinctly different than the other 2...33

32b. All 3 petals and sometimes sepals similar35

33a. Flowers arranged in a distinct spiral at the top of the stem *Spiranthes*

33b. Flowers in a loose to dense spike but not spirally arranged...34

34a. Lip petal ≥ 15 mm long, flowers reddish *Epipactis*

34b. Lip petal < 15 mm long, flowers white or greenish.... *Habenaria* (= *Coeloglossum*, *Piperia*, *Platanthera*)

35a. Petals and sepals attached to the top of the developing fruit; leaves iris-like (equitant).....36

35b. Base of petals and sepals united below the developing fruit37

36a. Flowers > 3 cm across..... *Iris*

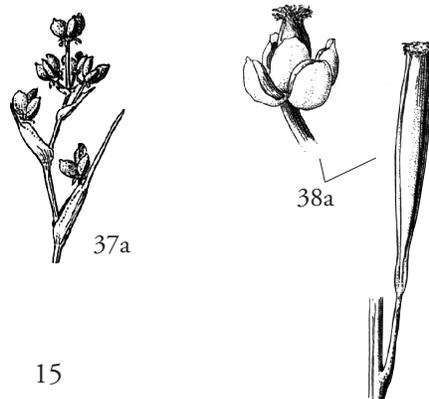
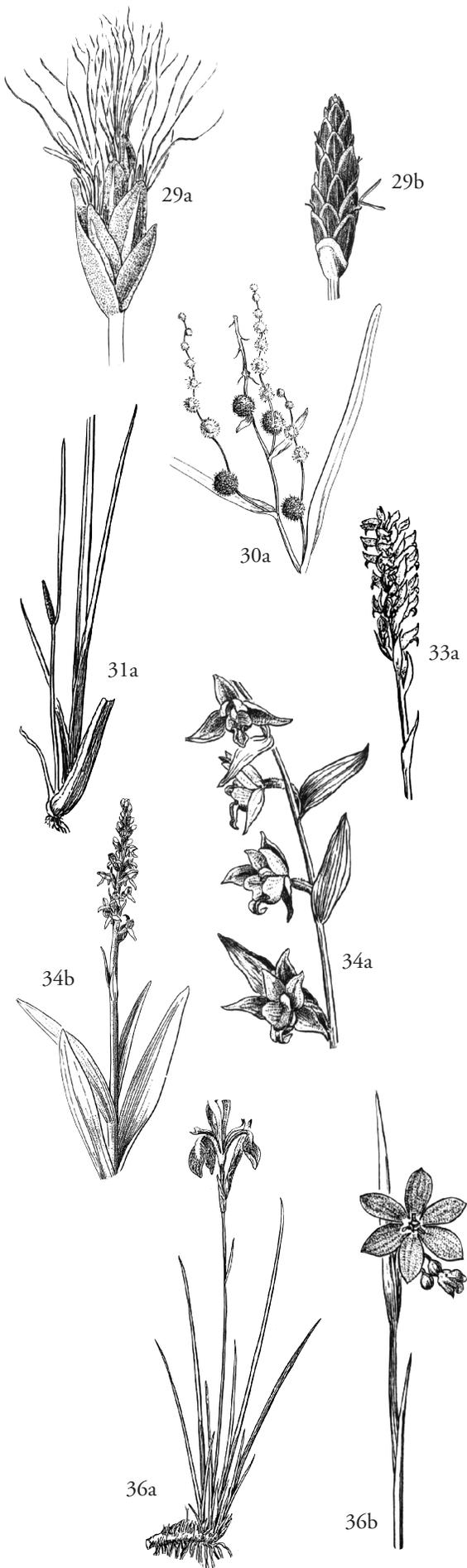
36b. Flowers < 2 cm across..... *Sisyrinchium*

37a. Each flower with 3 separate developing fruits... *Scheuchzeria*

37b. Each flower with 1 developing fruit.....38

38a. Petals and sepals < 2 mm long; flower stem completely leafless *Triglochin*

38b. Petals and sepals > 2 mm long.....39



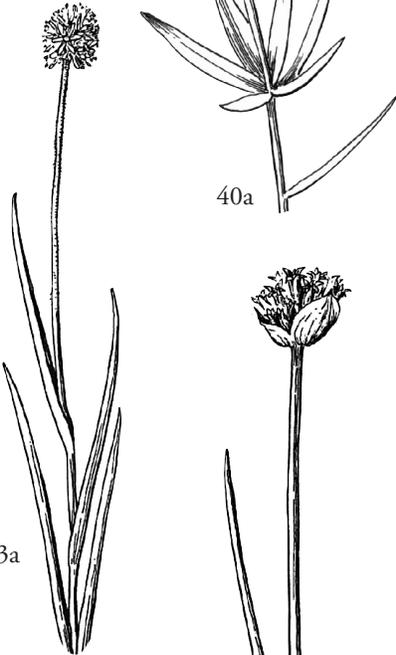
Key 4: Emergent Monocots



39a



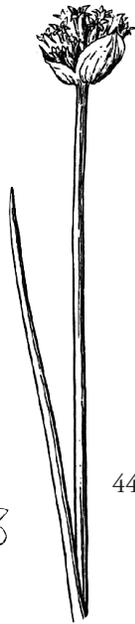
40a



43a



44b



44a



45a



46a



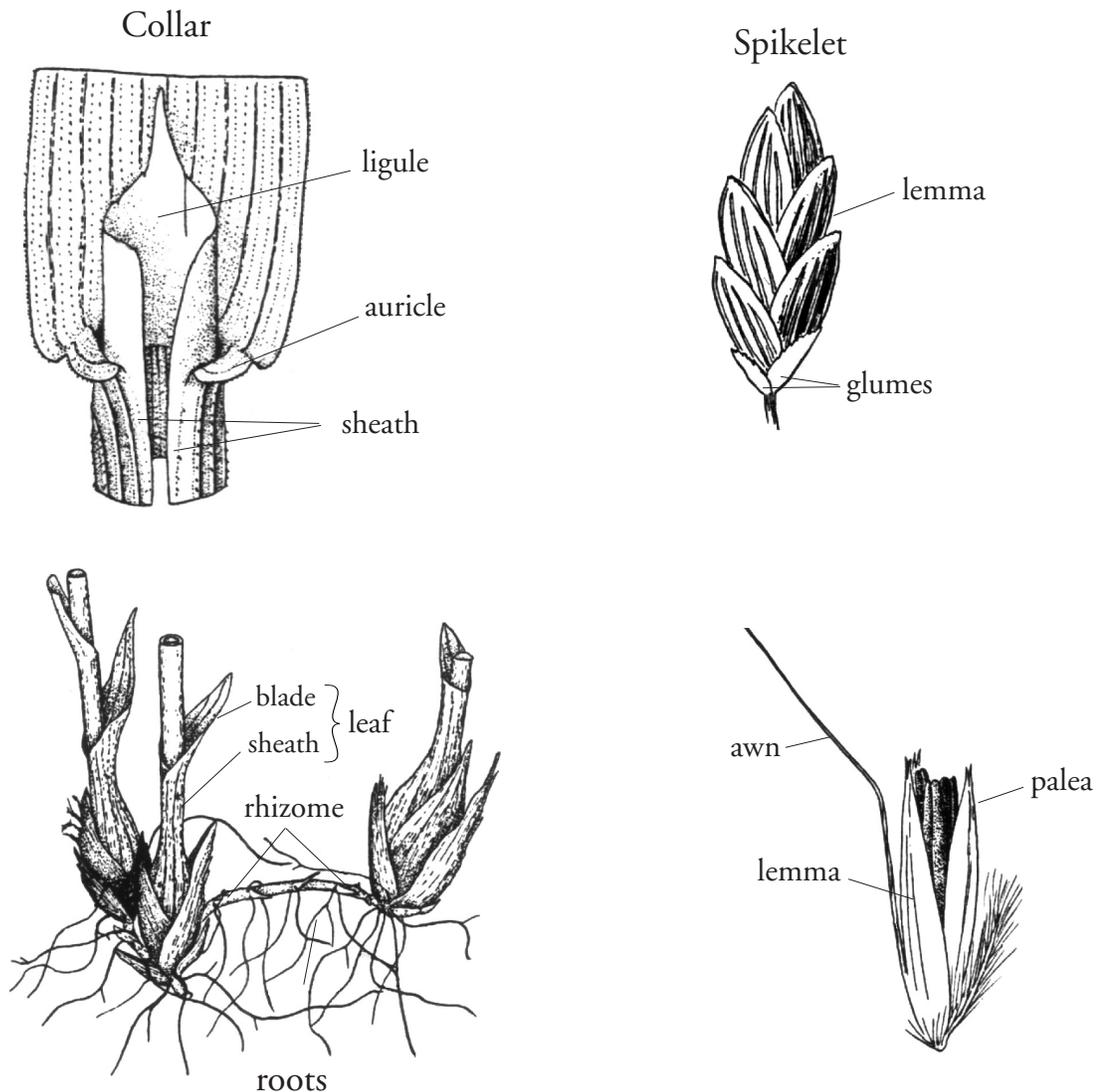
46b

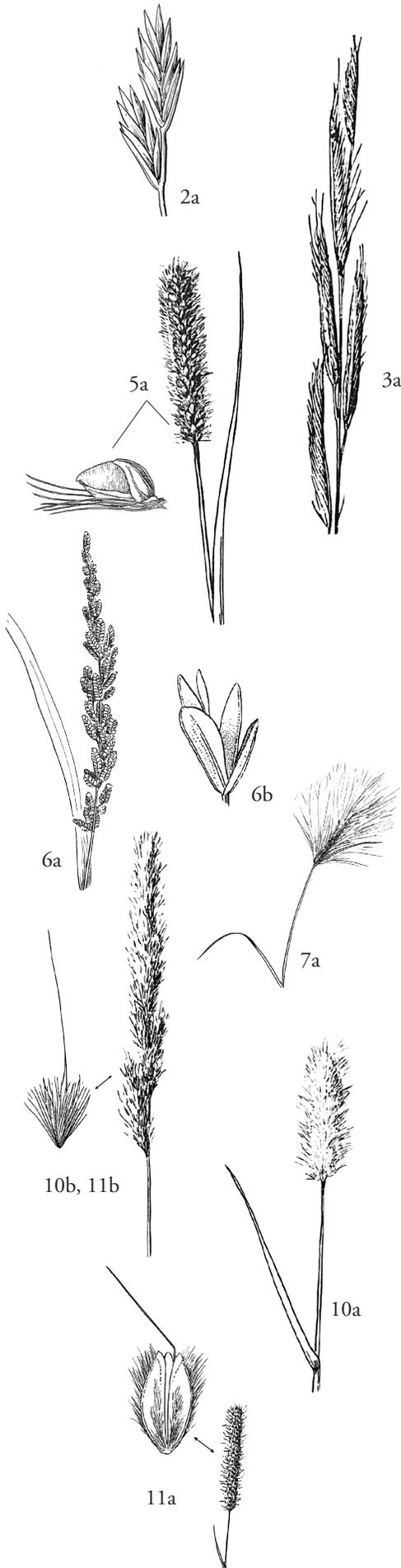
- 39a. Petals and sepals brownish or greenish and scale-like.....*Juncus* (see key to the species, p. 66)
- 39b. Petals and sepals more fleshy, petal-like and colorful.....40
- 40a. Petals >5 cm long.....*Lilium*
- 40b. Flowers <4 cm long.....41
- 41a. Flowers borne in an open or dense inflorescence at the tip of the stem42
- 41b. Flowers borne in a more elongate inflorescence45
- 42a. Plants with gland-tipped hairs in or just below the inflorescence; inflorescence not umbrella-like (umbel)43
- 42b. Plants not glandular; inflorescence an umbel.....44
- 43a. Flowers and fruits >8; leaves erect; petals \leq 5 mm long*Tofieldia* (= *Triantha*)
- 43b. Flowers and fruits <8; leaves curved outward; petals larger.....*Tradescantia*
- 44a. Plant with an onion smell; stems arising from a bulb....*Allium*
- 44b. Plant lacking onion odor; stems from a rhizome*Butomus*
- 45a. Flowers bronze-colored; flowers and fruit pendent..... *Stenanthium* (= *Anticlea*)
- 45b. Flowers white or blue; flowers and fruits erect or spreading.....46
- 46a. Stems leafless; petals blue*Camassia*
- 46b. Stems with reduced leaves; petals white*Zigadenus* (includes *Toxicoscordion*)

Key 4A The Grasses

Members of the **Poaceae (Grass Family)** have leaves with a basal portion (sheath) that sheaths the stem and forms a small, hairy or membranous extension (ligule) where it joins the blade. The flowers are usually bisexual and composed of a canoe-shaped bract (lemma) enfolding at the base another, usually smaller bract (palea). Flowers are arranged in 2-sided spikelets. Each spikelet usually has 2 sterile canoe-like bracts (glumes) at the base. Lemmas, paleas, and glumes may have a needle-like awn arising from the back or tip. The fruit is a seed-like grain, often enclosed in the lemma and palea.

Grass plants increase vegetatively by forming new tillers at the base. Each tiller is a stem with 1 or more leaves. In species with erect tillers the plant will form tussocks or bunches of side-by-side stems (bunchgrasses). In other species some or all of the tillers grow horizontally. These horizontal tillers are rhizomes (under the ground) or stolons (above ground). Rhizomes give rise to erect tillers from their nodes. In rhizomatous or stoloniferous grasses the plants will be single or small tufts of tillers spaced throughout the surface of the ground (sod) rather than distinct large tussocks as in bunchgrasses.



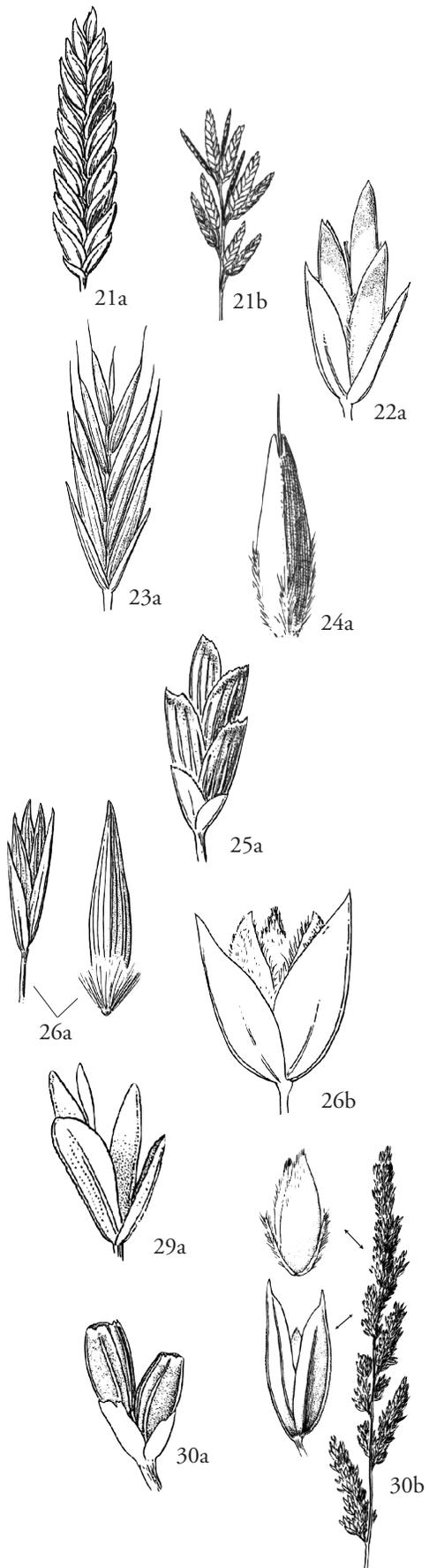


Phippsia algida and *Phleum alpinum* are found only at high elevations and are not included in the following key. *Trisetum orthochaetum* is very rare in Montana and is not included here.

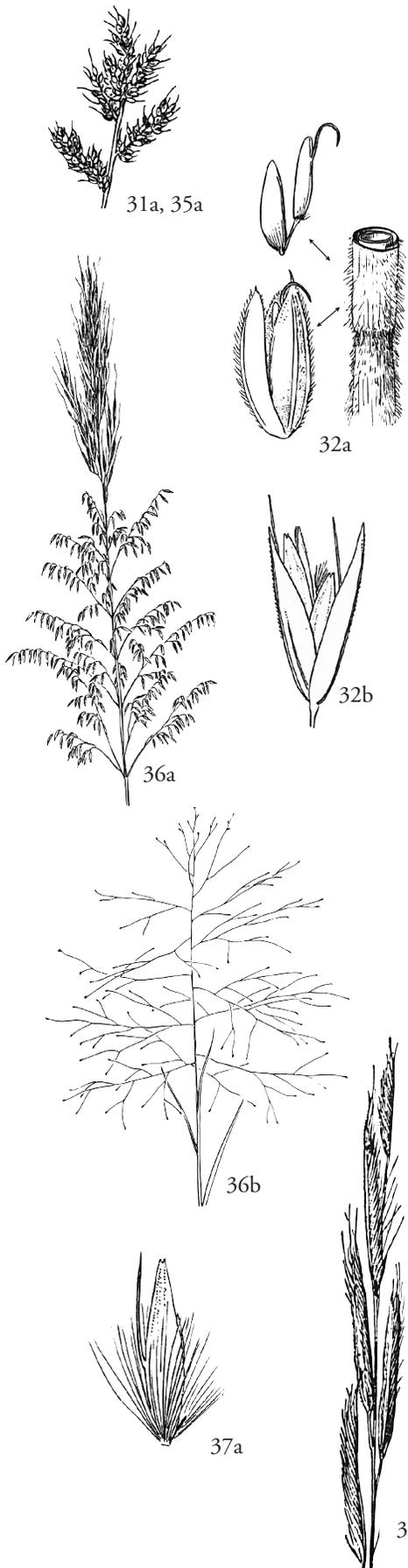
- 1a. Stalks of spikelets lacking or very short; inflorescence of one or more spikes or spike-like cluster(s)2
- 1b. Spikelets apparently stalked, not very tightly clustered; inflorescence more open and branched; branches erect or spreading.....13
- 2a. Spikelets turned edgewise to the rachis, lateral spikelets with only 1 glume *Lolium*
- 2b. Spikelets not turned edgewise, both glumes present3
- 3a. Inflorescence of erect, spike-like clusters; glumes with stiff hairs along the midvein; ligule a fringe of hairs..... *Spartina*
- 3b. Plants not with the above combination of characters4
- 4a. Lemmas and glumes without distinct awns5
- 4b. Lemmas, glumes or both with awns7
- 5a. Spikelets subtended by 3 or more barbed bristles..... *Setaria*
- 5b. Spikelets not subtended by barbed bristles.....6
- 6a. Spikelets 1-flowered; larger leaf blades >5 mm wide; glumes similar *Beckmannia*
- 6b. Spikelets 2-flowered; leaves <5 mm wide; one glume wider than the other *Sphenopholis*
- 7a. Spikelet of 1 fertile flower but >2 awn-like glumes *Hordeum*
- 7b. Each spikelet with >1 fertile flower or <3 awned glumes.....8
- 8a. Glumes hairy9
- 8b. Glumes smooth and hairless.....12
- 9a. Glumes with awns.....10
- 9b. Glumes unawned11
- 10a. Awns of glumes >5 mm..... *Polypogon*
- 10b. Awns of glumes <4 mm..... *Muhlenbergia*
- 11a. Awns arising from the middle of the lemma *Alopecurus*
- 11b. Lemmas awned from the tip..... *Muhlenbergia*



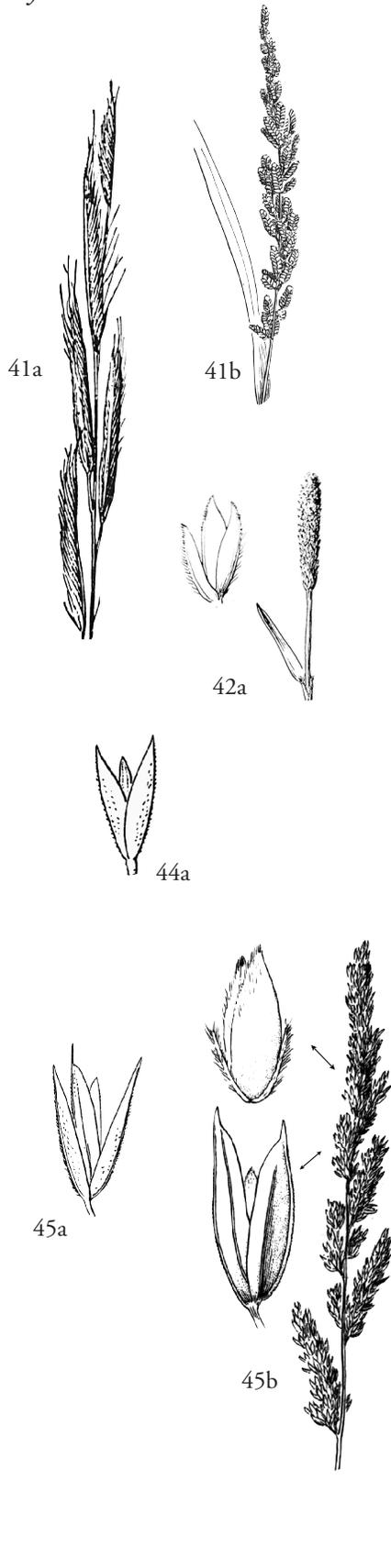
- 12a. Spikelets with 1 floret and 1 awn each; awns arising from middle of the lemma *Alopecurus*
- 12b. Spikelets with >1 floret or >1 awn; lemmas awned from the tip *Agropyron* (includes *Pascopyrum*) and *Elymus* (includes *Leymus* and *Psathyrostachys*)
- 13a. Spikelets with >2 florets 14
- 13b. Spikelets with 1 or 2 florets 27
- 14a. Spikelets with 3 florets, 1 fertile the other 2 reduced to linear, hairy segments; larger leaf blades > 7 mm wide *Phalaris*
- 14b. Plants without the above combination of characters 15
- 15a. Leaf sheaths fused around the stem most of their length.... 16
- 15b. Leaf sheaths open (edges not fused) at least 1/3 of their length..... 18
- 16a. Stems with bulb-like bases; stems smooth and hairless *Melica*
- 16b. Stem bases not bulb-like; stems hairy or not..... 17
- 17a. Stems hairless; both glumes 1-veined; veins of lemmas parallel to the tip *Glyceria*
- 17b. Stems hairy; 1 glume with at least 3 veins; veins of lemma converging at the tip *Bromus*
- 18a. Ligule of principle leaves at least partly a fringe of hairs; top of leaf sheaths (collar) often hairy 19
- 18b. Ligule membranous; collar hairless..... 22
- 19a. Lemmas awned 20
- 19b. Lemmas without awns 21
- 20a. Lemmas awned from the tip; awn straight; plant >1 m tall; inflorescence feathery with many spikelets..... *Phragmites*
- 20b. Awn arising from the sinus between apical teeth of the lemma; awn often twisted; inflorescence with few spikelets *Danthonia*



- 21a. Plant a fibrous-rooted annual *Eragrostis*
 21b. Plant a rhizomatous perennial *Distichlis*
- 22a. Upper leaf surface with parallel lines lengthwise along the midvein; leaf tip shaped like prow of a canoe *Poa*
 22b. Leaves without “railroad tracks” or canoe-shaped tips 23
- 23a. Ligule higher on the edges than in the middle, and/or leaf sheath with 2 ear-like appendages (auricles) at the top (collar) where the edges separate *Festuca* (includes *Schedonorus*)
 23b. Ligule not higher on the edges and collar without auricles 24
- 24a. Plant annual; lemmas awned from between a minutely 2-toothed apex; inflorescence partly enclosed by the upper leaf *Leptochloa* (= *Diplachne*)
 24b. Plant perennial; lemmas not awned 25
- 25a. Both glumes shorter than the lowest lemma; veins of lemma parallel to the tip *Puccinellia* (includes *Torreyochloa*)
 25b. At least 1 glume longer than the lowest lemma; veins of lemma converging toward the tip 26
- 26a. Only 1 glume as long as the lowest lemma; lemma long-hairy below but hairless above *Scolochloa*
 26b. Both glumes longer than the lowest lemma; lemma short-hairy all over *Hierochloa* (= *Anthoxanthum*)
- 27a. Most spikelets with 2 florets 28
 27b. Spikelets with 1 floret or apparently so 33
- 28a. Lemmas without awns 29
 28b. Lemmas awned 31
- 29a. One glume obviously broader at the tip than the other *Sphenopholis*
 29b. Glumes similar 30
- 30a. Glumes shorter than the lemmas; stems <1 m long, often prostrate at the base *Catabrosa*
 30b. Glumes longer than the lemmas; stems erect, usually > 1 m high *Phalaris*



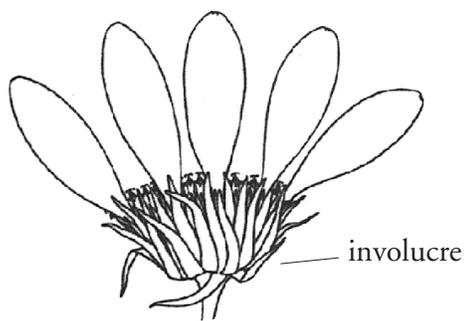
- 31a. Glumes smaller than lemmas, with bristly hairs; ligule absent *Echinocloa*
- 31b. Glumes without bristly hairs, at least 1 as long as the lemmas; ligules membranous 32
- 32a. Ligule short and blunt; plant hairy; lower lemma unawned *Holcus*
- 32b. Ligule long and pointed; plant hairless; both lemmas awned *Deschampsia* (includes *Vahlodea*)
- 33a. Lemmas with awns 34
- 33b. Lemmas without awns 40
- 34a. Both glumes smaller than the lemma or lacking 35
- 34b. At least 1 glume as long or longer than the lemma 37
- 35a. Ligule absent *Echinocloa*
- 35b. Membranous ligule present 36
- 36a. Plants >1 m tall, usually in standing water *Zizania*
- 36b. Plants shorter *Muhlenbergia*
- 37a. Florets with tuft of hair at the base, at least 1/4 as long as the lemma *Calamagrostis*
- 37b. Florets without basal tuft of long hair 38
- 38a. Inflorescence of erect, spike-like clusters; ligule a fringe of hair *Spartina*
- 38b. Florets not in spike-like clusters 39
- 39a. Leaf blades >7 mm wide *Cinna*
- 39b. Leaf blades <7 mm wide *Agrostis* (includes *Podagrostis*)
- 40a. Inflorescence of stalked spikes, each composed of tightly clustered florets [41](#)
- 40b. Florets not so tightly clustered [42](#)



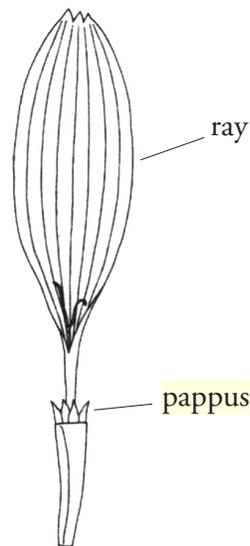
- 41a. Ligules a fringe of hairs; glumes with stiff hairs along the midvein..... *Spartina*
- 41b. Ligules membranous; glumes mostly glabrous... *Beckmannia*
- 42a. Upper leaf sheaths conspicuously inflated *Crypsis* (= *Heleochoa*)
- 42b. Leaf sheaths not as above43
- 43a. At least 1 glume as long or longer than the lemma44
- 43b. Both glumes shorter than the lemma or lacking46
- 44a. Leaf blades <7 mm wide..... *Agrostis* (includes *Podagrostis*)
- 44b. Blades of some leaves >7 mm wide45
- 45a. Some lemmas with a short awn; branches of inflorescence widely spreading *Cinna*
- 45b. Lemma unawned; inflorescence congested.....*Phalaris*
- 46a. Glumes lacking; lemmas bristly-hairy.....*Leersia*
- 46b. Glumes present; lemmas not bristly47
- 47a. Some leaves >5 mm wide *Panicum* (includes *Dichanthelium*)
- 47b. Leaves <4 mm wide.....48
- 48a. Ligule of hairs; leaf blade hairy just above and around the ligule.....*Sporobolus*
- 48b. Ligule membranous; leaf blade not as above*Muhlenbergia*

Key 5 Emergent Dicots

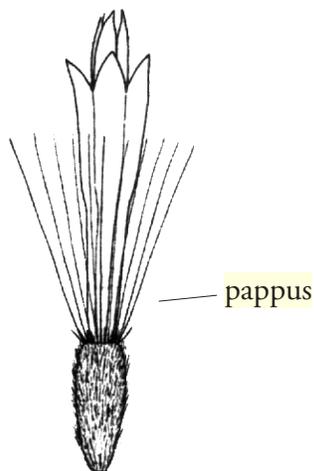
In the **Asteraceae (Sunflower Family)** the flowers are clustered in heads on a common receptacle, tightly surrounded by a cup- or tube-like involucre of papery to leaf-like bracts in 1 to many series of different heights. The corolla can be tubular and 5-lobed (disk flower) or strap-like (ray flower). The calyx is modified into a pappus of bristles, scales or lacking. The flower heads are often mistaken for flowers. Flower heads are of 3 types: (1) dandelion-like — all flowers have strap-shaped corollas, (2) thistle-like — all flowers have tubular corollas, and (3) aster-like — central flowers are tubular and outer are strap-shaped. The involucre bracts and pappus are important characters for delineating genera.



Head

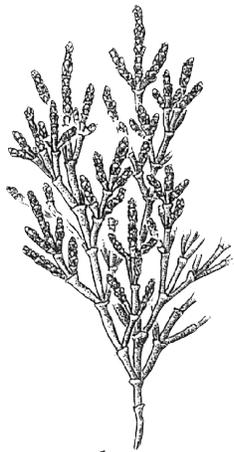


Ray Flower

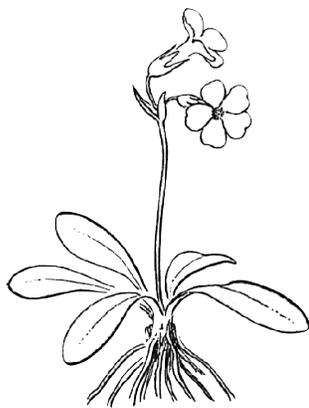


Disk Flower

Key 5: Emergent Dicots



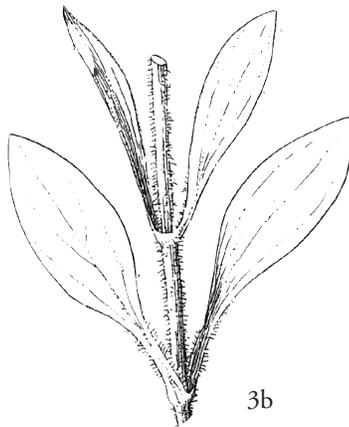
1a



2a



3a



3b

Campanula parryi, *C. uniflora*, *Erigeron humilis*, *Gentiana algida*, *G. glauca*, *Gentianella propinqua*, *G. tenella*, *Parnassia kotzebuei*, *Potentilla drummondii*, *Primula parryi*, *Ranunculus adoneus*, *Veronica cusickii* and *V. wormskjoldii* are strictly alpine or high subalpine and are not included here.

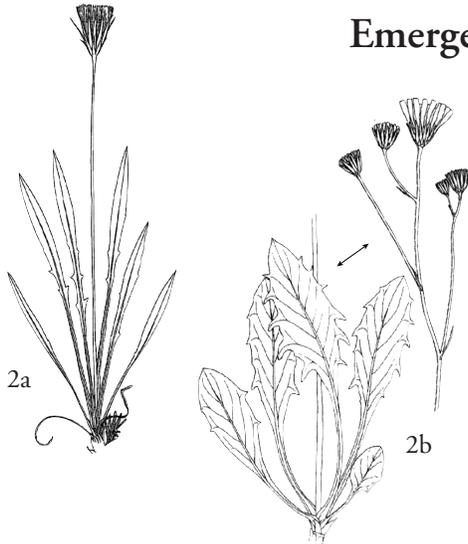
- 1a. Leaves reduced to scales or lacking; stems red and succulent.....*Salicornia*
- 1b. Leaves usually apparent; stems usually not red and succulent.....2
- 2a. Leaves all in a basal rosette, sometimes a small leaf-like bract occurs in the middle of the otherwise naked flowering stem[Key 5A \(p. 25\)](#)
- 2b. Leafy stems present3
- 3a. Lower leaves, leaf buds, and branches alternate on the stem ...4
- 3b. Lower leaves, leaf buds, and branches opposite or in whorls of 3 or more5
- 4a. Lower leaves divided into leaflets or lobed at least 1/3 of the way to the midrib.....[Key 5B \(p. 29\)](#)
- 4b. Lower leaves with entire (smooth) or toothed margins.....[Key 5C \(p. 36\)](#)
- 5a. Lower leaves divided into leaflets or with lobed or toothed margins.....[Key 5D \(p. 44\)](#)
- 5b. Lower leaves with entire (smooth) margins.....[Key 5E \(p. 48\)](#)

Key 5a

Emergent Dicots with leaves all basal

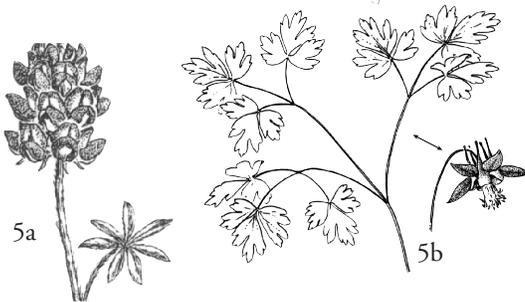
Oxytropis splendens and *Tiarella trifoliata* rarely occur in wetlands in Montana and are not included in this key.

- 1a. Sap milky; flowers in dandelion-like heads2
- 1b. Sap clear; flowers not dandelion-like3



- 2a. Flower heads solitary on stem tips *Agoseris*
- 2b. Flower heads >1 *Crepis*

- 3a. Leaves divided into leaflets or with lobed margins4
- 3b. Leaves with toothed to entire margins (heart-shaped leaves that appear lobed at the base are included here)9



- 4a. Leaves divided into distinct, short-stalked leaflets5
- 4b. Leaves lobed but not fully divided into leaflets6

- 5a. Leaflets all attached at their base to the end of the leaf stalk, like fingers on a hand (palmate)*Lupinus*
- 5b. Leaflets born on branches of the leaf*Aquilegia*



- 6a. Outline of leaf lance-shaped *Oenothera* or *Camissonia* (includes *Taraxia*)
- 6b. Leaf arrow-shaped or fan-shaped7

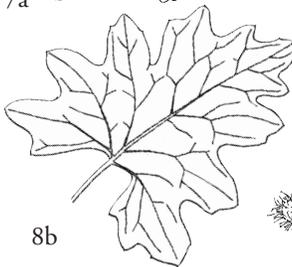
- 7a. Outline of leaf fan-shaped*Romanzoffia*
- 7b. Outline of leaf arrow-shaped8



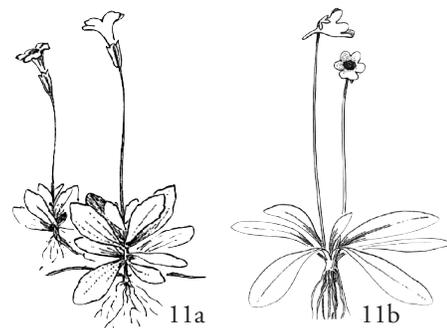
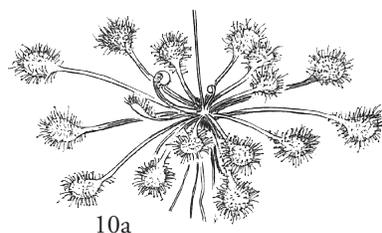
- 8a. Leaf blades <5 cm long..... *Ranunculus*
- 8b. Leaf blades >5 cm long.....*Petasites*

- 9a. Leaves sticky or slimy10
- 9b. Leaves not sticky or slimy.....[12](#)

- 10a. Leaves covered with purplish, sticky, gland-tipped hairs *Drosera*
- 10b. Leaves slimy on upper surface11

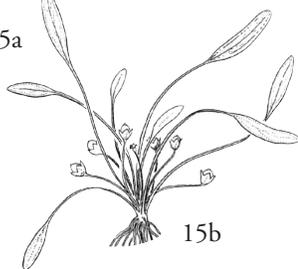


- 11a. Rosettes of close pairs of opposite leaves*Mimulus*
- 11b. Plants with true rosettes, leaves yellowish*Pinguicula*





15a



15b



16a



17a



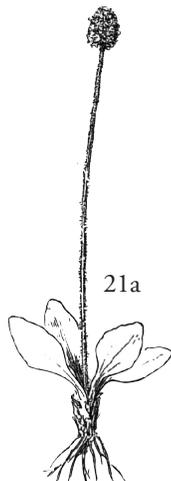
18a, 21b



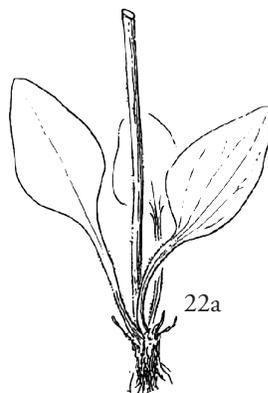
19a



19b



21a



22a

- 12a. Leaves with smooth, entire margins.....13
- 12b. Leaves with **toothed** or uneven margins.....**25**

- 13a. Flowers and fruits solitary on the stem14
- 13b. Many stems with >1 flower or fruit20

- 14a. Leaves <5 mm wide15
- 14b. Leaves >5 mm wide16

- 15a. Fruit a conical cluster of seeds.....*Myosurus*
- 15b. Seeds enclosed in a globose capsule.....*Limosella*

- 16a. **Rosettes** of close pairs of **opposite** leaves*Mimulus*
- 16b. Plants with true rosettes.....17

- 17a. Flower stems weak and lax *Hesperochiron*
- 17b. Flower stems erect18

- 18a. Leaf blades strap- to narrowly lance-shaped *Dodecatheon*
- 18b. Leaf blades elliptic to heart-shaped19

- 19a. Stems without a **bract** at midstem *Caltha*
- 19b. Stems with a small leaf-like **bract** in the middle*Parnassia*

- 20a. **Petioles** <1/4 length of **blade**, indistinct, or lacking21
- 20b. Leaves with distinct petioles >1/3 length of the blade22

- 21a. Stems with **gland-tipped** hairs..... *Saxifraga* or *Micranthes*
- 21b. Stems without glandular hairs *Dodecatheon*

- 22a. Stems with **gland-tipped** hairs..... *Saxifraga* or *Micranthes*
- 22b. Stems without **gland-tipped** hairs**23**



23a. Flowers without stalks in a narrow, spike-like inflorescence *Plantago*

23b. Flowers stalked 24

24a. Leaves strap- or narrowly lance-shaped *Dodecatheon*

24b. Leaves wider, elliptic to egg-shaped in outline *Pyrola*

25a. Flowers solitary 26

25b. Some stems with >1 flower 29

26a. Stems erect 27

26a. Stems lax and arching, not erect 28

27a. Leaf blades heart-shaped at the base *Caltha*

27b. Leaf blades rounded to the petiole ... *Pyrola* (includes *Moneses*)

28a. Leaf blades strap- to narrowly lance-shaped *Camissonia* (includes *Taraxia*) or *Oenothera*

28b. Leaf blades elliptic to fan-shaped (violets) *Viola*

29a. Inflorescence open and hemispheric; flower stalks like the spokes of an umbrella 30

29b. Inflorescence not both open and hemispheric 31

30a. Leaf blades >5 cm long *Petasites*

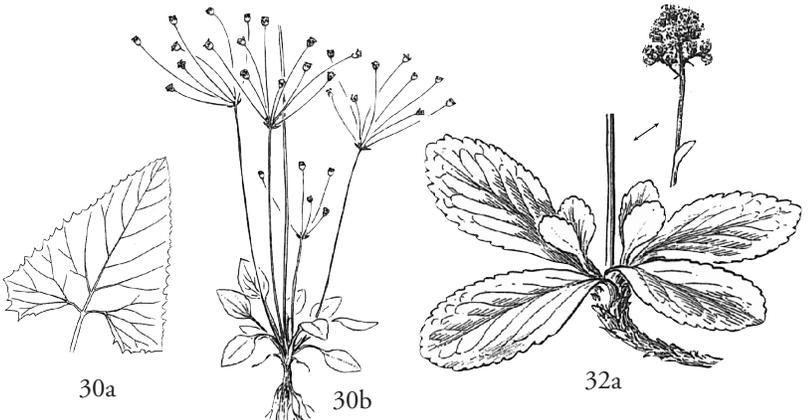
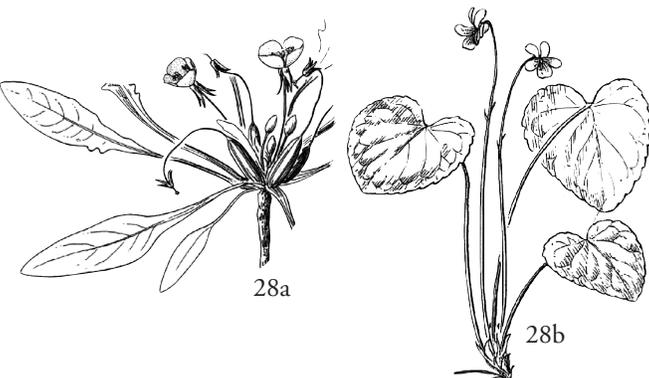
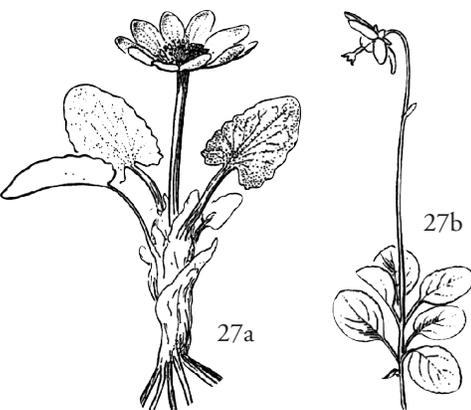
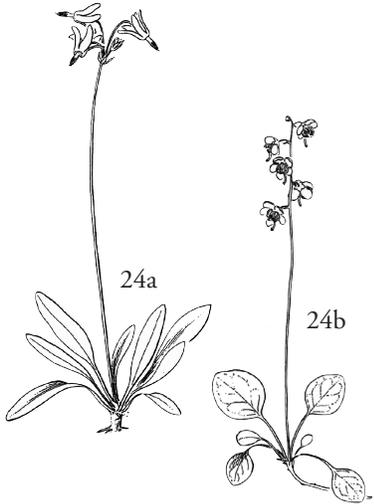
30b. Leaf blades smaller *Androsace*

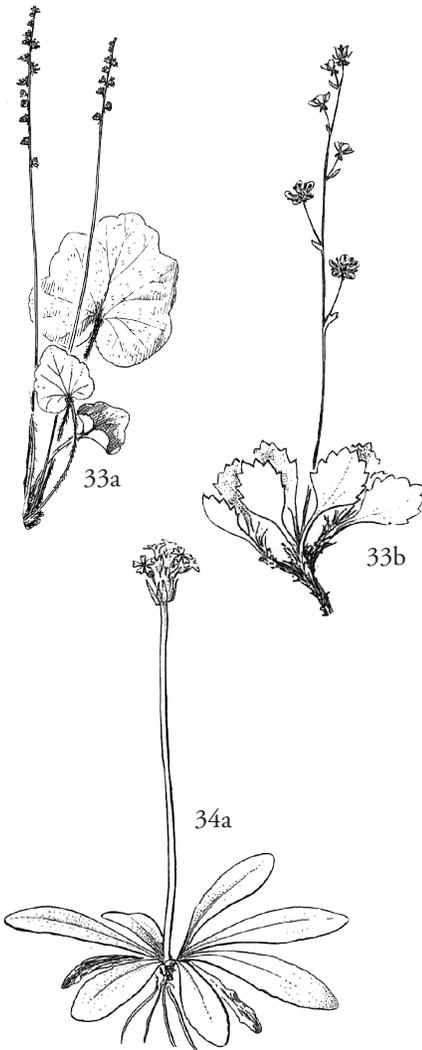
31a. Stems with gland-tipped hairs 32

31b. Stems without glandular hairs, mostly hairless 34

32a. Stems with a small leaf-like bract at midlength ... *Leptarrhena*

32b. Stems without a leafy bract at midlength 33





33a. Flowers well-separated in a narrow, unbranched inflorescence *Mitella* (includes *Mitellastra*, *Ozomelis*, *Pectiantia*)

33b. Flowers in 1 to several clusters or in an open, branched inflorescence..... *Saxifraga* or *Micranthes*

34a. Leaves powdery-white beneath.....*Primula*

34b. Leaves not white beneath.....35

35a. Fruit a cylindrical cluster of seeds..... *Ranunculus*

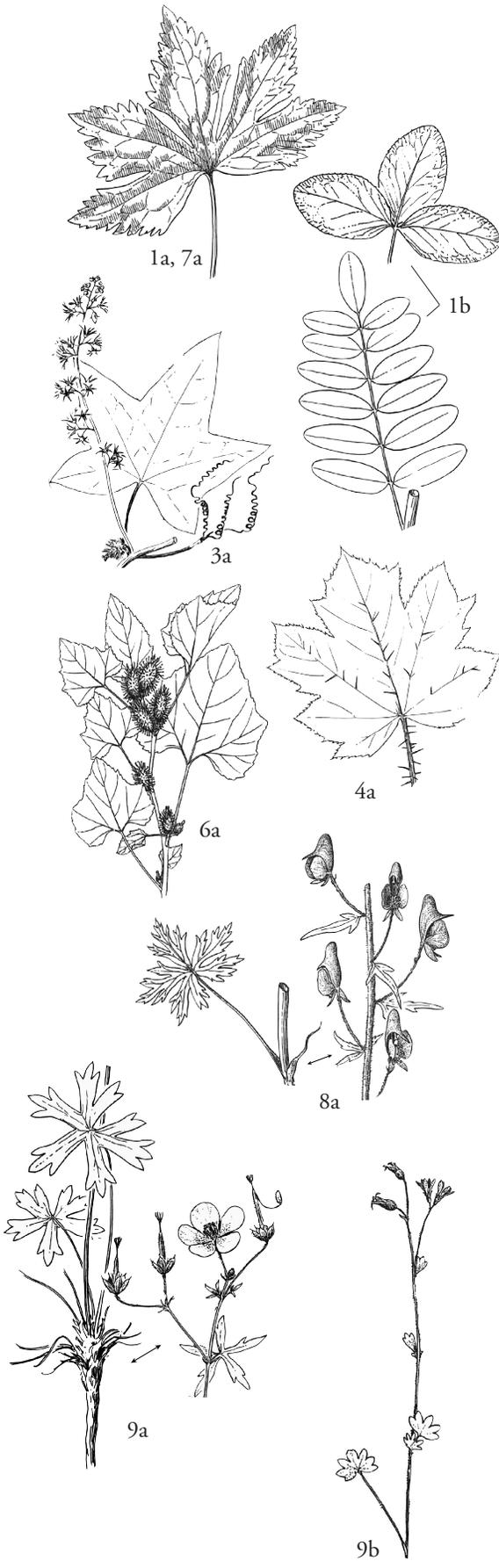
35b. Fruit a pumpkin-shaped capsule enclosing the seeds....*Pyrola*



Key 5B

Emergent Dicots, lower leaves alternate and lobed or divided

Actaea rubra does not occur in the Arid West portion of Montana; *Sullivantia hapemanii* occurs only on wet cliffs in Bighorn Canyon; *Vicia americana*, *Sinapis alba* and *Phacelia heterophylla* rarely occur in wetlands in Montana; these are not included in the keys.



- 1a. Lowest leaves lobed but the divisions not extending all the way to the midrib.....2
- 1b. Lowest leaves divided into leaflets or lobed to the midrib or nearly so.....20
- 2a. Lowest leaf blades fan-shaped in outline, nearly as wide or wider than long.....3
- 2b. Lowest leaf blades strap- to arrow-shaped, definitely longer than wide.....11
- 3a. Plants vine-like with spiraling tendrils at branch tips..... *Echinocystis*
- 3b. Plants not vine-like.....4
- 4a. Stem and leaves with stiff spines..... *Oplonanax*
- 4b. Plants not stiff-spiny.....5
- 5a. Plants with crystal-like glands or gland-tipped hairs in the inflorescence.....6
- 5b. Plants without glands.....10
- 6a. Lowest leaf blades lobed ca. 1/3 the way to the midvein; fruit with hooked bristles.....*Xanthium*
- 6b. Lowest leaf blades lobed at least 1/2 way to the midvein.....7
- 7a. Stems arising from spreading rhizomes..... *Trautvetteria*
- 7b. Plants with branched or fibrous roots, not rhizomatous.....8
- 8a. Stems hollow; flowers hood-shaped..... *Aconitum*
- 8b. Stems solid; flowers dish- or vase-shaped.....9
- 9a. Upper root woody, without rice-like bulbs.....*Geranium*
- 9b. Upper root scarcely woody; bulbs usually present..... *Suksdorfia* (includes *Hemieva*)

Key 5B: Dicots with Alternate, Divided Leaves

10a. Leaves without hair or with straight hairs *Ranunculus*

10b. Leaves with star-shaped hairs..... *Sidalcea* or *Illiamna*

11a. Vine with weak, climbing stems, often woody at the base..... *Solanum*

11b. Plants not vines, often with erect stems 12

12a. Sap milky; flowers in dandelion-like heads 13

12b. Sap clear; flowers not dandelion-like 14

13a. Flower heads with ≤55 flowers or seeds *Lactuca*

13b. Flower heads with >80 flowers or seeds *Sonchus*

14a. Leaves somewhat thick and juicy; white flakes on stems or lower leaf surfaces (Family Chenopodiaceae) 15

14b. Leaves not succulent, sometimes white-hairy but without white flakes 17

15a. Seeds enclosed by a pair of triangular bracts *Atriplex*

15b. Seeds enclosed by a 1- or 5-parted calyx 16

16a. Calyx of 1 bract-like segment..... *Monolepis*

16b. Seeds enclosed in a 5-lobed calyx *Chenopodium*

17a. Leaves densely white-hairy at least beneath..... *Artemisia*

17b. Leaves sparsely hairy or without hair 18

18a. Flowers in aster-like heads; seeds with long bristles.... *Senecio*

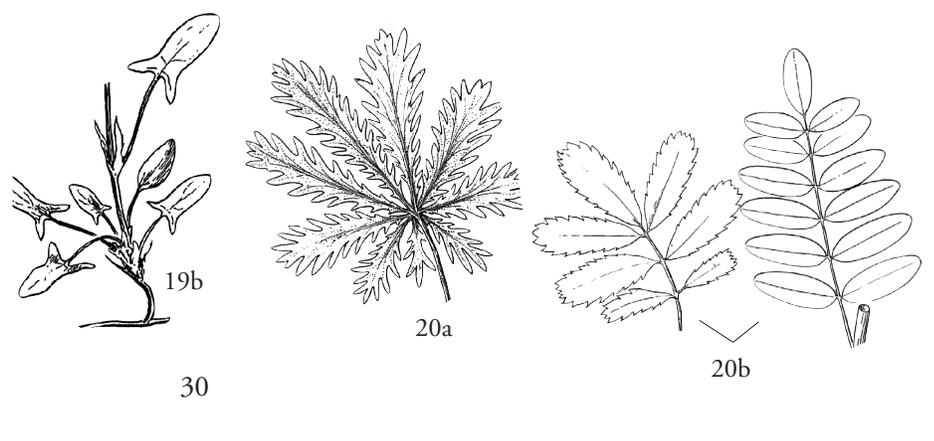
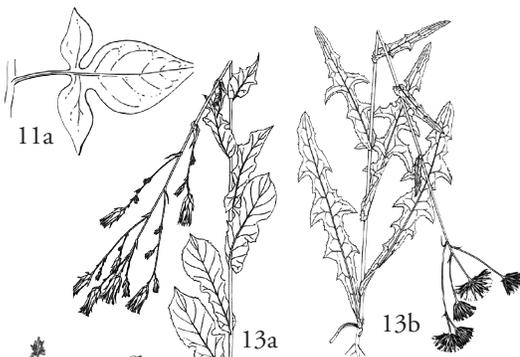
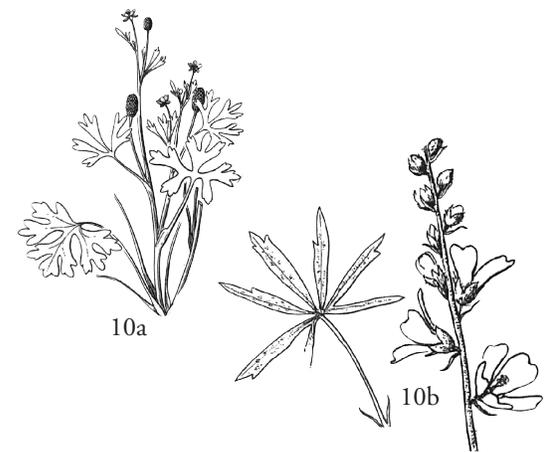
18b. Flowers not aster-like; seeds and fruits without long bristles..... 19

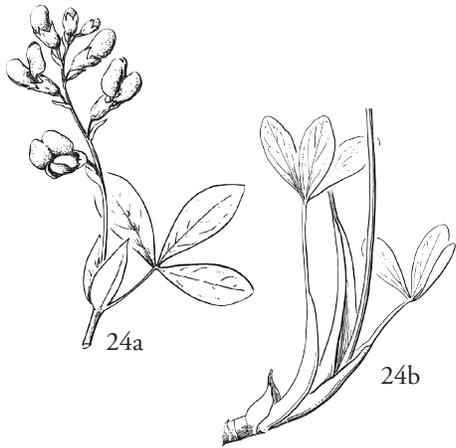
19a. Leaves evenly lobed along the margins *Rorippa*

19b. Leaves lobed only near the base *Rumex*

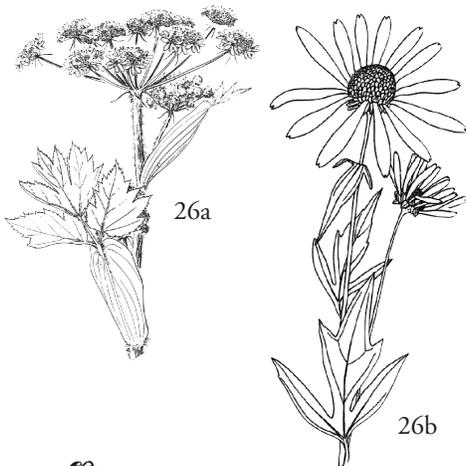
20a. Lower leaves with 3 or more divisions arranged like the fingers of a hand (palmate) 21

20b. Lower leaves pinnately divided or lobed (lobes >3)..... 42

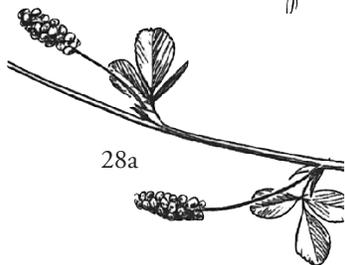




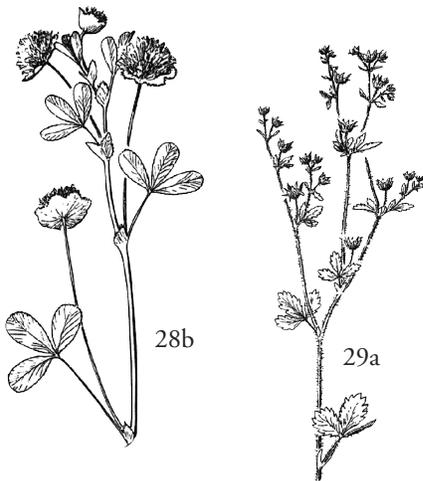
- 21a. Leaves divided into leaflets joined to the leaf axis by a short stalk22
- 21b. Leaves lobed to the midrib or nearly so but not divided into distinctly stalked leaflets34
- 22a. Leaflets 323
- 22b. Leaves with >3 leaflets31
- 23a. Leaflets with entire margins.....24
- 23b. Leaflets with toothed or lobed margins.....25



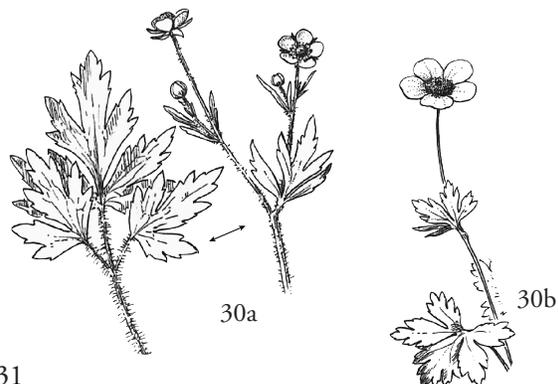
- 24a. Stipules (wing-like appendages where petiole attaches to stem) present..... *Thermopsis*
- 24b. Stipules absent; plants usually growing in saturated peat..... *Menyanthes*
- 25a. Plants usually >70 cm tall.....26
- 25b. Plants <70 cm tall27



- 26a. Leaf stalks with dilated bases (like celery stalks) *Heracleum*
- 26b. Leaf stalks little expanded at the base *Rudbeckia*
- 27a. Flowers and fruits in head-like clusters28
- 27b. Flowers and fruits long-stalked.....29



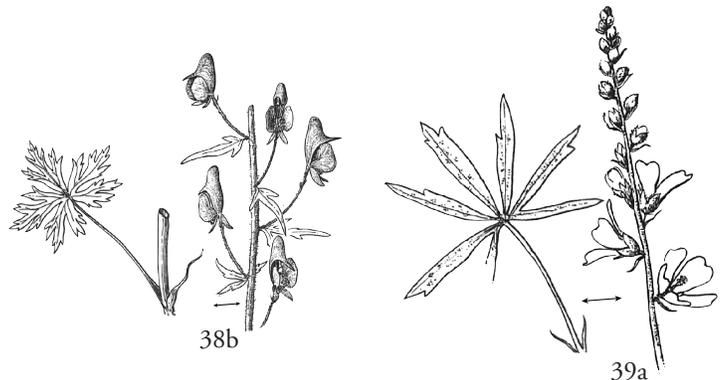
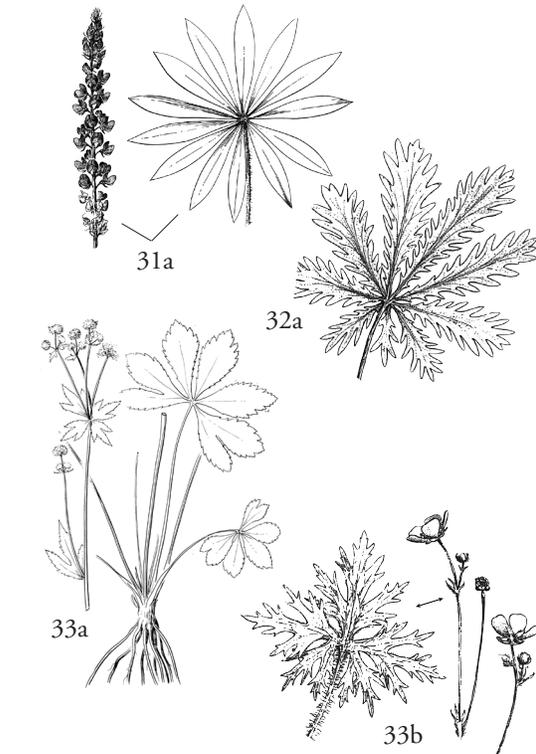
- 28a. Flowers yellow..... *Medicago*
- 28b. Flowers white, pink or purple..... *Trifolium*
- 29a. Leaflets shallowly to deeply toothed but not lobed; stipules present *Potentilla*
- 29b. Leaflets lobed as well as toothed; stipules absent.....30



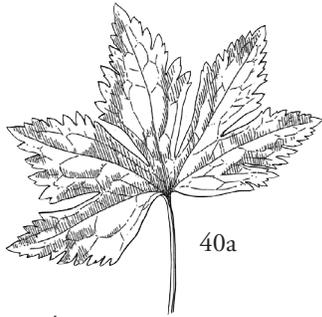
- 30a. Fruit a globose to cylindrical cluster of seeds (achenes)..... *Ranunculus*
- 30b. Fruit cup-shaped, divided into many chambers, each opening at the top *Trollius*

Key 5B: Dicots with Alternate, Divided Leaves

- 31a. Leaflets with entire margins.....*Lupinus*
- 31b. Leaflets with toothed or lobed margins.....32
- 32a. Leaflets toothed or shallowly lobed..... *Potentilla* (including *Drymocallis*)
- 32b. Leaflets deeply lobed as well as toothed33
- 33a. Inflorescence an umbel *Sanicula*
- 33b. Inflorescence a panicle, not an umbel *Ranunculus*
- 34a. Leaves lance-shaped, longer than wide, lobed only at the base.....35
- 34b. Leaves lobed all around, nearly as wide or wider than long36
- 35a. Plants with lax, twining stems; fruit a berry.....*Solanum*
- 35b. Stems erect or ascending, not twining; fruit a long capsule *Cardamine*
- 36a. Plants with crystal-like glands or gland-tipped hairs in the inflorescence37
- 36b. Plants without glands in the inflorescence39
- 37a. Stems not at all hollow; inflorescence not long and slender*Geranium*
- 37b. Stems hollow at least at the base; inflorescence long and slender38
- 38a. Flowers with a conical spur >1 cm long projecting backward.....*Delphinium*
- 38b. Flowers hood-like but without a spur..... *Aconitum*
- 39a. Leaves with star-shaped hairs.....*Sidalcea*
- 39b. Leaves with straight hairs or hair lacking.....40



- 40a. Plants arising from spreading rhizomes..... *Trautvetteria*
- 40b. Plants fibrous-rooted, without rhizomes.....41



- 41a. Fruit a globose to cylindrical cluster of seeds (achenes)..... *Ranunculus*
- 41b. Fruit cup-shaped, divided into 3 chambers, each opening at the top*Delphinium*

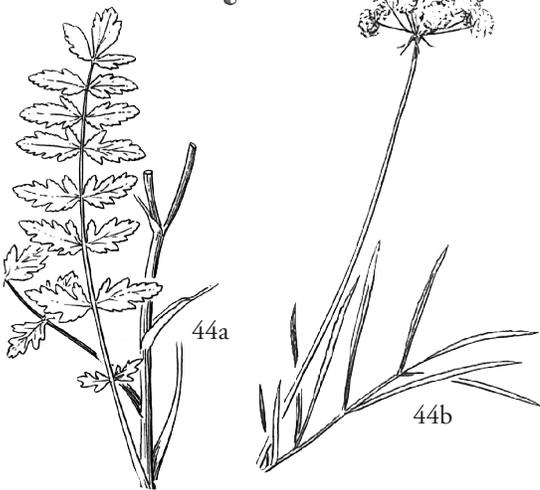


- 42a. Lower portion of leaf petiole dilated with parallel veins (like the base of a celery stalk); branches of the inflorescence all united at their bases like the spokes of an umbrella (Family Apiaceae).....43
- 42b. Inflorescence not an umbel; leaf petioles little expanded at the base (sometimes leaf-like bases clasp the stem but they do not have parallel veins)49



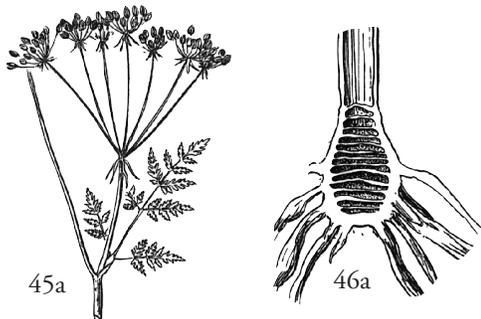
- 43a. Lowest leaves only once divided into toothed or lobed leaflets (once pinnate).....44
- 43b. Lowest leaf divisions divided again into lobed or toothed leaflets (twice pinnate).....45

- 44a. Leaflets lance-shaped, some lobed *Berula*
- 44b. Leaflets linear, >5 times as long as wide, merely toothed *Sium*

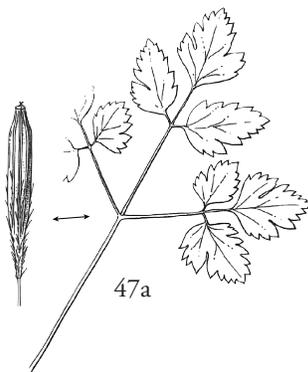


- 45a. Lower portion of stem purple-spotted..... *Conium* (poisonous)
- 45b. Stems not spotted.....46

- 46a. Base of stem widened with hollow chambers or plant bearing purplish bulblets in the inflorescence.... *Cicuta* (poisonous)
- 46b. Plants without bulblets; stem base not much widened or with hollow chambers47



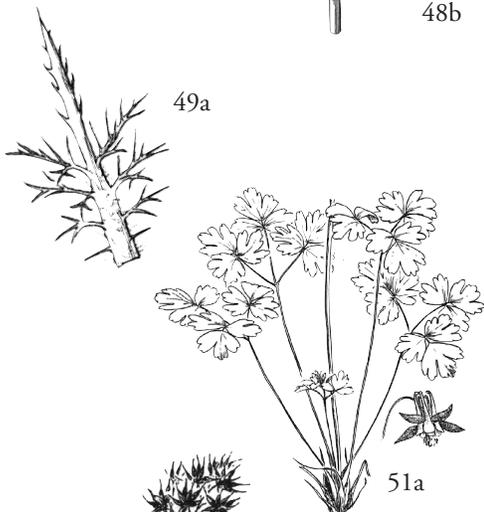
- 47a. Fruit club-shaped, 4-5 times as long as wide.....*Osmorbiza*
- 47b. Fruit elliptic in outline, 1-3 times as long as wide.....48



Key 5B: Dicots with Alternate, Divided Leaves



- 48a. Fruit nearly round in cross-section *Ligusticum*
- 48b. Fruit flattened *Angelica* or *Conioselinum*



- 49a. Leaves with needle-like, spine-tipped lobes..... *Navarettia*
- 49b. Leaves wider and not spine-tipped50

- 50a. Lowest leaf divisions 1 or 2 times again divided into stalked leaflets51
- 50b. Lowest leaves only once divided into lobes or leaflets that may be lobed or toothed but not stalked52

- 51a. Flowers with showy petals; fruit cup-shaped, composed of segments united almost to their tips *Aquilegia*
- 51b. Flowers without petals; fruit of seed-like achenes united only at their base..... *Thalictrum*

- 52a. Leaflets or primary lobes of the lowest leaves with smooth margins53
- 52b. Leaflets or primary lobes with ragged or toothed margins57

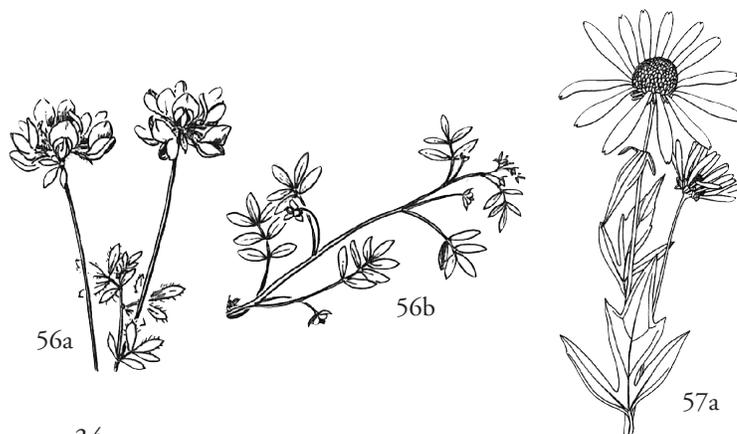
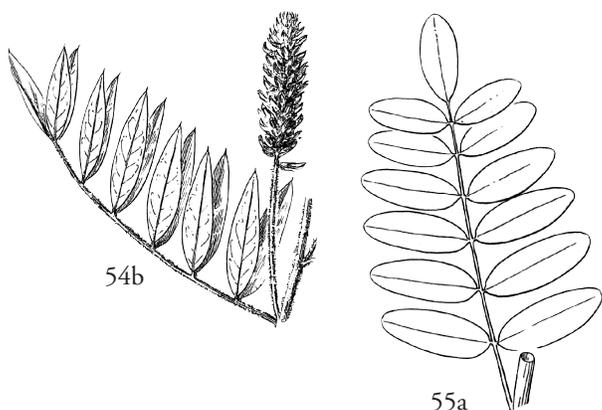
- 53a. Leaves and stems with crystal-like glands or gland-tipped hairs54
- 53b. Herbage not glandular55

- 54a. Flowers saucer-shaped; fruit a smooth capsule... *Polemonium*
- 54b. Flowers pea-like; fruits with hooked bristles *Glycyrrhiza*

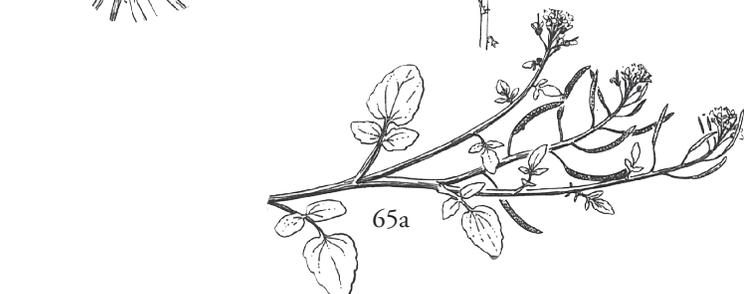
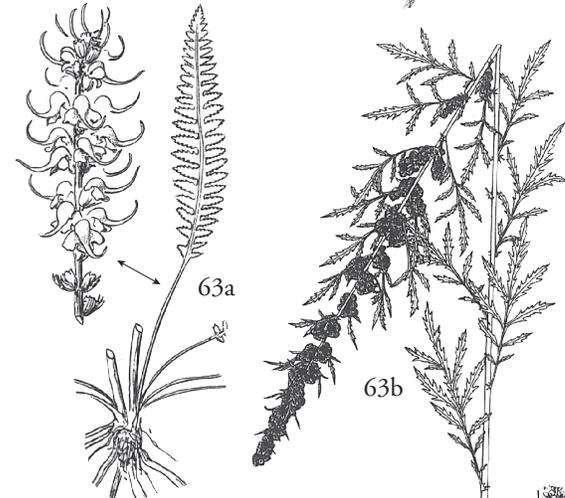
- 55a. Stems erect, plants mostly >20 cm high..... *Astragalus*
- 55b. Stems lax and trailing or ascending.....56

- 56a. Leaflets hairy at the base on the margin..... *Lotus*
- 56b. Plants succulent and hairless *Floerkia*

- 57a. Plants ≥1 m tall; flowers sunflower-like *Rudbeckia*
- 57b. Plants usually <1 m tall; flowers not like sunflowers58



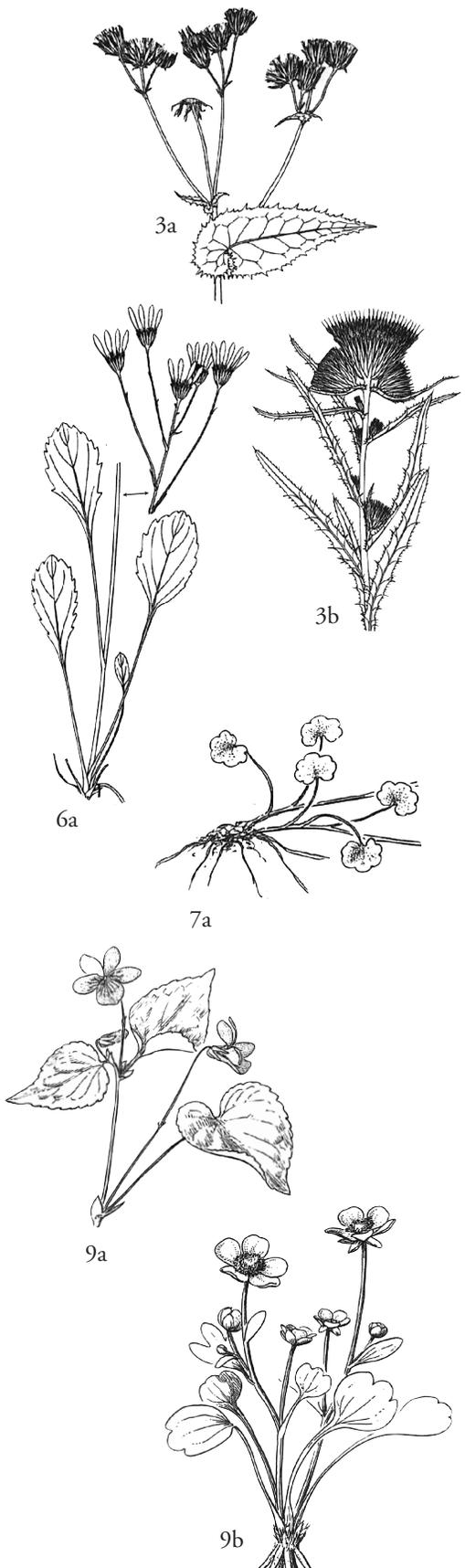
- 58a. Leaves sparsely to densely hairy (sometimes only on the veins)59
- 58b. Leaves hairless62
- 59a. Stem leaves without stipules *Rorippa*
- 59b. Base of leaf stalk with leaflet-like stipules that clasp the stem60
- 60a. Inflorescence narrow and spike-like *Agrimonia*
- 60b. Inflorescence branched and open61
- 61a. Seeds (achenes) hairy; terminal leaflet usually wider than the ones below *Geum*
- 61b. Seeds without hair; terminal leaflet about as wide as the ones below *Potentilla* (includes *Drymocallis*)
- 62a. Inflorescence with leaf-like bracts among the flowers or flower clusters63
- 62b. Flowers not subtended by bracts (Family Brassicaceae)64
- 63a. Perennial; cluster of basal leaves present with flowering and fruiting stems *Pedicularis*
- 63b. Biennial; basal leaves absent from flowering and fruiting stems *Artemisia*
- 64a. Flowers white65
- 64b. Flowers yellow66
- 65a. Stems lax and trailing, usually in water *Nasturtium*
- 65b. Stems erect or ascending *Cardamine*
- 66a. Fruits >15 mm long, erect, (i.e., almost vertical) *Barbarea*
- 66b. Fruits <15 mm long, spreading or arching out and up *Rorippa*



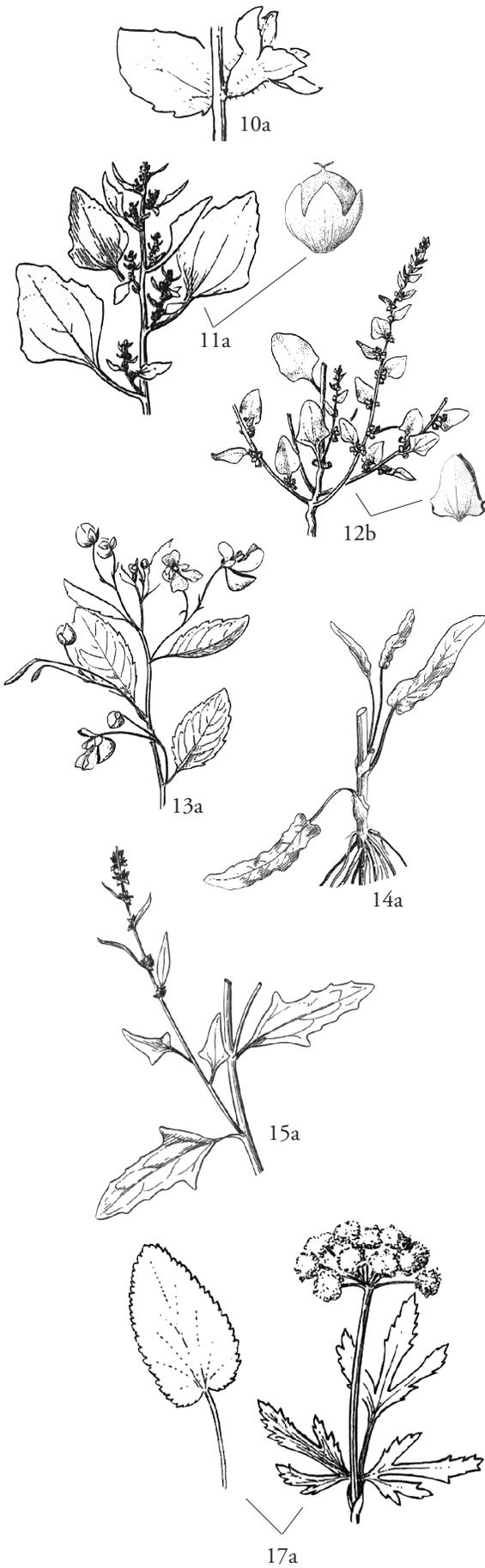
Key 5C

Emergent Dicots, lower leaves alternate with entire or toothed margins

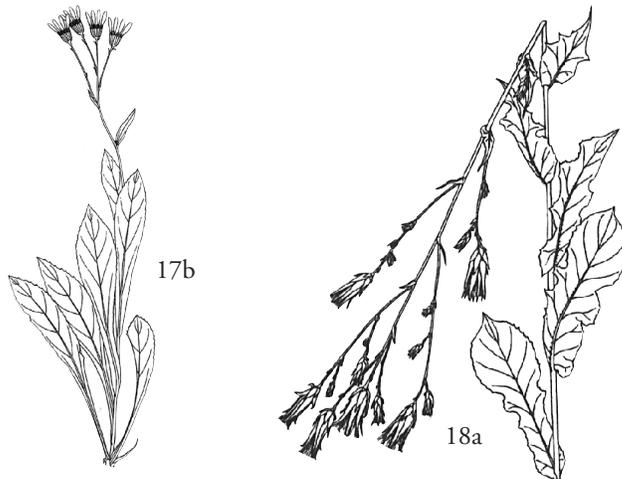
Calystegia sepium, *Cordylanthus ramosus*, *Dieteria canescens*, *Euphorbia spathulata*, *Gayophytum humile*, *G. racemosum*, *Lepidium appelianum* and *Parietaria pennsylvanica* rarely occur in wetlands in Montana; *Wyethia amplexicaulis* does not occur in the Arid West portion of Montana; *Bergia texana*, *Hymenoxys hoopsii*, *Verbesina encelioides* and *Prenanthes racemosa* are very rare in Montana; they are not included in the key.



- 1a. Lower leaves with toothed, shallowly lobed or spiny margins2
- 1b. Lower leaves with entire margins (margins sometimes wrinkled)[35](#)
- 2a. Leaves with spines on midveins or margins3
- 2b. Leaves not spiny4
- 3a. Plants with milky sap *Sonchus*
- 3b. Plants with clear sap *Cirsium*
- 4a. Plants essentially without hair below the inflorescence (herbage may be mealy with white flakes)5
- 4b. Plants with some hair on leaves or stems[24](#)
- 5a. Lower leaf blades round to triangular in outline, as wide as long or nearly so6
- 5b. Lower leaf blades linear to lance-shaped or elliptic, longer than wide[13](#)
- 6a. Flowers yellow, clustered in aster-like heads *Senecio* (includes *Packera*)
- 6b. Flowers not aster-like7
- 7a. Stems prostrate *Chrysoplenium*
- 7b. Stems erect or lax but not prostrate8
- 8a. Flowers few, long-stalked in a terminal inflorescence9
- 8b. Flowers without stalks, born in upper leaf axils[10](#)
- 9a. Flowers violet-shaped; seeds contained in a 3-parted capsule *Viola*
- 9b. Flowers saucer-shaped; seeds born in a globose cluster *Ranunculus* (includes *Cyrtorhyncha*)

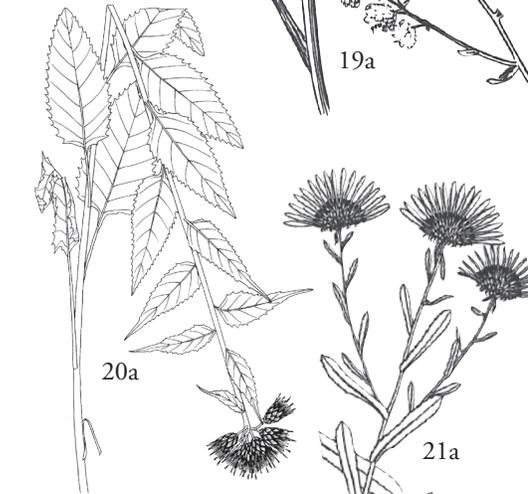


- 10a. Flowers solitary in upper leaf axils *Heterocodon*
 10b. Flowers in dense clusters in upper leaf axils (Family Chenopodiaceae) 11
- 11a. Seeds enclosed in the 5-lobed calyx *Chenopodium*
 11b. Seeds enclosed in a pair of triangular bracts 12
- 12a. Stems succulent and juicy *Suckleya*
 12b. Stems not succulent *Atriplex*
- 13a. Stems succulent and juicy *Impatiens*
 13b. Stems not succulent 14
- 14a. Stems with membranous sheaths (stipules) at point of attachment *Rumex*
 14b. Stems without sheathing stipules 15
- 15a. Flowers and fruits green, clustered in axils of upper leaves *Atriplex*
 15b. Flowers colored, not clustered in leaf axils 16
- 16a. Uppermost leaves deeply lobed 17
 16b. Upper leaves not lobed 18
- 17a. Flowers not aster-like; leaf stalks expanded at the base like a celery stalk *Zizia*
 17b. Flowers clustered in aster-like heads; leaf petioles not expanded at the base *Senecio* (includes *Packera*)
- 18a. Sap milky; flowers blue, clustered in dandelion-like heads *Lactuca*
 18b. Sap clear; flowers yellow or white, not dandelion-like 19

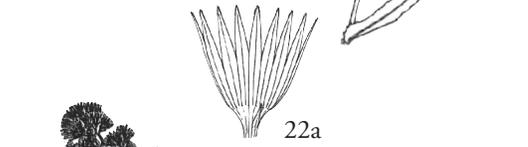




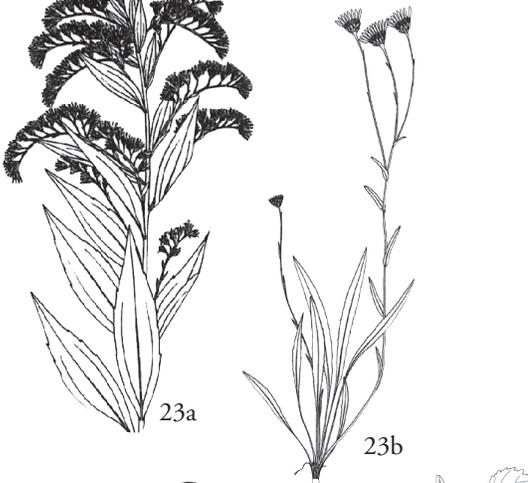
- 19a. Flowers white in a highly-branched inflorescence, not aster-like *Lepidium*
- 19b. Flowers clustered in aster-like heads20



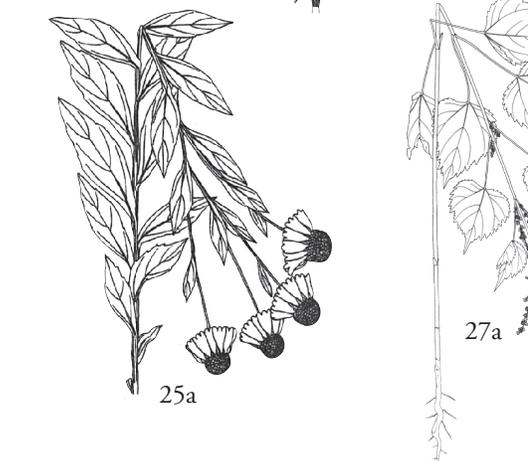
- 20a. Flowers purple; ray flowers absent..... *Saussurea*
- 20b. Flowers yellow; rays often present21



- 21a. Plants sticky, especially above *Grindelia*
- 21b. Plants not sticky.....22



- 22a. Involucral bracts around flower heads of nearly the same length.....*Senecio* (includes *Packera*)
- 22b. Involucral bracts of different lengths23



- 23a. Flower heads >12 *Solidago*
- 23b. Flower heads <12 *Haplopappus* (includes *Xanthisma*)

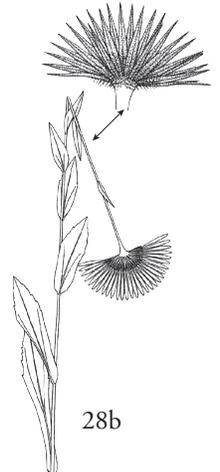
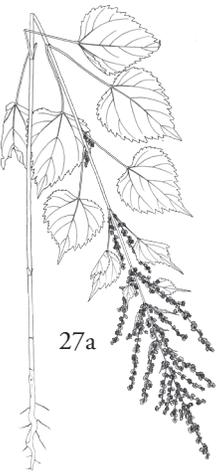
- 24a. Flowers clustered in aster-like heads; seeds with long bristle-like hairs (pappus) on top (Family Asteraceae).....25
- 24b. Flowers not aster-like; seeds without pappus[31](#)

- 25a. Stems with green, low ridges going down the stem from the point of leaf attachment *Helenium*
- 25b. Stems without longitudinal, low ridges.....26

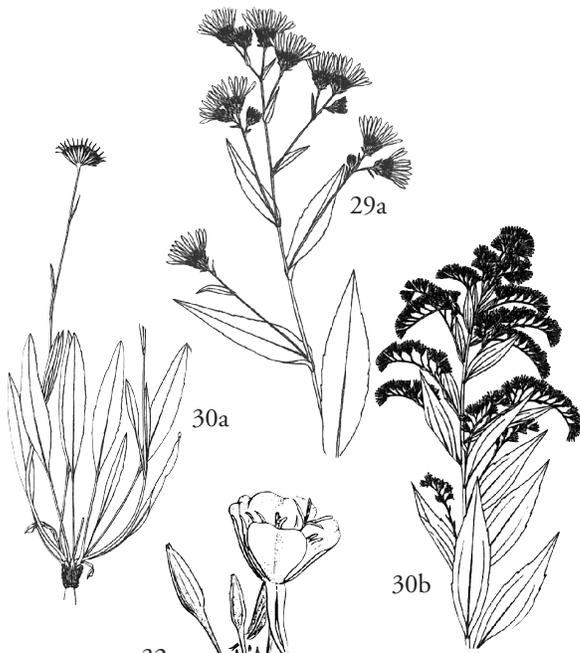
- 26a. Flower heads with nearly all involucral bracts of one length.....27
- 26b. Flower heads with involucral bracts of many different lengths[29](#)

- 27a. Leaf petioles as long or longer than leaf blades*Iva* (= *Cyclachaena*)
- 27b. Leaf blades longer than petioles28

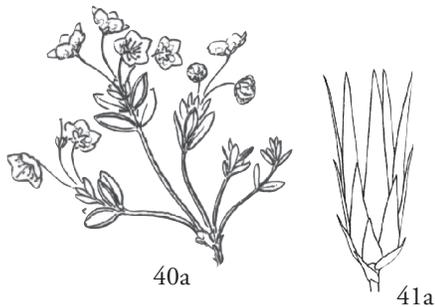
- 28a. Flowers yellow.....*Senecio* (includes *Packera*)
- 28b. Flowers white or blue *Erigeron*



- 29a. Flower heads with white, pink or blue strap
flowers*Aster* (includes *Almutaster*, *Canadanthus*, *Eurybia*,
Symphyotrichum)
- 29b. Flowers heads yellow30
- 30a. Flower heads >5 mm wide..... *Haplopappus* (includes
Pyrrocoma)
- 30b. Flower heads ≤5 mm wide *Solidago*
- 31a. Flowers and fruits without stalks in leaf axils; tubular por-
tion of ovary may appear to be a flower stalk.....32
- 31b. Flowers stalked.....33
- 32a. Fruits ≥2 cm long; petals 8-15 mm long *Oenothera*
- 32b. Fruits ≤1 cm long; petals <8 mm long..... *Boisduvalia*
(= *Epilobium*)
- 33a. Flowers long-stalked from leaf axils *Viola*
- 33b. Flowers in an inflorescence at the ends of the stems.....34
- 34a. Flowers numerous in a dense, narrow spike *Lobelia*
- 34b. Flowers in an open inflorescence *Ranunculus*
- 35a. Stems with membranous sheaths (stipules) at point of
attachment (Family Polygonaceae)36
- 35b. Stems without sheathing stipules.....37
- 36a. Seed enclosed by 3 papery wings*Rumex*
- 36b. Seed enclosed by a 4- or 5-lobed calyx..... *Polygonum* (includes
Bistorta, *Fallopia*, *Persicaria*, *Reynoutria*)
- 37a. Plants essentially without hair (sometimes white-flaky)38
- 37b. Plants hairy, at least in the inflorescence[67](#)
- 38a. Lower leaf stalks lacking, very short or
indistinct.....39
- 38b. Lower leaves with well differentiated blade and petiole.....[53](#)
- 39a. Plants sticky especially in the inflorescence..... *Grindelia*
- 39b. Plants not noticeably sticky[40](#)



Key 5C: Dicots with Alternate, Entire Leaves



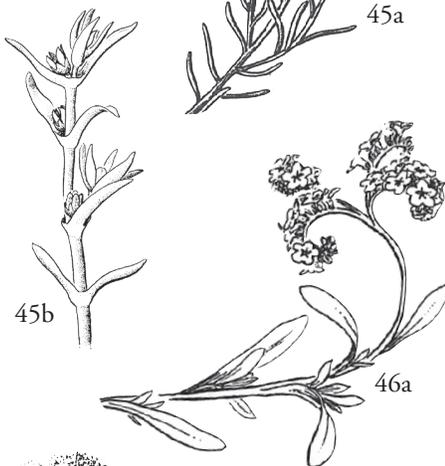
- 40a. Leaves leathery with rolled margins, shiny above; base of stem woody.....*Kalmia*
 40b. Leaves not leathery; stems not woody at the base41

- 41a. Sap milky; flowers clustered in dandelion-like heads..... *Lactuca*
 41b. Sap clear; flowers not dandelion-like42



- 42a. Leaves succulent, noticeably thick, sometimes nearly tubular43
 42b. Leaves thin48

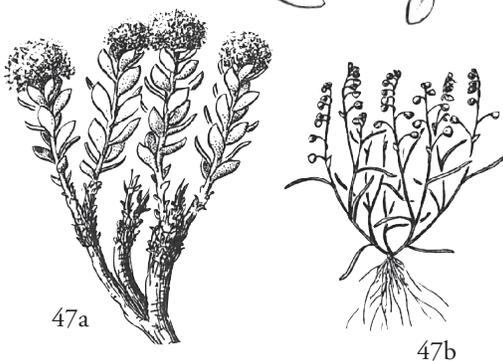
- 43a. Flowers and fruits without stalks in upper leaf axils44
 43b. Flowers and fruits, stalked or not, in a terminal inflorescence46



- 44a. Leaves somewhat spoon-shaped.....*Portulaca*
 44b. Leaves tubular45

- 45a. Leaves alternate *Suaeda*
 45b. Leaves opposite *Tillaea* (= *Crassula*)

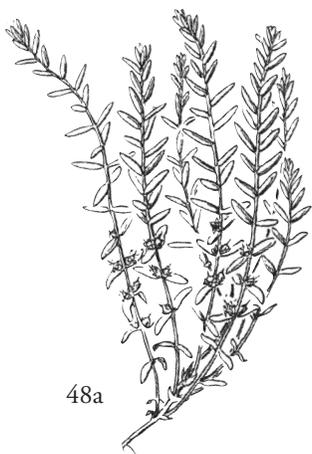
- 46a. Flowers and fruits in a dense, narrow inflorescence that uncoils as it matures*Heliotropium*
 46b. Inflorescence not both narrow and dense47



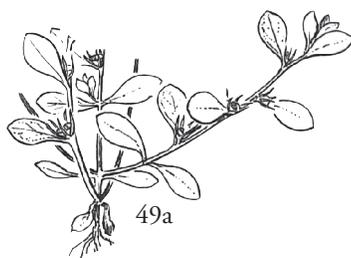
- 47a. Root crown thick and scaly; flowers reddish with five sepals*Sedum* (includes *Rhodiola*)
 47b. Root crown delicate; petals white with 2 sepals *Montia*

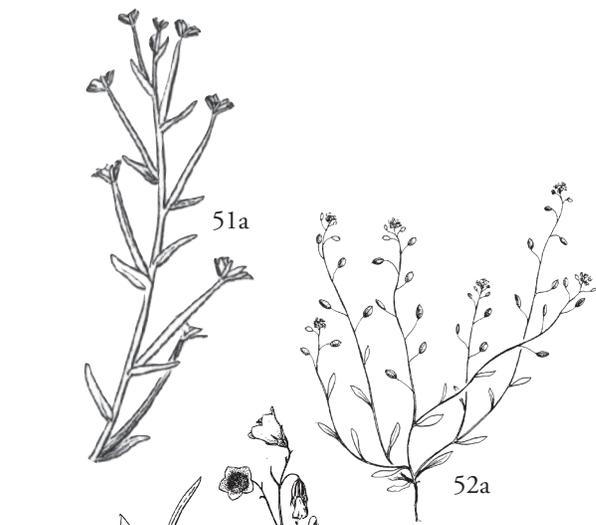
- 48a. Leaves opposite near base of the stem *Glaux*
 48b. Leaves alternate throughout49

- 49a. Leaves elliptic in outline..... *Centunculus*
 49b. Leaves strap- to narrowly lance-shaped.....50



- 50a. Flowers yellow, clustered in small aster-like heads.... *Solidago* (includes *Euthamia*)
 50b. Flowers white or blue, not aster-like.....51





51a. Flowers sessile in upper leaf axils *Downingia*
 51b. Flowers stalked in a terminal inflorescence 52



52a. Plants annual *Hornungia* (= *Hutchinsia*)
 52b. Plants perennial *Campanula*

53a. Flowers clustered in aster-like or thistle-like heads 54
 53b. Flowers not clustered in aster-like heads 56



54a. Flower heads purple, arranged in a spike-like inflorescence *Liatris*
 54b. Flower heads yellowish; heads stalked 55

55a. Involucral bracts around flower heads of nearly the same length *Senecio* (includes *Packera*)
 55b. Involucral bracts of different lengths *Haplopappus* (includes *Pyrocoma*)



56a. Stem leaf blades narrowly elliptic to broadly heart-shaped 57
 56b. Stem leaf blades strap- to narrowly lance-shaped or divided into strap-shaped segments 61

57a. Stems with a solitary leaf and flower *Parnassia*
 57b. Stems with >1 leaf and >1 flower 58

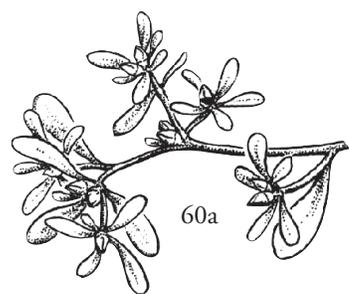
58a. Flowers and fruits solitary In leaf axils *Geocaulon*
 58b. Flowers clustered in leaf axils or a terminal inflorescence 59

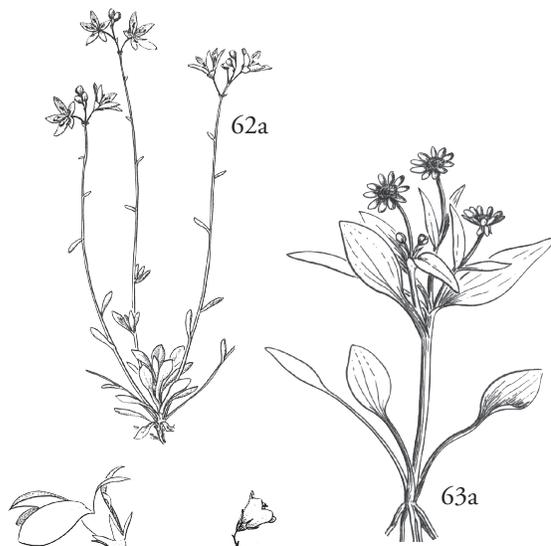


59a. Stems erect; leaf blades broader at the base than the tip *Atriplex*
 59b. Stems prostrate or ascending; leaf blades more elliptic 60

60a. Leaves succulent and juicy *Portulaca*
 60b. Leaves thin *Amaranthus*

61a. Lowest flowers subtended by a small leaf-like bract 62
 61b. Individual flowers without bracts 65





- 62a. Upper leaves succulent and nearly tubular..... *Montia*
- 62b. Upper leaves thin and not tubular.....63

- 63a. Flowers yellow; fruit a globose cluster of seeds.... *Ranunculus*
- 63b. Flowers white or blue; fruit a capsule containing the seeds
(Family Campanulaceae).....64

- 64a. Flower with 3 larger and 2 smaller lobes..... *Lobelia*
- 64b. Flower with 5 identical lobes..... *Campanula*

- 65a. Fruit capsule enclosed in the persistent 5-lobed calyx..... *Mertensia*
- 65b. 4-lobed calyx falling away from fruit capsule at maturity...66

- 66a. Fruit long and tubular..... *Thelypodium*
- 66b. Fruit nearly round in outline ...*Lepidium* (includes *Cardaria*)

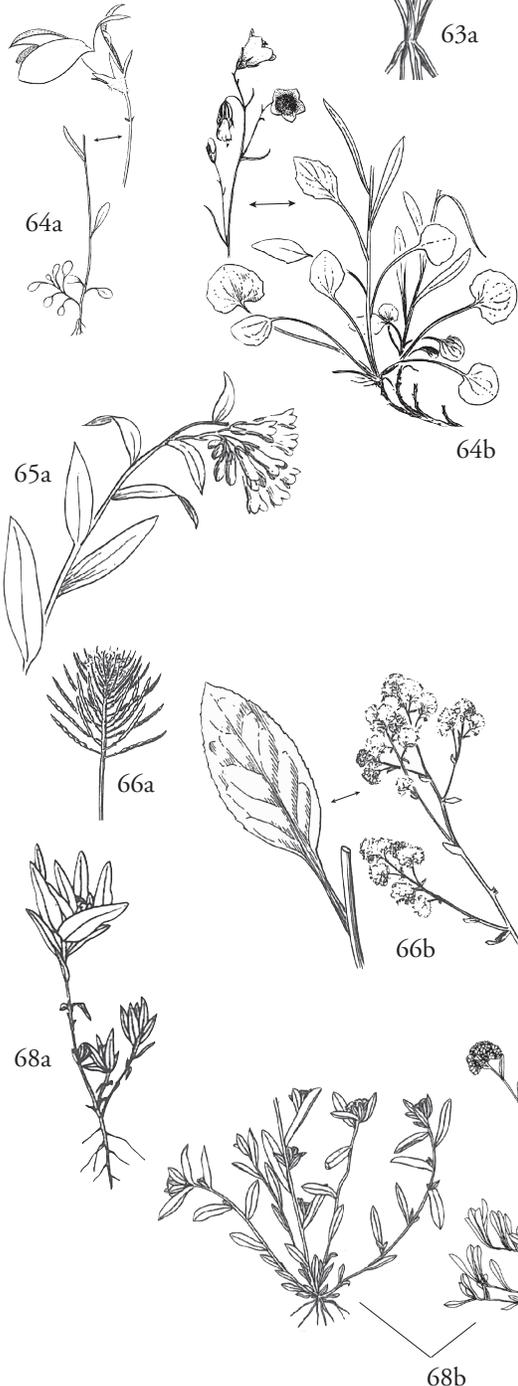
- 67a. Leaves and stems white-wooly.....68
- 67b. Herbage not so densely hairy as to be wooly.....69

- 68a. Leaves clustered around the flower head; lower stem leaves dried or lacking..... *Psilocarphus*
- 68b. Leaves spaced more evenly along the stem..... *Gnaphalium*
(includes *Pseudognaphalium*) or *Antennaria*

- 69a. Flowers clustered in aster-like heads70
- 69b. Flowers not clustered in aster-like heads.....72

- 70a. Flower heads >2 cm wide *Wyethia*
- 70b. Flower heads smaller71

- 71a. Most involucre bracts ca. the same height *Erigeron*
- 71b. Involucre bracts of different heights and overlapping like shingles*Aster* (includes *Almutaster*, *Canadanthus*, *Eurybia*, *Symphyotrichum*)



- 72a. Leaf blades elliptic to broadly heart-shaped73
- 72b. Leaf blades strap- to narrowly lance-shaped.....74
- 73a. Flowers in a nodding, terminal inflorescence *Mertensia*
- 73b. Flowers clustered in leaf axils..... *Amaranthus*
- 74a. Flowers is a narrow spike, each flower subtended by a colorful bract *Castilleja*
- 74b. Flowers not subtended by colorful bracts75
- 75a. Flowers and fruits without stalks, inconspicuous *Bassia* or *Kochia* (= *Neokochia*)
- 75b. Flowers and fruits stalked (sometimes short)76
- 76a. Flower stalks long, solitary from rooting leaf nodes *Ranunculus*
- 76b. Flowers short-stalked in an inflorescence above the leaves.....77
- 77a. Fruit a hairy calyx enclosing about 4 seeds (Family Boraginaceae).....78
- 77b. Seeds enclosed in a long capsule not enclosed by the calyx.....79
- 78a. Flowers blue; seeds smooth *Myosotis*
- 78b. Flowers white; seeds wrinkled or bumpy *Plagiobothrys*
- 79a. Inflorescence (especially fruit) with unbranched hair *Epilobium* (includes *Chamerion*)
- 79b. Herbage with star-shaped hairs..... *Draba*



73a



73b



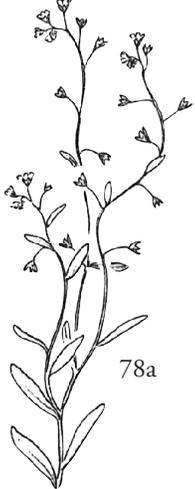
74a



75a



76a



78a



78b



79a

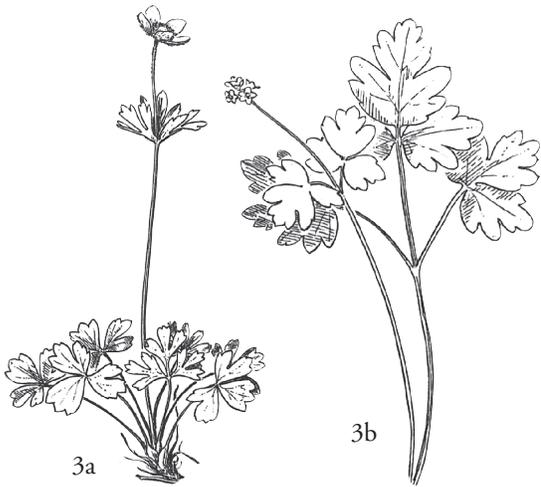


79b

Key 5D

Emergent Dicots; lower leaves opposite or whorled; leaf margins toothed, divided or lobed

Euphorbia serpens rarely occurs in wetlands in Montana and is not included here.



- 1a. Leaves divided into leaflets or lobed at least halfway to the midvein.....2
- 1b. Leaves with toothed margins, not deeply lobed or divided into leaflets.....[11](#)

- 2a. Stems with only 1 pair or whorl of leaves3
- 2b. Well-developed stems with >1 pair or whorl of leaves.....4

- 3a. Stem leaves usually 3, deeply lobed *Anemone*
- 3b. Stem leaves usually 2, divided into leaflets.....*Adoxa*

- 4a. Stem 4-angled5
- 4b. Stem more-or-less round in cross-section6

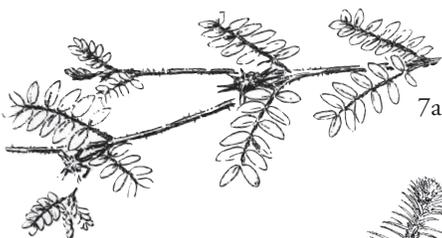
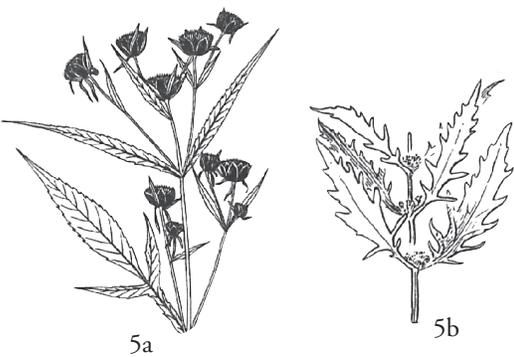
- 5a. Flowers yellow, clustered in stalked, aster-like heads *Bidens*
- 5b. Flowers white, not stalked, clustered around leaf nodes*Lycopus*

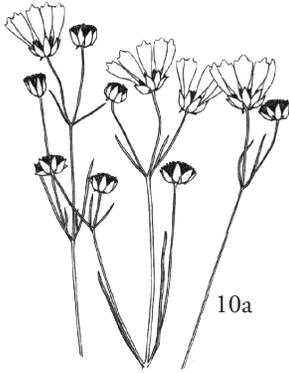
- 6a. Stems prostrate, forming mats.....7
- 6b. Stems erect.....8

- 7a. Leaves divided into 4-8 pairs of leaflets *Tribulus*
- 7b. Leaves deeply lobed, not divided into leaflets..... *Verbena*

- 8a. Leaves hairy, especially beneath; flowers and fruits in narrow spikes*Ambrosia*
- 8b. Leaves not hairy; inflorescences not narrow.....9

- 9a. Flowers clustered in a hemispheric to pyramidal inflorescence, not aster-like*Valeriana*
- 9b. Flowers clustered in long-stalked, aster-like heads.....[10](#)





- 10a. Leaflets linear with entire margins *Coreopsis*
- 10b. Leaflets lance-shaped with toothed margins..... *Bidens*



- 11a. Whorls of 3-4 leaves at each node*Eupatorium*
(=*Eutrochium*)
- 11b. Principle leaves 2 per node12

- 12a. Stem 4-sided, square in cross-section at least below13
- 12b. Stem round in cross-section without angles.....26

- 13a. At least stems and petioles with stinging prickles.....*Urtica*
- 13b. Herbage with or without hair but without prickles.....14

- 14a. Flowers yellow, clustered in aster-like heads..... *Bidens*
- 14b. Flowers not aster-like15

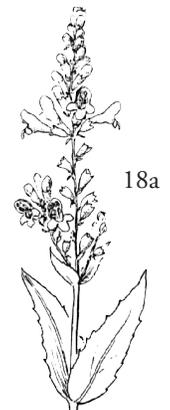
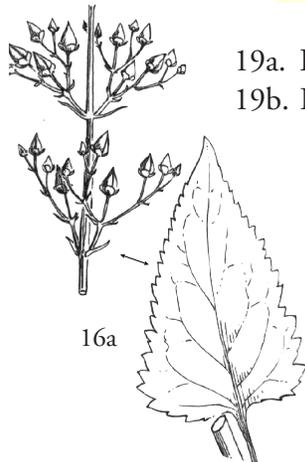
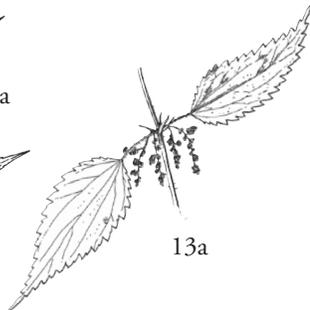
- 15a. Inflorescence terminal, open; individual flower stalks at least 5 mm long16
- 15b. Inflorescence congested, the flowers nearly stalkless or flowers few and born in axils of upper leaves.....17

- 16a. Plants >40 cm tall *Scrophularia*
- 16b. Plants <40 cm tall *Veronica*

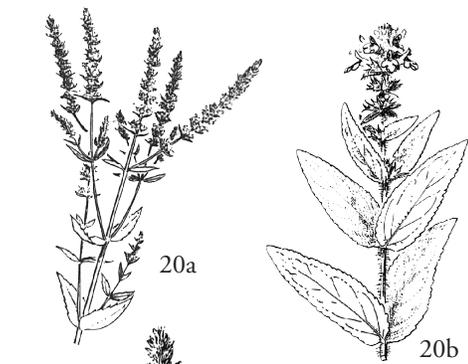
- 17a. Flowers and fruits in clusters at stem tips18
- 17b. Flowers and fruits few to many around the upper leaf nodes23

- 18a. Plants without hair below the inflorescence..... *Physostegia*
- 18b. Stems or leaves hairy (sometimes sparse) below the inflorescence.....19

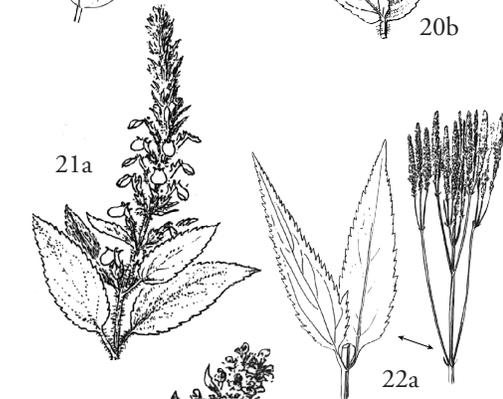
- 19a. Leaf stalks <5 mm long20
- 19b. Lower leaf stalks >5 mm long.....21



Key 5D: Dicots with Opposite, Divided Leaves



- 20a. Plants smelling of spearmint..... *Mentha*
 20b. Herbage without a strong minty odor *Stachys*



- 21a. Inflorescence with gland-tipped hairs *Teucrium*
 21b. Inflorescence without gland-tipped hairs 22

- 22a. Stem terminating in a cluster of finger-like flower spikes; plants without a minty odor..... *Verbena*
 22b. Inflorescence not a cluster of spikes; plants smelling minty *Nepeta*



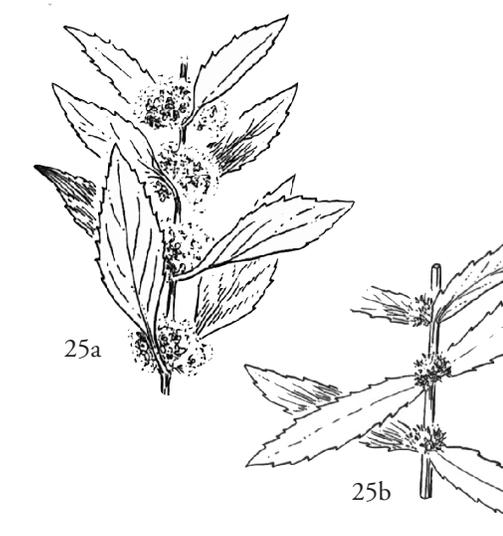
- 23a. Flowers 2 per leaf node..... *Scutellaria*
 23b. Flowers several, surrounding each leaf node..... 24

- 24a. Stems white-wooly *Marrubium*
 24b. Stems without hair or sparsely hairy 25



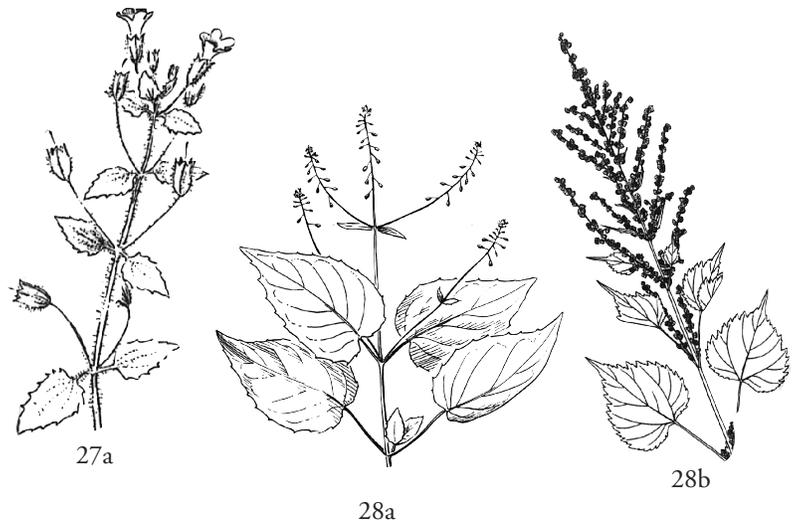
- 25a. Herbage strongly mint-smelling *Mentha*
 25b. Herbage not much aromatic..... *Lycopus*

- 26a. Lower leaves with petioles at least 1/2 as long as the blade ... 27
 26b. Leaf petioles absent or much shorter than the blades 29



- 27a. Plants with crystal-like glands or gland-tipped hairs in the inflorescence *Mimulus*
 27b. Plants without glands 28

- 28a. Inflorescence subtended by 1 or 2 linear bracts with entire margins; stems usually <30 cm tall *Circaea*
 28b. Bracts of the inflorescence lance-shaped with toothed margins; stems usually >30 cm tall *Iva*



- 29a. Flowers clustered in sunflower-like heads30
- 29b. Flowers not sunflower-like33

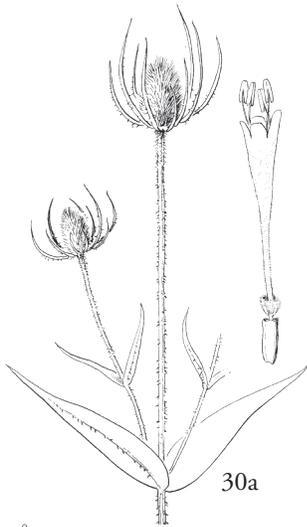
- 30a. Stems and leaf midribs with hooked prickles.....*Dipsacus*
- 30b. Herbage not as above.....31

- 31a. Upper leaves alternate on the stem *Helianthus*
- 31b. Upper leaves opposite each other.....32

- 32a. Plants annual with weak fibrous roots *Bidens*
- 32b. Plants rhizomatous perennials *Arnica*

- 33a. Fruit linear; flowers with separate petals*Epilobium*
- 33b. Fruit a globose capsule; petals united into a tube at the base.....34

- 34a. Calyx tube much longer than the lobes*Mimulus*
- 34b. Calyx divided at least halfway to the base *Veronica*



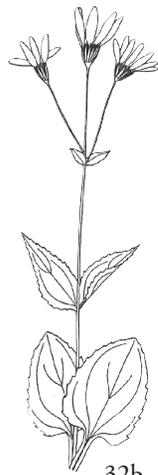
30a



31a



32a



32b



33a



34a

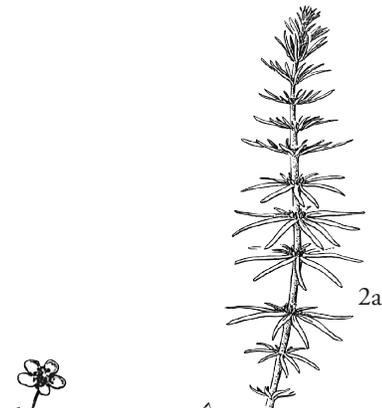


34b

Key 5E

Emergent Dicots; lower leaves opposite or whorled; leaf margins entire

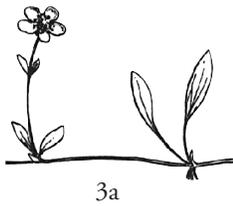
Dianthus deltoides and *Gymnosteris parvula* rarely occur in wetlands in Montana and are not included here.



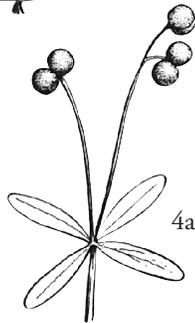
- 1a. Leaves in whorls of 3 or more from the same node.....2
- 1b. Leaves 2 per node.....5

- 2a. Flowers sessile in upper leaf axils*Hippuris*
- 2a. Flowers stalked.....3

- 3a. Leaves with petioles..... *Ranunculus*
- 3b. Leaves without petioles4



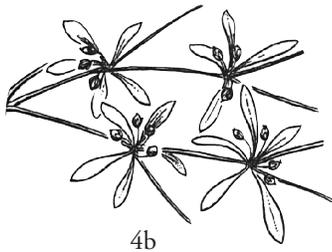
- 4a. Fruits 2-lobed *Galium*
- 4b. Fruits globose..... *Mollugo*



- 5a. Stems with only 1 pair of leaves..... *Claytonia*
(includes species formerly placed in *Montia* having only 1 pair of stem leaves)
- 5b. Well-developed stems with >1 pair of leaves6

- 6a. Sap milky7
- 6b. Sap clear.....8

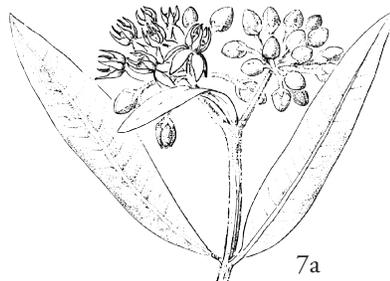
- 7a. Fruit >1 cm wide; herbage hairy at least in the inflorescence or on the leaf veins; flowers purplish.....*Asclepias*
- 7b. Fruit <1 cm wide; herbage without hair or nearly so; flowers white..... *Apocynum*

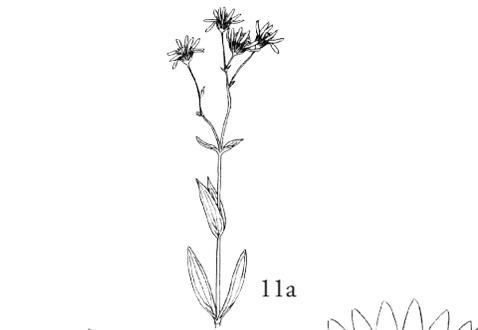


- 8a. Lower leaves with well-differentiated blade and petiole9
- 8b. Lower leaf stalks (petioles) lacking, very short or indistinct.....27

- 9a. Herbage hairy at least in the inflorescence or leaf stalks10
- 9b. Plants without hair or nearly so.....21

- 10a. Flowers clustered in sunflower-like heads11
- 10b. Flowers not sunflower-like13





- 11a. Inflorescence with crystal-like glands.....*Arnica*
- 11b. Plants not glandular12

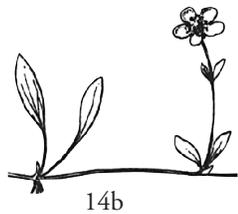


- 12a. Leaves alternate above *Helianthus*
- 12b. Leaves opposite throughout..... *Helianthella*



- 13a. Stems prostrate, at least toward the base, and rooting at the nodes14
- 13b. Stems not rooting at the nodes, often erect or ascending...15

- 14a. Flowers several in a terminal, glandular inflorescence *Veronica*
- 14b. Flowers 1 per leaf node; plants without glands ... *Ranunculus*



- 15a. Plants with crystal-like glands or gland-tipped hairs in the inflorescence16
- 15b. Plants without glands.....18



- 16a. Plants annual; stems arising singly.....*Melampyrum*
- 16b. Plants perennial; well-developed plants branched at ground level17



- 17a. Stems hairless below the glandular inflorescence *Penstemon*
- 17b. Stems hairy below the inflorescence..... *Silene*



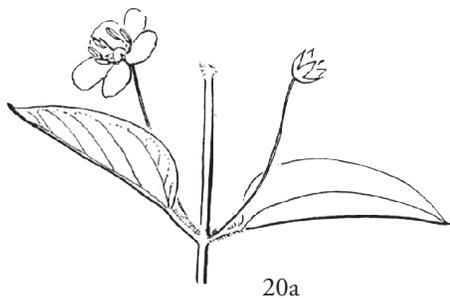
- 18a. Flowers and fruits stalkless, in a dense cluster at stem tips..... *Prunella*
- 18b. Flowers and fruits stalked, often born in axils of upper leaves.....19



- 19a. Stems hairy *Epilobium*
- 19b. Leaves sparsely hairy but stems without hair.....20



Key 5E: Dicots with Opposite, Entire Leaves



20a

- 20a. Leaf blades >2 cm long..... *Lysimachia*
- 20b. Leaf blades <2 cm long..... *Stellaria*

- 21a. Uppermost leaves deeply lobed or divided..... *Valeriana*
- 21b. All leaves with entire margins.....22

- 22a. Flowers clustered in sunflower-like heads *Helianthus*
- 22b. Flowers not sunflower-like23

- 23a. Flowers and fruits without stalks in leaf axils *Elatine*
- 23b. Flowers and fruits stalked24

- 24a. Flowers several and born in an inflorescence above the leaves.....25
- 24b. One to several flowers on stalks or branches from the leaf axils.....26

- 25a. Flowers with 2 sepals; plants of low elevations..... *Claytonia* (including some species formerly in *Montia*)
- 25b. Flowers with 5 sepals; plants of upper montane to alpine habitats*Swertia*

- 26a. Flowers 1 per leaf node..... *Ranunculus*
- 26b. Flowers >1 per node..... *Veronica*

- 27a. Leaves or stems hairy at least in the inflorescence28
- 27b. Plants without hair or nearly so.....40

- 28a. Leaves stiff, sharp-pointed, <3 mm wide; plants forming cushions or mats*Phlox*
- 28b. Leaves softer, without a hard, sharp point, often >3 mm wide29

- 29a. Herbage with crystal-like glands or gland-tipped hairs, at least in the inflorescence.....30
- 29b. Plants not glandular36



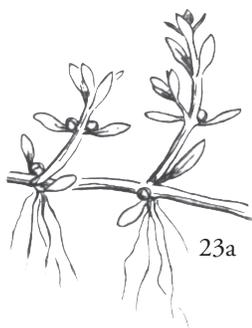
20b



21a



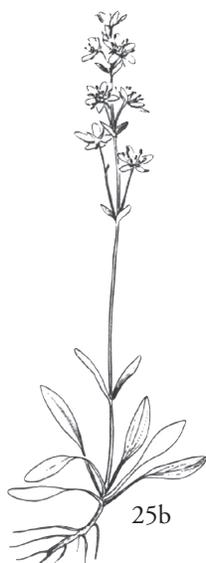
22a



23a



25a



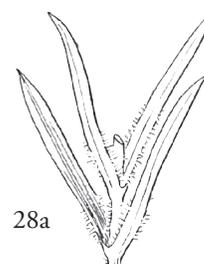
25b



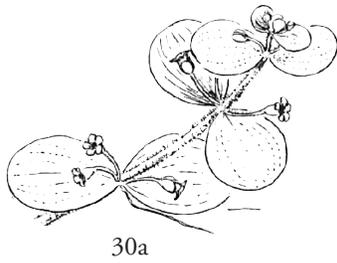
26a



26b



28a



30a. Leaves nearly round in outline; stems lax, rooting at the nodes *Bacopa*

30b. Leaves lance- to strap-shaped; stems erect or ascending31



31a. Flowers clustered in sunflower-like heads*Arnica*

31b. Flowers not sunflower-like32

32a. Leaves lance-shaped, 2 to 3 times as long as wide*Arenaria*
(includes *Minuartia*)

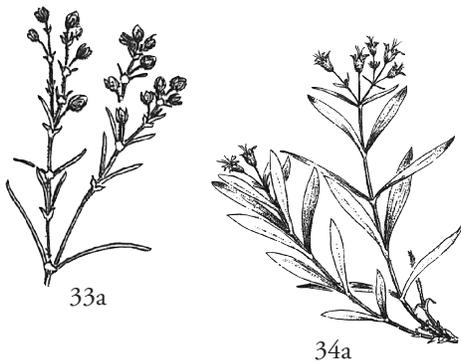
32b. Leaves strap-shaped or linear, >3 times as long as wide33

33a. Plants with whitish, papery stipules at the point where the leaves join the stem*Spergularia*

33b. Plants without stipules34

34a. Plants perennial; well-developed plants branched at ground level *Silene*

34b. Plants annual; stems arising singly35



35a. Upper leaves alternate; flowers without stalks *Veronica*

35b. Upper leaves opposite; flowers stalked *Gratiola*

36a. Herbage densely covered with long, white hairs ... *Psilocarphus*

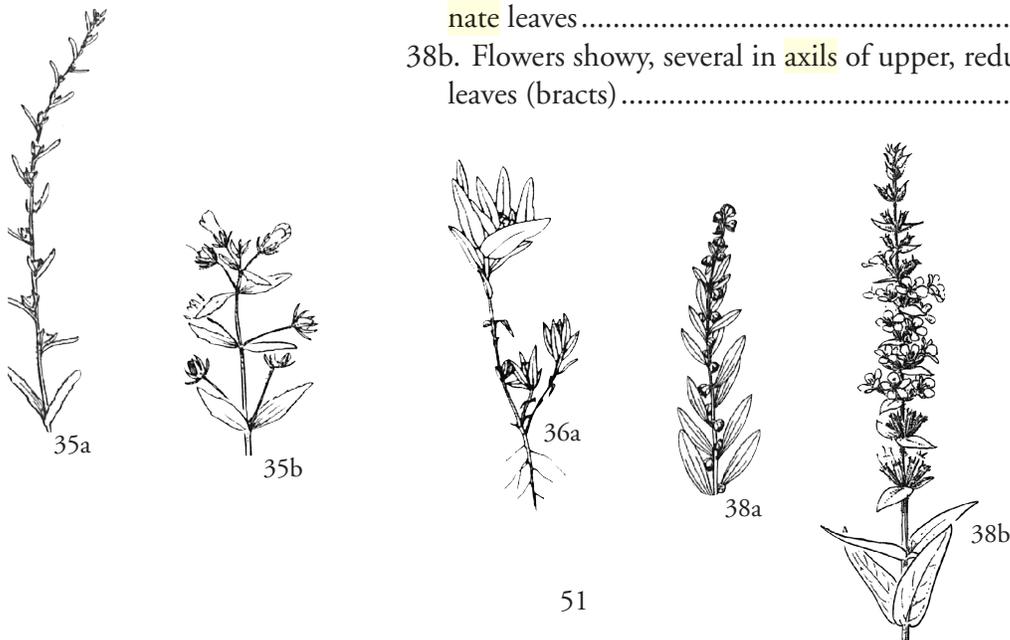
36b. Herbage green, not white-wooly37

37a. Flowers or flower heads without conspicuous stalks.....38

37b. Flowers or flower heads obviously stalked.....[39](#)

38a. Flower heads inconspicuous, single in axils of upper, alternate leaves*Iva*

38b. Flowers showy, several in axils of upper, reduced, opposite leaves (bracts) *Lythrum*





39a. Petals 4; fruits tubular, not enclosed in calyx *Epilobium*
 39b. Petals 5; fruits globose, partly enclosed in calyx ... *Moebringia*
 (formerly in *Arenaria*)

40a. Flowers and fruits in dense, thimble-shaped clusters on stalks from upper leaf axils *Lysimachia*
 40b. Flowers and fruits solitary in axils of leaves or in inflorescences at the ends of the stems 41

41a. Individual flowers without stalks or stalks small and inconspicuous 42
 41b. Flowers with evident stalks 46



42a. Stems prostrate, rooting at the nodes *Elatine*
 42b. Stems usually erect, not rooting at the nodes 43

43a. Leaves egg-shaped, 1 to 2 times as long as wide 44
 43b. Leaves strap-shaped, ≥ 3 times as long as wide 45



44a. Upper leaves alternate; flowers <5 mm long, in leaf axils *Glaux*
 44b. Leaves all opposite; flowers >1 cm long on stem tips *Gentiana*

45a. Stems >20 cm tall *Lythrum*
 45b. Stems ≤ 20 cm tall *Ammania* or *Rotala*

46a. Leaves with small dark dots on the surface and along the margins *Hypericum*
 46b. Leaves without black dots 47





- 47a. Fruits linear, ca. 10 times as long as wide *Epilobium*
- 47b. Fruits 1 to 5 times as long as wide 48

- 48a. Lower leaves narrowly lance-shaped to orbicular, <3 times as long as wide 49
- 48b. Lower leaves linear to strap-shaped, >3 times as long as wide 55



- 49a. Flowers born in axils of leaves on the upper half of the stem, these leaves not much smaller than those below 50
- 49b. Flowers born at the tips of leafy stems, sometimes subtended by reduced leaves..... 52

- 50a. Flowers several on branched stems from leaf axils.... *Veronica*
- 50b. Flowers 1 or 2 at each leaf node..... 51

- 51a. Fruits born on down-curved stalks *Anagalis*
- 51b. Fruits erect or spreading but not pendent..... *Stellaria*

- 52a. Calyx ≤ 4 mm long *Stellaria*
- 52b. Calyx > 5 mm long 53



- 53a. Lower, tubular portion of the calyx at least 1/2 as long as the lobes *Gentiana*
- 53a. Calyx divided nearly to the base 54

- 54a. Calyx ≤ 1 cm long..... *Gentianella* (formerly *Gentiana*)
- 54b. Calyx > 1 cm long..... *Eustoma*

- 55a. Stems lax and prostrate at least at the base..... 56
- 55b. Stems erect..... 58



- 56a. Fruit capsules flattened and notched or lobed on top; spikes of several flowers born in leaf axils..... *Veronica*

- 56b. Fruit capsules globose; flowers born only at stem tips or singly from leaf axils (Family Caryophyllaceae) 57





- 57a. Pairs of leaves united at their bases around the stem..... *Sagina*
- 57b. Leaf pairs opposite but not united..... *Stellaria*



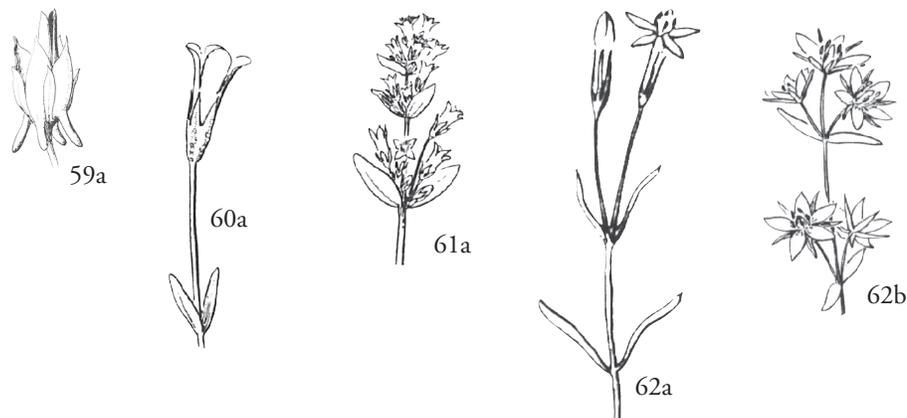
- 58a. Largest leaves >3 mm wide and tapered to a long tip..... *Gratiola*
- 58b. Largest leaves either narrower or not long-tapered (Family Gentianaceae)59

- 59a. Petals with a backward-pointing spur *Halenia*
- 59b. Petals without a backward-pointing spur60

- 60a. Lower 1/3 of calyx tubular..... *Gentianopsis* (formerly *Gentiana*)
- 60. Calyx divided to the base or nearly so.....61

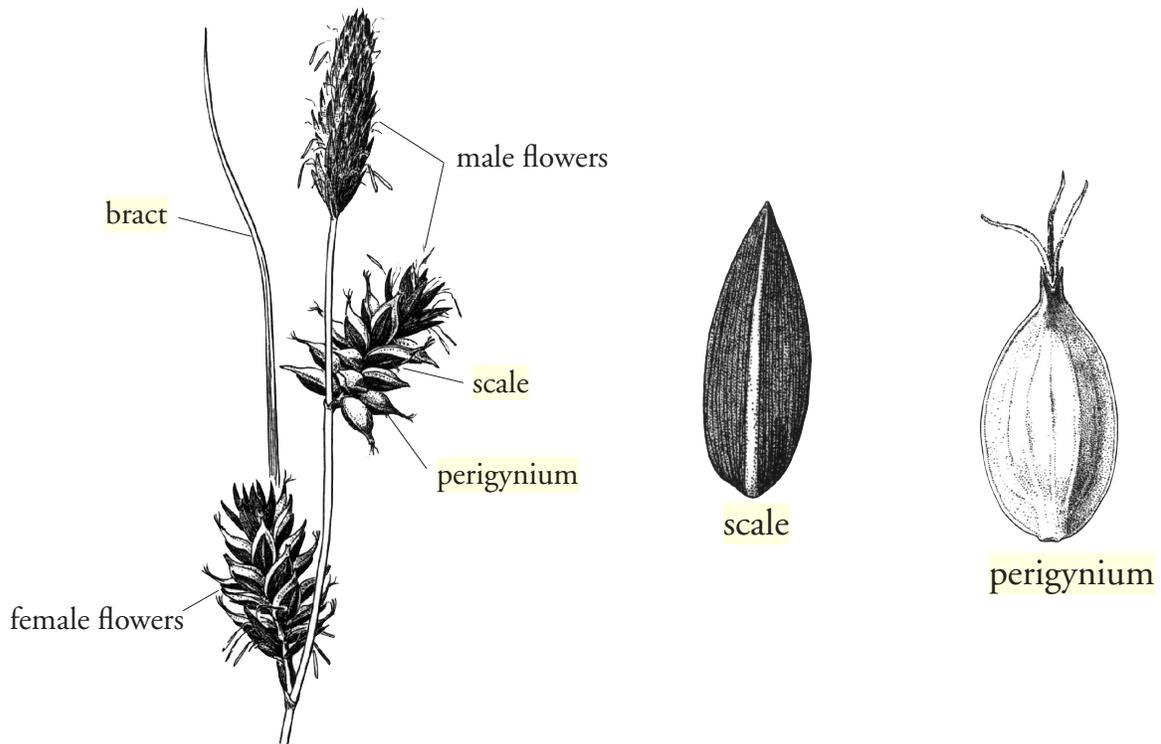
- 61a. Largest leaves on well-developed plants >2 mm wide*Gentianella* (= *Comastoma*, formerly *Gentiana*)
- 61b. Largest leaves ≤2 mm wide.....62

- 62a. Flowers tubular *Centaureum* (= *Zeltnera*)
- 62b. Flowers dish-shaped *Lomatogonium*



Key to the Montana Species of Wetland *Carex* (Sedges)

In the genus *Carex* (sedges) the flowers are unisexual and arranged in unisexual or bisexual spikes. In bisexual spikes the male flowers are segregated into either the top or bottom portion. At least the lowest spike in the inflorescence is subtended by a leaf-like bract. Each flower is subtended by a papery, green to black scale. Male flowers consist of 3 stamens. Female flowers have an ovary enclosed in a papery, sac-like perigynium, often but not always with a narrow beak at the top. The seed (achene) is 2-sided when there are 2 stigmas and 3-sided when there are 3 stigmas.



Key to the Montana Species of Wetland *Carex* (Sedges)



Carex albonigra, *C. lachenalii* (= *bipartita*), *C. capitata*, *C. glacialis*, *C. heteroneura* (now *C. chalciolepis* and *C. epapillosa*), *C. illota*, *C. leporina*, *C. macloviana*, *C. maritima* (= *C. incurviformis*) *C. nelsonii*, *C. nigricans*, *C. pelocarpa*, *C. podocarpa*, *C. praeceptorum*, *C. pyrenaica*, and *C. spectabilis* occur exclusively near or above treeline and are not included in the following key. *Carex diluta* is known from only one site in Montana. *Carex angustata* (= *C. eurycarpa*) and *Carex luzulifolia* have not been verified to occur in Montana. *Carex hoodii*, *Carex vallicola*, and *Carex petasata* rarely occur in wetlands in Montana and are not included here.

- 1a. Plants unisexual; flowers all male or all female.....[Group A](#) (p. 57)
- 1b. Both male and female flowers on the same plant2
- 2a. Stems with a solitary, terminal spike, male flowers above (plants with a tightly clustered head of several spikes may appear to have a solitary spike but will not key here)..... [Group B](#) (p. 57)
- 2b. Spikes >1 per stem3
- 3a. Terminal spike all male (sometimes a few perigynia at the base) and narrower than the female spikes below.....4
- 3b. Terminal spike bisexual or all female, mostly similar to the lower ones.....5
- 4a. Achene (seed) 3-sided; stigmas 3 [Group C](#) (p. 57)
- 4b. Achene 2-sided, coin- or lens-shaped; stigmas 2..... [Group D](#) (p. 60)
- 5a. Achene (seed) 3-sided; stigmas 3 [Group E](#) (p. 61)
- 5b. Achene 2-sided, coin-shaped; stigmas 2.....6
- 6a. Bisexual spikes with male flowers above the female (or all spikes unisexual) [Group F](#) (p. 61)
- 6b. Bisexual spikes with male flowers at the base (look for old anthers or anther stalks) [Group G](#) (p. 63)

Group A. Plants unisexual (dioecious)

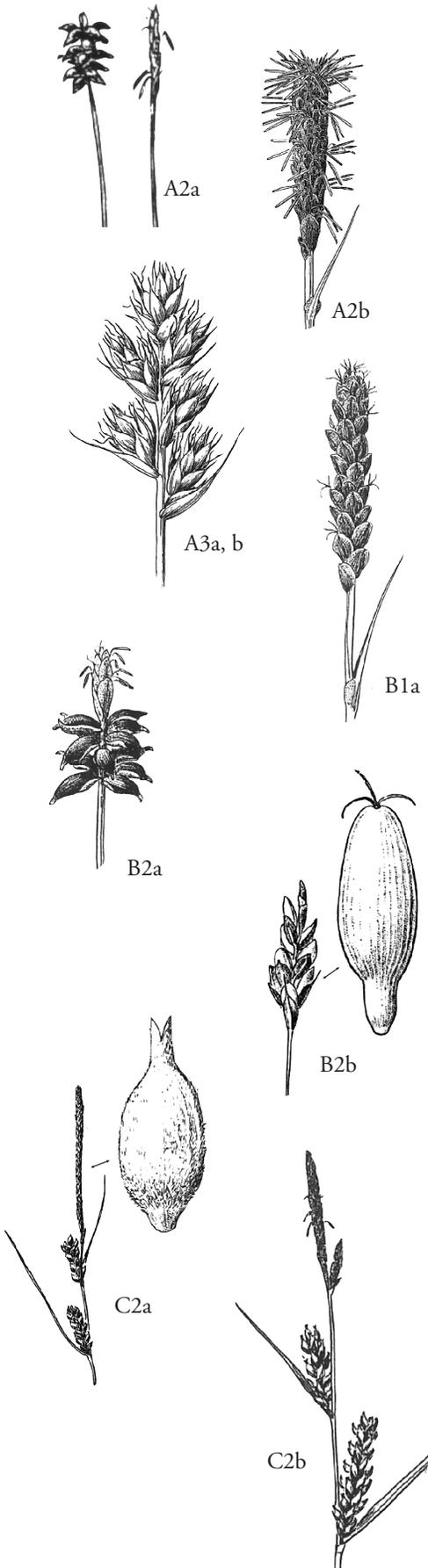
- 1a. Spike solitary.....2
- 1b. Spikes >1, sometimes tightly clustered3
- 2a. Leaves <1 mm wide; perigynia glabrous *C. gynocrates*
- 2b. Some leaves >1 mm wide; perigynia hairy *C. scirpoidea*
- 3a. Plants of peaty soil in fens; perigynia <3 mm long *C. simulata*
- 3b. Plants of mineral soil in wet meadows; perigynia >3 mm long *C. praegracilis*

Group B. Stems with a solitary, terminal spike

- 1a. Perigynia hairy *C. scirpoidea*
- 1b. Perigynia without hair2
- 2a. Achene 2-sided; perigynia dark brown with a small beak, spreading at maturity *C. gynocrates*
- 2b. Achene 3-sided; perigynia greenish, beakless, not spreading *C. leptalea*

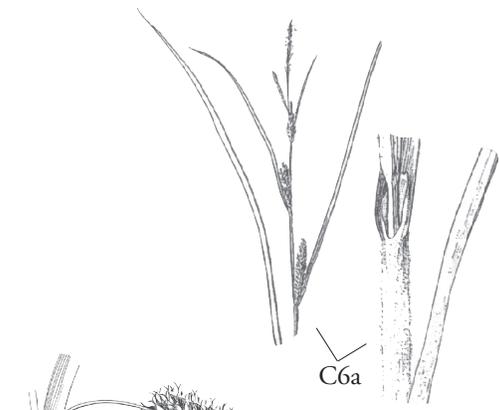
Group C. Plants with a narrow terminal male spike; achene 3-sided

- 1a. Body of perigynia hairy2
- 1b. Perigynia without hair or with sparse hair on the margins3
- 2a. Leaves 1-2 mm wide; wet organic soil of fens *C. lasiocarpa*
- 2b. Leaves 2-5 mm wide; wet meadows.....*C. lanuginosa*
(=*C. pellita*)
- 3a. Perigynia with a beak ≥ 0.5 mm long4
- 3b. Beak of perigynia <0.5 mm long17
- 4a. Terminal male spike of most plants >20 mm long5
- 4b. Terminal male spike of most plants <20 mm long14

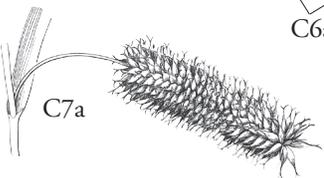


Key to Species of *Carex*

- 5a. Beak of perigynia with spreading tips as long as the lower tubular portion (sometimes broken off)6
- 5b. Tips of perigynia beak shorter than the lower portion, little spreading or absent...8
- 6a. Upper leaf sheaths densely hairy *C. atherodes*
- 6b. Leaf sheaths without hair or nearly so7
- 7a. Female spikes on spreading or drooping branches *C. comosa*
- 7b. Female spikes erect or nearly so *C. laeviconica*
- 8a. Beak of perigynia ≥ 2 mm long9
- 8b. Beak of perigynia 1-2 mm long10
- 9a. Female spikes on spreading or drooping branches, female scales with awns *C. hystericina*
- 9b. Female spikes erect or nearly so; females scales unawned *C. retrorsa*
- 10a. Perigynia (including beak) < 3.5 mm long..... *C. amplifolia*
- 10b. Perigynia > 3.5 (3.3) mm long11
- 11a. Bract at base of inflorescence sheathing the stem for 1-2cm (Lincoln Co.) *C. vaginata*
- 11b. Bract not, or little, sheathing the stem12
- 12a. Perigynia spreading at ca. right angles or pointed down..... *C. rostrata* or *C. utriculata*
- 12b. Perigynia pointed sharply upward, \pm erect13
- 13a. Perigynia beak 2-3mm long..... *C. vesicaria* (= *C. exsiccata*)
- 13b. Perigynia beak about 1mm long (Lake Co. marshes)... *C. lacustris*
- 14a. Perigynium beak at least as long as the body; lowest spike on spreading or drooping stalk..... *C. sprengeii*
- 14b. Perigynium beak up to as long as the body; lowest spike not spreading or drooping15



C6a



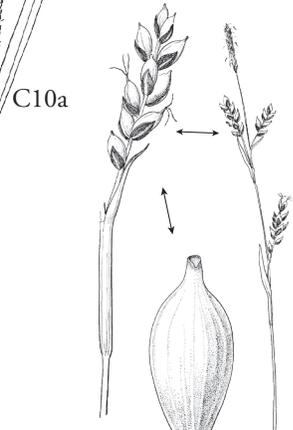
C7a



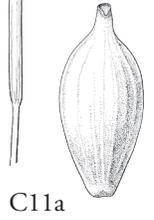
C9a



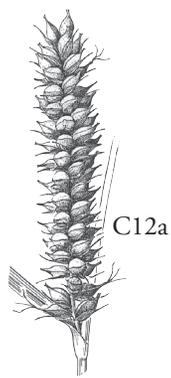
C9b



C10a



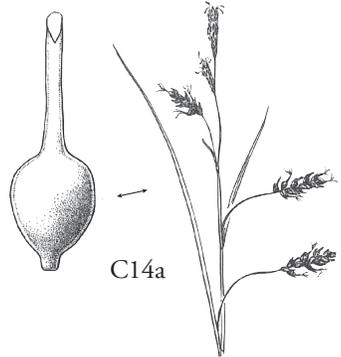
C11a



C12a



C13a

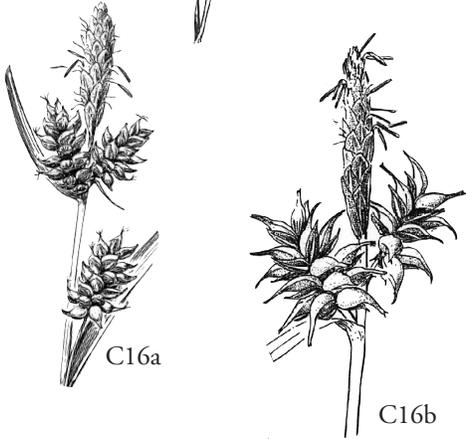


C14a

- 15a. Leaf (bract) subtending the lowest spike shorter than the inflorescence *C. luzulina* (= *C. fissuricola*)
 15b. Leaf subtending the lowest spike longer than the inflorescence 16



- 16a. Perigynia (including beak) 2-3.5 mm long, all spreading *C. viridula*
 16b. Perigynia 3.5-7 mm long, the lower reflexed *C. flava*



- 17a. Lower spikes on spreading or drooping stalks 18
 17b. Spikes erect or ascending 20

- 18a. Leaf-like bract subtending the lowest spike sheathing the stem for >5 mm *C. capillaris*
 18b. Sheaths of bracts <4 mm long 19



- 19a. Terminal male spike 13-27 mm long *C. limosa*
 19b. Terminal male spike 4-12 mm long *C. paupercula* (= *C. magellanica*)

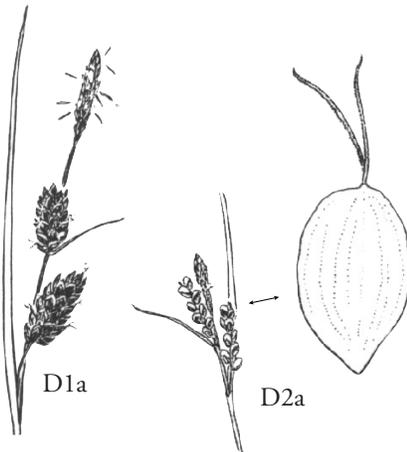
- 20a. Leaf surfaces hairy 21
 20b. Leaf surfaces without hair 22

- 21a. Perigynia with a short beak *C. torreyi*
 21b. Perigynia beakless *C. pallescens* (Ravalli Co.)

- 22a. Perigynia pale-waxy, minutely bumpy; peatlands *C. livida*
 22b. Perigynia not waxy or bumpy; mostly mineral soil *C. crawei*



Group D Plants with a narrow terminal male spike; achene 2-sided



- 1a. Perigynia 3.5-4.0 mm long, lustrous..... *C. saxatilis*
- 1b. Perigynia <4 mm long, not lustrous.....2

- 2a. Leaf-like bract subtending the lowest spike sheathing the stem for 3-12 mm; perigynia yellowish..... *C. aurea* (= *C. garberi*)
- 2b. Bracts sheathless or with a sheath <2 mm long3

- 3a. Leaf-like bract subtending the lowest spike shorter than the inflorescence4
- 3b. Lowest bract as long or exceeding the inflorescence6

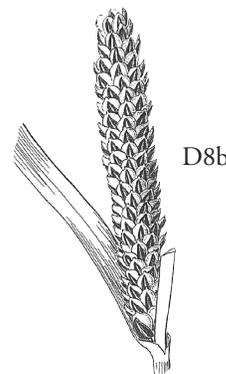
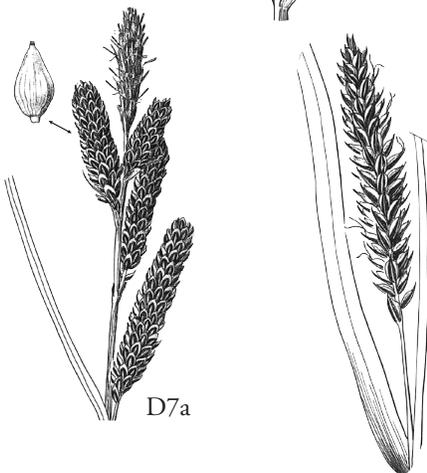
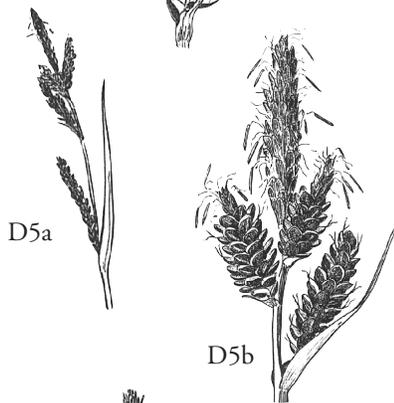
- 4a. Female scales longer than the perigynia *C. aperta*
- 4b. Female scales usually shorter than the perigynia5

- 5a. Plants tussock-forming; female spikes >3 times as long as wide *C. prionophylla*
- 5b. Stems arising separately from rhizomes; female spikes <3 times as long as wide *C. scopulorum*

- 6a. Perigynia with raised veins apparent on the ventral (closest to the spike axis) face.....7
- 6b. Perigynia without apparent veins on ventral face8

- 7a. Plants forming distinct tussocks; spreading rhizomes lacking; leaves 2-4 wide..... *C. lenticularis* (= *C. kelloggii*)
- 7b. Plants rhizomatous; some leaves >4 mm wide *C. nebrascensis*

- 8a. Mature perigynia inflated, pillow-like; female scales mostly longer than the perigynia *C. aperta*
- 8b. Perigynia flattened; female scales shorter than the perigynia *C. aquatilis*



Group E Achene 3-sided; bisexual spikes with male flowers below female



E3a



E5a



E4a



E5b



F1a

- 1a. Lower spikes drooping on long stalks *C. mertensii*
- 1b. Spikes sessile or on erect or ascending stalks 2
- 2a. Female spikes <10 mm long *C. norvegica*
(includes *C. stevenii*, *C. media*)
- 2b. At least some female spikes >10 mm long 3
- 3a. Rhizomatous plants of peaty soils; stems arising singly; female scales with an awn tip *C. buxbaumii*
- 3b. Plants forming small clumps; female scales pointed but not awned 4
- 4a. Perigynia >3 mm long; plants montane to subalpine.... *C. atrata*
(includes *C. atosquamma*, *C. chalciolepis*, *C. epappilosa*)
- 4b. Perigynia <3 mm long; plants montane or lower 5
- 5a. Terminal spike at least twice as wide as the lower ones; over 5000 ft in southwest MT *C. idahoa*
- 5b. Terminal spike about as wide as lower ones *C. parryana*

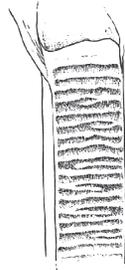
Group F Achene 2-sided; spikes with male flowers above female

- 1a. Spikes well-separated, usually with 1-3 perigynia each *C. disperma*
- 1b. Spikes with >3 perigynia per spike 2
- 2a. Inflorescence branched below 3
- 2b. All spikes attached on the main inflorescence axis 5

- 3a. Leaf sheaths not cross-corrugate at the top *C. cusickii*
- 3b. Leaf sheaths with horizontal ridges at the top opposite the base of the blade 4



F3a



F3b

- 4a. Perigynia 4-5 mm long, the beak about as long as the body..... *C. stipata*
- 4b. Perigynia 3-4.5 mm long, the beak shorter than the body.....*C. vulpinoidea*



F4a



F4b

- 5a. Stems forming tussocks; creeping rhizomes lacking6
- 5b. Stems arising singly or in small groups from rhizomes..... 10

- 6a. Leaf sheaths with horizontal ridges at the top opposite the base of the blade *C. neurophora*
- 6b. Leaf sheaths not cross-corrugate at the top7

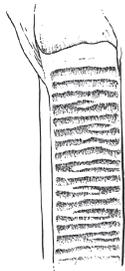
- 7a. Leaves all clustered near the base, perigynia with > 7 veins.... *C. jonesii*
- 7b. Leaves on stem as well as basal, perigynia with fewer veins8

- 8a. Beak of perigynia deeply cut into 2 pointed teeth at the tip; leaf sheaths mottled green and white *C. gravida*
- 8b. Beak of perigynia little or not cut at the tip; leaf sheaths not mottled9

- 9a. Lower spikes well separated *C. prairea* (Lincoln Co.)
- 9b. Lower spikes touching each other..... *C. diandra*



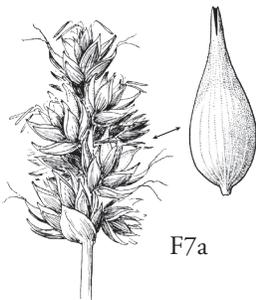
F6a



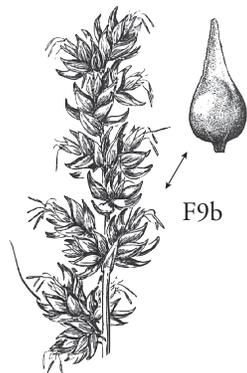
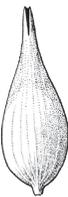
- 10a. Inflorescence 5-15 mm long; stems creeping on wet peat..... *C. chordorrhiza*
- 10b. Inflorescence >15 cm long; stems erect; habitat various 11

- 11a. Leaf sheaths green and white opposite where the blade meets the stem*C. sartwellii*
- 11b. Upper leaf sheaths white or brown not green and white striped 12

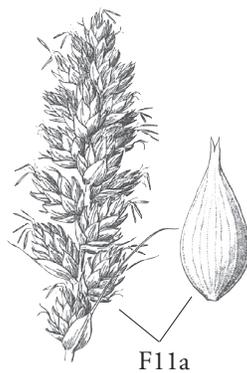
- 12a. Perigynia about 2 mm long; plants of fens..... *C. simulata*
- 12b. Perigynia >3 mm long; grasslands to wet meadows..... 13



F7a



F9b



F11a



F12a



F13a



F14a



F14b

- 13a. Perigynia 4-6 mm long.....*C. siccata*
- 13b. Perigynia 3-4 mm long.....14

- 14a. Stem mostly >20 cm high, sharply 3-angled and roughened near the top..... *C. prae-gracilis*
- 14b. Stem usually <20 cm high, rounded and smooth *C. douglasii*

Group G Achene 2-sided; bisexual spikes with males at the base

- 1a. Leaf-like bract at the base of the inflorescence longer than the inflorescence2
- 1b. Bracts not surpassing the inflorescence3

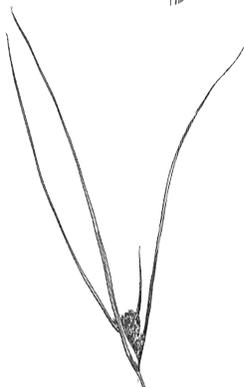
- 2a. Perigynium beak 3-4 mm long..... *C. sychnocephala*
- 2b. Beaks of perigynia ≤1 mm long..... *C. athrostachya*

- 3a. Perigynia 2-3 mm long including the beak4
- 3b. Perigynia >3 mm long.....[10](#)

- 4a. Spikes 7-14, crowded in an elongate cluster *C. arcta*
- 4b. Spikes fewer or well-separated5

- 5a. Perigynia widely spreading at maturity so the spikes appear star-like when viewed from above.....6
- 5b. Perigynia erect or ascending[7](#)

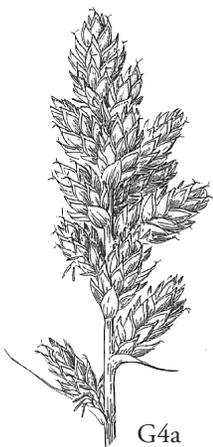
- 6a. Beak of perigynia <1 mm long, up to half as long as the body..... *C. interior*
- 6b. Beak of perigynia >1 mm long, >half as long as the body..... *C. echinata* (*C. muricata*)



G2a



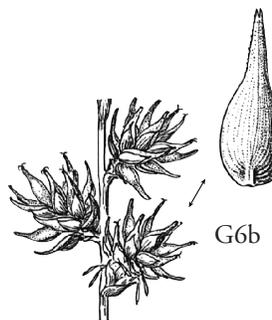
G2b



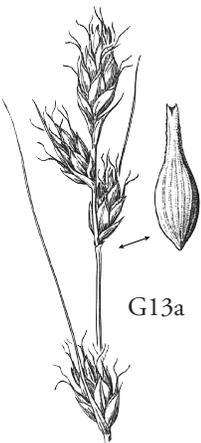
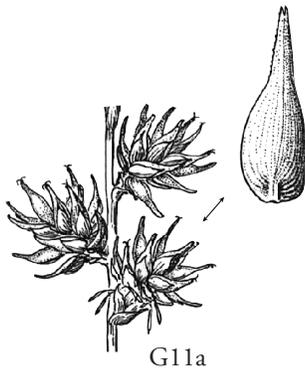
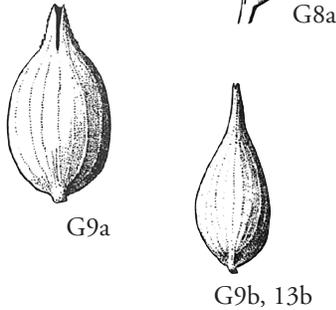
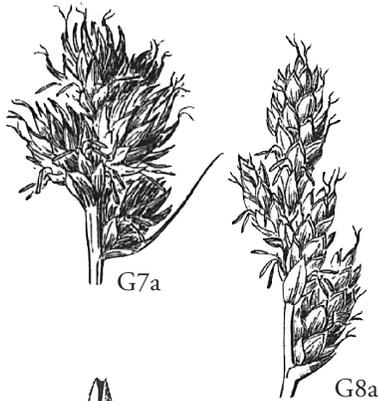
G4a



G6a



G6b



- 7a. Beaks of perigynia ≥ 1 mm..... *C. limnophila* (= *C. microptera*)
- 7b. Perigynium beaks < 1 mm long.....8

- 8a. Most spikes with > 10 perigynia..... *C. canescens*
- 8b. Most spikes with 5-10 perigynia.....9

- 9a. Perigynium beaks ≤ 0.5 mm long..... *C. brunnescens*
- 9b. Beaks of perigynia 0.5-1.0 mm long..... *C. laeviculmis*

- 10a. Perigynia with rounded margins, filled to the edges with the seed.....11
- 10b. Perigynia thin-edged, not completely filled by the seed inside14

- 11a. Perigynia widely spreading at maturity so the spikes appear star-like when viewed from above..... *C. echinata*
- 11b. Perigynia erect or ascending12

- 12a. Beak of perigynium < 0.5 mm long; spikes closely aggregated..... *C. tenuiflora*
- 12b. Perigynium beak > 0.5 mm; spike widely spaced13

- 13a. Beak of perigynium ≥ 1 mm long, nearly as long as the body..... *C. deweyana* (= *C. leptopoda*, *C. infirmivervia*)
- 13b. Perigynium beak < 1 mm long *C. laeviculmis*

- 14a. Spikes tightly clustered in a globose head 7-12 mm high *C. limnophila* (= *C. microptera*)
- 14b. Inflorescence > 12 mm long15

- 15a. Perigynia 3-4 mm long including the beak.....16
- 15b. Perigynia > 4 mm long.....[21](#)

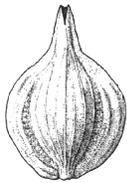
- 16a. Perigynia > 3 times as long as wide.....[17](#)
- 16b. Perigynia 1-3 times as long as wide.....[18](#)



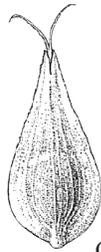
G17a, 20a, 22b



G17b



G18a, 23a



G19a



G20b



G22a, 24b



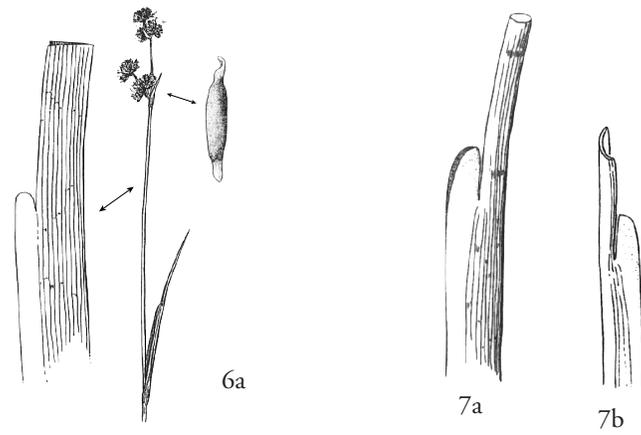
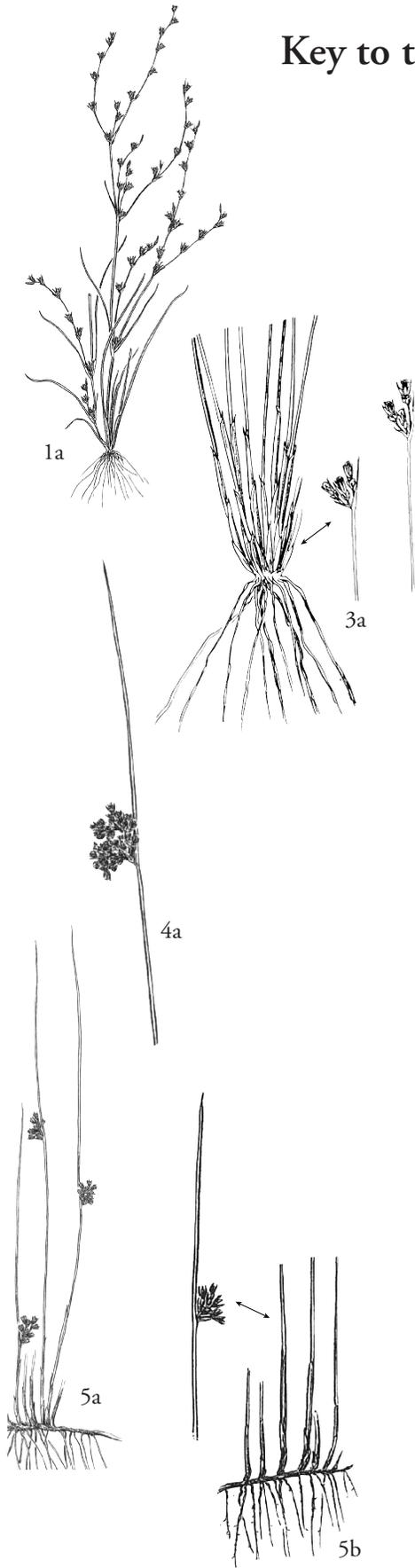
G24a

- 17a. Spikes in an orbicular to ovoid cluster, 1-2 times as long as wide *C. microptera*
 17b. Inflorescence in an oblong cluster 2-3 times as long as wide *C. crawfordii*
- 18a. Perigynia >2.5 mm wide *C. brevior*
 18b. Perigynia <2.5 mm wide 19
- 19a. Perigynia averaging 3.0-3.5 mm long *C. bebbii*
 19b. Perigynia averaging ≥ 3.5 mm long 20
- 20a. Inflorescence globose; spikes tightly clustered *C. microptera* or *C. pachystachya*
 20b. Lower spikes well separated and distinct from those above *C. tenera* or *C. tincta*
- 21a. Spikes in an orbicular to ovoid cluster, 1-2 times as long as wide 22
 21b. Inflorescence >2 times as long as wide 23
- 22a. Female scales light brown; rare *C. scoparia*
 22b. Female scales dark brown; common *C. microptera* or *C. pachystachya*
- 23a. Perigynia >2.5 mm wide *C. brevior*
 23b. Perigynia ≤ 2.5 mm wide 24
- 24a. Female scales about as long as the tips of perigynia *C. praticola*
 24b. Perigynia beaks conspicuously exceeding the female scales *C. scoparia*

Key to the Montana Species of *Juncus*

Juncus albescens, *J. biglumis* and *J. triglumis* occur only in high subalpine to alpine habitats and are not included. *Juncus vaseyi* is reported for Montana, but we have been unable to find specimens to verify this report.

- 1a. Plants fibrous-rooted annual with flowers in the axils of leaves as well as in terminal clusters.....*J. bufonius*
- 1b. Plants perennial without flowers in leaf axils2
- 2a. Stem leaf blades lacking or reduced to papery sheaths3
- 2b. Stem leaves present and conspicuous.....6
- 3a. Stems with 1-4 flowers *J. drummondii*
- 3b. Stems with >4 flowers4
- 4a. Stems densely clustered from short rhizomes.....*J. effusus* (= *J. pylaei*)
- 4b. Plants with spreading rhizomes5
- 5a. Inflorescence apparently attached near middle of stem (stem-like portion above inflorescence is actually considered a bract)*J. filiformis*
- 5b. Inflorescence apparently attached on upper third of the stem*J. balticus*
- 6a. Leaves iris-like, each folded in half and enfolding those above at the base (equitant)*J. ensifolius* (includes *J. tacyi*)
- 6b. Leaves not equitant7
- 7a. Leaf blades round in cross-section and usually divided cross-wise into sections (hold up to light).....8
- 7b. Leaf blades flat or v-shaped in cross-section.....16



- 8a. Stems with a single head-like cluster of flowers; high montane to alpine.....*J. mertensianus*
- 8b. Most stems with >1 head; habitat usually lower.....9

- 9a. Flowers in clusters of 3-12 flowers.....10
- 9b. Most flower heads with >12 flowers each.....13

- 10a. Petal-like tepals mostly >3 mm long.....11
- 10b. Tepals 2-3 mm long.....12

- 11a. Tepals shorter than the mature capsule; seeds with short white "tails" on each end (rare).....*J. tweedyi*
- 11b. Tepals as long or longer than the mature capsule; seeds without tails.....*J. nevadensis*

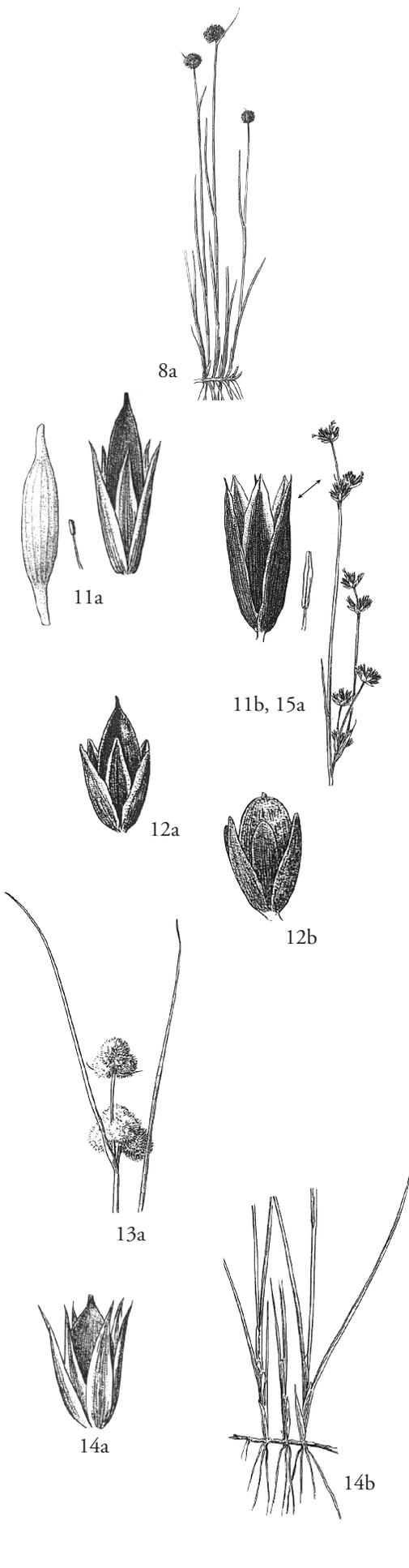
- 12a. Seed capsule pointed at the top *J. articulatus*
- 12b. Seed capsule distinctly rounded on top ...*J. alpinoarticulatus* (= *J. alpinus*)

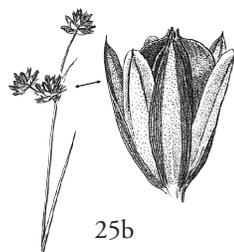
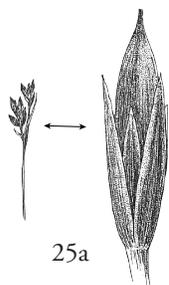
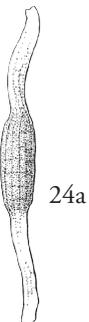
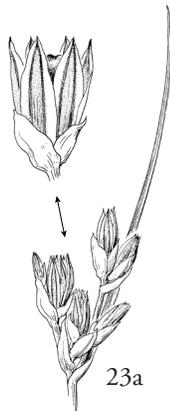
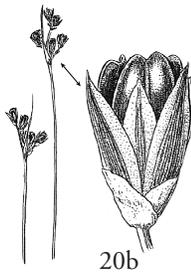
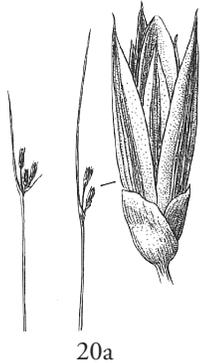
- 13a. Heads, 10-15 mm wide, with 30-80 flowers each....*J. torreyi*
- 13b. Heads smaller with fewer flowers.....14

- 14a. Stems clumped; stamens 3 in some flowers (rare)*J. acuminatus*
- 14b. Stems arising singly from rhizomes; stamens 615

- 15a. Seed capsules rounded to the small pointed tip; anthers as long or longer than anther stalks; rhizome without swollen nodes*J. nevadensis*
- 15b. Seed capsules tapered to a long point; anthers shorter than anther stalks; rhizome nodes swollen*J. nodosus*

- 16a. Each flower with a pair of small bracts at the base (prophyll) in addition to a single bract at the base of the flower stalk....[17](#)
- 16b. Each flower with one or no prophylls"[24](#)





- 17a. Tips of outer perianth segments (tepals) curved inward (hooded)18
- 17b. Outer tepals not hooded19

- 18a. Anthers as long as their stalks; seed capsules longer than the tepals..... *J. compressus*
- 18b. Anthers ca. 3 times as long as their stalks; seed capsules ca. as long as the tepals*J. gerardii*

- 19a. Flowers 2-7 per stem20
- 19b. Flowers usually >7 per stem.....21

- 20a. Tepals 6-7 mm long; flowers 1-3 per stem..... *J. parryi*
- 20b. Tepals 4-5 mm long; flowers usually 2-7 per stem*J. hallii*

- 21a. Auricles at the top of leaf sheaths >1 mm long, membranous*J. tenuis*
- 21b. Auricles ≤1 mm long or absent, leathery or membranous.....22

- 22a. Auricles leathery, yellowish.....*J. dudleyi*
- 22b. Auricles white to purplish, membranous.....23

- 23a. Capsule indented on top, completely divided into 3 cells.....*J. confusus*
- 23b. Capsule rounded on top, dividing walls not going all the way to the center.....*J. interior*

- 24a. Seeds with white “tails” as long as the body25
- 24b. Seeds without tails.....26

- 25a. Petal-like tepals uniformly brown, shorter than the mature capsule*J. castaneus*
- 25b. Tepals with a broad green mid-stripe, longer than the mature capsule*J. regelii*

- 26a. Petal-like tepals 3-4 mm long, shorter than the mature capsule *J. covillei*
- 26b. Petal-like tepals 5-6 mm long, longer than the mature capsule *J. longistylis*

Glossary

> Greater than, more than

≥ Greater than or equal to, more than or as many as

< Less than, fewer than

≤ Less than or equal to, fewer than or as many as

Achene – Dry, 1-seeded fruit with a hard coat; achenes often resemble seeds.

Alpine – Above the altitudinal limit of trees.

Alternate – Arranged 1-per-node; see “opposite” and “whorl.”

Anther – The sac at the end of the stamen that contains the pollen.

Annual – A plant that completes its life-cycle in 1 year or less.

Aster-like – Flowers in a hemispheric head with tubular flowers (usually yellow) in the circular center and petal-shaped flowers surrounding it.

Auricle – A small lobe partly surrounding the stem at the base of a grass leaf blade.

Awn – A stiff bristle-like appendage.

Axil – Juncture between a leaf and stem or any two organs.

Beak – A firm, elongate structure, tip or projection.

Biennial – A plant that is vegetative its first year, then flowers and dies the second; sometimes such plants may live more than 2 years, but flowering is always followed by death.

Bladder – Inflated, thin-walled, sac-like structure.

Blade – The usually broad and flat portion of the leaf; does not include the stalk-like petiole, if one exists.

Bract – Reduced or modified leaf subtending a flower or group of flowers.

Bulb – Underground bud covered by fleshy scales, like an onion.

Calyx – The collective sepals; the outermost, usually green series of flower parts.

Capsule – A dry, many-seeded fruit.

Catkin – A small, tightly clustered spike of unisexual flowers with bracts but lacking petals and sepals.

Collar – Top of a grass leaf sheath where it joins the blade.

Cone – A usually cylindrical reproductive structure consisting of a central axis with spirally arranged scales, each subtending seed- or pollen-bearing structures; occurring in non-flowering plants.

Dandelion-like – Flowers all strap-shaped and clustered in a conical head.

Dicot – A plant whose germinated seedlings have 2 leaf-like cotyledons before the first true leaves are formed; true leaves have net-like venation; flower parts usually in 2s or 4s or 5s.

Glossary

- Equitant** – Each leaf folded in half lengthwise and partly enfolding the base of the one above; like an iris.
- Fen** – Vegetation dominated by grass-like plants with wet, peaty soil.
- Floret** – The flower of a grass composed of the lemma, palea and enclosed male and female parts.
- Fron** – A fern leaf.
- Gland** – An organ usually recognized by its secretion of tiny oil, resin etc. droplets, often at the ends of hairs.
- Glume** – One of two scale-like bracts at the base of a grass spikelet.
- Inflorescence** – Flowering portion of the plant.
- Leaf sheath** – A tubular covering; in grasses the leaf sheath occurs below the blade and surrounds and encloses the stem.
- Leaflet** – A separate, leaf-like segment of a compound leaf. Leaves are attached to stems that have a bud at the tip; leaflets are attached to the axis (rachis) of a compound leaf, which has a leaflet or coiled tendril at the tip instead of a bud.
- Lemma** – The outermost of the pair of scale-like grass flower parts surrounding the ovary and/or stamens.
- Ligule** – A short, hairy or membranous projection on the inside of the leaf sheath at the point where it joins the blade.
- Lobe** – Rounded or pointed segment of a leaf, petal or fruit that projects or stands out from the margin.
- Mineral soil** – Soil composed mainly of eroded rock, clay or sand and only a small fraction of organic matter.
- Monocot** – A plant whose germinated seedlings have a single leaf-like cotyledon before the first true leaves are formed; leaves undivided with parallel veins; flower parts usually in 3s or 6s.
- Montane** – Referring to the vegetation zone encompassing the foothills and lower mountains.
- Node** – A stem “joint,” the point of attachment for leaves or side branches.
- Opposite** – Paired at the nodes; plants with opposite leaves have 2 leaves arising opposite each other at a single leaf node.
- Palmate** – Leaflets arranged with their stalks all attached at a single point on the tip of the petiole, like fingers to the palm of a hand.
- Pappus** – In the Asteraceae; the outer series of flower parts (calyx), usually composed of several to many bristles or scales.
- Peat** – Soil composed primarily of decomposing organic matter (i.e., leaves, stems etc.).
- Peatland** – Wetland with organic soil; i.e., derived from decayed plants.
- Perennial** – A plant that persists through at least one winter and flowers in at least two growing seasons.
- Perianth** – A collective term for the sepals (calyx) and petals (corolla) together; often used when they are difficult to distinguish.
- Perigynium** – In the genus *Carex*; the sac-like flower part surrounding the seed (achene).

- Petal** – One member of the series of flower parts just inside the sepals, often colored and showy.
- Petiole** – The stalk of a leaf, attaching the leaf blade to the stem.
- Pinnate** – With leaflets, lobes or veins arising along opposite sides of a long axis.
- Rhizome** – An underground, often horizontal stem that may give rise to many individual-appearing plants.
- Rosette** – A cluster of leaves all radiating out from a central point of attachment.
- Scale** – A small, thin structure, like a fish scale.
- Spathe** – Large, hood-like bract partially enclosing the inflorescence.
- Spike** – An elongate inflorescence bearing unstalked flowers.
- Spikelet** – A small spike of flowers in the grass or sedge families.
- Spore** – A simple 1-celled reproductive body, capable of giving rise to a new individual.
- Spur** – A long, narrow appendage, often from a petal or sepal.
- Stipule** – Scale- or leaf-like appendages at the base of the leaf where it joins the stem.
- Subalpine** – Referring to the vegetation zone of the higher mountains but still within the growing limits of trees.
- Subtend** – To be immediately beneath.
- Succulent** – Thick, fleshy and often juicy.
- Tepal** – A petal or sepal when they are indistinguishable from each other.
- Terminal** – Referring to the last or end segment or structure.
- Toothed** – With short, pointed or rounded projections along the edge of a leaf or other structure.
- Umbel** – An inflorescence with the flower stalks ascending from the same point at the tip of a stem or branch, like the spokes of an umbrella.
- Vine** – A plant with weak stems that “climbs” and is supported by other plants or upright objects.
- Whorl** – A group of 3 or more leaves or branches all attached at the same level (node) on the stem.
- Tussock** – A distinct tuft or hummock formed by a grass or sedge in which all stems arise from a well-defined central area.

Appendix A

Table 3 lists wetland vascular plant species occurring in Montana, including all species listed in the U.S. Army Corps of Engineer’s 2014 National Wetland Plant List for Montana (<http://rsgisias.crrel.usace.army.mil/NWPL/>) in OBL, FACW, FAC or FACU indicator categories in Great Plains (GP), Western Mountains, Valleys, and Coast (WMVC), or Arid West (AW) regions. An asterisk (*) denotes an introduced species. Table 1 identifies the wetland plant indicator categories used. Additional information on indicator categories is included in the introduction of this field guide. For use of wetland plant indicator status in wetland delineations, refer to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory. 1987.’ “Corps of Engineers Wetlands Delineation Manual,” Technical Report Y-87-1, US Army Engineers Waterways Experiment Station, Vicksburg, Miss.). Figure 1 shows the location of USACE regions in Montana.

The most recent wetland plant list and indicator status is available on the U.S. Army Corps of Engineers National Wetland Plant List website. https://cwbi-app.sec.usace.army.mil/nwpl_static/v34/home/home.html

Category	Status
OBL	Almost always is a hydrophyte, rarely in uplands
FACW	Usually is a hydrophyte but occasionally found in uplands
FAC	Commonly occurs as either a hydrophyte or non-hydrophyte
FACU	Occasionally is a hydrophyte but usually occurs in uplands
UPL	Rarely is a hydrophyte, almost always in uplands.

The coefficient of conservatism (C. of C.) is a method of ranking the relative ability of a plant to tolerate disturbance and is a reliable indicator of site condition. Scoring criteria used to assign coefficients are shown in Table 2. Additional information about coefficients of conservation and the scoring process used in Montana is included in the introduction of this field guide.

Table 2. Dichotomous key used for coefficient of conservatism scoring (after Zomlefer et al. 2013).

Dichotomous key for Coefficient of Conservation Rankings	
(a) Non-native species	(b)
(b) invasive	rank 0
(b) relatively benign.....	rank 1
(a) Native species.....	(c)
(c) opportunistic, broad range of ecological tolerance, more or less restricted to areas subject to human disturbance.....	rank 2
(c) non-opportunistic, intermediate to narrow range of ecological tolerance	(d)
(d) intermediate range of ecological tolerance, typifies a stable phase of some native community, thrives and/or persists under natural or human disturbance	(e)
(e) persists and/or thrives under natural or human disturbance	rank 3
(e) persists but does not thrive under limited natural or human disturbance	(f)
(f) persists with some disturbance	rank 4
(f) persists with little disturbance	rank 5

Dichotomous key for Coefficient of Conservation Rankings (cont.)

- (d) narrow range of ecological tolerance, typifies a stable or near climax community (including fire-dependent disclimax communities), tolerates little to no disturbance (unless surrogate for fire or other natural disturbance)..... (g)
- (g) moderate fidelity to a narrow habitat requirement, may or may not tolerate limited disturbance (h)
- (h) more or less narrow range of ecological tolerance, tolerates limited disturbance **rank 6**
- (h) narrower range of ecological tolerance, does not tolerate disturbance (i)
- (i) somewhat narrow range of ecological tolerance **rank 7**
- (i) narrow range of ecological tolerance **rank 8**
- (g) high fidelity to a narrow range of habitat requirement, does not tolerate disturbance (j)
- (j) narrow range of ecological tolerance, relatively high fidelity to a narrow range of habitat requirement **rank 9**
- (j) very narrow range of ecological tolerance, very high fidelity to a very narrow range of habitat requirement **rank 10**

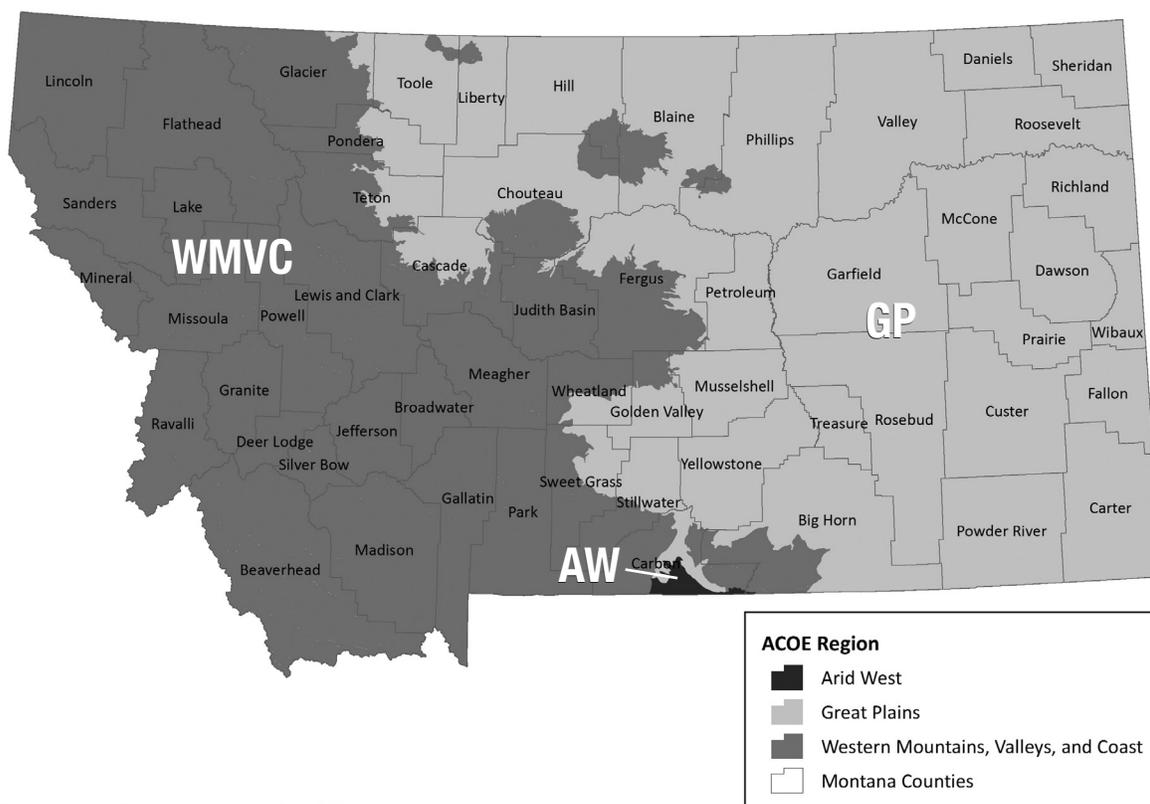


Figure 1. Location of USACE regions in Montana.

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana.

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Abies bifolia</i> A. Murr.	Pinaceae	Subalpine Fir	-	FACU		FACU
<i>Abies grandis</i> (Dougl. ex D. Don) Lindl.	Pinaceae	Grand Fir	-	FACU		FACU
* <i>Abutilon theophrasti</i> Medik.	Malvaceae	Velvetleaf	1	FACU	UPL	UPL
<i>Acer glabrum</i> Torr.	Aceraceae	Rocky Mountain Maple	4	FACU	UPL	UPL
<i>Acer negundo</i> L.	Aceraceae	Box-elder	2	FACU	FAC	FAC
* <i>Acer platanoides</i> L.	Aceraceae	Norway Maple	1	FAC	FAC	FACW
> <i>Achillea millefolium</i> L.	Asteraceae	Common Yarrow	-	FACU	FACU	FACU
* <i>Achillea ptarmica</i> L.	Asteraceae	Pearl Yarrow	1	FACU	FACU	FACU
> <i>Achnatherum hymenoides</i> (Roemer & J.A. Schultes) Barkworth	Poaceae	Indian Rice Grass	-	UPL	FACU	UPL
> <i>Achnatherum nelsonii</i> (Scribn.) Barkworth	Poaceae	Nelson's Rice Grass	6	UPL	UPL	FACU
> <i>Achnatherum richardsonii</i> (Link) Barkworth	Poaceae	Richardson's Rice Grass	-	UPL	FACU	UPL
> <i>Acmispon americanus</i> (Nutt.) Rydb.	Fabaceae	American Deerweed		FACU	FACU	UPL
<i>Aconitum columbianum</i> Nutt.	Ranunculaceae	Columbian Monkshood	5	FACW	FACW	FACW
> <i>Aconogonon phytolaccifolium</i> (Meisn. ex Small) Small	Polygonaceae	Poke Knotweed	-	FAC		FAC
> <i>Acorus americanus</i> (Raf.) Raf.	Acoraceae	Sweetflag	9	OBL	OBL	OBL
<i>Actaea rubra</i> (Ait.) Willd.	Ranunculaceae	Red Baneberry	7	FACU	FACU	FAC
> <i>Adiantum aleuticum</i> (Rupr.) Paris	Polypodiaceae	Maidenhair Fern	7	FAC	FAC	FAC
<i>Adoxa moschatellina</i> L.	Adoxaceae	Musk-root	9	FAC	FAC	FAC
<i>Agastache urticifolia</i> (Benth.) Kuntze	Lamiaceae	Nettle-leaf Giant-hyssop	-	FACU		FACU
<i>Agoseris aurantiaca</i> (Hook.) Greene	Asteraceae	Orange Agoseris	5	FACU		FAC
<i>Agoseris glauca</i> (Pursh) Raf.	Asteraceae	Pale Agoseris	4	FAC	FACU	FACU
> <i>Agoseris parviflora</i> (Nutt.) D. Dietr.	Asteraceae	Steppe Agoseris	-	UPL	UPL	FACU
<i>Agrimonia gryposepala</i> Wallr.	Rosaceae	Tall Hairy Groovebur	-	FACW	FAC	FAC
<i>Agrimonia striata</i> Michx.	Rosaceae	Woodland Agrimony	-	FACU	FACU	FACU
> * <i>Agrostis capillaris</i> L.	Poaceae	Colonial Bentgrass	1	FAC	FAC	FAC
<i>Agrostis exarata</i> Trin.	Poaceae	Spike Bentgrass	3	FACW	FACW	FACW
> * <i>Agrostis gigantea</i> Roth	Poaceae	Redtop	0	FAC	FACW	FACW
<i>Agrostis idahoensis</i> Nash	Poaceae	Idaho Bentgrass	4	FACW	FACW	FACW
> <i>Agrostis mertensii</i> Trin.	Poaceae	Northern Bentgrass	-	FACU	FACU	FACU
<i>Agrostis oregonensis</i> Vasey	Poaceae	Oregon Bentgrass	6	FAC		FACW
> <i>Agrostis pallens</i> Trin.	Poaceae	Leafy Bentgrass	-	UPL		FACU
<i>Agrostis scabra</i> Willd.	Poaceae	Rough Bentgrass	2	FAC	FAC	FAC
> * <i>Agrostis stolonifera</i> L.	Poaceae	Creeping Bentgrass	0	FAC	FACW	FACW
<i>Alisma gramineum</i> Lej.	Alismataceae	Narrow-leaf Water-plantain	6	OBL	OBL	OBL
> <i>Alisma triviale</i> Pursh	Alismataceae	Northern Water-plantain	6	OBL	OBL	OBL
<i>Alliaria petiolata</i> (Bieb.) Cavara & Grande	Brassicaceae	Garlic-Mustard		FACU	FACU	FACU
<i>Allium cernuum</i> Roth	Liliaceae	Nodding Onion	-	FACU	UPL	FACU
<i>Allium geyeri</i> S. Wats.	Liliaceae	Geyer's Onion	-	FACU	FACU	FACU
<i>Allium schoenoprasum</i> L.	Liliaceae	Chives	6	FACW	FACU	FACW
> <i>Almutaster pauciflorus</i> (Nutt.) A.& D. Love	Asteraceae	Alkali Marsh Aster	7	FACW	FACW	FACW
> <i>Alnus incana</i> (L.) Moench	Betulaceae	Speckled Alder	6	FACW	FACW	FACW
<i>Alnus rubra</i> Bong.	Betulaceae	Red Alder	-	FAC		FACW
> <i>Alnus viridis</i> (Chaix) DC.	Betulaceae	Green Alder	6	FACW	FAC	FACW
<i>Alopecurus aequalis</i> Sobol.	Poaceae	Short-awn Foxtail	4	OBL	OBL	OBL
* <i>Alopecurus arundinaceus</i> Poir.	Poaceae	Creeping Foxtail	0	FAC	FACW	FAC
<i>Alopecurus carolinianus</i> Walt.	Poaceae	Tufted Foxtail	4	FACW	FACW	FACW
* <i>Alopecurus geniculatus</i> L.	Poaceae	Water Foxtail	1	OBL	OBL	OBL
> <i>Alopecurus magellanicus</i> Lam.	Poaceae	Mountain Foxtail	6	FACW	FACW	FACW

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
* <i>Alopecurus pratensis</i> L.	Poaceae	Meadow Foxtail	0	FAC	FACW	FACW
<i>Amaranthus albus</i> L.	Amaranthaceae	White Amaranth	-	FACU	FACU	FACU
<i>Amaranthus arenicola</i> I.M. Johnston	Amaranthaceae	Sandhills Amaranth	-	FAC	FACU	FACU
> <i>Amaranthus blitoides</i> S. Wats.	Amaranthaceae	Prostrate Amaranth	2	FACW	FAC	FACW
<i>Amaranthus californicus</i> (Moq.) S. Wats.	Amaranthaceae	California Amaranth	7	FACW	FACW	FACW
<i>Amaranthus retroflexus</i> L.	Amaranthaceae	Redroot Amaranth	2	FACU	FACU	FACU
> * <i>Amaranthus tuberculatus</i> (Moq.) Sauer	Amaranthaceae	Roughfruit Amaranth	1	OBL	FAC	FACW
<i>Ambrosia artemisiifolia</i> L.	Asteraceae	Annual Ragweed	-	FACU	FACU	FACU
<i>Ambrosia psilostachya</i> DC.	Asteraceae	Western Ragweed	3	FACU	FACU	FACU
<i>Ambrosia trifida</i> L.	Asteraceae	Giant Ragweed	2	FAC	FAC	FAC
<i>Amelanchier alnifolia</i> (Nutt.) Nutt. ex M. Roemer	Rosaceae	Saskatoon Serviceberry	-	FACU	FACU	FACU
<i>Amelanchier utahensis</i> Koehne	Rosaceae	Utah Serviceberry	-	UPL	FAC	FACU
> <i>Ammannia robusta</i> Heer & Regel	Lythraceae	Scarlet Ammannia	6	OBL	OBL	OBL
<i>Anaphalis margaritacea</i> (L.) Benth. & Hook. f.	Asteraceae	Pearly-Everlasting	-	FACU	FACU	FACU
<i>Andropogon gerardii</i> Vitman	Poaceae	Big Bluestem	-	FACU	FACU	FACU
> <i>Androsace chamaejasme</i> Wulfen	Primulaceae	Sweet-flower Rock-jasmine	-	FACU	FACU	FACU
<i>Androsace filiformis</i> Retz.	Primulaceae	Filiform Rockjasmine	2	FACW		FACW
<i>Androsace occidentalis</i> Pursh	Primulaceae	Western Rock-jasmine	-	FACU	FACU	FACU
<i>Androsace septentrionalis</i> L.	Primulaceae	Pygmy-flower Rock-jasmine	-	FACU	FACU	FACU
<i>Anemone canadensis</i> L.	Ranunculaceae	Canada Anemone	4	FAC	FACW	FAC
<i>Anemone parviflora</i> Michx.	Ranunculaceae	Small-flower Anemone	6	FACW	FACU	FACW
<i>Anemone piperi</i> Britt. ex Rydb.	Ranunculaceae	Piper's Anemone	-	FACU		FACU
<i>Angelica arguta</i> Nutt.	Apiaceae	Lyal's Angelica	5	FACW		FACW
<i>Angelica dawsonii</i> S. Wats.	Apiaceae	Dawson's Angelica	7	FACW		FACW
<i>Angelica pinnata</i> S. Wats.	Apiaceae	Small-leaf Angelica	4	FACW	FACW	FACW
<i>Antennaria alpina</i> (L.) Gaertn.	Asteraceae	Alpine Pussytoes	9	FACU		FACU
<i>Antennaria corymbosa</i> E. Nels.	Asteraceae	Meadow Pussytoes	6	FAC		FAC
<i>Antennaria media</i> Greene	Asteraceae	Rocky Mountain Pussytoes	7	FAC		FAC
<i>Antennaria neglecta</i> Greene	Asteraceae	Field Pussytoes	-	FACU	FACU	FACU
<i>Antennaria pulcherrima</i> (Hook.) Greene	Asteraceae	Showy Pussytoes	8	FAC		FACU
<i>Antennaria umbrinella</i> Rydb.	Asteraceae	Umber Pussytoes	6	FACU	FACU	FACU
* <i>Anthemis cotula</i> L.	Asteraceae	Mayweed	1	FACU	FACU	FACU
> <i>Anthoxanthum hirtum</i> (Schrank) Y. Schouten & Veldkamp	Poaceae	Northern Sweet Vernal Grass	8	FACW	FACW	FACW
* <i>Anthoxanthum odoratum</i> L.	Poaceae	Sweet Vernalgrass	1	FACU	FAC	FAC
> <i>Anticlea elegans</i> (Pursh) Rydb.	Liliaceae	Mountain Deathcamas	4	FACU	FACW	FACU
> <i>Anticlea occidentalis</i> (Gray) Zomlefer & Judd	Liliaceae	Western Featherbells	7	FAC	FACW	FACW
<i>Apocynum androsaemifolium</i> L.	Apocynaceae	Spreading Dogbane	-	FACU	UPL	UPL
> <i>Apocynum cannabinum</i> L.	Apocynaceae	Indian-Hemp	4	FAC	FAC	FAC
> <i>Aquilegia caerulea</i> James	Ranunculaceae	Colorado Columbine	6	FAC		FACU
<i>Aquilegia formosa</i> Fisch. ex DC.	Ranunculaceae	Crimson Columbine	6	FAC		FAC
> <i>Arabidopsis lyrata</i> (L.) O'Kane & Al-Shehbaz	Brassicaceae	Lyre-Leaf Thalecress	-	FACU		FACU
> <i>Arabis eschscholtziana</i> Andrz.	Brassicaceae	Pacific-Coast Eared Rockcress	-	FACU	FACU	FACU
> <i>Arabis pycnocarpa</i> M. Hopkins	Brassicaceae	Hairy Eared Rockcress	-	FACU	FACU	FACU
<i>Aralia nudicaulis</i> L.	Araliaceae	Wild Sarsaparilla	-	FACU	FACU	FACU
* <i>Arctium minus</i> (Hill) Bernh.	Asteraceae	Lesser Burrdock	0	UPL	FACU	FACU
<i>Arctostaphylos uva-ursi</i> (L.) Spreng.	Ericaceae	Red Bearberry	-	FACU	UPL	FACU
* <i>Arenaria serpyllifolia</i> L.	Caryophyllaceae	Thyme-Leaf Sandwort	0	FACU	FACU	FACU
<i>Arnica chamissonis</i> Less.	Asteraceae	Leafy Leopardbane	5	FACW	FACW	FACW

> = *synonym listed in Appendix B*

* = *introduced species*

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
<i>Arnica fulgens</i> Pursh	Asteraceae	Shining Leopardbane	-	UPL	UPL	FACU
> <i>Arnica lanceolata</i> Nutt.	Asteraceae	Lance-Leaf Leopardbane	5	FACW	FAC	FACW
<i>Arnica latifolia</i> Bong.	Asteraceae	Daffodil Leopardbane	4	FAC	FAC	FAC
<i>Arnica longifolia</i> D.C. Eat.	Asteraceae	Spear-Leaf Leopardbane	7	FACW	FACW	FACW
<i>Arnica mollis</i> Hook.	Asteraceae	Cordilleran Leopardbane	6	FAC	FAC	FAC
> <i>Arnica ovata</i> Greene	Asteraceae	Sticky-Leaf Leopardbane	5	FACW	FACW	FACW
* <i>Arrhenatherum elatius</i> (L.) Beauv. ex J.& K. Presl	Poaceae	Tall Oat Grass	0	UPL	FACU	UPL
* <i>Artemisia annua</i> L.	Asteraceae	Annual Wormwood	1	UPL	FACU	UPL
<i>Artemisia biennis</i> Willd.	Asteraceae	Biennial Wormwood	2	FACW	FACU	FACW
<i>Artemisia campestris</i> L.	Asteraceae	Pacific Wormwood	-	FACU	UPL	UPL
<i>Artemisia cana</i> Pursh	Asteraceae	Coaltown Sagebrush	4	FACU	FACU	FACU
<i>Artemisia ludoviciana</i> Nutt.	Asteraceae	White Sagebrush	3	FACU	UPL	FACU
> <i>Artemisia norvegica</i> Fries	Asteraceae	Boreal Sagebrush	-	FACU	FACW	FACU
<i>Artemisia tilesii</i> Ledeb.	Asteraceae	Tilesius' Wormwood	-	FACU	FACU	FACU
<i>Asarum caudatum</i> Lindl.	Aristolochiaceae	Long-Tail Wild Ginger	8	FACU		FAC
<i>Asclepias incarnata</i> L.	Asclepiadaceae	Swamp Milkweed	6	OBL	FACW	OBL
<i>Asclepias speciosa</i> Torr.	Asclepiadaceae	Showy Milkweed	2	FAC	FAC	FAC
<i>Asclepias syriaca</i> L.	Asclepiadaceae	Common Milkweed		FACU	UPL	FACU
<i>Asclepias verticillata</i> L.	Asclepiadaceae	Whorled Milkweed	-	FACU	FACU	FACU
* <i>Asparagus officinalis</i> L.	Liliaceae	Asparagus	1	FACU	FACU	FACU
<i>Asplenium trichomanes</i> L.	Polypodiaceae	Maidenhair Spleenwort	-	FAC	FAC	FAC
<i>Astragalus agrestis</i> Dougl. ex G. Don	Fabaceae	Cock's-Head	3	FACW	FACU	FAC
<i>Astragalus alpinus</i> L.	Fabaceae	Alpine Milk-Vetch	4	FACU	FAC	FAC
<i>Astragalus americanus</i> (Hook.) M.E. Jones	Fabaceae	American Milk-Vetch	6	FAC	FAC	FAC
<i>Astragalus argophyllus</i> Nutt.	Fabaceae	Silver-Leaf Milk-Vetch	6	FACW	FACW	FACW
<i>Astragalus canadensis</i> L.	Fabaceae	Canadian Milk-Vetch	3	FACW	FAC	FAC
<i>Astragalus eucosmus</i> B.L. Robins.	Fabaceae	Elegant Milk-Vetch	-	FACU	FACU	FACU
<i>Astragalus lentiginosus</i> Dougl. ex Hook.	Fabaceae	Freckled Milk-Vetch	-	UPL	FACU	UPL
<i>Astragalus leptaleus</i> Gray	Fabaceae	Park Milk-Vetch	6	OBL	OBL	OBL
<i>Astragalus robbinsii</i> (Oakes) Gray	Fabaceae	Robbins' Milk-Vetch	5	FAC	FAC	FAC
> <i>Athyrium americanum</i> (Butters) Maxon	Polypodiaceae	American Alpine Lady Fern	7	FAC	FAC	FAC
> <i>Athyrium cyclosorum</i> Rupr.	Polypodiaceae	Western Lady Fern	5	FAC	FAC	FAC
<i>Atriplex argentea</i> Nutt.	Amaranthaceae	Silverscale	3	FAC	FAC	FAC
> <i>Atriplex dioica</i> Raf.	Amaranthaceae	Saline Saltbush	3	UPL	FAC	FAC
* <i>Atriplex hortensis</i> L.	Amaranthaceae	Garden Orache	1	FAC	FAC	FAC
<i>Atriplex patula</i> L.	Amaranthaceae	Halberd-Leaf Orache	0	FACW	FACW	FACW
* <i>Atriplex rosea</i> L.	Amaranthaceae	Tumbling Orache	1	FACU	FACU	FACU
<i>Atriplex truncata</i> (Torr. ex S. Wats.) Gray	Amaranthaceae	Wedge-Leaf Orache	5	FACU	FAC	FACU
> * <i>Avena sativa</i> L.	Poaceae	Oat	1	UPL	FACU	UPL
> <i>Azolla microphylla</i> Kaulfuss	Salviniaceae	Mexican Mosquito Fern		OBL	OBL	OBL
<i>Bacopa rotundifolia</i> (Michx.) Wettst.	Plantaginaceae	Disk Water-Hyssop	7	OBL	OBL	OBL
<i>Barbarea orthoceras</i> Ledeb.	Brassicaceae	American Yellow-Rocket	4	FACW	OBL	FACW
* <i>Barbarea vulgaris</i> Ait. f.	Brassicaceae	Garden Yellow-Rocket	1	FAC	FACU	FAC
* <i>Bassia hyssopifolia</i> (Pallas) Kuntz	Amaranthaceae	Five-Horn Smotherweed	1	FACW	FACW	FAC
> <i>Bassia scoparia</i> (L.) A.J. Scott	Amaranthaceae	Mexican-Fireweed	0	FAC	FACU	FAC
<i>Beckmannia syzigachne</i> (Steud.) Fern.	Poaceae	American Slough Grass	4	OBL	OBL	OBL
* <i>Berberis vulgaris</i> L.	Berberidaceae	European Barberry	1	UPL	UPL	FACU
<i>Bergia texana</i> (Hook.) Seub. ex Walp.	Elatinaceae	Texas Bergia		OBL	OBL	OBL
<i>Berula erecta</i> (Huds.) Coville	Apiaceae	Cut-Leaf-Water-Parsnip	7	OBL	OBL	OBL
> <i>Betula glandulosa</i> Michx.	Betulaceae	Resin Birch	8	OBL	OBL	OBL

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
<i>Betula occidentalis</i> Hook.	Betulaceae	Water Birch	5	FACW	FACW	FACW
<i>Betula papyrifera</i> Marsh.	Betulaceae	Paper Birch	3	FAC	FACU	FAC
<i>Betula pubescens</i> Ehrh.	Betulaceae	Downy Birch		FACW	FACW	FAC
<i>Betula pumila</i> L.	Betulaceae	Bog Birch	6	OBL	OBL	OBL
> <i>Bidens beckii</i> Torr. ex Spreng.	Asteraceae	Beck's Water-Marigold	8	OBL	OBL	OBL
<i>Bidens cernua</i> L.	Asteraceae	Nodding Burr-Marigold	4	OBL	OBL	OBL
<i>Bidens frondosa</i> L.	Asteraceae	Devil's-Pitchfork	6	FACW	FACW	FACW
> <i>Bidens tripartita</i> L.	Asteraceae	Three-Lobe Beggarticks	6	FACW	FACW	OBL
<i>Bidens vulgata</i> Greene	Asteraceae	Tall Beggarticks	6	OBL	FAC	FACW
> <i>Bistorta bistortoides</i> (Pursh) Small	Polygonaceae	American Bistort	6	FACW	OBL	FACW
> <i>Bistorta vivipara</i> (L.) Delarbre	Polygonaceae	Serpent-Grass	7	FAC	FACW	FAC
> <i>Boechera collinsii</i> (Fern.) A.& D. Love	Brassicaceae	Collin's rockcress	-	FACU	UPL	FACU
> <i>Boechera divaricarpa</i> (A. Nels.) A.& D. Love	Brassicaceae	Spreading-pod rockcress	-	FACU	FACU	FACU
> <i>Boechera grahamii</i> (Lehm.) Windham & Al-Shehbaz	Brassicaceae	Boivin's Rockcress	-	FACU	FACU	FACU
> <i>Boechera lemmonii</i> (S. Wats.) W.A. Weber	Brassicaceae	Soldier Rockcress	-	UPL	UPL	FACU
> <i>Boechera stricta</i> (Graham) Al-Shehbaz	Brassicaceae	Canadian Rockcress	-	FACU	FACU	FACU
<i>Botrychium ascendens</i> W.H. Wagner	Ophioglossaceae	Triangle-Lobe Moonwort	4	FACU	FAC	FAC
> <i>Botrychium crenulatum</i> W.H. Wagner	Ophioglossaceae	Scalloped Moonwort	4	FACW		FACW
> <i>Botrychium hesperium</i> (Maxon & Clausen) W.H. Wagner & Lellinger	Ophioglossaceae	Western Moonwort	-	FACU	FACU	FACU
<i>Botrychium lanceolatum</i> (Gmel.) Angstr.	Ophioglossaceae	Lance-Leaf Moonwort	6	FACW	FACW	FACW
> <i>Botrychium lunaria</i> (L.) Sw.	Ophioglossaceae	Common Moonwort	4	FAC	FAC	FAC
> <i>Botrychium pinnatum</i> St. John	Ophioglossaceae	Northeastern Moonwort	7	UPL	UPL	FACU
<i>Botrychium simplex</i> E. Hitchc.	Ophioglossaceae	Least Moonwort	6	FAC	FAC	FAC
> <i>Botrypus virginianus</i> (L.) Holub	Ophioglossaceae	Rattlesnake Fern	4	FAC	FACU	FAC
> <i>Bouteloua dactyloides</i> (Nutt.) J.T. Columbus	Poaceae	Buffalo Grass	-	UPL	FACU	FACU
<i>Boykinia major</i> Gray	Saxifragaceae	Mountain Brookfoam	7	FACW		FACW
<i>Brasenia schreberi</i> J.F. Gmel.	Nymphaeaceae	Watershield	9	OBL	OBL	OBL
* <i>Brassica juncea</i> (L.) Czern.	Brassicaceae	Chinese Mustard	1	UPL	FACU	FACU
> * <i>Brassica rapa</i> L.	Brassicaceae	Rape	1	FACU	UPL	FACU
> <i>Braya humilis</i> (C.A. Mey.) B.L. Robins.	Brassicaceae	Alpine Northern-Rockcress	-	UPL	FACU	UPL
* <i>Bromus arvensis</i> L.	Poaceae	Field Brome	1	UPL	FACU	FACU
> <i>Bromus ciliatus</i> L.	Poaceae	Fringed Brome	6	FAC	FAC	FAC
* <i>Bromus hordeaceus</i> L.	Poaceae	Soft Brome	1	FACU	UPL	FACU
* <i>Bromus inermis</i> Leys.	Poaceae	Smooth Brome	0	FAC	UPL	FACU
<i>Bromus vulgaris</i> (Hook.) Shear	Poaceae	Colombian Brome	-	FACU	UPL	FACU
<i>Bulbostylis capillaris</i> (L.) Kunth ex C.B. Clarke	Cyperaceae	Dense-Tuft Hair Sedge	-	FAC	FACU	FACU
* <i>Butomus umbellatus</i> L.	Butomaceae	Greater Flowering-Rush	0	OBL	OBL	OBL
<i>Calamagrostis canadensis</i> (Michx.) Beauv.	Poaceae	Bluejoint	5	FACW	FACW	FACW
<i>Calamagrostis scopulorum</i> M.E. Jones	Poaceae	Ditch Reed Grass	-	FAC	FAC	FAC
> <i>Calamagrostis stricta</i> (Timm) Koel.	Poaceae	Slim-Stem Reed Grass	6	FACW	FACW	FACW
<i>Calamagrostis tweedyi</i> (Scribn.) Scribn. ex Vasey	Poaceae	Cascade Reed Grass	-	FAC		FAC
<i>Callitriche hermaphroditica</i> L.	Callitrichaceae	Autumn Water-Starwort	6	OBL	OBL	OBL
<i>Callitriche heterophylla</i> Pursh	Callitrichaceae	Greater Water-Starwort	3	OBL	OBL	OBL
<i>Callitriche palustris</i> L.	Callitrichaceae	Vernal Water-Starwort	6	OBL	OBL	OBL
* <i>Callitriche stagnalis</i> Scop.	Callitrichaceae	Pond Water-Starwort	1	OBL	OBL	OBL
<i>Callitriche stenoptera</i> Lansdown	Callitrichaceae	Narrow-Wing Water-Starwort		FACW	OBL	OBL
<i>Caltha leptosepala</i> DC.	Ranunculaceae	White Marsh-Marigold	7	OBL	OBL	OBL
<i>Calypso bulbosa</i> (L.) Oakes	Orchidaceae	Fairy-Slipper Orchid	6	FACU	FACW	FAC

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> * Calystegia sepium (L.) R. Br.	Convolvulaceae	Hedge False Bindweed	1	FAC	FAC	FAC
Camassia quamash (Pursh) Greene	Liliaceae	Small Camas	6	FACW		FACW
Camelina alyssum (P. Mill.) Thellung	Brassicaceae	Madwort False Flax		FACU	FACU	FACU
* Camelina microcarpa Andr. ex DC.	Brassicaceae	Little-Pod False Flax	0	FACU	UPL	FACU
* Camelina sativa (L.) Crantz	Brassicaceae	Gold-of-Pleasure	1	FACU	FACU	FACU
Campanula parryi Gray	Campanulaceae	Parry's Bellflower	7	FAC	FAC	FACU
Campanula rotundifolia L.	Campanulaceae	Bluebell-of-Scotland	3	FACU	FAC	FACU
Campanula uniflora L.	Campanulaceae	Arctic Bellflower	9	FAC		FAC
> Canadanthus modestus (Lindl.) Nesom	Asteraceae	Canada-Aster	6	FACW	FAC	FACW
* Capsella bursa-pastoris (L.) Medik.	Brassicaceae	Shepherd's-Purse	0	FACU	FACU	FACU
Cardamine breweri S. Wats.	Brassicaceae	Sierran Bittercress	7	FACW	FACW	FACW
Cardamine oligosperma Nutt.	Brassicaceae	Little Western Bittercress	3	FAC	FAC	FAC
Cardamine pensylvanica Muhl. ex Willd.	Brassicaceae	Quaker Bittercress	3	FACW	FACW	FACW
* Carduus nutans L.	Asteraceae	Nodding Plumeless-Thistle	0	UPL	FACU	FACU
Carex albonigra Mackenzie	Cyperaceae	Black-and-White-Scale Sedge	5	FACU	FAC	FACU
Carex amplifolia Boott	Cyperaceae	Big-Leaf Sedge	5	OBL		OBL
> Carex angustata Boott	Cyperaceae	Many-Fruit Sedge	-	FACW		FACW
Carex aperta Boott	Cyperaceae	Columbian Sedge	6	OBL	FACW	FACW
Carex aquatilis Wahlenb.	Cyperaceae	Leafy Tussock Sedge	5	OBL	OBL	OBL
Carex arcta Boott	Cyperaceae	Northern Cluster Sedge	6	OBL		OBL
Carex atherodes Spreng.	Cyperaceae	Wheat Sedge	5	OBL	OBL	OBL
Carex athrostachya Olney	Cyperaceae	Slender-Beak Sedge	4	FACW	FACW	FACW
> Carex atosquama Mackenzie	Cyperaceae	Lesser Black-Scale Sedge	5	FAC	FACU	FACU
Carex aurea Nutt.	Cyperaceae	Golden-Fruit Sedge	6	FACW	OBL	OBL
Carex bebbii Olney ex Fern.	Cyperaceae	Bebb's Sedge	7	OBL	OBL	OBL
> Carex bolanderi Olney	Cyperaceae	Bolander's Sedge	6	FAC	FACW	FAC
Carex brevior (Dewey) Mackenzie	Cyperaceae	Short-Beak Sedge	4	FAC	FAC	FAC
Carex brunnescens (Pers.) Poir.	Cyperaceae	Brownish Sedge	8	OBL	FAC	OBL
Carex buxbaumii Wahlenb.	Cyperaceae	Brown Bog Sedge	8	OBL	OBL	OBL
Carex canescens L.	Cyperaceae	Hoary Sedge	8	OBL	OBL	OBL
Carex capillaris L.	Cyperaceae	Hair-Like Sedge	8	FACW	FACW	FACW
Carex capitata L.	Cyperaceae	Capitate Sedge	7	FACW	FACW	FAC
Carex chordorrhiza Ehrh. ex L. f.	Cyperaceae	Rope-Root Sedge	9	OBL	OBL	OBL
Carex comosa Boott	Cyperaceae	Bearded Sedge	7	OBL	OBL	OBL
Carex concinna R. Br.	Cyperaceae	Low Northern Sedge	7	FAC	FACU	FAC
Carex crawei Dewey	Cyperaceae	Crawe's Sedge	6	FACW	FACW	FACW
Carex crawfordii Fern.	Cyperaceae	Crawford's Sedge	5	FACW	OBL	FAC
Carex cusickii Mackenzie ex Piper & Beattie	Cyperaceae	Cusick's Sedge	7	OBL		OBL
Carex deweyana Schwein.	Cyperaceae	Dewey's Sedge	6	FAC	FACU	FACU
Carex diandra Schrank	Cyperaceae	Lesser Tussock Sedge	8	OBL	OBL	OBL
Carex disperma Dewey	Cyperaceae	Soft-Leaf Sedge	6	FACW	FACW	OBL
Carex douglasii Boott	Cyperaceae	Douglas' Sedge	3	FAC	FAC	FAC
Carex eburnea Boott	Cyperaceae	Bristle-Leaf Sedge	-	FACU	FACU	
> Carex echinata Murr.	Cyperaceae	Star Sedge	8	OBL	OBL	OBL
Carex elynoides Holm	Cyperaceae	Black-Root Sedge	6	FAC	FAC	FAC
> Carex exsiccata Bailey	Cyperaceae	Western Inflated Sedge	5	OBL	OBL	OBL
> Carex fissuricola Mackenzie	Cyperaceae	Cleft Sedge		OBL	FACW	FACW
Carex flava L.	Cyperaceae	Yellow-Green Sedge	7	OBL	OBL	OBL
> Carex foenea Willd.	Cyperaceae	Bronze-Head Oval Sedge	-	FACU	UPL	FACU

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> Carex fuliginosa Schkuhr	Cyperaceae	Short-Leaf Sedge	5	FACU	FACW	FACU
> Carex garberi Fern.	Cyperaceae	Elk Sedge		FACW	FACW	FACW
Carex gravida Bailey	Cyperaceae	Heavy Sedge	6	FACW	FACW	FACW
> Carex gynocrates Wormsk. ex Drej.	Cyperaceae	Northern Bog Sedge	9	OBL	OBL	OBL
Carex haydeniana Olney	Cyperaceae	Hayden's Sedge	6	FAC	FACU	FAC
> Carex heteroneura W. Boott	Cyperaceae	Different-Nerve Sedge	-	FAC	FACW	FAC
Carex hoodii Boott	Cyperaceae	Hood's Sedge	4	FACU	UPL	FAC
Carex hystericina Muhl. ex Willd.	Cyperaceae	Porcupine Sedge	5	OBL	OBL	OBL
> Carex idahoensis Bailey	Cyperaceae	Idaho Sedge	7	FACW		FACW
Carex illota Bailey	Cyperaceae	Small-Head Sedge	7	FACW	FACW	FACW
> Carex incurviformis Mackenzie	Cyperaceae	Coastal-Sand Sedge	9	FAC	FAC	FAC
> Carex infirmivervia Naczi	Cyperaceae	Weak-nerved sedge		FAC	FAC	FAC
Carex interior Bailey	Cyperaceae	Inland Sedge	8	OBL	OBL	OBL
Carex jonesii Bailey	Cyperaceae	Jones' Sedge	-	OBL	FACW	FACW
> Carex kelloggii W. Boott	Cyperaceae	Kellogg's Sedge	5	OBL	OBL	OBL
> Carex lachenalii Schkuhr	Cyperaceae	Arctic Hare-Foot Sedge	9	OBL	OBL	OBL
Carex lacustris Willd.	Cyperaceae	Lakebank Sedge	9	OBL	OBL	
Carex laeviconica Dewey	Cyperaceae	Smooth-Cone Sedge	5	OBL	OBL	
Carex laeviculmis Meinsh.	Cyperaceae	Smooth-Stem Sedge	6	FACW	FACW	FACW
Carex lasiocarpa Ehrh.	Cyperaceae	Woolly-Fruit Sedge	7	OBL	OBL	OBL
> Carex lenticularis Michx.	Cyperaceae	Lakeshore Sedge		OBL	OBL	OBL
Carex leporinella Mackenzie	Cyperaceae	Sierran Hare Sedge	5	OBL	FACW	FACW
Carex leptalea Wahlenb.	Cyperaceae	Bristly-Stalk Sedge	8	OBL	OBL	OBL
> Carex leptopoda Mackenzie	Cyperaceae	Taper-Fruit Short-Scale Sedge	6	FAC		FAC
Carex limosa L.	Cyperaceae	Mud Sedge	9	OBL	OBL	OBL
Carex livida (Wahlenb.) Willd.	Cyperaceae	Livid Sedge	9	OBL	OBL	OBL
Carex luzulifolia W. Boott	Cyperaceae	Little-Leaf Sedge		FACW	FACW	FACW
Carex luzulina Olney	Cyperaceae	Woodrush Sedge	7	OBL	OBL	OBL
Carex macloviana d'Urv.	Cyperaceae	Falkland Island Sedge	5	FACW	FACW	FACW
> Carex magellanica Lam.	Cyperaceae	Boreal-Bog Sedge	10	OBL	OBL	OBL
> Carex media R. Br.	Cyperaceae	Montana Sedge	8	FACW	FACW	FACW
Carex mertensii Prescott ex Bong.	Cyperaceae	Mertens' Sedge	3	FAC	FAC	FAC
Carex microglochin Wahlenb.	Cyperaceae	False Uncinia Sedge	-	FACW	OBL	OBL
> Carex micropoda C.A. Mey.	Cyperaceae	Pyrenean Sedge	7	FACU	FACU	FAC
> Carex microptera Mackenzie	Cyperaceae	Small-Wing Sedge	3	FACU	FAC	FAC
Carex nardina Fries	Cyperaceae	Nard Sedge	-	FACU	FACU	FACU
Carex nebrascensis Dewey	Cyperaceae	Nebraska Sedge	3	OBL	OBL	OBL
Carex nelsonii Mackenzie	Cyperaceae	Nelson's Sedge	7	FAC	FAC	FAC
Carex neurophora Mackenzie	Cyperaceae	Alpine Nerve Sedge	7	FACW	FACW	FACW
Carex nigricans C.A. Mey.	Cyperaceae	Black Alpine Sedge	7	FACW	FACW	FACW
> Carex pachystachya Cham. ex Steud.	Cyperaceae	Thick-Head Sedge	7	FAC	FAC	FAC
Carex pallescens L.	Cyperaceae	Pale Sedge	-	FAC		FAC
Carex parryana Dewey	Cyperaceae	Parry's Sedge	5	FACW	FACW	FAC
> Carex paysonis Clokey	Cyperaceae	Payson's Sedge	-	FACU	FACU	FACU
> Carex pellita Muhl. ex Willd.	Cyperaceae	Woolly Sedge	4	OBL	OBL	OBL
> Carex pelocarpa E.J. Herm.	Cyperaceae	Dusky-Seed Sedge	7	FAC	FACU	FAC
Carex petasata Dewey	Cyperaceae	Liddon Sedge	4	UPL	UPL	FAC
Carex phaeocephala Piper	Cyperaceae	Mountain Hare Sedge	-	UPL	FACU	FACU
Carex podocarpa R. Br.	Cyperaceae	Short-Stalk Sedge	7	FAC	FAC	FAC

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
<i>Carex praeceptorum</i> Mackenzie	Cyperaceae	Teacher's Sedge	7	OBL	OBL	OBL
<i>Carex praegracilis</i> W. Boott	Cyperaceae	Clustered Field Sedge	4	FACW	FACW	FACW
<i>Carex prairea</i> Dewey ex Wood	Cyperaceae	Prairie Sedge	9	OBL	OBL	
> <i>Carex praticola</i> Rydb.	Cyperaceae	Northern Meadow Sedge	4	FACW	FAC	FACW
<i>Carex preslii</i> Steud.	Cyperaceae	Presl's Sedge	-	FACU	FACU	FACU
<i>Carex raynoldsii</i> Dewey	Cyperaceae	Raynolds' Sedge	-	FACU	FACU	FACU
<i>Carex retrorsa</i> Schwein.	Cyperaceae	Retrorse Sedge	7	OBL	OBL	OBL
<i>Carex rostrata</i> Stokes	Cyperaceae	Swollen Beaked Sedge	9	OBL	OBL	OBL
<i>Carex rupestris</i> All.	Cyperaceae	Curly Sedge	-	FACU	FACU	FACU
<i>Carex sartwellii</i> Dewey	Cyperaceae	Sartwell's Sedge	7	OBL	FACW	OBL
<i>Carex saxatilis</i> L.	Cyperaceae	Russet Sedge	8	OBL	OBL	OBL
<i>Carex scirpoidea</i> Michx.	Cyperaceae	Canadian Single-Spike Sedge	4	FAC	FACU	FAC
<i>Carex scoparia</i> Schkuhr ex Willd.	Cyperaceae	Pointed Broom Sedge	7	FACW	FACW	FACW
<i>Carex scopulorum</i> Holm	Cyperaceae	Holm's Rocky Mountain Sedge	8	OBL	FACW	FACW
> <i>Carex siccata</i> Dewey	Cyperaceae	Dry-Spike Sedge	7	FACU	UPL	UPL
<i>Carex simulata</i> Mackenzie	Cyperaceae	Analogue Sedge	8	OBL	OBL	OBL
<i>Carex spectabilis</i> Dewey	Cyperaceae	Northwestern Showy Sedge	7	FACW	FACW	FACW
<i>Carex sprengei</i> Dewey ex Spreng.	Cyperaceae	Long-Beak Sedge	8	FAC	FACU	FAC
> <i>Carex stevenii</i> (Holm) Kalela	Cyperaceae	Steven's Sedge	8	FAC	FAC	FAC
<i>Carex stipata</i> Muhl. ex Willd.	Cyperaceae	Stalk-Grain Sedge	4	OBL	OBL	OBL
<i>Carex sychnocephala</i> Carey	Cyperaceae	Many-Head Sedge	8	FACW	FACW	FACW
<i>Carex tenera</i> Dewey	Cyperaceae	Quill Sedge	6	FACW	FACW	FACW
<i>Carex tenuiflora</i> Wahlenb.	Cyperaceae	Sparse-Flower Sedge	10	OBL	OBL	OBL
<i>Carex torreyi</i> Tuckerman	Cyperaceae	Torrey's Sedge	9	FAC	UPL	FAC
> <i>Carex utriculata</i> Boott	Cyperaceae	Northwest Territory Sedge	3	OBL	OBL	OBL
<i>Carex vaginata</i> Tausch	Cyperaceae	Sheathed Sedge	-	OBL	OBL	
<i>Carex vallicola</i> Dewey	Cyperaceae	Valley Sedge	4	FAC	FAC	FAC
<i>Carex vernacula</i> Bailey	Cyperaceae	Native Sedge		FAC	FAC	FAC
> <i>Carex vesicaria</i> L.	Cyperaceae	Lesser Bladder Sedge	5	OBL	OBL	OBL
> <i>Carex viridula</i> Michx.	Cyperaceae	Little Green Sedge	8	OBL	OBL	OBL
<i>Carex vulpinoidea</i> Michx.	Cyperaceae	Common Fox Sedge	6	OBL	FACW	OBL
* <i>Carum carvi</i> L.	Apiaceae	Caraway	0	FACU	UPL	FACU
<i>Cassiope mertensiana</i> (Bong.) G. Don	Ericaceae	Western Moss-Heather	-	FACU	FACU	FACU
<i>Cassiope tetragona</i> (L.) D. Don	Ericaceae	White Arctic Mountain-Heather	-	FACU	FACU	FACU
<i>Castilleja miniata</i> Dougl. ex Hook.	Orobanchaceae	Great Red Indian-Paintbrush	4	FACW	FAC	FACW
<i>Castilleja occidentalis</i> Torr.	Orobanchaceae	Pale-Yellow Indian-Paintbrush	7	FAC	FAC	FAC
<i>Castilleja rhexiifolia</i> Rydb.	Orobanchaceae	Rosy Indian-Paintbrush	7	FAC	FAC	FAC
<i>Catabrosa aquatica</i> (L.) Beauv.	Poaceae	Water Whorl Grass	3	OBL	OBL	OBL
<i>Celastrus scandens</i> L.	Celastraceae	American Bittersweet	-	FACU	UPL	FACU
<i>Celtis occidentalis</i> L.	Ulmaceae	Common Hackberry	-	FACU	FACU	FAC
* <i>Centaurea cyanus</i> L.	Asteraceae	Garden Cornflower	1	FACU	FACU	FACU
<i>Centaurea jacea</i> L.	Asteraceae	Brown-Ray Knapweed	0	FACU	FACU	FACU
<i>Cerastium arvense</i> L.	Caryophyllaceae	Field Mouse-Ear Chickweed	-	FACU	FACU	FACU
<i>Cerastium beeringianum</i> Cham. & Schlecht.	Caryophyllaceae	Bering Sea Mouse-Ear Chickweed	4	FACU	FAC	FACU
> <i>Cerastium brachypodium</i> (Engelm. ex Gray) B.L. Robins.	Caryophyllaceae	Short-Stalk Mouse-Ear Chickweed	4	FAC	FACU	FAC
> * <i>Cerastium fontanum</i> Baumg.	Caryophyllaceae	Common Mouse-Ear Chickweed	0	FACU	FACU	FACU
> * <i>Cerastium glomeratum</i> Thuill.	Caryophyllaceae	Sticky Mouse-Ear Chickweed	1	FACU	FACU	UPL
<i>Cerastium nutans</i> Raf.	Caryophyllaceae	Nodding Mouse-Ear Chickweed	4	FACU	FAC	FACU

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Ceratophyllum demersum L.	Ceratophyllaceae	Coon's-Tail	3	OBL	OBL	OBL
> Chamerion angustifolium (L.) Scop.	Onagraceae	Narrow-Leaf Fireweed	2	FACU	FAC	FACU
> Chamerion latifolium (L.) Sweet	Onagraceae	Broad-Leaf Fireweed		FACW		FACW
* Chelidonium majus L.	Papaveraceae	Greater Celandine	1	FACU	FACU	FACU
* Chenopodium album L.	Amaranthaceae	Lamb's-Quarters	0	FACU	FACU	FACU
> Chenopodium chenopodioides (L.) Aellen	Amaranthaceae	Low Goosefoot	3	FAC	FACW	FACW
Chenopodium fremontii S. Wats.	Amaranthaceae	Fremont's Goosefoot	-	FACU	FACU	FACU
* Chenopodium glaucum L.	Amaranthaceae	Oak-Leaf Goosefoot	4	FAC	FAC	FAC
Chenopodium leptophyllum (Moq.) Nutt. ex S. Wats.	Amaranthaceae	Narrow-Leaf Goosefoot	-	FACU	FACU	FACU
* Chenopodium murale L.	Amaranthaceae	Nettle-Leaf Goosefoot	0	FACU	FACU	FACU
Chenopodium rubrum L.	Amaranthaceae	Red Goosefoot	3	FACW	OBL	FACW
Chloris gayana Kunth	Poaceae	Rhodes Grass		FACU	FACU	FACU
Chrysosplenium tetrandrum (Lund ex Malmgr.) Th. Fries	Saxifragaceae	Northern Golden-Saxifrage	4	OBL		OBL
* Cichorium intybus L.	Asteraceae	Chicory	1	FACU	FACU	FACU
Cicuta bulbifera L.	Apiaceae	Bulblet-Bearing Water-Hemlock	7	OBL	OBL	OBL
Cicuta douglasii (DC.) Coult. & Rose	Apiaceae	Western Water-Hemlock	4	OBL	OBL	OBL
Cicuta maculata L.	Apiaceae	Spotted Water-Hemlock	3	OBL	OBL	OBL
Cinna arundinacea L.	Poaceae	Sweet Wood-Reed	-		FACW	
Cinna latifolia (Trev. ex Goeppl.) Griseb.	Poaceae	Slender Wood-Reed	5	FACW	OBL	FACW
Circaea alpina L.	Onagraceae	Small Enchanter's-Nightshade	5	FAC	FACW	FAC
* Cirsium arvense (L.) Scop.	Asteraceae	Canadian Thistle	0	FAC	FACU	FACU
Cirsium flodmanii (Rydb.) Arthur	Asteraceae	Flodman's Thistle	3	FAC	FAC	FAC
Cirsium scariosum Nutt.	Asteraceae	Meadow Thistle	5	FAC	FAC	FAC
Cirsium undulatum (Nutt.) Spreng.	Asteraceae	Wavy-Leaf Thistle	4	FACU	FACU	FACU
* Cirsium vulgare (Savi) Ten.	Asteraceae	Bull Thistle	0	FACU	UPL	FACU
> Claytonia cordifolia S. Wats.	Portulacaceae	Heart-Leaf Springbeauty	5	FAC		FAC
Claytonia lanceolata Pall. ex Pursh	Portulacaceae	Lance-Leaf Springbeauty	4	FAC	FACW	FAC
Claytonia megarhiza (Gray) Parry ex S. Wats.	Portulacaceae	Alpine Springbeauty	-	FACU	FACU	FACU
> Claytonia multiscapa Rydb.	Portulacaceae	Many-Stem Springbeauty	4	FAC	FAC	FAC
> Claytonia parviflora Dougl. ex Hook.	Portulacaceae	Streambank Springbeauty	-	FACU		FACU
> Claytonia perfoliata Donn ex Willd.	Portulacaceae	Miner's-Lettuce	2	FAC	FACW	FAC
> Claytonia sibirica L.	Portulacaceae	Siberian Springbeauty	5	FAC		FAC
Clematis ligusticifolia Nutt.	Ranunculaceae	Deciduous Traveler's-Joy	3	FAC	FACU	FAC
> Clinopodium douglasii (Benth.) Kuntze	Lamiaceae	Oregon-Tea		FACU		FACU
> Coeloglossum viride (L.) Hartman	Orchidaceae	Long-Bract Frog Orchid	6	FAC	FACU	FAC
Collomia linearis Nutt.	Polemoniaceae	Narrow-Leaf Mountain-Trumpet	3	FACU	FACU	FACU
> Comandra umbellata (L.) Nutt.	Santalaceae	Bastard-Toadflax	-	FACU	UPL	UPL
> Comarum palustre L.	Rosaceae	Purple Marshlocks	7	OBL	OBL	OBL
> Comastoma tenellum (Rottb.) Toyokuni	Gentianaceae	Samiland-Gentian		FACW	FAC	FACW
Conioselinum scopulorum (Gray) Coult. & Rose	Apiaceae	Rocky Mountain Hemlock-Parsley	-	FACW	FACW	FACW
* Conium maculatum L.	Apiaceae	Poison-Hemlock	0	FAC	FACW	FACW
Corallorhiza striata Lindl.	Orchidaceae	Hooded Coralroot	-	FACU	UPL	FACU
Corallorhiza trifida Chatelain	Orchidaceae	Yellow Coralroot	8	FAC	FAC	FAC
Corallorhiza wisteriana Conrad	Orchidaceae	Spring Coralroot	9	FAC	FACU	FAC
Cordylanthus ramosus Nutt. ex Benth.	Orobanchaceae	Bushy Bird's-Beak	6	FACW	FACW	FACU
Coreopsis tinctoria Nutt.	Asteraceae	Golden Tickseed	6	FACU	FAC	FACU
> Corispermum americanum (Nutt.) Nutt.	Amaranthaceae	American Bugseed	-	FACU	FACU	FACU
> Cornus alba L.	Cornaceae	Red Osier	5	FACW	FACW	FACW

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Cornus canadensis</i> L.	Cornaceae	Canadian Bunchberry	7	FAC	FACU	FAC
> <i>Crassula aquatica</i> (L.) Schoenl.	Crassulaceae	Water Pygmyweed	6	OBL	OBL	OBL
<i>Crassula solieri</i> (C. Gay) Meigen	Crassulaceae	Smooth-Seed Pygmyweed		OBL	FACU	OBL
> <i>Crataegus douglasii</i> Lindl.	Rosaceae	Black Hawthorn	5	FAC	FAC	FAC
> <i>Crataegus gaylussacia</i> Heller	Rosaceae	Suksdorf's Hawthorn		FAC		FAC
* <i>Crataegus monogyna</i> Jacq.	Rosaceae	English Hawthorn	1	FAC		FAC
> <i>Crataegus rivularis</i> Nutt.	Rosaceae	River Hawthorn		FACW	FACW	FAC
<i>Crepis capillaris</i> (L.) Wallr.	Asteraceae	Smooth Hawk's-Beard		FACU	UPL	FACU
<i>Crepis runcinata</i> (James) Torr. & Gray	Asteraceae	Fiddle-Leaf Hawk's-Beard	5	FACU	FAC	FACU
> * <i>Crypsis alopecuroides</i> (Piller & Mitterp.) Schrad.	Poaceae	Fox-Tail Prickle Grass	1	OBL	FACW	OBL
<i>Cryptogramma stelleri</i> (Gmel.) Prantl	Polypodiaceae	Fragile Rockbrake	-	FACU		FACU
> <i>Cyclachaena xanthiifolia</i> (Nutt.) Fresen.	Asteraceae	Carelessweed	3	FAC	FAC	FAC
<i>Cycloloma atriplicifolium</i> (Spreng.) Coult.	Amaranthaceae	Winged-Pigweed	-	FACU	FACU	FACU
* <i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Bermuda Grass	1	FACU	FACU	FACU
* <i>Cynoglossum officinale</i> L.	Boraginaceae	Gypsy-Flower	0	FACU	FACU	FACU
* <i>Cynosurus cristatus</i> L.	Poaceae	Crested Dog's-Tail Grass	1	FACU	FACU	FACU
<i>Cyperus acuminatus</i> Torr. & Hook. ex Torr.	Cyperaceae	Taper-Tip Flat Sedge	4	OBL	OBL	OBL
> <i>Cyperus bipartitus</i> Torr.	Cyperaceae	Shining Flat Sedge	4	OBL	FACW	OBL
<i>Cyperus erythrorhizos</i> Muhl.	Cyperaceae	Red-Root Flat Sedge	4	OBL	OBL	OBL
<i>Cyperus schweinitzii</i> Torr.	Cyperaceae	Sand Flat Sedge	8	FAC	FACU	FAC
> <i>Cyperus squarrosus</i> L.	Cyperaceae	Awned Flat Sedge	4	OBL	OBL	OBL
<i>Cyperus strigosus</i> L.	Cyperaceae	Straw-Color Flat Sedge	4	FACW	FACW	FACW
<i>Cypripedium fasciculatum</i> Kellogg ex S. Wats.	Orchidaceae	Clustered Lady's-Slipper	7	FACU		FACU
<i>Cypripedium montanum</i> Dougl. ex Lindl.	Orchidaceae	Mountain Lady's-Slipper	8	FACU		FACU
> <i>Cypripedium parviflorum</i> Salisb.	Orchidaceae	Yellow Lady's-Slipper	9	FACW	FACW	FACW
<i>Cypripedium passerinum</i> Richards.	Orchidaceae	Sparrow-Egg Lady's-Slipper	10	FACW		
> <i>Cyrtorhyncha cymbalaria</i> (Pursh) Britt.	Ranunculaceae	Alkali Buttercup		OBL	OBL	OBL
<i>Cystopteris fragilis</i> (L.) Bernh.	Polypodiaceae	Brittle Bladder Fern	-	FACU	FACU	FACU
<i>Cystopteris montana</i> (Lam.) Bernh. ex Desv.	Polypodiaceae	Mountain Bladder Fern	10	FAC		FAC
* <i>Dactylis glomerata</i> L.	Poaceae	Orchard Grass	0	FACU	FACU	FACU
> <i>Damasonium californicum</i> Torr.	Alismataceae	Fringed-Water-Plantain	-	OBL		OBL
<i>Danthonia californica</i> Boland.	Poaceae	California Wild Oat Grass	4	FAC	FACU	FACU
<i>Danthonia intermedia</i> Vasey	Poaceae	Timber Wild Oat Grass	5	FACU	FAC	FACU
<i>Daphne mezereum</i> L.	Thymelaeaceae	Paradise-Plant	1	FACU		
> <i>Dasiphora fruticosa</i> (L.) Rydb.	Rosaceae	Golden-Hardhack	3	FAC	FACW	FAC
* <i>Daucus carota</i> L.	Apiaceae	Queen Anne's-Lace	1	FACU	UPL	UPL
> <i>Delphinium burkei</i> Greene (pro sp.)	Ranunculaceae	Burke's larkspur		FACU	FACU	FACU
<i>Delphinium glaucescens</i> Rydb.	Ranunculaceae	Electric Peak Larkspur	-	FACU	FACU	FACU
<i>Delphinium glaucum</i> S. Wats.	Ranunculaceae	Tower Larkspur	6	FACW	FACW	FACW
> <i>Delphinium nuttallianum</i> Pritz. ex Walp.	Ranunculaceae	Two-Lobe Larkspur	4	FAC	FACU	FAC
> <i>Delphinium occidentale</i> (S. Wats.) S. Wats. (pro sp.)	Ranunculaceae	Western larkspur	-	FACU	UPL	FACU
> <i>Dendrolycopodium dendroideum</i> (Michx.) A. Haines	Lycopodiaceae	Prickley Tree-Club-Moss	5	FACU	FAC	
> <i>Deschampsia caespitosa</i> (L.) Beauv.	Poaceae	Tufted Hair Grass	7	FACW	FACW	FACW
<i>Deschampsia danthonioides</i> (Trin.) Munro	Poaceae	Annual Hair Grass	5	FACW	FACW	FACW
<i>Deschampsia elongata</i> (Hook.) Munro	Poaceae	Slender Hair Grass	4	FACW	FAC	FACW
> <i>Descurainia incana</i> (Bernh. ex Fisch. & C.A. Mey.) Dorn	Brassicaceae	Mountain Tansy-Mustard	-	FACU	UPL	FACU
* <i>Dianthus armeria</i> L.	Caryophyllaceae	Deptford Pink	0	FACU	UPL	UPL
* <i>Dianthus deltoides</i> L.	Caryophyllaceae	Maiden Pink	1	FAC	UPL	FAC

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Dichanthelium acuminatum</i> (Sw.) Gould & C.A. Clark	Poaceae	Tapered Rosette Grass	9	FAC	FAC	FAC
> <i>Dichanthelium oligosanthes</i> (J.A. Schultes) Gould	Poaceae	Heller's Rosette Grass	-	FACU	FACU	FACU
> <i>Dieteria canescens</i> (Pursh) Nutt.	Asteraceae	Hoar False Tansy-Aster	3	FAC	UPL	UPL
* <i>Digitalis purpurea</i> L.	Plantaginaceae	Purple Foxglove	1	FACU	UPL	FACU
* <i>Digitaria ischaemum</i> (Schreb. ex Schweig.) Schreb. ex Muhl.	Poaceae	Smooth Crab Grass	1	FACU	UPL	FACU
* <i>Digitaria sanguinalis</i> (L.) Scop.	Poaceae	Hairy Crab Grass	1	FACU	FACU	FACU
> <i>Diphasiastrum alpinum</i> (L.) Holub	Lycopodiaceae	Alpine Creeping-Cedar	9	FAC		FAC
> <i>Diphasiastrum complanatum</i> (L.) Holub	Lycopodiaceae	Trailing Creeping-Cedar	7	FAC		FAC
> <i>Diplachne fusca</i> (L.) Beauv.ex Roemer & J.A. Schultes	Poaceae	Bearded Sprangletop		FACW	FACW	FACW
> * <i>Dipsacus fullonum</i> L.	Dipsacaceae	Fuller's Teasel	0	FAC	FACU	FAC
> <i>Distichlis spicata</i> (L.) Greene	Poaceae	Coastal Salt Grass	5	FACW	FACW	FAC
> <i>Dodecatheon conjugens</i> Greene	Primulaceae	Bonneville Shootingstar	-	FACU	FACU	FACU
> <i>Dodecatheon jeffreyi</i> Van Houtte	Primulaceae	Tall Mountain Shootingstar	7	FACW		FACW
> <i>Dodecatheon pulchellum</i> (Raf.) Merr.	Primulaceae	Dark-Throat Shootingstar	5	FACW	FACW	FACW
<i>Downingia laeta</i> (Greene) Greene	Campanulaceae	Great Basin Calico-Flower	9	OBL		OBL
> <i>Draba albertina</i> Greene	Brassicaceae	Slender Whitlow-Grass	4	FAC	FAC	FAC
<i>Draba aurea</i> Vahl ex Hornem.	Brassicaceae	Golden Whitlow-Grass	7	FACU	FAC	FACU
> <i>Draba lonchocarpa</i> Rydb.	Brassicaceae	Lance-Pod Whitlow-Grass	-	UPL		FACU
<i>Draba praealta</i> Greene	Brassicaceae	Tall Whitlow-Grass	4	FACW		FACU
<i>Draba stenoloba</i> Ledeb.	Brassicaceae	Alaska Whitlow-Grass	4	FAC	UPL	FACU
<i>Dracocephalum parviflorum</i> Nutt.	Lamiaceae	American Dragonhead	-	FACU	FACU	FACU
<i>Drosera anglica</i> Huds.	Droseraceae	English Sundew	10	OBL		OBL
<i>Drosera linearis</i> Goldie	Droseraceae	Slender-Leaf Sundew	10	OBL		
<i>Drosera rotundifolia</i> L.	Droseraceae	Round-Leaf Sundew	10	OBL	OBL	OBL
> <i>Dryas ajanensis</i> Juz.	Rosaceae	Eight-Petal Mountain-Avens		FAC	UPL	UPL
<i>Dryas drummondii</i> Richards. ex Hook.	Rosaceae	Yellow Mountain-Avens	-	FACU		FACU
<i>Dryas integrifolia</i> Vahl	Rosaceae	White Mountain-Avens	-	FACU	FACU	
> <i>Drymocallis arguta</i> (Pursh) Rydb.	Rosaceae	Tall Woodbeauty	-	FACU	FACU	FACU
> <i>Drymocallis convallaria</i> (Rydb.) Rydb.	Rosaceae	Cream Woodbeauty	-	FACU	FACU	FACU
> <i>Drymocallis glabrata</i> Rydb.	Rosaceae	Idaho Woodbeauty	6	FAC		FAC
> <i>Drymocallis glandulosa</i> (Lindl.) Rydb.	Rosaceae	Sticky Woodbeauty	6	FAC	FAC	FAC
> <i>Drymocallis lactea</i> (Greene) Rydb.	Rosaceae	Sierran Woodbeauty		FAC		FAC
> <i>Drymocallis pseudorupestris</i> (Rydb.) Rydb.	Rosaceae	Sticky cinquefoil	6	FAC	FAC	FAC
> <i>Dryopteris carthusiana</i> (Vill.) H.P. Fuchs	Polypodiaceae	Spinulose Wood Fern	7	FAC	FACW	FAC
<i>Dryopteris cristata</i> (L.) Gray	Polypodiaceae	Crested Wood Fern	9	FACW	OBL	FACW
> <i>Dryopteris expansa</i> (K. Presl) Fraser-Jenkins & Jermy	Polypodiaceae	Spreading Wood Fern	8	FACW		FACW
<i>Dulichium arundinaceum</i> (L.) Britt.	Cyperaceae	Three-Way Sedge	9	OBL	OBL	OBL
> * <i>Dysphania botrys</i> (L.) Mosyakin & Clemants	Amaranthaceae	Jerusalem-Oak	1	FACU	FACU	FACU
<i>Echinochloa colona</i> (L.) Link	Poaceae	Jungle-Rice		FAC	FACW	FAC
* <i>Echinochloa crus-galli</i> (L.) Beauv.	Poaceae	Large Barnyard Grass	0	FAC	FAC	FACW
<i>Echinochloa muricata</i> (Beauv.) Fern.	Poaceae	Rough Barnyard Grass	1	FACW	FACW	FACW
<i>Echinocystis lobata</i> (Michx.) Torr. & Gray	Cucurbitaceae	Wild Cucumber	5	FACU	FAC	FACU
* <i>Elaeagnus angustifolia</i> L.	Elaeagnaceae	Russian-Olive	0	FAC	FACU	FAC
<i>Elaeagnus commutata</i> Bernh. ex Rydb.	Elaeagnaceae	American Silver-Berry	-	FAC	UPL	FAC
<i>Elatine brachysperma</i> Gray	Elatinaceae	Short-Seed Waterwort	6	OBL	FACW	OBL
<i>Elatine californica</i> Gray	Elatinaceae	California Waterwort	6	OBL	OBL	OBL
> <i>Elatine rubella</i> Rydb.	Elatinaceae	Red-Stem Waterwort	6	OBL	OBL	OBL
<i>Eleocharis acicularis</i> (L.) Roemer & J.A. Schultes	Cyperaceae	Needle Spike-Rush	4	OBL	OBL	OBL

> = *synonym listed in Appendix B*

* = *introduced species*

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Eleocharis bella (Piper) Svens.	Cyperaceae	Delicate Spike-Rush	4	FACW	FACW	FACW
> Eleocharis elliptica Kunth	Cyperaceae	Elliptic Spike-Rush	-	OBL	OBL	OBL
> Eleocharis engelmannii Steud.	Cyperaceae	Engelmann's Spike-Rush		OBL	FACW	OBL
Eleocharis flavescens (Poir.) Urban	Cyperaceae	Yellow Spike-Rush	-	OBL	OBL	OBL
> Eleocharis palustris (L.) Roemer & J.A. Schultes	Cyperaceae	Common Spike-Rush	4	OBL	OBL	OBL
> Eleocharis quinqueflora (F.X. Hartmann) Schwarz	Cyperaceae	Few-Flower Spike-Rush	7	OBL	OBL	OBL
Eleocharis rostellata (Torr.) Torr.	Cyperaceae	Beaked Spike-Rush	9	OBL	OBL	OBL
> Eleocharis suksdorfiana Beauv.	Cyperaceae	Suksdorf's Spike-Rush	7	OBL	OBL	OBL
* Eleusine indica (L.) Gaertn.	Poaceae	Indian Goose Grass	1	UPL	FACU	UPL
Ellisia nyctelea (L.) L.	Hydrophyllaceae	Aunt Lucy	-	FACU	FACU	FACU
> Elodea bifoliata St. John	Hydrocharitaceae	Two-Leaf Waterweed	8	OBL	OBL	OBL
Elodea canadensis Michx.	Hydrocharitaceae	Canadian Waterweed	7	OBL	OBL	OBL
Elodea nuttallii (Planch.) St. John	Hydrocharitaceae	Western Waterweed	4	OBL	OBL	OBL
> Elymus alaskanus (Scribn. & Merr.) A. Love	Poaceae	Alaska Wild Rye		FACU	UPL	UPL
Elymus canadensis L.	Poaceae	Nodding Wild Rye	5	FAC	FACU	FAC
> Elymus curvatus Piper	Poaceae	Awnless Wild Rye	6	FAC	FAC	FAC
> Elymus elymoides (Raf.) Swezey	Poaceae	Western Bottle-Brush Grass	-	FACU	UPL	FACU
Elymus glaucus Buckl.	Poaceae	Blue Wild Rye	5	FACU	FACU	FACU
> Elymus lanceolatus (Scribn. & J.G. Sm.) Gould	Poaceae	Streamside Wild Rye	-	FACU	FACU	UPL
> * Elymus repens (L.) Gould	Poaceae	Creeping Wild Rye	0	FAC	FACU	FAC
> Elymus trachycaulus (Link) Gould ex Shinners	Poaceae	Slender Wild Rye	5	FAC	FACU	FACU
Elymus virginicus L.	Poaceae	Virginia Wild Rye	-	FACW	FAC	FACW
> Elymus wawawaiensis J. Carlson & Barkworth	Poaceae	Wawawai Wild Rye		FACU	FACU	FACU
> Epilobium anagallidifolium Lam.	Onagraceae	Pimpernel Willowherb	5	FACU	FAC	FACU
> Epilobium campestre (Jepson) Hoch & W.L. Wagner	Onagraceae	Smooth Willowherb	-	OBL	FACW	OBL
> Epilobium ciliatum Raf.	Onagraceae	Fringed Willowherb	3	FACW	FACW	FACW
> Epilobium clavatum Trel.	Onagraceae	Talus Willowherb	-	FACU	FACU	FACU
> Epilobium densiflorum (Lindl.) Hoch & Raven	Onagraceae	Dense-Flower Willowherb	-	FACW		FACW
Epilobium glaberrimum Barbey	Onagraceae	Glaucous Willowherb	5	FACW	FACW	FACW
> Epilobium hallianum Hausskn.	Onagraceae	Glandular Willowherb	4	FACW	FACW	FACW
> Epilobium hornemannii Reichenb.	Onagraceae	Hornemann's Willowherb	4	FACW	FACW	FACW
Epilobium lactiflorum Hausskn.	Onagraceae	White-Flower Willowherb	4	FACW	FACW	FACW
Epilobium leptocarpum Hausskn.	Onagraceae	Slender-Fruit Willowherb	-	FACW	FACW	FACW
> Epilobium leptophyllum Raf.	Onagraceae	Bog Willowherb	-	FACW	OBL	FACW
Epilobium minutum Lindl. ex Lehm.	Onagraceae	Chaparral Willowherb	-	FACU	FACU	FACU
> Epilobium oregonense Hausskn.	Onagraceae	Oregon Willowherb	4	FACW	FACW	OBL
Epilobium palustre L.	Onagraceae	Marsh Willowherb	7	OBL	OBL	OBL
> Epilobium saximontanum Hausskn.	Onagraceae	Rocky Mountain Willowherb	4	FACW	FACW	FACW
Epilobium suffruticosum Nutt.	Onagraceae	Shrubby Willowherb	-	FACU	FACU	FACU
Epipactis gigantea Dougl. ex Hook.	Orchidaceae	Giant Helleborine	8	OBL	OBL	OBL
* Epipactis helleborine (L.) Crantz	Orchidaceae	Helleborine	-	FACU	FACU	FACU
Equisetum arvense L.	Equisetaceae	Field Horsetail	2	FAC	FAC	FAC
Equisetum fluviatile L.	Equisetaceae	Water Horsetail	6	OBL	OBL	OBL
Equisetum hyemale L.	Equisetaceae	Tall Scouring-Rush	3	FACW	FACW	FACW
Equisetum laevigatum A. Braun	Equisetaceae	Smooth Scouring-Rush	4	FACW	FAC	FACW
Equisetum palustre L.	Equisetaceae	Marsh Horsetail	6	FACW	FACW	FACW
Equisetum pratense Ehrh.	Equisetaceae	Meadow Horsetail	6	FACW	FACW	
Equisetum scirpoides Michx.	Equisetaceae	Dwarf Scouring-Rush	7	FAC	FAC	FAC
Equisetum sylvaticum L.	Equisetaceae	Woodland Horsetail	5	FAC	FACW	FAC

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Equisetum variegatum Schleich. ex F. Weber & D.M.H. Mohr	Equisetaceae	Variegated Scouring-Rush	5	FACW	FACW	FACW
* Eragrostis cilianensis (All.) Vign. ex Janchen	Poaceae	Stink Grass	1	FACU	FACU	FACU
Eragrostis hypnoides (Lam.) B.S.P.	Poaceae	Teal Love Grass	4	OBL	OBL	OBL
Eragrostis pectinacea (Michx.) Nees ex Jedw.	Poaceae	Purple Love Grass	4	FAC	FAC	FAC
Eragrostis pilosa (L.) Beauv.	Poaceae	Indian Love Grass		FACU	FACU	FACU
> Eremogone capillaris (Poir.) Fenzl	Caryophyllaceae	Slender Mountain Matted Sandwort	-	FACU		FACU
> Erigeron acris L.	Asteraceae	Bitter Fleabane	5	FACU	FAC	FACU
> Erigeron canadensis L.	Asteraceae	Canadian Horseweed		FACU	FACU	FACU
Erigeron coulteri Porter	Asteraceae	Large Mountain Fleabane	6	FACW	FACW	FACW
Erigeron flagellaris Gray	Asteraceae	Trailing Fleabane	3	FACU	FAC	FACU
Erigeron formosissimus Greene	Asteraceae	Beautiful Fleabane	-	UPL	FAC	UPL
> Erigeron glabellus Nutt.	Asteraceae	Streamside Fleabane	4	FACW	FACW	FAC
> Erigeron glacialis (Nutt.) A. Nels.	Asteraceae	Glacier Fleabane	7	FACW		FAC
Erigeron humilis Graham	Asteraceae	Arctic Alpine Fleabane	8	FACW		FACW
Erigeron lanatus Hook.	Asteraceae	Woolly Fleabane	-	FACU		FACU
> Erigeron lonchophyllus Hook.	Asteraceae	Short-Ray Fleabane	4	FACW	FACW	FACW
> Erigeron nivalis Nutt.	Asteraceae	Scotter's Fleabane	5	FAC		FAC
Erigeron philadelphicus L.	Asteraceae	Philadelphia Fleabane	3	FACU	FAC	FACU
Erigeron strigosus Muhl. ex Willd.	Asteraceae	Prairie Fleabane	-	FACU	FACU	FACU
Eriogonum ovalifolium Nutt.	Polygonaceae	Cushion Wild Buckwheat	-	FACU	UPL	FACU
> Eriophorum angustifolium Honckeny	Cyperaceae	Tall Cotton-Grass	9	OBL	OBL	OBL
Eriophorum callitrix Cham. ex C.A. Mey.	Cyperaceae	Arctic Cotton-Grass	10	OBL		FACW
Eriophorum chamissonis C.A. Mey.	Cyperaceae	Chamisso's Cotton-Grass	9	OBL	OBL	OBL
Eriophorum gracile W.D.J. Koch	Cyperaceae	Slender Cotton-Grass	10	OBL	OBL	OBL
Eriophorum viridicarinatum (Engelm.) Fern.	Cyperaceae	Tassel Cotton-Grass	10	OBL	OBL	OBL
Erysimum cheiranthoides L.	Brassicaceae	Worm-Seed Wallflower	-	FACU	FACU	FACU
Erythronium grandiflorum Pursh	Liliaceae	Yellow Avalanche-Lily	-	FACU		FACU
> * Euphorbia maculata L.	Euphorbiaceae	Spotted Sandmat	1	UPL	FACU	UPL
Euphorbia marginata Pursh	Euphorbiaceae	Snow-on-the-Mountain	-	UPL	FACU	UPL
> Euphorbia serpens Kunth	Euphorbiaceae	Matted Sandmat	3	FAC	UPL	FACU
Euphorbia spathulata Lam.	Euphorbiaceae	Warty Spurge	3	FACU	FACU	FAC
> Eurybia merita (A. Nels.) Nesom	Asteraceae	Behring Wood-Aster	-	FACU		FACU
> Eurybia sibirica (L.) Nesom	Asteraceae	Siberian Wood-Aster	5	UPL	FAC	FAC
> Eustoma exaltatum (L.) Salisb.	Gentianaceae	Catchfly Prairie-Gentian	-	OBL	FACW	OBL
> Euthamia occidentalis Nutt.	Asteraceae	Western Goldentop	7	FACW	OBL	FACW
> Eutrochium maculatum (L.) E. Lamont	Asteraceae	Spotted Trumpetweed	5	OBL	OBL	OBL
> Fallopia convolvulus (L.) A. Love	Polygonaceae	Black-Bindweed	0	FACU	FACU	FACU
Festuca idahoensis Elmer	Poaceae	Bluebunch Fescue	4	FACU	UPL	FACU
Festuca rubra L.	Poaceae	Red Fescue	1	FAC	FAC	FAC
Festuca subulata Trin.	Poaceae	Bearded Fescue	7	FACU	UPL	FACU
Festuca trachyphylla (Hack.) Krajina	Poaceae	Hard Fescue		FACU	UPL	UPL
Floerkea proserpinacoides Willd.	Limnanthaceae	False Mermaidweed	4	FACW	FACW	FACW
Fragaria vesca L.	Rosaceae	Woodland Strawberry	-	FACU	UPL	UPL
Fragaria virginiana Duchesne	Rosaceae	Virginia Strawberry	3	FACU	FACU	FACU
> Frangula purshiana (DC.) Cooper	Rhamnaceae	Cascara False Buckthorn	6	FAC		FACU
Fraxinus pennsylvanica Marsh.	Oleaceae	Green Ash	4	FAC	FAC	FACW
* Galeopsis tetrahit L.	Lamiaceae	Brittle-Stem Hemp-Nettle	1	FACU	FACU	FACU

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
* Galinsoga quadriradiata Ruiz & Pav.	Asteraceae	Shaggy-Soldier	1	UPL	FACU	UPL
Galium aparine L.	Rubiaceae	Sticky-Willy	-	FACU	FACU	FACU
Galium boreale L.	Rubiaceae	Northern Bedstraw	4	FACU	FACU	FACU
> Galium mexicanum Kunth	Rubiaceae	Mexican Bedstraw	2	FAC	FAC	FAC
Galium mollugo L.	Rubiaceae	White Bedstraw	1	FACU		FACU
Galium palustre L.	Rubiaceae	Common Marsh Bedstraw	5	OBL		
Galium trifidum L.	Rubiaceae	Three-Petal Bedstraw	6	FACW	OBL	FACW
Galium triflorum Michx.	Rubiaceae	Fragrant Bedstraw	6	FACU	FACU	FACU
> Gamochaeta purpurea (L.) Cabrera	Asteraceae	Spoon-Leaf Purple Everlasting		FACU	FACU	FACU
Gaultheria humifusa (Graham) Rydb.	Ericaceae	Alpine Spicy-Wintergreen	8	FACW	FACU	FACW
Gaultheria ovatifolia Gray	Ericaceae	Western Teaberry	8	FAC	FAC	FAC
Gayophytum humile Juss.	Onagraceae	Dwarf Groundsmoke	-	FAC		FAC
Gayophytum racemosum Torr. & Gray	Onagraceae	Black-Foot Groundsmoke	4	FAC		FAC
Gentiana affinis Griseb.	Gentianaceae	Pleated Gentian	6	FACU	FACU	FACU
Gentiana algida Pallas	Gentianaceae	Whitish Gentian	9	FACW	FACW	FACW
Gentiana calycosa Griseb.	Gentianaceae	Rainier Pleated Gentian	7	FACW		FACW
> Gentiana fremontii Torr.	Gentianaceae	Moss Gentian	7	FACW	OBL	FACW
Gentiana glauca Pallas	Gentianaceae	Pale Gentian	10	FAC		FAC
Gentiana prostrata Haenke	Gentianaceae	Pygmy Gentian	6	FACW		FACW
> Gentianella amarella (L.) Borner	Gentianaceae	Autumn Dwarf-Gentian	3	FACW	FACW	FACW
> Gentianella propinqua (Richards.) J. Gillett	Gentianaceae	Four-Part Dwarf-Gentian	10	FACW		FACW
> Gentianopsis simplex (Gray) Iltis	Gentianaceae	One-Flower Fringed-Gentian	9	FACW		FACW
> Gentianopsis thermalis (Kuntze) Iltis	Gentianaceae	Rocky Mountain Fringed-Gentian	8	FACW	OBL	FACW
> Gentianopsis virgata (Raf.) Holub	Gentianaceae	Lesser Fringed-Gentian	-	OBL	OBL	
> Geocaldon lividum (Richards.) Fern.	Santalaceae	False Toadflax	7	FAC		FAC
Geranium richardsonii Fisch. & Trautv.	Geraniaceae	White Crane's-Bill	5	FAC	FAC	FACU
Geranium robertianum L.	Geraniaceae	Lesser Herb Robert	1	FACU		FACU
Geranium viscosissimum Fisch. & C.A. Mey.	Geraniaceae	Sticky Purple Crane's-Bill	4	FACU	FACU	FAC
Geum aleppicum Jacq.	Rosaceae	Yellow Avens	6	FACW	FACU	FAC
Geum canadense Jacq.	Rosaceae	White Avens	6	FACU	FAC	
Geum macrophyllum Willd.	Rosaceae	Large-Leaf Avens	5	FAC	FACW	FACW
Geum rivale L.	Rosaceae	Purple Avens	7	FACW	FACW	FACW
Geum rossii (R. Br.) Ser.	Rosaceae	Ross' Avens	-	FACU	FACU	FACU
Geum triflorum Pursh	Rosaceae	Old-Man's-Whiskers	-	FACU	FACU	FACU
> Githopsis specularioides Nutt.	Campanulaceae	Common Bluecup	-	FACU		FACU
* Glechoma hederacea L.	Lamiaceae	Groundivy	1	FACU	FACU	FACU
Gleditsia triacanthos L.	Fabaceae	Honey-Locust		FAC	FACU	FAC
Glyceria borealis (Nash) Batchelder	Poaceae	Small Floating Manna Grass	6	OBL	OBL	OBL
Glyceria elata (Nash ex Rydb.) M.E. Jones	Poaceae	Tall Manna Grass	6	FACW	OBL	OBL
Glyceria grandis S. Wats.	Poaceae	American Manna Grass	7	OBL	OBL	OBL
Glyceria striata (Lam.) A.S. Hitchc.	Poaceae	Fowl Manna Grass	6	OBL	OBL	OBL
Glycyrrhiza lepidota Pursh	Fabaceae	American Licorice	3	FAC	FACU	FAC
Gnaphalium palustre Nutt.	Asteraceae	Western Marsh Cudweed	3	FACW	OBL	FACW
* Gnaphalium uliginosum L.	Asteraceae	Marsh Cudweed	1	FAC	FAC	FAC
Goodyera oblongifolia Raf.	Orchidaceae	Green-Leaf Rattlesnake-Plantain	-	FACU	FACU	FACU
Goodyera repens (L.) R. Br.	Orchidaceae	Dwarf Rattlesnake-Plantain	-	FACU		FACU
> Graphophorum wolfii (Vasey) Vasey ex Coult.	Poaceae	Wolf's trisetum	4	FACU	FACW	FACU
Gratiola ebracteata Benth. ex A. DC.	Plantaginaceae	Bractless Hedge-Hyssop	8	OBL	OBL	OBL
Gratiola neglecta Torr.	Plantaginaceae	Clammy Hedge-Hyssop	8	OBL	OBL	OBL
> Grindelia nana Nutt.	Asteraceae	Idaho Gumweed	3	FACW		FACW

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
<i>Grindelia squarrosa</i> (Pursh) Dunal	Asteraceae	Curly-Cup Gumweed	2	FACU	UPL	FACU
> <i>Gymnocarpium dryopteris</i> (L.) Newman	Polypodiaceae	Northern Oak Fern	7	FAC	FACU	FAC
<i>Gymnosteris parvula</i> Heller	Polypodiaceae	Small-Flower Starlet	3	FAC		FAC
<i>Hackelia floribunda</i> (Lehm.) I.M. Johnston	Boraginaceae	Many-Flower Stickseed	-	FACU	FACU	FACU
<i>Hackelia micrantha</i> (Eastw.) J.L. Gentry	Boraginaceae	Blue Stickseed	-	FACU		FACU
<i>Halenia deflexa</i> (Sm.) Griseb.	Gentianaceae	American Spurred-Gentian	4	FACW	FAC	
<i>Hedysarum alpinum</i> L.	Fabaceae	Alpine Sweet-Vetch	-	FACU	FACU	FACU
<i>Helenium autumnale</i> L.	Asteraceae	Fall Sneezeweed	6	FACW	FACW	FACW
<i>Helianthella quinquenervis</i> (Hook.) Gray	Asteraceae	Nodding Dwarf-Sunflower	4	FACU	FACW	FACU
<i>Helianthus annuus</i> L.	Asteraceae	Common Sunflower	-	FACU	FACU	FACU
<i>Helianthus maximiliani</i> Schrad.	Asteraceae	Maximilian Sunflower	-	UPL	FACU	UPL
<i>Helianthus nuttallii</i> Torr. & Gray	Asteraceae	Nuttall's Sunflower	7	FACW	FACW	FACW
<i>Helianthus tuberosus</i> L.	Asteraceae	Jerusalem-Artichoke		FACU	FACU	FACU
<i>Heliotropium curassavicum</i> L.	Boraginaceae	Seaside Heliotrope	5	OBL	OBL	FACU
* <i>Hemerocallis fulva</i> (L.) L.	Liliaceae	Orange Day-Lily	1	FACU	FACU	FACU
> <i>Hemieva ranunculifolia</i> (Hook.) Raf.	Saxifragaceae	Buttercup Hemieva		FAC	FACW	FAC
> <i>Heracleum maximum</i> Bartr.	Apiaceae	American Cow-Parsnip	5	FAC	FAC	FACW
* <i>Hesperis matronalis</i> L.	Brassicaceae	Mother-of-the-Evening	0	FACU	FACU	FACU
<i>Hesperochiron californicus</i> (Benth.) S. Wats.	Hydrophyllaceae	California Monkey-Fiddle	-	FACU		FACU
<i>Hesperochiron pumilus</i> (Dougl. ex Griseb.) Porter	Hydrophyllaceae	Dwarf Monkey-Fiddle	9	FAC		FAC
<i>Heteranthera dubia</i> (Jacq.) MacM.	Pontederiaceae	Grass-Leaf Mud-Plantain	7	OBL	OBL	OBL
<i>Heterocodon rariflorum</i> Nutt.	Campanulaceae	Western Pearlflower	7	FAC		FACW
<i>Heuchera richardsonii</i> R. Br.	Saxifragaceae	Richardson's Alumroot	-	FACU	FACU	
> <i>Hieracium triste</i> Willd. ex Spreng.	Asteraceae	Woolly Hawkweed	-	FACU		FACU
<i>Hippuris vulgaris</i> L.	Hippuridaceae	Common Mare's-Tail	6	OBL	OBL	OBL
* <i>Holcus lanatus</i> L.	Poaceae	Common Velvet Grass	1	FAC	FAC	FAC
<i>Holodiscus discolor</i> (Pursh) Maxim.	Rosaceae	Creambush	-	FACU		FACU
<i>Hordeum brachyantherum</i> Nevski	Poaceae	Meadow Barley	5	FACW	FAC	FACW
<i>Hordeum jubatum</i> L.	Poaceae	Fox-Tail Barley	2	FAC	FACW	FAC
> * <i>Hordeum marinum</i> Huds.	Poaceae	Seaside Barley	1	FAC	FACU	FAC
* <i>Hordeum murinum</i> L.	Poaceae	Wall Barley	0	FAC	FACU	FACU
<i>Hordeum pusillum</i> Nutt.	Poaceae	Little Barley	-	FACU	FACU	FACU
> <i>Hornungia procumbens</i> (L.) Hayek	Brassicaceae	Ovalpurse	4	FAC		FAC
<i>Howellia aquatilis</i> Gray	Campanulaceae	Water Howellwort	9	OBL		OBL
* <i>Humulus lupulus</i> L.	Cannabaceae	Common Hop	1	FACU	FACU	FACU
> <i>Huperzia haleakalae</i> (Brack.) Holub	Lycopodiaceae	Pacific Fir-Moss	-	FACU		FACU
> <i>Hymenoxys hoopesii</i> (Gray) Bierner	Asteraceae	Owl's-Claws	-	FAC	FAC	FAC
<i>Hypericum anagalloides</i> Cham. & Schlecht.	Clusiaceae	Tinker's-Penny	7	OBL		OBL
<i>Hypericum majus</i> (Gray) Britt.	Clusiaceae	Greater Canadian St. John's-Wort	8	FACW	FACW	FACW
* <i>Hypericum perforatum</i> L.	Clusiaceae	Common St. John's-Wort	0	FACU	UPL	FACU
> <i>Hypericum scouleri</i> Hook.	Clusiaceae	Scouler's St. John's-Wort	7	FACW		FACW
* <i>Hypochaeris radicata</i> L.	Asteraceae	Hairy Cat's-Ear	1	FACU	UPL	FACU
<i>Iliamna rivularis</i> (Dougl. ex Hook.) Greene	Malvaceae	Streambank Wild Hollyhock	3	FAC		FACW
<i>Impatiens aurella</i> Rydb.	Balsaminaceae	Pale-Yellow Touch-Me-Not	3	FACW	FACW	FACW
<i>Impatiens ecalcarata</i> Blank.	Balsaminaceae	Spurless Touch-Me-Not	3	FACW		FACW
<i>Ipomoea purpurea</i> (L.) Roth	Convolvulaceae	Common Morning-Glory		UPL	FACU	UPL
<i>Iris missouriensis</i> Nutt.	Iridaceae	Rocky Mountain Iris	2	FACW	FACW	FACW
* <i>Iris pseudacorus</i> L.	Iridaceae	Pale-Yellow Iris	0	OBL	OBL	OBL
<i>Isoetes bolanderi</i> Engelm.	Isoetaceae	Bolander's Quillwort	7	OBL	OBL	OBL

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> Isoetes echinospora Durieu	Isoetaceae	Spiny-Spore Quillwort	9	OBL	OBL	OBL
Isoetes howellii Engelm.	Isoetaceae	Howell's Quillwort	8	OBL		OBL
> Isoetes occidentalis Henderson	Isoetaceae	Western Quillwort	9	OBL	OBL	OBL
Iva axillaris Pursh	Asteraceae	Deer-Root	3	FAC	FAC	FAC
> Jacobaea vulgaris Gaertn.	Asteraceae	Stinking Willie		FACU		FACU
Juncus acuminatus Michx.	Juncaceae	Knotty-Leaf Rush	5	OBL	OBL	OBL
> Juncus albescens (Lange) Fern.	Juncaceae	Northern White Rush	9	OBL	OBL	OBL
> Juncus alpinoarticulatus Chaix	Juncaceae	Northern Green Rush	7	OBL	OBL	OBL
Juncus articulatus L.	Juncaceae	Joint-Leaf Rush	7	OBL	OBL	OBL
> Juncus balticus Willd.	Juncaceae	Baltic Rush	3	FACW	FACW	FACW
Juncus biglumis L.	Juncaceae	Two-Flower Rush	9	OBL		OBL
Juncus brachyphyllus Wieg.	Juncaceae	Short-Leaf Rush	-	FAC	FAC	FAC
> Juncus brevicaudatus (Engelm.) Fern.	Juncaceae	Narrow-Panicle Rush	-	OBL	OBL	OBL
Juncus bufonius L.	Juncaceae	Toad Rush	1	FACW	OBL	FACW
Juncus castaneus Sm.	Juncaceae	Chestnut Rush	9	FACW	OBL	FACW
* Juncus compressus Jacq.	Juncaceae	Round-Fruit Rush	1	OBL	FACW	OBL
Juncus confusus Coville	Juncaceae	Colorado Rush	2	FAC	FACW	FAC
Juncus covillei Piper	Juncaceae	Coville's Rush	4	FACW		FACW
Juncus drummondii E. Mey.	Juncaceae	Drummond's Rush	7	FACW	FACW	FACW
> Juncus dudleyi Wieg.	Juncaceae	Dudley's Rush	3	FAC	FACW	FAC
> Juncus effusus L.	Juncaceae	Lamp Rush	6	FACW	OBL	FACW
> Juncus ensifolius Wikstr.	Juncaceae	Dagger-Leaf Rush	4	FACW	FACW	FACW
Juncus filiformis L.	Juncaceae	Thread Rush	7	FACW	OBL	FACW
* Juncus gerardii Loisel.	Juncaceae	Saltmarsh Rush	1	FACW	OBL	FACW
Juncus hallii Engelm.	Juncaceae	Hall's Rush	6	FAC		FAC
Juncus interior Wieg.	Juncaceae	Inland Rush	3	FAC	FACW	FAC
Juncus longistylis Torr.	Juncaceae	Long-Style Rush	5	FACW	FACW	FACW
Juncus mertensianus Bong.	Juncaceae	Mertens' Rush	7	OBL	OBL	OBL
Juncus nevadensis S. Wats.	Juncaceae	Sierran Rush	8	FACW	FACW	FACW
Juncus nodosus L.	Juncaceae	Knotted Rush	5	OBL	OBL	OBL
Juncus orthophyllus Coville	Juncaceae	Straight-Leaf Rush	-	FACW		FACW
Juncus parryi Engelm.	Juncaceae	Parry's Rush	7	FAC		FAC
> Juncus pylaei Laharpe	Juncaceae	Common Rush	6	OBL	OBL	
Juncus regelii Buch.	Juncaceae	Regel's Rush	-	FACW		FACW
Juncus saximontanus A. Nels.	Juncaceae	Rocky Mountain Rush	4	FACW	FACW	FACW
Juncus tenuis Willd.	Juncaceae	Lesser Poverty Rush	3	FAC	FAC	FACW
Juncus torreyi Coville	Juncaceae	Torrey's Rush	5	FACW	FACW	FACW
Juncus triglumis L.	Juncaceae	Three-Flower Rush	8	FACW		FACW
Juniperus communis L.	Cupressaceae	Common Juniper	-	UPL	UPL	FACU
Juniperus horizontalis Moench	Cupressaceae	Creeping Juniper	-	FACU	UPL	FACU
> Kalmia microphylla (Hook.) Heller	Ericaceae	Alpine-Laurel	5	OBL		OBL
> Kobresia myosuroides (Vill.) Fiori	Cyperaceae	Pacific Bog Sedge	7	FAC	FAC	FACU
> Kobresia sibirica (Turcz. ex Ledeb.) Boeckl.	Cyperaceae	Siberian Bog Sedge	8	FAC		FAC
Kobresia simpliciuscula (Wahlenb.) Mackenzie	Cyperaceae	Simple Bog Sedge	9	FACW		FACW
Koenigia islandica L.	Polygonaceae	Island-Purslane	10	OBL		OBL
Lactuca biennis (Moench) Fern.	Asteraceae	Wild Blue Lettuce	3	FAC	FAC	FAC
Lactuca canadensis L.	Asteraceae	Canadian Blue Lettuce	-	FACU	FACU	FACU
Lactuca ludoviciana (Nutt.) Riddell	Asteraceae	Louisiana Lettuce	3	FAC	FACU	FAC
* Lactuca serriola L.	Asteraceae	Prickly Lettuce	0	FACU	FAC	FACU

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Lactuca tatarica</i> (L.) C.A. Mey.	Asteraceae	Russian Blue Lettuce	4	FAC	UPL	FAC
* <i>Lapsana communis</i> L.	Asteraceae	Common Nipplewort	0	FACU	FAC	FAC
<i>Larix occidentalis</i> Nutt.	Pinaceae	Western Larch	-	FACU		FACU
> <i>Lathyrus lanszwertii</i> Kellogg	Fabaceae	Nevada Vetchling		UPL	FACU	UPL
<i>Leersia oryzoides</i> (L.) Sw.	Poaceae	Rice Cut Grass	8	OBL	OBL	OBL
<i>Lemna minor</i> L.	Lemnaceae	Common Duckweed	2	OBL	OBL	OBL
<i>Lemna trisulca</i> L.	Lemnaceae	Ivy-Leaf Duckweed	5	OBL	OBL	OBL
<i>Lemna turionifera</i> Landolt	Lemnaceae	Turion Duckweed	2	OBL	OBL	OBL
<i>Lemna valdiviana</i> Phil.	Lemnaceae	Pale Duckweed	-	OBL	OBL	OBL
> * <i>Lepidium appelianum</i> Al-Shehbaz	Brassicaceae	Globe-Pod Pepperwort	0	FACU	FAC	UPL
<i>Lepidium densiflorum</i> Schrad.	Brassicaceae	Miner's Pepperwort	3	FACU	FAC	UPL
* <i>Lepidium latifolium</i> L.	Brassicaceae	Broad-Leaf Pepperwort	0	FAC	FACW	FAC
* <i>Lepidium perfoliatum</i> L.	Brassicaceae	Clasping Pepperwort	0	FACU	FAC	FACU
* <i>Lepidium virginicum</i> L.	Brassicaceae	Poorman's-Pepperwort	1	FACU	FACU	FACU
<i>Leptarrhena pyrolifolia</i> (D. Don) R. Br. ex Ser.	Saxifragaceae	Pearleaf	8	FACW		FACW
> <i>Leptosphon nuttallii</i> (Gray) J.M. Porter & L.A. Johnson	Polemoniaceae	Nuttall's Perennial Gily-Flower	-	FACU	FAC	FACU
> * <i>Leucanthemum vulgare</i> Lam.	Asteraceae	Ox-Eye Daisy	0	FACU	UPL	UPL
<i>Lewisia pygmaea</i> (Gray) B.L. Robins.	Portulacaceae	Alpine Bitter-Root	-	FACU	FACU	FACU
> <i>Leymus cinereus</i> (Scribn. & Merr.) A. Love	Poaceae	Great Basin Lyme Grass	5	FAC	UPL	FAC
> <i>Leymus condensatus</i> (J. Presl) A. Love	Poaceae	Giant Lyme Grass	-	FACU	FACU	FACU
> <i>Leymus triticoides</i> (Buckl.) Pilger	Poaceae	Beardless Lyme Grass	3	FAC	FAC	FAC
<i>Liatris ligulistylis</i> (A. Nels.) K. Schum.	Asteraceae	Strap-Style Gayfeather	4	FAC	FAC	FAC
<i>Ligusticum canbyi</i> (Coul. & Rose) Coul. & Rose	Apiaceae	Canby's Wild Lovage	6	FAC		FAC
<i>Ligusticum grayi</i> Coul. & Rose	Apiaceae	Sheep Wild Lovage		FAC		FAC
<i>Ligusticum tenuifolium</i> S. Wats.	Apiaceae	Slender-Leaf Wild Lovage	7	FACW	FAC	FACW
<i>Ligusticum verticillatum</i> (Hook.) Coul. & Rose ex Rose	Apiaceae	Idaho Wild Lovage	6	FACW		FACW
<i>Lilium philadelphicum</i> L.	Liliaceae	Wood Lily	9	FAC	FACU	FAC
<i>Limosella aquatica</i> L.	Scrophulariaceae	Awl-Leaf Mudwort	4	OBL	OBL	OBL
<i>Linnaea borealis</i> L.	Caprifoliaceae	American Twinflower	-	FACU	FACU	FACU
<i>Liparis loeselii</i> (L.) L.C. Rich.	Orchidaceae	Yellow Wide-Lip Orchid	10	FACW	OBL	FACW
> <i>Lipocarpa drummondii</i> (Nees) G. Tucker	Cyperaceae	Drummond's Halfchaff Sedge		FACW	FACW	FACW
<i>Lloydia serotina</i> (L.) Reichenb.	Orchidaceae	Common Alp-Lily	7	FACU	FACU	FACU
<i>Lobelia kalmii</i> L.	Campanulaceae	Brook Lobelia	5	OBL	OBL	OBL
<i>Lobelia spicata</i> Lam.	Campanulaceae	Pale-Spike Lobelia	7	FAC	FAC	
* <i>Lolium perenne</i> L.	Poaceae	Perennial Rye Grass	1	FAC	FACU	FAC
<i>Lomatium bicolor</i> (S. Wats.) Coul. & Rose	Apiaceae	Wasatch Desert-Parsley	-	FACU	UPL	FACU
<i>Lomatogonium rotatum</i> (L.) Fries ex Fern.	Gentianaceae	Marsh-Felwort	6	OBL	OBL	OBL
> <i>Lonicera cauriana</i> Fern.	Caprifoliaceae	Sweet-Berry Honeysuckle		FAC	FAC	FAC
<i>Lonicera involucrata</i> (Richards.) Banks ex Spreng.	Caprifoliaceae	Four-Line Honeysuckle	5	FAC	FACU	FAC
* <i>Lonicera tatarica</i> L.	Caprifoliaceae	Twinsisters	1	FACU	FACU	UPL
<i>Lonicera utahensis</i> S. Wats.	Caprifoliaceae	Rocky Mountain Honeysuckle	4	FAC	FACU	FAC
> <i>Lorandersonia linifolia</i> (Greene) Urbatsch, R.P. Roberts & Neubig	Asteraceae	Spear-Leaf False Geesewood	-	FAC		FAC
* <i>Lotus corniculatus</i> L.	Fabaceae	Garden Bird's-Foot-Trefoil	1	FAC	FACU	FAC
<i>Lotus tenuis</i> Waldst. & Kit. ex Willd.	Fabaceae	Narrow-Leaf Bird's-Foot-Trefoil	1	FACU	FACU	FACU
<i>Luetkea pectinata</i> (Pursh) Kuntze	Rosaceae	Partridgefoot	-	FACU		FACU
> <i>Lupinus prunophilus</i> M.E. Jones	Fabaceae	Hairy Big-Leaf Lupine	6	FACU	FACU	FACU
<i>Luzula arcuata</i> (Wahlenb.) Sw.	Juncaceae	Curved Wood-Rush	-	UPL	FACU	UPL
> <i>Luzula comosa</i> E. Mey.	Juncaceae	Pacific Wood-Rush		FAC	FAC	FAC

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Luzula multiflora</i> (Ehrh.) Lej.	Juncaceae	Common Wood-Rush	4	FACU	FAC	FACU
<i>Luzula parviflora</i> (Ehrh.) Desv.	Juncaceae	Small-Flower Wood-Rush	7	FAC	UPL	FAC
<i>Luzula spicata</i> (L.) DC.	Juncaceae	Spiked Wood-Rush	-	FACU	FACU	FACU
> <i>Lycopodiella inundata</i> (L.) Holub	Lycopodiaceae	Northern Bog Club-Moss	10	OBL		OBL
<i>Lycopodium clavatum</i> L.	Lycopodiaceae	Running Ground-Pine	10	FAC		FAC
> <i>Lycopodium lagopus</i> (Laestad. ex Hartm.) Zinserl. ex Kuzen	Lycopodiaceae	Single-Cone Ground-Pine	-	FACU		FACU
<i>Lycopus americanus</i> Muhl. ex W. Bart.	Lamiaceae	Cut-Leaf Water-Horehound	8	OBL	OBL	OBL
<i>Lycopus asper</i> Greene	Lamiaceae	Rough Water-Horehound	6	OBL	OBL	OBL
<i>Lycopus uniflorus</i> Michx.	Lamiaceae	Northern Water-Horehound	9	OBL	OBL	OBL
<i>Lysichiton americanus</i> Hulten & St. John	Araceae	Yellow-Skunk-Cabbage	8	OBL		OBL
> <i>Lysimachia arvensis</i> (L.) U. Manns & A. Anderb.	Myrsinaceae	Scarlet Yellow-Loosestrife		FAC	FACW	FAC
<i>Lysimachia ciliata</i> L.	Myrsinaceae	Fringed Yellow-Loosestrife	7	FACW	FACW	FACW
> <i>Lysimachia maritima</i> (L.) Galasso, Banfi & Soldano	Myrsinaceae	Sea-Milkwort		OBL	OBL	FACW
> <i>Lysimachia minima</i> (L.) U. Manns & A. Anderb.	Myrsinaceae	Chaffweed		FACW	FACW	FACW
<i>Lysimachia nummularia</i> L.	Myrsinaceae	Creeping-Jenny		FACW	FACW	FACW
<i>Lysimachia thyrsoiflora</i> L.	Myrsinaceae	Tufted Yellow-Loosestrife	8	OBL	OBL	OBL
<i>Lysimachia vulgaris</i> L.	Myrsinaceae	Garden Yellow-Loosestrife		FACW		FACW
<i>Lythrum alatum</i> Pursh	Lythraceae	Wing-Angle Loosestrife	-	OBL	OBL	OBL
* <i>Lythrum salicaria</i> L.	Lythraceae	Purple Loosestrife	0	OBL	OBL	OBL
<i>Madia glomerata</i> Hook.	Asteraceae	Mountain Tarplant	-	FACU	FACU	FACU
> <i>Mahonia aquifolium</i> (Pursh) Nutt.	Berberidaceae	Holly-Leaf Oregon-Grape	-	FACU	UPL	UPL
> <i>Mahonia nervosa</i> (Pursh) Nutt.	Berberidaceae	Cascade Oregon-Grape		FACU		FACU
<i>Maianthemum canadense</i> Desf.	Liliaceae	False Lily-of-the-Valley	-	FACU	FACU	
> <i>Maianthemum racemosum</i> (L.) Link	Liliaceae	Feathery False Solomon's-Seal	4	FAC	FAC	FAC
> <i>Maianthemum stellatum</i> (L.) Link	Liliaceae	Starry False Solomon's-Seal	4	FAC	FACU	FACU
* <i>Marrubium vulgare</i> L.	Lamiaceae	White Horehound	0	FACU	FACU	FACU
<i>Marsilea oligospora</i> Goodding	Marsileaceae	Pacific Water-Clover	-	OBL		OBL
<i>Marsilea vestita</i> Hook. & Grev.	Marsileaceae	Hairy Water-Clover	4	OBL	OBL	OBL
> * <i>Matricaria discoidea</i> DC.	Asteraceae	Pineapple-Weed	0	FACU	FACU	FACU
* <i>Medicago lupulina</i> L.	Fabaceae	Black Medick	0	FACU	FACU	FAC
* <i>Medicago polymorpha</i> L.	Fabaceae	Toothed Medick	1	FACU	FACU	FACU
<i>Melampyrum lineare</i> Desr.	Orobanchaceae	American Cow-Wheat	6	FAC		FAC
<i>Melica bulbosa</i> Geyer ex Porter & Coult.	Poaceae	Onion Grass	-	FACU		FACU
<i>Melica spectabilis</i> Scribn.	Poaceae	Showy Melic Grass	7	FAC		FAC
* <i>Melilotus officinalis</i> (L.) Lam.	Fabaceae	Yellow Sweet-Clover	0	FACU	FACU	FACU
> <i>Mentha arvensis</i> L.	Lamiaceae	American Wild Mint	3	FACW	FACW	FACW
* <i>Mentha spicata</i> L.	Lamiaceae	Spearmint	1	FACW	FACW	OBL
<i>Menyanthes trifoliata</i> L.	Menyanthaceae	Buck-Bean	9	OBL	OBL	OBL
<i>Menziesia ferruginea</i> Sm.	Ericaceae	Fool's-Huckleberry	-	FACU		FACU
<i>Mertensia bella</i> Piper	Boraginaceae	Oregon Bluebells	6	FACW		FACW
<i>Mertensia ciliata</i> (James ex Torr.) G. Don	Boraginaceae	Tall Fringe Bluebells	6	FACW	FACW	FACW
> <i>Mertensia oblongifolia</i> (Nutt.) G. Don	Boraginaceae	Languid-Lady	-	FAC	FAC	FAC
<i>Mertensia paniculata</i> (Ait.) G. Don	Boraginaceae	Tall Bluebells	7	FAC	FAC	FACW
> <i>Mertensia viridis</i> (A. Nels.) A. Nels.	Boraginaceae	Green Bluebells	-	FACU	UPL	FACU
> <i>Micranthes ferruginea</i> (Graham) Brouillet & Gornall	Saxifragaceae	Russet-Hair Pseudosaxifrage	8	FAC	OBL	FAC
> <i>Micranthes lyallii</i> (Engl.) Small	Saxifragaceae	Red-Stem Pseudosaxifrage	7	FACW	OBL	FACW
> <i>Micranthes nidifica</i> (Greene) Small	Saxifragaceae	Peak Pseudosaxifrage	7	FACW	FAC	FACW
> <i>Micranthes occidentalis</i> (S. Wats.) Small	Saxifragaceae	Mountain Pseudosaxifrage	6	FAC	FAC	FAC
> <i>Micranthes odontoloma</i> (Piper) Heller	Saxifragaceae	Streambank Pseudosaxifrage	7	FACW	FACW	FACW

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Micranthes oregana</i> (T.J. Howell) Small	Saxifragaceae	Bog Pseudosaxifrage	6	FACW	OBL	OBL
> <i>Micranthes rhomboidea</i> (Greene) Small	Saxifragaceae	Diamond-Leaf Pseudosaxifrage	7	FAC	FAC	FACW
> <i>Micranthes tolmiei</i> (Torr. & Gray) Brouillet & Gornall	Saxifragaceae	Tolmie's Alpine Pseudosaxifrage		FAC		FAC
> <i>Microsteris gracilis</i> (Hook.) Greene	Polemoniaceae	Annual-Phlox	-	FACU	UPL	FACU
<i>Mimulus breviplorus</i> Piper	Phrymaceae	Short-Flower Monkey-Flower	3	FACW	FACW	FACW
<i>Mimulus breweri</i> (Greene) Coville	Phrymaceae	Brewer's Monkey-Flower	-	FACU		FACU
<i>Mimulus floribundus</i> Lindl.	Phrymaceae	Purple-Stem Monkey-Flower	3	OBL	OBL	OBL
<i>Mimulus guttatus</i> DC.	Phrymaceae	Seep Monkey-Flower	5	OBL	OBL	OBL
<i>Mimulus lewisii</i> Pursh	Phrymaceae	Great Purple Monkey-Flower	7	FACW		FACW
<i>Mimulus moschatus</i> Dougl. ex Lindl.	Phrymaceae	Muskflower	3	OBL	OBL	FACW
<i>Mimulus nanus</i> Hook. & Arn.	Phrymaceae	Dwarf Purple Monkey-Flower	-	FACU		FACU
<i>Mimulus primuloides</i> Benth.	Phrymaceae	Yellow Creeping Monkey-Flower	10	OBL		FACW
<i>Mimulus ringens</i> L.	Phrymaceae	Allegheny Monkey-Flower	-	OBL	OBL	OBL
<i>Mimulus suksdorfii</i> Gray	Phrymaceae	Miniature Monkey-Flower	4	FACU	FACW	FACU
<i>Mimulus tilingii</i> Regel	Phrymaceae	Subalpine Monkey-Flower	7	OBL	OBL	OBL
> <i>Mimulus washingtonensis</i> Gandog.	Phrymaceae	Washington Monkey-Flower	-	OBL	OBL	OBL
> <i>Minuartia obtusiloba</i> (Rydb.) House	Caryophyllaceae	Alpine Stitchwort	-	FACU	FACU	FACU
> <i>Minuartia rubella</i> (Wahlenb.) Hiern.	Caryophyllaceae	Boreal Stitchwort	5	FACU	FAC	FACU
<i>Mirabilis nyctaginea</i> (Michx.) MacM.	Nyctaginaceae	Heart-Leaf Four-O'clock	-	FACU	UPL	FACU
<i>Mitella nuda</i> L.	Saxifragaceae	Bare-Stem Bishop's-Cap	8	FACW	OBL	FACW
<i>Mitella stauropetala</i> Piper	Saxifragaceae	Side-Flower Bishop's-Cap	6	FAC	FAC	FAC
> <i>Mitellastrum caulescens</i> (Nutt.) T.J. Howell	Saxifragaceae	Mock Millerwort	5	FAC		FAC
> <i>Moehringia lateriflora</i> (L.) Fenzl	Caryophyllaceae	Blunt-Leaf Grove-Sandwort	5	FAC	FACU	FACU
> <i>Moehringia macrophylla</i> (Hook.) Fenzl	Caryophyllaceae	Large-Leaf Grove-Sandwort	-	FACU	UPL	FAC
* <i>Mollugo verticillata</i> L.	Molluginaceae	Green Carpetweed	1	FAC	FAC	FACU
<i>Monarda fistulosa</i> L.	Lamiaceae	Bee Balm	-	FACU	UPL	FACU
> <i>Moneses uniflora</i> (L.) Gray	Ericaceae	Single-Delight	8	FACU	FAC	FACU
<i>Monolepis nuttalliana</i> (J.A. Schultes) Greene	Amaranthaceae	Nuttall's Poverty-Weed	2	FAC	FAC	FAC
<i>Monotropa uniflora</i> L.	Lamiaceae	One-Flower Indian-Pipe	-	FACU	UPL	FACU
<i>Montia chamissoi</i> (Ledeb. ex Spreng.) Greene	Portulacaceae	Chamisso's Candy-Flower	4	OBL	OBL	OBL
<i>Montia dichotoma</i> (Nutt.) T.J. Howell	Portulacaceae	Dwarf Candy-Flower	2	FAC		FAC
<i>Montia linearis</i> (Dougl. ex Hook.) Greene	Portulacaceae	Linear-Leaf Candy-Flower	4	FAC	FAC	FAC
> <i>Montia parvifolia</i> (Moc. ex DC.) Greene	Portulacaceae	Little-Leaf Candy-Flower	2	FAC	FACW	FACW
<i>Muhlenbergia andina</i> (Nutt.) A.S. Hitchc.	Poaceae	Fox-Tail Muhly	-	FAC	FAC	FAC
<i>Muhlenbergia asperifolia</i> (Nees & Meyen ex Trin.) Parodi	Poaceae	Alkali Muhly	7	FACW	FACW	FACW
<i>Muhlenbergia filiformis</i> (Thurb. ex S. Wats.) Rydb.	Poaceae	Pullup Muhly	4	FACW	FACW	FACW
<i>Muhlenbergia glomerata</i> (Willd.) Trin.	Poaceae	Spiked Muhly	8	FACW	FACW	FACW
<i>Muhlenbergia minutissima</i> (Steud.) Swallen	Poaceae	Least Muhly	2	FAC	FAC	FAC
<i>Muhlenbergia racemosa</i> (Michx.) B.S.P.	Poaceae	Green Muhly	3	FACW	FACW	FACW
<i>Muhlenbergia richardsonis</i> (Trin.) Rydb.	Poaceae	Matted Muhly	4	FAC	FAC	FAC
* <i>Myosotis arvensis</i> (L.) Hill	Boraginaceae	Rough Forget-Me-Not	0	FACU	FAC	FAC
> <i>Myosotis asiatica</i> (Vesterg.) Schischkin & Sergievskaja	Boraginaceae	Asian Forget-Me-Not	7	FAC	FAC	FAC
<i>Myosotis laxa</i> Lehm.	Boraginaceae	Bay Forget-Me-Not	4	OBL	OBL	OBL
* <i>Myosotis scorpioides</i> L.	Boraginaceae	True Forget-Me-Not	0	FACW	OBL	FACW
> <i>Myosotis sylvatica</i> Ehrh. ex Hoffmann	Boraginaceae	Woodland Forget-Me-Not	7	FAC	FACW	FAC
<i>Myosotis verna</i> Nutt.	Boraginaceae	Spring Forget-Me-Not	-	FAC	FAC	FAC
> <i>Myosurus apetalus</i> C. Gay	Ranunculaceae	Bristly Mousetail	4	OBL	FACW	OBL
<i>Myosurus minimus</i> L.	Ranunculaceae	Tiny Mousetail	4	OBL	FACW	OBL
<i>Myriophyllum quitense</i> Kunth	Haloragaceae	Andean Water-Milfoil	4	OBL		OBL

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Myriophyllum sibiricum Komarov	Haloragaceae	Siberian Water-Milfoil	3	OBL	OBL	OBL
Myriophyllum verticillatum L.	Haloragaceae	Whorled Water-Milfoil	4	OBL	OBL	OBL
> Nabalus racemosus (Michx.) DC.	Asteraceae	Purple Rattlesnake-Root		FAC	FACU	FACU
Najas flexilis (Willd.) Rostk. & Schmidt	Najadaceae	Wavy Waternymph	7	OBL	OBL	OBL
Najas guadalupensis (Spreng.) Magnus	Najadaceae	Guadalupe Waternymph	7	OBL	OBL	OBL
> Nasturtium microphyllum Boenn. ex Reichenb.	Brassicaceae	One-Row Watercress	0	OBL	OBL	OBL
> Nasturtium officinale Ait. f.	Brassicaceae	Watercress	0	OBL	OBL	OBL
Navarretia intertexta (Benth.) Hook.	Polemoniaceae	Needle-Leaf Pincushion-Plant	6	FACW	FACW	FACW
Navarretia saximontana S.C. Spencer	Polemoniaceae	Rocky Mountain Pincushion-Plant	4	FACW	FACW	FACW
> Neoholmgrenia andina (Nutt.) W.L. Wagner & Hoch	Onagraceae	Obscure Evening-primrose		UPL	FACU	UPL
> Neokochia americana (S. Wats.) Chu & Sanderson	Amaranthaceae	Green-Molly		FACU	FAC	FAC
> Neottia banksiana (Lindl.) Rchb.f.	Orchidaceae	Northwestern Twayblade	7	FACU	OBL	FACU
> Neottia borealis (Morong) Szlach.	Orchidaceae	Northern Twayblade	9	FACW		FACW
> Neottia convallarioides (Sw.) Rich	Orchidaceae	Broad-Lip Twayblade	8	FAC	FACW	FAC
> Neottia cordata (L.) Rich	Orchidaceae	Heart-Leaf Twayblade	7	FAC	FACU	FACW
* Nepeta cataria L.	Lamiaceae	Catnip	0	FACU	FACU	FACU
Nicotiana attenuata Torr. ex S. Wats.	Solanaceae	Coyote Tobacco	3	FACU	FAC	FACU
> Nuphar polysepala Engelm.	Nymphaeaceae	Yellow Water-lily	5	OBL	OBL	OBL
> Nuphar variegata Dur.	Nymphaeaceae	Yellow Water-lily	5	OBL	OBL	
> Nymphaea leibergii Morong	Nymphaeaceae	Dwarf Water-Lily	9	OBL	OBL	
* Nymphaea odorata Ait.	Nymphaeaceae	American White Water-Lily	0	OBL	OBL	OBL
> Oenothera biennis L.	Onagraceae	King's-Cureall	-	FACU	FACU	FACU
> Oenothera curtiflora W.L. Wagner & Hoch	Onagraceae	Velvetweed	-	FACU	UPL	FACU
Oenothera flava (A. Nels.) Garrett	Onagraceae	Long-Tube Evening-Primrose	2	FAC	FACW	FAC
Oenothera perennis L.	Onagraceae	Small Evening-Primrose	-	FAC	FAC	
> Oenothera villosa Thunb.	Onagraceae	Hairy Evening-Primrose	1	FAC	FACU	FAC
> Ophioglossum pusillum Raf.	Ophioglossaceae	Northern Adder's-Tongue	4	FACW	FACW	FACW
Oplopanax horridus (Small) Miq.	Araliaceae	Devil's-Club	7	FAC	FACU	FAC
> Oreostemma alpigenum (Torr. & Gray) Greene	Asteraceae	Tundra Mountaincrown	4	FAC		FAC
Orobanche uniflora L.	Orobanchaceae	Naked Broom-Rape	-	FACU	UPL	FACU
> Orthilia secunda (L.) House	Ericaceae	Sidebells	-	FACU	FACU	FACU
Orthocarpus luteus Nutt.	Orobanchaceae	Golden-Tongue Owl-Clover	-	FACU	FACU	FACU
> Osmorhiza berteroi DC.	Apiaceae	Mountain Sweet-Cicely	4	FACU	FACU	FACU
Osmorhiza longistylis (Torr.) DC.	Apiaceae	Aniseroot	6	FACU	FAC	FACU
Osmorhiza purpurea (Coul. & Rose) Suksdorf	Apiaceae	Purple Sweet-Cicely	6	FAC	FAC	FAC
* Oxalis corniculata L.	Oxalidaceae	Creeping Yellow Wood-Sorrel	1	FACU	FACU	FACU
Oxalis dillenii Jacq.	Oxalidaceae	Slender Yellow Wood-Sorrel	-	FACU	FACU	FACU
Oxalis stricta L.	Oxalidaceae	Upright Yellow Wood-Sorrel	-	FACU	FACU	FACU
Oxyria digyna (L.) Hill	Polygonaceae	Mountain-Sorrel	5	FACU	FAC	FACU
Oxytropis deflexa (Pallas) DC.	Fabaceae	Pendant-Pod Locoweed	-	FACU	FACU	FACU
Oxytropis parryi Gray	Fabaceae	Parry's Locoweed	-	FACU	FACU	FACU
Oxytropis splendens Dougl. ex Hook.	Fabaceae	Whorled Locoweed	3	FAC	FACU	FAC
> Ozomelis trifida (Graham) Rydb.	Saxifragaceae	Pacific Mitrewort		FAC	FAC	FAC
> Packera debilis (Nutt.) W.A. Weber & A. Love	Asteraceae	Weak-Stem Groundsel	8	FACW	FACW	FACW
> Packera dimorphophylla (Greene) W.A. Weber & A. Love	Asteraceae	Two-Leaf Groundsel	7	FAC	FACU	FACU
> Packera heterophylla (Fisch.) E. Wiebe	Asteraceae	Dwarf Arctic Groundsel		FACU	FACU	FACU
> Packera indecora (Greene) A.& D. Love	Asteraceae	Rayless Mountain Groundsel	6	FACW	FACW	FACW
> Packera pauciflora (Pursh) A.& D. Love	Asteraceae	Rayless Alpine Groundsel	-	FAC	FAC	FAC
> Packera pauperula (Michx.) A.& D. Love	Asteraceae	Balsam Groundsel	5	FACW	FAC	FACW

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* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Packera plattensis</i> (Nutt.) W.A. Weber & A. Love	Asteraceae	Prairie Groundsel	-	UPL	FACU	UPL
> <i>Packera pseudaura</i> (Rydb.) W.A. Weber & A. Love	Asteraceae	Streambank Groundsel	7	FACW	FACW	FACW
> <i>Packera streptanthifolia</i> (Greene) W.A. Weber & A. Love	Asteraceae	Rocky Mountain Groundsel	-	FACU	UPL	FACU
> <i>Packera subnuda</i> (DC.) D.K. Trock & T.M. Barkl.	Asteraceae	Buck's Groundsel	7	FACW	OBL	FACW
<i>Panicum capillare</i> L.	Poaceae	Common Panic Grass	1	FAC	FAC	FACU
<i>Panicum dichotomiflorum</i> Michx.	Poaceae	Fall Panic Grass		FACW	FAC	FACW
<i>Panicum virgatum</i> L.	Poaceae	Wand Panic Grass	4	FACW	FAC	FACW
<i>Parietaria pensylvanica</i> Muhl. ex Willd.	Urticaceae	Pennsylvania Pellitory	3	FACU	FAC	FACU
<i>Parnassia fimbriata</i> Koenig	Saxifragaceae	Fringed Grass-of-Parnassus	7	OBL	OBL	OBL
<i>Parnassia kotzebuei</i> Cham. ex Spreng.	Saxifragaceae	Kotzebue's Grass-of-Parnassus	9	OBL	OBL	OBL
<i>Parnassia palustris</i> L.	Saxifragaceae	Marsh Grass-of-Parnassus	4	OBL	OBL	OBL
> <i>Parnassia parviflora</i> DC.	Saxifragaceae	Small-Flower Grass-of-Parnassus	9	OBL	OBL	OBL
> <i>Parthenocissus inserta</i> (Kerner) Fritsch	Vitaceae	Thicket-Creeper	4	FACU	FAC	FACU
> * <i>Parthenocissus quinquefolia</i> (L.) Planch.	Vitaceae	Virginia-Creeper	1	FAC	FACU	FAC
> <i>Pascopyrum smithii</i> (Rydb.) A. Love	Poaceae	Western-Wheat Grass	3	FACU	FACU	FAC
> <i>Paxistima myrsinites</i> (Pursh) Raf.	Celastraceae	Oregon Boxleaf	-	FACU	FACU	FACU
> <i>Pectiantia breweri</i> (Gray) Rydb.	Saxifragaceae	Brewer's mitrewort		FAC	FAC	FAC
> <i>Pectiantia pentandra</i> (Hook.) Rydb.	Saxifragaceae	Alpine mitrewort		FAC	FAC	FACW
<i>Pedicularis contorta</i> Benth.	Orobanchaceae	White Coil-Beak Lousewort	-	FACU	FACU	FACU
<i>Pedicularis crenulata</i> Benth.	Orobanchaceae	Purple-Flower Lousewort	6	FACW	FACW	FACW
<i>Pedicularis groenlandica</i> Retz.	Orobanchaceae	Bull Elephant's-Head	7	OBL	OBL	OBL
<i>Pedicularis parryi</i> Gray	Orobanchaceae	Parry's Lousewort	5	FACU	FAC	FACU
<i>Penstemon attenuatus</i> Dougl. ex Lindl.	Plantaginaceae	Sulphur Beardtongue	5	FACU	FACU	FACU
<i>Penstemon globosus</i> (Piper) Pennell & Keck	Plantaginaceae	Globe Beardtongue	-	FAC		FAC
<i>Penstemon gracilis</i> Nutt.	Plantaginaceae	Lilac Beardtongue	-	UPL	FACU	UPL
<i>Penstemon lyallii</i> (Gray) Gray	Plantaginaceae	Lyall's Beardtongue	-	FACU	FACU	FACU
<i>Penstemon procerus</i> Dougl. ex Graham	Plantaginaceae	Pincushion Beardtongue	5	FAC	UPL	FAC
<i>Penstemon rydbergii</i> A. Nels.	Plantaginaceae	Meadow Beardtongue	5	FACU	FAC	FACU
<i>Penstemon whippleanus</i> Gray	Plantaginaceae	Dark Beardtongue	-	FACU	FACU	FACU
<i>Perideridia gairdneri</i> (Hook. & Arn.) Mathias	Apiaceae	Common Yampah	4	FAC	FACU	FAC
> <i>Peritoma lutea</i> (Hook.) Raf.	Cleomaceae	Yellow Beeplant	-	FACU	FACU	FACU
> <i>Peritoma serrulata</i> (Pursh) DC.	Cleomaceae	Rocky Mountain Beeplant	-	FACU	FACU	FACU
> <i>Persicaria amphibia</i> (L.) S.F. Gray p.p.	Polygonaceae	Water Smartweed	6	OBL	OBL	OBL
> * <i>Persicaria hydropiper</i> (L.) Delarbre	Polygonaceae	Mild Water-Pepper	1	OBL	OBL	OBL
> <i>Persicaria lapathifolia</i> (L.) S.F. Gray	Polygonaceae	Dock-Leaf Smartweed	2	FACW	OBL	FACW
> <i>Persicaria maculosa</i> S.F. Gray	Polygonaceae	Spotted Lady's-Thumb	1	FACW	FACW	FACW
> <i>Persicaria pensylvanica</i> (L.) M. Gomez	Polygonaceae	Pinkweed	-	FACW	FACW	FACW
> <i>Persicaria punctata</i> (Ell.) Small	Polygonaceae	Dotted Smartweed	4	OBL	OBL	OBL
> <i>Petasites frigidus</i> (L.) Fries	Asteraceae	Arctic Sweet-Colt's-Foot	8	FACW	FAC	FACW
<i>Phacelia heterophylla</i> Pursh	Hydrophyllaceae	Variable-Leaf Scorpion-Weed	3	FACU	FAC	FACU
<i>Phacelia ramosissima</i> Dougl. ex Lehm.	Hydrophyllaceae	Branched Scorpion-Weed		FACU		FACU
<i>Phalaris aquatica</i> L.	Poaceae	Harding Grass		FACU	FAC	FACU
<i>Phalaris arundinacea</i> L.	Poaceae	Reed Canary Grass	0	FACW	FACW	FACW
* <i>Phalaris canariensis</i> L.	Poaceae	Common Canary Grass	1	FACU	FACU	FACU
> <i>Phegopteris connectilis</i> (Michx.) Watt	Polypodiaceae	Narrow Beech Fern	-	FACU	FACU	FACU
<i>Phippsia algida</i> (Soland.) R. Br.	Poaceae	Ice Grass	10	OBL		OBL
<i>Phleum alpinum</i> L.	Poaceae	Mountain Timothy	7	FAC	FAC	FAC
* <i>Phleum pratense</i> L.	Poaceae	Common Timothy	0	FAC	FACU	FACU
<i>Phlox kelseyi</i> Britt.	Polemoniaceae	Marsh Phlox	5	FACW	FAC	FACW

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> Phragmites australis (Cav.) Trin. ex Steud.	Poaceae	Common Reed	4	FACW	FACW	FACW
Phyllodoce empetrifloris (Sm.) D. Don	Ericaceae	Pink Mountain-Heath	7	FACU	FACU	FACU
Phyllodoce glanduliflora (Hook.) Coville	Ericaceae	Yellow Mountain-Heath	7	FACU	FACU	FACU
Physocarpus monogynus (Torr.) Coult.	Rosaceae	Mountain Ninebark	-	UPL	FACU	UPL
Phystostegia parviflora Nutt. ex Gray	Lamiaceae	Western False Dragonhead	7	FACW	FACW	FACW
Picea engelmannii Parry ex Engelm.	Pinaceae	Engelmann's Spruce	4	FAC	FAC	FACU
Picea glauca (Moench) Voss	Pinaceae	White Spruce	-	FAC	FACU	FAC
> Pinguicula macroceras Link	Lentibulariaceae	California Butterwort	9	OBL	OBL	OBL
Pinus contorta Dougl. ex Loud.	Pinaceae	Lodgepole Pine	3	FAC	FACU	FAC
Pinus monticola Dougl. ex D. Don	Pinaceae	Western White Pine	-	FACU		FACU
Pinus ponderosa P.& C. Lawson	Pinaceae	Ponderosa Pine	-	FACU	UPL	FACU
> Pteriparia dilatata (Pursh) Szlach. & Rutk.	Orchidaceae	Scentbottle	5	FACW	FACW	FACW
> Pteriparia unalascensis (Spreng.) Rydb.	Orchidaceae	Alaska Rein Orchid	6	FACU	FACU	FACU
> Plagiobothrys hispidulus (Greene) I.M. Johnston	Boraginaceae	Harsh Popcorn-Flower		FACW	FACW	FACW
Plagiobothrys leptocladus (Greene) I.M. Johnston	Boraginaceae	Alkali Popcorn-Flower	6	FACW	FACW	OBL
Plagiobothrys mollis (Gray) I.M. Johnston	Boraginaceae	Soft Popcorn-Flower		FACW		FACW
Plagiobothrys salsus (Brandeg.) I.M. Johnston	Boraginaceae	Salty Popcorn-Flower		FACW		FACW
Plagiobothrys stipitatus (Greene) I.M. Johnston	Boraginaceae	Stalked Popcorn-Flower	-	FACW		FACW
Plantago elongata Pursh	Plantaginaceae	Prairie Plantain	3	FACW	FACW	FACW
Plantago eriopoda Torr.	Plantaginaceae	Red-Woolly Plantain	7	FACW	FAC	FACW
* Plantago lanceolata L.	Plantaginaceae	English Plantain	1	FACU	FAC	FAC
* Plantago major L.	Plantaginaceae	Great Plantain	1	FAC	FAC	FAC
> Platanthera aquilonis Sheviak	Orchidaceae	Bog Orchid	8	FACW	OBL	OBL
> Platanthera huronensis (Nutt.) Lindl.	Orchidaceae	Lake Huron Green Orchid	8	OBL	OBL	OBL
> Platanthera obtusata (Banks ex Pursh) Lindl.	Orchidaceae	Blunt-Leaf Orchid	10	FACW	FACW	FACW
> Platanthera orbiculata (Pursh) Lindl.	Orchidaceae	Lesser Round-Leaf Orchid	9	FACU	FAC	FAC
> Platanthera rotundifolia (Banks ex Pursh) Lindl.	Orchidaceae	Round-Leaf Orchid		OBL		OBL
> Platanthera stricta Lindl.	Orchidaceae	Slender Bog Orchid	7	FACW	FACW	FACW
Plectritis macrocera Torr. & Gray	Valerianaceae	White Seablush	-	FACU		FACU
Poa alpina L.	Poaceae	Alpine Blue Grass	5	FAC	FACU	FAC
* Poa annua L.	Poaceae	Annual Blue Grass	1	FAC	FACU	FACU
> Poa arctica R. Br.	Poaceae	Arctic Blue Grass	4	FACU	FACW	FACU
> Poa arida Vasey	Poaceae	Prairie Blue Grass	4	UPL	FAC	FAC
Poa bulbosa L.	Poaceae	Bulbous Blue Grass	0	FACU	FACU	FACU
* Poa compressa L.	Poaceae	Flat-Stem Blue Grass	0	FACU	FACU	FACU
> Poa interior Rydb.	Poaceae	Inland Blue Grass	3	FAC	FAC	FAC
> Poa leptocoma Trin.	Poaceae	Marsh Blue Grass	8	FACW	OBL	FACW
Poa palustris L.	Poaceae	Fowl Blue Grass	3	FAC	FACW	FAC
* Poa pratensis L.	Poaceae	Kentucky Blue Grass	0	FAC	FACU	FAC
Poa reflexa Vasey & Scribn.	Poaceae	Nodding Blue Grass	3	OBL	OBL	FAC
> Poa secunda J. Presl	Poaceae	Curly Blue Grass	3	FACU	FACU	FACU
> Poa stanantha Trin.	Poaceae	Narrow-Flower Blue Grass	4	FACU	FAC	FACU
* Poa trivialis L.	Poaceae	Rough-Stalk Blue Grass	1	FAC	FACW	FACW
> Podagrostis humilis (Vasey) Bjorkman	Poaceae	Alpine False Bent	4	FACW	FACW	FACW
> Polanisia dodecandra (L.) DC.	Cleomaceae	Red-Whisker Clammyweed	-	FACU	FACU	FACU
Polemonium micranthum Benth.	Polemoniaceae	Annual Jacob's-Ladder	-	FACU	FACU	FACU
Polemonium occidentale Greene	Polemoniaceae	Western Jacob's-Ladder	6	FACW	FACW	FACW
Polygala verticillata L.	Polygalaceae	Whorled Milkwort	-	UPL	FACU	FACU
Polygonum achoreum Blake	Polygonaceae	Leathery Knotweed	-	FACU	FACU	FACU
> Polygonum austiniiae Greene	Polygonaceae	Mrs. Austin's Knotweed	-	FACU	FACU	FACU

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> * Polygonum aviculare L.	Polygonaceae	Yard Knotweed	0	FAC	FACU	FACW
Polygonum douglasii Greene	Polygonaceae	Douglas' Knotweed	3	FACU	FACU	FACU
> Polygonum engelmannii Greene	Polygonaceae	Engelmann's Knotweed	-	FACU	FACU	FACU
Polygonum erectum L.	Polygonaceae	Erect Knotweed	2	FACU	FAC	FACU
> Polygonum kelloggii Greene	Polygonaceae	Kellogg's Knotweed	-	FACW	FACW	FACW
> Polygonum majus (Meisn.) Piper	Polygonaceae	Wiry Knotweed	-	FACU		FACU
Polygonum minimum S. Wats.	Polygonaceae	Zigzag Knotweed	5	FACU	FAC	FACU
Polygonum polygaloides Wallich ex Meisn.	Polygonaceae	White-Margin Knotweed	4	FACW		FACW
> Polygonum ramosissimum Michx.	Polygonaceae	Yellow-Flower Knotweed	-	FAC	FACW	FAC
> Polygonum sawatchense Small	Polygonaceae	Sawatch Knotweed	-	FACU	FACU	FACU
* Polypogon monspeliensis (L.) Desf.	Poaceae	Annual Rabbit's-Foot Grass	1	FACW	FACW	FACW
Polystichum lonchitis (L.) Roth	Polypodiaceae	Northern Holly Fern	-	FACU	FACU	FACU
Polystichum munitum (Kaulfuss) K. Presl	Polypodiaceae	Pineland Sword Fern	-	FACU	FACU	FACU
> Populus acuminata Rydb. (pro sp.)	Salicaceae	Rydberg's cottonwood	5	FAC	FAC	FAC
Populus angustifolia James	Salicaceae	Narrow-Leaf Cottonwood	5	FACW	FACW	FACW
> Populus balsamifera L.	Salicaceae	Balsam Poplar	5	FAC	FACW	FAC
Populus deltoides Bartr. ex Marsh.	Salicaceae	Eastern Cottonwood	4	FAC	FAC	FAC
Populus tremuloides Michx.	Salicaceae	Quaking Aspen	5	FACU	FAC	FACU
* Portulaca oleracea L.	Portulacaceae	Little-Hogweed	1	FAC	FAC	FAC
Potamogeton alpinus Balbis	Potamogetonaceae	Reddish Pondweed	7	OBL	OBL	OBL
Potamogeton amplifolius Tuckerman	Potamogetonaceae	Large-Leaf Pondweed	10	OBL	OBL	OBL
> Potamogeton berchtoldii Fieber	Potamogetonaceae	Little Aguja Pondweed	7	OBL	OBL	OBL
* Potamogeton crispus L.	Potamogetonaceae	Curly Pondweed	0	OBL	OBL	OBL
Potamogeton diversifolius Raf.	Potamogetonaceae	Waterthread	6	OBL	OBL	OBL
Potamogeton epihydrus Raf.	Potamogetonaceae	Ribbon-Leaf Pondweed	7	OBL	OBL	OBL
Potamogeton foliosus Raf.	Potamogetonaceae	Leafy Pondweed	6	OBL	OBL	OBL
Potamogeton friesii Rupr.	Potamogetonaceae	Flat-Stalk Pondweed	7	OBL	OBL	OBL
Potamogeton gramineus L.	Potamogetonaceae	Grassy Pondweed	6	OBL	OBL	OBL
Potamogeton illinoensis Morong	Potamogetonaceae	Illinois Pondweed	6	OBL	OBL	OBL
Potamogeton natans L.	Potamogetonaceae	Broad-Leaf Pondweed	6	OBL	OBL	OBL
Potamogeton nodosus Poir.	Potamogetonaceae	Long-Leaf Pondweed	6	OBL	OBL	OBL
Potamogeton obtusifolius Mert. & Koch	Potamogetonaceae	Blunt-Leaf Pondweed	8	OBL	OBL	OBL
Potamogeton praelongus Wulfen	Potamogetonaceae	White-Stem Pondweed	6	OBL	OBL	OBL
Potamogeton pusillus L.	Potamogetonaceae	Small Pondweed	7	OBL	OBL	OBL
Potamogeton richardsonii (Benn.) Rydb.	Potamogetonaceae	Red-Head Pondweed	6	OBL	OBL	OBL
Potamogeton robbinsii Oakes	Potamogetonaceae	Fern Pondweed	7	OBL	OBL	OBL
Potamogeton strictifolius Benn.	Potamogetonaceae	Straight-Leaf Pondweed	7	OBL	OBL	OBL
Potamogeton zosteriformis Fern.	Potamogetonaceae	Flat-Stem Pondweed	9	OBL	OBL	OBL
> Potentilla anserina L.	Rosaceae	Silverweed	3	OBL	FACW	OBL
* Potentilla argentea L.	Rosaceae	Silver-Leaf Cinquefoil	1	FACU	FACU	FACU
Potentilla biennis Greene	Rosaceae	Biennial Cinquefoil	4	FACW	FACW	FACW
Potentilla drummondii Lehm.	Rosaceae	Drummond's Cinquefoil	-	FAC		FAC
Potentilla flabellifolia Hook. ex Torr. & Gray	Rosaceae	Fringe-Leaf Cinquefoil	8	FAC		FACW
> Potentilla glaucophylla Lehm.	Rosaceae	Mountain-Meadow Cinquefoil	6	FACU	FACW	FACU
Potentilla gracilis Dougl. ex Hook.	Rosaceae	Graceful Cinquefoil	4	FAC	FAC	FAC
Potentilla norvegica L.	Rosaceae	Norwegian Cinquefoil	2	FAC	FAC	FAC
Potentilla pensylvanica L.	Rosaceae	Pennsylvania Cinquefoil	-	FACU	FACU	FACU
Potentilla plattensis Nutt.	Rosaceae	Platte River Cinquefoil	6	FACW	FACW	FACW
> Potentilla pulcherrima Lehm.	Rosaceae	Soft Cinquefoil		FAC	FAC	FAC
Potentilla rivalis Nutt.	Rosaceae	Brook Cinquefoil	4	FACW	FACW	FACW

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Potentilla rubricaulis</i> Lehm.	Rosaceae	Rocky Mountain Cinquefoil	-	FACU	FACU	FACU
> <i>Potentilla supina</i> L.	Rosaceae	Bushy Cinquefoil		FACW	FACW	FACW
> <i>Poterium sanguisorba</i> L.	Rosaceae	Small burnet		UPL	FACU	FACU
<i>Primula alcalina</i> Cholewa & D. Henderson	Primulaceae	Blue-Dome Primrose	6	OBL		OBL
<i>Primula incana</i> M.E. Jones	Primulaceae	Silvery Primrose	5	OBL	FACW	OBL
<i>Primula parryi</i> Gray	Primulaceae	Brook Primrose	8	FAC	FAC	FAC
> <i>Prosartes trachycarpa</i> S. Wats.	Liliaceae	Rough-Fruit Fairybells	-	FACU	UPL	FACU
* <i>Prunella vulgaris</i> L.	Lamiaceae	Common Selfheal	2	FACU	FAC	FACU
<i>Prunus americana</i> Marsh.	Rosaceae	American Plum	-	FACU	UPL	FACU
<i>Prunus emarginata</i> (Dougl.) D. Dietr.	Rosaceae	Bitter Cherry	5	FACU	FAC	FACU
<i>Prunus pensylvanica</i> L. f.	Rosaceae	Fire Cherry	-	UPL	FACU	FACU
<i>Prunus virginiana</i> L.	Rosaceae	Choke Cherry	3	FACU	FACU	FAC
> <i>Psathyrostachys juncea</i> (Fisch.) Nevski	Poaceae	Russian-Wild Rye	0	FAC	FACU	UPL
> <i>Pseudognaphalium canescens</i> (DC.) A. Anderb.	Asteraceae	Wright's Rabbit-Tobacco	-	FACU	UPL	FACU
> <i>Pseudognaphalium stramineum</i> (Kunth) A. Anderb.	Asteraceae	Cotton-Batting-Plant	3	FAC	FAC	FAC
<i>Pseudotsuga menziesii</i> (Mirbel) Franco	Pinaceae	Douglas-Fir	-	FACU	FACU	FACU
<i>Psilocarphus brevissimus</i> Nutt.	Asteraceae	Dwarf Woollyheads	8	FACW	FACW	FACW
<i>Psilocarphus elatior</i> (Gray) Gray	Asteraceae	Tall Woollyheads	-	FACW		FACW
<i>Psilocarphus tenellus</i> Nutt.	Asteraceae	Slender Woollyheads	-	OBL		OBL
<i>Pteridium aquilinum</i> (L.) Kuhn	Polypodiaceae	Northern Bracken Fern	-	FACU	FACU	FACU
* <i>Puccinellia distans</i> (Jacq.) Parl.	Poaceae	Spreading Alkali Grass	4	FACW	FACW	FACW
<i>Puccinellia lemmonii</i> (Vasey) Scribn.	Poaceae	Lemmon's Alkali Grass	7	FAC	FACW	FACW
> <i>Puccinellia nuttalliana</i> (J.A. Schultes) A.S. Hitchc.	Poaceae	Nuttall's Alkali Grass	6	FACW	OBL	FACW
<i>Pyrola asarifolia</i> Michx.	Ericaceae	Pink Wintergreen	6	FACU	FACU	FAC
<i>Pyrola chlorantha</i> Sw.	Ericaceae	Green-Flower Wintergreen	8	FACU	FACU	FAC
<i>Pyrola minor</i> L.	Ericaceae	Snowline Wintergreen	-	FACU	FACU	FACU
> <i>Pyrrocoma lanceolata</i> (Hook.) Greene	Asteraceae	Lance-Leaf Goldenweed	4	FAC	FACU	FAC
> <i>Pyrrocoma uniflora</i> (Hook.) Greene	Asteraceae	Plantain Goldenweed	6	FACW	FAC	FACW
<i>Quercus macrocarpa</i> Michx.	Fagaceae	Burr Oak	-	FACU	FACU	FAC
<i>Ranunculus abortivus</i> L.	Ranunculaceae	Kidney-Leaf Buttercup	3	FACW	FAC	FACW
<i>Ranunculus acrifolius</i> Gray	Ranunculaceae	Sharp-Leaf Buttercup	6	FACW	FACW	FACW
* <i>Ranunculus acris</i> L.	Ranunculaceae	Tall Buttercup	0	FAC	FACW	FACW
> <i>Ranunculus adoneus</i> Gray	Ranunculaceae	Alpine Buttercup	7	FACW	FACW	FACW
<i>Ranunculus alismifolius</i> Geyer ex Benth.	Ranunculaceae	Water-Plantain Buttercup	7	FACW	OBL	FACW
> <i>Ranunculus aquatilis</i> L.	Ranunculaceae	White Water-Crowfoot	4	OBL	OBL	OBL
> <i>Ranunculus arcticus</i> Richards.	Ranunculaceae	Northern Buttercup		FAC	OBL	FAC
<i>Ranunculus cardiophyllus</i> Hook.	Ranunculaceae	Heart-Leaf Buttercup	9	FACW	FACW	FACW
<i>Ranunculus eschscholtzii</i> Schlecht.	Ranunculaceae	Spruce-Fir Buttercup	7	FACW	FACW	FAC
> <i>Ranunculus flammula</i> L.	Ranunculaceae	Greater Creeping Spearwort	4	FACW	FACW	OBL
<i>Ranunculus glaberrimus</i> Hook.	Ranunculaceae	Sagebrush Buttercup	4	FACU	FAC	FAC
<i>Ranunculus gmelinii</i> DC.	Ranunculaceae	Lesser Yellow Water Buttercup	4	FACW	FACW	FACW
> <i>Ranunculus grayi</i> Britt.	Ranunculaceae	Arctic Buttercup	9	FAC		FAC
> <i>Ranunculus hyperboreus</i> Rottb.	Ranunculaceae	Far-Northern Buttercup	9	OBL	OBL	OBL
<i>Ranunculus inamoenus</i> Greene	Ranunculaceae	Graceful Buttercup	6	FACW	FACW	FACW
<i>Ranunculus jovis</i> A. Nels.	Ranunculaceae	Hillside Buttercup	4	FAC	FACU	FAC
> <i>Ranunculus longirostris</i> Godr.	Ranunculaceae	Long-Beak Water-Crowfoot	4	OBL	OBL	OBL
<i>Ranunculus macounii</i> Britt.	Ranunculaceae	Macoun's Buttercup	5	OBL	OBL	OBL
<i>Ranunculus orthorhynchus</i> Hook.	Ranunculaceae	Straight-Beak Buttercup	8	FACW	FACW	FACW
<i>Ranunculus pensylvanicus</i> L. f.	Ranunculaceae	Pennsylvania Buttercup	4	FACW	FACW	FACW
<i>Ranunculus populago</i> Greene	Ranunculaceae	Mountain Buttercup	7	FACW		OBL

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* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Ranunculus pygmaeus Wahlenb.	Ranunculaceae	Dwarf Buttercup	9	FAC	FACW	FACW
* Ranunculus repens L.	Ranunculaceae	Creeping Buttercup	1	FAC	FACW	FAC
Ranunculus sceleratus L.	Ranunculaceae	Cursed Buttercup	4	OBL	OBL	OBL
> Ranunculus subrigidus W. Drew	Ranunculaceae	Short-Beak Water-Crowfoot	4	OBL	OBL	OBL
Ranunculus sulphureus Soland. ex C.J. Phipps	Ranunculaceae	Sulphur Buttercup	-	FACW	OBL	FACW
> Ranunculus trichophyllus Chaix	Ranunculaceae	Thread-Leaf Water-Crowfoot	4	OBL	OBL	OBL
Ranunculus uncinatus D. Don ex G. Don	Ranunculaceae	Woodland Buttercup	2	FAC	FACW	FAC
> Reynoutria japonica Houtt.	Polygonaceae	Japanese-Knotweed		FACU	FACU	FACU
Rhamnus alnifolia L'Her.	Rhamnaceae	Alder-Leaf Buckthorn	4	FACW	FACW	OBL
* Rhamnus cathartica L.	Rhamnaceae	European Buckthorn	0	UPL	FACU	FAC
> Rhinanthus minor L.	Orobanchaceae	Little Yellow-Rattle	-	FACU	FACU	FACU
> Rhodiola integrifolia Raf.	Crassulaceae	Entire-Leaf Rosewort	-	FACU	FACU	FACU
> Rhodiola rhodantha (Gray) Jacobsen	Crassulaceae	Queen's-Crown	8	FACW	FAC	FACW
Rhododendron albiflorum Hook.	Ericaceae	Cascade Azalea	8	FACU	FACW	FACU
> Rhododendron columbianum (Piper) Harmaja	Ericaceae	Western Labrador-Tea	7	OBL		FACW
> Rhus aromatica Ait.	Anacardiaceae	Fragrant Sumac	-	UPL	UPL	FACU
Ribes americanum P. Mill.	Grossulariaceae	Wild Black Currant	6	FAC	FACW	FACW
Ribes aureum Pursh	Grossulariaceae	Golden Currant	5	FAC	FACU	FAC
Ribes hudsonianum Richards.	Grossulariaceae	Northern Black Currant	7	FACW	OBL	FACW
Ribes inerme Rydb.	Grossulariaceae	White-Stem Gooseberry	5	FAC	FACW	FAC
Ribes lacustre (Pers.) Poir.	Grossulariaceae	Bristly Black Gooseberry	6	FAC	FACW	FACW
Ribes laxiflorum Pursh	Grossulariaceae	Trailing Black Currant	-	FACU	FACU	FACU
Ribes oxycanthoides L.	Grossulariaceae	Canadian Gooseberry	6	FACW	FACU	FACU
Ribes triste Pallas	Grossulariaceae	Swamp Red Currant	7	FAC	OBL	OBL
Ribes viscosissimum Pursh	Grossulariaceae	Sticky Currant	4	FAC	FACU	FAC
* Robinia pseudoacacia L.	Fabaceae	Black Locust	1	FACU	UPL	FACU
Romanzoffia sitchensis Bong.	Orchidaceae	Sitka Mistmaiden	10	FACW	FACW	FACW
* Rorippa austriaca (Crantz) Bess.	Brassicaceae	Austrian Yellowcress	1	FAC	FACW	FACW
Rorippa calycina (Engelm.) Rydb.	Brassicaceae	Persistent-Sepal Yellowcress	-	FACW	OBL	FACW
Rorippa curvipes Greene	Brassicaceae	Blunt-Leaf Yellowcress	4	FACW	OBL	FACW
Rorippa curvisiliqua (Hook.) Bess. ex Britt.	Brassicaceae	Curve-Pod Yellowcress	4	OBL	OBL	OBL
> Rorippa palustris (L.) Bess.	Brassicaceae	Bog Yellowcress	4	OBL	OBL	OBL
Rorippa sinuata (Nutt.) A.S. Hitchc.	Brassicaceae	Spreading Yellowcress	4	FAC	FACW	FACW
* Rorippa sylvestris (L.) Bess.	Brassicaceae	Creeping Yellowcress	1	OBL	FACW	OBL
Rorippa tenerrima Greene	Brassicaceae	Modoc Yellowcress	4	FAC	FAC	FAC
> Rosa acicularis Lindl.	Rosaceae	Prickly Rose	-	FACU	FACU	FACU
Rosa arkansana Porter	Rosaceae	Prairie Rose	-	FACU	FACU	FACU
Rosa gymnocarpa Nutt.	Rosaceae	Bald-Hip Rose	-	FACU	UPL	FACU
Rosa nutkana K. Presl	Rosaceae	Nootka Rose	5	FAC	FACU	FACU
Rosa woodsii Lindl.	Rosaceae	Woods' Rose	-	FACU	FACU	FACU
Rotala ramosior (L.) Koehne	Lythraceae	Lowland Toothcup	3	OBL	OBL	OBL
> Rubus arcticus L.	Rosaceae	Northern Blackberry	10	FAC	FACW	FAC
> Rubus armeniacus Focke	Rosaceae	Himalayan Blackberry	0	FACU	FAC	FACU
Rubus idaeus L.	Rosaceae	Common Red Raspberry	-	FACU	FACU	FACU
* Rubus laciniatus Willd.	Rosaceae	Cut-Leaf Blackberry	1	FACU	FACU	FACU
Rubus leucodermis Dougl. ex Torr. & Gray	Rosaceae	White-Stem Raspberry	5	FACU	FAC	FACU
Rubus parviflorus Nutt.	Rosaceae	Western Thimble-Berry	3	FACU	FACU	FAC
Rubus pedatus Sm.	Rosaceae	Strawberry-Leaf Raspberry	-	FACU	FAC	FACU
Rubus pubescens Raf.	Rosaceae	Dwarf Red Raspberry	7	FAC	FACW	FAC
Rubus ursinus Cham. & Schlecht.	Rosaceae	California Dewberry	-	FACU		FAC

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Rudbeckia hirta L.	Asteraceae	Black-Eyed-Susan	-	FACU	FACU	FACU
Rudbeckia laciniata L.	Asteraceae	Green-Head Coneflower	5	FAC	FAC	FAC
Rudbeckia occidentalis Nutt.	Asteraceae	Western Coneflower	7	FAC	FAC	FAC
* Rumex acetosella L.	Polygonaceae	Common Sheep Sorrel	1	FACU	FAC	FACU
> Rumex californicus Rech. f.	Polygonaceae	California Willow Dock	7	FACW	FACW	FACW
* Rumex crispus L.	Polygonaceae	Curly Dock	1	FAC	FAC	FAC
> Rumex fueginus Phil.	Polygonaceae	Tierra del Fuego Dock	6	FACW	FACW	FACW
> Rumex lapponicus (Hiitonon) Czernov	Polygonaceae	Lapland Sorrel	9	UPL	FAC	FAC
* Rumex obtusifolius L.	Polygonaceae	Bitter Dock	1	FAC	FACW	FAC
> Rumex occidentalis S. Wats.	Polygonaceae	Western Dock	4	FACW	OBL	FACW
Rumex paucifolius Nutt.	Polygonaceae	Alpine Sheep Sorrel	4	FAC	FAC	FAC
* Rumex stenophyllus Ledeb.	Polygonaceae	Narrow-Leaf Dock	1	FACW	FACW	FACW
> Rumex triangulivalvis (Danser) Rech. f.	Polygonaceae	Triangular-Valved Dock	7	FAC	FACW	FACW
Rumex venosus Pursh	Polygonaceae	Veiny Dock	3	FACU	FAC	UPL
> Ruppia cirrhosa (Petag.) Grande	Ruppiales	Spiral Ditch-Grass	8	OBL	OBL	OBL
Sagina nivalis (Lindbl.) Fries	Caryophyllaceae	Snow Pearlwort	-	FACW	FACW	
* Sagina procumbens L.	Caryophyllaceae	Bird-Eye Pearlwort	1	FAC	FACW	FAC
Sagina saginoides (L.) Karst.	Caryophyllaceae	Alpine Pearlwort	3	FACW	FACW	FACW
Sagittaria cuneata Sheldon	Alismataceae	Arum-Leaf Arrowhead	7	OBL	OBL	OBL
Sagittaria latifolia Willd.	Alismataceae	Duck-Potato	7	OBL	OBL	OBL
Salicornia rubra A. Nels.	Amaranthaceae	Red Saltwort	7	OBL	OBL	OBL
Salix alba L.	Salicaceae	White Willow		FACW	FACW	FACW
Salix amygdaloides Anderss.	Salicaceae	Peach-Leaf Willow	7	FACW	FACW	FACW
Salix barclayi Anderss.	Salicaceae	Barclay's Willow	8	FACW	OBL	FACW
Salix barrattiana Hook.	Salicaceae	Barratt's Willow	10	FACW		FACW
Salix bebbiana Sarg.	Salicaceae	Gray Willow	4	FACW	FACW	FACW
> Salix boothii Dorn	Salicaceae	Booth's Willow	6	FACW		FACW
Salix brachycarpa Nutt.	Salicaceae	Short-Fruit Willow	6	FACW		FACW
Salix candida Fluegge ex Willd.	Salicaceae	Sage Willow	9	OBL	OBL	OBL
Salix cascadenis Cockerell	Salicaceae	Cascade Willow	-	FACU		FACU
Salix commutata Bebb	Salicaceae	Under-Green Willow	7	OBL		OBL
Salix discolor Muhl.	Salicaceae	Pussy Willow	4	FACW	FACW	FACW
Salix drummondiana Barratt ex Hook.	Salicaceae	Drummond's Willow	5	FACW	FACW	FACW
Salix eastwoodiae Cockerell ex Heller	Salicaceae	Sierran Willow	7	FACW		FACW
Salix exigua Nutt.	Salicaceae	Narrow-Leaf Willow	4	FACW	FACW	FACW
> Salix famelica (Ball) Argus	Salicaceae	Yellow willow	-	FACW	FACW	FACW
Salix farriarum Ball	Salicaceae	Farr's Willow	7	OBL	OBL	OBL
Salix geyeriana Anderss.	Salicaceae	Geyer's Willow	6	FACW	OBL	OBL
Salix glauca L.	Salicaceae	Gray-Leaf Willow	7	FACW	FACW	FACW
> Salix interior Rowlee	Salicaceae	Sandbar Willow	4	FACW	FACW	FACW
> Salix lasiandra Benth.	Salicaceae	Pacific Willow	4	FACW	FACW	FACW
Salix lemmonii Bebb	Salicaceae	Lemmon's Willow	6	FACW		FACW
> Salix lutea Nutt.	Salicaceae	Yellow Willow	6	OBL	FACW	OBL
> Salix melanopsis Nutt.	Salicaceae	Dusky Willow	5	OBL	FACW	OBL
> Salix nivalis Hook.	Salicaceae	Snow Willow	5	FACW		FACW
> Salix planifolia Pursh	Salicaceae	Tea-Leaf Willow	7	OBL	OBL	OBL
> Salix prolixa Anderss.	Salicaceae	Mackenzie's Willow	7	OBL	FACW	OBL
> Salix pseudomonticola Ball	Salicaceae	False Mountain Willow	7	FACW	FACW	FACW
> Salix rotundifolia Trautv.	Salicaceae	Round-Leaf Willow	8	FACW		FACW
Salix scouleriana Barratt ex Hook.	Salicaceae	Scouler's Willow	4	FAC	FACU	FAC

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Salix serissima (Bailey) Fern.	Salicaceae	Autumn Willow	9	OBL	OBL	OBL
Salix sitchensis Sanson ex Bong.	Salicaceae	Sitka Willow	8	FACW	FACW	FACW
Salix tweedyi (Bebb ex Rose) Ball	Salicaceae	Tweedy's Willow	7	FACW		FACW
Salix vestita Pursh	Salicaceae	Rock Willow	7	FAC		FAC
Salix wolfii Bebb	Salicaceae	Idaho Willow	7	OBL	FACW	OBL
> * Salix fragilis L.	Salicaceae	Crack Willow	0	FAC	FAC	FAC
> * Salsola tragus L.	Amaranthaceae	Prickly Russian-Thistle	0	FACU	FACU	FACU
> Sambucus nigra L.	Caprifoliaceae	Black Elder	4	FACU	FAC	FAC
Sambucus racemosa L.	Caprifoliaceae	Red Elder	-	FACU	FACU	FACU
Sanicula marilandica L.	Apiaceae	Maryland Black-Snakeroot	5	FAC	FACU	FAC
* Saponaria officinalis L.	Caryophyllaceae	Bouncing-Bett	0	UPL	FACU	FACU
Sarcobatus vermiculatus (Hook.) Torr.	Sarcobataceae	Greasewood	4	FACU	FAC	FAC
Saussurea americana D.C. Eat.	Asteraceae	American Saw-Wort	-	FACW		FACW
Saxifraga adscendens L.	Saxifragaceae	Wedge-Leaf Saxifrage	6	FACW	FACW	FACW
> Saxifraga austromontana Wieg.	Saxifragaceae	Matted Saxifrage		FACU	FACU	FACU
> Saxifraga caespitosa L.	Saxifragaceae	Tufted Alpine Saxifrage	6	FAC	FACU	FAC
Saxifraga cernua L.	Saxifragaceae	Nodding Saxifrage	8	FACW	FACU	FACW
> Saxifraga chrysantha Gray	Saxifragaceae	Golden Saxifrage	-	FACU	FACU	FACU
Saxifraga hirculus L.	Saxifragaceae	Yellow Marsh Saxifrage	-	OBL	OBL	OBL
Saxifraga mertensiana Bong.	Saxifragaceae	Woodland Saxifrage	7	FACW	OBL	FACW
Saxifraga oppositifolia L.	Saxifragaceae	Purple Mountain Saxifrage	5	FACU	FAC	FACU
> Saxifraga rivularis L.	Saxifragaceae	Alpine-Brook Saxifrage	8	FACW	FACW	FACW
> Sceptridium multifidum (Gmel.) Nishida ex Tagawa	Ophioglossaceae	Leathery Grape Fern	8	FAC	FAC	FAC
> * Schedonorus arundinaceus (Schreb.) Dumort.	Poaceae	Tall False Rye Grass	0	FAC	FACU	FACU
> * Schedonorus pratensis (Huds.) Beauv.	Poaceae	Meadow False Rye Grass	0	FACU	FACU	FACU
Scheuchzeria palustris L.	Scheuchzeriaceae	Rannoch-Rush	10	OBL	OBL	OBL
Schizachne purpurascens (Torr.) Swallen	Poaceae	False Melic Grass	-	UPL	FACU	FACU
> Schizachyrium scoparium (Michx.) Nash	Poaceae	Little False Bluestem	-	FACU	FACU	FACU
> Schoenoplectus acutus (Muhl. ex Bigelow) A.& D. Love	Cyperaceae	Hard-Stem Club-Rush	5	OBL	OBL	OBL
> Schoenoplectus americanus (Pers.) Volk. ex Schinz & R. Keller	Cyperaceae	Chairmaker's Club-Rush	6	OBL	OBL	OBL
> Schoenoplectus fluviatilis (Torr.) M.T. Strong	Cyperaceae	River Club-Rush	4	OBL	OBL	OBL
> Schoenoplectus heterochaetus (Chase) Sojak	Cyperaceae	Pale Great Club-Rush	8	OBL	OBL	OBL
> Schoenoplectus maritimus (L.) Lye	Cyperaceae	Saltmarsh Club-Rush	6	OBL	OBL	OBL
> Schoenoplectus pungens (Vahl) Palla	Cyperaceae	Three-Square	6	OBL	OBL	OBL
> Schoenoplectus subterminalis (Torr.) Sojak	Cyperaceae	Swaying Club-Rush	9	OBL	OBL	OBL
> Schoenoplectus tabernaemontani (K.C. Gmel.) Palla	Cyperaceae	Soft-Stem Club-Rush	6	OBL	OBL	OBL
Scirpus atrocinctus Fern.	Cyperaceae	Black-Girdle Bulrush	4	OBL	OBL	OBL
Scirpus atrovirens Willd.	Cyperaceae	Dark-Green Bulrush	-	OBL	OBL	OBL
Scirpus cyperinus (L.) Kunth	Cyperaceae	Cottongrass Bulrush	1	OBL	OBL	OBL
Scirpus microcarpus J.& K. Presl	Cyperaceae	Red-Tinge Bulrush	5	OBL	OBL	OBL
> Scirpus nevadensis S. Wats.	Cyperaceae	Nevada Bulrush	9	OBL	OBL	OBL
> Scirpus pallidus (Britt.) Fern.	Cyperaceae	Pale Bulrush	4	OBL	OBL	OBL
Scirpus pendulus Muhl.	Cyperaceae	Rufous Bulrush	-	OBL	OBL	OBL
* Scleranthus annuus L.	Caryophyllaceae	Annual Knawel	1	UPL	FACU	FACU
Scolochloa festucacea (Willd.) Link	Poaceae	Common River Grass	-	OBL	OBL	OBL
Scrophularia lanceolata Pursh	Scrophulariaceae	Lance-Leaf Figwort	4	FAC	FAC	FAC
Scutellaria galericulata L.	Lamiaceae	Hooded Skullcap	6	OBL	OBL	OBL
Selaginella selaginoides (L.) Beauv. ex Mart. & Schrank	Sellaginellaceae	Northern Spike-Moss	8	FACW		FACW
> Senecio amplexans Gray	Asteraceae	Showy Alpine Ragwort	-	FACU	FACW	FACW

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Senecio crassulus Gray	Asteraceae	Thick-Leaf Ragwort	7	FACU	OBL	FACU
Senecio eremophilus Richards.	Asteraceae	Desert Ragwort	4	FACU	FAC	FACU
> Senecio hydrophiloides Rydb.	Asteraceae	Stout Meadow Ragwort	5	FACW	FACW	FACW
Senecio hydrophilus Nutt.	Asteraceae	Alkali-Marsh Ragwort	5	OBL	OBL	OBL
Senecio integerrimus Nutt.	Asteraceae	Lamb-Tongue Ragwort	7	FACU	FAC	FACU
Senecio lugens Richards.	Asteraceae	Small Black-Tip Ragwort	5	FAC	FACW	FAC
Senecio serra Hook.	Asteraceae	Tall Ragwort	5	FACU	FACW	FACU
Senecio sphaerocephalus Greene	Asteraceae	Mountain-Marsh Ragwort	6	FACW	FAC	FACW
Senecio triangularis Hook.	Asteraceae	Arrow-Leaf Ragwort	5	FACW	OBL	FACW
* Senecio vulgaris L.	Asteraceae	Old-Man-in-the-Spring	0	FACU	FACU	FACU
* Setaria italica (L.) Beauv.	Poaceae	Italian Bristle Grass	1	FAC	FACU	FACU
> * Setaria pumila (Poir.) Roemer & J.A. Schultes	Poaceae	Yellow Bristle Grass	1	FAC	FACU	FAC
* Setaria verticillata (L.) Beauv.	Poaceae	Rough Bristle Grass	1	FACU	FAC	FACU
Shepherdia argentea (Pursh) Nutt.	Elaeagnaceae	Silver Buffalo-Berry	-	FACU	UPL	FACU
Shepherdia canadensis (L.) Nutt.	Elaeagnaceae	Russet Buffalo-Berry	-	UPL	FACU	UPL
Sibbaldia procumbens L.	Rosaceae	Creeping-Glow-Wort	-	FACU	FACU	FACU
Sidalcea oregana (Nutt. ex Torr. & Gray) Gray	Malvaceae	Oregon Checkerbloom	3	FACW		FACW
Silene acaulis (L.) Jacq.	Caryophyllaceae	Cushion-Pink	-	UPL	FAC	UPL
> * Silene flos-cuculi (L.) Clairv.	Caryophyllaceae	Ragged-Robin	1	FACW		
> Silene hitchquierei Bocquet	Caryophyllaceae	Mountain Catchfly	8	UPL		OBL
Silene menziesii Hook.	Caryophyllaceae	White Catchfly	6	FAC	UPL	FAC
> Silene uralensis (Rupr.) Bocquet	Caryophyllaceae	Apetalous Catchfly	6	FAC	FACW	FACW
> Sinapis alba L.	Brassicaceae	White-Mustard	1	OBL	FAC	FAC
* Sisymbrium altissimum L.	Brassicaceae	Tall Hedge-Mustard	0	FACU	FACU	FACU
Sisyrinchium idahoense Bickn.	Iridaceae	Idaho Blue-Eyed-Grass	6	FACW	OBL	FACW
Sisyrinchium montanum Greene	Iridaceae	Strict Blue-Eyed-Grass	6	FAC	FAC	FACW
Sisyrinchium septentrionale Bickn.	Iridaceae	Northern Blue-Eyed-Grass	8	FACW	FAC	FACW
Sium suave Walt.	Apiaceae	Hemlock Water-Parsnip	7	OBL	OBL	OBL
* Solanum dulcamara L.	Solanaceae	Climbing Nightshade	0	FAC	FACU	FAC
> * Solanum ptychanthum Dunal	Solanaceae	Eastern Black Nightshade	1	FACU	FACU	FACU
> Solidago altissima L.	Asteraceae	Tall Goldenrod	3	FACU	FACU	FACU
Solidago gigantea Ait.	Asteraceae	Late Goldenrod	6	FACW	FAC	FACW
> Solidago lepida DC.	Asteraceae	Western Canada Goldenrod	3	FAC	FACU	FAC
Solidago multiradiata Ait.	Asteraceae	Rocky Mountain Goldenrod	-	FACU	FACU	FACU
> Solidago rigida L.	Asteraceae	Hard-Leaf Flat-Top-Goldenrod	-	FACU	FACU	FACU
> Solidago simplex Kunth	Asteraceae	Mt. Albert Goldenrod	-	FACU	FACU	FACU
* Sonchus arvensis L.	Asteraceae	Field Sow-Thistle	0	FACU	FAC	FACU
* Sonchus asper (L.) Hill	Asteraceae	Spiny-Leaf Sow-Thistle	0	FACU	FAC	FAC
Sorbus scopulina Greene	Rosaceae	Cascade Mountain-Ash	-	FACU	FACU	FACU
Sorbus sitchensis M. Roemer	Rosaceae	Sitka Mountain-Ash	5	FAC	FAC	FAC
Sorghastrum nutans (L.) Nash	Poaceae	Yellow Indian Grass	-	FACU	FACU	FACU
Sorghum bicolor (L.) Moench	Poaceae	Broom-Corn		FACU	FACU	FACU
* Sorghum halepense (L.) Pers.	Poaceae	Johnson Grass	1	FACU	FACU	FACU
> Sparganium angustifolium Michx.	Sparganiaceae	Narrow-Leaf Burr-Reed	7	OBL	OBL	OBL
> Sparganium emersum Rehmann	Sparganiaceae	European Burr-Reed	7	OBL	OBL	OBL
Sparganium eurycarpum Engelm. ex Gray	Sparganiaceae	Broad-Fruit Burr-Reed	7	OBL	OBL	OBL
> Sparganium natans L.	Sparganiaceae	Arctic Burr-Reed	6	OBL	OBL	OBL
Spartina gracilis Trin.	Poaceae	Alkali Cord Grass	6	FACW	FACW	FACW
Spartina pectinata Bosc ex Link	Poaceae	Freshwater Cord Grass	6	OBL	FACW	OBL
Spergularia diandra (Guss.) Held.	Caryophyllaceae	Alkali Sandspurry		FACW	FACW	FACW

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Spergularia marina</i> (L.) Griseb.	Caryophyllaceae	Saltmarsh Sandspurry	8	OBL	OBL	OBL
> * <i>Spergularia media</i> (L.) K. Presl ex Griseb.	Caryophyllaceae	Satin-Flower	0	FAC	FACU	FACW
* <i>Spergularia rubra</i> (L.) J.& K. Presl	Caryophyllaceae	Ruby Sandspurry	0	FAC	FACU	FAC
* <i>Sphaerophysa salsula</i> (Pallas) DC.	Fabaceae	Red Bladder-Vetch	1	UPL	FACU	FACU
> <i>Sphenopholis intermedia</i> (Rydb.) Rydb.	Poaceae	Slender Wedgescale		FAC	FAC	FAC
<i>Sphenopholis obtusata</i> (Michx.) Scribn.	Poaceae	Prairie Wedgescale	7	FAC	FAC	FAC
> <i>Spinulum annotinum</i> (L.) A. Haines	Lycopodiaceae	Interrupted Club-Moss		FAC	FAC	FAC
<i>Spiraea betulifolia</i> Pallas	Rosaceae	Shiny-Leaf Meadowsweet	-	FACU	FACU	FACU
<i>Spiraea douglasii</i> Hook.	Rosaceae	Douglas' Meadowsweet	5	FACW		FACW
<i>Spiranthes diluvialis</i> Sheviak	Orchidaceae	Diluvim Ladies'-Tresses	6	FACW	FACW	FACW
<i>Spiranthes romanzoffiana</i> Cham.	Orchidaceae	Hooded Ladies'-Tresses	6	FACW	OBL	FACW
<i>Spirodela polyrrhiza</i> (L.) Schleid.	Lemnaceae	Common Duckmeat	7	OBL	OBL	OBL
<i>Sporobolus airoides</i> (Torr.) Torr.	Poaceae	Alkali-Sacaton	4	FAC	FAC	FAC
<i>Sporobolus cryptandrus</i> (Torr.) Gray	Poaceae	Sand Dropseed	-	FACU	FACU	FACU
> <i>Stachys pilosa</i> Nutt.	Lamiaceae	Hairy Hedge-Nettle	6	FACW	FACW	FACW
<i>Stellaria borealis</i> Bigelow	Caryophyllaceae	Boreal Starwort	6	FACW	FACW	FACW
> <i>Stellaria calycantha</i> (Ledeb.) Bong.	Caryophyllaceae	Northern Bog Starwort	6	FACW	FACW	FACW
<i>Stellaria crassifolia</i> Ehrh.	Caryophyllaceae	Fleshy Starwort	5	FACW	OBL	FACW
<i>Stellaria crispa</i> Cham. & Schlecht.	Caryophyllaceae	Ruffled Starwort	4	FAC	FACW	FAC
* <i>Stellaria graminea</i> L.	Caryophyllaceae	Grass-Leaf Starwort	1	FACU	FACU	FAC
<i>Stellaria longifolia</i> Muhl. ex Willd.	Caryophyllaceae	Long-Leaf Starwort	6	FACW	FACW	FACW
<i>Stellaria longipes</i> Goldie	Caryophyllaceae	Long-Stalk Starwort	7	FACW	OBL	FACW
* <i>Stellaria media</i> (L.) Vill.	Caryophyllaceae	Common Chickweed	0	FACU	FACU	FACU
<i>Stellaria obtusa</i> Engelm.	Caryophyllaceae	Rocky Mountain Starwort	3	FACW	FACW	FACW
<i>Stellaria umbellata</i> Turcz. ex Kar. & Kir.	Caryophyllaceae	Umbrella Starwort	7	FACW	FACW	FACW
<i>Streptopus amplexifolius</i> (L.) DC.	Liliaceae	Clasping Twistedstalk	7	FAC	FACW	FAC
<i>Streptopus lanceolatus</i> (Ait.) Reveal	Liliaceae	Lance-Leaf Twistedstalk	-	FAC	FAC	FAC
> <i>Stuckenia filiformis</i> (Pers.) Boerner	Potamogetonaceae	Slender-Leaf False Pondweed	6	OBL	OBL	OBL
> <i>Stuckenia pectinata</i> (L.) Boerner	Potamogetonaceae	Sago False Pondweed	5	OBL	OBL	OBL
> <i>Stuckenia vaginata</i> (Turcz.) Holub	Potamogetonaceae	Sheathed False Pondweed	7	OBL	OBL	OBL
> <i>Suaeda calceoliformis</i> (Hook.) Moq.	Amaranthaceae	Paiuteweed	3	FACW	FACW	FACW
> <i>Suaeda nigra</i> (Raf.) J.F. Macbr.	Amaranthaceae	Shrubby Seepweed	6	OBL	OBL	OBL
<i>Suaeda occidentalis</i> (S. Wats.) S. Wats.	Amaranthaceae	Western Seepweed	4	FACW	FACW	FACW
<i>Suckleya suckleyana</i> (Torr.) Rydb.	Amaranthaceae	Poison Suckleya	3	FACW	FACW	FACW
<i>Suksdorfia violacea</i> Gray	Saxifragaceae	Violet Mock Brookfoam	8	FAC	FAC	FAC
<i>Sullivantia hapemanii</i> (Coul. & Fisher) Coul.	Saxifragaceae	Hapeman's Coolwort	10	OBL	FACW	FACW
<i>Swertia perennis</i> L.	Gentianaceae	Felwort	7	FACW	FAC	FACW
<i>Symphoricarpos albus</i> (L.) Blake	Caprifoliaceae	Common Snowberry	3	FACU	UPL	FACU
<i>Symphoricarpos occidentalis</i> Hook.	Caprifoliaceae	Western Snowberry	4	FAC	UPL	FAC
> <i>Symphotrichum ascendens</i> (Lindl.) Nesom	Asteraceae	Western American-Aster	2	FACU	FACU	FAC
> <i>Symphotrichum boreale</i> (Torr. & Gray) A.& D. Love	Asteraceae	Boreal American-Aster	7	OBL	OBL	OBL
> <i>Symphotrichum bracteolatum</i> (Nutt.) Nesom	Asteraceae	Bracted American-Aster		FAC	FAC	FAC
> <i>Symphotrichum ciliatum</i> (Ledeb.) Nesom	Asteraceae	Alkali American-Aster	6	FACW	FACW	FACW
> <i>Symphotrichum ericoides</i> (L.) Nesom	Asteraceae	White Heath American-Aster	6	FAC	FACU	FAC
> <i>Symphotrichum falcatum</i> (Lindl.) Nesom	Asteraceae	Rough White Prairie American-Aster	-	FACU	FACU	FACU
> <i>Symphotrichum foliaceum</i> (Lindl. ex DC.) Nesom	Asteraceae	Alpine Leafy-Head American-Aster	5	FACU	UPL	UPL
> <i>Symphotrichum frondosum</i> (Nutt.) Nesom	Asteraceae	Leafy American-Aster		FACW	FACW	FACW
> <i>Symphotrichum laeve</i> (L.) A.& D. Love	Asteraceae	Smooth Blue American-Aster	-	FACU	FACU	FACU
> <i>Symphotrichum lanceolatum</i> (Willd.) Nesom	Asteraceae	White Paniced American-Aster	4	OBL	FACW	OBL

> = *synonym listed in Appendix B** = *introduced species*

Appendix A: Wetland Plants Occurring in Montana

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
> <i>Symphyotrichum spathulatum</i> (Lindl.) Nesom	Asteraceae	Mountain American-Aster	5	FAC	FAC	FAC
> <i>Symphyotrichum subspicatum</i> (Nees) Nesom	Asteraceae	Leafy-Bract American-Aster	6	FACW	FAC	FACW
<i>Tamarix chinensis</i> Lour.	Tamaricaceae	Five-Stamen Tamarisk	0	FAC	FACW	FAC
* <i>Tanacetum vulgare</i> L.	Asteraceae	Common Tansy	0	FACU	FACU	FACU
<i>Taraxacum ceratophorum</i> (Ledeb.) DC.	Asteraceae	Horned Dandelion	-	FACU	UPL	UPL
* <i>Taraxacum officinale</i> G.H. Weber ex Wiggers	Asteraceae	Common Dandelion	0	FACU	FACU	FACU
> <i>Taraxia breviflora</i> (Torr. & Gray) Nutt. ex Small	Onagraceae	Nested Goldeneggs		FAC	FACU	FAC
> <i>Taraxia subacaulis</i> Rydb.	Onagraceae	Spreading Goldeneggs		FACW	FACW	FACW
> <i>Taraxia tanacetifolia</i> (Torr. & Gray) Piper	Onagraceae	Tansy-Leaf Goldeneggs		FACU		FACU
<i>Taxus brevifolia</i> Nutt.	Taxaceae	Pacific Yew	-	FACU	FACU	FACU
<i>Tellima grandiflora</i> (Pursh) Dougl. ex Lindl.	Saxifragaceae	Fragrant Fringecup	-	FACU		FACU
> <i>Tephrosia palustris</i> (L.) Reichenb.	Asteraceae	Clustered Marsh Squaw-Weed	-		FACW	
<i>Teucrium canadense</i> L.	Lamiaceae	American Germander	6	FAC	FACW	FACW
<i>Thalictrum alpinum</i> L.	Ranunculaceae	Alpine Meadow-Rue	9	FACW	FACW	FACW
<i>Thalictrum dasycarpum</i> Fisch. & Ave-Lall.	Ranunculaceae	Purple Meadow-Rue	5	FACW	FAC	FACW
<i>Thalictrum fendleri</i> Engelm. ex Gray	Ranunculaceae	Fendler's Meadow-Rue	-	FAC	FAC	FAC
<i>Thalictrum occidentale</i> Gray	Ranunculaceae	Western Meadow-Rue	5	FACU		FACU
<i>Thalictrum sparsiflorum</i> Turcz. ex Fisch. & C.A. Mey.	Ranunculaceae	Few-Flower Meadow-Rue	5	FAC		FAC
<i>Thalictrum venulosum</i> Trel.	Ranunculaceae	Veiny-Leaf Meadow-Rue	4	FAC	FAC	FACU
<i>Thelypodium integrifolium</i> (Nutt.) Endl.	Brassicaceae	Entire-Leaf Thelypody	6	FACW	FACW	FACW
<i>Thelypodium sagittatum</i> (Nutt. ex Torr. & Gray) Endl. ex Walp.	Brassicaceae	Arrowhead Thelypody	6	FACW	FACU	FACW
> <i>Thermopsis divaricarpa</i> A. Nels.	Fabaceae	Spread-Fruit Golden-Banner		FAC	FAC	FAC
<i>Thermopsis montana</i> Nutt.	Fabaceae	Montane Golden-Banner	6	FAC		FAC
<i>Thermopsis rhombifolia</i> (Nutt. ex Pursh) Nutt. ex Richards.	Fabaceae	Prairie Golden-Banner	-	FACU	UPL	FACU
* <i>Thlaspi arvense</i> L.	Brassicaceae	Field Pennycress	0	UPL	FACU	UPL
<i>Thuja plicata</i> Donn ex D. Don	Cupressaceae	Western Arborvitae	7	FAC	UPL	FAC
> <i>Tiarella trifoliata</i> L.	Saxifragaceae	Three-Leaf Foamflower	5	FAC		FAC
<i>Tofieldia pusilla</i> (Michx.) Pers.	Liliaceae	Scotch Featherling	9	FACW		
> <i>Torreya chloa pallida</i> (Torr.) Church	Poaceae	Pale False Manna Grass	7	OBL	OBL	OBL
> <i>Toxicodendron rydbergii</i> (Small ex Rydb.) Greene	Anacardiaceae	Western Poison Ivy	4	FACU	FACU	FACU
> <i>Toxicoscordion venenosum</i> (S. Wats.) Rydb.	Liliaceae	Meadow Poison Camas	5	FACU	FAC	FACU
<i>Tradescantia bracteata</i> Small	Commelinaceae	Long-Bract Spiderwort	-	FAC	FACU	
<i>Tradescantia occidentalis</i> (Britt.) Smyth	Commelinaceae	Prairie Spiderwort	4	FACW	UPL	FACU
> <i>Transbergingia bursifolia</i> (DC.) Al-Shehbaz & O'Kane	Brassicaceae	False Fissurewort	-	UPL	FACU	UPL
<i>Trautvetteria carolinensis</i> (Walt.) Vail	Ranunculaceae	Carolina Tassel-Rue	8	FAC	FACW	FACW
> <i>Triantha occidentalis</i> (S. Wats.) Gates	Liliaceae	Western False Asphodel	7	FACW	UPL	UPL
> <i>Trichophorum alpinum</i> (L.) Pers.	Cyperaceae	Alpine Leafless-Bulrush	9	OBL	OBL	
> <i>Trichophorum caespitosum</i> (L.) Hartman	Cyperaceae	Tufted Leafless-Bulrush	8	OBL	OBL	OBL
> <i>Trichophorum pumilum</i> (Vahl) Schinz & Thellung	Cyperaceae	Rolland's Leafless-Bulrush	10	FACW	OBL	FACW
<i>Trifolium beckwithii</i> Brewer ex S. Wats.	Fabaceae	Plumas Clover	4	FAC		FAC
<i>Trifolium cyathiferum</i> Lindl.	Fabaceae	Bowl Clover	3	FAC		FAC
<i>Trifolium dasyphyllum</i> Torr. & Gray	Fabaceae	Uinta Clover	-	UPL	FACU	UPL
* <i>Trifolium dubium</i> Sibthorp	Fabaceae	Suckling Clover	1	FACU	FACU	UPL
<i>Trifolium eriocephalum</i> Nutt.	Fabaceae	Woolly-Head Clover	4	FAC		FAC
* <i>Trifolium fragiferum</i> L.	Fabaceae	Strawberry-Head Clover	0	FACU	FAC	FACU
<i>Trifolium haydenii</i> Porter	Fabaceae	Hayden's Clover	-	UPL		FACU
* <i>Trifolium hybridum</i> L.	Fabaceae	Alsike Clover	0	FAC	FACU	FAC
<i>Trifolium longipes</i> Nutt.	Fabaceae	Long-Stalk Clover	6	FAC	FACW	FACW
<i>Trifolium microcephalum</i> Pursh	Fabaceae	Small-Head Clover	1	FAC		FAC

> = synonym listed in Appendix B

* = introduced species

Table 3. Wetland vascular plant species occurring in Montana (cont.).

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Trifolium nanum Torr.	Fabaceae	Tundra Clover	8	UPL	FACW	UPL
Trifolium parryi Gray	Fabaceae	Parry's Clover	7	FAC	FAC	FAC
* Trifolium pratense L.	Fabaceae	Red Clover	0	FACU	FACU	FACU
* Trifolium repens L.	Fabaceae	White Clover	0	FAC	FACU	FACU
Trifolium variegatum Nutt.	Fabaceae	White-Tip Clover	-	FAC		FAC
> Triglochin maritima L.	Juncaginaceae	Seaside Arrow-Grass	8	OBL	OBL	OBL
Triglochin palustris L.	Juncaginaceae	Marsh Arrow-Grass	7	OBL	OBL	OBL
> Triglochin scilloides (Poir.) Mering & Kadereit	Juncaginaceae	Flowering-Quillwort	6	OBL	OBL	OBL
Trillium ovatum Pursh	Liliaceae	Western Trillium	-	FACU		FACU
Triodanis perfoliata (L.) Nieuwl.	Campanulaceae	Clasping-Leaf Venus'-Looking-Glass	1	UPL	FAC	FACU
Trisetum cernuum Trin.	Poaceae	Tall False Oat	-	FACU		FACU
> Trisetum orthochaetum A.S. Hitchc.	Poaceae	Bitterroot False Oat	-	FACW		FACW
Trisetum spicatum (L.) Richter	Poaceae	Narrow False Oat	-	UPL	FACU	FACU
> Trollius laxus Salisb.	Ranunculaceae	American Globeflower	7	OBL	OBL	OBL
Tsuga heterophylla (Raf.) Sarg.	Pinaceae	Western Hemlock	-	FACU		FACU
Tsuga mertensiana (Bong.) Carr.	Pinaceae	Mountain Hemlock	-	FACU		FACU
Typha angustifolia L.	Typhaceae	Narrow-Leaf Cat-Tail	-	OBL	OBL	OBL
Typha latifolia L.	Typhaceae	Broad-Leaf Cat-Tail	3	OBL	OBL	OBL
Ulmus americana L.	Ulmaceae	American Elm	9	FAC	FAC	FAC
Urtica dioica L.	Urticaceae	Stinging Nettle	3	FAC	FAC	FAC
Utricularia intermedia Hayne	Lentibulariaceae	Flat-Leaf Bladderwort	10	OBL	OBL	OBL
> Utricularia macrorhiza Le Conte	Lentibulariaceae	Greater Bladderwort	5	OBL	OBL	OBL
Utricularia minor L.	Lentibulariaceae	Lesser Bladderwort	10	OBL	OBL	OBL
> * Vaccaria hispanica (P. Mill.) Rauschert	Caryophyllaceae	Cowcockle	1	FACU	UPL	FACU
> Vaccinium caespitosum Michx.	Ericaceae	Dwarf Blueberry	5	FAC	FAC	FAC
> Vaccinium membranaceum Dougl. ex Torr.	Ericaceae	Square-Twig Blueberry	-	FACU	FACU	FACU
Vaccinium myrtilloides Michx.	Ericaceae	Velvet-Leaf Blueberry	6	FACU	FACW	FACU
Vaccinium myrtillus L.	Ericaceae	Whortle-Berry	-	UPL	UPL	FACU
Vaccinium scoparium Leib. ex Coville	Ericaceae	Grouseberry	-	FACU	FACU	FACU
> Vaccinium uliginosum L.	Ericaceae	Alpine Blueberry	8	FACW	FAC	FACW
> Vahlodea atropurpurea (Wahlenb.) Fries ex Hartman	Poaceae	Arctic-Hair Grass	7	FACW		FACW
Valeriana acutiloba Rydb.	Valerianaceae	Cordilleran Valerian	7	FACU	FAC	FACU
Valeriana dioica L.	Valerianaceae	Marsh Valerian	5	FACW	FACW	FACW
Valeriana edulis Nutt. ex Torr. & Gray	Valerianaceae	Tobacco-Root	7	FAC	FAC	FAC
Valeriana occidentalis Heller	Valerianaceae	Small-Flower Valerian	7	FAC	FAC	FAC
Valeriana sitchensis Bong.	Valerianaceae	Sitka Valerian	7	FAC		FAC
Veratrum californicum Dur.	Liliaceae	California False Hellebore	4	FAC	OBL	FACW
Veratrum viride Ait.	Liliaceae	American False Hellebore	7	FAC		FACW
* Verbascum thapsus L.	Scrophulariaceae	Great Mullein	0	FACU	UPL	FACU
Verbena bracteata Cav. ex Lag. & Rodr.	Verbenaceae	Carpet Vervain	3	FAC	FACU	FAC
Verbena hastata L.	Verbenaceae	Simpler's-Joy	6	FAC	FACW	FAC
Verbesina encelioides (Cav.) Benth. & Hook. f. ex Gray	Asteraceae	Golden Crownbeard	-	FACU	FAC	FACU
Veronica americana Schwein. ex Benth.	Plantaginaceae	American-Brooklime	5	OBL	OBL	OBL
> * Veronica anagallis-aquatica L.	Plantaginaceae	Blue Water Speedwell	0	OBL	OBL	OBL
* Veronica arvensis L.	Plantaginaceae	Corn Speedwell	0	FACU	FACU	FACU
* Veronica chamaedrys L.	Plantaginaceae	Germander Speedwell	1	UPL	UPL	FACU
Veronica cusickii Gray	Plantaginaceae	Cusick's Speedwell	7	FAC	FAC	FAC
Veronica peregrina L.	Plantaginaceae	Neckweed	4	OBL	FACW	OBL
Veronica scutellata L.	Plantaginaceae	Grass-Leaf Speedwell	6	OBL	OBL	OBL
Veronica serpyllifolia L.	Plantaginaceae	Thyme-Leaf Speedwell	2	FAC	OBL	FAC

> = synonym listed in Appendix B

* = introduced species

Appendix A: Wetland Plants Occurring in Montana

Scientific Name	Family	Common Name	C-Value	WMVC	GP	AW
Veronica wormskjoldii Roemer & J.A. Schultes	Plantaginaceae	American Alpine Speedwell	7	FACW	FAC	FACW
Viburnum edule (Michx.) Raf.	Caprifoliaceae	Squashberry	8	FACW	FACW	FACW
Viburnum lentago L.	Caprifoliaceae	Nanny-Berry	6	FACU	FACU	FAC
Viburnum opulus L.	Caprifoliaceae	Highbush-Cranberry	1	FACW	FAC	FACW
Vicia americana Muhl. ex Willd.	Fabaceae	American Purple Vetch	3	FAC	FACU	FAC
* Vicia sativa L.	Fabaceae	Garden Vetch	1	UPL	FACU	FACU
Viola adunca Sm.	Violaceae	Hook-Spur Violet	5	FAC	FACU	FAC
Viola canadensis L.	Violaceae	Canadian White Violet	-	FACU	FACU	FACU
Viola glabella Nutt.	Violaceae	Pioneer Violet	4	FACW		FAC
Viola macloskeyi Lloyd	Violaceae	Smooth White Violet	8	OBL	FACW	OBL
> Viola nephrophylla Greene	Violaceae	Northern Bog Violet	8	FACW	FACW	FACW
Viola palustris L.	Violaceae	Alpine-Marsh Violet	7	OBL	FACW	FACW
Viola pedatifida G. Don	Violaceae	Crow-Foot Violet	-	UPL	FACU	FACU
Viola renifolia Gray	Violaceae	Kidney-Leaf White Violet	8	FACW	FACW	FACW
Viola septentrionalis Greene	Violaceae	Northern Woodland Violet	-	FACU		FACU
Vitis riparia Michx.	Vitaceae	River-Bank Grape	5	FACU	FAC	FAC
> * Vulpia bromoides (L.) S.F. Gray	Poaceae	Brome Six-Weeks Grass	1	FACU	FAC	FAC
> * Vulpia myuros (L.) K.C. Gmel.	Poaceae	Rat-Tail Six-Weeks Grass	1	FACU	FAC	FACU
> Vulpia octoflora (Walt.) Rydb.	Poaceae	Eight-Flower Six-Weeks Grass	-	UPL	FACU	UPL
Wolffia borealis (Engelm. ex Hegelm.) Landolt ex Landolt & Wildi	Lemnaceae	Northern Watermeal	-	OBL	OBL	OBL
Wolffia columbiana Karst.	Lemnaceae	Columbian Watermeal	7	OBL	OBL	OBL
Wyethia amplexicaulis (Nutt.) Nutt.	Asteraceae	Northern Mule's-Ears	3	FACU		FAC
Wyethia helianthoides Nutt.	Asteraceae	White-Ray Mule's-Ears	2	FACW		FACW
* Xanthium spinosum L.	Asteraceae	Spiny Cockleburr	1	FACU	FACU	FACU
> Xanthisma spinulosum (Pursh) D. Morgan & R.L. Hartman	Asteraceae	Lacy Sleepy Daisy	-	FACU	UPL	UPL
* Xanthium strumarium L.	Asteraceae	Rough Cockleburr	0	FAC	FAC	FAC
Xerophyllum tenax (Pursh) Nutt.	Liliaceae	Western Turkeybeard	5	FACU	FAC	FACU
Zannichellia palustris L.	Zanichelliaceae	Horned-Pondweed	8	OBL	OBL	OBL
> Zeltnera exaltata (Griseb.) G.Mans.	Gentianaceae	Desert Mountain-Pink	-	FACW	FACW	FACW
> Zizania palustris L.	Poaceae	Northern Wild Rice	0	OBL	OBL	OBL
Zizia aptera (Gray) Fern.	Apiaceae	Heart-Leaf Alexanders	7	FAC	FAC	FAC

Appendix B1

Partial list of synonyms for scientific names. Appendix B1 has USACE names in alphabetical order. Appendix B2 has commonly-used synonyms in alphabetical order.

USACE Name	Synonym	USACE Name	Synonym
<i>Abies bifolia</i>	<i>Abies lasiocarpa</i>	<i>Atriplex dioica</i>	<i>Atriplex subspicata</i>
<i>Achillea millefolium</i>	<i>Achillea lanulosa</i>	<i>Atriplex patula</i>	<i>Atriplex hastata</i>
<i>Achnatherum hymenoides</i>	<i>Oryzopsis hymenoides</i>	<i>Avena sativa</i>	<i>Avena fatua</i>
<i>Achnatherum nelsonii</i>	<i>Stipa columbiana</i>	<i>Azolla microphylla</i>	<i>Azolla filiculoides</i>
<i>Achnatherum nelsonii</i>	<i>Stipa nelsonii</i>	<i>Bassia scoparia</i>	<i>Kochia scoparia</i>
<i>Achnatherum nelsonii</i>	<i>Stipa williamsii</i>	<i>Betula glandulosa</i>	<i>Betula nana</i>
<i>Achnatherum richardsonii</i>	<i>Stipa richardsonii</i>	<i>Bidens beckii</i>	<i>Megalodonta beckii</i>
<i>Acmispon americanus</i>	<i>Lotus purshianus</i>	<i>Bidens tripartita</i>	<i>Bidens comosa</i>
<i>Acmispon americanus</i>	<i>Lotus unifoliolatus</i>	<i>Bistorta bistortoides</i>	<i>Polygonum bistortoides</i>
<i>Aconogonon phytolaccifolium</i>	<i>Polygonum phytolaccifolium</i>	<i>Bistorta vivipara</i>	<i>Polygonum viviparum</i>
<i>Acorus americanus</i>	<i>Acorus calamus</i>	<i>Boechea collinsii</i>	<i>Arabis holboellii</i>
<i>Adiantum aleuticum</i>	<i>Adiantum pedatum</i>	<i>Boechea divaricarpa</i>	<i>Arabis divaricarpa</i>
<i>Agoseris parviflora</i>	<i>Agoseris glauca</i>	<i>Boechea grahamii</i>	<i>Arabis boivinii</i>
<i>Agrostis capillaris</i>	<i>Agrostis tenuis</i>	<i>Boechea grahamii</i>	<i>Arabis confinis</i> var. <i>brachycarpa</i>
<i>Agrostis gigantea</i>	<i>Agrostis alba</i>	<i>Boechea grahamii</i>	<i>Arabis holboellii</i>
<i>Agrostis mertensii</i>	<i>Agrostis borealis</i>	<i>Boechea lemmonii</i>	<i>Arabis lemmonii</i>
<i>Agrostis pallens</i>	<i>Agrostis diegoensis</i>	<i>Boechea stricta</i>	<i>Arabis drummondii</i>
<i>Agrostis stolonifera</i>	<i>Agrostis alba</i>	<i>Botrychium crenulatum</i>	<i>Botrychium dusenii</i>
<i>Alisma triviale</i>	<i>Alisma plantago-aquatica</i>	<i>Botrychium hesperium</i>	<i>Botrychium matricariifolium</i>
<i>Almutaster pauciflorus</i>	<i>Aster pauciflorus</i>	<i>Botrychium hesperium</i>	<i>Botrychium michiganense</i>
<i>Alnus incana</i>	<i>Alnus tenuifolia</i>	<i>Botrychium pinnatum</i>	<i>Botrychium boreale</i>
<i>Alnus viridis</i>	<i>Alnus crispa</i>	<i>Botrypus virginianus</i>	<i>Botrychium virginianum</i>
<i>Alnus viridis</i>	<i>Alnus sinuata</i>	<i>Bouteloua dactyloides</i>	<i>Buchloe dactyloides</i>
<i>Alopecurus magellanicus</i>	<i>Alopecurus alpinus</i>	<i>Brassica rapa</i>	<i>Brassica campestris</i>
<i>Alopecurus magellanicus</i>	<i>Alopecurus borealis</i>	<i>Braya humilis</i>	<i>Neotorularia humilis</i>
<i>Amaranthus blitoides</i>	<i>Amaranthus graecizans</i>	<i>Calamagrostis stricta</i>	<i>Calamagrostis inexpansa</i>
<i>Amaranthus tuberculatus</i>	<i>Amaranthus tamariscina</i>	<i>Calamagrostis stricta</i>	<i>Calamagrostis neglecta</i>
<i>Ammannia robusta</i>	<i>Ammannia coccinea</i>	<i>Calystegia sepium</i>	<i>Convolvulus sepium</i>
<i>Androsace chamaejasme</i>	<i>Androsace lehmanniana</i>	<i>Canadanthus modestus</i>	<i>Aster modestus</i>
<i>Anthoxanthum hirtum</i>	<i>Hierochloe birta</i>	<i>Carex angustata</i>	<i>Carex eurycarpa</i>
<i>Anthoxanthum hirtum</i>	<i>Hierochloe odorata</i>	<i>Carex atosquama</i>	<i>Carex atrata</i>
<i>Anticlea elegans</i>	<i>Zigadenus elegans</i>	<i>Carex bolanderi</i>	<i>Carex deweyana</i>
<i>Anticlea occidentalis</i>	<i>Stenanthium occidentale</i>	<i>Carex echinata</i>	<i>Carex muricata</i>
<i>Apocynum cannabinum</i>	<i>Apocynum sibericum</i>	<i>Carex exsiccata</i>	<i>Carex vesicaria</i>
<i>Arabidopsis lyrata</i>	<i>Arabis kamchatica</i>	<i>Carex fissuricola</i>	<i>Carex luzulina</i>
<i>Arabidopsis lyrata</i>	<i>Arabis lyrata</i>	<i>Carex foenea</i>	<i>Carex aenea</i>
<i>Arabis eschscholtziana</i>	<i>Arabis hirsuta</i>	<i>Carex fuliginosa</i>	<i>Carex misandra</i>
<i>Arabis pycnocarpa</i>	<i>Arabis hirsuta</i>	<i>Carex garberi</i>	<i>Carex aurea</i>
<i>Arnica lanceolata</i>	<i>Arnica amplexicaulis</i>	<i>Carex gynocrates</i>	<i>Carex dioica</i>
<i>Arnica ovata</i>	<i>Arnica diversifolia</i>	<i>Carex heteroneura</i>	<i>Carex atrata</i>
<i>Athyrium americanum</i>	<i>Athyrium alpestre</i>	<i>Carex heteroneura</i>	<i>Carex chalciolepis</i>
<i>Athyrium americanum</i>	<i>Athyrium distentifolium</i>	<i>Carex heteroneura</i>	<i>Carex epipilosa</i>
<i>Athyrium cyclosorum</i>	<i>Athyrium filix-femina</i>	<i>Carex incurviformis</i>	<i>Carex maritima</i>
<i>Atriplex dioica</i>	<i>Atriplex patula</i>	<i>Carex infirmivervia</i>	<i>Carex deweyana</i>

Appendix B: Partial List of Synonyms

USACE Name	Synonym	USACE Name	Synonym
<i>Carex kelloggii</i>	<i>Carex lenticularis</i>	<i>Dasiphora fruticosa</i>	<i>Dasiphora floribunda</i>
<i>Carex lachenalii</i>	<i>Carex bipartita</i>	<i>Dasiphora fruticosa</i>	<i>Pentaphylloides floribunda</i>
<i>Carex lenticularis</i>	<i>Carex kelloggii</i>	<i>Dasiphora fruticosa</i>	<i>Pentaphylloides fruticosa</i>
<i>Carex lenticularis</i>	<i>Carex plectocarpa</i>	<i>Dasiphora fruticosa</i>	<i>Potentilla floribunda</i>
<i>Carex leptopoda</i>	<i>Carex deweyana</i>	<i>Dasiphora fruticosa</i>	<i>Potentilla fruticosa</i>
<i>Carex magellanica</i>	<i>Carex paupercula</i>	<i>Delphinium nuttallianum</i>	<i>Delphinium sutherlandii</i>
<i>Carex media</i>	<i>Carex norvegica</i>	<i>Dendrolycopodium dendroideum</i>	<i>Lycopodium dendroideum</i>
<i>Carex micropoda</i>	<i>Carex pyrenaica</i>	<i>Dendrolycopodium dendroideum</i>	<i>Lycopodium obscurum var. dendroideum</i>
<i>Carex microptera</i>	<i>Carex festivella</i>	<i>Descurainia incana</i>	<i>Descurainia richardsonii</i>
<i>Carex pachystachya</i>	<i>Carex preslii</i>	<i>Dichanthelium acuminatum</i>	<i>Dichanthelium lanuginosum</i>
<i>Carex paysonis</i>	<i>Carex tolmiei</i>	<i>Dichanthelium acuminatum</i>	<i>Panicum acuminatum</i>
<i>Carex pellita</i>	<i>Carex lanuginosa</i>	<i>Dichanthelium acuminatum</i>	<i>Panicum lanuginosum</i>
<i>Carex pelocarpa</i>	<i>Carex nova</i>	<i>Dichanthelium acuminatum</i>	<i>Panicum occidentale</i>
<i>Carex praticola</i>	<i>Carex platylepis</i>	<i>Dichanthelium oligosanthes</i>	<i>Dichanthelium wilcoxianum</i>
<i>Carex stevenii</i>	<i>Carex norvegica</i>	<i>Dichanthelium oligosanthes</i>	<i>Panicum oligosanthes</i>
<i>Carex utriculata</i>	<i>Carex rostrata [misapplied]</i>	<i>Dichanthelium oligosanthes</i>	<i>Panicum scribnerianum</i>
<i>Carex vesicaria</i>	<i>Carex exsuccata</i>	<i>Dichanthelium oligosanthes</i>	<i>Panicum wilcoxianum</i>
<i>Carex viridula</i>	<i>Carex oederi</i>	<i>Dieteria canescens</i>	<i>Machaeranthera canescens</i>
<i>Cerastium brachypodium</i>	<i>Cerastium nutans</i>	<i>Diphasiastrum alpinum</i>	<i>Lycopodium alpinum</i>
<i>Cerastium fontanum</i>	<i>Cerastium vulgatum</i>	<i>Diphasiastrum complanatum</i>	<i>Lycopodium complanatum</i>
<i>Cerastium glomeratum</i>	<i>Cerastium viscosum</i>	<i>Diplachne fusca</i>	<i>Leptochloa fusca</i>
<i>Chamaenerion angustifolium</i>	<i>Epilobium angustifolium</i>	<i>Dipsacus fullonum</i>	<i>Dipsacus sylvestris</i>
<i>Chamaenerion latifolium</i>	<i>Epilobium latifolium</i>	<i>Distichlis stricta</i>	<i>Distichlis spicata</i>
<i>Claytonia cordifolia</i>	<i>Montia cordifolia</i>	<i>Dodecatheon conjugens</i>	<i>Primula conjugens</i>
<i>Claytonia multiscapa</i>	<i>Claytonia lanceolata</i>	<i>Dodecatheon jeffreyi</i>	<i>Primula jeffreyi</i>
<i>Claytonia multiscapa</i>	<i>Claytonia rosea</i>	<i>Dodecatheon pulchellum</i>	<i>Dodecatheon cusickii</i>
<i>Claytonia parviflora</i>	<i>Montia parviflora</i>	<i>Dodecatheon pulchellum</i>	<i>Dodecatheon pauciflorum</i>
<i>Claytonia perfoliata</i>	<i>Montia perfoliata</i>	<i>Dodecatheon pulchellum</i>	<i>Primula pauciflora</i>
<i>Claytonia sibirica</i>	<i>Montia sibirica</i>	<i>Dryas ajanensis</i>	<i>Dryas hookeriana</i>
<i>Clinopodium douglasii</i>	<i>Satureja douglasii</i>	<i>Dryas ajanensis</i>	<i>Dryas octopetala</i>
<i>Coeloglossum viride</i>	<i>Dactylorhiza viridis</i>	<i>Drymocalis arguta</i>	<i>Potentilla arguta</i>
<i>Coeloglossum viride</i>	<i>Habenaria viridis</i>	<i>Drymocalis convallaria</i>	<i>Potentilla arguta</i>
<i>Comandra umbellata</i>	<i>Comandra pallida</i>	<i>Drymocalis glabrata</i>	<i>Potentilla glandulosa</i>
<i>Comarum palustre</i>	<i>Potentilla palustris</i>	<i>Drymocalis glandulosa</i>	<i>Potentilla glandulosa</i>
<i>Comastoma tenellum</i>	<i>Gentianella tenella</i>	<i>Drymocalis lactea</i>	<i>Potentilla glandulosa</i>
<i>Corispermum americanum</i>	<i>Corispermum hyssopifolium</i>	<i>Drymocalis pseudorupestris</i>	<i>Potentilla glandulosa</i>
<i>Cornus alba</i>	<i>Cornus sericea</i>	<i>Dryopteris carthusiana</i>	<i>Dryopteris austriaca</i>
<i>Cornus alba</i>	<i>Cornus stolonifera</i>	<i>Dryopteris carthusiana</i>	<i>Dryopteris spinulosa</i>
<i>Cornus canadensis</i>	<i>Chamaeperichlymenum canadense</i>	<i>Dryopteris expansa</i>	<i>Dryopteris dilatata</i>
<i>Crassula aquatica</i>	<i>Tillaea aquatica</i>	<i>Dysphania botrys</i>	<i>Chenopodium botrys</i>
<i>Crataegus douglasii</i>	<i>Crataegus okennonii</i>	<i>Elatine rubella</i>	<i>Elatine triandra</i>
<i>Crataegus gaylussacia</i>	<i>Crataegus suksdorfii</i>	<i>Eleocharis elliptica</i>	<i>Eleocharis compressa</i>
<i>Crypsis alopecuroides</i>	<i>Heleocharis alopecuroides</i>	<i>Eleocharis elliptica</i>	<i>Eleocharis tenuis</i>
<i>Cyclachaena xanthiifolia</i>	<i>Iva xanthifolia</i>	<i>Eleocharis engelmannii</i>	<i>Eleocharis obtusa</i>
<i>Cyperus bipartitus</i>	<i>Cyperus rivularis</i>	<i>Eleocharis engelmannii</i>	<i>Eleocharis ovata</i>
<i>Cyperus squarrosus</i>	<i>Cyperus aristatus</i>	<i>Eleocharis palustris</i>	<i>Eleocharis erythropoda</i>
<i>Cypripedium parviflorum</i>	<i>Cypripedium calceolus</i>	<i>Eleocharis palustris</i>	<i>Eleocharis macrostachya</i>
<i>Cyrtorhyncha cymbalaria</i>	<i>Ranunculus cymbalaria</i>	<i>Eleocharis palustris</i>	<i>Eleocharis xyridiformis</i>
<i>Damasonium californicum</i>	<i>Machaerocarpus californicus</i>		

Appendix B: Partial List of Synonyms

USACE Name	Synonym	USACE Name	Synonym
<i>Eleocharis quinqueflora</i>	<i>Eleocharis pauciflora</i>	<i>Eustoma exaltatum</i>	<i>Eustoma russellianum</i>
<i>Eleocharis suksdorfiana</i>	<i>Eleocharis pauciflora</i>	<i>Euthamia graminifolia</i>	<i>Solidago graminifolia</i>
<i>Elodea bifoliata</i>	<i>Elodea longivaginata</i>	<i>Euthamia occidentalis</i>	<i>Solidago occidentalis</i>
<i>Elyhordeum macounii</i>	<i>Elymus macounii</i>	<i>Eutrochium maculatum</i>	<i>Eupatoriadelphus maculatus</i>
<i>Elymus alaskanus</i>	<i>Agropyron caninum</i>	<i>Eutrochium maculatum</i>	<i>Eupatorium maculatum</i>
<i>Elymus alaskanus</i>	<i>Agropyron latiglume</i>	<i>Fallopia convolvulus</i>	<i>Polygonum convolvulus</i>
<i>Elymus alaskanus</i>	<i>Agropyron subsecundum</i>	<i>Frangula purshiana</i>	<i>Rhamnus purshiana</i>
<i>Elymus alaskanus</i>	<i>Agropyron trachycaulum</i>	<i>Galium mexicanum</i>	<i>Galium asperimum</i>
<i>Elymus alaskanus</i>	<i>Elymus trachycaulus</i>	<i>Gamochaeta purpurea</i>	<i>Gnaphalium purpureum</i>
<i>Elymus alaskanus</i>	<i>Elymus violaceus</i>	<i>Gentiana fremontii</i>	<i>Gentiana aquatica</i>
<i>Elymus curvatus</i>	<i>Elymus submuticus</i>	<i>Gentianella amarella</i>	<i>Gentiana amarella</i>
<i>Elymus elymoides</i>	<i>Sitanion hystrix</i>	<i>Gentianella propinqua</i>	<i>Gentiana propinqua</i>
<i>Elymus lanceolatus</i>	<i>Agropyron dasystachyum</i>	<i>Gentianopsis simplex</i>	<i>Gentiana simplex</i>
<i>Elymus repens</i>	<i>Agropyron repens</i>	<i>Gentianopsis simplex</i>	<i>Gentianella simplex</i>
<i>Elymus repens</i>	<i>Elytrigia repens</i>	<i>Gentianopsis thermalis</i>	<i>Gentiana detonsa</i>
<i>Elymus trachycaulus</i>	<i>Agropyron caninum</i>	<i>Gentianopsis thermalis</i>	<i>Gentianella detonsa</i>
<i>Elymus trachycaulus</i>	<i>Agropyron latiglume</i>	<i>Gentianopsis virgata</i>	<i>Gentiana detonsa</i>
<i>Elymus trachycaulus</i>	<i>Agropyron subsecundum</i>	<i>Gentianopsis virgata</i>	<i>Gentiana macounii</i>
<i>Elymus trachycaulus</i>	<i>Agropyron trachycaulum</i>	<i>Gentianopsis virgata</i>	<i>Gentianella crinita</i>
<i>Elymus trachycaulus</i>	<i>Elymus alaskanus</i>	<i>Gentianopsis virgata</i>	<i>Gentianopsis macounii</i>
<i>Elymus trachycaulus</i>	<i>Elymus violaceus</i>	<i>Gentianopsis virgata</i>	<i>Gentianopsis procera</i>
<i>Elymus wawawaiensis</i>	<i>Agropyron spicatum (Secar)</i>	<i>Geocaulon lividum</i>	<i>Comandra livida</i>
<i>Epilobium anagallidifolium</i>	<i>Epilobium alpinum</i>	<i>Githopsis specularioides</i>	<i>Githopsis calycina</i>
<i>Epilobium campestre</i>	<i>Boisduvalia glabella</i>	<i>Graphephorum wolfii</i>	<i>Trisetum wolfii</i>
<i>Epilobium campestre</i>	<i>Epilobium pygmaeum</i>	<i>Grindelia nana</i>	<i>Grindelia hirsutula</i>
<i>Epilobium ciliatum</i>	<i>Epilobium glandulosum</i>	<i>Gymnocarpium dryopteris</i>	<i>Gymnocarpium disjunctum</i>
<i>Epilobium ciliatum</i>	<i>Epilobium watsonii</i>	<i>Hemieva ranunculifolia</i>	<i>Suksdorfia ranunculifolia</i>
<i>Epilobium clavatum</i>	<i>Epilobium alpinum</i>	<i>Heracleum maximum</i>	<i>Heracleum lanatum</i>
<i>Epilobium densiflorum</i>	<i>Boisduvalia densiflora</i>	<i>Heracleum maximum</i>	<i>Heracleum sphondylium</i>
<i>Epilobium hallianum</i>	<i>Epilobium watsonii</i>	<i>Hieracium triste</i>	<i>Hieracium gracile</i>
<i>Epilobium hornemannii</i>	<i>Epilobium alpinum</i>	<i>Hordeum marinum</i>	<i>Hordeum geniculatum</i>
<i>Epilobium oregonense</i>	<i>Epilobium alpinum</i>	<i>Hordeum murinum</i>	<i>Hodeum leporinum</i>
<i>Epilobium saximontanum</i>	<i>Epilobium glandulosum</i>	<i>Hormungia procumbens</i>	<i>Hutchinsia procumbens</i>
<i>Eremogone capillaris</i>	<i>Arenaria capillaris</i>	<i>Huperzia haleakalae</i>	<i>Lycopodium haleakalae</i>
<i>Erigeron acris</i>	<i>Erigeron kamtschaticus</i>	<i>Hymenoxys hoopesii</i>	<i>Dugaldia hoopesii</i>
<i>Erigeron acris</i>	<i>Trimorpha acris</i>	<i>Hymenoxys hoopesii</i>	<i>Helenium hoopesii</i>
<i>Erigeron canadensis</i>	<i>Conyza canadensis</i>	<i>Hypericum scouleri</i>	<i>Hypericum formosum</i>
<i>Erigeron glabellus</i>	<i>Erigeron asper</i>	<i>Isoetes echinospora</i>	<i>Isoetes tenella</i>
<i>Erigeron glacialis</i>	<i>Erigeron peregrinus</i>	<i>Isoetes occidentalis</i>	<i>Isoetes lacustris</i>
<i>Erigeron lonchophyllus</i>	<i>Trimorpha lonchophylla</i>	<i>Jacobaea vulgaris</i>	<i>Senecio jacoaea</i>
<i>Erigeron nivalis</i>	<i>Erigeron kamtschaticus</i>	<i>Juncus albescens</i>	<i>Juncus triglumis</i>
<i>Eriophorum angustifolium</i>	<i>Eriophorum polystachion</i>	<i>Juncus alpinoarticulatus</i>	<i>Juncus alpinus</i>
<i>Euphorbia maculata</i>	<i>Chamaesyce maculata</i>	<i>Juncus balticus</i>	<i>Juncus arcticus</i>
<i>Euphorbia maculata</i>	<i>Chamaesyce supina</i>	<i>Juncus brevicaudatus</i>	<i>Juncus tweedyi</i>
<i>Euphorbia maculata</i>	<i>Euphorbia supina</i>	<i>Juncus ensifolius</i>	<i>Juncus saximontanus</i>
<i>Euphorbia serpens</i>	<i>Chamaesyce serpens</i>	<i>Juncus ensifolius</i>	<i>Juncus tracyi</i>
<i>Eurybia merita</i>	<i>Aster meritus</i>	<i>Juncus pylaei</i>	<i>Juncus effusus</i>
<i>Eurybia sibirica</i>	<i>Aster sibiricus</i>	<i>Kalmia microphylla</i>	<i>Kalmia occidentalis</i>
<i>Eustoma exaltatum</i>	<i>Eustoma grandiflorum</i>	<i>Kalmia microphylla</i>	<i>Kalmia polifolia</i>

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USACE Name	Synonym	USACE Name	Synonym
<i>Kobresia myosuroides</i>	<i>Kobresia bellardii</i>	<i>Moneses uniflora</i>	<i>Pyrola uniflora</i>
<i>Kobresia sibirica</i>	<i>Kobresia macrocarpa</i>	<i>Montia parvifolia</i>	<i>Claytonia parvifolia</i>
<i>Lactuca tatarica</i>	<i>Lactuca oblongifolia</i>	<i>Myosotis sylvatica</i>	<i>Myosotis alpestris</i>
<i>Lactuca tatarica</i>	<i>Lactuca pulchella</i>	<i>Myosurus apetalus</i>	<i>Myosurus aristatus</i>
<i>Lactuca tatarica</i>	<i>Mulgedium pulchellum</i>	<i>Nabalus racemosus</i>	<i>Prenanthes racemosa</i>
<i>Lathyrus lanszwertii</i>	<i>Lathyrus bijugatus</i>	<i>Nasturtium microphyllum</i>	<i>Rorippa microphylla</i>
<i>Lepidium appelianum</i>	<i>Cardaria pubescens</i>	<i>Nasturtium officinale</i>	<i>Rorippa nasturtium-aquaticum</i>
<i>Leptosiphon nuttallii</i>	<i>Linanthastrum nuttallii</i>	<i>Neobolmgrenia andina</i>	<i>Camissonia andina</i>
<i>Leptosiphon nuttallii</i>	<i>Linanthus nuttallii</i>	<i>Neokochia americana</i>	<i>Kochia americana</i>
<i>Leucanthemum vulgare</i>	<i>Chrysanthemum leucanthemum</i>	<i>Neottia banksiana</i>	<i>Listera banksiana</i>
<i>Leymus cinereus</i>	<i>Elymus cinereus</i>	<i>Neottia banksiana</i>	<i>Listera caurina</i>
<i>Leymus condensatus</i>	<i>Elymus condensatus</i>	<i>Neottia borealis</i>	<i>Listera borealis</i>
<i>Leymus triticooides</i>	<i>Elymus triticooides</i>	<i>Neottia convallarioides</i>	<i>Listera convallarioides</i>
<i>Lipocarpha drummondii</i>	<i>Hemicarpha drummondii</i>	<i>Neottia cordata</i>	<i>Listera cordata</i>
<i>Lonicera cauriana</i>	<i>Lonicera caerulea</i>	<i>Nuphar polysepala</i>	<i>Nuphar lutea</i>
<i>Lorandersonia linifolia</i>	<i>Chrysothamnus linifolius</i>	<i>Nuphar variegata</i>	<i>Nuphar lutea</i>
<i>Lorandersonia linifolia</i>	<i>Chrysothamnus viscidiflorus</i>	<i>Nymphaea leibergii</i>	<i>Nymphaea tetragona</i>
<i>Luzula comosa</i>	<i>Luzula campestris</i>	<i>Oenothera biennis</i>	<i>Oenothera elata</i>
<i>Luzula multiflora</i>	<i>Luzula campestris</i>	<i>Oenothera curtiflora</i>	<i>Gaura parviflora</i>
<i>Lycopodiella inundata</i>	<i>Lycopodium inundatum</i>	<i>Oenothera villosa</i>	<i>Oenothera strigosa</i>
<i>Lycopodium lagopus</i>	<i>Lycopodium clavatum</i>	<i>Ophioglossum pusillum</i>	<i>Ophioglossum vulgatum</i>
<i>Lysimachia arvensis</i>	<i>Anagalis arvensis</i>	<i>Oreostemma alpigenum</i>	<i>Aster alpigenus</i>
<i>Lysimachia maritima</i>	<i>Glaux maritima</i>	<i>Orthilia secunda</i>	<i>Pyrola secunda</i>
<i>Lysimachia minima</i>	<i>Anagalis minima</i>	<i>Orthilia secunda</i>	<i>Ramischia secunda</i>
<i>Lysimachia minima</i>	<i>Centunculus minimus</i>	<i>Osmorhiza berteroi</i>	<i>Osmorhiza chilensis</i>
<i>Mahonia aquifolium</i>	<i>Berberis aquifolium</i>	<i>Ozomelis trifida</i>	<i>Mitella trifida</i>
<i>Mahonia nervosa</i>	<i>Berberis nervosa</i>	<i>Packera debilis</i>	<i>Senecio debilis</i>
<i>Maianthemum racemosum</i>	<i>Smilacina racemosa</i>	<i>Packera dimorphophylla</i>	<i>Senecio dimorphophyllus</i>
<i>Maianthemum stellatum</i>	<i>Smilacina stellata</i>	<i>Packera heterophylla</i>	<i>Packera cymbalaria</i>
<i>Matricaria discoidea</i>	<i>Matricaria matricarioides</i>	<i>Packera heterophylla</i>	<i>Senecio cymbalaria</i>
<i>Mentha arvensis</i>	<i>Mentha canadensis</i>	<i>Packera indecora</i>	<i>Senecio indecorus</i>
<i>Micranthes ferruginea</i>	<i>Saxifraga ferruginea</i>	<i>Packera pauciflora</i>	<i>Senecio pauciflorus</i>
<i>Micranthes lyallii</i>	<i>Saxifraga lyallii</i>	<i>Packera paupercula</i>	<i>Senecio pauperculus</i>
<i>Micranthes nidifica</i>	<i>Saxifraga integrifolia</i>	<i>Packera plattensis</i>	<i>Senecio plattensis</i>
<i>Micranthes nidifica</i>	<i>Saxifraga nidifica</i>	<i>Packera pseudaurea</i>	<i>Senecio pseudaureus</i>
<i>Micranthes occidentalis</i>	<i>Saxifraga occidentalis</i>	<i>Packera streptanthifolia</i>	<i>Senecio streptanthifolius</i>
<i>Micranthes odontoloma</i>	<i>Saxifraga arguta</i>	<i>Packera subnuda</i>	<i>Senecio cymbalarioides</i>
<i>Micranthes odontoloma</i>	<i>Saxifraga odontoloma</i>	<i>Packera subnuda</i>	<i>Senecio subnudus</i>
<i>Micranthes oregana</i>	<i>Saxifraga oregana</i>	<i>Pascopyrum smithii</i>	<i>Agropyron smithii</i>
<i>Micranthes rhomboidea</i>	<i>Saxifraga rhomboidea</i>	<i>Pascopyrum smithii</i>	<i>Elymus smithii</i>
<i>Micranthes tolmiei</i>	<i>Saxifraga tolmiei</i>	<i>Paxistima myrsinites</i>	<i>Pachystima myrsinites</i>
<i>Microsteris gracilis</i>	<i>Phlox gracilis</i>	<i>Pectiantia breweri</i>	<i>Mitella breweri</i>
<i>Mimulus washingtonensis</i>	<i>Mimulus ampliatus</i>	<i>Pectiantia pentandra</i>	<i>Mitella pentandra</i>
<i>Mimulus washingtonensis</i>	<i>Mimulus patulus</i>	<i>Peritoma lutea</i>	<i>Cleome lutea</i>
<i>Minuartia obtusiloba</i>	<i>Arenaria obtusiloba</i>	<i>Peritoma serrulata</i>	<i>Cleome serrulata</i>
<i>Minuartia rubella</i>	<i>Arenaria rubella</i>	<i>Persicaria amphibia</i>	<i>Polygonum amphibium</i>
<i>Mitellastrum caulescens</i>	<i>Mitella caulescens</i>	<i>Persicaria amphibia</i>	<i>Polygonum coccineum</i>
<i>Moebria lateriflora</i>	<i>Arenaria lateriflora</i>	<i>Persicaria hydropiper</i>	<i>Polygonum hydropiper</i>
<i>Moebria macrophylla</i>	<i>Arenaria macrophylla</i>	<i>Persicaria lapathifolia</i>	<i>Polygonum lapathifolium</i>

Appendix B: Partial List of Synonyms

USACE Name	Synonym	USACE Name	Synonym
<i>Persicaria maculosa</i>	<i>Polygonum persicaria</i>	<i>Potentilla pulcherrima</i>	<i>Potentilla gracilis</i>
<i>Persicaria pennsylvanica</i>	<i>Polygonum pennsylvanicum</i>	<i>Potentilla rubricaulis</i>	<i>Potentilla concinna</i>
<i>Persicaria punctata</i>	<i>Polygonum punctatum</i>	<i>Potentilla supina</i>	<i>Potentilla paradoxa</i>
<i>Petasites frigidus</i>	<i>Petasites sagittatus</i>	<i>Poterium sanguisorba</i>	<i>Sanguisorba minor</i>
<i>Phegopteris connectilis</i>	<i>Thelypteris phegopteris</i>	<i>Prosartes trachycarpa</i>	<i>Disporum trachycarpum</i>
<i>Phragmites australis</i>	<i>Phragmites communis</i>	<i>Psathyrostachys juncea</i>	<i>Elymus junceus</i>
<i>Pinguicula macroceras</i>	<i>Pinguicula vulgaris</i>	<i>Pseudognaphalium canescens</i>	<i>Gnaphalium microcephalum</i>
<i>Piperia dilatata</i>	<i>Habenaria dilatata</i>	<i>Pseudognaphalium canescens</i>	<i>Gnaphalium thermale</i>
<i>Piperia dilatata</i>	<i>Platanthera dilatata</i>	<i>Pseudognaphalium canescens</i>	<i>Pseudognaphalium thermale</i>
<i>Piperia unalascensis</i>	<i>Habenaria unalascensis</i>	<i>Pseudognaphalium stramineum</i>	<i>Gnaphalium chilense</i>
<i>Plagiobothrys hispidulus</i>	<i>Plagiobothrys scouleri</i>	<i>Pseudognaphalium stramineum</i>	<i>Gnaphalium stramineum</i>
<i>Platanthera aquilonis</i>	<i>Habenaria hyperborea</i>	<i>Pseudoroegneria spicata</i>	<i>Elymus spicata</i>
<i>Platanthera aquilonis</i>	<i>Platanthera hyperborea</i>	<i>Puccinellia nuttalliana</i>	<i>Puccinellia cusickii</i>
<i>Platanthera huronensis</i>	<i>Habenaria hyperborea</i>	<i>Pyrrcoma lanceolata</i>	<i>Haplopappus lanceolatus</i>
<i>Platanthera huronensis</i>	<i>Platanthera hyperborea</i>	<i>Pyrrcoma uniflora</i>	<i>Haplopappus uniflorus</i>
<i>Platanthera obtusata</i>	<i>Habenaria obtusata</i>	<i>Ranunculus adoneus</i>	<i>Ranunculus eschscholtzii</i>
<i>Platanthera orbiculata</i>	<i>Habenaria orbiculata</i>	<i>Ranunculus aquatilis</i>	<i>Ranunculus circinatus</i>
<i>Platanthera rotundifolia</i>	<i>Amerorchis rotundifolia</i>	<i>Ranunculus arcticus</i>	<i>Ranunculus pedatifidus</i>
<i>Platanthera rotundifolia</i>	<i>Orchis rotundifolia</i>	<i>Ranunculus flammula</i>	<i>Ranunculus reptans</i>
<i>Platanthera stricta</i>	<i>Habenaria saccata</i>	<i>Ranunculus grayi</i>	<i>Ranunculus gelidus</i>
<i>Platanthera stricta</i>	<i>Habenaria stricta</i>	<i>Ranunculus grayi</i>	<i>Ranunculus karelinii</i>
<i>Platanthera stricta</i>	<i>Limnorchis saccata</i>	<i>Ranunculus grayi</i>	<i>Ranunculus verecundus</i>
<i>Platanthera stricta</i>	<i>Platanthera saccata</i>	<i>Ranunculus hyperboreus</i>	<i>Ranunculus natans</i>
<i>Poa abbreviata</i>	<i>Poa pattersonii</i>	<i>Ranunculus longirostris</i>	<i>Ranunculus circinatus</i>
<i>Poa arctica</i>	<i>Poa grayana</i>	<i>Ranunculus subrigidus</i>	<i>Ranunculus circinatus</i>
<i>Poa arida</i>	<i>Poa glaucifolia</i>	<i>Ranunculus trichophyllus</i>	<i>Ranunculus circinatus</i>
<i>Poa interior</i>	<i>Poa nemoralis</i>	<i>Reynoutria japonica</i>	<i>Fallopia japonica</i>
<i>Poa leptocoma</i>	<i>Poa paucispicula</i>	<i>Reynoutria japonica</i>	<i>Polygonum cuspidatum</i>
<i>Poa secunda</i>	<i>Poa ampla</i>	<i>Rhinanthus minor</i>	<i>Rhinanthus crista-galli</i>
<i>Poa secunda</i>	<i>Poa canbyi</i>	<i>Rhodiola integrifolia</i>	<i>Sedum integrifolium</i>
<i>Poa secunda</i>	<i>Poa incurva</i>	<i>Rhodiola integrifolia</i>	<i>Sedum roseum</i>
<i>Poa secunda</i>	<i>Poa juncifolia</i>	<i>Rhodiola rhodantha</i>	<i>Sedum rhodanthum</i>
<i>Poa secunda</i>	<i>Poa nevadensis</i>	<i>Rhododendron columbianum</i>	<i>Ledum glandulosum</i>
<i>Poa secunda</i>	<i>Poa sandbergii</i>	<i>Rhododendron columbianum</i>	<i>Ledum groenlandicum</i>
<i>Poa secunda</i>	<i>Poa scabrella</i>	<i>Rhus aromatica</i>	<i>Rhus trilobata</i>
<i>Poa stenantha</i>	<i>Poa macroclada</i>	<i>Rorippa palustris</i>	<i>Rorippa islandica</i>
<i>Podagrostis humilis</i>	<i>Agrostis humilis</i>	<i>Rosa acicularis</i>	<i>Rosa sayi</i>
<i>Polanisia dodecandra</i>	<i>Polanisia trachysperma</i>	<i>Rubus arcticus</i>	<i>Rubus acaulis</i>
<i>Polygonum austinae</i>	<i>Polygonum douglasii</i>	<i>Rubus armeniacus</i>	<i>Rubus discolor</i>
<i>Polygonum aviculare</i>	<i>Polygonum arenastrum</i>	<i>Rumex californicus</i>	<i>Rumex salicifolius</i>
<i>Polygonum engelmannii</i>	<i>Polygonum douglasii</i>	<i>Rumex californicus</i>	<i>Rumex utahensis</i>
<i>Polygonum kelloggii</i>	<i>Polygonum polygaloides</i>	<i>Rumex fueginus</i>	<i>Rumex maritimus</i>
<i>Polygonum majus</i>	<i>Polygonum douglasii</i>	<i>Rumex lapponicus</i>	<i>Rumex acetosa</i>
<i>Polygonum ramosissimum</i>	<i>Polygonum leptocarpum</i>	<i>Rumex lapponicus</i>	<i>Rumex alpestris</i>
<i>Polygonum sawatchense</i>	<i>Polygonum douglasii</i>	<i>Rumex occidentalis</i>	<i>Rumex aquaticus</i>
<i>Populus balsamifera</i>	<i>Populus trichocarpa</i>	<i>Rumex triangulivalvis</i>	<i>Rumex salicifolius</i>
<i>Potamogeton berchtoldii</i>	<i>Potamogeton pusillus</i>	<i>Ruppia cirrhosa</i>	<i>Ruppia maritima</i>
<i>Potentilla anserina</i>	<i>Argentina anserina</i>	<i>Salix famelica</i>	<i>Salix eriocephala</i>
<i>Potentilla glaucophylla</i>	<i>Potentilla diversifolia</i>	<i>Salix famelica</i>	<i>Salix lutea</i>

Appendix B: Partial List of Synonyms

USACE Name	Synonym	USACE Name	Synonym
<i>Salix interior</i>	<i>Salix exigua</i>	<i>Solanum ptychanthum</i>	<i>Solanum interius</i>
<i>Salix lasiandra</i>	<i>Salix lucida</i>	<i>Solanum ptychanthum</i>	<i>Solanum nigrum</i>
<i>Salix lutea</i>	<i>Salix eriocephala</i>	<i>Solidago lepida</i>	<i>Solidago altissima</i>
<i>Salix lutea</i>	<i>Salix famelica</i>	<i>Solidago lepida</i>	<i>Solidago canadensis</i>
<i>Salix melanopsis</i>	<i>Salix exigua</i>	<i>Solidago rigida</i>	<i>Oligoneuron rigidum</i>
<i>Salix nivalis</i>	<i>Salix reticulata</i>	<i>Solidago simplex</i>	<i>Solidago spathulata</i>
<i>Salix planifolia</i>	<i>Salix phylicifolia</i>	<i>Sparganium natans</i>	<i>Sparganium minimum</i>
<i>Salix prolixa</i>	<i>Salix eriocephala</i>	<i>Spergularia media</i>	<i>Spergularia maritima</i>
<i>Salix pseudomonticola</i>	<i>Salix monticola</i>	<i>Spergularia salina</i>	<i>Spergularia marina</i>
<i>Salix rotundifolia</i>	<i>Salix dodgeana</i>	<i>Sphenopholis intermedia</i>	<i>Sphenopholis obtusata</i>
<i>Salsola tragus</i>	<i>Salsola australis</i>	<i>Spinulum annotinum</i>	<i>Lycopodium annotinum</i>
<i>Salsola tragus</i>	<i>Salsola iberica</i>	<i>Stachys pilosa</i>	<i>Stachys palustris</i>
<i>Salsola tragus</i>	<i>Salsola kali</i>	<i>Stellaria calycantha</i>	<i>Stellaria simcoei</i>
<i>Salsola tragus</i>	<i>Salsola pestifer</i>	<i>Stuckenia filiformis</i>	<i>Potamogeton filiformis</i>
<i>Sambucus nigra</i>	<i>Sambucus caerulea</i>	<i>Stuckenia pectinata</i>	<i>Potamogeton pectinatus</i>
<i>Sambucus nigra</i>	<i>Sambucus cerulea</i>	<i>Stuckenia vaginata</i>	<i>Potamogeton vaginatus</i>
<i>Saxifraga austromontana</i>	<i>Saxifraga bronchialis</i>	<i>Suaeda calceoliformis</i>	<i>Suaeda americana</i>
<i>Saxifraga chrysantha</i>	<i>Saxifraga serpyllifolia</i>	<i>Suaeda calceoliformis</i>	<i>Suaeda depressa</i>
<i>Saxifraga rivularis</i>	<i>Saxifraga debilis</i>	<i>Suaeda nigra</i>	<i>Suaeda intermedia</i>
<i>Sceptridium multifidum</i>	<i>Botrychium multifidum</i>	<i>Suaeda nigra</i>	<i>Suaeda moquinii</i>
<i>Schedonorus arundinaceus</i>	<i>Festuca arundinacea</i>	<i>Symphyotrichum ascendens</i>	<i>Aster ascendens</i>
<i>Schedonorus arundinaceus</i>	<i>Lolium arundinaceum</i>	<i>Symphyotrichum ascendens</i>	<i>Aster chilensis</i>
<i>Schedonorus arundinaceus</i>	<i>Schedonorus phoenix</i>	<i>Symphyotrichum boreale</i>	<i>Aster borealis</i>
<i>Schedonorus pratensis</i>	<i>Festuca pratensis</i>	<i>Symphyotrichum boreale</i>	<i>Aster junciformis</i>
<i>Schedonorus pratensis</i>	<i>Lolium pratense</i>	<i>Symphyotrichum bracteolatum</i>	<i>Aster eatonii</i>
<i>Schizachyrium scoparium</i>	<i>Andropogon scoparius</i>	<i>Symphyotrichum bracteolatum</i>	<i>Symphyotrichum eatonii</i>
<i>Schoenoplectus acutus</i>	<i>Scirpus acutus</i>	<i>Symphyotrichum ciliatum</i>	<i>Aster brachyactis</i>
<i>Schoenoplectus americanus</i>	<i>Scirpus americanus</i>	<i>Symphyotrichum ciliatum</i>	<i>Brachyactis ciliata</i>
<i>Schoenoplectus fluviatilis</i>	<i>Bolboschoenus fluviatilis</i>	<i>Symphyotrichum ericoides</i>	<i>Aster ericoides</i>
<i>Schoenoplectus fluviatilis</i>	<i>Scirpus fluviatilis</i>	<i>Symphyotrichum ericoides</i>	<i>Aster pansus</i>
<i>Schoenoplectus heterochaetus</i>	<i>Scirpus heterochaetus</i>	<i>Symphyotrichum falcatum</i>	<i>Aster falcatus</i>
<i>Schoenoplectus maritimus</i>	<i>Bolboschoenus maritimus</i>	<i>Symphyotrichum foliaceum</i>	<i>Aster foliaceus</i>
<i>Schoenoplectus maritimus</i>	<i>Scirpus maritimus</i>	<i>Symphyotrichum frondosum</i>	<i>Aster frondosus</i>
<i>Schoenoplectus pungens</i>	<i>Scirpus pungens</i>	<i>Symphyotrichum laeve</i>	<i>Aster laevis</i>
<i>Schoenoplectus subterminalis</i>	<i>Scirpus subterminalis</i>	<i>Symphyotrichum lanceolatum</i>	<i>Aster hesperius</i>
<i>Schoenoplectus tabernaemontani</i>	<i>Scirpus validus</i>	<i>Symphyotrichum lanceolatum</i>	<i>Aster lanceolatus</i>
<i>Scirpus nevadensis</i>	<i>Amphiscirpus nevadensis</i>	<i>Symphyotrichum spathulatum</i>	<i>Aster occidentalis</i>
<i>Scirpus pallidus</i>	<i>Scirpus atrovirens</i>	<i>Symphyotrichum spathulatum</i>	<i>Aster spathulatus</i>
<i>Senecio amplexans</i>	<i>Ligularia amplexans</i>	<i>Symphyotrichum subspicatum</i>	<i>Aster subspicatus</i>
<i>Senecio hydrophiloides</i>	<i>Senecio foetidus</i>	<i>Taraxia breviflora</i>	<i>Camissonia breviflora</i>
<i>Setaria pumila</i>	<i>Pennisetum glaucum</i>	<i>Taraxia subacaulis</i>	<i>Camissonia subacaulis</i>
<i>Setaria pumila</i>	<i>Setaria glauca</i>	<i>Taraxia tanacetifolia</i>	<i>Camissonia tanacetifolia</i>
<i>Setaria pumila</i>	<i>Setaria lutescens</i>	<i>Tephrosia palustris</i>	<i>Senecio congestus</i>
<i>Silene flos-cuculi</i>	<i>Lychnis flos-cuculi</i>	<i>Thermopsis divaricarpa</i>	<i>Thermopsis montana</i>
<i>Silene hitchguirei</i>	<i>Lychnis apetala</i>	<i>Torreyochloa pallida</i>	<i>Glyceria pauciflora</i>
<i>Silene hitchguirei</i>	<i>Silene uralensis</i>	<i>Torreyochloa pallida</i>	<i>Puccinellia pallida</i>
<i>Silene uralensis</i>	<i>Lychnis apetala</i>	<i>Torreyochloa pallida</i>	<i>Puccinellia pauciflora</i>
<i>Sinapis alba</i>	<i>Brassica hirta</i>	<i>Toxicodendron rydbergii</i>	<i>Rhus radicans</i>
<i>Solanum ptychanthum</i>	<i>Solanum americanum</i>	<i>Toxicodendron rydbergii</i>	<i>Rhus toxicodendron</i>

USACE Name	Synonym
<i>Toxicodendron rydbergii</i>	<i>Toxicodendron radicans</i>
<i>Toxicoscordion venenosum</i>	<i>Zigadenus venenosus</i>
<i>Transberingia bursifolia</i>	<i>Halimolobos virgata</i>
<i>Transberingia bursifolia</i>	<i>Transberingia virgata</i>
<i>Triantha occidentalis</i>	<i>Tofieldia glutinosa</i>
<i>Trichophorum alpinum</i>	<i>Eriophorum alpinum</i>
<i>Trichophorum alpinum</i>	<i>Scirpus hudsonianus</i>
<i>Trichophorum caespitosum</i>	<i>Scirpus cespitosus</i>
<i>Trichophorum pumilum</i>	<i>Scirpus pumilus</i>
<i>Trichophorum pumilum</i>	<i>Scirpus rollandii</i>
<i>Triglochin maritima</i>	<i>Triglochin concinna</i>
<i>Triglochin scilloides</i>	<i>Lilaea scilloides</i>
<i>Tripleurospermum maritimum</i>	<i>Matricaria maritima</i>
<i>Trollius laxus</i>	<i>Trollius albiflorus</i>
<i>Utricularia macrorhiza</i>	<i>Utricularia vulgaris</i>
<i>Vaccaria hispanica</i>	<i>Saponaria hispanica</i>
<i>Vaccaria hispanica</i>	<i>Vaccaria pyramidata</i>
<i>Vaccinium membranaceum</i>	<i>Vaccinium globulare</i>
<i>Vaccinium uliginosum</i>	<i>Vaccinium occidentale</i>
<i>Vahlodea atropurpurea</i>	<i>Deschampsia atropurpurea</i>
<i>Veronica anagallis-aquatica</i>	<i>Veronica catenata</i>
<i>Viola nephrophylla</i>	<i>Viola pratincola</i>
<i>Vulpia bromoides</i>	<i>Festuca bromoides</i>
<i>Vulpia myuros</i>	<i>Festuca megalura</i>
<i>Vulpia myuros</i>	<i>Vulpia megalura</i>
<i>Vulpia octoflora</i>	<i>Festuca octoflora</i>
<i>Xanthisma spinulosum</i>	<i>Haplopappus spinulosus</i>
<i>Xanthisma spinulosum</i>	<i>Machaeranthera pinnatifida</i>
<i>Zeltnera exaltata</i>	<i>Centaurium exaltatum</i>
<i>Zizania palustris</i>	<i>Zizania aquatica</i>

Appendix B2

Partial list of synonyms for scientific names. Appendix B2 has commonly-used synonyms in alphabetical order. Appendix B1 has USACE names in alphabetical order.

Synonym	USACE Name	Synonym	USACE Name
<i>Abies lasiocarpa</i>	<i>Abies bifolia</i>	<i>Agropyron smithii</i>	<i>Pascopyrum smithii</i>
<i>Achillea lanulosa</i>	<i>Achillea millefolium</i>	<i>Agropyron spicatum</i> (Secar)	<i>Elymus wawawaiensis</i>
<i>Acorus calamus</i>	<i>Acorus americanus</i>	<i>Agropyron subsecundum</i>	<i>Elymus alaskanus</i>
<i>Adiantum pedatum</i>	<i>Adiantum aleuticum</i>	<i>Agropyron subsecundum</i>	<i>Elymus trachycaulus</i>
<i>Agoseris glauca</i>	<i>Agoseris parviflora</i>	<i>Agropyron trachycaulum</i>	<i>Elymus alaskanus</i>
<i>Agropyron caninum</i>	<i>Elymus alaskanus</i>	<i>Agropyron trachycaulum</i>	<i>Elymus trachycaulus</i>
<i>Agropyron caninum</i>	<i>Elymus trachycaulus</i>	<i>Agrostis alba</i>	<i>Agrostis gigantea</i>
<i>Agropyron dasystachyum</i>	<i>Elymus lanceolatus</i>	<i>Agrostis alba</i>	<i>Agrostis stolonifera</i>
<i>Agropyron latiglume</i>	<i>Elymus alaskanus</i>	<i>Agrostis borealis</i>	<i>Agrostis mertensii</i>
<i>Agropyron latiglume</i>	<i>Elymus trachycaulus</i>	<i>Agrostis diegoensis</i>	<i>Agrostis pallens</i>
<i>Agropyron repens</i>	<i>Elymus repens</i>	<i>Agrostis humilis</i>	<i>Podagrostis humilis</i>

Appendix B: Partial List of Synonyms

Synonym	USACE Name	Synonym	USACE Name
<i>Agrostis tenuis</i>	<i>Agrostis capillaris</i>	<i>Aster lanceolatus</i>	<i>Symphyotrichum lanceolatum</i>
<i>Alisma plantago-aquatica</i>	<i>Alisma triviale</i>	<i>Aster meritus</i>	<i>Eurybia merita</i>
<i>Alnus crispa</i>	<i>Alnus viridis</i>	<i>Aster modestus</i>	<i>Canadanthus modestus</i>
<i>Alnus sinuata</i>	<i>Alnus viridis</i>	<i>Aster occidentalis</i>	<i>Symphyotrichum spathulatum</i>
<i>Alnus tenuifolia</i>	<i>Alnus incana</i>	<i>Aster pansus</i>	<i>Symphyotrichum ericoides</i>
<i>Alopecurus alpinus</i>	<i>Alopecurus magellanicus</i>	<i>Aster pauciflorus</i>	<i>Almutaster pauciflorus</i>
<i>Alopecurus borealis</i>	<i>Alopecurus magellanicus</i>	<i>Aster sibiricus</i>	<i>Eurybia sibirica</i>
<i>Amaranthus graecizans</i>	<i>Amaranthus blitoides</i>	<i>Aster spathulatus</i>	<i>Symphyotrichum spathulatum</i>
<i>Amaranthus tamariscina</i>	<i>Amaranthus tuberculatus</i>	<i>Aster subspicatus</i>	<i>Symphyotrichum subspicatum</i>
<i>Amerorhchis rotundifolia</i>	<i>Platanthera rotundifolia</i>	<i>Athyrium alpestre</i>	<i>Athyrium americanum</i>
<i>Ammannia coccinea</i>	<i>Ammannia robusta</i>	<i>Athyrium distentifolium</i>	<i>Athyrium americanum</i>
<i>Amphiscirpus nevadensis</i>	<i>Scirpus nevadensis</i>	<i>Athyrium filix-femina</i>	<i>Athyrium cyclosorum</i>
<i>Anagalis arvensis</i>	<i>Lysimachia arvensis</i>	<i>Atriplex hastata</i>	<i>Atriplex patula</i>
<i>Anagalis minima</i>	<i>Lysimachia minima</i>	<i>Atriplex patula</i>	<i>Atriplex dioica</i>
<i>Andropogon scoparius</i>	<i>Schizachyrium scoparium</i>	<i>Atriplex subspicata</i>	<i>Atriplex dioica</i>
<i>Androsace lehmanniana</i>	<i>Androsace chamaejasme</i>	<i>Avena fatua</i>	<i>Avena sativa</i>
<i>Apocynum sibericum</i>	<i>Apocynum cannabinum</i>	<i>Azolla filiculoides</i>	<i>Azolla microphylla</i>
<i>Arabis boivinii</i>	<i>Boechera grahamii</i>	<i>Berberis aquifolium</i>	<i>Mahonia aquifolium</i>
<i>Arabis confinis var. brachycarpa</i>	<i>Boechera grahamii</i>	<i>Berberis nervosa</i>	<i>Mahonia nervosa</i>
<i>Arabis divaricarpa</i>	<i>Boechera divaricarpa</i>	<i>Betula nana</i>	<i>Betula glandulosa</i>
<i>Arabis drummondii</i>	<i>Boechera stricta</i>	<i>Bidens comosa</i>	<i>Bidens tripartita</i>
<i>Arabis hirsuta</i>	<i>Arabis eschscholtziana</i>	<i>Boisduvalia densiflora</i>	<i>Epilobium densiflorum</i>
<i>Arabis hirsuta</i>	<i>Arabis pycnocarpa</i>	<i>Boisduvalia glabella</i>	<i>Epilobium campestre</i>
<i>Arabis holboellii</i>	<i>Boechera grahamii</i>	<i>Bolboschoenus fluviatilis</i>	<i>Schoenoplectus fluviatilis</i>
<i>Arabis holboellii</i>	<i>Boechera collinsii</i>	<i>Bolboschoenus maritimus</i>	<i>Schoenoplectus maritimus</i>
<i>Arabis kamchatica</i>	<i>Arabidopsis lyrata</i>	<i>Botrychium boreale</i>	<i>Botrychium pinnatum</i>
<i>Arabis lemmonii</i>	<i>Boechera lemmonii</i>	<i>Botrychium dusenii</i>	<i>Botrychium crenulatum</i>
<i>Arabis lyrata</i>	<i>Arabidopsis lyrata</i>	<i>Botrychium matricariifolium</i>	<i>Botrychium hesperium</i>
<i>Arenaria capillaris</i>	<i>Eremogone capillaris</i>	<i>Botrychium michiganense</i>	<i>Botrychium hesperium</i>
<i>Arenaria lateriflora</i>	<i>Moebringia lateriflora</i>	<i>Botrychium multifidum</i>	<i>Sceptridium multifidum</i>
<i>Arenaria macrophylla</i>	<i>Moebringia macrophylla</i>	<i>Botrychium virginianum</i>	<i>Botrypus virginianus</i>
<i>Arenaria obtusiloba</i>	<i>Minuartia obtusiloba</i>	<i>Brachyactis ciliata</i>	<i>Symphyotrichum ciliatum</i>
<i>Arenaria rubella</i>	<i>Minuartia rubella</i>	<i>Brassica campestris</i>	<i>Brassica rapa</i>
<i>Argentina anserina</i>	<i>Potentilla anserina</i>	<i>Brassica hirta</i>	<i>Sinapis alba</i>
<i>Arnica amplexicaulis</i>	<i>Arnica lanceolata</i>	<i>Buchloe dactyloides</i>	<i>Bouteloua dactyloides</i>
<i>Arnica diversifolia</i>	<i>Arnica ovata</i>	<i>Calamagrostis inexpansa</i>	<i>Calamagrostis stricta</i>
<i>Aster alpigenus</i>	<i>Oreostemma alpigenum</i>	<i>Calamagrostis neglecta</i>	<i>Calamagrostis stricta</i>
<i>Aster ascendens</i>	<i>Symphyotrichum ascendens</i>	<i>Camissonia andina</i>	<i>Neoholmgrenia andina</i>
<i>Aster borealis</i>	<i>Symphyotrichum boreale</i>	<i>Camissonia breviflora</i>	<i>Taraxia breviflora</i>
<i>Aster brachyactis</i>	<i>Symphyotrichum ciliatum</i>	<i>Camissonia subacaulis</i>	<i>Taraxia subacaulis</i>
<i>Aster chilensis</i>	<i>Symphyotrichum ascendens</i>	<i>Camissonia tanacetifolia</i>	<i>Taraxia tanacetifolia</i>
<i>Aster eatonii</i>	<i>Symphyotrichum bracteolatum</i>	<i>Cardaria pubescens</i>	<i>Lepidium appelianum</i>
<i>Aster ericoides</i>	<i>Symphyotrichum ericoides</i>	<i>Carex aenea</i>	<i>Carex foenea</i>
<i>Aster falcatus</i>	<i>Symphyotrichum falcatum</i>	<i>Carex atrata</i>	<i>Carex atosquama</i>
<i>Aster foliaceus</i>	<i>Symphyotrichum foliaceum</i>	<i>Carex atrata</i>	<i>Carex heteroneura</i>
<i>Aster frondosus</i>	<i>Symphyotrichum frondosum</i>	<i>Carex aurea</i>	<i>Carex garberi</i>
<i>Aster hesperius</i>	<i>Symphyotrichum lanceolatum</i>	<i>Carex bipartita</i>	<i>Carex lachenalii</i>
<i>Aster junciformis</i>	<i>Symphyotrichum boreale</i>	<i>Carex chalciolepis</i>	<i>Carex heteroneura</i>
<i>Aster laevis</i>	<i>Symphyotrichum laeve</i>	<i>Carex deweyana</i>	<i>Carex infirmivervia</i>

Appendix B: Partial List of Synonyms

Synonym	USACE Name	Synonym	USACE Name
<i>Carex deweyana</i>	<i>Carex bolanderi</i>	<i>Cornus sericea</i>	<i>Cornus alba</i>
<i>Carex deweyana</i>	<i>Carex leptopoda</i>	<i>Cornus stolonifera</i>	<i>Cornus alba</i>
<i>Carex dioica</i>	<i>Carex gynocrates</i>	<i>Crataegus okenonii</i>	<i>Crataegus douglasii</i>
<i>Carex epapillosa</i>	<i>Carex heteroneura</i>	<i>Crataegus suksdorfii</i>	<i>Crataegus gaylussacia</i>
<i>Carex eurycarpa</i>	<i>Carex angustata</i>	<i>Cyperus aristatus</i>	<i>Cyperus squarrosus</i>
<i>Carex exsiccata</i>	<i>Carex vesicaria</i>	<i>Cyperus rivularis</i>	<i>Cyperus bipartitus</i>
<i>Carex festivella</i>	<i>Carex microptera</i>	<i>Cypripedium calceolus</i>	<i>Cypripedium parviflorum</i>
<i>Carex kelloggii</i>	<i>Carex lenticularis</i>	<i>Dactylorhiza viridis</i>	<i>Coeloglossum viride</i>
<i>Carex lanuginosa</i>	<i>Carex pellita</i>	<i>Dasiphora floribunda</i>	<i>Dasiphora fruticosa</i>
<i>Carex lenticularis</i>	<i>Carex kelloggii</i>	<i>Delphinium sutherlandii</i>	<i>Delphinium nuttallianum</i>
<i>Carex luzulina</i>	<i>Carex fissuricola</i>	<i>Deschampsia atropurpurea</i>	<i>Vahlodea atropurpurea</i>
<i>Carex maritima</i>	<i>Carex incurviformis</i>	<i>Descurainia richardsonii</i>	<i>Descurainia incana</i>
<i>Carex misandra</i>	<i>Carex fuliginosa</i>	<i>Dichanthelium lanuginosum</i>	<i>Dichanthelium acuminatum</i>
<i>Carex muricata</i>	<i>Carex echinata</i>	<i>Dichanthelium wilcoxianum</i>	<i>Dichanthelium oligosanthos</i>
<i>Carex norvegica</i>	<i>Carex media</i>	<i>Dipsacus sylvestris</i>	<i>Dipsacus fullonum</i>
<i>Carex norvegica</i>	<i>Carex stevenii</i>	<i>Disporum trachycarpum</i>	<i>Prosartes trachycarpa</i>
<i>Carex nova</i>	<i>Carex pelocarpa</i>	<i>Distichlis spicata</i>	<i>Distichlis stricta</i>
<i>Carex oederi</i>	<i>Carex viridula</i>	<i>Dodecatheon cusickii</i>	<i>Dodecatheon pulchellum</i>
<i>Carex paupercula</i>	<i>Carex magellanica</i>	<i>Dodecatheon pauciflorum</i>	<i>Dodecatheon pulchellum</i>
<i>Carex platylepis</i>	<i>Carex praticola</i>	<i>Dryas hookeriana</i>	<i>Dryas ajanensis</i>
<i>Carex plectocarpa</i>	<i>Carex lenticularis</i>	<i>Dryas octopetala</i>	<i>Dryas ajanensis</i>
<i>Carex preslii</i>	<i>Carex pachystachya</i>	<i>Dryopteris austriaca</i>	<i>Dryopteris carthusiana</i>
<i>Carex pyrenaica</i>	<i>Carex micropoda</i>	<i>Dryopteris dilatata</i>	<i>Dryopteris expansa</i>
<i>Carex rostrata [misapplied]</i>	<i>Carex utriculata</i>	<i>Dryopteris spinulosa</i>	<i>Dryopteris carthusiana</i>
<i>Carex tolmiei</i>	<i>Carex paysonis</i>	<i>Dugaldia hoopesii</i>	<i>Hymenoxys hoopesii</i>
<i>Carex vesicaria</i>	<i>Carex exsiccata</i>	<i>Elatine triandra</i>	<i>Elatine rubella</i>
<i>Centaurium exaltatum</i>	<i>Zeltnera exaltata</i>	<i>Eleocharis compressa</i>	<i>Eleocharis elliptica</i>
<i>Centunculus minimus</i>	<i>Lysimachia minima</i>	<i>Eleocharis erythropoda</i>	<i>Eleocharis palustris</i>
<i>Cerastium nutans</i>	<i>Cerastium brachypodium</i>	<i>Eleocharis macrostachya</i>	<i>Eleocharis palustris</i>
<i>Cerastium viscosum</i>	<i>Cerastium glomeratum</i>	<i>Eleocharis obtusa</i>	<i>Eleocharis engelmannii</i>
<i>Cerastium vulgatum</i>	<i>Cerastium fontanum</i>	<i>Eleocharis ovata</i>	<i>Eleocharis engelmannii</i>
<i>Chamaepericlymenum canadense</i>	<i>Cornus canadensis</i>	<i>Eleocharis pauciflora</i>	<i>Eleocharis quinqueflora</i>
<i>Chamaesyce maculata</i>	<i>Euphorbia maculata</i>	<i>Eleocharis pauciflora</i>	<i>Eleocharis suksdorfiana</i>
<i>Chamaesyce serpens</i>	<i>Euphorbia serpens</i>	<i>Eleocharis tenuis</i>	<i>Eleocharis elliptica</i>
<i>Chamaesyce supina</i>	<i>Euphorbia maculata</i>	<i>Eleocharis xyridiformis</i>	<i>Eleocharis palustris</i>
<i>Chenopodium botrys</i>	<i>Dysphania botrys</i>	<i>Elodea longivaginata</i>	<i>Elodea bifoliata</i>
<i>Chrysanthemum leucanthemum</i>	<i>Leucanthemum vulgare</i>	<i>Elymus alaskanus</i>	<i>Elymus trachycaulus</i>
<i>Chrysothamnus linifolius</i>	<i>Lorandersonia linifolia</i>	<i>Elymus cinereus</i>	<i>Leymus cinereus</i>
<i>Chrysothamnus viscidiflorus</i>	<i>Lorandersonia linifolia</i>	<i>Elymus condensatus</i>	<i>Leymus condensatus</i>
<i>Claytonia lanceolata</i>	<i>Claytonia multiscapa</i>	<i>Elymus junceus</i>	<i>Psathyrostachys juncea</i>
<i>Claytonia parvifolia</i>	<i>Montia parvifolia</i>	<i>Elymus macounii</i>	<i>Elyhordeum macounii</i>
<i>Claytonia rosea</i>	<i>Claytonia multiscapa</i>	<i>Elymus smithii</i>	<i>Pascopyrum smithii</i>
<i>Cleome lutea</i>	<i>Peritoma lutea</i>	<i>Elymus spicata</i>	<i>Pseudoroegneria spicata</i>
<i>Cleome serrulata</i>	<i>Peritoma serrulata</i>	<i>Elymus submuticus</i>	<i>Elymus curvatus</i>
<i>Comandra livida</i>	<i>Geocaulon lividum</i>	<i>Elymus trachycaulus</i>	<i>Elymus alaskanus</i>
<i>Comandra pallida</i>	<i>Comandra umbellata</i>	<i>Elymus triticoides</i>	<i>Leymus triticoides</i>
<i>Convolvulus sepium</i>	<i>Calystegia sepium</i>	<i>Elymus violaceus</i>	<i>Elymus alaskanus</i>
<i>Conyza canadensis</i>	<i>Erigeron canadensis</i>	<i>Elymus violaceus</i>	<i>Elymus trachycaulus</i>
<i>Corispermum hyssopifolium</i>	<i>Corispermum americanum</i>	<i>Elytrigia repens</i>	<i>Elymus repens</i>

Appendix B: Partial List of Synonyms

Synonym	USACE Name	Synonym	USACE Name
<i>Epilobium alpinum</i>	<i>Epilobium anagallidifolium</i>	<i>Gnaphalium stramineum</i>	<i>Pseudognaphalium stramineum</i>
<i>Epilobium alpinum</i>	<i>Epilobium hornemannii</i>	<i>Gnaphalium thermale</i>	<i>Pseudognaphalium canescens</i>
<i>Epilobium alpinum</i>	<i>Epilobium clavatum</i>	<i>Grindelia hirsutula</i>	<i>Grindelia nana</i>
<i>Epilobium alpinum</i>	<i>Epilobium oregonense</i>	<i>Gymnocarpium disjunctum</i>	<i>Gymnocarpium dryopteris</i>
<i>Epilobium angustifolium</i>	<i>Chamaenerion angustifolium</i>	<i>Habenaria dilatata</i>	<i>Piperia dilatata</i>
<i>Epilobium glandulosum</i>	<i>Epilobium ciliatum</i>	<i>Habenaria hyperborea</i>	<i>Platanthera aquilonis</i>
<i>Epilobium glandulosum</i>	<i>Epilobium saximontanum</i>	<i>Habenaria hyperborea</i>	<i>Platanthera huronensis</i>
<i>Epilobium latifolium</i>	<i>Chamaenerion latifolium</i>	<i>Habenaria obtusata</i>	<i>Platanthera obtusata</i>
<i>Epilobium pygmaeum</i>	<i>Epilobium campestre</i>	<i>Habenaria orbiculata</i>	<i>Platanthera orbiculata</i>
<i>Epilobium watsonii</i>	<i>Epilobium hallianum</i>	<i>Habenaria saccata</i>	<i>Platanthera stricta</i>
<i>Epilobium watsonii</i>	<i>Epilobium ciliatum</i>	<i>Habenaria stricta</i>	<i>Platanthera stricta</i>
<i>Erigeron asper</i>	<i>Erigeron glabellus</i>	<i>Habenaria unalascensis</i>	<i>Piperia unalascensis</i>
<i>Erigeron kamtschaticus</i>	<i>Erigeron acris</i>	<i>Habenaria viridis</i>	<i>Coeloglossum viride</i>
<i>Erigeron kamtschaticus</i>	<i>Erigeron nivalis</i>	<i>Halimolobos virgata</i>	<i>Transberingia bursifolia</i>
<i>Erigeron peregrinus</i>	<i>Erigeron glacialis</i>	<i>Haplopappus lanceolatus</i>	<i>Pyrocoma lanceolata</i>
<i>Eriophorum alpinum</i>	<i>Trichophorum alpinum</i>	<i>Haplopappus spinulosus</i>	<i>Xanthisma spinulosum</i>
<i>Eriophorum polystachion</i>	<i>Eriophorum angustifolium</i>	<i>Haplopappus uniflorus</i>	<i>Pyrocoma uniflora</i>
<i>Eupatoriadelphus maculatus</i>	<i>Eutrochium maculatum</i>	<i>Helenium hoopesii</i>	<i>Hymenoxys hoopesii</i>
<i>Eupatorium maculatum</i>	<i>Eutrochium maculatum</i>	<i>Heleochloa alopecuroides</i>	<i>Crypsis alopecuroides</i>
<i>Euphorbia supina</i>	<i>Euphorbia maculata</i>	<i>Hemicarpha drummondii</i>	<i>Lipocarpha drummondii</i>
<i>Eustoma grandiflorum</i>	<i>Eustoma exaltatum</i>	<i>Heracleum lanatum</i>	<i>Heracleum maximum</i>
<i>Eustoma russellianum</i>	<i>Eustoma exaltatum</i>	<i>Heracleum sphondylium</i>	<i>Heracleum maximum</i>
<i>Fallopia japonica</i>	<i>Reynoutria japonica</i>	<i>Hieracium gracile</i>	<i>Hieracium triste</i>
<i>Festuca arundinacea</i>	<i>Schedonorus arundinaceus</i>	<i>Hierochloa hirta</i>	<i>Anthoxanthum hirtum</i>
<i>Festuca bromoides</i>	<i>Vulpia bromoides</i>	<i>Hierochloa odorata</i>	<i>Anthoxanthum hirtum</i>
<i>Festuca megalura</i>	<i>Vulpia myuros</i>	<i>Hodeum leporinum</i>	<i>Hordeum murinum</i>
<i>Festuca octoflora</i>	<i>Vulpia octoflora</i>	<i>Hordeum geniculatum</i>	<i>Hordeum marinum</i>
<i>Festuca pratensis</i>	<i>Schedonorus pratensis</i>	<i>Hutchinsia procumbens</i>	<i>Hornungia procumbens</i>
<i>Galium asperrimum</i>	<i>Galium mexicanum</i>	<i>Hypericum formosum</i>	<i>Hypericum scouleri</i>
<i>Gaura parviflora</i>	<i>Oenothera curtiflora</i>	<i>Isoetes lacustris</i>	<i>Isoetes occidentalis</i>
<i>Gentiana amarella</i>	<i>Gentianella amarella</i>	<i>Isoetes tenella</i>	<i>Isoetes echinospora</i>
<i>Gentiana aquatica</i>	<i>Gentiana fremontii</i>	<i>Iva xanthifolia</i>	<i>Cyclachaena xanthiifolia</i>
<i>Gentiana detonsa</i>	<i>Gentianopsis virgata</i>	<i>Juncus alpinus</i>	<i>Juncus alpinoarticulatus</i>
<i>Gentiana detonsa</i>	<i>Gentianopsis thermalis</i>	<i>Juncus arcticus</i>	<i>Juncus balticus</i>
<i>Gentiana macounii</i>	<i>Gentianopsis virgata</i>	<i>Juncus effusus</i>	<i>Juncus pylaei</i>
<i>Gentiana propinqua</i>	<i>Gentianella propinqua</i>	<i>Juncus saximontanus</i>	<i>Juncus ensifolius</i>
<i>Gentiana simplex</i>	<i>Gentianopsis simplex</i>	<i>Juncus tracyi</i>	<i>Juncus ensifolius</i>
<i>Gentianella crinita</i>	<i>Gentianopsis virgata</i>	<i>Juncus triglumis</i>	<i>Juncus albenscens</i>
<i>Gentianella detonsa</i>	<i>Gentianopsis thermalis</i>	<i>Juncus tweedyi</i>	<i>Juncus brevicaudatus</i>
<i>Gentianella simplex</i>	<i>Gentianopsis simplex</i>	<i>Kalmia occidentalis</i>	<i>Kalmia microphylla</i>
<i>Gentianella tenella</i>	<i>Comastoma tenellum</i>	<i>Kalmia polifolia</i>	<i>Kalmia microphylla</i>
<i>Gentianopsis macounii</i>	<i>Gentianopsis virgata</i>	<i>Kobresia bellardii</i>	<i>Kobresia myosuroides</i>
<i>Gentianopsis procera</i>	<i>Gentianopsis virgata</i>	<i>Kobresia macrocarpa</i>	<i>Kobresia sibirica</i>
<i>Githopsis calycina</i>	<i>Githopsis specularioides</i>	<i>Kochia americana</i>	<i>Neokochia americana</i>
<i>Glaux maritima</i>	<i>Lysimachia maritima</i>	<i>Kochia scoparia</i>	<i>Bassia scoparia</i>
<i>Glyceria pauciflora</i>	<i>Torreyochloa pallida</i>	<i>Lactuca oblongifolia</i>	<i>Lactuca tatarica</i>
<i>Gnaphalium chilense</i>	<i>Pseudognaphalium stramineum</i>	<i>Lactuca pulchella</i>	<i>Lactuca tatarica</i>
<i>Gnaphalium microcephalum</i>	<i>Pseudognaphalium canescens</i>	<i>Lathyrus bijugatus</i>	<i>Lathyrus lanszwertii</i>
<i>Gnaphalium purpureum</i>	<i>Gamochoeta purpurea</i>	<i>Ledum glandulosum</i>	<i>Rhododendron columbianum</i>

Synonym	USACE Name	Synonym	USACE Name
<i>Ledum groenlandicum</i>	<i>Rhododendron columbianum</i>	<i>Myosotis alpestris</i>	<i>Myosotis sylvatica</i>
<i>Leptochloa fusca</i>	<i>Diplachne fusca</i>	<i>Myosurus aristatus</i>	<i>Myosurus apetalus</i>
<i>Ligularia amplexans</i>	<i>Senecio amplexans</i>	<i>Neotorularia humilis</i>	<i>Braya humilis</i>
<i>Lilaea scilloides</i>	<i>Triglochin scilloides</i>	<i>Nuphar lutea</i>	<i>Nuphar polysepala</i>
<i>Limnorchis saccata</i>	<i>Platanthera stricta</i>	<i>Nuphar lutea</i>	<i>Nuphar variegata</i>
<i>Linanthastrum nuttallii</i>	<i>Leptosiphon nuttallii</i>	<i>Nymphaea tetragona</i>	<i>Nymphaea leibergii</i>
<i>Linanthus nuttallii</i>	<i>Leptosiphon nuttallii</i>	<i>Oenothera elata</i>	<i>Oenothera biennis</i>
<i>Listera banksiana</i>	<i>Neottia banksiana</i>	<i>Oenothera strigosa</i>	<i>Oenothera villosa</i>
<i>Listera borealis</i>	<i>Neottia borealis</i>	<i>Oligoneuron rigidum</i>	<i>Solidago rigida</i>
<i>Listera caurina</i>	<i>Neottia banksiana</i>	<i>Ophioglossum vulgatum</i>	<i>Ophioglossum pusillum</i>
<i>Listera convallarioides</i>	<i>Neottia convallarioides</i>	<i>Orchis rotundifolia</i>	<i>Platanthera rotundifolia</i>
<i>Listera cordata</i>	<i>Neottia cordata</i>	<i>Oryzopsis hymenoides</i>	<i>Achnatherum hymenoides</i>
<i>Lolium arundinaceum</i>	<i>Schedonorus arundinaceus</i>	<i>Osmorbiza chilensis</i>	<i>Osmorbiza berteroi</i>
<i>Lolium pratense</i>	<i>Schedonorus pratensis</i>	<i>Pachystima myrsinites</i>	<i>Paxistima myrsinites</i>
<i>Lonicera caerulea</i>	<i>Lonicera cauriana</i>	<i>Packeria cymbalaria</i>	<i>Packeria heterophylla</i>
<i>Lotus purshianus</i>	<i>Acmispon americanus</i>	<i>Panicum acuminatum</i>	<i>Dichanthelium acuminatum</i>
<i>Lotus unifoliolatus</i>	<i>Acmispon americanus</i>	<i>Panicum lanuginosum</i>	<i>Dichanthelium acuminatum</i>
<i>Luzula campestris</i>	<i>Luzula comosa</i>	<i>Panicum occidentale</i>	<i>Dichanthelium acuminatum</i>
<i>Luzula campestris</i>	<i>Luzula multiflora</i>	<i>Panicum oligosanthes</i>	<i>Dichanthelium oligosanthes</i>
<i>Lychnis apetala</i>	<i>Silene uralensis</i>	<i>Panicum scribnerianum</i>	<i>Dichanthelium oligosanthes</i>
<i>Lychnis apetala</i>	<i>Silene hitchguirei</i>	<i>Panicum wilcoxianum</i>	<i>Dichanthelium oligosanthes</i>
<i>Lychnis flos-cuculi</i>	<i>Silene flos-cuculi</i>	<i>Pennisetum glaucum</i>	<i>Setaria pumila</i>
<i>Lycopodium alpinum</i>	<i>Diphasiastrum alpinum</i>	<i>Pentaphylloides floribunda</i>	<i>Dasiphora fruticosa</i>
<i>Lycopodium annotinum</i>	<i>Spinulum annotinum</i>	<i>Pentaphylloides fruticosa</i>	<i>Dasiphora fruticosa</i>
<i>Lycopodium clavatum</i>	<i>Lycopodium lagopus</i>	<i>Petasites sagittatus</i>	<i>Petasites frigidus</i>
<i>Lycopodium complanatum</i>	<i>Diphasiastrum complanatum</i>	<i>Phlox gracilis</i>	<i>Microsteris gracilis</i>
<i>Lycopodium dendroideum</i>	<i>Dendrolycopodium dendroideum</i>	<i>Phragmites communis</i>	<i>Phragmites australis</i>
<i>Lycopodium haleakalae</i>	<i>Huperzia haleakalae</i>	<i>Pinguicula vulgaris</i>	<i>Pinguicula macroceras</i>
<i>Lycopodium inundatum</i>	<i>Lycopodiella inundata</i>	<i>Plagiobothrys scouleri</i>	<i>Plagiobothrys hispidulus</i>
<i>Lycopodium obscurum var. dendroideum</i>	<i>Dendrolycopodium dendroideum</i>	<i>Platanthera dilatata</i>	<i>Piperia dilatata</i>
<i>Machaeranthera canescens</i>	<i>Dieteria canescens</i>	<i>Platanthera hyperborea</i>	<i>Platanthera aquilonis</i>
<i>Machaeranthera pinnatifida</i>	<i>Xanthisma spinulosum</i>	<i>Platanthera hyperborea</i>	<i>Platanthera huronensis</i>
<i>Machaerocarpus californicus</i>	<i>Damasonium californicum</i>	<i>Platanthera saccata</i>	<i>Platanthera stricta</i>
<i>Matricaria maritima</i>	<i>Tripleurospermum maritimum</i>	<i>Poa ampla</i>	<i>Poa secunda</i>
<i>Matricaria matricarioides</i>	<i>Matricaria discoidea</i>	<i>Poa canbyi</i>	<i>Poa secunda</i>
<i>Megalodonta beckii</i>	<i>Bidens beckii</i>	<i>Poa glaucifolia</i>	<i>Poa arida</i>
<i>Mentha canadensis</i>	<i>Mentha arvensis</i>	<i>Poa grayana</i>	<i>Poa arctica</i>
<i>Mimulus ampliatus</i>	<i>Mimulus washingtonensis</i>	<i>Poa incurva</i>	<i>Poa secunda</i>
<i>Mimulus patulus</i>	<i>Mimulus washingtonensis</i>	<i>Poa juncifolia</i>	<i>Poa secunda</i>
<i>Mitella breweri</i>	<i>Pectiantia breweri</i>	<i>Poa macroclada</i>	<i>Poa stenantha</i>
<i>Mitella caulescens</i>	<i>Mitellastra caulescens</i>	<i>Poa nemoralis</i>	<i>Poa interior</i>
<i>Mitella pentandra</i>	<i>Pectiantia pentandra</i>	<i>Poa nevadensis</i>	<i>Poa secunda</i>
<i>Mitella trifida</i>	<i>Ozomelis trifida</i>	<i>Poa pattersonii</i>	<i>Poa abbreviata</i>
<i>Montia cordifolia</i>	<i>Claytonia cordifolia</i>	<i>Poa paucispicula</i>	<i>Poa leptocoma</i>
<i>Montia parviflora</i>	<i>Claytonia parviflora</i>	<i>Poa sandbergii</i>	<i>Poa secunda</i>
<i>Montia perfoliata</i>	<i>Claytonia perfoliata</i>	<i>Poa scabrella</i>	<i>Poa secunda</i>
<i>Montia sibirica</i>	<i>Claytonia sibirica</i>	<i>Polanisia trachysperma</i>	<i>Polanisia dodecandra</i>
<i>Mulgedium pulchellum</i>	<i>Lactuca tatarica</i>	<i>Polygonum amphibium</i>	<i>Persicaria amphibia</i>
		<i>Polygonum arenastrum</i>	<i>Polygonum aviculare</i>

Appendix B: Partial List of Synonyms

Synonym	USACE Name	Synonym	USACE Name
<i>Polygonum bistortoides</i>	<i>Bistorta bistortoides</i>	<i>Ranunculus circinatus</i>	<i>Ranunculus trichophyllus</i>
<i>Polygonum coccineum</i>	<i>Persicaria amphibia</i>	<i>Ranunculus cymbalaria</i>	<i>Cyrtorhyncha cymbalaria</i>
<i>Polygonum convolvulus</i>	<i>Fallopia convolvulus</i>	<i>Ranunculus eschscholtzii</i>	<i>Ranunculus adoneus</i>
<i>Polygonum cuspidatum</i>	<i>Reynoutria japonica</i>	<i>Ranunculus gelidus</i>	<i>Ranunculus grayi</i>
<i>Polygonum douglasii</i>	<i>Polygonum austinae</i>	<i>Ranunculus karelinii</i>	<i>Ranunculus grayi</i>
<i>Polygonum douglasii</i>	<i>Polygonum engelmannii</i>	<i>Ranunculus natans</i>	<i>Ranunculus hyperboreus</i>
<i>Polygonum douglasii</i>	<i>Polygonum sawatchense</i>	<i>Ranunculus pedatifidus</i>	<i>Ranunculus arcticus</i>
<i>Polygonum douglasii</i>	<i>Polygonum majus</i>	<i>Ranunculus reptans</i>	<i>Ranunculus flammula</i>
<i>Polygonum hydropiper</i>	<i>Persicaria hydropiper</i>	<i>Ranunculus verecundus</i>	<i>Ranunculus grayi</i>
<i>Polygonum lapathifolium</i>	<i>Persicaria lapathifolia</i>	<i>Rhamnus purshiana</i>	<i>Frangula purshiana</i>
<i>Polygonum leptocarpum</i>	<i>Polygonum ramosissimum</i>	<i>Rhinanthus crista-galli</i>	<i>Rhinanthus minor</i>
<i>Polygonum pensylvanicum</i>	<i>Persicaria pensylvanica</i>	<i>Rhus radicans</i>	<i>Toxicodendron rydbergii</i>
<i>Polygonum persicaria</i>	<i>Persicaria maculosa</i>	<i>Rhus toxicodendron</i>	<i>Toxicodendron rydbergii</i>
<i>Polygonum phytolaccifolium</i>	<i>Aconogonon phytolaccifolium</i>	<i>Rhus trilobata</i>	<i>Rhus aromatica</i>
<i>Polygonum polygaloides</i>	<i>Polygonum kelloggii</i>	<i>Rorippa islandica</i>	<i>Rorippa palustris</i>
<i>Polygonum punctatum</i>	<i>Persicaria punctata</i>	<i>Rorippa microphylla</i>	<i>Nasturtium microphyllum</i>
<i>Polygonum viviparum</i>	<i>Bistorta vivipara</i>	<i>Rorippa nasturtium-aquaticum</i>	<i>Nasturtium officinale</i>
<i>Populus trichocarpa</i>	<i>Populus balsamifera</i>	<i>Rosa sayi</i>	<i>Rosa acicularis</i>
<i>Potamogeton filiformis</i>	<i>Stuckenia filiformis</i>	<i>Rubus acaulis</i>	<i>Rubus arcticus</i>
<i>Potamogeton pectinatus</i>	<i>Stuckenia pectinata</i>	<i>Rubus discolor</i>	<i>Rubus armeniacus</i>
<i>Potamogeton pusillus</i>	<i>Potamogeton berchtoldii</i>	<i>Rumex acetosa</i>	<i>Rumex lapponicus</i>
<i>Potamogeton vaginatus</i>	<i>Stuckenia vaginata</i>	<i>Rumex alpestris</i>	<i>Rumex lapponicus</i>
<i>Potentilla arguta</i>	<i>Drymocallis arguta</i>	<i>Rumex aquaticus</i>	<i>Rumex occidentalis</i>
<i>Potentilla arguta</i>	<i>Drymocallis convallaria</i>	<i>Rumex maritimus</i>	<i>Rumex fueginus</i>
<i>Potentilla concinna</i>	<i>Potentilla rubricaulis</i>	<i>Rumex salicifolius</i>	<i>Rumex triangulivalvis</i>
<i>Potentilla diversifolia</i>	<i>Potentilla glaucophylla</i>	<i>Rumex salicifolius</i>	<i>Rumex californicus</i>
<i>Potentilla floribunda</i>	<i>Dasiphora fruticosa</i>	<i>Rumex utahensis</i>	<i>Rumex californicus</i>
<i>Potentilla fruticosa</i>	<i>Dasiphora fruticosa</i>	<i>Ruppia maritima</i>	<i>Ruppia cirrhosa</i>
<i>Potentilla glandulosa</i>	<i>Drymocallis lactea</i>	<i>Salix dodgeana</i>	<i>Salix rotundifolia</i>
<i>Potentilla glandulosa</i>	<i>Drymocallis glabrata</i>	<i>Salix eriocephala</i>	<i>Salix lutea</i>
<i>Potentilla glandulosa</i>	<i>Drymocallis glandulosa</i>	<i>Salix eriocephala</i>	<i>Salix famelica</i>
<i>Potentilla glandulosa</i>	<i>Drymocallis pseudorupestris</i>	<i>Salix eriocephala</i>	<i>Salix proluxa</i>
<i>Potentilla gracilis</i>	<i>Potentilla pulcherrima</i>	<i>Salix exigua</i>	<i>Salix interior</i>
<i>Potentilla palustris</i>	<i>Comarum palustre</i>	<i>Salix exigua</i>	<i>Salix melanopsis</i>
<i>Potentilla paradoxa</i>	<i>Potentilla supina</i>	<i>Salix famelica</i>	<i>Salix lutea</i>
<i>Prenanthes racemosa</i>	<i>Nabalus racemosus</i>	<i>Salix lucida</i>	<i>Salix lasiandra</i>
<i>Primula conjugens</i>	<i>Dodecatheon conjugens</i>	<i>Salix lutea</i>	<i>Salix famelica</i>
<i>Primula jeffreyi</i>	<i>Dodecatheon jeffreyi</i>	<i>Salix monticola</i>	<i>Salix pseudomonticola</i>
<i>Primula pauciflora</i>	<i>Dodecatheon pulchellum</i>	<i>Salix phylicifolia</i>	<i>Salix planifolia</i>
<i>Pseudognaphalium thermale</i>	<i>Pseudognaphalium canescens</i>	<i>Salix reticulata</i>	<i>Salix nivalis</i>
<i>Puccinellia cusickii</i>	<i>Puccinellia nuttalliana</i>	<i>Salsola australis</i>	<i>Salsola tragus</i>
<i>Puccinellia pallida</i>	<i>Torreyochloa pallida</i>	<i>Salsola iberica</i>	<i>Salsola tragus</i>
<i>Puccinellia pauciflora</i>	<i>Torreyochloa pallida</i>	<i>Salsola kali</i>	<i>Salsola tragus</i>
<i>Pyrola secunda</i>	<i>Orthilia secunda</i>	<i>Salsola pestifer</i>	<i>Salsola tragus</i>
<i>Pyrola uniflora</i>	<i>Moneses uniflora</i>	<i>Sambucus caerulea</i>	<i>Sambucus nigra</i>
<i>Ramischia secunda</i>	<i>Orthilia secunda</i>	<i>Sambucus cerulea</i>	<i>Sambucus nigra</i>
<i>Ranunculus circinatus</i>	<i>Ranunculus aquatilis</i>	<i>Sanguisorba minor</i>	<i>Poterium sanguisorba</i>
<i>Ranunculus circinatus</i>	<i>Ranunculus longirostris</i>	<i>Saponaria hispanica</i>	<i>Vaccaria hispanica</i>
<i>Ranunculus circinatus</i>	<i>Ranunculus subrigidus</i>	<i>Satureja douglasii</i>	<i>Clinopodium douglasii</i>

Synonym	USACE Name	Synonym	USACE Name
<i>Saxifraga arguta</i>	<i>Micranthes odontoloma</i>	<i>Smilacina stellata</i>	<i>Maianthemum stellatum</i>
<i>Saxifraga bronchialis</i>	<i>Saxifraga austromontana</i>	<i>Solanum americanum</i>	<i>Solanum ptychanthum</i>
<i>Saxifraga debilis</i>	<i>Saxifraga rivularis</i>	<i>Solanum interius</i>	<i>Solanum ptychanthum</i>
<i>Saxifraga ferruginea</i>	<i>Micranthes ferruginea</i>	<i>Solanum nigrum</i>	<i>Solanum ptychanthum</i>
<i>Saxifraga integrifolia</i>	<i>Micranthes nidifica</i>	<i>Solidago altissima</i>	<i>Solidago lepida</i>
<i>Saxifraga lyallii</i>	<i>Micranthes lyallii</i>	<i>Solidago canadensis</i>	<i>Solidago lepida</i>
<i>Saxifraga nidifica</i>	<i>Micranthes nidifica</i>	<i>Solidago graminifolia</i>	<i>Euthamia graminifolia</i>
<i>Saxifraga occidentalis</i>	<i>Micranthes occidentalis</i>	<i>Solidago occidentalis</i>	<i>Euthamia occidentalis</i>
<i>Saxifraga odontoloma</i>	<i>Micranthes odontoloma</i>	<i>Solidago spathulata</i>	<i>Solidago simplex</i>
<i>Saxifraga oregana</i>	<i>Micranthes oregana</i>	<i>Sparganium minimum</i>	<i>Sparganium natans</i>
<i>Saxifraga rhomboidea</i>	<i>Micranthes rhomboidea</i>	<i>Spergularia marina</i>	<i>Spergularia salina</i>
<i>Saxifraga serpyllifolia</i>	<i>Saxifraga chrysantha</i>	<i>Spergularia maritima</i>	<i>Spergularia media</i>
<i>Saxifraga tolmiei</i>	<i>Micranthes tolmiei</i>	<i>Sphenopholis obtusata</i>	<i>Sphenopholis intermedia</i>
<i>Schedonorus phoenix</i>	<i>Schedonorus arundinaceus</i>	<i>Stachys palustris</i>	<i>Stachys pilosa</i>
<i>Scirpus acutus</i>	<i>Schoenoplectus acutus</i>	<i>Stellaria simcoei</i>	<i>Stellaria calycantha</i>
<i>Scirpus americanus</i>	<i>Schoenoplectus americanus</i>	<i>Stenanthium occidentale</i>	<i>Anticlea occidentalis</i>
<i>Scirpus atrovirens</i>	<i>Scirpus pallidus</i>	<i>Stipa columbiana</i>	<i>Achnatherum nelsonii</i>
<i>Scirpus cespitosus</i>	<i>Trichophorum caespitosum</i>	<i>Stipa nelsonii</i>	<i>Achnatherum nelsonii</i>
<i>Scirpus fluviatilis</i>	<i>Schoenoplectus fluviatilis</i>	<i>Stipa richardsonii</i>	<i>Achnatherum richardsonii</i>
<i>Scirpus heterochaetus</i>	<i>Schoenoplectus heterochaetus</i>	<i>Stipa williamsii</i>	<i>Achnatherum nelsonii</i>
<i>Scirpus hudsonianus</i>	<i>Trichophorum alpinum</i>	<i>Suaeda americana</i>	<i>Suaeda calceoliformis</i>
<i>Scirpus maritimus</i>	<i>Schoenoplectus maritimus</i>	<i>Suaeda depressa</i>	<i>Suaeda calceoliformis</i>
<i>Scirpus pumilus</i>	<i>Trichophorum pumilum</i>	<i>Suaeda intermedia</i>	<i>Suaeda nigra</i>
<i>Scirpus pungens</i>	<i>Schoenoplectus pungens</i>	<i>Suaeda moquinii</i>	<i>Suaeda nigra</i>
<i>Scirpus rollandii</i>	<i>Trichophorum pumilum</i>	<i>Suksdorfia ranunculifolia</i>	<i>Hemieva ranunculifolia</i>
<i>Scirpus subterminalis</i>	<i>Schoenoplectus subterminalis</i>	<i>Symphotrichum eatonii</i>	<i>Symphotrichum bracteolatum</i>
<i>Scirpus validus</i>	<i>Schoenoplectus tabernaemontani</i>	<i>Thelypteris phegopteris</i>	<i>Phegopteris connectilis</i>
<i>Sedum integrifolium</i>	<i>Rhodiola integrifolia</i>	<i>Thermopsis montana</i>	<i>Thermopsis divaricarpa</i>
<i>Sedum rhodanthum</i>	<i>Rhodiola rhodantha</i>	<i>Tillaea aquatica</i>	<i>Crassula aquatica</i>
<i>Sedum roseum</i>	<i>Rhodiola integrifolia</i>	<i>Tofieldia glutinosa</i>	<i>Triantha occidentalis</i>
<i>Senecio congestus</i>	<i>Tephrosia palustris</i>	<i>Toxicodendron radicans</i>	<i>Toxicodendron rydbergii</i>
<i>Senecio cymbalaria</i>	<i>Packera heterophylla</i>	<i>Transberingia virgata</i>	<i>Transberingia bursifolia</i>
<i>Senecio cymbalarioides</i>	<i>Packera subnuda</i>	<i>Triglochin concinna</i>	<i>Triglochin maritima</i>
<i>Senecio debilis</i>	<i>Packera debilis</i>	<i>Trimorpha acris</i>	<i>Erigeron acris</i>
<i>Senecio dimorphophyllus</i>	<i>Packera dimorphophylla</i>	<i>Trimorpha lonchophylla</i>	<i>Erigeron lonchophyllus</i>
<i>Senecio foetidus</i>	<i>Senecio hydrophiloides</i>	<i>Trisetum wolfii</i>	<i>Grappophorum wolfii</i>
<i>Senecio indecorus</i>	<i>Packera indecora</i>	<i>Trollius albiflorus</i>	<i>Trollius laxus</i>
<i>Senecio jacobaea</i>	<i>Jacobaea vulgaris</i>	<i>Utricularia vulgaris</i>	<i>Utricularia macrorhiza</i>
<i>Senecio pauciflorus</i>	<i>Packera pauciflora</i>	<i>Vaccaria pyramidata</i>	<i>Vaccaria hispanica</i>
<i>Senecio pauperculus</i>	<i>Packera paupercula</i>	<i>Vaccinium globulare</i>	<i>Vaccinium membranaceum</i>
<i>Senecio plattensis</i>	<i>Packera plattensis</i>	<i>Vaccinium occidentale</i>	<i>Vaccinium uliginosum</i>
<i>Senecio pseudoureus</i>	<i>Packera pseudoureus</i>	<i>Veronica catenata</i>	<i>Veronica anagallis-aquatica</i>
<i>Senecio streptanthifolius</i>	<i>Packera streptanthifolia</i>	<i>Viola pratensis</i>	<i>Viola nephrophylla</i>
<i>Senecio subnudus</i>	<i>Packera subnuda</i>	<i>Vulpia megalura</i>	<i>Vulpia myuros</i>
<i>Setaria glauca</i>	<i>Setaria pumila</i>	<i>Zigadenus elegans</i>	<i>Anticlea elegans</i>
<i>Setaria lutescens</i>	<i>Setaria pumila</i>	<i>Zigadenus venenosus</i>	<i>Toxicoscordion venenosum</i>
<i>Silene uralensis</i>	<i>Silene hitchguirei</i>	<i>Zizania aquatica</i>	<i>Zizania palustris</i>
<i>Sitanion hystrix</i>	<i>Elymus elymoides</i>		
<i>Smilacina racemosa</i>	<i>Maianthemum racemosum</i>		

Appendix C

Species of Special Concern. The following wetland indicators are listed as plant species of special concern by the Montana Natural Heritage Program (2014 list).

For the most up to date information on species of special concern, please visit the Montana Natural Heritage Program Field Guide website. <https://fieldguide.mt.gov/>

Species Name	SOC	Federal listed	Species Name	SOC	Federal listed
<i>Acorus americanus</i>	SOC		<i>Cyperus schweinitzii</i>	SOC	
<i>Adoxa moschatellina</i>	SOC		<i>Cyperus strigosus</i>	PSOC	
<i>Alnus rubra</i>	SOC		<i>Cypripedium fasciculatum</i>	SOC	
<i>Ammannia robusta</i>	SOC		<i>Cypripedium parviflorum</i>	PSOC	
<i>Aquilegia formosa</i>	SOC		<i>Cypripedium passerinum</i>	SOC	
<i>Arabidopsis lyrata</i>	PSOC		<i>Cystopteris montana</i>	PSOC	
<i>Asclepias incarnata</i>	SOC		<i>Damasonium californicum</i>	PSOC	
<i>Asplenium trichomanes</i>	PSOC		<i>Delphinium glaucescens</i>	PSOC	
<i>Atriplex truncata</i>	SOC		<i>Dendrolycopodium dendroideum</i>	SOC	
<i>Bacopa rotundifolia</i>	SOC		<i>Dichantheium oligosanthes var. scribnerianum</i>	SOC	
<i>Bidens beckii</i>	SOC		<i>Downingia laeta</i>	SOC	
<i>Botrychium ascendens</i>	SOC		<i>Drosera anglica</i>	SOC	
<i>Botrychium crenulatum</i>	SOC		<i>Drosera linearis</i>	SOC	
<i>Botrychium hesperium</i>	SOC		<i>Drosera rotundifolia</i>	PSOC	
<i>Botrychium lanceolatum</i>	SOC		<i>Dryas integrifolia</i>	SOC	
<i>Botrychium pinnatum</i>	SOC		<i>Dryopteris cristata</i>	SOC	
<i>Botrychium simplex</i>	SOC		<i>Eleocharis rostellata</i>	SOC	
<i>Brasenia schreberi</i>	SOC		<i>Elodea bifoliata</i>	SOC	
<i>Braya humilis</i>	SOC		<i>Epilobium densiflorum</i>	PSOC	
<i>Calamagrostis tweedyi</i>	SOC		<i>Epilobium suffruticosum</i>	PSOC	
<i>Carex amplifolia</i>	PSOC		<i>Epipactis gigantea</i>	SOC	
<i>Carex chordorrhiza</i>	SOC		<i>Erigeron formosissimus</i>	SOC	
<i>Carex comosa</i>	SOC		<i>Erigeron lanatus</i>	PSOC	
<i>Carex crawei</i>	SOC		<i>Eriophorum callitrix</i>	SOC	
<i>Carex gravida</i>	SOC		<i>Eriophorum gracile</i>	SOC	
<i>Carex idahoa</i>	SOC		<i>Eupatorium maculatum</i>	SOC	
<i>Carex incurviformis</i>	SOC		<i>Gaultheria ovatifolia</i>	PSOC	
<i>Carex lacustris</i>	SOC		<i>Gentiana glauca</i>	SOC	
<i>Carex lenticularis var. dolia</i>	SOC		<i>Gentianopsis simplex</i>	SOC	
<i>Carex nelsonii</i>	PSOC		<i>Gentianopsis virgata ssp. macounii</i>	SOC	
<i>Carex prairea</i>	SOC		<i>Geocaulon lividum</i>	PSOC	
<i>Carex rostrata</i>	SOC		<i>Githopsis specularioides</i>	SOC	
<i>Carex scoparia</i>	SOC		<i>Goodyera repens</i>	SOC	
<i>Carex stevenii</i>	SOC		<i>Gratiola ebracteata</i>	SOC	
<i>Carex sychnocephala</i>	SOC		<i>Gymnosteris parvula</i>	SOC	
<i>Carex tenuiflora</i>	SOC		<i>Hedysarum alpinum</i>	PSOC	
<i>Carex vaginata</i>	SOC		<i>Heteranthera dubia</i>	SOC	
<i>Castilleja minor ssp. minor</i>	SOC		<i>Heterocodon rariflorum</i>	SOC	
<i>Celastrus scandens</i>	PSOC		<i>Hornungia procumbens</i>	SOC	
<i>Clinopodium douglasii</i>	SOC		<i>Howellia aquatilis</i>	SOC	Federal threatened
<i>Cyperus acuminatus</i>	SOC		<i>Impatiens ecalcarata</i>	PSOC	
<i>Cyperus bipartitus</i>	SOC		<i>Juncus acuminatus</i>	SOC	
<i>Cyperus erythrorhizos</i>	SOC				

Species Name	SOC	Federal listed	Species Name	SOC	Federal listed
<i>Juncus albescens</i>	SOC		<i>Salix barrattiana</i>	SOC	
<i>Juncus covillei</i>	SOC		<i>Salix cascadenis</i>	SOC	
<i>Kobresia sibirica</i>	SOC		<i>Salix serissima</i>	SOC	
<i>Kobresia simpliciuscula</i>	SOC		<i>Saxifraga hirculus</i>	SOC	
<i>Koenigia islandica</i>	SOC		<i>Scheuchzeria palustris</i>	SOC	
<i>Leptosiphon nuttallii</i>	PSOC		<i>Schoenoplectus heterochaetus</i>	SOC	
<i>Liparis loeselii</i>	SOC		<i>Schoenoplectus subterminalis</i>	SOC	
<i>Lobelia spicata</i>	SOC		<i>Selaginella selaginoides</i>	SOC	
<i>Lomatium bicolor</i>	PSOC		<i>Senecio amplexens</i>	SOC	
<i>Lomatogonium rotatum</i>	SOC		<i>Senecio eremophilus</i>	SOC	
<i>Lorandersonia linifolia</i>	PSOC		<i>Sidalcea oregana</i>	SOC	
<i>Lycopodium inundatum</i>	SOC		<i>Sisyrinchium septentrionale</i>	SOC	
<i>Lycopodium lagopus</i>	SOC		<i>Sphenopholis intermedia</i>	PSOC	
<i>Maianthemum canadense</i>	PSOC		<i>Spiranthes diluvialis</i>	SOC	Federal threatened
<i>Mertensia bella</i>	SOC		<i>Sporobolus neglectus</i>	SOC	
<i>Mimulus breviflorus</i>	SOC		<i>Sullivantia hapemanii</i>	SOC	
<i>Mimulus floribundus</i>	SOC		<i>Thalictrum alpinum</i>	SOC	
<i>Mimulus nanus</i>	SOC		<i>Thelypodium sagittatum</i>	SOC	
<i>Mimulus primuloides</i>	SOC		<i>Tofieldia pusilla</i>	SOC	
<i>Mimulus ringens</i>	SOC		<i>Trichophorum alpinum</i>	SOC	
<i>Mimulus suksdorfii</i>	PSOC		<i>Trichophorum caespitosum</i>	SOC	
<i>Mimulus washingtonensis</i>	SOC		<i>Trichophorum punilum</i>	SOC	
<i>Najas guadalupensis</i>	SOC		<i>Trifolium eriocephalum</i>	SOC	
<i>Nymphaea leibergii</i>	SOC		<i>Triglochin scilloides</i>	SOC	
<i>Ophioglossum pusillum</i>	SOC		<i>Utricularia intermedia</i>	SOC	
<i>Oxytropis parryi</i>	SOC		<i>Vaccinium myrtilloides</i>	SOC	
<i>Pedicularis crenulata</i>	SOC		<i>Veratrum californicum</i>	SOC	
<i>Penstemon whippleanus</i>	SOC		<i>Wolffia columbiana</i>	SOC	
<i>Peritoma lutea</i>	SOC		<i>Zeltnera exaltata</i>	PSOC	
<i>Phegopteris connectilis</i>	SOC				
<i>Phippsia algida</i>	SOC				
<i>Plagiobothrys leptocladus</i>	SOC				
<i>Polygonum austinae</i>	PSOC				
<i>Potamogeton obtusifolius</i>	SOC				
<i>Potentilla plattensis</i>	SOC				
<i>Primula alcalina</i>	SOC				
<i>Primula incana</i>	SOC				
<i>Psilocarphus brevissimus</i>	SOC				
<i>Puccinellia lemmonii</i>	SOC				
<i>Quercus macrocarpa</i>	SOC				
<i>Ranunculus cardiophyllus</i>	SOC				
<i>Ranunculus grayi</i>	SOC				
<i>Ranunculus hyperboreus</i>	PSOC				
<i>Ranunculus orthorhynchus</i>	SOC				
<i>Ribes laxiflorum</i>	SOC				
<i>Ribes triste</i>	SOC				
<i>Rorippa calycina</i>	SOC				
<i>Rotala ramosior</i>	SOC				
<i>Sagina nivalis</i>	SOC				

Appendix D

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