

# **Common Wetland Plants of Colorado's Southern Rocky Mountains A Pocket Guide**

**Prepared for:**

U.S. Environmental Protection Agency, Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129

**Prepared by:**

Denise R. Culver  
Colorado Natural Heritage Program  
Warner College of Natural Resources  
Colorado State University  
Fort Collins, CO 80523-1475

May 2018

*Dedicated to Sylvia "Tass" Kelso*



## Acknowledgements:

The *Common Wetland Plants of Colorado's Southern Rocky Mountains: A Pocket Guide* was funded by a U.S. Environmental Protection Agency, Region 8, Wetland Program Development Grant (CD 96852201) with oversight from Cynthia Gonzales, Penney Trujillo, and William Bunch. Colorado State University and The Nature Conservancy provided in-kind match.



Book Reviewers: Pam Smith, Sierra Crumbaker, Joanna Lemly, and Jill Handwerk  
Layout Assistance: Puja Gurung and Michael Menefee  
Graphic Expertise: Michael Menefee

Printed by: Frederic Printing, Aurora, Colorado

Front Cover Photograph: Headwaters of Middle Fork South Platte River, Denise Culver  
Back Cover Photograph: Loveland Pass, Tom Lebsack

Email: [Denise.Culver@colostate.edu](mailto:Denise.Culver@colostate.edu)  
<https://www.cnhp.colostate.edu>

© 2018 by Denise R. Culver. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO.

# Contents

Acknowledgements.....	iii
Introduction to Southern Rocky Mountain Wetlands.....	1
Wetland Definitions.....	3
Wetland Plants and Families.....	5
Aquatics.....	5
Poaceae-Grass Family.....	6
Juncaceae-Rush Family.....	7
Cyperaceae-Sedge and Bulrush Families.....	8
Monocot Herb Families.....	9
Dicot Herb Families.....	10
Woody Plant Families.....	11
How to Use the Pocket Guide.....	12
Species Profile Key.....	13
Other Resources.....	16
<b>AQUATICS.....</b>	<b>17</b>
<b>FERN &amp; FERN ALLIES.....</b>	<b>48</b>
<b>GRASSES.....</b>	<b>50</b>
<b>RUSHES.....</b>	<b>67</b>
<b>SEDGES.....</b>	<b>79</b>
<b>MONOCOT HERBS.....</b>	<b>117</b>
<b>DICOT HERBS.....</b>	<b>128</b>
<b>WOODY PLANTS.....</b>	<b>268</b>
Glossary.....	301
Credits.....	307
References.....	311
Index.....	316

# Introduction to Southern Rocky Mountain Wetlands

The *Common Wetland Plants of Colorado's Southern Rocky Mountain Wetlands: A Pocket Guide* builds upon the Colorado Natural Heritage Program's (CNHP) ongoing effort to provide wetland professionals and the general public with essential tools to identify and assess Colorado's wetland resource. The Southern Rocky Mountain Pocket Guide follows the well-received *Common Wetland Plants of Colorado's Eastern Plains: A Pocket Guide* (Culver 2014) and was produced concurrently with the *Common Wetland Plants of Colorado's West Slope: A Pocket Guide* (Culver 2018). The pocket guide format is an easy-to-use resource for field identification, providing pertinent information on wetland indicator status, nativity, protection, and conservation. For a comprehensive guide to all of Colorado's wetland plants, refer to the *Field Guide to Colorado's Wetland Plants: Identification, Ecology and Conservation* (Culver and Lemly 2013) or download the free Colorado Wetlands App.

The Southern Rocky Mountains (SRM) ecoregion encompasses the U.S. Army Corp of Engineers Western Mountains, Valleys, and Coast (WMVC) geographic region (Figure 1). The SRM encompasses 53 peaks over 14,000 feet, 637 summits over 13,000 feet, countless alpine cirques, glacial moraines, and mountain valleys. The area covered in this Pocket Guide ranges from the Park Range in Jackson County to the San Juan Range in Archuleta County, from the foothills of the Front Range, 6,000 feet (1829 meters) and above, to the west slope of Colorado 5,000 feet (1524 meters) and above. The SRM includes the headwaters of four major rivers: Colorado (Gunnison, White-Yampa, Dolores, San Juan), North/South Platte, Arkansas, and Rio Grande Rivers.

There are four major intermountain basins or valleys within the SRM: North Park, Middle Park, South Park, and the San Luis Valley. North Park contains numerous riparian and marsh wetlands that have formed within the floodplain of the North Platte headwaters and its tributaries. North Park is the "moose viewing capital of Colorado." I would argue that North Park is the willow viewing capital as well! The headwaters of the Colorado and Middle Park are located in Grand County. South Park includes the headwaters of the South Platte, which support a range of wetlands from extreme rich fens to playas. The San Luis Valley includes the Rio Grande headwaters and is the largest mountain park in Colorado. For the WMVC, the total wetland acres, excluding river channel and lakes, is 893,749 acres or 2.9% of total land cover in the WMVC. Table 1 is a summary of the National Wetland Inventory (NWI) classification (Cowardin et al. 1979) for the WMVC.

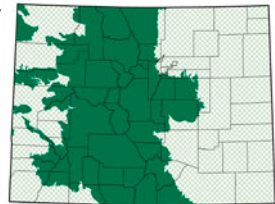


Figure 1. Geographic Range included in Pocket Guide.

Table 1. Summary of NWI classification for WMVC (excluding river and lake types).

NWI Classification Type	Acres
Emergent	618,621
Shrub-Scrub	209,855
Forested	13,420
Pond	44,281
Other	7,572

Wetland types range from narrow forested bands along first-order streams to large, mountain meadows, shrub wetlands, wetland forests, and fens. Riparian wetlands, dominated by willows and cottonwoods, occur along moving water with seasonal flooding. This wetland type is commonly recognized by floodplain and streambank vegetation. Riparian wetlands are integral for nutrient cycling, food chain support, and fish, bird, and other wildlife habitat. Naturally occurring marsh wetlands form in depressions created by landscape processes such as water, wind, or past glacial activity. They typically contain deep water in spring and early summer, with emergent vegetation along banks. Marsh wetlands provide habitat for fish, waterfowl, and shorebirds. Inter-dunal wetlands located in the Great Sand Dunes National Park and Preserve, occur among the sand dunes, supported by groundwater discharge. Human-made wetlands are located throughout the SRM. They are essential for waterfowl and other wildlife habitat. These wetlands are especially visible in North Park and the San Luis Valley. Wet meadows, dominated by grasses and sedges, have saturated soils in early summer, drying by mid-summer. Wet meadows, the most common wetland type, provide habitat and forage for wildlife and birds from irrigated pastures to alpine cirques.

Fens, peat-accumulating wetlands, are groundwater fed, thus creating anaerobic conditions during the growing season, preventing plant decomposition. Fens are further classified as poor, iron, intermediate, rich, and extreme rich. These terms refer to the levels of nutrients or minerals (calcium, magnesium, etc.) in the soil water. Poor fens are similar to bogs, where pH and conductivity are low. Plants that thrive in these conditions include bladderwort (*Utricularia* spp.) and sundews (*Drosera* spp.). Iron fens have low pH and are dominated by *Sphagnum* spp., appearing superficially like bogs. The acidity in iron fens is caused by the oxidation of iron pyrite ( $\text{FeS}_2$ ) in the surrounding bedrock, which releases sulfuric acid along with high concentrations of minerals, particularly iron, that give the water a reddish color. Iron fens only occur in mineral rich mountain areas in the SRM (e.g. San Juan Mountains, Elk Mountains, and Central Front Range). Intermediate and rich fens are found throughout the granitic subalpine zone at breaks in slopes, at the headwaters of streams, along spring-fed slopes, and in small, water-filled depressions formed by glaciers. Intermediate and rich fens are typically dominated by sedges and willows and the pH tends to be slightly acidic (5.0-6.5). Extreme rich fens are closely associated with calcium-rich sedimentary bedrock, such as limestone and dolomite. They have a basic pH greater than 7.0 and very high calcium concentrations that are tolerated by specialized plants or calciphiles. Extreme rich fens appear restricted to small areas in Colorado, primarily western Park County, northern Gunnison County, and eastern Lake County.



### A CLOSER LOOK

What is that smell?!

Have you ever smelled rotten eggs in a wetland and wondered why? If soil is saturated long enough the air pockets fill with water and the environment goes from aerobic to anaerobic. The smell is the result of microbes decomposing organic matter that releases electrons via microbial respiration. The rotten egg smell is the result of anaerobes reducing sulfate ion ( $\text{SO}_4^{2-}$ ) to hydrogen sulfide ( $\text{H}_2\text{S}$ ).

# Wetland Definitions

The word wetland encompasses many different habitats, but they all share a suite of common biotic and abiotic characteristics. Most importantly, all wetlands are ecosystems shaped by water. The federal regulatory definition of a wetland is used by the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (USEPA) to implement the dredge and fill permit system under Section 404 of the Federal Clean Water Act (CWA). According to this definition, wetlands are:

*“Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstance do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”*

For the Section 404 permitting program, wetland boundaries are determined according to mandatory technical criteria described in the **Corps of Engineers Wetlands Delineation Manual** (Environmental Laboratory 1987) and the **Western Mountains, Valleys, and Coasts Regional Supplement** (USACE 2010). In order for an area to be classified as a wetland, it must have *all* three of the following criteria: (1) predominance of wetland plants; (2) wetland hydrology; and (3) hydric soils.

The U.S. Fish and Wildlife Service (USFWS) defines wetlands from an ecological point of view. **Classification of Wetlands and Deepwater Habitats of the United States** (Cowardin et al. 1979) states:

*“Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.”*

According to this definition, wetlands must have *one or more* of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (wetland plants); (2) the substrate is predominantly un-drained hydric soil; and/or (3) the substrate is non-soil and is predominantly saturated with water or covered by shallow water at some time during the growing season of each year. This definition recognizes that some areas display many of the attributes of wetlands without exhibiting all three characteristics required to fulfill the USACE criteria. For example, riparian areas, which often do not meet all three USACE criteria, perform many of the same functions as other wetland types, including maintenance of water quality, storage of floodwaters and enhancement of biodiversity, especially in the western United States (National Research Council 1995). The USFWS definition is often used for wetland mapping and habitat management.

To create a common classification system for hydrophytic plant species, the USFWS developed the first National Wetland Plant List (Reed 1988). This list has been used extensively for wetland delineation, wetland restoration, wetland management, and for general botanical information about wetland plants. Over the years, modifications to the list have been proposed. In 2012, the USACOE produced a thoroughly revised version of the list and a process for periodic updates (Lichvar 2012). The most recent revision was released in 2016 (Lichvar et al. 2016).

The National Wetland Plant List relies on a five-tiered wetland indicator status rating system that describes the likelihood a plant occurs in wetlands as opposed to non-wetlands (Table 2). Each species on the list is rated independently for ten geographic regions within the United States and outlying territories (Lichvar and Minkin 2008), three of which occur within Colorado: Arid West (AW), Western Mountains, Valleys, and Coast (WMVC), and Great Plains (GP) (Figure 2).

Table 2. Wetland indicator status categories.

Indicator Code	Indicator Status	Comment
OBL	Obligate Wetland	Almost always occurs in wetlands.
FACW	Facultative Wetland	Usually occurs in wetlands, but may occur in non-wetlands.
FAC	Facultative	Occurs in wetland and non-wetlands.
FACU	Facultative Upland	Usually occurs in non-wetlands, but may occur in wetlands.
UPL	Obligate Upland	Almost never occurs in wetlands.
NI	No Indicator	Insufficient information available to determine indicator status

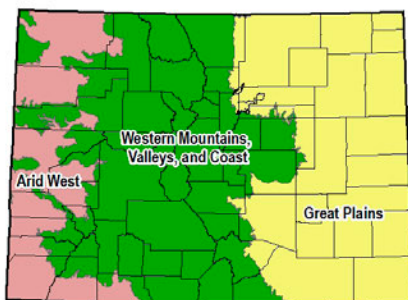


Figure 2. U.S. Army Corp of Engineers Geographic Regions within Colorado.



# Wetland Plants and Families

Plants are the most conspicuous component in a wetland. Because of this, wetlands are typically defined by their vegetation. A commonly used term for a wetland plant is hydrophyte; a plant that grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. Hydrophytes have evolved a number of adaptations for life in wet environments, including additional pore space, dimorphic leaves and complex rooting systems. Phreatophytes are deep-rooted woody plants (e.g., cottonwoods, alders or willows) that obtain a significant portion of their water from groundwater and are typically found along rivers and streams.

Keying out plants can be a daunting task even for professionals. Knowing the defining characteristics of the major plant families can make it less frustrating. Correct identification is crucial to making valid interpretations about wetland characteristics. Wetland plants reflect the condition of the wetland (highly impacted or lightly impacted) and the presence/absence of abiotic factors such as groundwater changes, soil types, or surface disturbance. For example, the presence of bulrushes (*Schoenoplectus* spp.), woody wetland plants, or duckweeds can indicate permanent saturation. The presence of purple loosestrife or cattails may indicate frequent or severe water level fluctuations or high nutrient inflow.

The following section is a brief overview of the major wetland plant families within the generalized sections of the Pocket Guide.

## Aquatic Plants

Aquatic plants are uniquely adapted to living in water. They lack cuticles that terrestrial plants need to prevent dehydration, thus absorbing nutrients and performing gas exchange over their entire surfaces. Water provides physical support, so aquatic plants do not have structural cells needed for growing upright. They need to stay afloat for sunlight and have developed large air spaces that link together to provide buoyancy. Aquatic plants are often slimy, covered with a layer of mucilage to avoid becoming supersaturated. They are further classified according to the following growth forms:

- **Emergent plants** are rooted in the soil with basal portions that typically grow beneath the surface of the water, but whose leaves, stems (photosynthetic parts), and inflorescences are extended out of the water. Common emergent plants are water plantains (*Alisma* spp.), smartweeds (*Polygonum* or *Persicaria* spp.), and cattails (*Typha* spp.).
- **Submerged plants** live in shallow waters, typically spending their entire life cycle beneath the surface of the water, with the possible exception of flowering. Common species include: aquatic buttercup (*Ranunculus aquatilis*), pondweeds (*Potamogeton* spp.), bladderworts (*Utricularia* spp.), pondweeds (*Potamogeton* spp.), water-starworts (*Callitriche* spp.), and waterweeds (*Elodea* spp.)
- **Floating plants** float on the water surface or occasionally within the water column, and take their nutrients directly from the water via suspended roots or osmotic processes. Examples include: duckweeds (*Lemna* spp., *Spirodela polyrrhiza*)



# Poaceae-Grass Family

Grasses are the world's third largest family. They occupy every continent and have contributed to important aspects of human civilizations in the form of easily domesticated, nutritional food (rice, corn, sugar) and feed for domesticated livestock. Grasses can be distinguished from other grass-like families by hollow, round stems that are jointed, the presence of a ligule, and reduced flowers with no petals, only two bracts (palea and lemma) (Figure 3). A defining feature for grass identification is the number of florets per spikelet and the arrangement of the spikelets on the rachis or stem. Each spikelet has 2 glumes and 1 or more florets. Each floret is surrounded by 2 floral bracts—the outer lemma and the inner palea (Figure 4). The evolution of grasses has led to reduced floral parts and size, mainly due to the fact that they are wind-pollinated and do not need to attract pollinators with showy flowers, for example the palea and lemma represent much-reduced sepals.

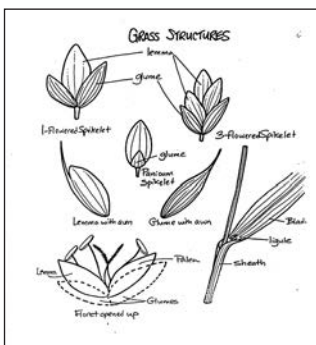


Figure 3. Grass Structures

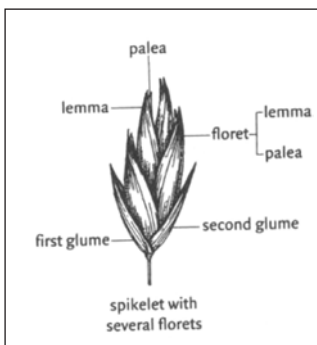


Figure 4. Grass floret.

The grass family is so large it has been divided into tribes. The common tribes, key characters, and corresponding genera found in the SRM include:

- Mannagrass tribe (Meliceae)—lemmas with prominent parallel venation, a closed leaf sheath, and a membranous ligule. Examples include: American mannagrass (*Glyceria grandis*) and fowl mannagrass (*G. striata*)
- Blue grass/oat grass tribe (Poeae)—membranous ligules, open sheaths, long awns (if present) from back of lemma, and inflorescence usually a panicle. Examples include: foxtail (*Alopecurus pratensis*), bluejoint (*Calamagrostis canadensis*), redbud (*Agrostis* spp.), and reed canarygrass (*Phalaris arundinacea*)
- Wheat grass tribe (Triticeae)—sessile spikelets with a tendency of narrow or awn-like glumes. Examples include: foxtail barley (*Hordeum jubatum*), western wheat (*Pascopyrum smithii*), and rye grasses (*Elymus* spp.)
- Salt grass tribe (Cynodonteae)—sheaths open, membranous ligules, and often ciliate around collar. Most genera grow on dry substrate, however salt grass (*Distichlis spicata*) grows on alkaline salt flats or in a ribbon along small creeks

# Juncaceae-Rush Family

The rush family is grass-like, with mainly linear, basal leaves that are either septate (divided by partitions) (Figure 5), sword-shaped or equitant, or flattened. Rushes have perfect flowers (with both stamens and pistil) (Figure 6) that are in head-like clusters, subtended by 1+ bracts. There are no differentiated sepals or petals; they are collectively defined as tepals, as in lilies. The identifying character is the capsule, however, with a hand lens, seeds can also be used for identification. Common rushes include: Baltic or arctic rush (*Juncus arcticus* ssp. *littoralis*), toad rush (*J. bufonius*), and Torrey's rush (*J. torreyi*).



Figure 5. Septate Leaf Blade.

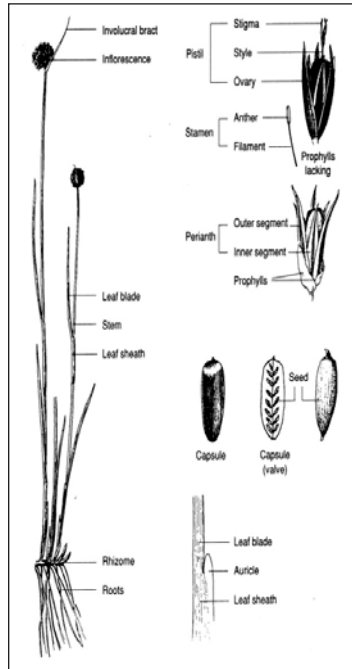


Figure 6. Rush Inflorescence and Floral Structures Hurd et al. 1994.

# Cyperaceae-Sedge and Bulrush Family

Sedges are also grass-like, but are distinguished by solid, triangular stems, 3-ranked leaves (at 90 degree angles), and closed leaf sheath. Sedges are important forage for birds, waterfowl and animals. They have been utilized by humans for hundreds of years as food, baskets, rope, sandals, and the original writing paper (*Cyperus papyrus*). In sedges (*Carex* spp.) the flowers are enclosed by a bract referred to as a perigynium, an important identifying character (See Figures 5, 6).

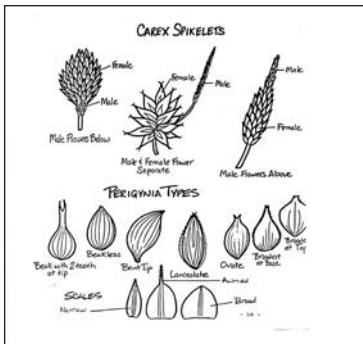


Figure 5. Sedge Spikelet Morphology

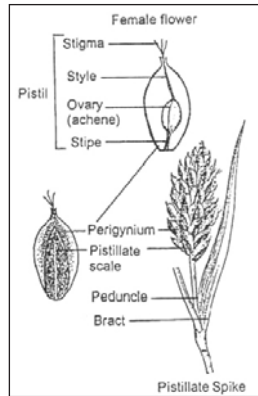
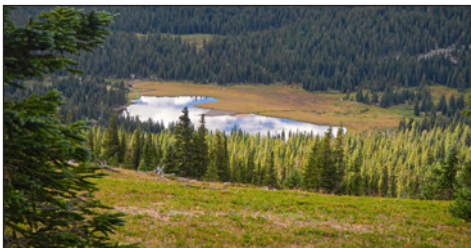


Figure 6. Female Flower.

The most commonly encountered genera on in the mountains are:

- Sedge (*Carex*)—perigynium closed, stems triangular, and ligule present. Perigynium are needed for accurate identification, as well as notes on growth form (i.e. bunch forming or rhizomatous). Common species include: beaked sedge (*C. utriculata*), Nebraska sedge (*C. nebrascensis*), meadow sedge (*C. praegracilis*), and woolly sedge (*C. pellita*)
- Spikerush (*Eleocharis*)—spikelet solitary and terminal, base of style persistent on the achene as a tubercle (cap), and no leaves. Common species include: common spikerush (*E. palustris*) and beaked spikerush (*E. rostellata*)
- Bulrush (*Scirpus* or *Schoenoplectus*)—stems either round (as in hard and soft bulrush) or triangular (as in common three-square), inflorescence subtended by one to several bracts, and 3-6 bristles. Common species include: hardstem bulrush (*Schoenoplectus tabernaemontani*) and common three-square (*S. pungens*).



Native Lakes, Lake County. Pam Smith

# Monocot Herb Families

Monocot means one (mono) seed leaf (cotyledon). One seldom sees the seed leaf, so there are other characteristics to distinguish a monocot from a dicot (Table 3). Monocot herbs exhibit the following characteristics: parallel leaf veins, flower parts in multiples of 3, and no woody or secondary growth. Common monocot families include:

- Iris family (Iridaceae)—perennial herb from rhizomes, leaves alternate, distichous (2-ranked) and equitant (sword-shaped), 6 tepals, and fruit a capsule. Examples include: Rocky Mountain iris (*Iris missouriensis*) and blue-eyed grasses (*Sisyrinchium* spp.)
- Lily family (Liliaceae/Ruscaceae/Melanthiaceae)—perennial herbs from bulbs, corms or rhizomes, leaves simple with parallel venation, and flower parts in 3s. Examples include: bog orchids (*Platanthera* spp.)
- Cattail family (Typhaceae)—semi-aquatic perennials from rhizomes, leaves 2-ranked, and terminal spikes with achenes. Three species occur in the SRM: broadleaf cattail (*T. latifolia*), southern cattail (*T. domingensis*), and the non-native narrowleaf cattail (*T. angustifolia*)

Table 3 . Monocot vs. Dicot Comparison.

	Monocot	Dicot
Cotyledon	One Seed Leaf	Two Seed Leaves
Leaf Venation	Parallel	Netlike
Stem Vascular Bundle Arrangement	Scattered	Ring
Root System	Fibrous	Taproot
Floral Part Arrangements	Multiples of 3s	Multiples of 4s or 5s

## A CLOSER LOOK

Plants with chemistry!

Alders, clovers, alfalfa, most legumes and even Russian olives have a common bacteria called *Rhizobium*, a symbiotic bacteria that infects the roots and uses the plant to help it draw nitrogen from the air ( $N_2$ ). the bacteria then converts this gas into nitrate ( $NO_2$ ) then into nitrate ( $NO_3$ ), a plant nutrient useful to the bacteria and then to the plant after root die-back. The fertilizer is then stored in the plant roots in a nitrogen nodule.

# Dicot Herb Families

Dicots have two (di) seed leaves (cotyledons). Leaf venation is net-like, flower parts are in multiples of 4 and 5, and woody or secondary growth that can be present. The common wetland plant families include:

- Carrot or Umbel family (Apiaceae)—leaves compound, inflorescence an umbel, and dry hard seeds (think of carrot seeds); can be edible or poisonous. Examples include: water hemlock (*Circuta maculata* var. *angustifolia*) and poison hemlock (*Conium maculatum*)
- Daisy or Composite family (Asteraceae)—flower heads composed of many small ray and disk flowers, flowers on receptacle surrounded by phyllaries, and fruits are achenes (Figure 7). Examples include: aster (*Symphotrichum* spp.), fleabane (*Erigeron* spp.), and groundsel (*Packera/Senecio* spp.)

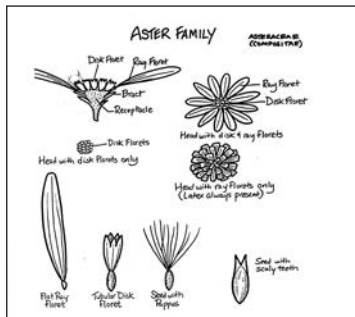


Figure 7. Aster Family Floral Illustration.

- Mustard family (Brassicaceae)—4 petals that are in a cross shape with 6 stamens (4 tall and 2 short), fruit a silique or silicle, and leaves with simple, forked or stellate hairs. Examples include: bittercress (*Cardamine* spp.), and yellowcress (*Rorippa* spp.)
- Goosefoot family (Chenopodiaceae)—small, green flowers lacking showy petals and succulent with scurfy hairs. Common species include: goosefoot (*Chenopodium* spp.) and seepweed (*Suaeda* spp.)
- Knotweed or Smartweed family (Polygonaceae)—small flowers, and most species with swollen nodes with a sheath (ocrea). Examples include: knotweed (*Polygonum* spp.), smartweed (*Persicaria* spp.), and dock (*Rumex* spp.)
- Buttercup family (Ranunculaceae)—radial or round flowers, 5 distinct sepals often showy, petals reduced, and waxy leaves. Examples include: buttercup (*Ranunculus* spp.) and columbine (*Aquilegia* spp.)
- Rose family (Rosaceae)—flowers radially symmetrical, 5 petals, many stamens, presence of a hypanthium (floral tube or cup), with or without thorns. Common species include: cinquefoil (*Potentilla*) and avens (*Geum* spp.)
- Snapdragon family (Scrophulariaceae/Plantaginaceae/Orobanchaceae/Phrymaceae)—the snapdragon family has recently undergone taxonomic revisions and is now divided into multiple families. Species that occur commonly in the mountains are monkey flower (*Mimulus* spp.) and speedwell (*Veronica* spp.)

# Woody Plant Families

Woody plants are characterized by woody stems and branches, and by buds that survive above ground in winter. Trees have a single, well-defined trunk, and shrubs have branched trunks. The most helpful characters for identification are the leaf and branch arrangements (opposite, alternate or whorled), leaf types (dissected, simple, serrate), and fruits.

Examples of common families and genera include:

- Maple family (Aceraceae/Sapindaceae)—opposite leaves palmately lobed or dissected and fruit is samara (winged). Examples include: boxelder (*Acer negundo*) and Rocky Mountain maple (*Acer glabrum*)
- Birch/alder family (Betulaceae)—monecious (male and female on same plant) shrubs, alternate leaves, and flowers in catkins with cone-like or papery bracts. Examples include: river birch (*Betula occidentalis*) and thinleaf alder (*Alnus incana*)
- Cottonwood family (Salicaceae)—trees or shrubs, simple leaves with alternate attachment on stem, flowers in drooping catkins, bud scales overlapping, dioecious (male and female on separate plants), and fruit a capsule (Figure 8). Examples include: narrowleaf cottonwood (*Populus angustifolia*) and Rio Grande cottonwood (*Populus deltoides* ssp. *wislizeni*)
- Willows family (Salicaceae)—typically shrubs (several trunks), buds 1-scaled, and catkins upright (Figure 9). There are numerous willows known from the SRM, including: geyer willow (*Salix geyeriana*), peachleaf willow (*S. amygdaloides*), coyote willow (*S. exigua*), and strappleaf willow (*S. ligulifolia*)

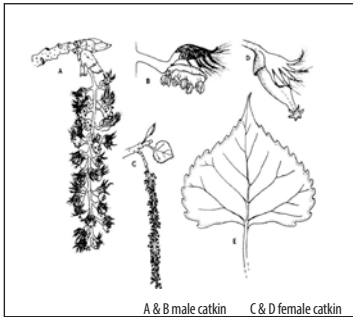


Figure 8. Cottonwood Inflorescence and Leaf.

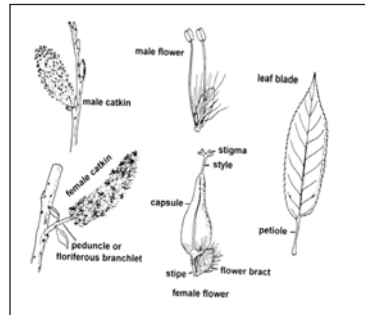


Figure 9. Willow Inflorescence and Leaf.

- Oleaster family (Elaeagnaceae)—trees and shrubs with silver, peltate hairs, 4 sepals, and with or without thorns. Two species occur frequently in the mountains: Russian olive (*Elaeagnus angustifolia*) that has alternate leaves and white berries; and silver buffaloberry (*Shepherdia argentea*) with opposite leaves and red berries
- Tamarisk family (Tamaricaceae)—tamarisks (*Tamarix chinensis* and *T. parviflora*) are non-native shrubs or trees, with pink flowers of four or five petals that can produce copious amounts of seeds

# How to Use the Pocket Guide

## Species Included in the Book

Unlike the *Field Guide to Colorado's Wetland Plants* (Culver and Lemly 2013), which focused only on FACW and OBL species, the Pocket Guide includes many FAC and FACU species that are commonly encountered in Southern Rocky Mountain wetlands. The 2016 National Wetland Plant List (Lichvar et al. 2016) and records in SEINet ([www.swbiodiversity.org](http://www.swbiodiversity.org)) with at least 10 records or more in the database formed the basis for the list of species covered in the *Field Guide to Colorado's Wetland Plants*. The associated database was queried for species that occur in the mountains of 42 counties at elevations above 5,000 ft. The result was 284 plant species selected for the Pocket Guide.

## Basic Organization

Major Wetland Plant Groups in the Pocket Guide:

1. Aquatics
2. Fern and Fern Allies
3. Grasses (Poaceae)
4. Rushes (Juncaceae)
5. Sedges, Bulrushes, and Spikerushes (Cyperaceae)
6. Monocot Herbs
7. Dicot Herbs
8. Woody Plants

The book contains detailed descriptions, photos and illustrations, but no dichotomous keys. Users can pair this field guide with dichotomous keys, such as Weber and Wittmann (2012) or Ackerfield (2015), to ensure that species not represented in this book are also considered. Species descriptions are broken down into eight sections according to habitat and external appearance (physiognomy) (Table 4). Each section is noted with a different color along the margins of the page for easy reference. Within each section, plant descriptions are sorted alphabetically by family first, followed by genus, and species.

Table 4. List of major plant groups and number of species in the Pocket Guide.

Section	Number of Species
Aquatics	31
Fern and Fern Allies	2
Grasses	20
Rushes	12
Sedges	37
Monocot Herbs	11
Dicot Herbs	139
Woody Plants	32
Total Species	284



# Species Profile Key

1 ***Eleocharis acicularis* (L.) Roem. & Schult.**  
Needle spikerush

Cyperaceae

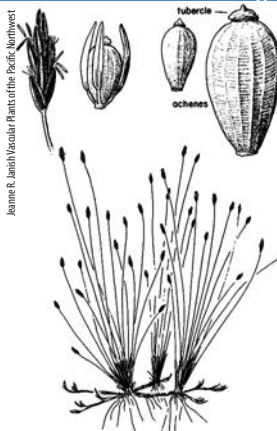
2



Steve Matson CalPhotos



Hurd et al. in prep. U.S. Forest Service



Joanne R. Jansh/Vascular Plants of the Pacific Northwest

3

4

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Annual, Perennial  
**Elevation:** 3,500 ft. - 10,170 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ELAC

5a-5h

6

**Key Characteristics:**

- ◆ Diminutive, from slender, branching rhizomes, often forming dense clumps
- ◆ Culms filiform, not compressed, 0.3–1.2 dm tall
- ◆ Floral scales 1.5–2.5 mm long, with greenish midribs; stigmas 3
- ◆ Bristles 3 or 4 equaling or surpassing achene; achenes white to pale gray or yellowish
- ◆ Achenes with tubercles forming distinctive cap, 8- to 18-ribbed connected by cross-ridges

7

**Similar Species:** *Trichophorum pumilum*, only known from South Park, has a terminal, solitary spikelet that resembles *E. acicularis*. *T. pumilum* has true leaves, not just sheaths, and the achenes are black. *E. wolfii* looks similar, but is rare, known only from northeastern Colorado. It is distinguished by the compressed culms with minutely serrulate margins.

8

**Habitat and Ecology:** Very common along marshes, muddy shores and fens, from plains to high elevations in mountains.

9

**Comments:** *Eleocharis acicularis* provides habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

**1. Scientific Name:** USDA-NRCS PLANTS National Database (2018) is the primary nomenclature for scientific names, as it is widely used and readily available (<http://plants.usda.gov/>). This nomenclature differs in some instances from state-based floras (e.g., Weber and Wittmann 2012, Ackerfield 2015), but is best for comparing across state borders and between various national datasets.

**2. Common Name:** Common names are generally derived from USDA-NRCS PLANTS National Database. In cases where there is more than one common name, both are listed.

**3. Family Name:** The primary family name is derived from PLANTS National Database. If a species is treated in a different family in one of the state floras or in the Flora of North America (1993 +), the alternate family name is listed in parenthesis.

**4. Photos and Illustrations:** Each species includes photos or illustrations that highlight the most diagnostic characteristics of the plant. Photos and illustrations were compiled from numerous sources, which include many talented Colorado photographers, several internet-based photo databases, genera-specific photo collections of herbaria specimens, and botanical illustrators from around the country.

**5a. Wetland Status:** The wetland indicator status reflects the likelihood that a particular plant occurs in a wetland or upland (see Table 2 on page 4). This information is both of general interest and specifically needed for wetland delineation. The wetland indicator rating status used in this guide is from the 2016 National Wetland Plant List published by the U.S. Army Corps of Engineers and is specific to the the Western Mountains, Valleys, and Coast (WMVC) Region within Colorado.

**5b. Native Status:** Native status denotes whether a plant is considered native, non-native, or, in limited cases, both native and non-native. Native status used in this guide is derived from PLANTS National Database, which largely considers whether a plant is native to the contiguous United States. There is considerable debate among taxonomic experts on the origin of certain plant species. Where there is debate about whether a species is native to Colorado, we have included that information in the comments section.

**5c. Conservation Status:** Conservation status refers to the Natural Heritage Network ranking system of global and state rarity. Every species is ranked on a Global (G) and Subnational/State (S) level. The basic ranks used to classify species and ecosystems are shown in Table 5. Additional ranks and associated criteria used by the Natural Heritage Network are available at: <http://www.natureserve.org/>.



Ptarmigan Lakes, Chaffee County. Denise Culver

Table 5. Natural Heritage Network ranking system.

Rank	Interpretation
G1/S1	Critically Imperiled (typically 5 or fewer occurrences or less than 1,000 individuals)
G2/S2	Imperiled (typically 6 to 20 occurrences or between 1,000 and 3,000 individuals)
G3/S3	Vulnerable to Extirpation (typically 21 to 100 occurrences or between 3,000 and 10,000 individuals)
G4/S4	Apparently Secure (usually more than 100 occurrences and more than 10,000 individuals)
G5/S5	Demonstrably Widespread, Abundant, and Secure (typically with considerably more than 100 occurrences and more than 10,000 individuals)
GNR/SNR	Not Ranked (not enough information is available on which to base a rank)
GNA/SNA	Not Applicable (rarity ranking is not applicable because the species is not native to the state)

**5d. C-Value:** The C-value or “coefficient of conservation”, which represents the estimated probability that a species occurs in a landscape ranging from a gradient of pristine to disturbed (Swink and Wilhelm 1979; Swink and Wilhelm 1994). C-values range from 0-10 (Table 6). C-values of 0 are always reserved for non-native species. Within native species, C-values of 7 or higher are assigned to species that are obligate to high-quality natural areas and sensitive to sudden alterations to natural ecological processes and disturbances. C-values of 3 or less are assigned to species commonly found in disturbed areas. The average C-value of a plant community assesses the degree of “naturalness” based on the presence or absence of conservative species and provides a powerful and relatively easy assessment of biotic integrity. C-values for Colorado species were assigned by a panel of botanical experts, as described in Rocchio (2007).

Table 6. C-Value ranking system.

C-Values	Interpretation	Examples (C-Values)
0	Non - native species. Very prevalent in new ground or non-natural areas.	Watercress ( <i>Nasturtium officinale</i> ) (0)
1-3	Commonly found in non-natural areas	Water plantain ( <i>Alisma trivale</i> ) (3)
4-6	Equally found in natural and non-natural areas.	Woolly sedge ( <i>Carex pellita</i> ) (6)
7-9	Obligate to natural areas but can sustain some habitat degradation	Sea milkwort ( <i>Glauca maritima</i> ) (7)
10	Obligate to high quality natural areas (relatively unaltered from pre-European settlement).	Oil shale columbine ( <i>Aquilegia bamebyi</i> ) (10)

**5e. Duration:** Indicates if a species is typically annual, biennial, perennial, or some combination of the three. This information is derived from PLANTS National Database.

**5f. Synonyms:** Major synonyms are listed for each species. A special effort was made to include all names used by Weber and Wittmann (2012), Ackerfield (2015), and the most recent Flora of North America treatments (Flora of North America 1993+).

**5g. USDA PLANTS Symbol:** The USDA PLANTS Symbol is the unique alpha-numeric symbol for each species used within PLANTS National Database. The symbols begin with the first two letters of the genus name and the first two letters of the species name, followed by the first letter of the subspecies or varieties, if applicable. If the letters in any code are the same for more than one taxon, a number is included at the end of the code to make each code unique.

**6. Key Characteristics:** The key characteristics include up to five bullets that detail the most important and distinguishing characteristics of the species and is perhaps the most useful section of the guide. In general, the first bullet describes overall plant size, plant habit, stem characteristics, and rooting structure. The second bullet describes the most important features of the leaves, including the size, shape, position on the plant, presence of hairs, etc. If there is more than one type of leaf, both are described in detail. Remaining bullets describe important features of the inflorescence, flowers and flower parts, and seeds. The key characteristics vary by family and genus, as each has particular characteristics of importance. The **bolded** characters are diagnostic.

**7. Similar Species:** Species that could be easily mistaken for the main species are described in this section along with their distinguishing characteristics.

**8. Habitat and Ecology:** This section describes the general habitat and ecology of the species

**9. Comments:** Additional information in this section can include: management recommendation (e.g., if the plant is a preferred species for moist soil management or revegetation), important noteworthy facts that could include information on wildlife use, ethnobotanical use, origins of the plant name, and evolutionary strategies of the plant or plant family, and comments about nativity or nomenclature.

## Other Resources

Several books are extremely helpful in identify Colorado plants.

- *The Flora of Colorado* (Ackerfield 2015) includes species descriptions and distribution maps.
- *Colorado Flora: Western Slope* by Bill Weber and Ron Wittmann (2012) is a handy field key.
- *Sedges of Colorado* (Wingate 2017) is a must have for all botanists, especially wetland scientists.
- *Grasses of Colorado* (Shaw 2008) includes comprehensive descriptions, distribution maps, and illustrations.
- *Trees and Shrubs of Colorado* (Carter 2006) include descriptions and illustrations.
- *The Plant Identification Terminology* by Harris and Harris (2003) is an illustrated glossary that is very useful.

**Please visit CNHP's Colorado Wetland Information Center  
([www.cnhp.colostate.edu/cwic](http://www.cnhp.colostate.edu/cwic)) for comprehensive information on wetland  
mapping, assessment, classification  
and conservation.**

# *Alisma triviale* Pursh

Northern water plantain

Alismataceae



Neal Kramer CalPhotos



Amadej Irnkozcy CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



JRJ

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 3  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 10,000 ft.  
**Synonyms:** *Alisma plantago-aquatica* L. ssp. *brevipes* (Greene) Sam.  
**USDA PLANTS Symbol:** ALTR7

### Key Characteristics:

- ◆ Aquatic, emergent, 2–6 (12) dm tall arising from short, crowded, fleshy rhizomes
- ◆ Leaves basal, shorter than the inflorescence; **blades 2–20 cm wide**, ovate; petioles sheathing, 3-15 (20) cm long
- ◆ Flowers 1- few whorls forming a diffuse panicle; scape 10–50 cm long excluding inflorescence
- ◆ Flowers numerous, diffuse; sepals obtuse; **petals white, 3.5–6 mm; pedicels 1–4 cm long; fruiting heads 4–7 mm in diameter**
- ◆ Achenes arranged in a single ring, 2–2.5 mm long, usually 3 ribbed with a central groove near tip; beaks erect

**Similar Species:** *A. gramineum* leaves are linear, less than 3 cm wide and achenes have 2 distinct grooves.

**Habitat and Ecology:** Common in wet places such as along pond shores, in ditches and marshes and on mud flats, rarely in deep water.

**Comments:** Alismataceae is considered to be one of the most primitive monocots due to the retention of of ancestral characters e.g., numerous pistils and numerous stamens. Achenes are eaten by waterfowl and small mammals.

# *Sagittaria cuneata* Sheldon

Arrowleaf arrowhead

Alismataceae



Trent M. Draper CalPhotos



Louis M. Landry CalPhotos



Jeanne R. Janish Vascular Plants of the Pacific Northwest

JR2

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 3,500 ft. - 10,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** SACU

## Key Characteristics:

- ◆ Aquatic, emergent, 1–11 dm tall; rhizomes absent, stolons and corms present
- ◆ Submerged leaf blades sagittate to 45 cm long, floating to 100 cm long; emergent petioles recurved
- ◆ Inflorescence equaling leaves, sparsely flowered, lower whorls female, upper whorls male
- ◆ **Sepals recurved, ovate, 4–9 mm long;** petals white, 7–19 mm long; anthers longer than filaments
- ◆ Fruiting heads globose, 5–13 mm across; **achene beaks straight, minute, 0.1–0.4 mm long**

**Similar Species:** *S. breviostra* also has erect achene beaks, but they are recurved, not straight and prominent (up to 1.7 mm long). *S. latifolia* achene beaks are horizontal, not erect.

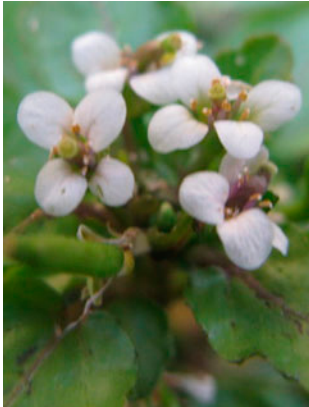
**Habitat and Ecology:** Common along shorelines and slow-moving streams and in swampy places, especially in sandy soils. *S. cuneata* is extremely variable. On emergent plants, the leaf petioles are often bent toward the ground. Submerged plants often grow from a basal rosette with a long, flexuous petiole and a floating, sagittate leaf.

**Comments:** The small, flattish seeds of arrowheads are eaten by ducks and the tubers are valuable to many species of wildlife. Muskrat, beaver and porcupine are known to eat the tubers.

# *Nasturtium officinale* W.T. Aiton

Watercress

Brassicaceae

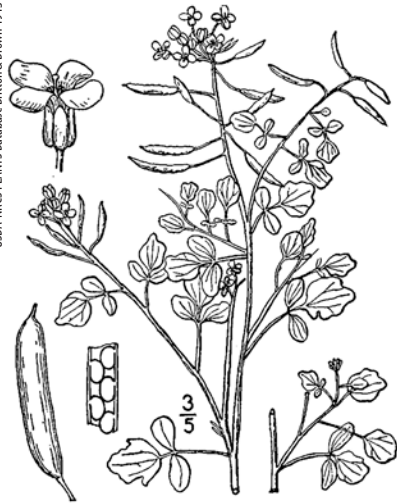


Thomas Stoughton CalPhotos



Louis M. Landry CalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** OBL  
**Native Status:** **Non-native**  
**Conservation Status:** GNR  
**C-Value:** 0  
**Duration:** Perennial  
**Elevation:** 4,100 ft. - 9,300 ft.  
**Synonyms:** *Rorippa nasturtium-aquaticum* (L.) Hayek  
**USDA PLANTS Symbol:** NAOF

## Key Characteristics:

- ◆ Aquatic or sub-aquatic herbs from fibrous rooted rhizomes, forming dense colonies in streams
- ◆ Stems 1–6 dm long, hollow, arising from rhizome nodes, rooting when in contact with wet ground

- ◆ **Leaves 2–6 cm wide, pinnately compound with 1–9 pairs;** petioles auriculate at the bases
- ◆ Flowers white, sometimes tinged with purple
- ◆ **Siliques 10–18 mm long x 1.8–2.6 mm wide, broadly linear;** styles 0.7–1.1 mm long

**Similar Species:** *Rorippa* spp. occur in similar habitats, but have siliques that are ovate or globose.

**Habitat and Ecology:** Common in slow-moving streams, ditches and along lake margins.

**Comments:** *N. officinale* is native to Eurasia, imported to United States as a cooking herb. It is a widespread aquatic plant that has become naturalized in wetlands. Widely used as a salad herb for the spicy, peppery flavor, it is grown commercially in the United States. It also contains high concentrations of vitamins and minerals. Watercress has a long history of medicinal use for a variety of ailments.

## *Callitriche palustris* L.

Vernal water-starwort

Callitrichaceae (Plantaginaceae)

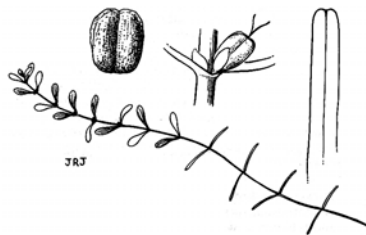


Max Licher Arizona State University Herbarium



© Susan McDougall  
Susan McDougall USDA-NRCS PLANTS Database

Jeanne R. Janish Vascular Plants of the Pacific Northwest  
Gary Fewell University of Wisconsin-Green Bay



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 4,850 ft. - 12,000 ft.

**Synonyms:** *Callitriche palustris* L. var. *verna* (L.)

Fenley ex Jeps., *Callitriche verna* L.

**USDA PLANTS Symbol:** CAPA52

### Key Characteristics:

- ◆ Submerged, stems 1–2 dm long, elongate, delicate
- ◆ Submerged leaves sessile, linear, 0.5–1.5 cm long and up to 1 mm wide
- ◆ Floating leaves broader, spatulate to obovate, up to 5 mm wide; blades 3-nerved

**Similar Species:** *C. heterophylla* has smaller fruits (0.6–1.2 mm long) and pits on fruit are not aligned in vertical rows. *C. hermaphroditica* has only submerged linear leaves.

**Habitat and Ecology:** Common in slow-moving streams, ditches and along lake margins.

**Comments:** Provides forage and cover for young fish and aquatic insects. Ducks eat seeds and foliage.



# *Ceratophyllum demersum* L.

Hornwort or coon's tail

Ceratophyllaceae



Neal Kramer CalPhotos



John Hiilty Illinois Wildflowers

## Key Characteristics:

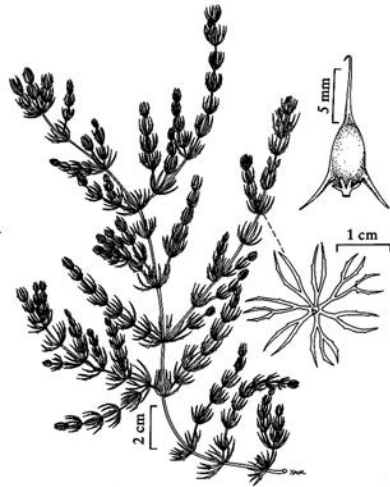
- ◆ Submerged, light green to brown, heavily branched stems, to 2 (3) m long; tips appear bushy
- ◆ Leaves whorled, dichotomously branched with narrow, linear divisions, margins serrate
- ◆ Flowers, if present, small, sessile, located in leaf axils, involucre of 8–15 linear bracts
- ◆ Fruits rarely produced, dark green, round with 3 narrow spines, 2 cm long including spines

**Similar Species:** *Ranunculus aquatilis* looks similar, but has alternate leaves and white, 5-parted flowers. *Myriophyllum spicatum* has roots and pinnate leaves, appearing more feathery and limp when held out of the water.

**Habitat and Ecology:** Common in lakes, ponds, irrigation ditches, and slow-moving streams. Can become dominant in warm, nutrient-rich waters. Hornwort stores energy as oils and may cause natural oil slicks when it decays.

**Comments:** *C. demersum* provides fall forage for waterfowl and can occur as dense mats, providing cover for aquatic insects. Hornwort is theorized to be one of the oldest living angiosperms, with fossil evidence dating back to the Cretaceous Period.

Yevonn Wilson-Ramsey Flora of North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 1

**Duration:** Perennial

**Elevation:** 3,500 ft. - 9,500 ft.

**Synonyms:** *Ceratophyllum apiculatum* Cham.

**USDA PLANTS Symbol:** CEDE4

# *Myriophyllum sibiricum* Kom.

Shortspike watermilfoil

Haloragaceae

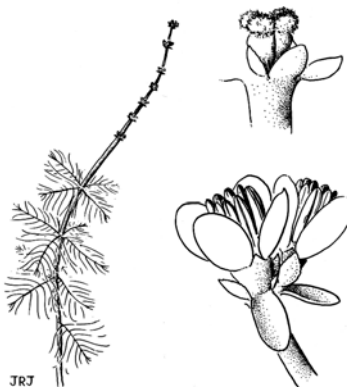


Louis M. Landry CalPhotos



George W. Hartwell CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



JRJ

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 3

**Duration:** Perennial

**Elevation:** 4,870 ft. - 11,590 ft.

**Synonyms:** *Myriophyllum exalbescens* Fernald,  
*Myriophyllum spicatum* L. ssp. *exalbescens* (Fernald)  
Hultén

**USDA PLANTS Symbol:** MYSI

## Key Characteristics:

- ◆ Submerged, stems stout, whitish or tan; forms turions, that appear as condensed areas of leaves
- ◆ Leaves whorled, stiff, 5–9 pairs of leaflets per leaf, lower leaflet pairs longer than those at the tip
- ◆ Inflorescence a terminal spike; floral bracts entire to serrate, shorter than flowers
- ◆ Staminate flowers 4, pink petals; pistillate flowers without sepals or less than 0.5 mm long
- ◆ Fruits to 3 mm across, 4-parted, smooth or slightly rough

**Similar Species:** *M. verticillatum* has strongly dissected floral bracts that are feather-like and the staminate flowers have yellowish-green petals. *M. sibiricum* can be confused with the noxious weed, *M. spicatum*. *M. spicatum* is less stout, limp when out of water, with 12–21 leaflet pairs that are of more uniform size, producing a square leaf tip rather than a pointed leaf tip.

**Habitat and Ecology:** Common in ponds, lakes, muddy shores and still-moving waters. Excessive growth can be indicative of excess nutrients.

**Comments:** *Myriophyllum sibiricum* is recommended as a beneficial plant for waterfowl, especially mallards who are largely vegetarian, due to its palatability and nutritional value.

# *Hippuris vulgaris* L.

Common mare's-tail

Hippuridaceae (Plantaginaceae)

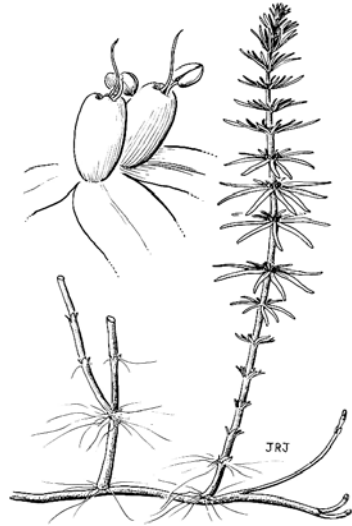
Jeanne R. Janish Vascular Plants of the Pacific Northwest



Denise Culver Colorado Natural Heritage Program



Scott Smith



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,680 ft. - 10,800 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** HIVU2

### Key Characteristics:

- ◆ Emergent and submergent, stems erect, limp when submerged, unbranched, hollow; roots at the nodes
- ◆ **Submerged leaves sessile, in whorls of 6–12, soft, pale green, to 5 cm long**
- ◆ Emergent leaves 1–3 cm long, thicker and firmer

**Similar Species:** *Elodea* spp. has whorled leaves as well, but they are all submerged, often with folded edges and the flowers are produced on long stalks.

**Habitat and Ecology:** Common in ponds and lakes, emergent or sometimes completely submerged.

**Comments:** Seeds and vegetation eaten by waterfowl. Provides shelter for small animals and invertebrates.

- ◆ Flowers small, inconspicuous, in leaf bases; petals and sepals reduced to a tiny rim
- ◆ Fruits clustered in bases of emergent leaves, mature fruit about 2 mm long

# *Elodea canadensis* Michx.

Canadian waterweed

Hydrocharitaceae

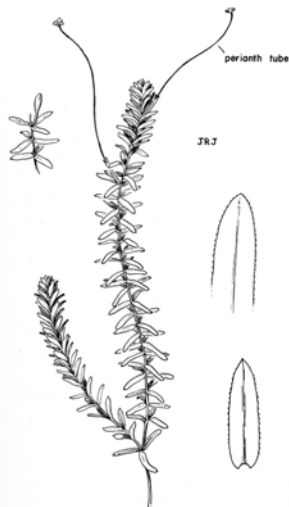


Louis M. Landry CalPhotos



Kristian Peters Flickr Creative Commons

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 3

**Duration:** Perennial

**Elevation:** 4,000 ft. - 9,500 ft.

**Synonyms:** *Anacharis canadensis* (Michx.) Planch.,

*Elodea brandegeae* H. St. John

**USDA PLANTS Symbol:** ELCA7

## Key Characteristics:

- ◆ Submergent, stems terete, slender, freely branched; winter buds may be present
- ◆ **Leaves in 3s at nodes, to 13 mm long, 1.5-3 mm wide, tips taper to blunt points, appear crowded near tips**

**Similar Species:** *E. bifoliata* has opposite leaves and seeds that are densely covered with hairs. *E. nuttallii* has narrower leaves (less than 1.7 mm wide). *Hippuris vulgaris* has whorled leaves as well, but leaves are more robust, thicker and the flowers and/or fruits are clustered in leaf bases not on stalks.

**Habitat and Ecology:** Found in ponds, sloughs and lakes; tolerant of polluted and eutrophic waters.

**Comments:** *E. canadensis* is an important part of freshwater ecosystems providing good habitat for many aquatic invertebrates and cover for young fish and amphibians.

# *Isoetes bolanderi* Engelm.

Bolander's quillwort

Isoetaceae

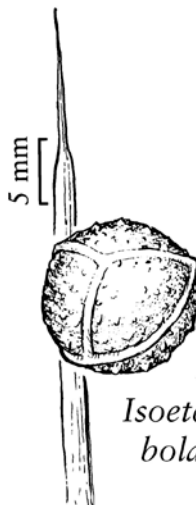


Steve Matson CalPhotos



Steve Matson CalPhotos

Laurie Lange eFloras of North America



*Isoetes  
bolanderi*

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G4

**C-Value:** 10

**Duration:** Perennial

**Elevation:** 8,200 ft. - 11,680 ft.

**Synonyms:** *Isoetes bolanderi* Engelm. var. *pygmaea* (Engelm.) Clute, *Isoetes pygmaea* Engelm.

**USDA PLANTS Symbol:** ISBO

## Key Characteristics:

- ◆ Submerged fern-allies, occasionally emergent, **grass-like appearances**
- ◆ Rootstocks nearly globose, 2-lobed
- ◆ Leaves bright green, spirally arranged, to 20 cm long, pliant, abruptly tapering to fine tip
- ◆ Membrane covering less than half of sporangium, wall brown-streaked
- ◆ **Megaspores white, 0.3–0.5 mm across, wrinkled to bearing tubercles**

**Similar Species:** *I. occidentalis* has megaspores that are wider (0.5–0.7 mm wide), with high ridges or jagged crests. *I. tenella* has distinctive megaspores that have thin, sharp spines.

**Habitat and Ecology:** Found rooted in muddy bottoms in shallow alpine or subalpine lakes. Most common quillwort in Colorado.

**Comments:** Deer feed on the leaves and muskrats and waterfowl eat the fleshy corms. Quillworts are intolerant of nutrient enrichment and can be an indicator of good water quality. It is common to see numerous plants that have been uprooted by wave action floating on the surface.

## *Lemna minor* L. Common duckweed

Lemnaceae (Araceae)

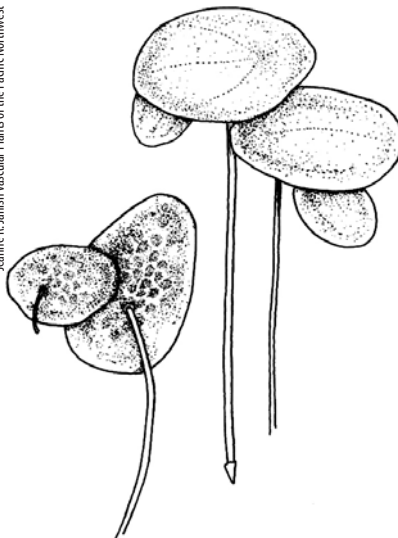


Steve Olson



Louis M. Landry CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 2

**Duration:** Perennial

**Elevation:** 3,500 ft. - 9,840 ft.

**Synonyms:** *Lemna turionifera* Landolt

**USDA PLANTS Symbol:** LEM13

### Key Characteristics:

- ◆ Free-floating, green, round leaves or fronds, 2–5 or more in coherent groups
- ◆ **Roots solitary on each frond, up to 15 cm long, tip mostly rounded**
- ◆ Fronds obovate, 3–6 mm long x 1.5–4 mm wide, essentially symmetrical
- ◆ **Fronds green above, tinged with red below, 3-nerved**
- ◆ Fronds rarely forming turions (winter buds)

**Similar Species:** *L. minuta* fronds are 1-nerved and do not turn red.

**Habitat and Ecology:** Commonly found in slow-moving streams, ponds and lakes. The most common duckweed in Colorado.

**Comments:** *Lemna minor* is recommended as a beneficial plant for waterfowl, especially mallards who are largely vegetarian, due to its palatability and nutritional value.

# *Utricularia macrorhiza* Leconte

Common bladderwort

Lentibulariaceae

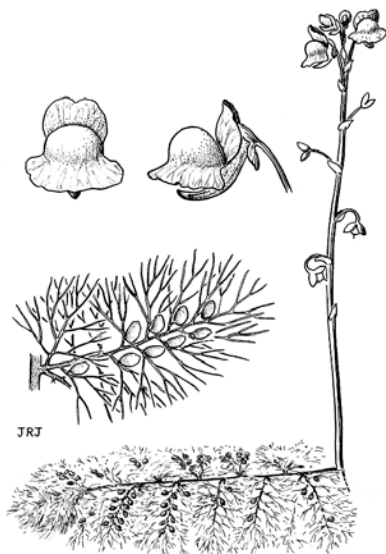


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



JRJ

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 6,500 ft. - 11,200 ft.

**Synonyms:** *Utricularia vulgaris* L. p.p.

**USDA PLANTS Symbol:** UTMA

### Key Characteristics:

- ◆ Submergent, carnivorous; stems 1 mm thick, turions 10–20 mm long, ovoid, appearing bristly
- ◆ Leaves large, ovate, 20–50 mm long, 2–3 times **pinnately divided with a main rachis**
- ◆ Ultimate leaf segments filiform, acuminate, terete; **bladders numerous on the leaves**
- ◆ Scapes emergent 8–25 (30) cm long, erect; pedicels becoming arched-recurved in fruit
- ◆ Flowers 8–20, corolla 12–18 mm long, yellow, lower lip 3-lobed, spurs 5–7 mm long

**Similar Species:** *U. macrorhiza* has the largest leaves of Colorado's bladderworts. The leaves are 2–3 times pinnately branched from a main rachis with rounded divisions. Other Colorado bladderworts are palmately divided without a main rachis and the divisions are flat. *U. intermedia* and *U. ochroleuca* have leaves and bladders that are on separate branches.

**Habitat and Ecology:** Found in shallow ponds, lakes, marshes, rills in fens and slow-moving streams. Most common bladderwort in Colorado.

**Comments:** Food and cover for fish, muskrats, waterfowl and aquatic invertebrates. The bladderworts are highly specialized, carnivorous plants that have evolved to thrive in nutrient deficient waters. They obtain nutrients through their bladders that open when activated by small prey (e.g., protozoa, water fleas and mosquito larvae) and then capture the prey along with water.

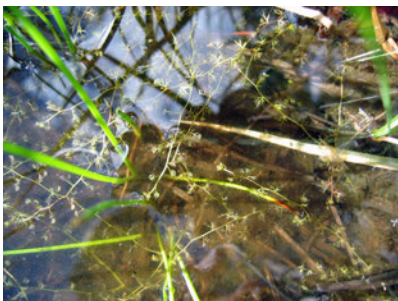
# *Utricularia minor* L.

Lesser bladderwort

Lentibulariaceae

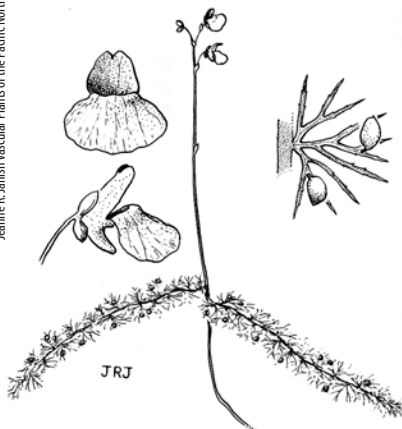


Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 7,500 ft. - 10,200 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** UTMI

## Key Characteristics:

- ◆ Submergent, carnivorous; turions 2.5–9 mm long, subglobose, bristly
- ◆ Leaves small, 2.5–10 mm long, 3 times **palmately divided from the base, without a main rachis**
- ◆ **Bladders 1–2 mm long, borne on some of the leaves**
- ◆ Scapes emergent, 10–25 cm long; pedicels becoming arched-recurved in fruit
- ◆ Flowers 2–9 in lax raceme; corolla 6–8 mm long, pale yellow, spurs reduced, 2.5–3 mm long

**Similar Species:** *U. macrorhiza* has much larger leaves and the other two bladderworts. *U. intermedia* has leaves and bladder traps on separate branches.

**Habitat and Ecology:** Uncommon in shallow ponds, pools and rills in fens.

**Comments:** Bladderworts provide food and cover for fish, muskrats, waterfowl and aquatic invertebrates. The bladderworts are highly specialized, carnivorous plants that have evolved to thrive in nutrient deficient waters. They obtain nutrients through their bladders that open when activated by small prey (e.g., protozoa, water fleas and mosquito larvae) and captures the prey along with surrounding water.



*Nuphar lutea* (L.) Sm. ssp. *polysepala* (Engelm.) E.O. Beal  
Rocky Mountain pond-lily

Nymphaeaceae



Denise Culver Colorado Natural Heritage Program

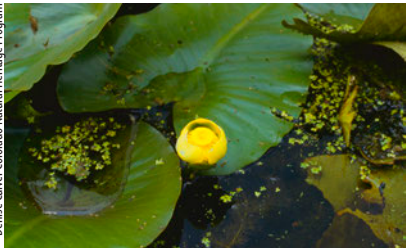


Denise Culver Colorado Natural Heritage Program

Yvonn Wilson-Ramsey, Flora of North America



Denise Culver Colorado Natural Heritage Program



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 8,000 ft. - 11,480 ft.

**Synonyms:** *Nuphar polysepala* Engelm.

**USDA PLANTS Symbol:** NULUP

**Key Characteristics:**

- ◆ Floating-leaves, fibrous roots with scaly, log-like rhizomes, 3–8 cm in diameter
- ◆ **Leaves floating, suborbiculate to ovate, margins entire, 10–40 (45) cm long x 7–30 cm wide**
- ◆ Flower and leaf stalks arise directly from the rhizome, green stems are leaf or flower stalks

**Similar Species:** *Nymphaea odorata*, a showy introduced plant, may occur in mountain ponds within residential subdivisions. It is distinguished by white petals, 4 sepals and cleft rounded leaves.

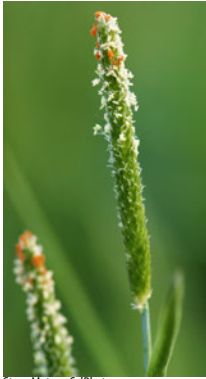
**Habitat and Ecology:** In Colorado, this is the only pond lily you will see in high altitude ponds and lakes.

**Comments:** Pond lilies are a food source for mammals and waterfowl and provide spawning habitat for fish. Native Americans used the rhizomes and seeds for food. Several cultures used parts of the plant for dyeing, tanning and medicinal purposes.

# *Alopecurus aequalis* Sobol.

Shortawn foxtail

Poaceae



Steve Matson CalPhotos



Keir Morse CalPhotos

### Key Characteristics:

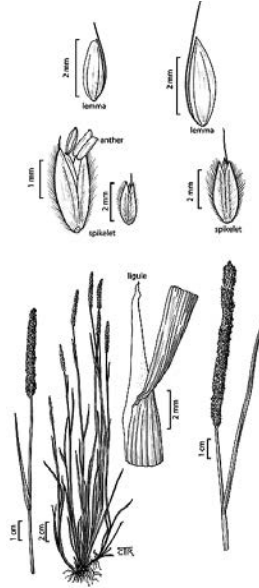
- ◆ Aquatic, grows in shallow water, tufted, occasionally rooting at nodes; culms erect, 1–5 dm tall
- ◆ Leaf sheaths open, glabrous; ligules membranous, 2–6.5 mm long; blades flat, 1–5 mm wide
- ◆ **Inflorescence a narrow panicle; spikelets 1-flowered, strongly flattened**

**Similar Species:** *A. geniculatus* also has obtuse glumes, but the lemma awns are geniculate and longer, up to 5 mm long. *A. pratensis* glumes are longer, 3–6 mm long, with acute tips.

**Habitat and Ecology:** Marshes, wet meadows, margins of lakes, ponds or streams from low elevations to subalpine.

**Comments:** Large herbivores, small mammals, waterfowl, and songbirds depend on grasses for food and nesting materials.

Cindy Talbot-Roché Manual of Grasses for North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 4,800 ft. - 11,480 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** ALAE

- ◆ **Glumes 1.8–3 mm long, 3-nerved, tips obtuse, keels ciliate, lateral nerves appressed-hairy**
- ◆ Lemmas 1.5–2.5 mm long, awn from below middle, straight, 0.7–3.0 mm; paleas lacking

# *Beckmannia syzigachne* (Steud.) Fernald

American sloughgrass

Poaceae



Crystal Strouse



Matt Lavin

Linda A. Vorobik (Manual of Grasses for North America)



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 4  
**Duration:** Annual  
**Elevation:** 5,000 ft. - 11,280 ft.  
**Synonyms:** *Beckmannia syzigachne* (Steud.) Fernald  
*ssp. baicalensis* (Kusnez.) Koyama & Kawano  
**USDA PLANTS Symbol:** BESY

## Key Characteristics:

- ◆ Aquatic, grows in shallow water, stout, erect, robust, **often stoloniferous**; culms 2–12 dm long, glabrous
- ◆ Leaf sheaths open; ligules 5–8.5 mm long, membranous; blades 8–10 cm long, flat, scabrous
- ◆ Inflorescence a narrow, **one-sided, panicle of closely imbricate spikelets**, 6–27 cm long

**Similar Species:** None.

**Habitat and Ecology:** Grows in wet meadows, irrigation ditches, floodplains, sloughs, and standing water from low elevations to montane.

**Comments:** Colonizer of recent sediment deposition along margins of freshwater lakes, ponds, marshes, wet meadows and lower gradient streams. It is eventually replaced by more aggressive riparian grasses and sedges. Considered palatable and a nutritious forage grass.

- ◆ Spikelets 1-flowered, 2.5–3.5 mm long, flat; **glumes 2.5–3.5 mm long, inflated, laterally compressed**
- ◆ Lemmas 3.5–3.5 mm long, acute, mucronate or awn-pointed

# *Catabrosa aquatica* (L.) P. Beauv.

Water whorlgrass

Poaceae



Matt Lavin



Matt Lavin

## Key Characteristics:

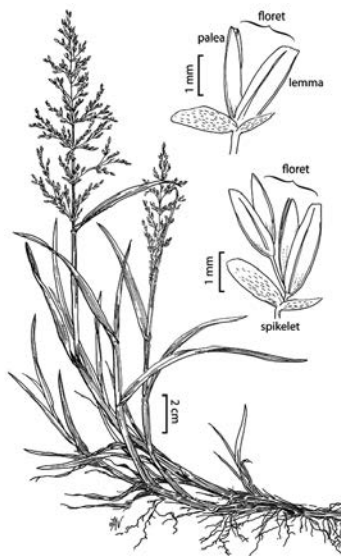
- ◆ **Stoloniferous, often aquatic; culms 1–5 dm long, rooting at nodes, decumbent at bases, glabrous**
- ◆ **Leaf sheaths closed; ligules 2–6 mm long, membranous; blades flat, wrinkled**

**Similar Species:** *Glyceria striata* spikelets contain more than two florets and the lemma has 7 nerves., not 3

**Habitat and Ecology:** Grows in standing or slow-moving water throughout Colorado, less common on the Eastern Slope.

**Comments:** *C. aquatica* is palatable, but it is never sufficiently abundant to be a dominant forage species. Global range is throughout North America.

Linda A. Vorobik/Manual of Grasses for North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 3,710 ft. - 10,800 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CAAQ3

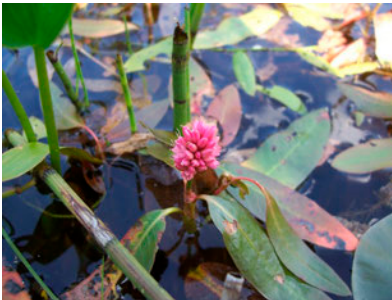
- ◆ Inflorescence an open panicle, 7–20 cm long; erect, oblong, or pyramidal; branches whorled, divergent
- ◆ Spikelets 2-flowered, 2.5–3.5 mm long; glumes short, truncate, scarios, smaller than flowers
- ◆ Lemmas 2–3 mm long with **3 prominent parallel** nerves, glabrous, truncate, apices erose

***Polygonum amphibium* L. var. *emersum* Michx**  
Longroot smartweed

Polygonaceae



Al Schneider Southwestern Colorado Wildflowers



Matt Below CalPhotos



USDA-NRCS PLANTS Database Britton & Brown 1913

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 3  
**Duration:** Perennial  
**Elevation:** 3,650 ft. - 10,660 ft.  
**Synonyms:** *Persicaria amphibia* (L.) Gray var. *emersa* (Michx.) J.C. Hickman, *Persicaria coccinea* (Muhl. ex Willd.) Greene  
**USDA PLANTS Symbol:** POAME

**Key Characteristics:**

- ◆ Emergent or submergent; rhizomes or stolons present
- ◆ Stems prostrate to ascending or erect, simple or branched, ribbed, glabrous or hairy; **ocrea (fused, sheathing stipules) 5-50 mm long**
- ◆ Leaf blades widest near the middle, not glandular-punctate below
- ◆ **Inflorescence a single, terminal raceme**
- ◆ **Perianth bright pink to red**

**Similar Species:** Water smartweeds, especially without flowering stems, can look like pondweeds (*Potamogeton* spp.). Pondweeds are monocots with parallel leaf veins, flowers are green and inconspicuous, not showy and pink as in smartweeds.

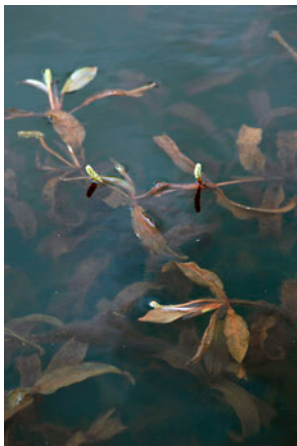
**Habitat and Ecology:** Found in shallow waters, margins of lakes and ponds and inundated meadows. *P. amphibium* var. *emersum* has two growth forms. The aquatic adapted plants have glabrous leaf blades with acute to rounded apices. **Terrestrial forms produce hairy, lanceolate leaf blades with pointed tips.**

**Comments:** *Polygonum amphibium* var. *emersum* is recommended as a beneficial plant for waterfowl, especially mallards who are largely vegetarian, due to its palatability and nutritional value.

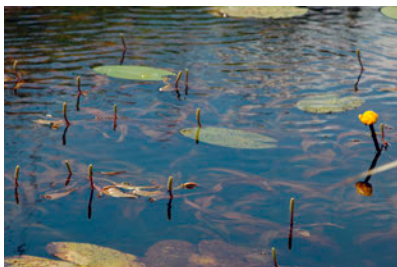
# Potamogeton alpinus Balbis

Alpine pondweed

Potamogetonaceae



A. S. Kers Flickr Creative Commons



A. S. Kers Flickr Creative Commons

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 6,800 ft. - 11,600 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POAL8

## Key Characteristics:

- ◆ Submergent, **stems reddish-brown**, to 20 dm; rhizomes present; turions absent
- ◆ **Submerged leaves linear-lanceolate, 4–18 cm long x 5–15 mm wide, 7 (11)-nerved; stipules free**

- ◆ Floating leaves, if present, thin, 4–6 cm long x 1–2 cm wide, 7- to 15-nerved, obtuse
- ◆ Spikes with 5–9 crowded whorls of flowers peduncles 3–15 cm long; peduncles 3–15 cm long
- ◆ Fruits olive, flattened, 2.5–3.5 mm long with 1 sharp ridge and 2 indistinct ridges; **beaks short, curved**

**Similar Species:** *Polygonum amphibium* var. *emersum* (a dicot) has a similar appearance, but has net-like leaf venation and a distinct leaf sheaths or ocreas present at the petioles.

**Habitat and Ecology:** Found in montane to subalpine ponds and lakes.

**Comments:** Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl.

**Potamogeton foliosus Raf.**  
Leafy pondweed

Potamogetonaceae



Neal Kramer CalPhotos



Keir Morse CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 4  
**Duration:** Perennial  
**Elevation:** 3,500 ft. - 10,400 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POF03

**Key Characteristics:**

- ◆ Submergent, stems compressed, 0.5–1 mm wide, freely branched, to 8 dm long
- ◆ Submerged leaves only, linear, 1.3–8.2 cm long x 0.3–2.3 mm wide, 1- to 5-nerved, basal glands absent; **stipules free; floating leaves similar to submerged leaves**
- ◆ Spikes short-cylindric, 1.5–7 mm long; peduncles usually clavate, stout, recurved, 3–10 mm long
- ◆ Fruits olive, 1.4–2.7 mm long, produced in a blocky cluster on a short stalk
- ◆ **Fruits with wavy dorsal keels; beak short**

**Similar Species:** *P. pusillus* has smooth, rounded fruits and glands that are usually present at the base of the stipules.

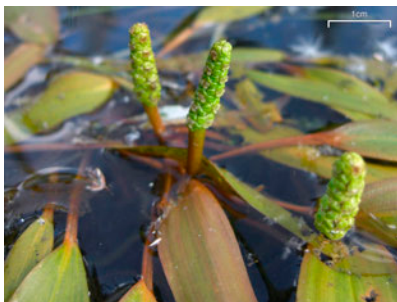
**Habitat and Ecology:** Found in ditches, shallow warm water ponds, lakes, springs and slow-moving streams.

**Comments:** *Potamogeton foliosus* is recommended as a beneficial plant for waterfowl, especially mallards who are largely vegetarian, due to its palatability and nutritional value.

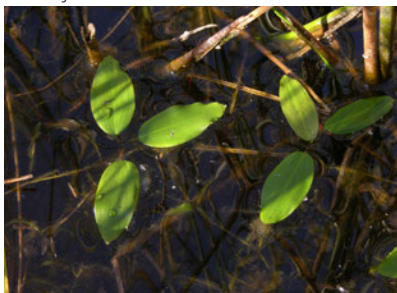
# Potamogeton gramineus L.

Variableleaf pondweed

Potamogetonaceae

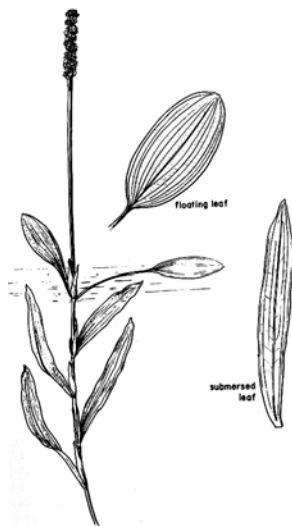


Jason Hollinger Flickr Creative Commons



Biopix

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 7,500 ft. - 10,000 ft.

**Synonyms:** *Potamogeton gramineus* L. var. *maximus*  
Morong

**USDA PLANTS Symbol:** POGR8

## Key Characteristics:

- ◆ Submergent, stems subterete, usually freely branched, to 8 dm long
- ◆ Submerged leaves 3–9 cm long x 3–15 mm wide, 3- to 7 (9)-nerved, acute to acuminate
- ◆ **Floating leaves very different from submerged,** 2–9 cm long x 1–3.5 cm wide; petioles 2–10 cm long; **stipules free, 0.5–3 cm long**

- ◆ Spikes dense, cylindrical, 1.5–3.5 cm long; peduncles stout, usually broadening upward
- ◆ **Fruits dull green, obovoid, 1.7–2.8 mm long, dorsal keels sharp, lateral keels obscure**

**Similar Species:** *P. illinoensis* has stems that are simple or just once branched and thicker (1–5 mm), the submerged leaves are 1.4–4 cm wide, 9- to 17-nerved and floating leaf blades are 4–41 cm long x 2–7 cm wide.

**Habitat and Ecology:** Common and widespread in lakes and ponds in mountains to subalpine.

**Comments:** Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. *P. gramineus* is common throughout the contiguous United States.



***Potamogeton nodosus* Poir.**  
Longleaf pondweed

Potamogetonaceae



Neal Kramer CalPhotos

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



John Hilty Illinois Wildflowers

Neal Kramer CalPhotos



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 3,500 ft. - 10,100 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** PONO2

**Key Characteristics:**

- ◆ Submergent, stems subterete, 1–2 mm thick, simple or seldom branched, to 1.5 m long
- ◆ **Submerged leaves, different from floating leaves, 10–20 (30) cm long x 1–2 cm wide, prominent mid-vein; petioles 4–10 cm long**
- ◆ Floating leaves 5–13 cm long x 2–4.5 cm wide; petioles winged, 5–20 cm long; **stipules free**
- ◆ Spikes cylindrical, usually 2–6 cm long; peduncles thicker than the stems, 3–15 cm long
- ◆ **Fruits reddish-brown**, obovoid, 2.7–4.3 mm long, dorsal keels sharp

**Similar Species:** *P. alpinus* has leaves that are red-tinged and tapering to the stem, rather than long-petiolate with mature spikes that are 3 cm long or less. *P. natans* has submerged leaves that are sessile and less than 1 cm wide.

**Habitat and Ecology:** Found in lakes, ponds and ditches.

**Comments:** Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Common throughout the contiguous United States.

# *Potamogeton praelongus* Wulfen

Whitestem pondweed

Potamogetonaceae



Jessica O'Brien CalPhotos

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



Kristian Peters Flickr Creative Commons

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 8,000 ft. - 10,600 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POPRS

## Key Characteristics:

- ◆ Submergent, stems whitish, 1.5–4 mm thick, 2–3 m long, **often zigzagged**
- ◆ Leaves all submerged, 10–25 (35) cm long x 1–3 cm wide, prominent midvein, rounded at tip
- ◆ Leaf margins entire, undulate, sessile, clasping; **stipules free, white, 2–8 cm long, fibrous**
- ◆ Spikes dense, cylindrical, 2.5–5 cm long; peduncles elongate, 10–40 cm long
- ◆ Fruits, typically above the water surface, greenish-brown, obovoid, 4–5 mm long, dorsal keels sharp; **beaks 1.5 mm, erect**

**Similar Species:** *P. richardsonii* looks similar, but does not have zigzag stems, the leaves have flat tips and the blades are mostly under 10 cm long with fruits less than 3.5 mm long.

**Habitat and Ecology:** Found in deep water in mountain lakes and ponds.

**Comments:** Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Global range from North America to Eurasia, south to California and Colorado.

**Potamogeton pusillus L.**  
Small pondweed

Potamogetonaceae

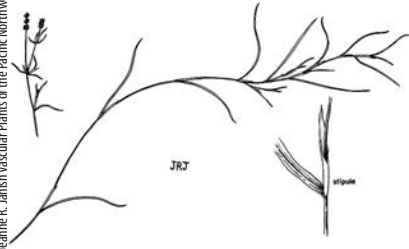


Neal Kramer CalPhotos



Neal Kramer CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest  
USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 10,600 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POPU7

**Key Characteristics:**

- ◆ Plants wholly emergent, stems terete, 0.1–0.7 mm thick, 2–15 dm long
- ◆ Leaves linear, 0.9–6.5 cm long x 0.2–2.5 mm wide, tapered, 2 globose glands present at bases
- ◆ Stipules free, brownish-green, 3–9 mm long, non-fibrous
- ◆ Spikes short-cylindric, under water surface, 1.5–10 mm long; floral whorls 1–3; peduncles 0.5–6 cm long
- ◆ Fruits green to brown, smooth, obliquely obovoid, 1.5–2.2 mm long, rounded back, concave on the sides

**Similar Species:** *P. foliosus* also has linear leaves that are submerged, but peduncles are much more stout and spikes are shorter (0.1–0.5 cm long) with 3–5 whorls of paired flowers. *Stuckenia* spp. leaves are channeled and the leaf sheaths are fused to the leaf blades 2/3 or more the length of the stipules and the peduncles does not project above water surface.

**Habitat and Ecology:** Found in shallow pools and shallow ditches.

**Comments:** Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Common throughout North America.

# *Potamogeton richardsonii* (Benn.) Rydb.

Richardson's pondweed

Potamogetonaceae



Graham Prichard Flickr Creative Commons



Frank Koshere University of Wisconsin-Green Bay

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 3,500 ft. - 11,500 ft.

**Synonyms:** *Potamogeton perfoliatus* L. ssp. *richardsonii* (Benn.) Hultén

**USDA PLANTS Symbol:** POR12

## Key Characteristics:

- ◆ Submergent, stems terete, 1–2.5 mm thick, 3–10 dm long, rarely zigzag
- ◆ Leaves all submerged, 2–10 cm long x 1–2.5 cm wide, strongly clasping
- ◆ **Stipules free, 1–2 cm long, early shredding into whitish fibers**
- ◆ Spikes dense, cylindrical, 1.5–4 cm long; peduncles strongly recurved in fruit, 2–10 cm long
- ◆ Fruits green to brown, obliquely obovoid, 2.5–3.5 mm long; beaks 1.5 mm or less long

**Similar Species:** *P. praelongus* is similar, but usually has distinct zigzag stems. *P. crispus* leaves are wavy and crispy when mature with serrate leaf margins.

**Habitat and Ecology:** Found in shallow ponds and lakes.

**Comments:** Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Common throughout Alaska, Canada south to Arizona and Colorado.

# *Stuckenia filiformis* (Pers.) Börner

Fineleaf pondweed

Potamogetonaceae



L. Watson and M.J. Dallwitz DELTA Database



Robert H. Mohlenbrock USDA-NRCS Western Wetland Flora

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 11,500 ft.  
**Synonyms:** *Potamogeton filiformis* Persoon  
**USDA PLANTS Symbol:** STF16

## Key Characteristics:

- ◆ Submergent, stems from buried rhizomes that produce tubers
- ◆ Leaves all submerged, 5–12 cm long x 0.2–2 mm wide, 1 (3)-nerved, **blunt-tipped**
- ◆ **Stipules adnate for 10 mm, forming a conspicuous ligule, 1–7 mm long**
- ◆ Spikes elongate, 1–5 cm long, with 2–5 whorls of flowers; peduncles slender, 2–15 cm long
- ◆ **Fruits olive-green, 2–3 mm long; beaks inconspicuous**

**Similar Species:** *S. pectinata* (= *Potamogeton pectinatus*) stipule sheaths are longer (2–3 cm long) and the leaf tips are sharp-pointed. *Potamogeton foliosus* also has linear leaves, but the peduncles are stouter and spikes are shorter (0.1–0.5 cm long) with 3–5 whorls of paired flowers. *P. pusillus* has smooth, rounded fruits and glands that are usually present at the base of the stipules.

**Habitat and Ecology:** Common in mountain lakes and slow-moving streams.

**Comments:** Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Common throughout Alaska, Canada, south to New Mexico, California, to upper midwest.

# *Stuckenia pectinata* (L.) Börner

Sago pondweed

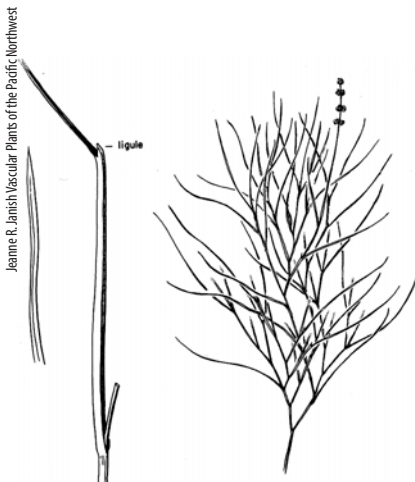
Potamogetonaceae



L. Watson and M.J. Dallwitz DELTA Database



Denise Culver Colorado Natural Heritage Program



Jeanne R. Janish Vascular Plants of the Pacific Northwest

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 3

**Duration:** Perennial

**Elevation:** 3,500 ft. - 10,790 ft.

**Synonyms:** *Potamogeton pectinatus* L.

**USDA PLANTS Symbol:** STPE15

## Key Characteristics:

- ◆ Plants wholly submerged, stems emerging from tubers at end of white rhizomes
- ◆ Leaves all submerged, branching, filiform to narrowly linear, 3–12 cm long x 0.2–1 mm wide, **with sharp pointed tip**

- ◆ **Stipules adnate to the base of the leaf blades for 2–3 cm, forming a short ligule, 1 mm long**
- ◆ Spikes elongate, 1–3 cm long, with 2–6 floral whorls; peduncles lax, filiform, to 15 cm long
- ◆ **Fruits yellowish to tawny, 2.7–4 mm long, egg-shaped, beaks short**

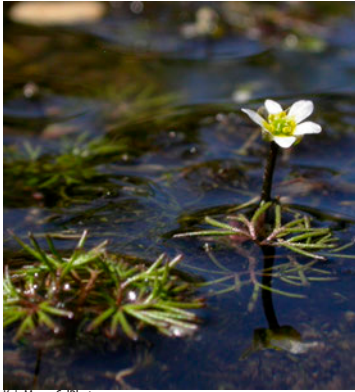
**Similar Species:** *S. filiformis* (= *Potamogeton filiformis*) occurs in similar habitats but has a longer ligule, up to 7 mm long and the leaves have blunt tips. *Potamogeton foliosus* has linear leaves, but the peduncles are stouter and spikes are shorter (0.1–0.5 cm long) with 3–5 whorls of paired flowers. *P. pusillus* has smooth, rounded fruits and glands that are usually present at the base of the stipules. Leaves are opposite or whorled, thread-like, tendril-like rhizomes and achenes that are curved with stout, horn-shaped beaks.

**Habitat and Ecology:** Commonly found in shallow mountain lakes and slow-moving streams. Leaves branch profusely like a wide fan, often spreading out along water surface.

**Comments:** *Stuckenia pectinata* is recommended as a beneficial plant for waterfowl, especially mallards who are largely vegetarian, due to its palatability and nutritional value.

***Ranunculus aquatilis* L.**  
White water crowfoot

Ranunculaceae

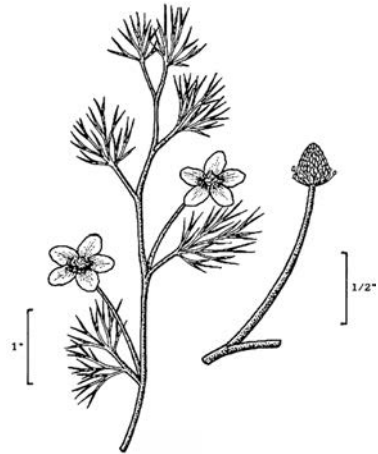


Keir Morse CalPhotos



Keir Morse CalPhotos

USDA-NRCS Wetland Flora



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 3  
**Duration:** Perennial  
**Elevation:** 3,500 ft. - 10,500 ft.  
**Synonyms:** *Batrachium circinatum* (Sibth.) Rchb. ssp. *subrigidum* (W. Drew) Å Löve & D. Löve, *Ranunculus longirostris* Godr., *Batrachium aquatile* (L.) Dumort., *Ranunculus trichophyllus* Chaix var. *hispidulus* (E. Drew) W. Drew  
**USDA PLANTS Symbol:** RAAQ

**Key Characteristics:**

- ◆ Submergent, except flowers; stems glabrous, forming dense mats
- ◆ Leaves sessile, all finely dissected into numerous filiform segments, less than 1 mm wide
- ◆ Receptacles rough with stiff hairs; sepals spreading or reflexed, glabrous; **petals 5, white, above water surface**
- ◆ **Fruiting pedicels recurved at fruiting time**
- ◆ Achenes cross-corrugated and pubescent; beaks persistent, filiform, 0.1–1.2 mm long

**Similar Species:** The leaves of *R. aquatilis* look like those of *Ceratophyllum demersum* or *Utricularia* spp. but if flowering, the white buttercup flowers are above the water surface which is diagnostic.

**Habitat and Ecology:** Common in ponds, streams and creeks. The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** Fruits and foliage of water crowfoot are a source of food for some waterfowl and provide food and shelter for fish and invertebrates. Common throughout southern Canada, south to California, east to Colorado.

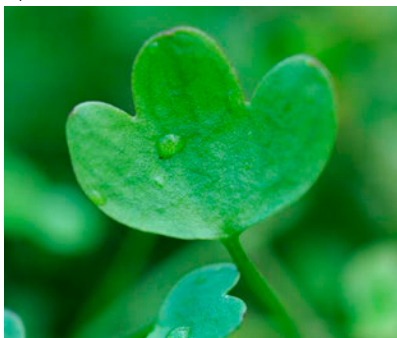
## *Ranunculus hyperboreus* Rottb.

High northern buttercup

Ranunculaceae

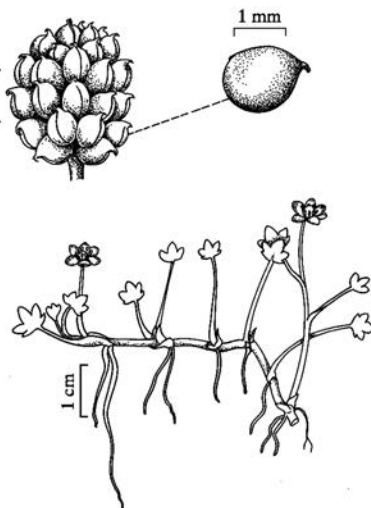


Biopix



Biopix

Yvonn Wilson-Ramsey, Flora of North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 5,500 ft. - 12,480 ft.

**Synonyms:** *Ranunculus hyperboreus* Rottb. ssp. *intertextus* (Greene) Kapoor & Å. Löve & D. Löve

**USDA PLANTS Symbol:** RAHY2

### Key Characteristics:

- ◆ Submergent, stems prostrate, glabrous, rooting at nodes
- ◆ Leaves 3–5 times ternately lobed, lobes entire and rounded, 0.3–1.2 cm long x 0.5–2.1 cm wide, either floating or stranded on mud
- ◆ Receptacles glabrous; sepals 3–4, spreading or reflexed from bases, 2–4 mm long x 1–3 mm wide
- ◆ Petals yellow, 3–4, 2–4 mm long x 1–3 mm wide; nectary scales poorly developed
- ◆ Heads of achenes globose, 3–5 mm long; achenes 1–1.4 mm long x 0.8–1.2 mm wide; beaks curved, 0.1–0.4 mm

**Similar Species:** *R. gmelinii* leaves are 3–5 times palmately divided, the lobes again 3–5 lobed, receptacles are pubescent and achene beak is 0.6–0.8 mm long.

**Habitat and Ecology:** Found floating in shallow subalpine ponds, rills in fens, along streams or stranded on mudflats. The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.



# *Sparganium angustifolium* Michx.

Narrowleaf bur-reed

Sparganiaceae (Typhaceae)



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

## Key Characteristics:

- ◆ Emergent to submergent stems slender, 3–10 dm long when floating, shorter and stouter in shallow waters
- ◆ **Leaves limp, usually floating**, unkeeled, rounded at back, flat to plano-convex, **3–10 dm long x (1)2–6 (8) mm wide**

**Similar Species:** *S. emersum* has at least some staminate heads that do not appear contiguous and the fruits are reddish to brown with longer beaks (2–4.5 mm long).

**Habitat and Ecology:** Common in shallow waters of mountain ponds and lakes.

**Comments:** *Sparganium angustifolium* is recommended as a beneficial plant for waterfowl, especially mallards who are largely vegetarian, due to its palatability and nutritional value. Common throughout Canada and western United States.

Jeanne R. Janish Vascular Plants of the Pacific, Northwest



JRJT

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 3,370 ft. - 11,900 ft.  
**Synonyms:** *Sparganium emersum* Rehmman var. *multipedunculatum* (Morong) Reveal  
**USDA PLANTS Symbol:** SPANZ

- ◆ Pistillate heads 2–5, sessile or short-stalked, 1–3 cm in fruit; stigmas 1
- ◆ **Staminate heads (1) 2–4, usually contiguous and appearing as one elongate head**
- ◆ Fruits 3–5 mm long, greenish, dull, **beaks (including stigmas) 1.5–2 mm long**

# *Sparganium emersum* Rehmann

European bur-reed

Sparganiaceae (Typhaceae)



Susan McDougall USDA-NRCS PLANTS Database



Steve Matson CalPhotos

## Key Characteristics:

- ◆ Submerged, inflorescences emergent, stiff, above water (1.5) 2–5 (10) dm tall
- ◆ Leaves erect or floating, stiff, keeled, flat, 2–5 (10) dm long x 6–12 (15) mm wide; bases triangular

**Similar Species:** *S. angustifolium* has staminate heads that are contiguous, appearing as one elongate head with leaves that are flat to plano-convex. *S. emersum* is distinguished by triangulate leaves, at least at the base, more numerous staminate heads, at least some of which are not contiguous, and by its greenish fruits with longer beaks. However, the two bur-reeds do hybridize, making positive identification difficult.

**Habitat and Ecology:** Not as common as *S. angustifolium*, found in shallow water of ponds and willow carrs.

**Comments:** Excellent food and habitat for waterfowl. Muskrats and deer eat the entire plant. *S. emersum* has a circumboreal distribution, occurring in Europe and North America. USDA-NRCS PLANTS Database lists it as non-native. Many authors consider it a naturalized species.

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** OBL

**Native Status:** Non-native

**Conservation Status:** GNR

**C-Value:** 0

**Duration:** Perennial

**Elevation:** 3,370 ft. - 10,130 ft.

**Synonyms:** *Sparganium simplex* Huds., *Sparganium angustifolium* Michaux ssp. *emersum* (Rehmann) Bradshaw

**USDA PLANTS Symbol:** SPEM2

- ◆ Pistillate heads 1–6, 1.6–3.5 cm across in fruit; stigmas 1
- ◆ Staminate heads 3–7, contiguous or not
- ◆ Fruits reddish-brown, beaks (including stigmas) 2–4.5 mm long; beaks straight or curved

***Zannichellia palustris* L.**  
Horned pondweed

Zannichelliaceae

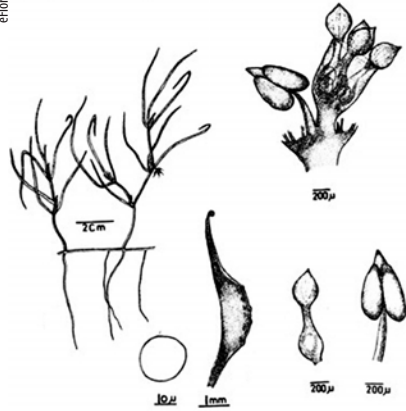


Graves Lovell Forestry Images



Graves Lovell Forestry Images

eFloras of China



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 2

**Duration:** Perennial

**Elevation:** 3,500 ft. - 10,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** ZAPA

**Key Characteristics:**

- ◆ Submerged, monoecious, with tendril-like roots and slender, delicate rhizomes
- ◆ Leaves opposite or whorled, 3–10 cm long with 1–3 veins, smooth margins, filiform, thread-like
- ◆ Stipules forming a sheath that is adnate to leaf bases
- ◆ Flowers highly reduced, 1 staminate and 4 (1–5) pistillate flowers at each node; perianth none
- ◆ Fruits are achenes, forms in leaf axils, flattened, slightly curved with stout, horn-shaped beaks

**Similar Species:** *Stuckenia pectinata* is similar in appearance, but leaves are slightly wider and the fruits are distinctly different. *Najas guadalupensis* has similar leaves, but with toothed margins and a shoulder at junction with stem. *Z. palustris* fruits are very distinct with the horned projections.

**Habitat and Ecology:** Found in slow-moving streams, ditches and along pond margins.

**Comments:** Provides food for waterfowl and small fish. Common through the contiguous United States.

# *Equisetum arvense* L.

Field horsetail

Equisetaceae



Louis M. Landry CalPhotos



Keir Morse CalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 4

**Duration:** Annual

**Elevation:** 5,000 ft. - 11,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** EQAR

## Key Characteristics:

- ◆ **Stems dimorphic-vegetative (sterile) stems green with whorls of branches at nodes** or fertile stems brown and unbranched
- ◆ Sheaths 5-10 mm long, greenish, teeth 1-3 mm long, persistent, firm, brown or black

- ◆ **Branches whorled**, ascending, 3-4 angled, solid, 1-1.5 mm thick
- ◆ **Strobili (cone structure)** 5-40 mm long

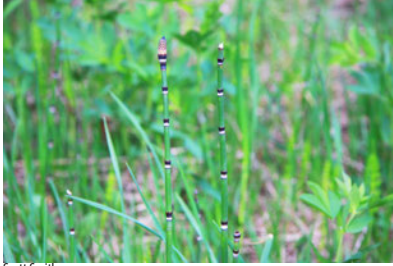
**Similar Species:** *Equisetum hyemale* var. *affine* stems are not whorled and leaf sheaths have a dark band.

**Habitat and Ecology:** Common in forests, along streams, on floodplains, and along pond margins. *Equisetum* spp. can absorb silicon from the soil.

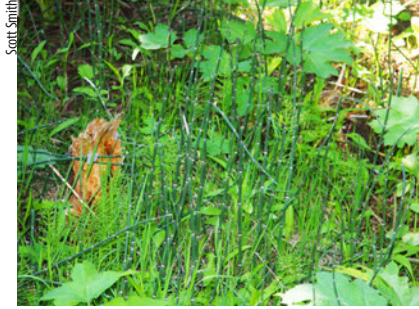
**Comments:** The fertile stems produced in early spring are light brown in color and non-photosynthetic. Scouringrush horsetails provide excellent cover for various kinds of wildlife, including waterfowl, small mammals, and insects. However, due to the tough stems and silica deposits, they have a low food value for mammals. Scouringrushes and horsetails have persisted since the Carboniferous Period, approximately 300 million years ago. Common throughout North America.

*Equisetum hyemale* L. var. *affine* (Engelm.) A.A. Eaton  
Scouringrush horsetail

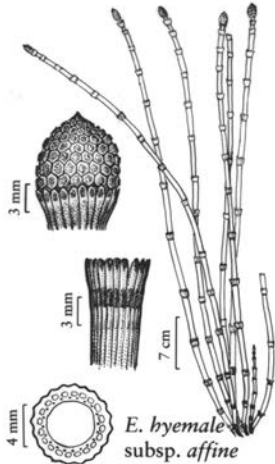
Equisetaceae



Scott Smith



Scott Smith



Laurie Lange eFloras of North America



Patrick Alexander USDA, NRCS PLANTS Database

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 4  
**Duration:** Perennial  
**Elevation:** 3,650 ft. - 10,140 ft.  
**Synonyms:** *Hippochaete hyemalis* (L.) Bruhin ssp. *affinis* (Engelm.) W.A. Weber  
**USDA PLANTS Symbol:** EQHYA

**Key Characteristics:**

- ◆ Aerial stems persisting more than year, 18–220 cm tall, **unbranched, ridges 14–50**
- ◆ **Mature sheaths dark-girdled at base, brown or gray above girdle, square**
- ◆ Sheaths 4.5–17 mm long x 3.5–18 mm wide
- ◆ **Teeth 14–50 per sheath, jointed, promptly shed or persistent**
- ◆ **Cone apices pointed;** spores green, spherical 1–2.5 cm long

**Similar Species:** *E. laevigatum* stems die back after one season, sheaths lack a dark band and cones are rounded not pointed at apices.

**Habitat and Ecology:** Found on wet sandy or gravelly substrates of ditches, roadsides and streamsides, often in dense colonies.

**Comments:** Scouringrush horsetails provide excellent cover for various kinds of wildlife, including waterfowl, small mammals, and insects. However, due to the tough stems and silica deposits, they have a low food value for mammals. Scouringrushes and horsetails have persisted since the Carboniferous Period, approximately 300 million years ago. Common throughout North America.

# *Agrostis humilis* Vasey

Alpine bentgrass

Poaceae



Matt Lavin



Steve Matson CalPhotos

Sandy Long Manual of Grasses for North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4  
**C-Value:** 10  
**Duration:** Perennial  
**Elevation:** 8,680 ft. - 13,000 ft.  
**Synonyms:** *Podagrostis humilis* (Vasey) Björkman,  
*Podagrostis thurberiana* (Hitchc.) Hultén  
**USDA PLANTS Symbol:** AGHU

## Key Characteristics:

- ◆ Tufted, occasionally with short rhizomes; **culms 0.5–6 dm long**, ascending to erect
- ◆ Leaf sheaths open; ligules 0.5–1.5 mm long, truncate, lacerate; blades mostly basal, flat or involute
- ◆ Inflorescence a panicle, narrow, loosely contracted, 2–15 cm long, lax or drooping

**Similar Species:** *A. humilis* can resemble *A. variabilis*. *A. variabilis* has a minute palea (0.2 mm) and the rachilla does not extend behind the palea. Many authors recognize *Podagrostis humilis* as the accepted name for *A. humilis* for consistency we are following USDA-NRCS PLANTS Database nomenclature. *Podagrostis* differs from *Agrostis* with the distinct characters of a relatively long palea and a prolongation of the rachilla beyond the floret base.

**Habitat and Ecology:** Found in wet meadows and tundra in subalpine and alpine zones.

**Comments:** Provides food and nesting material for small mammals, e.g., pika and songbirds.

# *Agrostis idahoensis* Nash

Idaho bentgrass

Poaceae



Steve Matson CalPhotos



Steve Matson CalPhotos

### Key Characteristics:

- ◆ Cespitose, **distinctly tufted**; culms erect, 0.5–4 dm tall
- ◆ Leaf sheaths open; ligules membranous, 1–3 mm long, obtuse, erose; blades 0.5–2 mm wide
- ◆ Inflorescence an **open panicle**, 2–12 cm long, branches forked below middle

**Similar Species:** *A. scabra* also has an awnless lemma, but the panicle is diffuse with long branches divided beyond the middle of rachis. *A. scabra* is taller, over 10 dm and is more common at lower elevations along roadsides and trails.

**Habitat and Ecology:** Grows in wet mountain meadows in subalpine and alpine zones.

**Comments:** Large herbivores, small mammals, waterfowl, and songbirds depend on grasses for food and nesting materials.

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Perennial  
**Elevation:** 7,350 ft. - 12,010 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** AGID

- ◆ Spikelets 1-flowered, purplish; glumes subequal, 1.5–2.5 mm long, lanceolate, 1-nerved
- ◆ Lemmas 1–2 mm long, 5-nerved, membranous, awnless or short awned

# *Alopecurus alpinus* Sm.

Boreal alopecurus

Poaceae

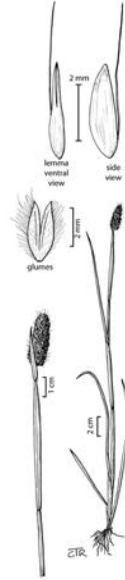


Daniella Longo Acta Plantarum (Italy)



Daniella Longo Acta Plantarum (Italy)

Cindy Talbot-Roché Manual of Grasses for North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 8,530 ft. - 12,800 ft.  
**Synonyms:** *Alopecurus alpinus* Sm. ssp. *glaucus* (Less.) Hultén, *Alopecurus magellanicus* Lam.  
**USDA PLANTS Symbol:** ALAL2

**Key Characteristics:**

- ◆ Rhizomatous or stoloniferous; culms 1–8 dm tall, erect to decumbent
- ◆ Leaf sheaths open, inflated, sometimes loosely separating from culms; blades flat, scabrous
- ◆ **Inflorescence a short, narrow, oblong panicle, 1–4 cm long, short pediceled**

- ◆ **Spikelets 1-flowered, strongly flattened, 3–5 mm long, densely woolly;** disarticulation below the glumes
- ◆ Glumes subequal, 3–5 mm long, densely villous; lemmas 2.5–4.5 mm long; awns, 2–6 mm long

**Similar Species:** *A. pratensis* also has woolly glumes, but has a much longer inflorescence up to 10 cm long, and occurs at lower elevations.

**Habitat and Ecology:** Grows along streams and in wet meadows at high elevations.

**Comments:** Global range is from Greenland to Alaska, south to Colorado, Utah and Wyoming. Provides food and nesting material for small mammals, e.g., pika and alpine songbirds.



***Alopecurus pratensis* L.**  
Meadow foxtail

Poaceae

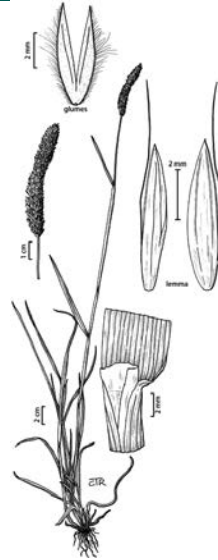


Steve Matson CalPhotos



Steve Hurst USDA-NRCS PLANTS Database

Cindy Talbot Roché Manual of Grasses for North America



**Wetland Status WMVC:** FACW  
**Native Status:** **Non-native**  
**Conservation Status:** GNR  
**C-Value:** 0  
**Duration:** Perennial  
**Elevation:** 3,280 ft. - 12,800 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ALPR3

**Key Characteristics:**

- ◆ Cespitose; culms 3–11 dm tall, erect, sometimes rooting at lower nodes
- ◆ Leaf sheaths open; ligules membranous, 1.5–3 mm long, obtuse; blades 6–40 cm long x 2–10 mm wide
- ◆ **Inflorescence a cylindrical panicle, short-pedicel spikelets, tightly contracted, 3.5–9 cm long**

- ◆ **Spikelets 1-flowered, strongly flattened, 4–6 mm long, disarticulation above the glumes**
- ◆ Glumes 4–5 mm long, apices acute, keels ciliate; lemmas 4–6 mm long, awns 5–8 mm long

**Similar Species:** *A. arundinaceus* can occur with *A. pratensis*, but the lemma apices are truncate, not acute, and the glume apices are divergent, not parallel. *Phleum pratense* also has a spike-like inflorescence, but the glumes are awned or horned, not the lemmas.

**Habitat and Ecology:** Frequently planted in hay meadows or road revegetation, then escaping to wet meadows adjacent to streams and ponds.

**Comments:** Large herbivores, small mammals, waterfowl, and songbirds depend on grasses for food and nesting materials.

# *Calamagrostis canadensis* (Michx.) P. Beauv.

Bluejoint

Poaceae



Denise Culver Colorado Natural Heritage Program



Matt Lavin

Cindy Tabor-Roché and Hana Pazdřiková Manual of Grasses for North America



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 5,300 ft. - 14,150 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CACA4

## Key Characteristics:

- ◆ Rhizomatous; culms 6–15 dm long, stout, erect, glabrous
- ◆ Leaf sheaths glabrous; ligules 3–8 mm long, membranous; blades flat, lax, scabrous
- ◆ Inflorescence a panicle, open, 8–25 cm long; spikelets 1- to 2-flowered, 3–4.5 mm long

- ◆ **Glumes as long as spikelet, lanceolate, keels scabrous; callus hairs as long or longer than lemma**
- ◆ Lemmas as long as glumes, (0.2) 1.2–2 (3) mm long, with awns 1.2–2 mm long

**Similar Species:** *C. stricta* can occur with *C. canadensis*. It has a narrower panicle versus an open panicle and the callus hairs are shorter.

**Habitat and Ecology:** One of the most common riparian grasses in the mountains and in North America, occurring along mountain streams, edges of lakes and ponds from foothills to subalpine.

**Comments:** *C. canadensis* provides forage for wildlife and livestock. It can form dense stands that are often used for hay. It is frequently used for restoration for streambank stabilization.

***Deschampsia cespitosa* (L.) P. Beauv.**  
Tufted hairgrass

Poaceae



Max Licher Arizona State University Herbarium



Max Licher Arizona State University Herbarium

**Key Characteristics:**

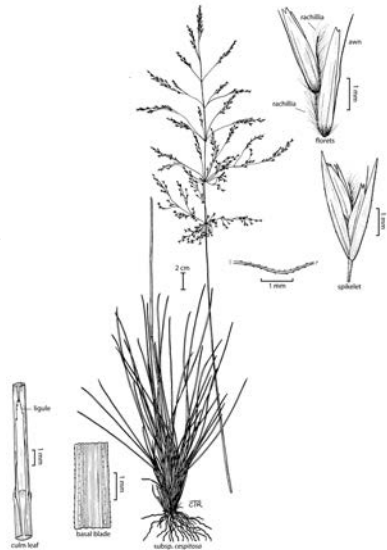
- ◆ Densely tufted; culms 1–15 dm tall, ascending to erect; leaves mostly basal, glabrous
- ◆ Leaf sheaths open; ligules 2–13 mm long; blades firm, usually flat or folded, scabrous
- ◆ Inflorescence a panicle, 8–40 cm long, open, spreading, **salt and pepper coloration, long hairs visible along rachilla**

**Similar Species:** *Vahlodea atropurpurea* (= *D. atropurpurea*) is found in similar habitats. It is distinguished from *D. cespitosa* with glumes longer than flowers, lemmas awned from the middle and few-flowered inflorescences.

**Habitat and Ecology:** Commonly occurs in wetlands to grassy openings from foothills to alpine.

**Comments:** An important forage grass for large animals and appears to decrease under extreme grazing. *D. cespitosa* is an aggressive riparian zone grass that eventually replaces tall sedges as sediment builds banks or fills in ponds. Globally common throughout Alaska, Canada and northern and western United States.

Cindy Talbot-Roché Manual of Grasses for North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 4  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 14,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** DECE

- ◆ **Spikelets 2- to 3-flowered, shiny, usually purple; glumes 2–7 mm long, purple band; callus villous**
- ◆ Lemmas 2–5 mm long, shiny, glabrous, 5-nerved; awns 1–8 mm long from bases,

# *Distichlis spicata* (L.) Greene

Saltgrass

Poaceae



Steve Matson CalPhotos



Steve Matson CalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 3,400 ft. - 9,000 ft.

**Synonyms:** *Distichlis spicata* (L.) Greene ssp. *stricta* (Torr.) Thorne, *Distichlis stricta* (Torr.) Rydb.

**USDA PLANTS Symbol:** DISP

## Key Characteristics:

- ◆ Strongly rhizomatous; culms prostrate to decumbent to erect, 1–6 dm tall
- ◆ Leaf sheaths open, margins and throats with tuft of hairs at collar; blades stiff, involute, white midveins
- ◆ Inflorescence a panicle of 4–10 digitally arranged branches, linear, 3–16 cm long
- ◆ Spikelets dioecious, 5- to 20-flowered, pistillate spikelets green, disarticulation above the glumes; staminate spikelets straw-colored, not disarticulating
- ◆ Glumes unequal, glabrous; lemmas acute, 3–6 mm long with yellow coarse margins; no awn

**Similar Species:** *D. spicata* is very distinctive with its rhizomatous growth habit, compressed spikelets, and hairy collars.

**Habitat and Ecology:** Commonly found along roadsides, playas, seeps, springs and mineral (alkaline) soil flats on both Eastern and Western Slopes.

**Comments:** Saltgrass is a warm season grass that is very tolerant of saline and sodium soils. It is an important forage for large animals. Saltgrass is a larval host plant for many skipper butterflies, including the San Luis Valley sandhills skipper (*Polites sublet ministigma*). It is also an important food for waterfowl and small mammals. The genus name refers to the Latin *distichus* or *distichous* meaning arranged in two opposite rows.

# *Glyceria borealis* (Nash) Batchelder

Small floating mannagrass

Poaceae

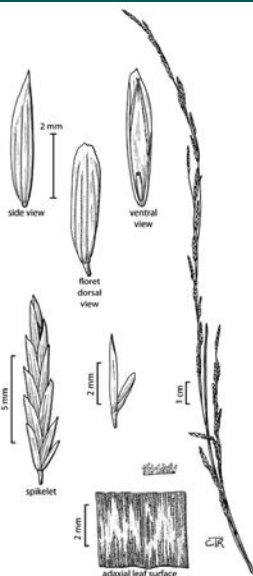


Louis M. Landry CalPhotos



Steve Matson CalPhotos

Cindy Talbot Ritchie Manual of Grasses for North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 5,000 ft. - 12,210 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** GLBO

## Key Characteristics:

- ◆ Rhizomatous; culms decumbent, 5–10 dm tall, hollow, spongy, rooting at nodes
- ◆ **Sheaths open for upper 1-4 cm**; ligules membranous, 3–4 mm long; blades flat, 20–40 cm x 6–15 mm
- ◆ **Inflorescence a narrow panicle, erect, 18–40 cm long, branches appressed to erect**

**Similar Species:** Manna grasses have closed leaf sheaths and parallel nerves on the lemmas. *G. borealis* is distinguished from other manna grasses by its narrow panicle and many-flowered-spikelets.

**Habitat and Ecology:** Grows along margins of ponds or lakes, sometimes in shallow waters from the foothills to the subalpine.

**Comments:** Global range from Alaska to Arizona and New Mexico east to Newfoundland and northeastern United States. Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

- ◆ **Spikelets 9-22 mm long**, linear, cylindrical, 8- to 12-flowered; glumes glabrous, lanceolate, 1-nerved, apices obtuse
- ◆ Lemmas 7-nerved, 3.5–4.5 mm long, glabrous between nerves; nerves scaberulous

# *Glyceria grandis* S. Watson

American mannagrass

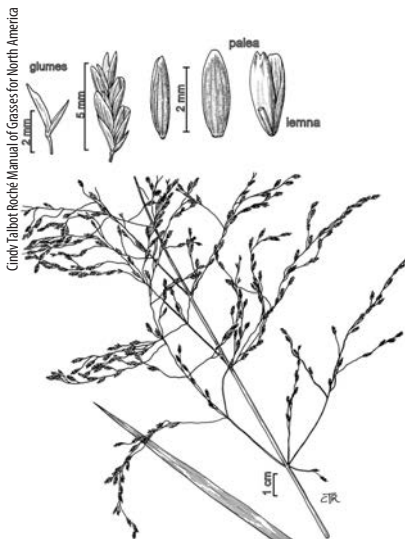
Poaceae



Dean Wm. Taylor CalPhotos



Louis M. Landry CalPhotos



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 5,200 ft. - 9,600 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** GLGR

## Key Characteristics:

- ◆ Rhizomatous; culms erect to decumbent at bases, 0.9–1.5 m tall, hollow, rooting freely at nodes
- ◆ **Leaf sheaths closed;** ligules membranous; blades 15–40 cm long x 6–12 mm wide
- ◆ **Inflorescence an open, lax panicle, purplish, branches often drooping**
- ◆ Spikelets purplish, 3.2–10 mm long, 4 to 7-flowered; first glume 1-nerved, 1.5 mm long, second glume 2 mm long
- ◆ **Lemmas purplish,** 7-nerved, 2.5 mm long, truncate

**Similar Species:** *G. grandis* is often confused with *Torreyochloa pallida*. *T. pallida* has **open** leaf sheaths and 7–9 nerves on lemmas. *G. grandis* is the tallest mannagrass that occurs in Colorado with culms over 1 m tall.

**Habitat and Ecology:** Occurs in wet and moist areas along streams, lakes and irrigation ditches.

**Comments:** Seeds are eaten by waterfowl and songbirds. Herbage is grazed by large and small mammals. *G. grandis* will decrease with extreme grazing and with encroaching tall sedges and other native grass species. Common throughout North America except for California and the east coast states.

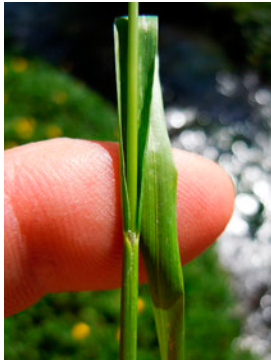
## *Glyceria striata* (Lam.) Hitchc.

Fowl mannagrass

Poaceae

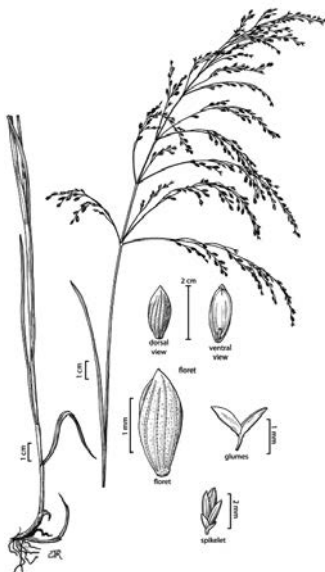


Matt Lavin



Matt Lavin

Cindy Talbot Roche Manual of Grasses for North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Perennial

**Elevation:** 5,000 ft. - 11,190 ft.

**Synonyms:** *Glyceria elata* (Nash ex Rydb.) M.E. Jones

**USDA PLANTS Symbol:** GLST

### Key Characteristics:

- ◆ Rhizomatous; culms slender, erect to decumbent, 2–10 (13) dm tall, often rooting at nodes
- ◆ **Sheaths closed;** ligules membranous, 1–3 mm long; blades flat to folded, 5–30 cm long x 2–6 mm wide
- ◆ Inflorescence a lax, open panicle, drooping at maturity, 5–20 cm long

**Similar Species:** *G. grandis* has wider leaf blades (6–12 mm wide) and is taller (up to 1.5 m) than *G. striata*.

**Habitat and Ecology:** Grows in wet meadows along streams, from lower montane to subalpine.

**Comments:** Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials. Likely decreases with extreme grazing by large animals. May also decrease as sediment deposition raises the streambank above water level and more aggressive plants are established.

# *Hordeum brachyantherum* Nevski

Meadow barley

Poaceae

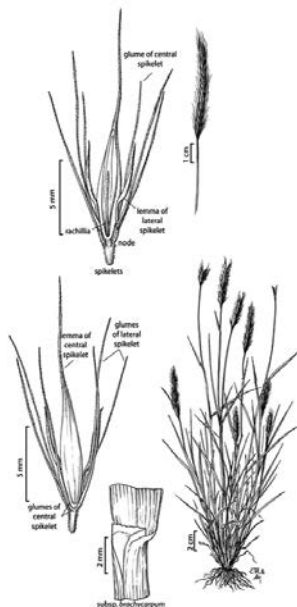


Matt Lavin



Steve Matson CalPhotos

Grady Talbot Roché and Annaliese Miller, Manual of Grasses for North America



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Perennial

**Elevation:** 5,000 ft. - 12,010 ft.

**Synonyms:** *Critesion brachyantherum* (Nevski)

Barkworth & Dewey

**USDA PLANTS Symbol:** HOBR2

## Key Characteristics:

- ◆ Tufted; culms stiffly erect, 3–7 dm tall
- ◆ Sheaths open; ligules membranous, truncate, sometimes ciliate; blades flat, 4–12 cm long
- ◆ **Inflorescence a 2-sided spike**, narrow, dense with fine awns, 3–10 cm long, longer than broad

**Similar Species:** *H. jubatum* has much longer lemma awns (2–5 cm long), broader spikes and occurs in both dry and wet habitats.

**Habitat and Ecology:** Commonly occurs in wet areas along streams, seeps, springs and irrigated fields in central and western Colorado. Weber and Wittmann (2012) consider it non-native to Colorado.

**Comments:** Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.



# *Muhlenbergia filiformis* (Thurb. ex S. Watson) Rydb.

Pullup muhly

Poaceae



Steve Matson CalPhotos



Steve Matson CalPhotos

## Key Characteristics:

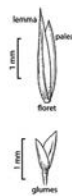
- ◆ Tufted; culms erect to geniculate, 0.5–2 dm tall, sometimes rooting at lower nodes
- ◆ Sheaths glabrous to scabrous; **ligules hyaline to membranous**; blades flat to involute near apices
- ◆ **Inflorescence a spike-like panicle, 1.6–6 cm long, 0.2–0.5 cm wide, few-flowered**

**Similar Species:** *M. richardsonis* looks similar, but it is rhizomatous with culms that are minutely bumpy and often decumbent at bases. *M. brevis* is a closely related annual. It differs by having a long-awned lemma, 10–20 mm and a bifid first glume.

**Habitat and Ecology:** Found in wet areas along streams, fens and ponds in subalpine zone.

**Comments:** Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Linda A. Vorobik and Annaliese Miller Manual of Grasses for North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Annual  
**Elevation:** 7,000 ft. - 12,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** MUF12

- ◆ **Spikelets 1-flowered**, sometimes purple-tinged; pedicels 1–3 mm long, stout
- ◆ **Glumes obtuse**, less than 1.4 mm long, 1-nerved; lemmas lanceolate, apices scabrous, acute to acuminate

# *Phalaris arundinacea* L.

Reed canarygrass

Poaceae



Matt Lavin



Louis M. Landry CalPhotos

## Key Characteristics:

- ◆ Creeping rhizomes; culms 5–20 dm tall, stout, erect, glabrous
- ◆ Sheaths glabrous, open; ligules 2–8 mm long, obtuse; blades flat, 6–16 mm wide x 10–30 cm long
- ◆ Inflorescence a narrow panicle, 7–40 cm long; spikelets 3-flowered (1 fertile, 2 sterile), reduced
- ◆ Glumes 4–6 mm long, laterally compressed, 3-nerved, keels scabrous
- ◆ Fertile lemma shiny, appressed pubescent; sterile lemmas up to 2 mm long, subulate, pubescent

**Similar Species:** *Calamagrostis canadensis* can look like a small, immature *P. arundinacea*, but is easily differentiated by the awn from the back of the lemma and the hairy callus. An immature *Phragmites australis* can look like *P. arundinacea*, but it has a ligule with a ciliate membrane and several florets per spikelet with short glumes.

**Habitat and Ecology:** Common along irrigation ditches and rivers.

**Comments:** *P. arundinacea* is native to temperate regions of Europe, Asia and North America. An Eurasian ecotype has been planted throughout the U.S. since the 1800s. It has become naturalized in much of the northern half of the U.S. and is still being planted. It is thought that most Colorado populations are the Eurasian ecotype. Regardless of its origin, it provides excellent nesting and escape cover and seeds for upland birds and waterfowl.

Linda A. Vorobik and Hana Pazdriková Manual of Grasses for North America



**Wetland Status WMVC:** FACW

**Native Status:** Native, Non-native, CO Noxious Weed Watch List

**Conservation Status:** G5

**C-Value:** 2

**Duration:** Perennial

**Elevation:** 4,500 ft. - 10,000 ft.

**Synonyms:** *Phalaroides arundinacea* (L.) Raeusch.

**USDA PLANTS Symbol:** PHAR3

# *Poa leptocoma* Trin.

Marsh bluegrass

Poaceae

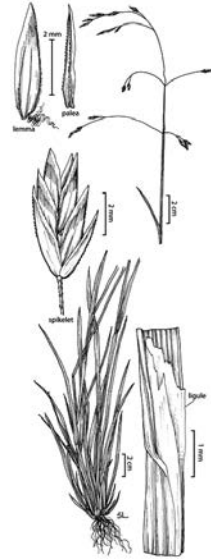


Steve Matson CalPhotos



Steve Matson CalPhotos

Sandy Long Manual of Grasses for North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 8,500 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POLE2

### Key Characteristics:

- ◆ Culms solitary or few, 2–10 dm tall, erect or decumbent; no rhizomes, rooting at nodes
- ◆ Sheaths terete, closed up to three-quarters of their length; ligules 1–5 mm long; blades 4–10 cm long
- ◆ Inflorescence a panicle, 5–15 cm long, nodding, reflexed; branches 1–3, capillary, spreading or ascending

**Similar Species:** *P. reflexa* is similar except the glumes are equal, the panicle branches nod and the lemmas are 2–3 mm long.

**Habitat and Ecology:** Found along springs, meadows, fens, lake shores and river banks from subalpine to alpine zones.

**Comments:** Palatable to domestic livestock. Typically not present in sufficient quantities to be significant forage for large animals.

- ◆ Spikelets 2- to 5-flowered, **strongly compressed, purplish; glumes unequal, calluses sparsely cobwebby**
- ◆ Lemmas **3.5–4.5 mm long, acuminate**, compressed-keeled, pubescent on keels and marginal nerves

# *Poa reflexa* Vasey & Scribn. ex Vasey

Nodding bluegrass

Poaceae



Matt Lavin



Matt Lavin

Sandy Long Manual of Grasses for North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 5,600 ft. - 13,690 ft.

**Synonyms:** *Poa leptocoma* Trin. var. *reflexa* (Vasey & Scribn. ex Vasey) M.E. Jones

**USDA PLANTS Symbol:** PORE

## Key Characteristics:

- ◆ **Solitary or in tufts**, rooting at nodes; culms 1–6 dm tall, erect or decumbent, glabrous
- ◆ **Sheaths closed about 1/3 to 2/3 their length**; ligules up to 3 mm long; blades 1–4 mm wide x 4–7 cm long
- ◆ Inflorescence an open panicle, 4–15 cm; lower panicle branches capillary, **reflexed at maturity**
- ◆ Spikelets 2- to 5-flowered, strongly laterally compressed; glumes equal, lanceolate, distinctly keeled
- ◆ Callus bases with copious cobwebby hairs; **lemma 2–5 mm long, acute, purple-tinged, distinctly keeled**

**Similar Species:** *P. leptocoma* is similar, but the glumes are distinctly unequal and the hairs along the palea keels and lemma nerves are not as long and shaggy as *P. reflexa*.

**Habitat and Ecology:** Grows in seasonally moist, often disturbed sites in montane forests often associated with gopher activity.

**Comments:** Large herbivores, small mammals, waterfowl, and songbirds depend on grasses for food and nesting materials.

# *Spartina gracilis* Trin.

Alkali cordgrass

Poaceae



Steve Matson CalPhotos



Steve Matson CalPhotos

## Key Characteristics:

- ◆ **Strongly rhizomatous** with elongated rhizomes; culms slender, erect, solitary, 4–10 dm tall
- ◆ Leaf sheaths open, hairy, **collars ciliate**; ligules ciliate membranes; blades less than 5 mm wide
- ◆ **Inflorescence consists of several 1-sided spikelets**, 8–25 cm long with appressed branches

**Similar Species:** *S. pectinata* is over 1 m tall with leaf blades over 5 mm wide and the glumes have awns that are over 3 mm long.

**Habitat and Ecology:** Found on alkaline flats and sloughs throughout Colorado, more common in the western part of the state.

**Comments:** *S. gracilis* is not a preferred forage for large animals, but does provide habitat for songbirds, waterfowl and small mammals.

Linda A. Vornobik and Linda Bea Miller Manual of Grasses for North America



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 3,900 ft. - 9,900 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** SPGR

- ◆ Spikelets 1-flowered, sessile, 6–11 mm long, ovate to lanceolate, strongly compressed
- ◆ Glumes unequal, upper 6–10 mm, mucronate; lemmas glabrous to sparsely hirsute, 6.2–7.5 mm long

# *Vahlodea atropurpurea* (Wahlenb.) Fr. ex Hartm.

Mountain hairgrass

Poaceae



Susan McDougall USDA-NRCS PLANTS Database



USDA-NRCS PLANTS Database Hitchcock 1950

## Key Characteristics:

- ◆ Loosely caespitose; culms erect, 1.5–8 dm tall
- ◆ **Leaf sheaths open, but closed at bases**; ligules membranous; blades 1–30 cm long x 1–8.5 mm wide
- ◆ Inflorescence a closed or open panicle, branches capillary, nodding; **spikelets 2-flowered, usually dark purple**

**Similar Species:** *Deschampsia cespitosa* looks similar and occurs in same habitats. *D. cespitosa* differs with a many flowered inflorescence, the lemmas awned from bases and the glumes equal to or shorter than the upper floret.

**Habitat and Ecology:** Grows in wet subalpine meadows and in rock outcrops on moist ledges. Often growing in bare ground below melting snow drifts.

**Comments:** May be considered a colonizer in newly forming riparian zones at high elevations. Global range from Alaska to Colorado.



Susan McDougall USDA-NRCS PLANTS Database  
Jose Hernandez USDA-NRCS PLANTS Database

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not assigned

**Duration:** Perennial

**Elevation:** 9,320 ft. - 13,200 ft.

**Synonyms:** *Deschampsia atropurpurea* (Wahlenb.)

*Scheele* var. *latifolia* (Hook.) Scribn. ex Macoun

**USDA PLANTS Symbol:** VAAT2

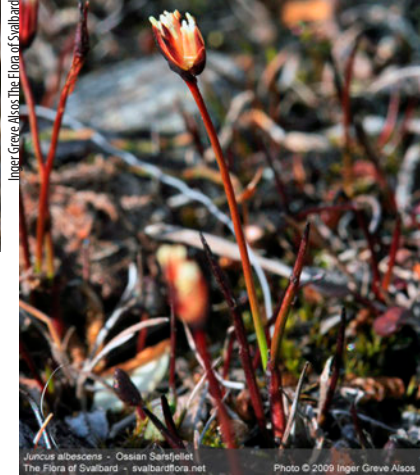
- ◆ **Glumes longer than florets**, keels and nerves glabrous-scabrous, lower 4–5 mm long, upper 4–5.5 mm long
- ◆ Lemmas ciliate, awned from near middle of back, twisted, geniculate, 2–4 mm long

***Juncus albescens* (Lange) Fernald**  
Northern white rush

Juncaceae



Ryan Batten CalPhotos



Inger Greve Alsos, The Flora of Svalbard

*Juncus albescens* - Ossiian Sarsfjellet  
The Flora of Svalbard - svalbardoffora.net  
Photo © 2009 Inger Greve Alsos



oppendeges seed

JRT

Jeanne R. Janish Vascular Plants of the Pacific Northwest

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 10  
**Duration:** Perennial  
**Elevation:** 10,000 ft. - 13,500 ft.  
**Synonyms:** *Juncus triglumis* L. ssp. *albescens* (Lange) Hultén  
**USDA PLANTS Symbol:** JUAL2

**Key Characteristics:**

- ◆ Densely caespitose, developing from fibrous roots; stems 0.3–3.5 dm tall
- ◆ Leaves 2–4; auricles slightly prolonged; blades deeply channeled, 2–10 cm long
- ◆ Inflorescence consists of a terminal, **solitary, 2–3 (5) flowered head; bract equal to inflorescence**
- ◆ **Tepals very pale brown or white**, oblong to lanceolate, 3–5 mm; stamens 6
- ◆ **Capsules tan, 3-angled, included or barely exerted from tepals**; seeds 0.7–1 mm, white tails

**Similar Species:** *J. triglumis* has capsules that are exerted from the perianth, 3.5–7 mm long, and the bract subtending the flower heads is shorter than the inflorescence.

**Habitat and Ecology:** Common in fens and wet alpine meadows.

**Comments:** FNA (2000) and Ackerfield (2015) recognize *J. triglumis* var. *albescens* as the accepted name. USDA-NRCS PLANTS Database and Weber and Wittmann (2012) recognize *J. albescens*. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents and insects.

# *Juncus arcticus* Willd. ssp. *littoralis* (Engelm.) Hultén

Arctic rush

Juncaceae



Brent Miller CalPhotos



Keir Morse CalPhotos



USDA-NRCS PLANTS Database Britton & Brown 1913

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 3,400 ft. - 11,500 ft.

**Synonyms:** *Juncus arcticus* Willd. ssp. *ater* (Rydb.)

Hultén, *Juncus arcticus* Willd. var. *balticus* (Willd.)

Trautv., *Juncus balticus* Willd.

**USDA PLANTS Symbol:** JUARL

## Key Characteristics:

- ◆ **Rhizomatous** producing dense clumps; stems 2–10 dm tall, **dark green, wiry, often with a zigzag pattern**
- ◆ Leaves usually absent
- ◆ Inflorescence a compact to loose panicle, **appearing laterally and halfway up stem**; bract 4–23 cm long, appears as a continuation of the stem

**Similar Species:** *J. effusus* exhibits the same combination of robust rhizomes and leaves reduced to bladeless sheaths. However, *J. effusus* stems are tufted while *J. arcticus* var. *littoralis* are usually more dispersed. *J. filiformis* also has a lateral inflorescence, but it is located only a few cm from the ground versus the upper half of the stem as in *J. arcticus* ssp. *littoralis*.

**Habitat and Ecology:** Very common. Grows in wet meadows, irrigation ditches, swales, lakes and rivers from plains to moderate elevation.

**Comments:** FNA (2000) and Ackerfield (2015) recognized *J. arcticus* var. *balticus*. Weber and Wittmann (2012) recognize *J. arcticus* ssp. *ater*. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, rodents, dabbling ducks, insects.



# *Juncus bufonius* L.

Toad rush

Juncaceae



Carol English



Amadej Imkoczy CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



JRJ

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 3

**Duration:** Annual

**Elevation:** 4,700 ft. - 10,000 ft.

**Synonyms:** *Juncus bufonius* var. *occidentalis* F.J. Hermann

**USDA PLANTS Symbol:** JUBU

## Key Characteristics:

- ◆ Tufted; stems 2–30 cm tall, slender, **diffuse branching nearly to base, bases typically reddish**
- ◆ Leaves much shorter than the stems; auricles absent; blades flat or involute
- ◆ **Inflorescence a panicle, usually 1/2 height of plant, flowers 1–20; bract filiform or reduced, node bractlets bearing an awn**
- ◆ Tepals acute, lanceolate with narrow, membranous margins, 3–8 mm long; stamens usually 6
- ◆ Capsules oblong, 3–4.5 mm long; seeds ovoid to ellipsoid, golden brown, 0.3–0.5 mm long

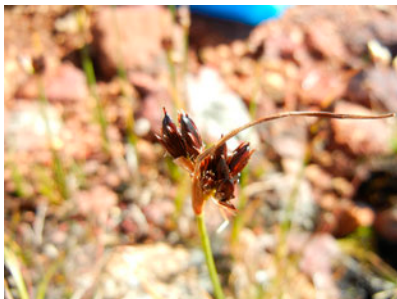
**Similar Species:** Weber and Wittmann (2012) recognize *J. bufonius* var. *occidentalis*. Taxonomic treatment in FNA (2000) subsumes this variety within *J. bufonius*.

**Habitat and Ecology:** Commonly found in disturbed wet meadows, roadsides, muddy or drying ponds, lake shores and streams.

**Comments:** The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails, and insects.

# *Juncus castaneus* Sm. Chestnut rush

Juncaceae



Steve Yarbrough



Norman Hagen

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 8,560 ft. - 13,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** JUCA6

## Key Characteristics:

- ◆ **Strongly rhizomatous or stoloniferous;** stems solitary, 1–4 dm tall
- ◆ Leaves partially cauline, 3–5; blades 20 cm long, channeled; auricles absent
- ◆ **Inflorescence a dense cluster of 1–3 heads,** each with 2–10 flowers; bract inflated at bases
- ◆ Tepals dark brown, 4.5–6.6 mm, apices acute-obtuse; inner series slightly shorter; stamens 6
- ◆ Capsules narrowly oblong, 6.5–8.5 long x 1.8–2.3 mm wide; seeds 0.6–0.7 mm, tails 0.8–1.1 mm

**Similar Species:** *J. biglumis* is found in similar habitats, but it is cespitose versus rhizomatous, has narrower leaves (1 mm wide) that are only found at the base and the flowering heads are distinctly smaller than *J. castaneus*.

**Habitat and Ecology:** Found in fens and wet alpine meadows.

**Comments:** The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails, and insects.

***Juncus drummondii* E. Mey.**  
Drummond's rush

Juncaceae

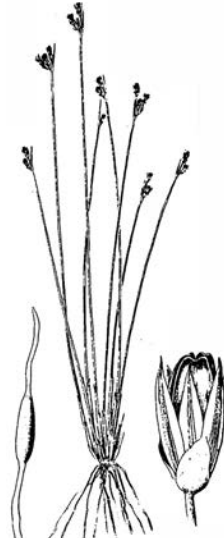


Matt Lavin



Steve Matson CalPhotos

Hurt et al., 1997 U.S. Forest Service



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 8,200 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** JUDR

**Key Characteristics:**

- ◆ **Strongly tufted**, rhizomes densely branched; culms terete, numerous wiry stems, **to 4 dm tall**
- ◆ **Leaf sheaths with bristle tips** about 1 cm long or blade lacking
- ◆ Inflorescences 2- to 5-flowered; bract sharp-pointed, 1–4 cm long, appears as part of stem
- ◆ Tepals brown with green midstripe, 5–8 mm; stamens 6
- ◆ Capsules brown, 4.5–7 mm long x 1.8–2.2 mm wide, equal or exceeding tepals; seeds 0.5 mm, tailed

**Similar Species:** *J. parryi* is found in similar habitats, but has well-developed leaf blades and an acute capsule. *J. drummondii* is very distinct with the long, stem-like involucral bract. The other two species that share this characteristic are *J. hallii* and *J. parryi*, but both lack the prominent bristle-tip on the bracts.

**Habitat and Ecology:** Commonly found along stream banks and wet meadows in montane and alpine zones.

**Comments:** The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, muskrats, some dabbling ducks, rails, and insects.

# *Juncus ensifolius* Wikstr.

Swordleaf rush

Juncaceae

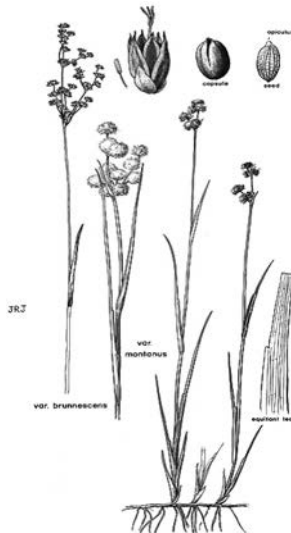


Dean Wm. Taylor CalPhotos



Steve Matson CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,500 ft. - 9,500 ft.  
**Synonyms:** *Juncus saximontanus* A. Nels., *Juncus tracyi* Rydb.  
**USDA PLANTS Symbol:** JUEN

### Key Characteristics:

- ◆ Rhizomatous from creeping rhizomes; culms arising singly, 2–6 dm tall
- ◆ Leaf blades laterally flattened, **equitant (as in Iris), partially septate**, 2–6 mm wide, **upper leaf looks like a sword**
- ◆ Inflorescence panicle, terminating the stems; heads 2–90, globose, black; bract sword-like

- ◆ Tepals lanceolate-acuminate, pale greenish-brown to brownish-purple, 3–3.5 mm long; stamens 3 or 6
- ◆ **Capsules chestnut to dark brown**, 2.4–4.3 mm; seeds elliptic to obovate, 0.4–1 mm, occasionally tailed

**Similar Species:** According to FNA (2000) and Weber and Wittmann (2012) there are two varieties of *J. ensifolius* that occur in Colorado: 1a. Stamens 3 ...var. *ensifolius* (= *J. saximontanus*). 1b. Stamens 6...var. *montanus*. USDA-NRCS PLANTS Database subsumes both varieties within *J. saximontanus*.

**Habitat and Ecology:** Common. Grows in wet meadows, marshes, lakes, seeps, springs, ditches and floodplains. *J. ensifolius* var. *montanus* is more common and widespread than *J. ensifolius* var. *ensifolius*.

**Comments:** Greater Sage-grouse brood habitats include riparian/wetland areas with willows, currants, grasses, sedges and rushes that are adjacent to sagebrush shrublands.

***Juncus longistylis* Torr.**  
Longstyle rush

Juncaceae



Max Licher Arizona State University Herbarium



Hurd et al. 1997 U.S. Forest Service

**Key Characteristics:**

- ◆ Rhizomes, long creeping; stems slightly compressed, 2–6 dm tall
- ◆ Leaves basal, 2–5, cauline 1–3; auricles 1–2.5 mm; blades flat, 4–15 cm long x 1.5–3 mm wide, **not septate**

Hurd et al. 1997 U.S. Forest Service



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 4,650 ft. - 10,950 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** JUL0

- ◆ Inflorescence 1–4 (8), each with 3–12 flowers; bract shorter than inflorescence
- ◆ **Tepals brown, green midstripe, 5–6 mm, margins scarios, sometimes papillose;** stamens 6
- ◆ Capsules tan, 3–5 mm, **shorter than perianth;** seeds ovoid, 0.4–0.6 mm, not tailed

**Similar Species:** *J. marginatus* has 3 stamens and shorter tepals (1.8–3.2 mm long). *J. drummondii* can also be confused with *J. longistylis*, look for the bristle-tipped leaf sheath to distinguish *J. drummondii*.

**Habitat and Ecology:** Common in wet meadows, seeps, springs, and fens. Known from the high plains to the montane and subalpine zones.

**Comments:** The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails, and the Greater Sage-grouse brood habitats include riparian/wetland areas with willows, currants, grasses, sedges and rushes that are adjacent to sagebrush shrublands.

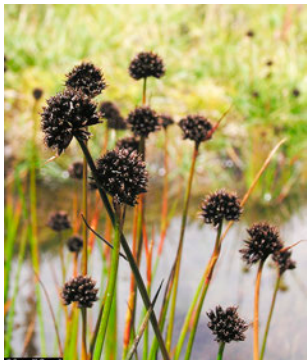
# *Juncus mertensianus* Bong.

Mertens' rush

Juncaceae



Steve Matson CalPhotos



Susan McDougall USDA-NRCS PLANTS Database

Hurt et al., 1997 U.S. Forest Service



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 7,500 ft. - 13,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** JUME3

## Key Characteristics:

- ◆ Rhizomatous to cespitose; culms erect, terete, 0.5–4 dm tall
- ◆ Leaves basal, 1–2, cauline 0–1; blades 3–15 cm long x 0.3–0.6 mm wide; **auricles 1–1.2 mm**
- ◆ **Inflorescence with a terminal, solitary head, with 12-60 flowers; bract erect, equaling or exceeding inflorescence**
- ◆ **Tepals dark purplish brown to black**, outer 2.4–4.9 mm, inner 2.3–4.3 mm; stamens 6
- ◆ Capsules slightly exserted, chestnut brown, 1.9–3.5 mm; seeds 0.4–0.5 mm, not tailed

**Similar Species:** *J. nevadensis* heads are 2–11, with 3–11 flowers per head, the tepal color ranges from light brown to dark purplish brown and it is much less common.

**Habitat and Ecology:** Common in moist montane to alpine meadows, along streams and near springs.

**Comments:** The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, and rails.

***Juncus nodosus* L.**  
Knotted rush

Juncaceae



Louis M. Landry CalPhotos



Louis M. Landry CalPhotos

Hurt et al., 1997 U.S. Forest Service



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 3,400 ft. - 8,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** JUN02

**Key Characteristics:**

- ◆ **Rhizomatous with swollen nodes;** stems terete, erect, 2–6 dm tall
- ◆ Leaves basal, cauline 2–4; blades terete, 6–30 cm x 0.5–1.5 mm; auricles 0.5–1.7 mm
- ◆ Inflorescence with a terminal raceme of 3–15 spherical heads, 3–10 (12) mm diameter; bract erect, 2.5–12 cm long

- ◆ Tepals green to light brown, subulate, 2.4–4.1 mm, nearly equal, apices acuminate; stamens 3 or 6
- ◆ **Capsules exserted, subulate, chestnut brown, 3.2–5 mm;** seeds oblong, 0.4–0.5 mm, not tailed

**Similar Species:** *J. torreyi* is a much taller plant (4–10 dm tall), the leaf blades are abruptly divergent, flowering heads are sessile and larger heads (10–15 mm in diameter) tightly clustered, and the outer tepals are longer than the inner tepals. *J. acuminatus* is cespitose, not rhizomatous.

**Habitat and Ecology:** Common in wet meadows, fens, pond margins and streams.

**Comments:** The seeds and/or seed capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails, and the Greater Sage-grouse brood habitats include riparian/wetland areas with willows, currants, grasses, sedges and rushes that are adjacent to sagebrush shrublands.

# *Juncus torreyi* Coville

Torrey's rush

Juncaceae



Steve Matson CalPhotos



Steve Matson CalPhotos

## Key Characteristics:

- ◆ **Rhizomatous with swollen nodes**; culms erect, terete, (3) 4–10 dm tall
- ◆ Leaves basal, 1–3, cauline 2–5; auricles 1–4 mm; blades, terete, 13–30 cm long x 1–5 mm wide
- ◆ **Inflorescence terminal clusters of 1–23 globose heads, 10–15 mm diameter**; bract equals or exceeds inflorescence

**Similar Species:** *J. nodosus* is a much smaller plant (1–4 dm high), leaf blades are erect and the capsule narrows to a long beak. *J. acuminatus* is cespitose, not rhizomatous, with 3 stamens.

**Habitat and Ecology:** Common in wet meadows and along streams, ditches and pond margins. *J. torreyi* often produces galls in which the floral parts are enlarged, creating a mass of telescoping sheaths. The gall is the work of the sedge psyllid (*Livia maculipennis*).

**Comments:** The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails, and insects.

Hurt et al., 1997 U.S. Forest Service



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 3,400 ft. - 8,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** JUTO

- ◆ Tepals green to straw-colored, lanceolate to subulate, outer 4–6 mm, inner 3.4–4.6 mm; stamens 6
- ◆ Capsules slightly exserted, 4.3–5.7 mm; seeds oblong to ellipsoid, 0.4–0.5 mm, not tailed



***Juncus triglumis* L.**  
Three-hulled tush

Juncaceae

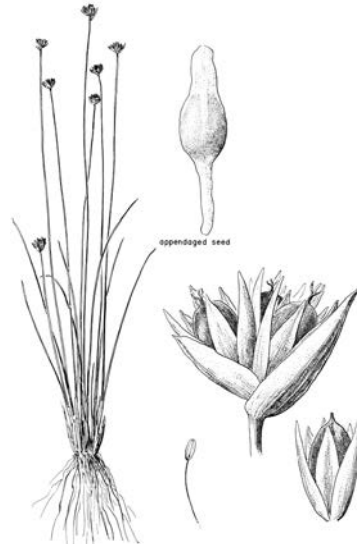


Renzo Salvo Flora Italiana



Hurd et al. 1997 U.S. Forest Service

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 10  
**Duration:** Perennial  
**Elevation:** 10,300 ft. - 13,280 ft.  
**Synonyms:** *Juncus triglumis* L. var. *triglumis*  
**USDA PLANTS Symbol:** JUTR4

**Key Characteristics:**

- ◆ Densely caespitose; culms 1–8, 0.3–3.5 dm tall
- ◆ Leaves basal, 2–4, crowded at bases; auricles slightly prolonged; blades deeply channeled, 2–10 cm
- ◆ **Inflorescence a solitary head, each with 2–3 flowers; bract equal to or longer than inflorescence**

**Similar Species:** *J. albescens* (= *J. triglumis* var. *albescens*) has capsules that are included or barely exerted from the perianth, 3–5 mm long, and the bract subtending the head is equal to or longer than the inflorescence.

**Habitat and Ecology:** Grows in peat fens and wet meadows from subalpine to alpine.

**Comments:** FNA (2000) and Ackerfield (2015) recognize *J. triglumis* var. *albescens* and *J. triglumis* var. *triglumis*. Weber and Wittmann (2012) recognize two the varieties as separate species. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails, and insects.

# *Luzula subcapitata* (Rydb.) Harrington

Colorado woodrush

Juncaceae

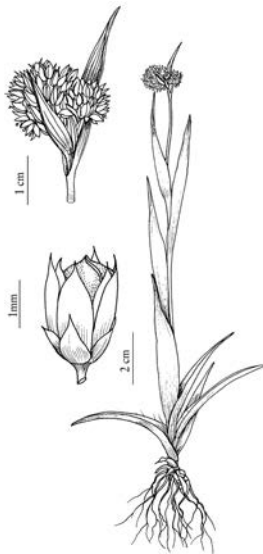


Colorado State University Herbarium



Colorado State University Herbarium

Yevonn Wilson-Ramsey, Flora of North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G3

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 10,440 ft. - 13,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** LUSU9

## Key Characteristics:

- ◆ Cespitose, rhizomes short and stocky; stems 0.8–4 dm tall, bases thickened, glabrous
- ◆ Leaves 1–3, 5–10 mm wide, up to 5 cm long; margins with hairs; sheaths closed
- ◆ Inflorescence a cyme, capitate, sessile, cylindrical
- ◆ Tepals shiny brown with clear margins, 1.5–2 mm, outer and inner whorls nearly equal
- ◆ Capsules deep purplish-brown, globose, equaling tepals; seeds brown, cylindrical, 1.3 mm

**Similar Species:** *L. comosa* is also found along subalpine streams but has short, cylindrical spikes and tepals are tan to brown with clear margins. *L. parviflora* flowers are on slender drooping pedicels and the leaves are not hairy, except near the throat of the leaf sheaths.

**Habitat and Ecology:** Uncommon, grows in subalpine and alpine fens and wet meadows.

**Comments:** *L. subcapitata* is a Colorado endemic. Even though both *L. parviflora* and *L. spicata* have wetland indicator status of FAC, they are commonly found associated Colorado wetlands.

# Carex aquatilis Wahlenb.

Water sedge

Cyperaceae



Keir Morse CalPhotos



Jeanne R. Janish Vascular Plants of the Pacific Northwest

## Key Characteristics:

- ◆ Culms arising from stout, scaly rhizomes; culm bases reddish-brown, 1–15 dm tall
- ◆ Leaf tips glaucous, especially early in growing season, reddish-brown at maturity; blades 2.5–8 mm wide
- ◆ Terminal spikes, 1–3, staminate; lateral spikes pistillate, subsessile to long peduncled, 1–4 cm long

**Similar Species:** *C. aquatilis* can be confused with *C. nebrascensis* especially where elevation ranges overlap. *C. nebrascensis* leaves are wider (3–12 mm) and glaucous throughout, perigynia are distinctly nerved, longer, (up to 4 mm), have a bidentate, not entire beak, and pistillate scales are awned. *C. lenticularis* and *C. emoryi* looks very similar, but the perigynia are distinctly nerved. *C. scopulorum* perigynia are strongly papillate (bumpy) usually purple above or throughout and the achenes are dull.

**Habitat and Ecology:** Common. Grows in shallow water or saturated soils within montane to subalpine zones. *C. aquatilis* frequently forms monoculture stands.

**Comments:** Moderately palatable to livestock, elk and deer. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently.



Denise Culliver Colorado Natural Heritage Program

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 7,000 ft. - 13,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAAQ

- ◆ Perigynia 2–3.6 mm long, **faces nerveless, speckled reddish-brown**; beaks entire, short-vestigial, 0.1–0.3 mm long
- ◆ **Pistillate scales dark with light midribs**, hyaline tips, not awned; achenes shiny; stigmas 2

## Carex athrostachya Olney

Slenderbeak sedge

Cyperaceae



The Nature Inn at Bald Eagle



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 7,500 ft. - 11,710 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CAAT3

### Key Characteristics:

- ◆ Densely tufted without creeping rhizomes; culms slender, 0.5–10 dm tall
- ◆ Leaves clustered on lower 1/3 of culm; blades firm, 1.5–4 mm wide, flat, yellowish green; sheaths whitish hyaline ventrally
- ◆ Spikes gynecandrous, sessile, aggregated into a dense head, 1-2 x 0.7-1.5 cm, greenish yellow to brown;

**Similar Species:** *C. sychnocephala* perigynia are similar with winged margins, however the perigynia are longer, (5.5–7.5 mm). The long, lowest bract is distinctive for positive identification of *C. athrostachya*.

**Habitat and Ecology:** Common to locally abundant in moist or wet places, on margins of sloughs, reservoirs or ephemeral pools.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges also provide nesting cover and/or concealment for ducks, beavers, and muskrats.

**lowest bract usually longer than inflorescence, bristle-like**

- ◆ **Perigynia 3–4 mm long, winged margins,** crowded into globose heads; beaks bidentate
- ◆ Pistillate scales oblong-ovate with acute tips, white-hyaline margins; stigmas 2

**Carex aurea** Nutt.  
Golden sedge

Cyperaceae



Steve Olson



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 4,600 ft. - 12,680 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAU3

**Key Characteristics:**

- ◆ Loosely caespitose from slender rhizomes; culms often shorter than leaves, **0.3–4 dm tall**
- ◆ Bracts leaf-like, sheathing, exceeding inflorescence
- ◆ Terminal spike 1, staminate; **lateral spikes pistillate, widely separate, perigynia ascending**
- ◆ **Perigynia golden-yellow, globose, fleshy, ribbed; beaks absent**
- ◆ Pistillate scales, if present, red-tinged, shorter than perigynia; stigmas 2

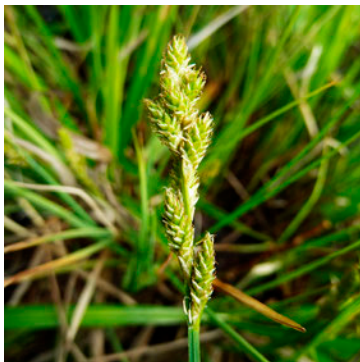
**Similar Species:** *C. hassei* perigynia are whitish-papillose (bumpy), not fleshy as in *C. aurea*. Several authors recognize *C. hassei* as a synonym for *C. aurea*.

**Habitat and Ecology:** Common in moist or wet places, meadows, fens, and along streambanks.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.

**Carex canescens L.**  
Silvery sedge

Cyperaceae



Max Licher Arizona State University Herbarium



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,600 ft. - 12,280 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CACA11

**Key Characteristics:**

- ◆ Loosely to densely clustered on short rhizomes; culms 1–8 dm tall, lax, widely spreading
- ◆ **Leaves clustered near bases; blades flat, soft, glaucous**, 1.5–4 mm wide
- ◆ Spikes 4–8, gynecandrous, 5–10 mm long, sessile, perigynia ascending, crowded
- ◆ **Perigynia ovoid-oblong, spongy-thickened, pale whitish-green or -brown**, 1.8–3 mm long; beak minute
- ◆ Pistillate scales broadly ovate, shorter and wide as perigynia at base, **white-hyaline with green midstripe**; stigmas 2

**Similar Species:** *C. brunnescens* perigynia have distinct serrulate beaks, few-flowered spikes and the leaves are green, not glaucous. *C. praeceptorum* perigynia are conspicuously nerved, pistillate scales are light brown with broad pale or green center and hyaline margins.

**Habitat and Ecology:** Common in open, wet sites, shores, river banks and wetlands in subalpine and montane zones.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers, and muskrats. The word *canescens* is from the Latin word meaning becoming gray. *C. canescens*, at maturity, will have a grayish look.

## Carex capillaris L.

Hair-like sedge

Cyperaceae



Steve Olson



Jeanne R. Janish Vascular Plants of the Pacific Northwest

### Key Characteristics:

- ◆ Densely tufted from short roots; culms grass-like, slender, nodding, 0.3–6 dm tall
- ◆ Leaves 5–8, clustered at bases, thin, grass-like; lowest bract leaf-like with well-developed sheaths
- ◆ **Single, staminate, terminal spike, 4–10 mm long; lateral spikes pistillate, nodding on slender peduncles**

**Similar Species:** *C. limosa* also has drooping or nodding culms, but it is not tufted, leaves have deep grooves, pistillate scales are dark and staminate spikes are much longer (1–3 cm). *C. crawei* spikes are erect, the perigynia are green to light brown and often reddish-dotted, not shiny. *C. disperma* is a very slender and delicate, but it is few-flowered and the spikes are distinctive.

**Habitat and Ecology:** Common on peat or moss hummocks or wet, shaded sites on stream banks, lake shores and willow stands from upper montane to alpine zones.

**Comments:** Circumboreal. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment.



Hurt et al., 1998 U.S. Forest Service

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 8,500 ft. - 13,300 ft.

**Synonyms:** None

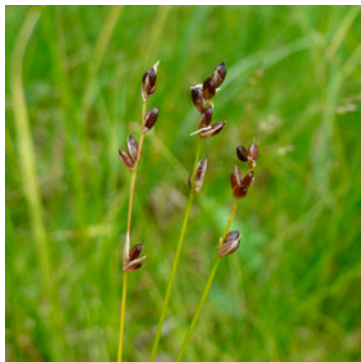
**USDA PLANTS Symbol:** CACA12

- ◆ Perigynia ovoid-lanceolate, 2–4 mm long, nerveless except for 2 marginal nerves
- ◆ Pistillate scales ovate, obtuse at apices, **wider and shorter than perigynia**; stigmas 3

# Carex disperma Dewey

Softleaf sedge

Cyperaceae



Max Licher Arizona State University Herbarium



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 11,500 ft.  
**Synonyms:** *Carex tenella* Schkuhr  
**USDA PLANTS Symbol:** CAD16

## Key Characteristics:

- Loosely tufted from long, slender rhizomes, mat-forming; culms very slender, weak, nodding, 1–6 dm tall
- Leaf blades fine, thin, 0.75–2 mm wide, soft, flat; sheaths tight, truncate at bases
- Spikes delicate, androgynous, 1–3 (6) flowered, lower spikes separate from upper spikes, to 5 mm long

**Similar Species:** *C. laeviculmis*, rare, has terminal gynecandrous spikes and the perigynia have longer beaks than *C. disperma*.

**Habitat and Ecology:** Common in shady, wet meadows, fens, and along streambanks in montane zone. *C. disperma* is difficult to see in dense vegetation, especially when it occurs with other sedges.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.



# Carex douglasii Boott

Douglas's sedge

Cyperaceae

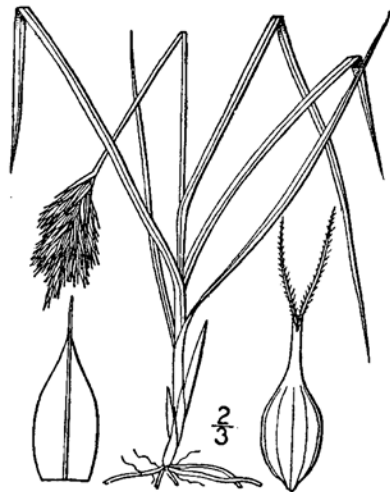


Steve Matson CalPhotos



Hurd et al. 1997 U.S. Forest Service

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FAC  
**Native Status:**  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 4,500 ft. - 10,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAD02

## Key Characteristics:

- ◆ Rhizomatous, rhizomes long, creeping; culms 0.6-2.0 dm tall, smooth; old leaves present
- ◆ Leaf blades 1-3 mm wide, flat at base, involute above; sheaths thickened at mouth; bracts shorter than heads
- ◆ **Spikes unisexual, straw colored; staminate spikes densely aggregated into a head; pistil-**

## late spikes aggregated into heads with long, reddish brown stigma branches

- ◆ Perigynia ovate-lanceolate, 4.7-7.5 mm, straw-colored, shiny; beak 1.2-1.6 mm, serrulate with hyaline tip
- ◆ Pistillate scales lanceolate to ovate, wider and longer than perigynia, straw-colored with hyaline margins, green midstripe; stigmas 2

**Similar Species:** *Carex simulata* perigynia are smaller, pistillate scales are dark, reddish-brown, completely concealing perigynia. *Carex duriuscula* perigynia are smaller with shorter beak, overall the heads are much smaller

**Habitat and Ecology:** Common along streams, meadows, forest opening, roadsides, and seasonally wet to dry areas, often alkaline.

**Comments:** *C. douglasii* is tolerant of compacted, alkaline soils.

## Carex heteroneura W. Boott

Different-nerve sedge

Cyperaceae



Max Licher Arizona State University Herbarium



Hurd et al. 1997 U.S. Forest Service

### Key Characteristics:

- ◆ Cespitose, small to large tufts without creeping rhizomes; culms nodding, 1.5–8 dm
- ◆ Leaf blades 2–8 mm wide, margins revolute; bracts leaf-like with dark auricles, longer than spikes
- ◆ **Terminal spike gynecandrous**, usually erect or nodding, clustered, sessile; lateral spikes pistillate, peduncled

**Similar Species:** *C. atrosquama* and *C. albonigra* occur in same habitats. Both look similar with black pistillate scales that are shorter than perigynia, but the peduncles of the lowest spike are much shorter than the spike and the inflorescences are erect, not nodding.

**Habitat and Ecology:** Common along streams and pond margins, in wet subalpine and alpine meadows, and tundra.

**Comments:** *C. heteroneura* is highly variable, especially in size and shape of lateral spikes, size and color of perigynia and length of pistillate scales.



Steve Matson, CalPhotos

**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 9,000 ft. - 13,000 ft.

**Synonyms:** *Carex heteroneura* W. Boott var. *chalciolepis* (T. Holm) F. J. Herm., *Carex heteroneura* W. Boott var. *epapilosa* Mack., *Carex atrata* L. var. *chalciolepis* (T. Holm) Kük., *Carex chalciolepis* T. Holm  
**USDA PLANTS Symbol:** CAHE8

- ◆ **Perigynia broadly oval, pale green or pale yellow;** nerves absent; beaks 0.5 mm long
- ◆ **Pistillate scales narrow, ovate, acute, dark reddish-brown to black, light midribs, longer than perigynia, hyaline margins;** stigmas 3

**Carex illota** L.H. Bailey  
Sheep sedge

Cyperaceae

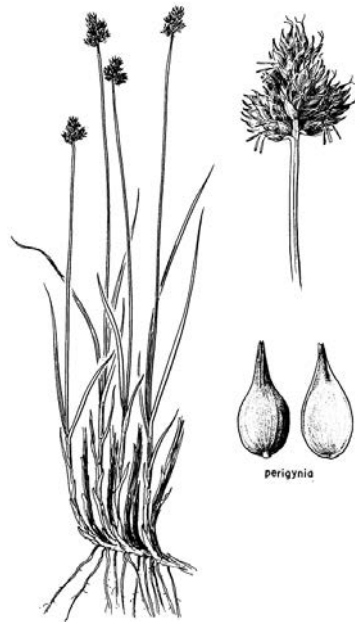


Hurd et al. 1997 U.S. Forest Service



Hurd et al. 1997 U.S. Forest Service

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 8,480 ft. - 13,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAIL

**Key Characteristics:**

- ◆ Cespitose from short, creeping rhizomes; culms slender, stiff, 1–3 dm tall
- ◆ **Spikes gynecandrous, sessile, dark, pyramidal inflorescence, closely aggregated;** bracts with short awn

- ◆ Perigynia 2.5–3.2 mm long, nerveless, **spreading with exerted tips**, ragged appearance; beaks smooth
- ◆ Pistillate scales, dark, yellowish-brown centers, obtuse tips, shorter and narrower than perigynia
- ◆ Achenes broadly oval, lenticular, 0.8–1 mm wide; stigmas 2

**Similar Species:** *C. jonesii* and *C. neurophora* occur in similar habitats, but has androgynous, terminal spikes.

**Habitat and Ecology:** Locally common to abundant in wet meadows, fens, and forests in the mountains.

**Comments:** *C. illota* typically forms a monoculture. Several occurrences, especially in southwestern Colorado, are indicative of fens. *C. illota* often drops some of its perigynia before the end of summer, giving it a darker and even more ragged look.

# Carex interior L.H. Bailey

Inland sedge

Cyperaceae



kgNaturePhotography



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,200 ft. - 10,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAIN11

## Key Characteristics:

- ◆ Densely tufted from short, dark-colored rhizomes; culms, slender, wiry, 1.5–5 dm tall
- ◆ Leaves 3; blades thin, 1–3 mm wide; bracts small and inconspicuous
- ◆ **Spikes 2–6, gynecandrous, short, sessile, perigynia widely spreading, forming a “star”**
- ◆ Perigynia ovate, plump, shiny, spongy bases, contracting to short, **bidentate beaks, short and stubby**
- ◆ Pistillate scales shorter than perigynia, ovoid with obtuse tips; stigmas 2

**Similar Species:** *C. echinata* (= *C. angustior*) is similar but perigynium beaks are more slender and longer (1.1–1.6 mm long) equaling the perigynia body versus the broader beaks in *C. interior*.

**Habitat and Ecology:** Widely distributed and common in wet meadows, calcareous fens and along streambanks in mountains and foothills.

**Comments:** *C. interior* is found from Alaska, east to Newfoundland, and south to Mexico. It is an inconspicuous sedge that is often overlooked especially when occurring with other graminoids. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.

***Carex lenticularis* Michx. var. *lipocarpa* (T. Holm) L.A. Standl.**  
Kellogg's sedge

Cyperaceae



Susan McDougall USDA-NRCS PLANTS Database



Hurd et al. 1998 U.S. Forest Service

**Key Characteristics:**

- ◆ **Cespitose, forms large tussocks;** culms 1–8 dm tall, brown at bases
- ◆ Leaf blades 1–4 mm wide; sheaths yellowish-brown, dotted ventrally; **bracts leaf-like, lowest bract exceeds inflorescence**
- ◆ **Terminal spike staminate, solitary,** pedunculate; lateral spikes pistillate with perigynia ascending

**Similar Species:** *C. aquatilis* looks similar, but is strongly rhizomatous. *C. emoryi* lowest bract is less than or equal to inflorescence and the pistillate scales are same size as perigynia.

**Habitat and Ecology:** Occasional or locally common in wet meadows, river banks and lake margins.

**Comments:** *C. lenticularis* remains green in fall and winter. It is not a particularly palatable species, but can be seasonally important winter forage for livestock and wildlife. This species can become established in disturbed habitats. Vertical rhizomes allow the plant to grow upwards through deposited sediments in disturbed habitats. It produces large number of seeds that germinate readily, successful species for restoration and erosion control.



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 5,550 ft. - 11,640 ft.

**Synonyms:** *Carex kelloggii* W. Boott

**USDA PLANTS Symbol:** CALEL3

- ◆ Perigynia ovate, 2-edged, swollen above stipe, green except for brown tips, **pointed at both ends;** beaks 0.1–0.3 mm
- ◆ Pistillate scales reddish, smaller than perigynia, 3-nerved, green center, hyaline margins; stigmas 2

# *Carex macloviana* d'Urv.

Thickhead sedge

Cyperaceae

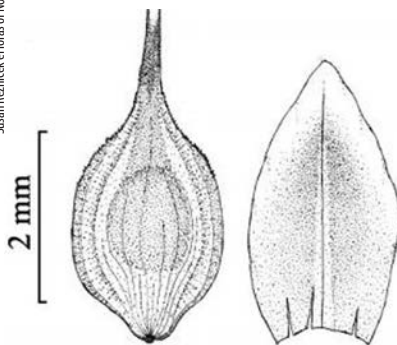


Keir Morse CalPhotos



Steve Matson CalPhotos

Susan Reznicek eFloras of North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 12,200 ft.  
**Synonyms:** *Carex macloviana* d'Urv. ssp. *subfusca* (W. Boott) T. Koyama, *Carex subfusca* W. Boott  
**USDA PLANTS Symbol:** CAMA9

## Key Characteristics:

- ◆ Densely caespitose; culms 1.6–6 dm tall, leaf sheaths white-hyaline, summits U-shaped
- ◆ Leaf blades 2–6 per fertile culm, 2–4 mm wide; inflorescence stiffly erect, dense
- ◆ Spikes 5–9, densely aggregated, gynecandrous, individually indistinct
- ◆ Perigynia ovate, 3.5–4.3 mm long, brown, **glossy metallic sheen**; beaks terete, hyaline tips; **dorsal suture with white, hyaline margins**
- ◆ **Pistillate scales golden brown to reddish, whitish-gold midstripe**, ovate, hyaline margins; stigmas 2

**Similar Species:** *C. bebbii* has smaller perigynia (2.5–3.8 mm long) with flat perigynium beaks.

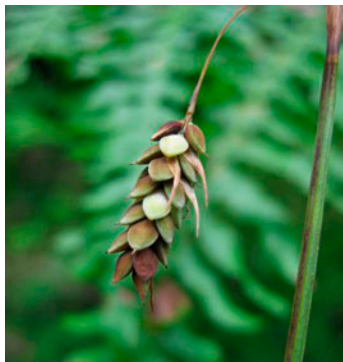
**Habitat and Ecology:** Common in meadows, along ponds, and in alpine tundra.

**Comments:** USDA-NRCS PLANTS Database does not show *C. macloviana* occurring in Colorado. However, FNA (2002), Johnston (2001), Ackerfield (2015), Wingate (2017), and Weber and Wittmann (2012) state that it occurs in Colorado and is common. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts.

*Carex magellanica* Lam. ssp. *irrigua* (Wahlenb.) Hultén

Boreal bog sedge

Cyperaceae



kgNaturePhotography



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 8,300 ft. - 11,500 ft.  
**Synonyms:** *Carex pauperula* Michx.  
**USDA PLANTS Symbol:** CAMA12

**Key Characteristics:**

- ◆ Loosely clustered in small tufts from rhizomes; roots golden-felted with root hairs; culms 1–8 dm tall, remnants of past leaves at bases
- ◆ Leaf blades flat, revolute margins, 2–4 mm wide; bracts leaf-like, 2–10 cm long

**Similar Species:** *Carex magellanica* ssp. *irrigua* is commonly mistaken for *C. limosa*, however *C. limosa* has grooved leaf blades, longer staminate spikes (15–27 mm) and pistillate scales that are obtuse, equalling or exceeding the perigynia.

**Habitat and Ecology:** In Colorado, *C. magellanica* ssp. *irrigua* is an indicator of peat accumulating wetlands, scattered to infrequent on wet lake shores, and willow carrs in upper montane or subalpine zones.

**Comments:** Circumboreal. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers, and muskrats.

- ◆ **Terminal spike staminate**, 4–12 mm long; lateral spikes **pistillate spikes nodding**
- ◆ Perigynia glaucous, **densely papillate**, dark brown, apices 2.2–3 mm long; marginal nerves prominent
- ◆ Pistillate scales lanceolate, **narrower and longer than perigynia**, awn-tipped; stigmas 3

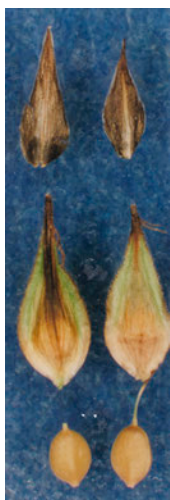
# Carex microptera Mack.

Smallwing sedge

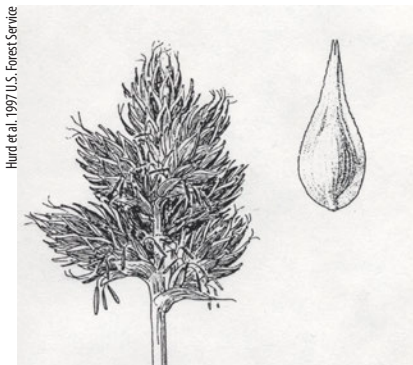
Cyperaceae



Hurd et al. 1997 U.S. Forest Service



Hurd et al. 1997 U.S. Forest Service



Hurd et al. 1997 U.S. Forest Service



Steve Matson Calliphotos

**Wetland Status WMVC:** FACU  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 11,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAMI7

## Key Characteristics:

- ◆ Densely caespitose, culms 2-11 dm tall, equaling or exceeding leaves, bases brown, old sheaths conspicuous
- ◆ Leaf blades flat, firm 2-5.5 mm wide, bristle-like (setaceous), channeled
- ◆ Inflorescence 4-10 spikes densely aggregated, spikes sessile, **gynecandrous**
- ◆ Pistillate scales ovate, acute, dull brown with lighter midstripe, **smaller than perigynia**
- ◆ Perigynia scalelike, winged, ovate to broadly ovate, 3.4-4.5 x 1.1-2.4 mm, spreading, scalelike, flattened, **beak terete**, bidentate; stigmas 2

**Similar Species:** *Carex pachystachya* perigynia are plano-convex (flat on one side-round on the other) and smaller, and is found in wetter areas.

**Habitat and Ecology:** Very common along streams, in meadows, and in forests.

**Comments:** *Carex microptera* is used in habitat restoration projects. It tolerates soils with high heavy-metal content, such as mine tailings and accumulates lead in its foliage. This is one of the commonest sedges at moderate elevation in the mountains. It is moderately palatable to livestock and is sensitive to grazing.



# Carex nebrascensis Dewey

Nebraska sedge

Cyperaceae



Trent M. Draper GalPhotos



Hurd et al. 1998 U.S. Forest Service

## Key Characteristics:

- ◆ Culms 2-9 dm tall, arising singly from stout, scaly rhizomes, forming dense stands; culm bases reddish; rosette of leaves are present
- ◆ Leaf blades blue-green to glaucous, 3-12 mm wide; bracts leaf-like, exceeds inflorescence
- ◆ Terminal spike(s), 1-2, staminate, 1.5-4 cm long; lateral spikes pistillate, pedunculate, 1.5-7 cm long

**Similar Species:** *C. aquatilis* perigynia are nerveless, wider and somewhat inflated and the leaves are often narrower (up to 8 mm wide). *C. nebrascensis* perigynia are strongly ribbed, longer and narrower, the beak is more prominent and often bidentate, and the pistillate scales usually have serrulate awns. It does not have a rosette of leaves on the ground and is not as blue-green as *C. nebrascensis*. *C. emoryi* leaves are green, not glaucous, scales are awnless, and the perigynia are early deciduous.

**Habitat and Ecology:** Common in wet meadows, streamsides, springs, lakesides, alkaline meadows from plains to upper montane zones. *C. nebrascensis* thrives in saturated soils, including high alkalinity.



Hurd et al. 1998 U.S. Forest Service

**Wetland Status** AW: OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 3,500 ft.-11,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CANE2

- ◆ Perigynia strongly veined, straw-colored, becoming red-dotted at maturity, 2.7-4.1 mm long; beak is bidentate, cylindrical, 0.3-0.5 mm
- ◆ Pistillate scales lanceolate, acute to short-awned, reddish-brown; stigmas 2

**Carex nigricans C.A. Mey.**  
Black alpine sedge

Cyperaceae

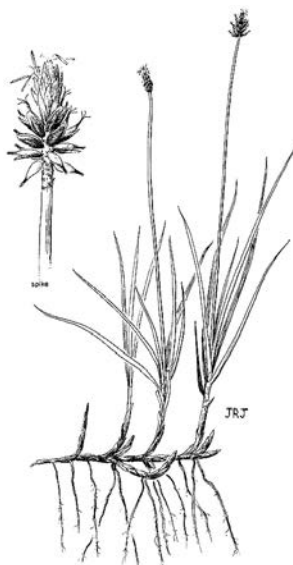


Susan McDougall USDA-NRCS PLANTS Database



Hurd et al. 1998 U.S. Forest Service

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 9,700 ft. - 13,400 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CANI2

**Key Characteristics:**

- ◆ Loosely cespitose from long, creeping rhizomes; culms stiff, 0.4–3 dm tall
- ◆ Leaves 4–9, crowded at bases; blades stiff, 4–13 mm long x 1.5–3 mm wide
- ◆ **Spikes solitary, androgynous, dark brown to black, perigynia dense, spreading**

**Similar Species:** *C. engelmannii* is also few-flowered, but perigynia are erect to spreading, not reflexed, and broadly obovate. *C. pyrenaica* is similar, but perigynia are ascending, not widely spreading, the leaves are narrower, up to 1.5 mm wide, and it is densely cespitose.

**Habitat and Ecology:** Common in snowmelt basins, wet meadows, edges of fens, and streambanks in the subalpine and alpine zones.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.

- ◆ Perigynia lanceolate, shiny, dark brown, 3–4.5 mm long, **reflexed when mature**
- ◆ **Pistillate scales deciduous, leaving a conspicuous ridge on spike axis;** stigmas 3

*Carex norvegica* Retz. ssp. *stevenii* (T. Holm) A.E. Murray  
Steven's sedge

Cyperaceae



Steve Olson



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5T4?  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 8,000 ft. - 11,500 ft.  
**Synonyms:** *Carex media* R. Br. var. *stevenii* (T. Holm)  
Fernald, *Carex stevenii* T. Holm  
**USDA PLANTS Symbol:** CANOS

**Key Characteristics:**

- Loosely to densely tufted on slender rhizomes; culms slender, triangular above, 2–8 dm tall
- Leaves 5–7, basal; blades pale green, flat, 1.5–3 mm wide; bracts leaf-like, sheathless
- Terminal spike gynecandrous**, cylindric, **bi-colored**; lateral spikes pistillate, up to 10 mm long
- Perigynia small, 2–2.5 mm, coppery yellow, rough-texture**; beaks short, 0.2–0.25 mm
- Pistillate scales ovate to broadly lanceolate, **black, white-hyaline margins**, apices blunt; stigmas 3

**Similar Species:** *C. buxbaumii* looks similar, however it is recognized by the cross-fibrillose lower leaf sheaths, the terminal spikes that can be either gynecandrous or androgynous, and the dark, narrow pistillate scales exceed the perigynia.

**Habitat and Ecology:** Common along streams, wet meadows, stream banks, occasionally reaching lower alpine tundra in Colorado.

**Comments:** The nomenclature for *C. norvegica* ssp. *stevenii* is not finalized. USDA-NRCS PLANTS Database recognize *C. norvegica* ssp. *stevenii*. However, FNA (2002), Johnston (2001), Ackerfield (2015) and Weber and Wittmann (2012) recognize *C. stevenii*.

# Carex nova L.H. Bailey

Black sedge

Cyperaceae



Steve Matson CalPhotos



Hurd et al. 1998 U.S. Forest Service

Hurd et al. 1998 U.S. Forest Service



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 10

**Duration:** Perennial

**Elevation:** 9,000 ft. - 12,500 ft.

**Synonyms:** *Carex elbertiana* L. Kelso

**USDA PLANTS Symbol:** CANO3

## Key Characteristics:

- ◆ Densely tufted from short, branched rhizomes; culms 1.5–6 dm tall, bases reddish
- ◆ Leaves 8–15, clustered at bases; blades erect, flat, firm with revolute margins
- ◆ **Terminal spike gynecandrous**, short, broad, bi-colored, **sessile**; lateral spikes, pistillate, sessele, crowded; heads dense

**Similar Species:** *Carex nelsonii* perigynia are gradually beaked, not abrupt, and perigynia are strongly papillose (bumpy). *Carex pelocarpa* perigynia are smooth with a beak that is slightly longer (0.5-1 mm long) and culms are flexuous with dark, shiny, nodding heads.

**Habitat and Ecology:** Common in meadows, along streams, in fens, and spruce-fir forests.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.

- ◆ Perigynia broadly elliptic, strongly flattened, 2–3.5 mm wide, **distally serrulate**; beaks 0.4–0.7 mm long
- ◆ **Pistillate scales ovate-oblong**, equaling or shorter than perigynia, **dark brown to purple**; stigmas 3

*Carex pachystachya* Cham. ex Steud.  
Chamisso sedge

Cyperaceae



Hurd et al. 1997 U.S. Forest Service



Hurd et al. 1997 U.S. Forest Service



Steve Watson, CalPhotos

Steve Watson, CalPhotos

**Key Characteristics:**

- ◆ Densely caespitose, culms 1.5-10 dm tall, slender, bases brown and clothed with old leaves
- ◆ Leaves on lower 1/3 shorter than or nearly equaling culms, 2-5 mm wide, flat, sheaths white-hyaline ventrally
- ◆ Spikes gynecandrous, sessile, in a dense head, perigynia ascending-spreading, 10-30 per spike

**Similar Species:** *Carex microptera* is found in drier areas, perigynia are flat, not plano-convex.

**Habitat and Ecology:** Common along streams, moist meadows, open forests, and slopes.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not assigned  
**Duration:** Perennial  
**Elevation:** 5,500 ft. - 11,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAPA14

- ◆ Pistillate scales ovate, acute, reddish brown, green midstripe, smaller than perigynia
- ◆ Perigynia ovate, 3.5-5 x 1.5-2.25 mm, plano-convex, thick, **copper colored with metallic sheen**, narrowly winged, serrulate above the middle; **beaks terete**, smooth, reddish brown, bidentate; stigmas 2

*Carex pellita* Muhl. ex Willd.  
Woolly sedge

Cyperaceae



Matt Lavin



Hurd et al. 1998 U.S. Forest Service

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 3,280 ft. - 10,500 ft.

**Synonyms:** *Carex lanuginosa* auct. non Michx. misapplied

**USDA PLANTS Symbol:** CAPE42

**Key Characteristics:**

- ◆ Stems arising singly from well-developed, creeping rhizomes; culm bases dark red, 3–12 dm tall
- ◆ Leaves 2–5, borne above bases; blades flat, 2.2–4.5 mm wide, **with prominent keel**, margins revolute; sheaths wine-red tinged
- ◆ **Terminal spike(s) staminate**, 2–5 cm long, sessile; lateral spikes pistillate, 1–6 cm long, cylindrical

- ◆ **Perigynia hairy**, broadly ovoid, spongy bases, 1.5–2 mm wide; beaks deeply bidentate or forked
- ◆ Pistillate scales lanceolate with long acuminate tips, reddish brown with light colored midstripe, hyaline margins; stigmas 3

**Similar Species:** *C. lasiocarpa* is much less common. The leaves are narrower (2 mm wide or less), the culms are obtusely triangular and the perigynia beaks are not forked. *C. lasiocarpa*, where it occurs, typically forms extensive stands, while *C. pellita* usually occurs as sporadic individuals.

**Habitat and Ecology:** Common and widespread along streambanks and wet meadows, often with alkaline soils.

**Comments:** *Carex pellita* is planted in wetland restoration projects. Its seeds are eaten by diverse suite of birds.

# *Carex praeceptorum* Mack.

Early sedge

Cyperaceae



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

### Key Characteristics:

- ◆ Cespitose with small clumps developing from short rhizomes; culms 1–3 dm tall, scabrous below inflorescence
- ◆ Leaves clustered toward bases; blades grooved, 1.2–2.5 mm wide
- ◆ Spikes 4–6, gynecandrous, green when young, sessile, aggregated into oblong-ovoid heads

**Similar Species:** *C. lachenalii* is found in similar habitats, but perigynia are longer (up to 3.5 mm) and beaks are smooth, up to 1 mm long. *C. canescens* resembles *C. praeceptorum*, but has pistillate scales that are white with green midveins.

**Habitat and Ecology:** Uncommon and inconspicuous in fens, wet meadows, and along streams in alpine and upper subalpine.

**Comments:** Occurs throughout the Intermountain West, west to the Pacific Northwest and California. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts.

Hurd et al. 1998 U.S. Forest Service



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G4G5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 8,480 ft. - 12,630 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CAPR22

- ◆ Perigynia ovate, spongy bases, yellowish-brown, wingless; beaks sparingly serrulate, 0.25–0.5 mm; dorsal suture well-developed
- ◆ Pistillate scales light brown with broad pale-green center, hyaline margins; stigmas 2

# Carex praegracilis W. Boott

Clustered field sedge

Cyperaceae



Susan McDougall USDA-NRCS PLANTS Database



Hurd et al. 1998 U.S. Forest Service

Hurd et al. 1998 U.S. Forest Service



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 3,280 ft. - 11,430 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CAPR5

## Key Characteristics:

- ◆ Culms arising singly or few together from creeping rhizomes, 2–7.5 dm tall; **bases dark, purple-black**
- ◆ Leaves basal; blades flattened, 1–3 mm wide; sheaths with white-hyaline inner band; apex of inner band of sheath not prolonged, the apiculus (awn-like appendage) hairy with 30x
- ◆ **Spikes androgynous**, 5–15, sometimes usually **appearing unisexual, sessile, straw-colored**, 1–5 cm long
- ◆ Perigynia ovate, spongy-based, sharp-edged (2.8) 3–4 mm long; beaks tapering, 0.6–1.3 mm
- ◆ Pistillate scales ovate, clasping perigynia usually covering it completely, straw-colored; stigmas 2

**Similar Species:** *C. simulata* perigynia are broadly ovate, shiny brown (when mature) and are abruptly short beaked versus the long, tapering beaks as in *C. praegracilis*.

**Habitat and Ecology:** Common in open, moist, wet, to drying swales, prairies, irrigation ditches and hay meadows, often in alkaline soils. *C. praegracilis* is sometimes dioecious, which makes identification difficult, due to no perigynia.

**Comments:** *Carex praegracilis* is an important winter/early spring forage for cattle, horses, and wildlife, it survives grazing, trampling and poor soils.



# Carex praticola Rydb.

Meadow sedge

Cyperaceae



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

Hurd et al. 1998 U.S. Forest Service



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 6,200 ft. - 11,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CAPR7

## Key Characteristics:

- ◆ Densely cespitose without creeping rhizomes; culms slender, flexuous, 2–9.5 dm tall
- ◆ Leaves 2–4, borne on lower part of culm, not clustered
- ◆ **Spikes 2–7, gynecandrous**, sessile, separated along culm; inflorescence slender, nodding
- ◆ Perigynia 4–6.5 mm long, tapered to bases and apices, **wing-margined**, pale green or straw-colored; beak terete
- ◆ Pistillate scales narrowly ovate, **concealing perigynia**, reddish-brown, pale green centers; stigmas 2

**Similar Species:** *C. praeceptorum* looks similar due to the gynecandrous spikes, but the perigynia are ovate, not tapered, and the pistillate scales are brown with hyaline margins.

**Habitat and Ecology:** Common in aspen forests and moist to dry meadows in the montane to subalpine. *C. praticola* is readily recognized by its arching spike and is one of the early maturing sedges.

**Comments:** *C. praticola* has been documented throughout the Intermountain West into the Pacific Northwest and California. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.

**Carex saxatilis** L.  
Rock sedge

Cyperaceae



Denise Culver Colorado Natural Heritage Program



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 8,900 ft. - 12,500 ft.

**Synonyms:** *Carex miliaris* Michx., *Carex physocarpa* J. Presl & C. Presl, *Carex rhomalea* (Fernald) Mack., *Carex saxatilis* L. ssp. *laxa* (Trautv.) Kalela

**USDA PLANTS Symbol:** CASA10

**Key Characteristics:**

- ◆ Culms arising singly or in small clusters from creeping rhizomes, turf-forming; culms 2–8 dm tall
- ◆ Leaf blades flat, revolute margins, septate-nodulose; bracts leaf-like, 3–15 cm long
- ◆ **Terminal spike staminate, purplish-black;** pistillate spikes sometimes drooping, densely flowered

- ◆ **Perigynia greenish-yellow, upper half reddish black-tinged, shiny, persistent styles;** beaks dark-tinged; persistent, contorted, bony style continuous with achene
- ◆ Pistillate scales ovate, apices erose, shorter and narrower than perigynia, dark-reddish; with light tip stigmas 2 (3)

**Similar Species:** *C. aquatilis* has delicate styles, pistillate spikes with peduncled proximal spikes that droop, and greenish-yellow perigynia, speckled with reddish-brown spots. In late season, *C. utriculata* perigynia can darken, but they are rarely as dark and shiny as *C. saxatilis*.

**Habitat and Ecology:** Common along streams and lakes, in fens, near melting snowbanks and in alpine meadows.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers, and muskrats.

# Carex scopulorum T. Holm

Mountain sedge

Cyperaceae



Hurd et al. 1998 U.S. Forest Service



Max Licher Arizona State University Herbarium

## Key Characteristics:

- ◆ Loosely clustered from dark reddish-tinged, scaly rhizomes, sod-forming; culms 1–4 dm, stout
- ◆ Leaf blades flat, revolute margins; bracts with purplish-black band at bases; **proximal (d closest to plant base) bract shorter than inflorescence**
- ◆ **Terminal spike usually staminate**, 1–3 cm long; lateral spikes pistillate, blackish spreading

**Similar Species:** From a distance, *C. aquatilis* can resemble *C. scopulorum*, but *C. aquatilis* perigynia are not as inflated and the lowest bract is usually longer than the inflorescence.

**Habitat and Ecology:** Common and abundant throughout montane, subalpine and alpine zones from drier areas to riparian zones.

**Comments:** Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers, and muskrats.



Hurd et al. 1998 U.S. Forest Service

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 9,000 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CASC12

- ◆ **Perigynia orbicular to obovoid, strongly biconvex, turgid, inflated, with reddish blotches; beaks reddish-black**
- ◆ Pistillate scales obovate, narrower, shorter than perigynia, black to dark reddish-brown; stigmas 2 (3)

# Carex simulata Mack.

Analoque sedge

Cyperaceae



Hurd et al. 1998 U.S. Forest Service



Hurd et al. 1998 U.S. Forest Service

## Key Characteristics:

- ◆ Culms arising singly or few together from well-developed, brown rhizomes; culms 1–9 dm tall
- ◆ Leaves 2–5, clustered at bases, light-green; blades 1–4 mm wide; apex of inner band of sheath prolonged 0.2–1.6 mm beyond base of blade, apiculus (awn-like appendage) smooth to warty at 30x
- ◆ Spikes 8–25, androgynous or dioecious, aggregated into linear-oblong heads
- ◆ Perigynia broadly ovate, spongy bases, raised margins, dark brown shiny, abruptly beaked
- ◆ Pistillate scales ovate-triangular, concealing perigynia, conspicuous lighter midveins; stigmas 2

**Similar Species:** *C. praegracilis* can occur with *C. simulata*, but can easily be distinguished (especially at maturity) by the perigynia that are not as round or shiny and pistillate scales do not clasp perigynia.

**Habitat and Ecology:** Widespread, common in wet meadows from foothills to upper montane. Monospecific stands are an indicator of peat-accumulating wetlands.

**Comments:** An unusual growth form of *C. simulata* (top, right image) is likely caused by an insect larvae that causes the plant to grow very wide with light green leaves. Inside the leaves there is a white, mealy residue. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers and muskrats.



Denise Culler Colorado Natural Heritage Program



Steve Hurd USDA-NRCS PLANTS Database

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 5,000 ft. - 10,830 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CASI2

## Carex utriculata Boott

Beaked Sedge

Cyperaceae



Keir Morse CalPhotos



Keir Morse CalPhotos

### Key Characteristics:

- ◆ Culms 3–12 dm tall, arising singly from deep-seated rhizomes forming monospecific stands
- ◆ Leaf blades, wide (2-12 mm), thick, yellowish-green, septate-nodulose; sheaths spongy, crosswalls between veins; bracts sheathless
- ◆ Terminal spike(s) staminate, linear, lateral spikes pistillate, erect with corn-cob appearance

**Similar Species:** *C. vesicaria* looks similar, but the perigynia are ascending, not erect, and the narrower beaks gradually taper into stiff, erect bidentate teeth. *C. exciccata* perigynia taper from the base into indistinct beaks.

**Habitat and Ecology:** One of the most common and robust sedges in the west and Colorado. Occurs in wet meadows, swamps, marshes and shallow water at margins of ponds, lakes, and streams, from prairies to subalpine.

**Comments:** *Carex utriculata* tolerates flooding up to 16 in. in spring, groundwater to 2 ft. below the surface, heavy metal contamination and acidic soils.

Hurt et al., 1998 U.S. Forest Service



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 5,800 ft. - 11,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** CAUT

- ◆ Perigynia strongly inflated, abruptly contracted at apices, nerves prominent; beaks bidentate
- ◆ Pistillate scales ovate, tips acute, smaller than perigynia; stigmas 3

**Carex vesicaria L.**  
Blister sedge

Cyperaceae



Steve Matson CalPhotos



Steve Matson CalPhotos



Hurt et al., 1998 U.S. Forest Service

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Perennial  
**Elevation:** 5,500 ft. - 11,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAVE6

**Key Characteristics:**

- ◆ Culms loosely cespitose from stout rhizomes, 3–10 dm tall, bases reddish-tinged, spongy
- ◆ Leaf blades flat, 1–7 mm wide; sheaths hyaline ventrally, becoming cross-filamentose
- ◆ Terminal spikes, 2–4, staminate, linear; pistillate spikes cylindrical, perigynia appressed
- ◆ Perigynia 3.5–10 mm long, inflated, papery, reddish-brown, nerves 10–20; beaks bidentate
- ◆ Pistillate scales ovate–lanceolate, acute-acuminate tips, smaller than or equal to perigynia; stigmas 3

**Similar Species:** *C. utriculata* differs because it is strongly rhizomatous (not cespitose), has leaf sheaths with “brickwork” of crosswalls on the leaves and does not have pistillate scales with acute or awned tips. *C. exsiccata* is characterized by inflated perigynia (7–10 mm long) that taper from bases to indistinct beaks.

**Habitat and Ecology:** Frequent to common in very wet sites, marshes, fens and wet meadows in montane and subalpine zones.

**Comments:** Circumpolar. Can hybridize with *C. saxatilis* and very rarely with *C. hystericina* or *C. utriculata*. *C. vesicaria* is more palatable to livestock than the coarser *C. utriculata*. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment for ducks, beavers, and muskrats.

***Eleocharis acicularis* (L.) Roem. & Schult.**  
Needle spikerush

Cyperaceae

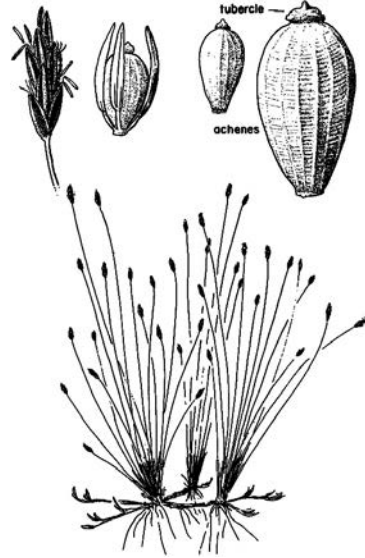


Steve Matson CalPhotos



Hurd et al. in prep. U.S. Forest Service

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Annual, Perennial  
**Elevation:** 3,500 ft. - 10,170 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ELAC

**Key Characteristics:**

- ◆ Diminutive, from slender, branching rhizomes, often forming dense clumps
- ◆ Culms filiform, not compressed, 0.3–1.2 dm tall
- ◆ Floral scales 1.5–2.5 mm long, with greenish midribs; stigmas 3
- ◆ Bristles 3 or 4 equaling or surpassing achene; achenes white to pale gray or yellowish
- ◆ Achenes with tubercles forming distinctive cap, 8- to 18-ribbed connected by cross-ridges

**Similar Species:** *Trichophorum pumilum*, only known from South Park, has a terminal, solitary spikelet that resembles *E. acicularis*. *T. pumilum* has true leaves, not just sheaths, and the achenes are black. *E. wolfii* looks similar, but is rare, known only from northeastern Colorado. It is distinguished by the compressed culms with minutely serrulate margins.

**Habitat and Ecology:** Very common along marshes, muddy shores and fens, from plains to high elevations in mountains.

**Comments:** *Eleocharis acicularis* provides habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

# *Eleocharis palustris* (L.) Roem. & Schult.

Common spikerush

Cyperaceae



Max Licher Arizona State University Herbarium



Hurd et al. in prep. U.S. Forest Service



Hurd et al. in prep. U.S. Forest Service

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 3

**Duration:** Perennial

**Elevation:** 3,350 ft. - 10,700 ft.

**Synonyms:** *Eleocharis macrostachya* Britton,

*Eleocharis xyridiformis* Fernald & Brack.

**USDA PLANTS Symbol:** ELPA3

## Key Characteristics:

- ◆ Rhizomatous, **mat-forming**; culms in small clusters along rhizomes, 1-10 dm tall
- ◆ Culms terete to slightly compressed, 8–30 blunt ridges, firm to soft, internally spongy
- ◆ **Leaf sheaths persistent**, not inflated, papery, prominent V-shaped sinuses
- ◆ Bristles 4 (5), retrosely barbed, much shorter than achene to equaling tubercle; **stigmas 2**
- ◆ **Achenes biconvex to lenticular, yellow to brown, tubercles pyramidal, twice as high as wide**

**Similar Species:** *E. palustris* is distinguished from other spikerushes by its rhizomatous habit creating monospecific stands. It also has 2 stigmas, 2 styles and lenticular achenes with distinct tubercles.

**Habitat and Ecology:** Common along ditches, streams, pond margins and in moist meadows.

**Comments:** *Eleocharis palustris* provides habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.



# *Eleocharis quinqueflora* (Hartmann) O. Schwarz

Fewflower spikerush

Cyperaceae



Steve Olson



Hurd et al. in prep. U.S. Forest Service



Hurd et al. in prep. U.S. Forest Service

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 6,000 ft. - 12,500 ft.

**Synonyms:** *Eleocharis pauciflora* (Lightf.) Link,  
*Eleocharis pauciflora* (Lightf.) Link var. *feraldii* Svens.

**USDA PLANTS Symbol:** ELQU2

## Key Characteristics:

- ◆ Clustered stems on rather short, stout rhizomes, with bulbs at bases; **culms 1–3 dm tall**
- ◆ Floral scales usually subtending ridges; stigmas 3
- ◆ Bristles 3–6, equaling or exceeding the achenes
- ◆ Achenes broadest above middle, cellular-roughened, 1.9–2.6 mm long
- ◆ **Distinct beak on the achenes are continuous with achene body**

**Similar Species:** *E. rostellata* has similar growth habit but is stoloniferous, not rhizomatous, typically rooting at the nodes, the culms are flattened (2 mm or wider) and is typically much taller, up to 10 dm tall. *E. acicularis* achenes have distinct longitudinal ridges and cross-ridges, with tubercles forming distinct apical caps.

**Habitat and Ecology:** Common along lake and pond margins, streams, wet meadow, fens, seeps, springs and hot springs in upper montane and subalpine.

**Comments:** Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

*Eleocharis rostellata* (Torr.) Torr.  
Beaked spikerush

Cyperaceae



Steve Matson CalPhotos



Hurd et al. in prep. U.S. Forest Service

Hurd et al. in prep. U.S. Forest Service



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,500 ft. - 9,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ELR02

**Key Characteristics:**

- ◆ Densely tufted, **mat-forming by means of rooting culm tips**; culms flattened, 2–10 dm tall
- ◆ Floral scales 10–40 per spikelet, midribs pale, ovate, 3.5–6 mm long x 2–3 mm wide
- ◆ Bristles brown, equaling achenes, including small spines
- ◆ Achenes variable, 1.5–2.5 mm long x 1–1.2 mm wide; stigmas 3
- ◆ **Tubercles pyramidal**; anthers brown, 2–2.4 mm

**Similar Species:** In Colorado there are no other spikerushes that are stoloniferous.

**Habitat and Ecology:** Uncommon in fens, saline/alkaline wet meadows, seeps and springs especially on Western Colorado. It will form large monospecific colonies due to the growth habit of rooting culm tips. When walking through a stand of *E. rostellata*, one can be tripped by the arching stolons.

**Comments:** Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers, and amphibians.

# *Eriophorum angustifolium* Honck.

Tall cottongrass

Cyperaceae



Al Schneider Southwestern Colorado Wildflowers



Denise Culver Colorado Natural Heritage Program



Hurd et al. in prep. USDA Forest Service

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 7,000 ft. - 12,800 ft.

**Synonyms:** *Eriophorum polystachion* L.

**USDA PLANTS Symbol:** ERAN6

## Key Characteristics:

- ◆ Colonial from long creeping rhizomes, wine-red staining on vegetative shoots; culms 2 to 10 dm tall
- ◆ Uppermost leaves as long or longer than the sheaths; blades flat, **staining red when crushed**
- ◆ **Spikelets (1) 2–10**, in sub-umbels, pendent, ovoid, 20–50 mm in fruit; peduncles 5–60 mm
- ◆ Scales 5–10 mm, lanceolate-ovate, margins broad, white, membranous, apices acute, midrib fading toward the tip
- ◆ Perianth bristles 15–30 mm long, white; anthers 2–5 mm long; achenes black, 2–5 mm

**Similar Species:** *E. gracile* is not as common, the leaf blades are folded, the upper culm leaf blade is much shorter than the sheath, scales are 3–4 mm long, leaves are narrower, 1–2 mm, wide and they seldom turn red, only shades of brown. *E. gracile* and *E. angustifolium* often occur together.

**Habitat and Ecology:** Common in marshes, fens, meadows, and lake shores. Uniform stands appear reddish due to red leaf tips, especially late in the growing season.

**Comments:** Most common cottongrass in Colorado. The 'cotton' of the cottongrass develops at bases of the ovaries and is actually modified petals and sepals. Cottongrass achenes are a food source for waterfowl and ungulates.

# *Eriophorum chamissonis* C.A. Mey.

Chamisso's cottongrass

Cyperaceae



Susan Spackman Panjabi Colorado Natural Heritage Program



Janet Wingate Denver Botanical Gardens



Dee Malone Colorado Natural Heritage Program

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 10  
**Duration:** Perennial  
**Elevation:** 10,000 ft. - 12,000 ft.  
**Synonyms:** *Eriophorum altaicum* Mein. var. *neogaeum* Raymond  
**USDA PLANTS Symbol:** ERCH7

## Key Characteristics:

- ◆ Colonial from long creeping rhizomes; culms (2) 3–7 (8) dm tall, somewhat 3-angled
- ◆ Leaves filiform, (2) 3–10 cm long x 1–2 mm wide, top 1–2 leaf sheaths bladeless
- ◆ **Spikelets solitary, erect, globose in fruit**
- ◆ Scales black-purple, obovate, 4–20 mm, margins hyaline at least 1 mm wide, apices blunt
- ◆ Perianth bristles 10 or more, red-brown to cinnamon, anthers smooth, 1 mm or longer

**Similar Species:** *E. scheuchzeri* also has solitary spikelets, the perianth bristles are stark white, anthers are 0.5–1.5 mm long and hyaline margins are up to 1 mm wide. However, the nomenclature for solitary headed cottongrasses is unsettled. The two other solitary headed cottongrasses include *E. altaicum* var. *neogaeum* and *E. scheuchzeri*. In PLANTS Database, *E. altaicum* var. *neogaeum* and *E. scheuchzeri* are recognized, but PLANTS Database does not show it occurring in Colorado. Weber and Wittmann (2012) recognize only *E. altaicum* var. *neogaeum*. FNA (2002) states that *E. altaicum* var. *neogaeum* is a synonym for *E. chamissonis*. In summary, a broad circumpolar analysis is needed to sort out the single headed cottongrasses.

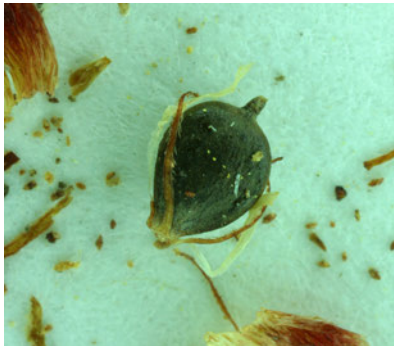
**Habitat and Ecology:** Uncommon in fens, marshes, and sedge hummocks in montane to alpine.

*Schoenoplectus americanus* (Pers.) Volkart ex Schinz & R. Keller  
Chairmaker's bulrush

Cyperaceae



Neal Kramer CalPhotos



Steve Matson CalPhotos

Steve Hurst USDA-NRCS PLANTS Database



Trent M. Draper CalPhotos



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Perennial  
**Elevation:** 4,500 ft. - 8,000 ft.  
**Synonyms:** *Scirpus americanus* Pers.  
**USDA PLANTS Symbol:** SCAM6

**Key Characteristics:**

- ◆ Rhizomatous; culms triangular, 5-15 dm tall
- ◆ **Involucre bract solitary, appearing as a continuation of the stem, 1-6 cm long**
- ◆ Inflorescence capitate; spikelets 2-20, sessile, to 15 mm long

- ◆ Perianth bristles 4-6, shorter to equal to the achene; achenes obovoid, 1.8-2.8 x 1.3-2 mm with a beak 0.1-0.3 mm long; **scales 2.5-4 mm long with an apical notch 0.1-0.3 mm long**
- ◆ **Achenes 1.5-3 mm long, obovoid**

**Similar Species:** *S. pungens* is stouter often 1 cm or more thick toward the base, very sharply triangular with conspicuously concave sides. The bract is longer, 3-20 cm long, secondary involucre bracts with blades (resembling large scales). *Scirpus nevadensis* has round stems, no awns on scales, and beakless achenes

**Habitat and Ecology:** Found in moist places along streams, ditches, and pond margins throughout Colorado.

**Comments:** Seeds and rhizomes are an important food source and nesting cover for waterfowl and amphibians.

# *Schoenoplectus maritimus* (L.) Lye

Cosmopolitan bulrush

Cyperaceae

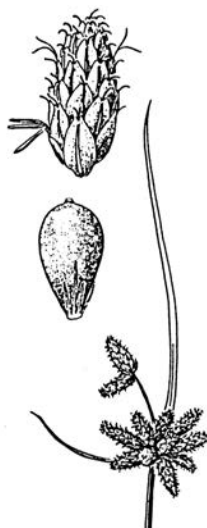


Hurd et al. in prep. U.S. Forest Service



Hurd et al. in prep. U.S. Forest Service

Hurd et al. in prep. U.S. Forest Service



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 3,580 ft. - 8,000 ft.

**Synonyms:** *Bolboschoenus maritimus* (L.) Palla ssp. *paludosus* (A. Nelson) Å. Löve & D. Löve, *Scirpus maritimus* L., *Scirpus paludosus* A. Nelson

**USDA PLANTS Symbol:** SCMA8

## Key Characteristics:

- ◆ Stout, rhizomatous, bearing firm tubers; culms 2–15 dm tall
- ◆ Leaves to 12 mm wide; involucre bracts 1–4, surpassing inflorescence, bracts 1–6 mm wide
- ◆ Inflorescence of sessile spikelets; spikelets over 7–40 mm long; scales orange-brown to tan, 5–8 mm long, apex bifid with awn 1–3 mm long
- ◆ Perianth bristles to 1/2 length of achene
- ◆ **Achenes 2.3–4 mm long, dark brown, glossy, lenticular; beaks 0.1–0.4 mm**

**Similar Species:** *S. fluviatilis*, rare and found at lower elevations, spikelets are pedunculate and perianth bristles are equal to or longer than achenes.

**Habitat and Ecology:** Common in marshes, wet meadows and margins of ponds, especially in alkaline or saline wetlands. *S. maritimus* is very tolerant of alkali conditions and is common with other halophytes in roadside ditches where road salts accumulate.

**Comments:** *Schoenoplectus maritimus* can be considered an aggressive plant, becoming dominant in shallow water wetlands.

# *Schoenoplectus pungens* (Vahl) Palla

Common threesquare

Cyperaceae



Steve Matson CalPhotos



Hurd et al. in prep. U.S. Forest Service



Hurd et al. in prep. U.S. Forest Service

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 4  
**Duration:** Perennial  
**Elevation:** 3,470 ft. - 8,000 ft.  
**Synonyms:** *Scirpus pungens* Vahl.  
**USDA PLANTS Symbol:** SCPU10

## Key Characteristics:

- ◆ Rhizomatous, often vertical; **culms sharply triangular**, 1.5–10 dm tall
- ◆ Spikelets 1–6, sessile in a compact cluster, 7–20 mm long
- ◆ **Involucre bract subtending the inflorescence 3–20 cm long**
- ◆ Perianth bristles retrorsely barbellate, 4–6, unequal, not exceeding achenes; short beak; scales 3.5–6 mm long, yellowish-brown, **midribs firm, exerted from broad notch as short awns**
- ◆ Achenes 2.5–3.5 mm long, obovoid with beaks 0.1–0.5 mm long

**Similar Species:** *Scirpus nevadensis*, superficially resembles *S. pungens*, but has round stems, scales without awns and beakless achenes. *Schoenoplectus americanus* is not as stout, the culms are triangular, not as sharp, the bract subtending the inflorescence is 1–5 cm long and the secondary involucre bracts lack blades. The spikelet scales are 2.7–4 mm long with apical notches that are 0.1–0.4 mm deep.

**Habitat and Ecology:** Very common along marshes, lakes, fens and perennial and intermittent streams, tolerant of alkali conditions.

**Comments:** *Schoenoplectus pungens* seeds and rhizomes are an important food source and provide nesting cover for waterfowl and amphibians.

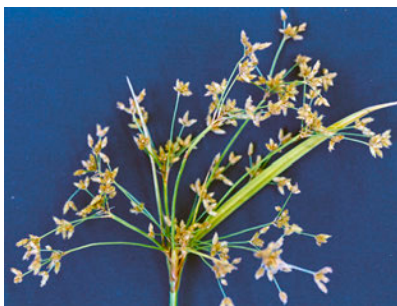
# *Scirpus microcarpus* J. Presl & C. Presl

Panicled bulrush

Cyperaceae



Steve Matson CalPhotos



Hurd et al. in prep. U.S. Forest Service



Hurd et al. in prep. U.S. Forest Service

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 3,860 ft. - 9,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SCMI2

## Key Characteristics:

- ◆ Rhizomatous; rhizomes reddish, long with conspicuous nodes; culms 6–15 dm tall; leaf sheaths red
- ◆ **Inflorescence terminal, spikelets sessile, aggregated into dense heads**
- ◆ **Spikelets 2-8 mm long, subtended by several leaf-like bracts that are unequal in length**
- ◆ Scales green-black, broadly ovate, apices rounded, 1-3.5 mm long, minute point
- ◆ Perianth bristles persistent, 4 (6), stout, straight; achenes lenticular

**Similar Species:** *S. pallidus* has green, not reddish leaf sheaths and the scales have conspicuous midribs that are exerted as short awns to 0.5 mm long.

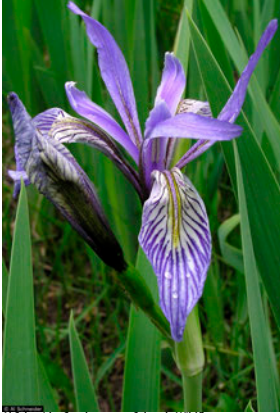
**Habitat and Ecology:** Found along muddy shores of marshes, moist meadows and ditches.

**Comments:** *Scirpus microcarpus* seeds and rhizomes are an important food source and provide nesting cover for waterfowl and amphibians.



*Iris missouriensis* Nutt.  
Rocky Mountain iris

Iridaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 4  
**Duration:** Perennial  
**Elevation:** 5,500 ft. - 11,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** IRMI

**Key Characteristics:**

- ◆ Stems 2–6 dm tall; spreading by thick rhizomes
- ◆ Leaves equitant, linear, 2.5–8 mm; flowering stems terminating in a (1)2–3(4) flowered spathes
- ◆ Outer tepals 4.5–6 cm long, obovate, recurved, lavender background with yellow center

**Habitat and Ecology:** Common in moist meadows, along streams and in aspen forests, often in soils that dry out by end of summer.

**Comments:** Iris roots can cause gastrointestinal poisoning (colic, diarrhea) in humans and other animals.

- ◆ Inner tepals (valves) as long as outer, notched, erect, pale blue to white
- ◆ Capsules 3–5 cm long, short-cylindrical, 6-ridged

*Sisyrinchium idahoense* E.P. Bicknell var. *occidentale* (E.P. Bicknell)  
Douglass M. Hend.  
Idaho blue-eyed grass

Iridaceae



Gary A. Monroe USDA-NRCS PLANTS Database



Barry Breckling CalPhotos

**Key Characteristics:**

- ◆ Cespitose, **stems simple, 1-2 mm wide, unbranched**, to 4.5 dm tall, obviously winged, not glaucous
- ◆ Leaf blades glabrous, bases not persistent in fibrous tufts

**Similar Species:** *S. pallidum* has pale blue flowers, stems are 2.3-5 mm wide and typically branched, outer spathe bracts are longer (28-38 mm long) and the tips of outer tepals are not awned.

**Habitat and Ecology:** Common in wet meadows, along streams and interdunal ponds.

**Comments:** *S. idahoense* is the most variable and widely distributed species of the genus in the western states. Characters critical for distinguishing species of *Sisyrinchium* are often found in the floral material, requiring extra care in collecting and pressing to properly determine identification. Source of nectar for native bees, wasps, butterflies, and other insects.

William Moye III Vascular Plant of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T3T5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 3,900 ft. - 10,000 ft.

**Synonyms:** *Sisyrinchium occidentale* E.P. Bicknell

**USDA PLANTS Symbol:** SIIDO

- ◆ Outer spathes 14–30 mm long, **1.5 times the length or inner spathe bracts**
- ◆ **Flowers light to deep blue, bases yellow; outer tepals 8–13 mm, tips notched**, awn minute
- ◆ Capsules beige, purple blotches on apices, globose, 3–6 mm; seeds globose, granular

# *Sisyrinchium montanum* Greene

Strict blue-eyed grass

Iridaceae



Keir Morse CalPhotos



Al Schneider Southwestern Colorado Wildflowers



Louis M. Landry CalPhotos



Louis M. Landry CalPhotos

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 4,800 ft. - 11,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SIMO2

### Key Characteristics:

- ◆ Cespitose; stems simple, obviously winged, (1.5–)2–3.7 mm wide, glabrous, margins denticulate
- ◆ Leaf blades glabrous, bases not persistent in fibrous tufts
- ◆ Spathes borne singly, usually green or bronze, keels usually denticulate, **outer spathe 35-75 mm long,**

**approx. twice the length of the inner,** connate (joined) basally 1.2–4.5 mm

- ◆ **Tepals blue-violet with yellow bases,** 8–15 mm long, apex notched, bearing an awn
- ◆ Capsules tan to brown, sometimes with purplish tinged, 4–7 mm in diameter; seeds globose, wrinkled, 0.9–1.5 mm

**Similar Species:** *Sisyrinchium pallidum* flowers are pale blue, inner bract has a narrow hyaline margin all the way to the tip, instead of within 1 mm of the tip, typically found in more alkaline soils

**Habitat and Ecology:** Common in meadows, marshes, and along streams.

**Comments:** Characters critical for distinguishing species of *Sisyrinchium* are often found in the floral material, e.g., spathe length, requiring extra care in collecting and pressing to properly determine identification. Source of nectar for native bees, wasps, butterflies, and other insects.

## *Triglochin maritima* L.

Seaside arrowgrass

Juncaginaceae



Steve Matson CalPhotos



Steve Matson CalPhotos

### Key Characteristics:

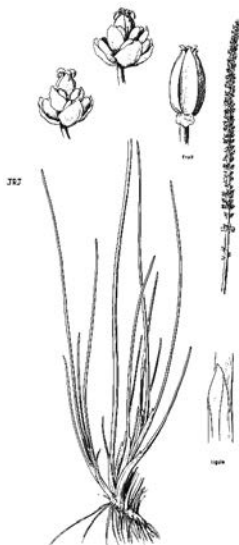
- ◆ Coarse to slender, erect, 3–10 dm tall; arising from stout rhizomes; old leaf strands at bases
- ◆ Leaves linear, 10–80 cm long x 1.5–2.5 mm wide, strongly compressed; **ligule 2-lobed, hood-like**
- ◆ Scapes slender, 1–8 dm long, terminated by a raceme 1–4 dm long, dense with pedicellate flowers

**Similar Species:** *T. palustris*, not as common, has 3 stigmas, fruits that are linear with narrow bases and fruiting receptacles with wings and is not as common.

**Habitat and Ecology:** Locally common in marsh areas, seeps, lake shores and moist meadows. Grows mostly in alkaline soils.

**Comments:** *Triglochin* spp. contain cyanogenic glycoside (cyanide), a very poisonous compound, especially in high concentration in young plants. Common throughout Alaska, Canada and the United States, except in the southeastern states.

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 5,000 ft. - 10,500 ft.

**Synonyms:** *Triglochin concinna* Burt-Davy

**USDA PLANTS Symbol:** TRMA20

- ◆ Tepals elliptic, 1.3–1.7 mm long x 0.6–1.4 mm wide, apices acute; stigmas 6
- ◆ **Fruits are receptacles without wings, linear to globose, 2–5 mm long, not narrowed at bases**

# *Platanthera aquilonis* Sheviak

Northern green orchid

Orchidaceae



Crystal Strouse



Scott Smith

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 5,300 ft. - 13,360 ft.

**Synonyms:** *Platanthera hyperborea* auct. non (L.)  
Lindl., *Limnorchis hyperborea* (L.) Rydberg

**USDA PLANTS Symbol:** PLAQ2

## Key Characteristics:

- ◆ Stems erect to decumbent, 0.5-6 dm tall, succulent
- ◆ Leaves few to several, scattered along stem or clustered at bases, 3-14 cm long x 0.4-4 cm wide
- ◆ Inflorescences a spike, very lax to dense
- ◆ Flowers yellowish-green; lip petals not dilated at bases, wider at bases than tips
- ◆ Spurs 2-5 mm long, not saccate; pollen loose, trailing downward onto stigmas

**Similar Species:** *Platanthera aquilonis* is a North American diploid species long confused with the tetraploid Icelandic *P. hyperborea* (L.) Lindley, that occurs only in Iceland. The two species differ in column structure, the shape of the lip and viscidium (sticky part that attaches to pollinator).

**Habitat and Ecology:** Common in marshes, moist spruce-fir forests, meadows and along streams.

**Comments:** *Platanthera* spp. are pollinated by bumblebees and moths, though many are also self-fertilizing. Globally common from Alaska, Canada, Pacific Northwest, Intermountain West to New Mexico and upper midwest and northeast United States.

# *Platanthera dilatata* (Pursh) Lindl. ex Beck

Scentbottle

Orchidaceae

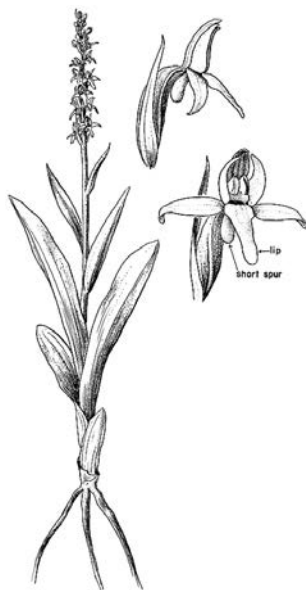


Scott Smith



Scott Smith

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 7,000 ft. - 12,600 ft.

**Synonyms:** *Limnorchis dilatata* (Pursh) Rydberg ssp. *albiflora* (Chamisso) Löve & Simon

**USDA PLANTS Symbol:** PLDI3

## Key Characteristics:

- ◆ Erect to decumbent, 1–15 dm tall, succulent; roots fasciculate (arranged in bundles)
- ◆ Leaves few to several, ascending to recurved, scattered along stem, 3.5–32 cm long x 0.3–7 cm wide

**Similar Species:** Two varieties in Colorado:

1a. Spur shorter than the lip . . . var. *albiflora*

1b. Spur equal to the lip or nearly so . . . var. *dilatata*

**Habitat and Ecology:** Common in moist meadows and spruce-fir forests, along streams, creeks and marshes.

**Comments:** Pollinated by moths and butterflies. An intense clove scent distinguishes *Platanthera dilatata* from related species across most of its range. Global range includes Alaska south to New Mexico to South Dakota to upper midwest, northeast United States and eastern Canada.

- ◆ Inflorescence a spike, very lax to very dense
- ◆ **Flowers white, showy, conspicuous, lip petals broadened and dilate at bases, very aromatic**
- ◆ Spurs equal to lips, clavate to slightly capitate

***Platanthera huronensis* (Nutt.) Lindl.**  
Huron green orchid

Orchidaceae



Louis M. Landry CalPhotos



R. K. Kupfer University of Wisconsin-Stevens Point

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5T5?  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,800 ft. - 11,800 ft.  
**Synonyms:** *Habenaria huronensis* (Nutt.) Spreng.,  
*Platanthera hyperborea* (L.) Lindl. var. *huronensis*  
(Nutt.) Luer  
**USDA PLANTS Symbol:** PLHU2

**Key Characteristics:**

- ◆ Stems 1–12 dm tall; leaves ascending, scattered along stem, reduced to bracts distally
- ◆ Leaf blades oblong to linear-lanceolate, 5–30 cm long x 0.6–7 cm wide
- ◆ **Flowers resupinate (upside down), not showy, whitish-green; corolla often whiter than calyx**

**Similar Species:** *P. purpurascens* spurs are half to three-quarters in length of the lip petals and are short and saccate, often scrotiform. *P. aquilonis* lips are ovate, rarely lanceolate, abruptly and broadly dilated at bases and the spurs are markedly clavate.

**Habitat and Ecology:** Locally common in moist forests, meadows, marshes and along creeks and streams.

**Comments:** *P. huronensis* usually has an intense, sweet, pungent fragrance. *P. huronensis* is known to hybridize with *P. dilatata*; it may hybridize with other species as well. More genetic research remains to determine if separate species. Global range extends from Yukon Territory, all of Canada, Montana, Wyoming, Colorado, Nebraska, upper midwest and northeast United States.

# *Platanthera purpurascens* (Rydb.) Sheviak & Jennings

Purple-petal bog orchid

Orchidaceae



Scott Smith



Susan McDougall USDA-NRCS PLANTS Database

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 5,000 ft. - 12,000 ft.

**Synonyms:** *Limnorchis purpurascens* Rydb.,  
*Platanthera hyperborea* (L.) Lindl. var. *purpurascens*  
(Rydb.) Luer, *Planthera stricta* Lindl.

**USDA PLANTS Symbol:** PLPU7

## Key Characteristics:

- ◆ Stems 2.5–8 dm tall, erect to decumbent, succulent
- ◆ Leaves few to several, abruptly diverging or ascending, scattered along stem
- ◆ Blades oblong, 3–32 cm long x (0.6) 1–4.5 cm wide

- ◆ **Flowers with light green sepals; petals dark green, lip petals rounded-dilated, bluish or red, musky smell**
- ◆ Spurs half to sometimes three-quarters the length of lip petals, short and saccate, strongly clavate

**Similar Species:** *P. huronensis* has longer spurs, surpassing the lip petals, and flowers that are whitish-green.

**Habitat and Ecology:** Found in moist meadows, spruce-fir forests, along lakes and streams.

**Comments:** *P. purpurascens* has a distinctive musky scent. Global range from Alaska south to British Columbia, Alberta, Montana, south to New Mexico, west to California and Washington.



***Spiranthes romanzoffiana* Cham.**  
 Hooded lady's tresses

Orchidaceae



Al Schneider Southwestern Colorado Wildflowers



Scott Smith

Jeanne R. Janish Vascular Plants of the Pacific, Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,460 ft. - 11,290 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SPRO

**Key Characteristics:**

- ◆ Stems 8–55 cm tall; leaves linear to linear-lanceolate, elliptic, or oblanceolate
- ◆ **Inflorescences tightly spiraled, rachises are not visible, 3 flowers per cycle of spiral**
- ◆ Rachises glabrous to sparsely pubescent, capitate glands short-stalked
- ◆ Flowers ascending, white to ivory, tubular; tepals converging to form a hood
- ◆ Corolla lips fiddle-shape, reflexed, apices broadly dilated, veins typically 3, lateral veins spreading

**Similar Species:** *S. diluvialis* tepals are only united at bases, not forming a hood, the outer lateral tepals are spreading, not upcurved, inflorescences are loose and rachises can be seen between flowers.

**Habitat and Ecology:** Locally common on floodplains, along streams, and in moist meadows and swales.

**Comments:** *S. romanzoffiana* varies considerably in habit, but is usually consistent in floral morphology. The strongly hooded, ascending flowers with abruptly reflexed lips provide a distinctive feature.

# *Typha angustifolia* L.

Narrowleaf cattail

Typhaceae



Aaron Arthur CalPhotos



Neal Kramer CalPhotos

## Key Characteristics:

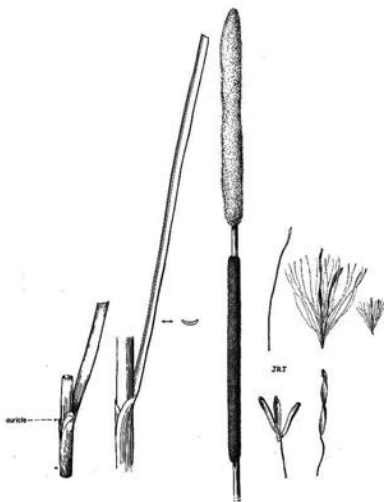
- ◆ Stems 1–1.5 m tall, arising from slender, creeping rhizomes
- ◆ Leaves exceeding the inflorescence, 5–10 mm wide, leaf sheaths closed with auricles; absence of brown dot-like mucilage glands from base of leaf blade

**Similar Species:** *T. latifolia* spikes are not separated by an axis segment, leaves are wider, and plants are less dominating. *T. domingensis* staminate and pistillate spikes are separated, but the staminate spikes are longer than the pistillate. It also has a brown dot-like mucilage glands on the inside of the leaf blade base.

**Habitat and Ecology:** Found in shallow, slow-moving waters of ponds and streams. It is restricted to mineral-rich habitats and is more salt tolerant than *T. latifolia*. Discussion of the native status of *T. angustifolia* is on-going. According to USDA-NRCS PLANTS Database it can be native with non-native populations that have been established by human activities.

**Comments:** *Typha angustifolia* can be considered an aggressive plant, becoming dominant in shallow water wetlands. All parts of the cattail are edible when gathered at the appropriate stage of growth.

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native, Non-native, CO Noxious Weed Watch List

**Conservation Status:** G5

**C-Value:** 2

**Duration:** Perennial

**Elevation:** 3,350 ft. - 8,200 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** TYAN

- ◆ Spike-bearing stems shorter than leaves
- ◆ Staminate and pistillate spikes separated by a naked segment of the axis, 1–5 (12) cm long
- ◆ Pistillate and staminate spikes same length, 8–20 cm long; staminate spikes straw-colored or tan

***Typha latifolia* L.**  
Broadleaf cattail

Typhaceae

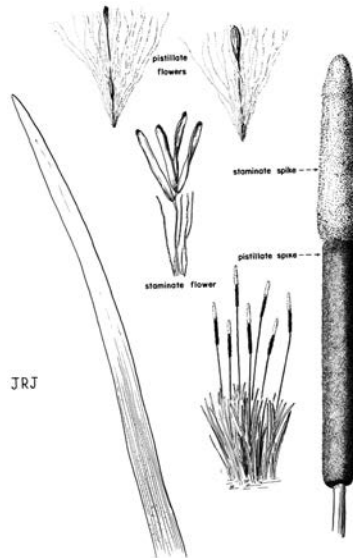


Al Schneider Southwestern Colorado Wildflowers



Steve Matson CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



J.R.J.

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 2  
**Duration:** Perennial  
**Elevation:** 3,600 ft. - 9,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** TYLA

**Key Characteristics:**

- ◆ Stems 1–3 m tall; arising from stout spreading fleshy rhizome
- ◆ Leaves light green, 8–20 mm wide, nearly flat, leaf sheaths open to bases, no auricles; absence of brown dot-like mucilage gland on leaf blade
- ◆ Spike-bearing stems as long or slightly longer than leaves
- ◆ Pistillate and staminate portions contiguous, rarely or only slightly separated
- ◆ Pistillate spikes dark brown, 10–18 cm long, staminate spikes lighter brown

**Similar Species:** *T. angustifolia* staminate and pistillate spikes are separated, exposing a portion of the axis. Pistil spike color is dark to bright brown. *T. domingensis* staminate and pistillate spikes are separated, exposing a portion of the axis. Inside leaf blade base a brown dot-like mucilage gland present.

**Habitat and Ecology:** Common, found in shallow water of ponds, ditches, slow-moving streams and creeks throughout the state. *T. latifolia* grows in a wide range of soils and waters from mineral-poor to mineral-rich. Of the three species, it occurs in the widest range of climates from the Arctic Circle to Guatemala.

**Comments:** All parts of the cattail are edible when gathered at the appropriate stage of growth. Seeds are eaten by several duck species. Rootstalks are eaten by Canada Geese, muskrats and beavers. Moose and elk eat fresh spring shoots. Cattails provide shelter and nesting cover.

# *Angelica ampla* A. Nelson

Giant angelica

Apiaceae



Ernie Marx Eastern Colorado Wildflowers



Allison Shaw Colorado Natural Heritage Program



Jane & Lindsey Huonius

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G3G4

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 6,000 ft. - 9,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** ANAM

## Key Characteristics:

- ◆ **Stems robust, stout, over 2 m tall, hollow, purplish**, glabrous or sparingly pubescent; taproots coarse
- ◆ **Leaves ternate, then twice pinnate, leaflets 3–20 cm long, serrate; petioles dilated**

- ◆ **Inflorescence rounded, globose umbels of very small white flowers**; pedicels 5–12 mm long
- ◆ Stylopodiums broadly conic; carpophores bifid to bases; fruits 7–8 mm long, oblong-oval
- ◆ Ribs of fruits narrowly winged; oil tubes numerous

**Similar Species:** *Cicuta maculata* var. *angustifolia* is not as stout, the leaf segments are lanceolate and the veins in leaves terminate in the angles between teeth. *A. pinnata* is a much smaller plant with flat-topped umbels and the involucre bracts are lacking.

**Habitat and Ecology:** Common on moist or wet ground along streams in mountains, especially on the Western Slope.

**Comments:** *Angelica* has been used for centuries for its medicinal properties for a range of ailments. It is recommended that no wild growing Apiaceae species be eaten as many species in this family are very poisonous (e.g. water and poison hemlock).

# *Cicuta maculata* L. var. *angustifolia* Hook.

Water hemlock

Apiaceae



Pam Smith Colorado Natural Heritage Program



Scott Smith

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 3  
**Duration:** Perennial  
**Elevation:** 3,400 ft. - 8,000 ft.  
**Synonyms:** *Cicuta douglasii* (deCandolle) Coulter & Rose  
**USDA PLANTS Symbol:** CIMAA

## Key Characteristics:

- ◆ Stems 5–25 dm tall, glabrous; roots tuberous, horizontally divided with cross partitions
- ◆ Leaves once pinnate or **ternate-pinnate, leaf veins terminate between serrations**
- ◆ Inflorescence a dome-shaped, compound umbel; involucrel of several narrow bractlets
- ◆ Flowers white or greenish or pink-tinged in bud; stylopodiums depressed or low-conic
- ◆ **Fruits glabrous, 2–4.5 mm long, prominent corky ribs, not winged**

**Similar Species:** *Conium maculatum* has distinctive stems with purple spots.

**Habitat and Ecology:** Locally common in wet places such as marshes, fens, along streams and irrigation ditches.

**Comments:** Water hemlock is considered one of the most toxic plants in the world. All parts of the plant, especially the roots, contain a cicutoxin alkaloid that affects the central nervous system and causes death.

# *Conioselinum scopulorum* (A. Gray) J.M. Coult. & Rose

Rocky Mountain hemlockparsley

Apiaceae

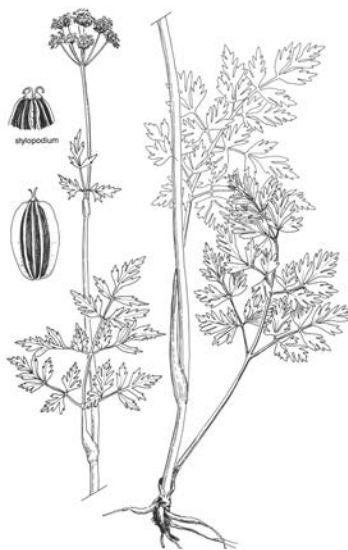


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Robin A. Jess Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 7,000 ft. - 12,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** COSC2

## Key Characteristics:

- ◆ Stems solitary, 3–12 dm tall, sparingly branched; cluster of 2 to several, tuberous-thickened roots
- ◆ Leaves 1–2, pinnately or ternate-pinnately dissected, ultimate leaf lobes with 1 principal vein
- ◆ Inflorescence consists of compound umbels; pedicels 3–6 mm long
- ◆ Flowers white; stylopodiums conic; carpophores bifid to bases
- ◆ Fruits elliptic-oblong, lateral ribs winged, dorsal ribs more narrowly winged, low and corky

**Similar Species:** *Ligusticum porteri* looks similar, but leaf divisions are broader, usually over 3 mm wide, the petiole bases are persistent and fibrose (not deciduous as in *C. scopulorum*), and the fruits are oblong, not flattened dorsally.

**Habitat and Ecology:** Common in mountains in wet places such as along streams and wet meadows.

**Comments:** Global range includes Oregon, Utah, Arizona, Wyoming, Colorado and New Mexico.

# *Conium maculatum* L.

Poison hemlock

Apiaceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

Jeanne R. Janish Vascular Plants of the Pacific Northwest



JRJ

**Wetland Status** WMVC: FAC

**Native Status:** Non-native CO, Noxious Weed List C

**Conservation Status:** G5

**C-Value:** 0

**Duration:** Biennial

**Elevation:** 3,600 ft. - 8,700 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** COMA2

## Key Characteristics:

- ◆ Stems 0.5–3 m tall, **purple-spotted**, hollow, glabrous; taproots stout
- ◆ **Leaves large, pinnately or ternate-pinnately dissected with small ultimate segments, fern-like**

- ◆ Numerous terminal and axillary compound umbels; involucre and involucre small, numerous bractlets
- ◆ Flowers white, styles reflexed; stylopodiums depressed-conic; carpophores entire
- ◆ Fruits glabrous, prominent winged ribs raised, often wavy; oil tubes numerous and small

**Similar Species:** *Cicuta maculata* var. *angustifolia* leaves are 1-to -3 ternate-pinnately compound and the fruits are ribbed.

**Habitat and Ecology:** Common, a tall weed of roadside ditches and moist disturbed sites.

**Comments:** *C. maculatum* leaves, stems and seeds contain several potent neurotoxins that affect both the central and peripheral nervous systems. This is the plant that Socrates was given after being condemned to death for impiety.

# *Ligusticum tenuifolium* S. Watson

Idaho licorice-root

Apiaceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 8,000 ft. - 12,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** LITE2

## Key Characteristics:

- ◆ Stems 1–6 dm tall from unbranched crowns of a thick taproot
- ◆ Basal leaves well-developed, less than 10 cm wide, **linear, ultimate segments 1–2 mm wide**
- ◆ Inflorescence consists of solitary or 2 (3) umbels with 5–13 rays, 1.5–3 cm long at maturity
- ◆ **Flowers white**, styles short; stylopodiums low
- ◆ Fruits 3–5 mm long, ribs narrowly winged

**Similar Species:** *L. filicinum* also has leaves dissected into linear segments, but is a more robust plant, 5–12 dm tall, with 1 or more developed cauline leaves and basal leaves that are usually 10–25 cm wide.

**Habitat and Ecology:** Uncommon in meadows, along streambanks and on moist slopes in the mountains.

**Comments:** The common name, licorice root, is from the distinctive odor from the roots and seeds.



***Oxypolis fendleri* (A. Gray) A. Heller**  
Fendler's cowbane

Apiaceae



Al Schneider Southwestern Colorado Wildflowers



Denise Culver Colorado Natural Heritage Program

Robin A. Jess Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 7,800 ft. - 12,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** OXFE

**Key Characteristics:**

- ◆ Stems 1, 3–10 dm tall, glabrous, from clusters of tuberous thickened roots
- ◆ **Cauline leaves once pinnate with 7–11 leaflets, broadly ovate, sessile, crenate teeth**
- ◆ Inflorescence consists of compound umbels, tomentose, umbellets subglobose, well separated

**Similar Species:** *Berula erecta* is stoloniferous and leaflets are also once pinnate. The leaflets are narrowly elliptical-oblong, deeply toothed, with the lowest leaf pair usually with a large lobe.

**Habitat and Ecology:** Common in wet places and along streambanks in the montane zone.

**Comments:** The common name, cowbane, refers to the toxicity of the plants to animals, especially cattle.

- ◆ Flowers white to purple; stylopodiums conic, carpophores bifid to bases
- ◆ Fruits elliptic, strongly flattened dorsally, dorsal ribs filiform, lateral ribs broadly thin-winged

# *Antennaria corymbosa* E.E. Nelson

Flat-top pussytoes

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

John H. Rumley Vascular Plants of the Pacific Northwest



Al Schneider Southwestern Colorado Wildflowers



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 8,000 ft. - 11,200 ft.

**Synonyms:** *Antennaria acuta* Rydb., *Antennaria dioica* (L.) Gaertn. var. *corymbosa* (E.E. Nelson) Jeps.

**USDA PLANTS Symbol:** ANCO

## Key Characteristics:

- ◆ Stems 15-30 cm, white woolly, stoloniferous, usually mat-forming, dioecious (male and female on separate plants)
- ◆ Leaves simple, mostly entire, **white tomentose on both sides**, basal leaves narrowly oblanceolate

**Similar Species:** *Antennaria pulcherrima* lacks stolons and the involucre is brown or black, sometimes with a small whitish tip.

**Habitat and Ecology:** Common along streambanks, in moist meadows and open woods from foothills to subalpine.

**Comments:** The common name refers to the packed flower heads' resemblance of a cat's paw.

- ◆ Heads few in small corymb; involucre bracts imbricate in several series, with a **conspicuous dark spot at the base**
- ◆ Achenes round or slightly compressed, minutely hairy, topped by slender bristles

***Arnica chamissonis* Less. ssp. *foliosa* (Nutt.) Maguire**  
Chamisso arnica

Asteraceae



University of British Columbia Botanical Gardens



Clint Gardner Flickr Creative Commons

John H. Rumble Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,500 ft. - 10,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ARCHF

**Key Characteristics:**

- ◆ Stems 2–10 dm tall, hairy; rhizomatous
- ◆ **Leaves opposite, 5–10 pairs along stems, no basal leaves**
- ◆ Heads 5–15; involucre 8–13 mm high, **bracts with tuft of long white hairs internally**

- ◆ Ray flower, yellow, 1.5–2 cm long
- ◆ Pappus barbellate, tawny

**Similar Species:** *A. longifolia* has involucre bract tips that are sharply acute and glandular pubescent.

**Habitat and Ecology:** Common in mountain meadows and moist places.

**Comments:** Europeans and Native Americans have used salves and creams of arnica to treat bruises, sprains, muscle aches, and inflammation.

# *Arnica mollis* Hook.

Hairy arnica

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Steve Hurst USDA-ARCS PLANTS Database

## Key Characteristics:

- ◆ Stems 2-6 dm tall, **puberulent to long-hairy and glandular**
- ◆ **Leaves mostly 3 or 4 pairs**, lower commonly largest, up to 25 cm long, sessile, lanceolate to obovate, irregularly toothed

**Similar Species:** *Arnica chamissonis* has more pairs of stem leaves and *Arnica longifolia* is distinguished by glandular bracts.

**Habitat and Ecology:** Common in subalpine meadows, on rocky slopes, and in moist places in the mountains.

**Comments:** Europeans and Native Americans have used salves and creams of arnica to treat bruises, sprains, muscle aches, and inflammation.

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 7,500 ft. - 13,300 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ARMO4

- ◆ Heads few or solitary, disk as much as 3.5 cm wide; involucre 10-16 mm high, bracts acuminate, long-hairy at base
- ◆ Ray flowers 9-18, 1.5-2.5 cm long, **yellow**; **disk flowers orange**, 8-10 mm long
- ◆ Achenes 6-7 mm long, hirsute, **pappus tawny, subplumose**

**Artemisia biennis Willd.**  
Biennial wormwood

Asteraceae



Ernie Marx Eastern Colorado Wildflowers



Max Licher Arizona State University Herbarium

**Key Characteristics:**

- ◆ Stems 3–30 dm tall, solitary, reddish, coarse, not aromatic, glabrous
- ◆ Leaves 5–15 cm long, green, lobed nearly to the midribs into several narrow, **sharply toothed segments**

**Similar Species:** *A. dracunculus* has entire leaves. *A. campestris* occurs in similar habitats, but has leaves that are tomentose and smaller heads, 1–3 mm wide.

**Habitat and Ecology:** Found in disturbed places (e.g., roads, dams, campgrounds and along streambanks), especially in sandy soils.

**Comments:** Native to northwestern United States, considered adventive in Colorado by Weber and Wittmann (2012) and Ackerfield (2015).

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW  
**Native Status:** **Non-native**  
**Conservation Status:** G5  
**C-Value:** 0  
**Duration:** Annual, Biennial  
**Elevation:** 5,000 ft. - 11,610 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ARB12

- ◆ Inflorescence dense on spike-like branches, heads 12–35 cm long x 2–4 cm wide, numerous, sessile
- ◆ Involucre glabrous, receptacles without hairs, flowers numerous
- ◆ Achenes smooth and shiny

# *Erigeron coulteri* Porter

Larq̄ mountain fleabane

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 7,600 ft. - 14,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** ERC06

## Key Characteristics:

- ◆ Stems 1–6 dm tall, usually leafy; rhizomes slender
- ◆ Leaf blades broadly oblanceolate, 40–120 mm long, margins entire or with shallow teeth
- ◆ **Involucral bracts villous hirsute, covered with multicellular hairs with black cross-walls**

**Similar Species:** *E. elatior* involucre bracts are woolly-villous with multicellular hairs, without the black cross-walls.

**Habitat and Ecology:** Common in open mountain meadows, along streams and in spruce or aspen forests.

**Comments:** One can see the hairs on the involucre bracts, but it is difficult to see the cross-walls in the field without at least a 10x hand lens. The major pollinators for *Erigeron* spp. are butterflies, moths, bees, and flies.

***Erigeron elatior* (A. Gray) Greene**  
Tall fleabane

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G4  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,550 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** EREL9

**Key Characteristics:**

- ◆ **Stems leafy, 2–6 dm tall**, purplish at bases, spreading-hirsute, glandular; roots fibrous
- ◆ Leaves entire, acute, villous-hirsute on both sides, becoming wider from base to near tips
- ◆ **Involucres 7–12 mm high, densely woolly, shiny, multicellular hairs, some with purplish cross-walls**

**Similar Species:** *E. coulteri* involucre is covered with hairs with black cross-walls, not short and woolly as in *E. elatior*.

**Habitat and Ecology:** Common in open mountain meadows, along streams, and in spruce or aspen forests.

**Comments:** The major pollinators for *Erigeron* spp. are butterflies, moths, bees, and flies.

- ◆ **Flowering heads usually 1**; rays 75–150, pink or pink purple
- ◆ Achenes hairy, 2-nerved; pappi double, inner 15–20 bristles

# *Erigeron glabellus* Nutt.

Streamside fleabane

Asteraceae

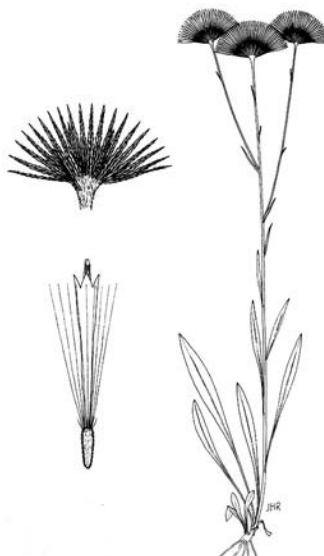


Kurt Stueber SEINet creative commons



Kurt Stueber SEINet creative commons

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Biennial, Perennial

**Elevation:** 5,000 ft. - 11,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** ERGL2

## Key Characteristics:

- ◆ Stems erect, strigose or glabrate, 7–50 (70) cm; rhizomatous
- ◆ Leaves basal and cauline; basal oblanceolate; cauline lanceolate, abruptly or gradually reduced distally
- ◆ Heads 1–15; involucre 5–9 mm long x 10–20 mm wide; phyllaries in (2) 3–4 series, greenish, hirsute

**Similar Species:** *E. glabellus* var. *pubescens* has hirsute to hirsute-villous stems. *E. formosissimus* is glandular with stems that are curved at the bases.

**Habitat and Ecology:** Common in wet or dry meadows, along streams and in forest openings.

**Comments:** The major pollinators for *Erigeron* spp. are butterflies, moths, bees and flies.



# *Erigeron lonchophyllus* Hook.

Shortray fleabane

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Biennial, Perennial

**Elevation:** 5,100 ft. - 11,500 ft.

**Synonyms:** *Trimorpha lonchophylla* (Hook.) G.L.

Nesom

**USDA PLANTS Symbol:** ERLO

## Key Characteristics:

- ◆ Stems erect, sparsely to densely hirsute, 2–45 (60) cm tall; roots fibrous
- ◆ Cauline leaves linear, basal oblanceolate to spatulate, margins entire, ciliate, 13–80 mm long
- ◆ **Inflorescence a raceme;** involucre 6–9 mm high, bracts hirsute, outer bracts shorter than the inner
- ◆ **Ray flowers in 1 series, few to numerous without an erect ligule, corollas white to light pink, 2–3 mm**
- ◆ Achenes 1.3–1.8 mm, 2-nerved; inner pappi white, 20–30 bristles

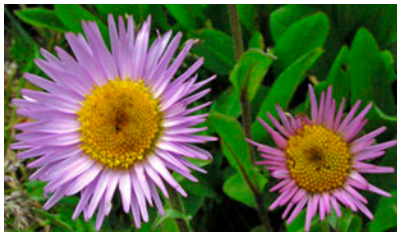
**Similar Species:** *E. acris* is similar, but has a corymbiform (flat-topped) inflorescence, the leaves are broader, peduncles are glandular, not as linear, and the ray flowers are in 2 series. In general, the differences between *Erigeron* and the *Aster* complex, including *Almutaster*, *Symphyotrichum*, and *Virgulastrum*, are that the phyllaries are equal in length and the rays are narrower (less than 0.5 mm) in *Erigeron* spp. and the phyllaries are imbricate and rays are wider (greater than 0.5 mm) in the *Aster* complex.

**Habitat and Ecology:** Found in moist meadows, along edges of ponds and around springs.

**Comments:** The major pollinators for *Erigeron* spp. are butterflies, moths, bees and flies.

***Erigeron peregrinus* (Banks ex Pursh) Greene ssp. *callianthemus* (Greene) Cronq.**  
Subalpine fleabane

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T4T5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 6,800 ft. - 14,310 ft.

**Synonyms:** *Erigeron glacialis* (Nutt.) A. Nelson

**USDA PLANTS Symbol:** ERPEC

**Key Characteristics:**

- ◆ Stems 5–55 (70) cm tall; fibrous roots from stout, thick rhizome
- ◆ Leaves 50–100 mm long x 5–25 mm wide, clasping; **peduncles hairy beneath heads**
- ◆ **Heads solitary or few, very showy, disk 10–25 mm wide**
- ◆ Rays rose-purple, wide 2–4 mm (commonly mistaken for an *Aster* due to its wide rays)
- ◆ Phyllaries 7–11 mm high, curve outward, covered with dark, club-shaped, red-tipped hairs

**Similar Species:** *E. eximius* has slender rhizomes, pappi are double and it does not have the distinctive pubescence below the phyllaries. In general, the differences between *Erigeron* and the *Aster* complex, including *Almataster*, *Symphotrichum*, and *Virgulaster*, are that the phyllaries are equal in length and the rays are narrower (less than 0.5 mm) in *Erigeron* spp. and the phyllaries are imbricate and rays are wider (greater than 0.5 mm) in the *Aster* complex.

**Habitat and Ecology:** Common in mountain and subalpine meadows, along streams and forest openings.

**Comments:** The major pollinators for *Erigeron* spp. are butterflies, moths, bees and flies. FNA (2006), Weber and Wittmann (2012) and Ackerfield (2015) recognize *E. glacialis* as the accepted name; stating that *E. peregrinus* is restricted to northwestern United States and Canada.

## *Gnaphalium exilifolium* A. Nelson

Slender cudweed

Asteraceae



Barry Breckling CalPhotos



Max Licher Arizona State University Herbarium



Max Licher Arizona State University Herbarium

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G3G4Q

**C-Value:** 5

**Duration:** Annual

**Elevation:** 4,500 ft. - 10,800 ft.

**Synonyms:** *Gnaphalium grayi* A. Nelson & J.F. Macbr.

**USDA PLANTS Symbol:** GNEX

### Key Characteristics:

- ◆ **Stems branched from bases**, erect to ascending, tomentose, 3–15 (25) cm tall; tap or fibrous roots
- ◆ **Leaf blades linear**, 0.4–5 cm long x 0.5–3 mm wide; bracts subtending heads, 10–25 mm long
- ◆ Heads in spiciform glomerules; involucre 2.5–3.5 mm long

- ◆ Phyllaries brown, bases woolly, inner narrowly triangular with whitish, acute apices
- ◆ Corollas purplish or whitish, sometimes reddish-tipped; achenes oblong, glabrous

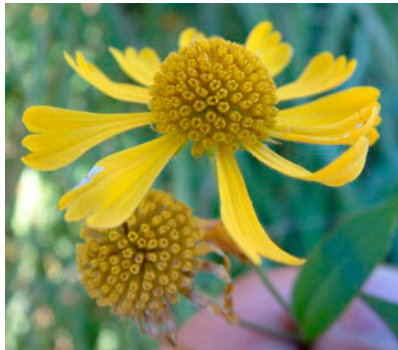
**Similar Species:** *G. palustre* has wider leaves (2–10 mm wide) and the bracts subtending the heads are much shorter.

**Habitat and Ecology:** Found along streams and pond margins.

**Comments:** *Gnaphalium exilifolium* is a New World native, documented from Arizona, New Mexico, South Dakota, Utah, Wyoming, and Chihuahua Mexico.

***Helenium autumnale* L. var. *montanum* (Nutt.) Fernald**  
Mountain sneezeweed

Asteraceae



Thomas G. Barnes USDA-NRCS PLANTS Database



Larwallan USDA-NRCS PLANTS Database



John H. Rumley Vascular Plants of the Pacific Northwest

**Key Characteristics:**

- ◆ Stems 3–11 dm tall, winged by decurrent leaves, puberulent, especially above; fibrous roots
- ◆ Leaves ovate-lanceolate or oblanceolate, glandular punctate, tapered to narrow bases
- ◆ Heads 5–7 per plant in a panicle; peduncles 3–10 cm, hairy; receptacles globose

**Habitat and Ecology:** Locally common in moist places in meadows and roadsides in the mountains.

**Comments:** Mountain sneezeweed is also a commonly cultivated, garden perennial that attracts butterflies.

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 3,500 ft. - 8,530 ft.  
**Synonyms:** *Helenium montanum* Nutt.  
**USDA PLANTS Symbol:** HEAUM

- ◆ Ray flowers 10–20, 3 lobed, 1.5–2.5 cm long; disk flowers yellow, constricted into slender tubes
- ◆ Achenes 4 to 5 angled, 1.5–2 mm long, appressed-hairy with white to coppery hairs

***Helianthus nuttallii* Torr. & A. Gray**  
Nuttall's sunflower

Asteraceae



Ernie Marx Eastern Colorado Wildflowers



Ernie Marx Eastern Colorado Wildflowers

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 3

**Duration:** Perennial

**Elevation:** 4,700 ft. - 9,400 ft.

**Synonyms:** *Helianthus nuttallii* Torr. & A. Gray ssp. *rydbergii* (Britton) R.W. Long

**USDA PLANTS Symbol:** HENU

**Key Characteristics:**

- ◆ Stems 6–30 dm tall; rhizomatous with coarse, tuberous-thickened roots
- ◆ Leaves alternate, narrowly to broadly lanceolate, 3-nerved, 4–15 cm long x 0.8–4.5 cm wide, tips acute

- ◆ Heads 1–6 in a panicle; **involucral bracts lance-linear, all similar size, acuminate, ciliate**, disks 12–25 mm wide
- ◆ **Ray flowers yellow**, 20–25 mm long; disk flowers yellow, 5–7 mm long
- ◆ Achenes 3–5, glabrous; pappi 2 awn-tipped scales, 2.2–4.5 mm long

**Similar Species:** FNA and USDA-NRCS PLANTS Database recognize *H. nuttallii* ssp. *rydbergii*. It is usually shorter (10–25 dm), the leaves are all or mostly opposite, leaf blades are lanceolate to nearly ovate, and the leaf apices are acute to obtuse. *H. pumilus* is also shorter (3–10 dm tall), stems arise from an erect, taprooted crown, the leaves are ovate, not linear, and the disks are smaller, 10–14 mm wide.

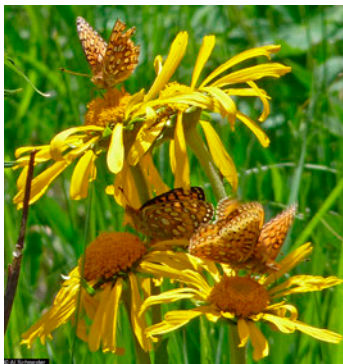
**Habitat and Ecology:** Common in wet places such as ditches, moist meadows and along streams or pond borders.

**Comments:** Achenes are eaten by songbirds and some waterfowl.

# *Hymenoxys hoopesii* (A. Gray) Bierner

Orange sneezeweed

Asteraceae



Al Schneider Southwestern Colorado Wildflowers

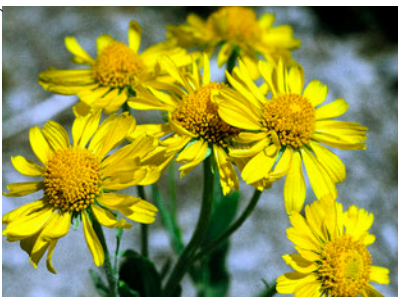


Al Schneider Southwestern Colorado Wildflowers

Al Schneider Southwestern Colorado Wildflowers



Nevada Native Plant Society



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Perennial

**Elevation:** 7,000 ft. - 11,500 ft.

**Synonyms:** *Dugaldia hoopesii* (A. Gray) Rydb.,

*Helenium hoopesii* A. Gray

**USDA PLANTS Symbol:** HYHO

## Key Characteristics:

- ◆ Stems 2-10 dm tall, (1) several on coarse, short on a rhizome, fibrous-rooted caudex, villose-tomentose to glabrous
- ◆ Leaves simple, firm, entire, oblanceolate, 10-30 cm long x 1-5 cm wide, tapering to broad base, some sessile or clasping
- ◆ Heads 1-12, involucre bracts biseriate, slender, 6-10 mm long, acute
- ◆ Rays (13) 17-25, orange or orange-yellow, 1.5-3 cm long x 3-5 mm wide, disk flowers 4-5.5 mm long, yellow to gold, numerous
- ◆ Achenes 3.5-4.5 mm, quadrangular, pappus-scales bright white

**Similar Species:** *Tetraneris* and *Hymenoxys* have recently been separated. *Tetraneris* leaves are simple, all basal, with a dense tuft of brownish or white hairs at the leaf base.

**Habitat and Ecology:** Common in wet meadows, streamsides, and moist open slopes.

**Comments:** The common name of sneezeweed refers to its unfortunate association with ragweed which blooms at the same time. Sneezeweed is insect pollinated, not wind pollinated so the pollen is sticky and does not blow in the wind as ragweed.

***Machaeranthera bigelovii* (A. Gray) Greene**  
Bigelow's tansyaster

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 3  
**Duration:** Biennial, Perennial  
**Elevation:** 4,900 ft. - 11,040 ft.  
**Synonyms:** *Dieteria bigelovii* (A. Gray) D.R. Morgan & R.L. Hartman var. *bigelovii*  
**USDA PLANTS Symbol:** MABI

**Key Characteristics:**

- ◆ Stems 1–10 dm tall; taprooted; branches and peduncles puberulent or canescent, stipitate-glandular
- ◆ **Leaf blades bristle-tipped**, lanceolate to oblanceolate, 5–15 mm wide, stipitate-glandular
- ◆ **Involucre bracts and peduncles with conspicuous, glandular hairs**
- ◆ **Ray flowers blue to purple**, 10–25 mm long x 1–2 mm wide; disk flowers yellow
- ◆ Achenes flattened, sparsely appressed-hairy; pappi barbellate bristles

**Similar Species:** *M. canescens* (= *Dieteria canescens*) involucre bracts have some glandular hairs, but not as conspicuously hairy on both the bracts and peduncles, and the leaves are narrower, 1.5–5 mm wide.

**Habitat and Ecology:** Common along roadsides, on open slopes, in meadows and forest clearings.

**Comments:** *M. bigelovii* and *M. canescens* commonly hybridize.

***Packera crocata* (Rydb.) W.A. Weber & Å. Löve**  
Saffron ragwort

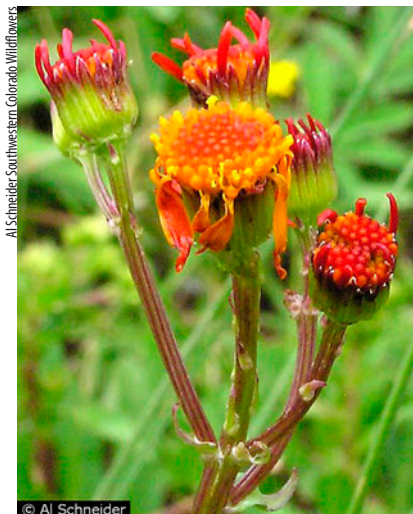
Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Anthony Salazar Vascular Plants of the Pacific Northwest



Al Schneider Southwestern Colorado Wildflowers

© Al Schneider

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G4  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 8,500 ft. - 13,000 ft.  
**Synonyms:** *Senecio crocatus* Rydb., *Packera dimorphophylla* (Greene) Weber & A. Love  
**USDA PLANTS Symbol:** PACR5

**Key Characteristics:**

- ◆ **Stems solitary or few together**, (1)2–7 dm from branched caudex, glabrous or with tufts of tomentum in leaf axils
- ◆ **Basal and lower stem leaves with round-toothed, lobed, or entire blades** 1–8 cm long x 1–4 cm wide with truncate to rounded bases that abruptly join long petioles; upper stem leaves are irregularly lobed, sessile to clasping and become progressively reduced in size
- ◆ Flower heads 1–15 per stem, borne in erect inflorescence (corymbiform)
- ◆ Involucre bracts 5–8 mm long; **ray flowers 5–8 mm long, yellow to orange**
- ◆ Achenes glabrous, 1–1.5 mm; pappi white, 5–5 mm

**Similar Species:** *Packera pauperula* basal leaves are lanceolate, 3x times longer than wide, usually 3-toothed at apex. *Packera psuedaurea* var. *flavula* basal leaf margins are crenate or dentate, ray flowers are yellow to pale yellow.

**Habitat and Ecology:** Common in moist meadows and on rocky subalpine slopes.

**Comments:** Regional endemic of southern Wyoming, northeastern Utah and western Colorado.



***Packera paupercula* (Michx.) Å . Löve & D. Löve**  
Balsam groundsel

Asteraceae



Peter Gorman Flickr Creative Commons



Daniel Reed Wildflowers of the Southeastern U.S.

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Perennial

**Elevation:** 8,130 ft. - 10,700 ft.

**Synonyms:** *Senecio pauperulus* Michx.

**USDA PLANTS Symbol:** PAPA20

**Key Characteristics:**

- ◆ Stems 1–4, 2–5 dm tall, glabrous, except for leaf axils; rhizomatous bases weakly branched
- ◆ **Basal leaves petiolate, 3-toothed; cauline gradually reduced, pinnatifid with rounded sinuses**
- ◆ Heads 2–10 in corymbiform arrays; peduncles glabrous; small bracts at involucre base inconspicuous
- ◆ **Ray flowers present**, yellow, 5–10 mm; disk flowers 2–3 mm
- ◆ Achene 1–2 mm, glabrous; pappi 3.5–4.5 mm

**Similar Species:** *P. pseud aurea* basal leaves are broadly ovate-cordate and regularly crenate, not rounded as in *P. paupercula*.

**Habitat and Ecology:** Infrequent in moist meadows and along stream banks and open forests.

**Comments:** Ecologically and morphologically, *P. paupercula* is the most variable species of *Packera* in North America.

***Packera pseudaura* (Rydb.) Weber & Löve var. *flavula* (Greene) Trock & Barkley**  
Falsegold groundsel

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T2T4  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 4,500 ft. - 11,600 ft.  
**Synonyms:** *Senecio pseudaura* Rydb. ssp. *flavulus* (Greene) G.W. Douglas & G. Ruyle-Douglas  
**USDA PLANTS Symbol:** PAPSF

**Key Characteristics:**

- ◆ Stems usually 1–4, clustered, 2–40 dm; fibrous-rooted, bases woolly or glabrous
- ◆ Basal leaves ovate with truncate bases, cauline leaves reduced, usually pinnatifid; petiole lengths equaling blades
- ◆ Heads 5–12 in congested, sub-umbelliform arrays; phyllaries 3–5 mm
- ◆ Ray flowers yellow, 6–10 mm; disk corolla tubes 2.5–3.5 mm long
- ◆ Achenes 1–1.5 mm, glabrous; pappi 4.5–5.5 mm long

**Similar Species:** *P. paupercula* basal leaves are narrower, tapering to cuneate bases with cauline leaves that are prominently pinnatifid with rounded sinuses.

**Habitat and Ecology:** Common in moist meadows, along streambanks and in forest openings.

**Comments:** Known from southern Wyoming through central Colorado to northern New Mexico.

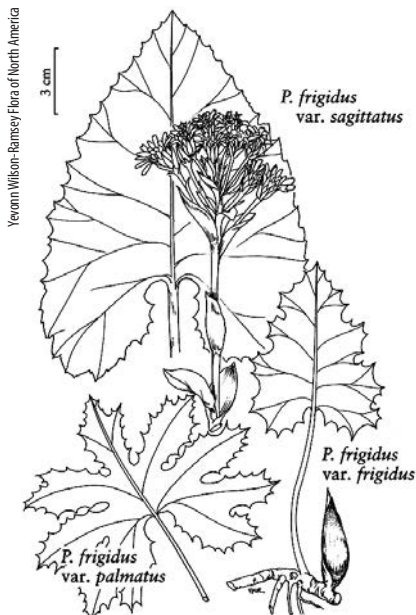
***Petasites frigidus* (L.) Fr. var. *sagittatus* (Banks ex Pursh) Cherniawsky**  
**Arrowleaf sweet coltsfoot** Asteraceae



Montana Natural Heritage Program



Montana Natural Heritage Program



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 7,800 ft. - 10,600 ft.

**Synonyms:** *Petasites sagittatus* (Banks ex Pursh)

A. Gray

**USDA PLANTS Symbol:** PEFRSS

**Key Characteristics:**

- ◆ Stems erect, 1–6 dm tall, staminate stems wither after flowering, pistillate stems elongate
- ◆ Leaves mostly basal, long-petioled, bases sagittate or cordate, densely woolly to villous underneath

**Similar Species:** None.

**Habitat and Ecology:** Uncommon to locally abundant in wet marshes, meadows, fens and roadside ditches; usually occurs with *Menyanthes trifoliata* at higher elevations. It flowers very early, one very seldom sees the flowers.

**Comments:** The common name, sweet coltsfoot, refers to the sweet smell of its flowers and large leaves.

- ◆ Flowers appear early, before the emergence of the leaves
- ◆ Ray flowers 4–19, white to pinkish; disk flower style branches 0.5–2.3 mm, hairy
- ◆ Achenes very narrow with a tuft of bristles at top; fruiting heads conspicuous due to white pappi

# *Pyrrocoma uniflora* (Hook.) Greene

Plantain goldenweed

Asteraceae



Steve Matson CalPhotos



Steve Matson CalPhotos

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Perennial

**Elevation:** 8,000 ft. - 13,810 ft.

**Synonyms:** *Haplopappus uniflorus* (Hook.) Torr. & Gray

**USDA PLANTS Symbol:** PYUN2

## Key Characteristics:

- ◆ Stems 7–40 cm tall, solitary, curved at bases, sparsely leafy; herbage floccose-tomentose
- ◆ Basal leaves tufted, conspicuous, often hairy in axils, 4–15 cm long
- ◆ Involucral bracts narrowly linear, outer often green, inner with chartaceous bases
- ◆ Rays mostly yellow, 6–11 mm long
- ◆ Achenes inconspicuously multi-nerved, sometimes few-angled, 2–4 mm long

**Similar Species:** *P. clementis* (= *Haplopappus clementis*) occurs in similar habitats but the involucre bracts are obovate to ovate, about 2 mm wide, green and herbaceous and the basal leaves are entire, often villous-ciliate margins without tufts of hairs in the axils.

**Habitat and Ecology:** Grows in wet or dry, often alkaline meadows in valleys and lower parts of mountains.

***Rudbeckia laciniata* L. var. *ampla* (A. Nelson) Cronquist**  
Cutleaf coneflower

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Louis M. Lamir, CalPhotos

**Wetland Status WMVC:** FAC  
**Native Status:**  
**Conservation Status:** G5T3T5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 9,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RULAA

**Key Characteristics:**

- ◆ Stems from 5-30 dm tall; rhizomatous, stems arising singly
- ◆ Leaves 15-30 cm long, mostly lobed, deeply pinnatifid or pinnately compound, with 3-11 lobes or leaflets, glabrous to hairy below
- ◆ Involucre bracts to 2 cm long, glabrous or hairy; **receptacle ovoid, elongating in fruit**
- ◆ Disk flowers 3.5-5 mm long, yellow to green; ray flowers 3-6 cm long, yellow
- ◆ Pappus a short crown; achenes 3-5 mm long

**Similar Species:** *Rudbeckia montana* ray flowers absent, disk flowers red below and green above

**Habitat and Ecology:** Common along streams and in moist meadows.

**Comments:** Jennifer Ackerfield features *R. laciniata* var. *ampla* for the front cover of the Flora of Colorado.

# *Rudbeckia montana* A. Gray

Montane coneflower

Asteraceae



Patrick Alexander USDA-NRCS PLANTS Database



Patrick Alexander USDA-NRCS PLANTS Database

Bobbi Angell Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T2T4

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 6,350 ft. - 10,500 ft.

**Synonyms:** *Rudbeckia occidentalis* Nutt. var. *montana* (A. Gray) Perdue

**USDA PLANTS Symbol:** RUM09

## Key Characteristics:

- ◆ Stems 2–15 dm tall, more or less clustered; herbage glabrous, from a branching rhizome-caudex
- ◆ Leaves cauline, ovate, 8–25 cm long x 4–15 cm wide; **pinnately deeply cleft with 3–7 segments**
- ◆ Heads solitary to few, long-pedunculate; receptacles columnar
- ◆ **No ray flowers, only disk flowers;** columnar black disk elongating to as much as 6 cm in fruit
- ◆ Achenes 4-angled, glabrous

**Similar Species:** *R. montanum* is distinct with elongate columns (receptacles) of disk flowers. All other *Rudbeckia* spp. have ray flowers.

**Habitat and Ecology:** Commonly found along streams, aspen forests, and moist meadows.

**Comments:** The global range for *R. montana* is Colorado, Oregon and Utah.

# *Senecio amplexens* A. Gray

Showy alpine ragwort

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACU

**Native Status:** Native

**Conservation Status:** G4

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 8,200 ft. - 14,420 ft.

**Synonyms:** *Ligularia amplexens* (A. Gray) W. A. Weber

**USDA PLANTS Symbol:** SEAM

## Key Characteristics:

- ◆ Stems 4–6 dm, rhizomatous or with branched caudices, often purplish-tinged, sparsely hairy
- ◆ Leaves ovate to broadly lanceolate, margins strongly dentate; petioles purplish
- ◆ Heads usually nodding, solitary or few (1–3) per stem

**Similar Species:** *S. amplexens* var. *holmii* (= *Ligularia holmii*) is shorter, up to 2 dm tall, the principal leaves are basal, and the involucre bracts are glabrous, sometimes purplish-tinged.

**Habitat and Ecology:** Common in open forests, subalpine mountain meadows and alpine tundra.

**Comments:** The Latin word *amplect* means to 'embrace', referring to the way in which the base of the leaves clasps the stems, especially noticeable in the top leaf. FNA (2006) and Cronquist et al. (1994) combine this species with *Ligularia holmii*.

- ◆ Phyllaries 13 or 21, tips often black or brownish, with scattered black hairs underneath
- ◆ Ray flowers 15–25 mm long, **yellow. bent back;** achenes glabrous

# *Senecio crassulus* A. Gray

Thickleaf ragwort

Asteraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACU

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 6,000 ft. - 14,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** SECR

## Key Characteristics:

- ◆ Stems 1–2 (4), 2–5 (7) dm tall; rhizomes branched, woody; herbage glabrous
- ◆ Leaves thick-turgid, broadly lanceolate, 2.5–12 cm long, margins sharply dentate; petioles winged
- ◆ Heads (1) 4–12, open inflorescence; calyx-like bracts 3–6, linear to filiform
- ◆ Phyllaries 5–9 mm, tips black, villous; ray flowers 8 or 13; corolla blades 6–12 mm, yellow-gold
- ◆ Achenes glabrous

**Similar Species:** *S. hydrophilus* occurs at lower elevations and has very glaucous, entire leaves and numerous, crowded flowering heads.

**Habitat and Ecology:** Common in montane meadows, on subalpine and alpine slopes.

**Comments:** The word *crass* is Latin for thick and *Senecio* is from the Latin *senes* which means old man; referring to the white pappus hairs.



# *Senecio hydrophilus* Nutt.

Water ragwort

Asteraceae



J.C. Dittes CalPhotos



Steve Matson CalPhotos

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Biennial, Perennial  
**Elevation:** 6,300 ft. - 9,190 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SEHY2

### Key Characteristics:

- ◆ Stems 1 or 2–4, 4–10 dm tall, hollow, glaucous, glabrous
- ◆ Leaves glaucous, often 10–20 cm long, entire, reduced upwards, elliptic to oblanceolate

- ◆ Heads numerous and crowded, 20–40 in compound corymbiform arrays
- ◆ Phyllaries 5–8 mm, tips frequently black; ray flowers 3–8 mm long
- ◆ Achenes glabrous

**Similar Species:** *S. hydrophilus* is very distinct with glaucous herbage and is often the only ragwort that can grow in saturated soils or standing water.

**Habitat and Ecology:** Found in wet meadows, fens and edges of marshes.

# *Senecio triangularis* Hook. Arrowleaf ragwort

Asteraceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 6,500 ft. - 13,480 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** SETR

## Key Characteristics:

- ◆ **Stems 50–120 cm**, caudices branched, woody, glabrous or sparsely floccose-tomentose when young
- ◆ **Leaves broadly triangular, truncate at bases and coarsely dentate**
- ◆ Heads 10–30 in corymbiform inflorescence

- ◆ Phyllaries 6–10 mm long, tips usually green, rarely black; ray flowers 8 or more; corolla yellow
- ◆ Achenes are crowded into small heads, veined and bearing soft, white bristles

**Similar Species:** *S. serra* var. *admirabilis* is found in similar habitats, but the leaves are lanceolate and taper from the bases with finely serrate margins.

**Habitat and Ecology:** Common along streams and in moist meadows in the mountains.

**Comments:** An important nectar source for butterflies, moths, and flies.

*Symphotrichum ciliatum* (Ledeb.) G.L. Nesom  
Rayless alkali aster

Asteraceae



Robert L. Clark New England Wildflowers



Trent M. Draper CalPhotos

John H. Rumley Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Annual  
**Elevation:** 4,700 ft. - 7,950 ft.  
**Synonyms:** *Aster brachyactis* S.F. Blake, *Brachyactis ciliata* (Ledeb.) Ledeb. ssp. *angusta* (Lindl.) A.G. Jones  
**USDA PLANTS Symbol:** SYC12

**Key Characteristics:**

- ◆ Stems single, erect, 1–7 dm tall, bluish or yellowish-green, often red-tinged, succulent, glabrous
- ◆ Leaves linear, 3–12 cm long x 1–9 mm wide, entire
- ◆ Heads several in an open-panicle to spike inflorescence; **involucral bracts distinctly acute**

**Similar Species:** *Symphotrichum frondosum* rays up to 2 mm long, that are pinkish and involucre bracts are oblong to narrowly oblanceolate.

**Habitat and Ecology:** Found along borders of lakes or streams in wet, saline soil.

**Comments:** Widespread and common throughout the northern United States into Canada and Alaska.

- ◆ **Ray flowers tubular, shorter than styles, virtually absent, disk flowers pink**
- ◆ Achenes purple or gray with purple streaks, 1.5–2.5 mm; pappi white or pink, 4–6 mm

# *Symphotrichum lanceolatum* (Willd.) Nesom ssp. *hesperium* (Gray)

Nesom

White panicle aster

Asteraceae



Liz Makings Arizona State University Herbarium



Louis M. Landry CalPhotos

USDA-NRCS Wetland Flora



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5T5?

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 3,500 ft. - 11,580 ft.

**Synonyms:** *Aster lanceolatus* Willd. ssp. *hesperius*

(A. Gray) Semple & Chmielewski, *Aster hesperius*

A. Gray

**USDA PLANTS Symbol:** SYLAH

## Key Characteristics:

- ◆ Stems stout, 3–15 dm tall, **pubescence in lines extending downward from leaf bases**
- ◆ Leaves all cauline, linear-lanceolate, margins shallowly serrate, 5–15 cm long x 5–25 mm wide

- ◆ **Heads in branched paniculiform inflorescence usually subtended by large, foliaceous bracts**
- ◆ Involucral bracts green-tipped, somewhat imbricate; **ray flowers pale to dark purple**, 4.2–10.1 mm
- ◆ Achenes 0.7–2.7 mm

**Similar Species:** *S. spathulatum* has hairs on the stem that are uniform, hairs found consistently under the flowering heads, and the flowering heads are fewer (3–10) per branch. *S. foliaceum* (= *Aster foliaceus*) has middle cauline leaves that are wider than 1 cm wide and the involucre bracts are wider and leafy.

**Habitat and Ecology:** Common along streams and ditches and in moist meadows. Probably the most frequently encountered aster in Colorado's wetlands.

**Comments:** Widespread throughout the west and midwest into Canada.

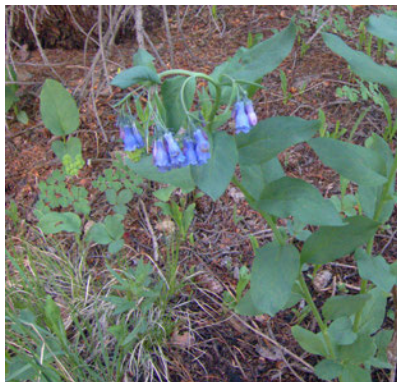
## *Mertensia ciliata* (James ex Torr.) G. Don

Tall fringed bluebells

Boraginaceae



Steve Olson



Denise Culver Colorado Natural Heritage Program

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 6,000 ft. - 12,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** MECB3

### Key Characteristics:

- ◆ Stems to 10 dm tall, erect, usually in clumps
- ◆ **Leaves blue-green**, glabrous to hairy on upper surface, basal leaves 12 cm long x 3–6 cm wide
- ◆ Inflorescence usually **tightly packed with numerous bell-shaped blue flowers**

**Similar Species:** *M. franciscana* leaves have stiff, short hairs on the upper surface and the hairs are usually thickened at the bases.

**Habitat and Ecology:** Common in moist places along streams and creeks.

**Comments:** Leaves and flowers are eaten by deer, elk and small mammals. The bell-shaped flowers have evolved to protect nectar and pollen from rain and wind and at the same time guide the insect pollinator to the nectar source.

- ◆ Calyx 1.5–3 (4) mm long, glabrous on back with ciliate margins; corolla tubular to campanulate, blue
- ◆ Nutlets 4, usually wrinkled or rugose

# *Mertensia franciscana* A. Heller

Franciscan bluebells

Boraginaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status** WMVC: FACW

**Native Status:** Native

**Conservation Status:** G3G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 6,500 ft. - 10,800 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** MEFR2

## Key Characteristics:

- ◆ Stems glabrous or loosely strigose, leafy-stemmed 4–10 (15) dm tall
- ◆ Leaves with straight, stiff, appressed, pustulate hairs on upper surface, prominently veined
- ◆ Inflorescence open and branching with numerous flowers
- ◆ Calyx 2.5–4 mm long, cleft to bases, ciliate on margins and back
- ◆ Corolla 10–15 mm long, blue, tubes equaling expanded limb

**Similar Species:** *M. ciliata* herbage is glabrous or slightly hairy with short stiff hairs.

**Habitat and Ecology:** Common in moist places along streams and creeks from western and southern counties.

**Comments:** Leaves and flowers are eaten by deer, elk and small mammals. Named for the San Francisco Peaks in northern Arizona.

***Plagiobothrys scouleri* (Hook. & Arn.) I.M. Johnst. var. *hispidulus* (Greene) Dorn**  
 Sleeping popcornflower

Boraginaceae

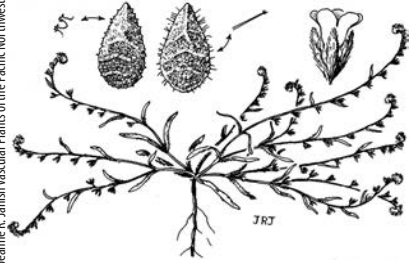


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne E. Janish Vascular Plants of the Pacific Northwest



Trent Draper, CalPhotos



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 3  
**Duration:** Annual  
**Elevation:** 5,000 ft. - 10,700 ft.  
**Synonyms:** *Plagiobothrys hispidulus* (Greene) I.M. Johnst., *Plagiobothrys scopulorum* (Greene) I.M. Johnst.  
**USDA PLANTS Symbol:** PLSCH

**Key Characteristics:**

- ◆ **Stems prostrate, up to 20 cm long; creeping at bases, stoloniferous**
- ◆ Leaves all cauline, linear, up to 6.5 cm long x 5 mm wide, lower pairs opposite, upper pairs alternate
- ◆ Stems terminating in a false, loosely flowered raceme or spike
- ◆ Calyx 2–4 mm long with symmetrical lobes
- ◆ **Corolla white, salverform**, stamens included; nutlet scar lateral, not basal, minute bristles

**Similar Species:** *P. leptocladus* occurs in southern Wyoming and is expected to occur in northern Moffatt or Routt counties. The calyx lobes are elongate and thick, curving toward the same side of the fruit and the nutlet scar is at the base.

**Habitat and Ecology:** Muddy places along drying pond margins or muddy soil in meadows.

**Comments:** A very small plant that grows on mud flats and can easily be overlooked.

***Barbarea orthoceras* Ledeb.**  
American yellowrocket

Brassicaceae



Mary Sanseverino Flickr Creative Commons



Margo Bors CalPhotos

Yevonn Wilson-Ramsey/Flora of North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Biennial, Perennial  
**Elevation:** 4,800 ft. - 10,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** BAOR

**Key Characteristics:**

- ◆ **Stems erect, 2–6 dm tall**, glabrous or sparsely pubescent with a few simple hairs; taproots
- ◆ Leaves divided into numerous leaflets having a large, rounded, terminal leaflet; auricles ciliate
- ◆ **Flowers yellow**, clustered at the terminal end of stems
- ◆ **Fruits siliques, linear, sessile or short stipitate, 3.1–4.5 cm long, constricted between seeds**
- ◆ Styles stout, 0.5–1.2 (2) mm

**Similar Species:** *B. vulgaris* has longer styles up to 3.5 mm long and the auricles are glabrous.

**Habitat and Ecology:** Found along streams, creeks, ditches, roadsides and within wet meadows, often disturbed areas.

**Comments:** Pollinated by flies, bees, beetles.



# *Cardamine cordifolia* A. Gray

Heartleaf bittercress

Brassicaceae



Steve Olson



Steve Olson

Yevonn Wilson-Ramsey eFloras of North America



*Cardamine cordifolia*

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CACO6

### Key Characteristics:

- ◆ Stems erect or decumbent, 2–4 (8) dm tall, glabrous or densely puberulent with simple, spreading hairs
- ◆ Leaves cauline, glabrous, petiolate, 1–6 (8) cm long x 2–7 cm wide, 1.5–5 (6) cm wide, leaf shape reniform, margins crenate
- ◆ Fruiting pedicels divaricate to ascending, (7) 10–20 mm
- ◆ Sepals oblong, 2.5–4.5 mm long x 1.5–2 mm wide; petals white, 7–12 mm long x 4–6 mm wide
- ◆ Fruits erect, siliques, 2.3–3.7 cm long, linear; styles 0.6–2.2 (4) mm long

**Similar Species:** Superficially *C. cordifolia* resembles *Nasturtium officinale* (= *Rorippa nasturtium-aquaticum*), a much shorter species with smaller flowers found commonly in wetlands and shallow waters across Colorado.

**Habitat and Ecology:** Common along streams, lake margins and in moist forests.

**Comments:** In most mustards, the presence of sulfur and nitrogen containing glucosinolates (also known as mustard oil) helps reduce herbivory and imparts the family characteristic sharply bitter taste. High doses of mustard oils can be toxic, but a number of moths and other insects have evolved metabolisms to counteract the chemicals.

## *Rorippa curvipes* Greene

Bluntleaf yellowcress

Brassicaceae



Aaron Schusteff CalPhotos



Aaron Schusteff CalPhotos

Aaron Arthur CalPhotos



Mary Ellen Harte Forestry Images



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Annual, Perennial

**Elevation:** 4,700 ft. - 10,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** ROCU2

### Key Characteristics:

- ◆ Stems few, rarely single, **prostrate, decumbent**, 1–4 dm long, pubescent with simple hairs
- ◆ Leaves 3–12 cm long x 1–3.5 cm wide, with an **auriculate clasping base**; petioles usually short
- ◆ Terminal leaf lobe much larger than narrowly oblong lateral lobes

- ◆ **Flowers yellow**; petals 0.7–1.3 mm long
- ◆ **Siliques glabrous, linear, 2.5–8 mm long, rounded, constricted near middle; styles 0.5–0.7 mm long**

**Similar Species:** *R. palustris* has erect, usually solitary stems that are densely hairy.

**Habitat and Ecology:** Common along margins of lakes and ponds, streams, ditches, fields and in moist depressions.

**Comments:** In most mustards, the presence of sulfur and nitrogen containing glucosinolates (also known as mustard oil) helps reduce herbivory and imparts the family characteristic sharply bitter taste. High doses of mustard oils can be toxic, but a number of moths and other insects have evolved metabolisms to counteract the chemicals.

# *Rorippa palustris* (L.) Besser

Bog yellowcress

Brassicaceae



Louis M. Landry CalPhotos



Barry Breckling CalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Annual, Biennial, Perennial  
**Elevation:** 5,000 ft. - 10,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ROPA2

## Key Characteristics:

- ◆ **Stems erect, usually solitary, 2.5–10 dm tall;** glabrous or sparsely to densely hirsute with simple hairs
- ◆ **Basal leaves wither early; cauline blades 1.5–4 cm wide, deeply pinnatifid, lobes dentate**
- ◆ **Terminal leaflet lobes larger; petioles auriculate and clasping stems**
- ◆ **Flowers yellow,** petals 0.8–2.7 mm long
- ◆ **Siliques 3–11 mm long,** globose to obtuse or rounded at both ends; styles 0.3–0.9 mm long

**Similar Species:** *R. sinuata* is pubescent with oval, white and inflated hairs. Stem leaves have an auriculate and clasping base and the silques are constricted near the middle.

**Habitat and Ecology:** Common along margins of lakes, ponds, streams, ditches, fields, and in moist depressions.

**Comments:** In most mustards, the presence of sulfur and nitrogen containing glucosinolates (also known as mustard oil) helps reduce herbivory and imparts the family characteristic sharply bitter taste. High doses of mustard oils can be toxic, but a number of moths and other insects have evolved metabolisms to counteract the chemicals.

***Sagina saginoides* (L.) Karst.**  
Arctic pearlwort

**Carvophyllaceae (Alsinaceae)**

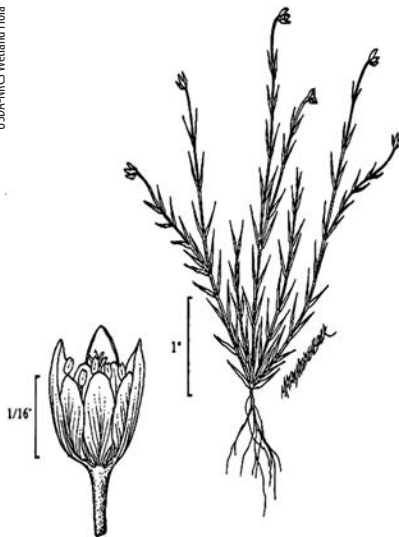


Keir Morse CalPhotos



Keir Morse CalPhotos

USDA-NRCS Wetland Flora



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Biennial, Perennial  
**Elevation:** 8,500 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SASA

**Key Characteristics:**

- ◆ **Stems 2-5 cm, ascending or sometimes procumbent, tufted or becoming caespitose in alpine habitats, glabrous**
- ◆ Leaves opposite, linear, 10–20 mm, not succulent, apices apiculate, glabrous, tufts of leaves in axils absent
- ◆ Petals 5 (4), (1) 1.5–2 mm long, shorter than or equaling sepals; stamens 5 or 10
- ◆ Sepals elliptic, 2–2.5 mm, margins white hyaline, apices obtuse to rounded
- ◆ Capsules 2.5–3 (3.5) mm long

**Similar Species:** *Sagina caespitosa* (= *Spergella caespitosa*) occurs in the alpine, but is densely caespitose, forming tight mats and the sepals are commonly purplish with scarious margins.

**Habitat and Ecology:** Common, but inconspicuous along streams and in moist areas from foothills to alpine tundra.

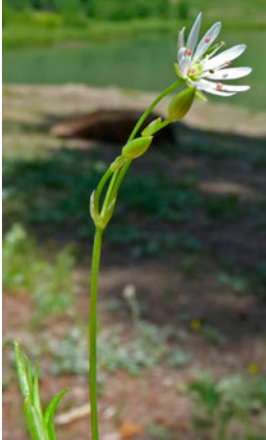
**Comments:** Circumboreal. Common throughout the Intermountain West, Pacific Northwest, California, north to Alaska.

***Stellaria longifolia* Muhl. ex Willd.**  
Longleaf starwort

Carryophyllaceae (Alsinaeeae)

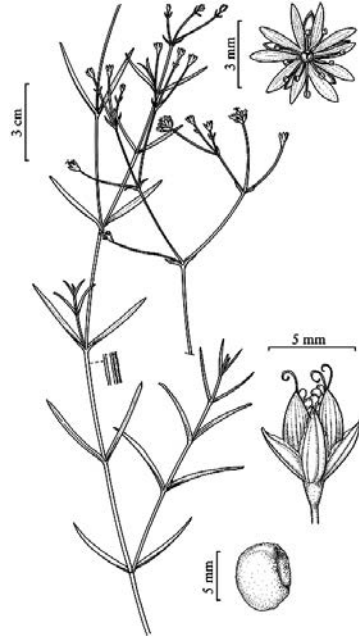


Max Licher Arizona State University Herbarium



Al Schneider Southwestern Colorado Wildflowers

Bee F. Gunn Flora of North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 6,400 ft. - 10,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** STLO

**Key Characteristics:**

- ◆ Stems erect or branched, 4-angled, 10–35 cm, glabrous, **angles with minutely warty projections**
- ◆ **Leaves opposite, sessile;** blades yellowish-green, 0.8–4 cm long x 1–3 mm wide

- ◆ **Inflorescence 2- to many-flowered, white flowers,** axillary cyme subtended by thin, dry membranous bracts
- ◆ Sepals 5, obscurely 3-veined, ovate-elliptic, 2–4 mm, apices acute; petals 5, 2–3.5 mm, equaling sepals
- ◆ Seeds minutely roughened by tubercles

**Similar Species:** Usually *S. longifolia* has conspicuous petals, but sometimes the petals can be shorter than sepals, confusing it with *S. umbellata*, which does not have roughened or scabrous stem angles.

**Habitat and Ecology:** Common in moist meadows, along streams, lakes and marshes.

**Comments:** The primary pollinators are likely bees, attracted by nectar.

# *Stellaria longipes* Goldie

Longstalk starwort

Carvophyllaceae (Alsinaceae)

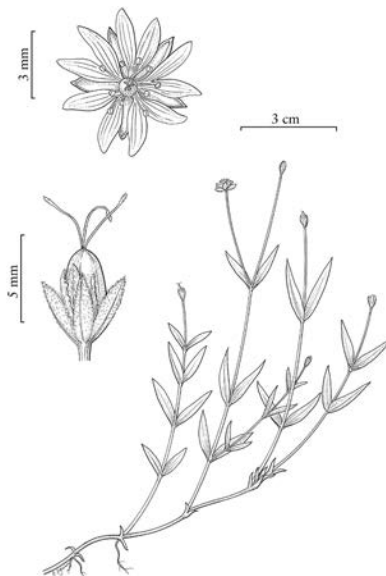


Keir Morse CalPhotos



Keir Morse CalPhotos

Bee F. Gunn Flora of North America



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 7,500 ft. - 13,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** STL02

## Key Characteristics:

- ◆ Stems erect, 4-angled, 3–32 cm tall, forming small to large clumps or mats, from slender rhizomes
- ◆ Leaves **opposite, sessile, green, glaucous, 1–3 veined, midribs prominent**, 0.4–2.6 cm long x 1–4 mm wide
- ◆ Inflorescence solitary or terminal, 3- to 30-white flowered (rarely more) cymes; bracts lanceolate, 2–10 mm
- ◆ Sepals 5, **3-veined, midribs prominent**, 3.5–5 mm long, sometimes ciliate
- ◆ Petals 5, 3–8 mm, 1–1.5 times as long as sepals; stamens 5–10; styles 3, ascending, curled at tips

**Similar Species:** *S. graminea* also has leaves with prominent midribs and sepals that are 3-veined, but is a weedy plant found in drier area, at elevations below 6,000 ft.

**Habitat and Ecology:** Common in meadows, forests, along streams and in alpine tundra.

**Comments:** The primary pollinators are likely bees or ants that are attracted by nectar.

***Hypericum scouleri* Hook.**  
Scouler's St. Johnswort

Clusiaceae (Hypericaceae)



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Key Characteristics:**

- ◆ Stems sparingly branched, erect, 2–7 dm tall, **glandular-punctate**; rhizomatous
- ◆ **Leaves opposite, gland-dotted**, oval or elliptic, 1–3.5 cm long
- ◆ Inflorescence a few-flowered cyme that is leafy-bracteate

**Similar Species:** *H. majus* does not have black gland-dotted sepal margins.

**Habitat and Ecology:** Common in wet meadows, ditches and along the margins of ponds and streams.

**Comments:** St. Johnswort contains hypericin, a photo-reactive pigment that is readily absorbed from the digestive tract. The main effect is photosensitivity after ingestion. St. Johnswort is palatable to livestock. It does not result in death, but animals will lose weight and develop skin irritation when exposed to sunlight.



Patrick Alexander USDA-NRCS PLANTS Database

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 10,370 ft.  
**Synonyms:** *Hypericum formosum* Kunth  
**USDA PLANTS Symbol:** HYSC5

- ◆ Sepals 5; petals 5, 6–15 mm long, **black gland-dotted**; stamens 75–100, connate at base into 3–5 groups
- ◆ Capsules ovoid, purplish, 3–7 mm long, included or barely exceeding the sepals

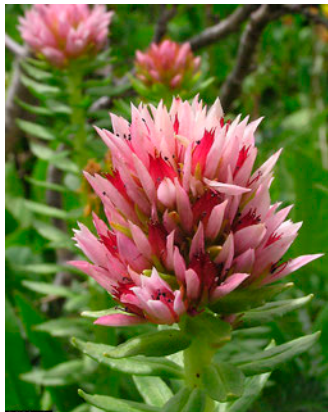
# *Rhodiola rhodantha* (A. Gray) H. Jacobsen

Redpod stonecrop

Crassulaceae

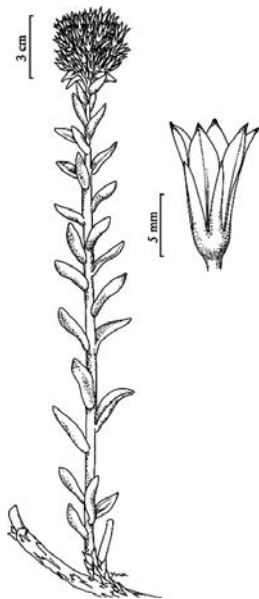


Steve Olson



Al Schneider Southwestern Colorado Wildflowers

Yevonn Wilson-Ramsey/Flora of North America



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 8,500 ft. - 13,500 ft.

**Synonyms:** *Clementsia rhodantha* (A. Gray) Rose,

*Sedum rhodanthum* A. Gray

**USDA PLANTS Symbol:** RHRH4

## Key Characteristics:

- ◆ Stems erect or decumbent, 0.3–6 dm tall, commonly branching to form clumps, **succulent**
- ◆ Leaves alternate; blades green, not glaucous, 10–30 mm long, apices mostly acute
- ◆ **Inflorescence rounded, longer than wide, flowers dense**
- ◆ Sepals linear-lanceolate, 3–9 mm; petals erect with tips outcurved, **pink**, longer than stamens
- ◆ Follicles 6–9 mm, beaks erect

**Similar Species:** *R. integrifolia* has crimson-red petals and flowers are in a flat-topped cluster.

**Habitat and Ecology:** Common along streams and wet meadows in upper montane and subalpine.

**Comments:** All members of the Crassulaceae have edible leaves. Butterflies and caterpillars also feed on members of the stonecrop family.



***Astragalus agrestis* Douglas ex G. Don**  
Purple milkvetch

Fabaceae



Matt Lavin



Matt Lavin

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 4,900 ft. - 10,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ASAG2

**Key Characteristics:**

- ◆ Stems tufted, 0.5–3 (4) dm tall, foliage thinly hairy with basifixed (attached at base) hairs
- ◆ Leaves 2–10 cm long; leaflets 13–21 (23), 4–18 mm long; stipules 2–10 mm long, connate
- ◆ Racemes 5- to 15-flowered, flowers in globose heads, erect or incurved, 1.5–11 cm long
- ◆ Flowers pink-purple, strictly ascending, calyx teeth 2.5–4.5 mm long
- ◆ Fruits 7–10 mm long x 3–4 mm wide, densely hairy (1–2 mm), axis of inflorescence hidden by fruit

**Similar Species:** *A. laxmannii* var. *robustior* (= *A. adsurgens* var. *robustior*) flowers are in an elongated head, not globose. *A. cicer* has longer fruits, 10–14 mm long, that are brown to green with black hairs and ochroleucous flowers.

**Habitat and Ecology:** Common in meadows, grasslands, along streams, seeps and springs found from high plains to upper montane meadows and forests.

**Comments:** Members of the Fabaceae have a symbiotic relationship with the bacteria, *Rhizobia*, that exists in their root nodules. *Rhizobia* have the ability to take nitrogen gas out of the air and convert it to a form of nitrogen that is usable to the host plant. The plants are then able to thrive in soils that are nitrogen deficient.

# *Astragalus alpinus* L.

Alpine milkvetch

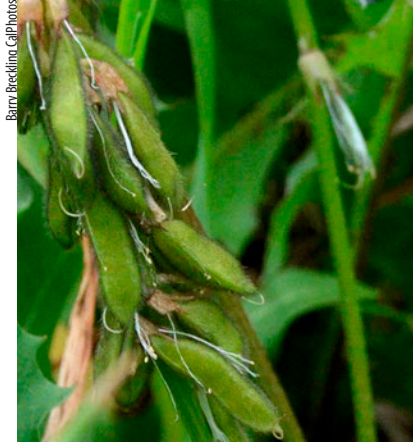
Fabaceae



Barry Breckling CalPhotos



Barry Breckling CalPhotos



Barry Breckling CalPhotos

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 7,500 ft. - 12,700 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ASAL7

## Key Characteristics:

- ◆ Stems 0.5-2.5 dm, caulescent, with slender taproot, foliage thinly villous with basifixed hairs
- ◆ Leaves pinnately compound with 15-25 leaflets; leaflets oval-ovate 0.4-2 cm long, often glabrate to sparsely hairy above, densely hairy below
- ◆ Inflorescence 7-17-flowered raceme; stipules 1.5-8 mm long, lower stipules loosely connate
- ◆ Calyx tube 2-4.1 mm long, densely to sparsely strigulose with black and white hairs; flowers **bicolored, banner and keel tip purple, wings whitish, banner 7-14 mm**
- ◆ Legumes ellipsoid, 3-angled, 7-14 x 2.5-4 mm, hairy with black or mixed black and white hairs

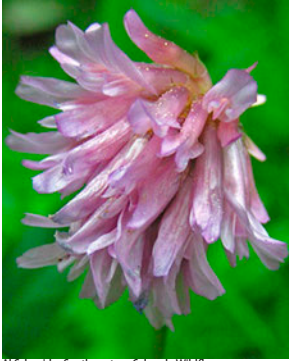
**Similar Species:** *Astragalus agrestis* flowers strictly ascending, densely packed into a ovoid or globose cluster. Fruit hairy with white-villous hairs

**Habitat and Ecology:** Common in alpine, aspen groves, meadows, along streams, and in spruce-pine forests.

**Comments:** Members of the Fabaceae have a symbiotic relationship with the bacteria, *Rhizobia*, that exists in their root nodules. *Rhizobia* have the ability to take nitrogen gas out of the air and convert it to a form of nitrogen that is usable to the host plant. The plants are then able to thrive in soils that are nitrogen deficient.

***Trifolium longipes* Nutt.**  
Longstalk clover

Fabaceae

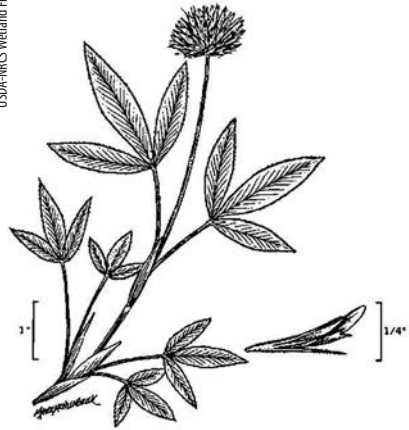


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

USDA-NRCS Wetland Flora



**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 6,100 ft. - 12,780 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** TRLO

**Key Characteristics:**

- ◆ Stems 0.5–4 dm tall; decumbent or erect; stipules all green, 8–40 mm long
- ◆ Leaflets 3, margins toothed entire length, 3–5 cm long, glabrous on upper side, pubescent underneath
- ◆ Inflorescence 20–65 flowers per head; heads ovoid, 15–35 mm wide
- ◆ Petals greenish-white, ochroleucous, striped with purple or bright pink or purple, banners apiculate
- ◆ Calyx teeth 2.9–6.5 mm long

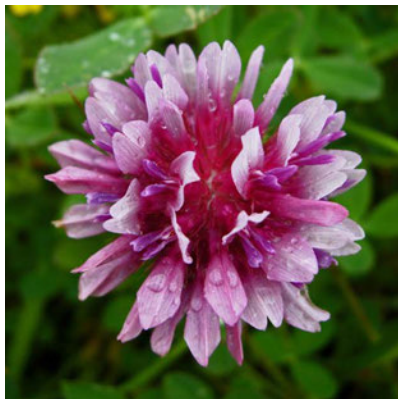
**Similar Species:** *T. pratense*, a non-native, is often in wetlands. It has solitary, sessile flower heads, subtended by stipules versus flowering heads on pedicels.

**Habitat and Ecology:** Found along streams, in meadows, and shaded forests.

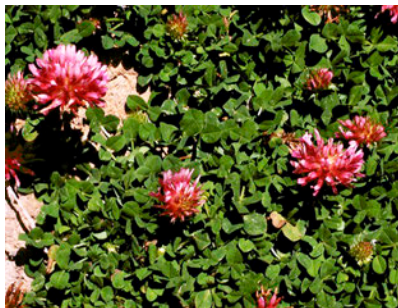
**Comments:** *T. longipes* is common throughout the Intermountain West, desert southwest, the Pacific Northwest and California. In general, clovers are one of the best nitrogen fixing plants available.

***Trifolium wormskioldii* Lehm.**  
Cows clover

Fabaceae



Neal Kramer CalPhotos



Br. Alfred Brousseau Saint Mary's College CalPhotos

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Annual, Perennial

**Elevation:** 6,500 ft. - 8,000 ft.

**Synonyms:** *Trifolium fendleri* Greene

**USDA PLANTS Symbol:** TRWO

**Key Characteristics:**

- ◆ Stems (0.5) 1–4 dm tall, **weak, often succulent**, glabrous; stipules toothed
- ◆ **Leaflets 3**, commonly oblanceolate or elliptic-oblanceolate, all serrulate or spinulose-denticulate

- ◆ Flowering heads 10 to numerous ascending flowers, 1.5-3 cm diameter, pedunculate, **involucral bracts fused for ½ their length, dentate**
- ◆ Calyx 5.2–10.5 mm long, 10-ribbed, spinulose tipped teeth; **petals red-purplish**
- ◆ Pods oblong-elliptic, 3.5–5 mm long

**Similar Species:** *T. parryi* is acaulescent, 0.4–2.5 dm tall, has entire stipules, involucral bracts that are free or connate for about a third of their length with entire margins and toothed apices.

**Habitat and Ecology:** Uncommon in moist meadows, along streams and other wet places.

**Comments:** In general, clovers are one of the best nitrogen fixing plants available.

*Corydalis caseana* A. Gray ssp. *brandegeei* (S. Watson) G.B. Ownbey  
Brandegee's fumewort Fumariaceae



Denise Culver Colorado Natural Heritage Program



Karin Freeman Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T3T4  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 6,900 ft. - 12,020 ft.  
**Synonyms:** *Corydalis brandegeei* S. Watson  
**USDA PLANTS Symbol:** COCAB2

**Key Characteristics:**

- ◆ **Stems up to 2 m tall, glaucous**, from large fleshy roots
- ◆ **Leaves pinnately compound with elliptic leaflets or “fern like”**
- ◆ **Inflorescence a panicle, 50 or more flowers on primary axis; bracts inconspicuous**
- ◆ **Flowers white to light pink, spurred petals 16–25 mm long, spurs 9–16 mm long, outer petals winged**
- ◆ **Capsules reflexed, ellipsoid, 10–15 mm long x 3–5 mm wide; seeds black, 2.5 mm across**

**Similar Species:** *C. caseana* ssp. *brandegeei* resembles *Astragalus* in the Fabaceae. The morphological differences are that Fabaceae has 10 stamens (9 fused, 1 free) versus Fumariaceae that has 6 stamens (fused in 2 sets of 3). Fabaceae has 5 petals that are fused to form a keel; Fumariaceae has 4 petals in 2 whorls of 2.

**Habitat and Ecology:** Found in forests and open meadows, often along streams and creeks, known only from southwestern and central Colorado and northern New Mexico. A poison, a sedative, and an antimalarial drug have all been extracted from this plant. Ingestion of this plant has resulted in significant livestock losses for despite its toxicity, the foliage is palatable to cattle and sheep.

**Comments:** The seed pods will explode if lightly touched. Significant livestock losses have been caused by ingestion of *C. caseana* ssp. *brandegeei*, which is palatable to both cattle and sheep.

# *Gentiana algida* Pall.

Whitish gentian

Gentianaceae

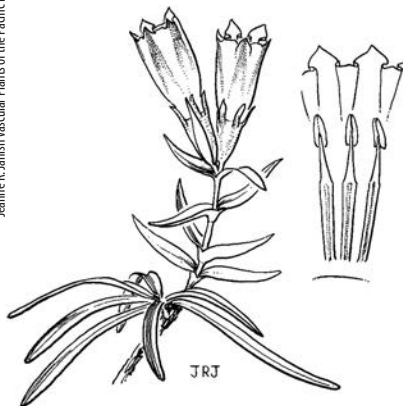


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 10,000 ft. - 14,000 ft.  
**Synonyms:** *Gentianodes algida* (Pall.) Å . Löve & D. Löve  
**USDA PLANTS Symbol:** GEAL2

## Key Characteristics:

- ◆ Cespitose, stems 1–several, 0.5–1.5 dm tall from fleshy roots, clustered, glabrous
- ◆ Leaves linear, forming a loose rosette, cauline leaves 2–5 cm long, linear to lanceolate
- ◆ Inflorescence a solitary or 2–3 closely clustered, subsessile flower(s)
- ◆ Flowers white or pale yellowish with purple pleats and purple or green spots
- ◆ Fruits are capsules, oblong-ovate

**Similar Species:** None.

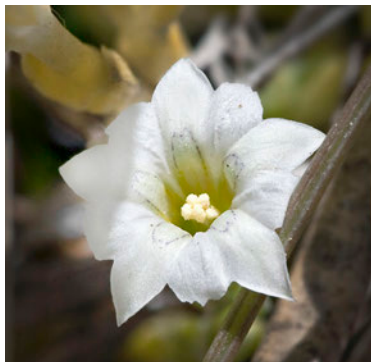
**Habitat and Ecology:** Common in moist subalpine and alpine meadows.

**Comments:** Circumpolar. Range includes Alaska, Montana, Wyoming, Colorado, New Mexico and Utah. Bees are the primary pollinators.

# *Gentiana fremontii* Torr.

Moss gentian

Gentianaceae



John Game CalPhotos



John Game CalPhotos



John Game CalPhotos

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4

**C-Value:** 9

**Duration:** Annual, Biennial

**Elevation:** 7,200 ft. - 12,000 ft.

**Synonyms:** *Chondrophylla aquatica* auct. non (L.)  
W.A. Weber

**USDA PLANTS Symbol:** GEFR

## Key Characteristics:

- ◆ Stems 0.2–1.2 dm tall, usually several, curved-ascending, glabrous
- ◆ Basal leaves 5–12 mm long, cauline leaves 4–7 mm long, **conspicuously white-margined**
- ◆ **Inflorescence a single terminal flower**, pedicels to 10 mm long

**Similar Species:** *G. prostrata* (= *Chondrophylla prostrata*) leaves and sepals are not white-margined, flowers are deep blue and capsules are included in the corolla tubes.

**Habitat and Ecology:** Common in moist meadows in upper montane, subalpine and alpine.

**Comments:** Corolla is not sensitive to light changes as in *Gentiana prostrata*. Globally range extends from northern Canada to California, Arizona, and New Mexico.

- ◆ Calyx 6.5–10 mm long, tubes 4.5–7; corolla 10–22 mm long, **strongly pleated, whitish or greenish-purple**
- ◆ Capsules 4–7 mm long, exserted from corolla tubes at maturity, broadly obovoid

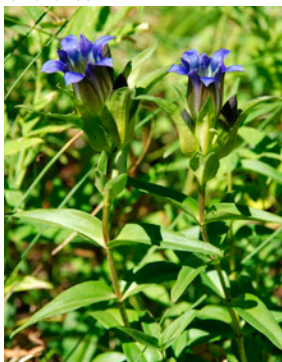
## *Gentiana parryi* Engelm.

Parry's gentian

Gentianaceae



Ron Wolf CalPhotos



Barry Breckling CalPhotos



Ron Wolf CalPhotos

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 7,500 ft. - 13,200 ft.  
**Synonyms:** *Pneumonanthe parryi* (Engelm.) Greene  
**USDA PLANTS Symbol:** GEPA

### Key Characteristics:

- ◆ Stems 1–3.5 dm tall, unbranched, few to several, clustered
- ◆ Leaves all cauline, 2–4 cm long, broadly lanceolate
- ◆ **Inflorescence 1 to few-flowered, tightly clustered in compact, bracteate cymes**

**Similar Species:** *G. affinis* has shorter calyx tubes, 4–10 mm long, and the leaf-like bracts subtending the flowers are lanceolate or linear, not hiding the calyx. The corolla is tubular-funnelform not barrel-shaped.

**Habitat and Ecology:** Common in moist meadows, along streams, in meadows and forest openings.

**Comments:** The lower halves of the corolla exhibits milky light that attracts the bees to the inside. *G. parryi* is one of the gentians that is light-sensitive, when it is cloudy or a hand is held over the flowers, they close. Global range includes Washington, Idaho, Wyoming, Utah, Arizona, Colorado and New Mexico. Bees are the primary pollinators.

- ◆ Calyx tubes 10–18 mm long; leaf-like bracts subtending the flowers, ovate, often hiding the calyx
- ◆ **Corolla purple, barrel-shaped**



# *Gentiana prostrata* Haenke

Pygmy gentian

Gentianaceae



Ron Wolf CalPhotos



Ron Wolf CalPhotos

### Key Characteristics:

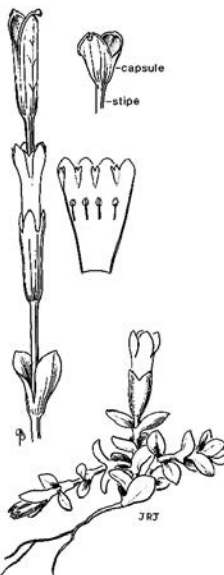
- ◆ Stems 0.2–1.2 dm tall, erect, usually several, glabrous
- ◆ Leaves and sepals not conspicuously white-margined
- ◆ Calyx lobes triangular to ovate-triangular
- ◆ Corolla 4-5 parts, **deep blue, rarely white, petals united into a pleated, 8-point star**
- ◆ Capsules stipitate, linear-oblong, 8–10 mm long, included within corolla tubes

**Similar Species:** *G. fremontii* has leaves and sepals that are conspicuously white-margined.

**Habitat and Ecology:** Common. Grows in moist subalpine meadows and alpine tundra.

**Comments:** Corolla is light sensitive, closing quickly when shaded by cloud or a hand. Globally range extends from Alaska south to California and New Mexico.

Jeanne R. Jamish and Bobbi Angell Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4G5

**C-Value:** 9

**Duration:** Annual, Biennial, Perennial

**Elevation:** 10,500 ft. - 14,000 ft.

**Synonyms:** *Chondrophylla prostrata* (Haenke) J.P. Anderson

**USDA PLANTS Symbol:** GEPR3

***Gentianella amarella* (L.) Börner ssp. *acuta* (Michx.) J.M. Gillett**

Autumn dwarf gentian

Gentianaceae



Steve Matson CalPhotos



Barry Breckling CalPhotos



Steve Matson CalPhotos

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 8

**Duration:** Annual, Biennial

**Elevation:** 6,000 ft. - 13,000 ft.

**Synonyms:** *Gentiana amarella* L. ssp. *acuta* (Michx.) Hultén, *Gentianella acuta* (Michx.) Hiitonen, *Gentianella strictiflora* (Rydb.) W.A. Weber

**USDA PLANTS Symbol:** GEAMA

**Key Characteristics:**

- ◆ Stems simple or usually branched at bases, 1–3 (4) dm tall, glabrous
- ◆ Leaves 1.5–4.5 cm long, sessile
- ◆ Inflorescences of axillary and terminal cymes; **pedicels 0.8–2.5 cm long, spreading, not stiffly erect**
- ◆ Calyx lobes united at base into a tube 2–4 mm long, equal; **corolla pale blue**, lobes 3–4.5 mm long
- ◆ **Single row of fringe on inside of each lobe**, sometimes absent

**Similar Species:** *G. amarella* ssp. *heterosepala* (= *G. heterosepala*) has conspicuously unequal calyx lobes, the outer lobes are much larger and leaf-like, usually enclosing the inner 2 lobes.

**Habitat and Ecology:** Common along streams and in moist meadows.

**Comments:** Weber and Wittmann (2012) do not recognize the name *G. amarella* ssp. *acuta*. They separate it into *G. acuta* and *G. strictiflora*, but state that the two hybridize freely.

# *Gentianella tenella* (Rottb.) Börner

Dane's dwarf gentian

Gentianaceae

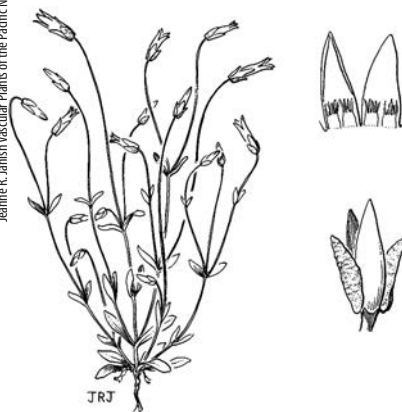


Steve Matson CalPhotos



Steve Matson CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



JRJ

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4G5

**C-Value:** 10

**Duration:** Annual

**Elevation:** 8,500 ft. - 13,000 ft.

**Synonyms:** *Comastoma tenellum* (Rottb.) Toyokuni

**USDA PLANTS Symbol:** GETE4

## Key Characteristics:

- ◆ Cespitose, stems simple or branched from bases, 0.4–1.3 dm tall; glabrous
- ◆ Leaves chiefly basal, 0.5–1.5 cm long, oblanceolate, cauline few, 0.5–1 cm long, oblanceolate, sessile
- ◆ Flowers solitary, terminal or axillary; pedicels 2–10 cm long, longer than subtending internodes
- ◆ Calyx 5–11 mm long, 2 lobes usually swollen at bases; corolla white or blue-tinged
- ◆ **2 fringed scales on inside of each lobe**

**Similar Species:** Other *Gentianella* spp. have corolla lobes with a single row of hairs inside.

**Habitat and Ecology:** Locally common along streams and in moist subalpine and alpine meadows.

**Comments:** Global range extends from Alaska south to California, Arizona and New Mexico. Bees are primary pollinators.

# *Gentianopsis barbellata* (Engelm.) Iltis

Perennial fringed gentian

Gentianaceae



Barry Breckling GalPhotos



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

## Key Characteristics:

- ◆ Stems 0.2–1.2 dm tall, few to several, glabrous; spreading by rhizomes
- ◆ Leaves mostly basal, 3.5–8 cm long, narrowly spatulate to oblanceolate
- ◆ Inflorescence of solitary or terminal flowers; pedicels short to sessile

**Similar Species:** *G. thermalis* flowers are on long pedicels and the sepal lobes have a prominent purplish vein in the center.

**Habitat and Ecology:** Found on moist slopes, meadows, alpine tundra and in aspen forests.

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G3G4

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 8,400 ft. - 13,000 ft.

**Synonyms:** *Gentiana barbellata* Engelm.

**USDA PLANTS Symbol:** GEBA2

- ◆ Calyx lobes without a prominent purplish vein in the center
- ◆ **Corolla tubes 12–18 mm long, deep blue, fragrant, margins conspicuously fimbriate, apices erose-dentate**

# *Gentianopsis thermalis* (Kuntze) Iltis

Rocky Mountain fringed gentian

Gentianaceae

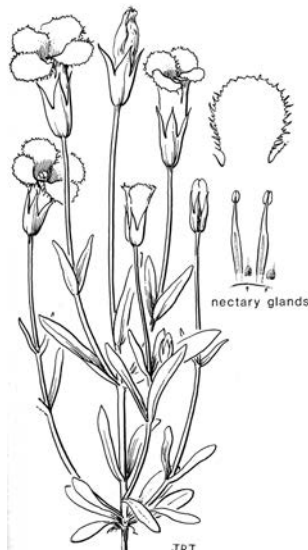


Al Schneider Southwestern Colorado Wildflowers



Steve Olson

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4?Q

**C-Value:** 8

**Duration:** Annual

**Elevation:** 7,500 ft. - 12,500 ft.

**Synonyms:** *Gentianella detonsa* (Rottb.) G. Don var.

*elegans* (A. Nelson) Dorn

**USDA PLANTS Symbol:** GETH

## Key Characteristics:

- ◆ Stems single to several in a cluster, usually branched above, (0.2) 1–5 (9) dm tall, glabrous
- ◆ Cauline leaves lanceolate to elliptical, usually wider than 4 mm
- ◆ Inflorescence of solitary and terminal flowers on long pedicels 4–12 (16) cm long
- ◆ Calyx 15–30 mm long, broadly funnelform, lobes 8–18 mm long, 1 pair often longer, keeled
- ◆ **Corolla 30–55 mm long, deep blue (sometimes white), margins fimbriate, apices erose**

**Similar Species:** *G. barbellata* flowers are sessile, not on long peduncles.

**Habitat and Ecology:** Common in wet meadows, fens and along streams.

**Comments:** Fringed gentian is the official flower of Yellowstone Park. Fringed gentian is found blooming at the beginning of the tourist season in June on the warm earth of the geyser basins and it can still be found in bloom in some of the more protected places in the park even in late September.

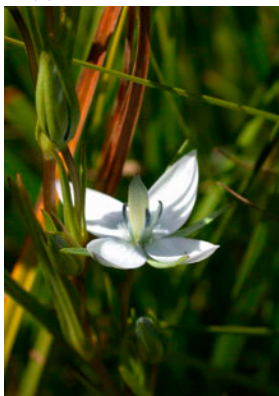
# *Lomatogonium rotatum* (L.) Fr. ex Fernald

Marsh felwort

Gentianaceae



Steve Olson



Mary Ellen Harte Forestry Images

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 9

**Duration:** Annual, Biennial

**Elevation:** 7,600 ft. - 10,500 ft.

**Synonyms:** *Pleurogyne rotata* (L.) Griseb.

**USDA PLANTS Symbol:** LORO

## Key Characteristics:

- ◆ Stems 0.5–5 dm tall, simple or branched from near the bases, erect or decumbent, glabrous
- ◆ Leaves opposite, cauline leaves ovate to linear-lanceolate, 0.5–2.5 cm long x 1–43 mm wide
- ◆ Inflorescence a terminal cyme or 1-flowered, axillary cyme
- ◆ Calyx with distinct lobes
- ◆ **Corolla blue to white, 4 or 5 petals**, rotate with 2 scaly appendages at base of each lobe

**Similar Species:** *Centaurium exaltatum* has white flowers, but the flowers are salverform, not rotate.

**Habitat and Ecology:** Uncommon in moist meadows, along lake and stream margins and in fens.

**Comments:** Widespread and locally abundant, circumboreal species. In Colorado it is at the southern extent of its range.

# Swertia perennis L.

Felwort

Gentianaceae

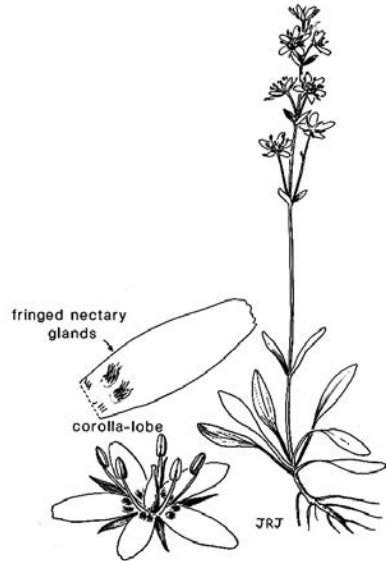


Steve Olson



Steve Olson

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,700 ft. - 14,150 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SWPE

## Key Characteristics:

- ◆ **Stems usually unbranched**, (1) 2–4.5 dm tall; short rhizomes and fibrous roots, glabrous
- ◆ Leaves chiefly basal, cauline leaves alternate or opposite, 1.5–5.5 (8) cm long, lanceolate
- ◆ Inflorescence a thyrses with 1- to 3-flowered cymes
- ◆ Calyx 4–8 mm long, lobes divided to bases
- ◆ **Corolla rotate, blue or purple with dark lines, lobes with a pair of fringed nectary glands**

**Similar Species:** *S. perennis* flowers can fade to white, resembling *Lomatogonium rotatum*.

**Habitat and Ecology:** Common along streams, wet meadows and willow carrs.

**Comments:** Global range extends from Alaska, south to California, Arizona and New Mexico.

# *Geranium richardsonii* Fisch. & Trautv.

Richardson's geranium

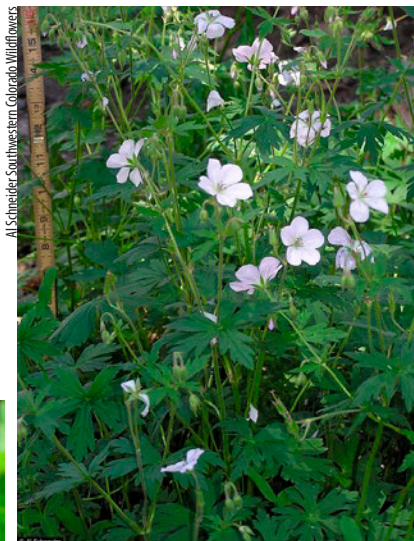
Geraniaceae



Thomas G. Barnes USDA-NRCS PLANTS Database



© Al Schneider  
Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 12,700 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** GERI

## Key Characteristics:

- ◆ Stems 3-7 dm tall, glandular above, glands purple-tipped
- ◆ Leaves palmately 5-7 parted, 6-12 cm wide; pedicels 1-3.3 cm long, glandular with purple-tipped glands
- ◆ Inflorescence open, peduncles and pedicels densely purple-tipped, glandular hairs
- ◆ Sepals 6-10 mm long with an awn tip 1-2.5 mm long; petals 11-20 mm long, white or light pinkish, with purple veins
- ◆ Fruits are long (20-30 mm) with a beak 1.7-4 mm long that split lengthwise into 5 slender recoiling segments

**Similar Species:** Other *Geranium* spp. have pink or purple flowers.

**Habitat and Ecology:** Common in moist meadows, along streams, and in aspen forests. Can form intermediates with *G. viscosissimum* and *G. caespitosum*.

**Comments:** Members of the Geraniaceae possess nectar guides on their petals. These guides are both visible and invisible to humans, unless a human happens to possess a UV light. The nectar guides provide direction to pollinating insects, e.g., bees.



***Hydrophyllum fendleri* (A. Gray) A. Heller**  
Fendler's waterleaf

Hydrophyllaceae



Patrick Alexander USDA-NRCS PLANTS Database



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,430 ft. - 13,690 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** HYFE

**Key Characteristics:**

- ◆ Stems solitary, 2–8 dm tall, retrorsely hispid; rhizomes short, stout with thickened roots
- ◆ **Leaves pinnately compound**, blades 2.5 dm long x 1.5 dm wide, long-petiolate, serrate
- ◆ Lower leaflets remote, acuminate, sharply toothed, scabrous or hairy beneath
- ◆ **Inflorescence on peduncles 3–15 cm long, equaling or surpassing leaves**
- ◆ **Calyx lobes 4–9 mm long, margins bristly-ciliate; corolla 6–11 mm long, white to purple**

**Similar Species:** *H. capitatum* flowers are pale to dark lavender and sometimes white, in a ball-like cluster and the leaf lobes have entire margins with 1–2 deeply cleft lobes at tips.

**Habitat and Ecology:** Common in moist, often shady places throughout the state.

**Comments:** Flies and butterflies are the primary pollinators.

# *Lycopus americanus* Muhl. ex W. Bartram

American water horehound

Lamiaceae

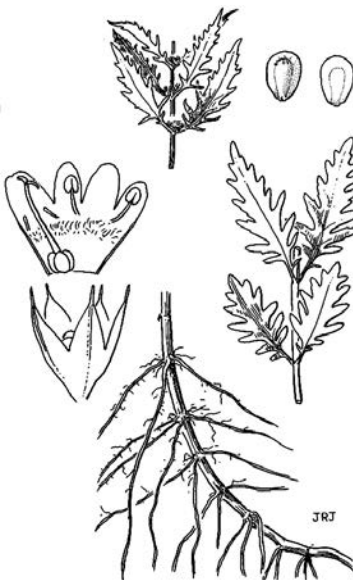


Richard Scully



Richard Scully

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 3,770 ft. - 7,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** LYAM

## Key Characteristics:

- ◆ Stems 2–8 dm tall, square, simple or branched, hairy at the nodes, especially upward
- ◆ Leaves opposite, lower leaves pinnatifid, others irregularly sharply serrate
- ◆ Calyx lobes 5, 2–3 mm long, narrow, firm, slender-pointed, with midnerve surpassing the mature nutlets

**Similar Species:** *L. asper* leaf margins are sharply, but evenly serrate, not pinnatifid and both arise from tuberous roots. *L. uniflorus* leaf margins are sharply, but evenly serrate, not pinnatifid.

**Habitat and Ecology:** Common in moist soil, sometimes in standing water.

**Comments:** Even though *Lycopus* spp. are in the mint family, they do not have aromatic leaves. They are pollinated mainly by bees.

# *Mentha arvensis* L.

Wild mint

Lamiaceae



Richard Scully



Richard Scully

## Key Characteristics:

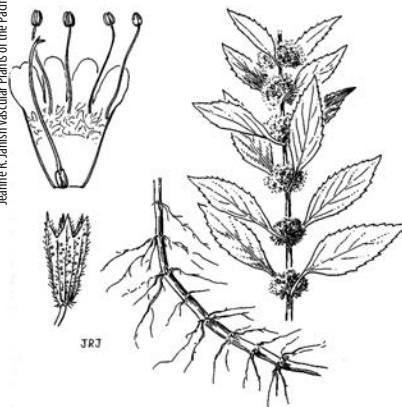
- ◆ Stems 2–8 dm tall, **square**, ascending or erect; creeping rhizomes
- ◆ Leaf blades 2–8 cm long x 6–40 mm wide, elliptic-ovate, glabrous or hairy, serrate, acuminate, short-petiolate

**Similar Species:** *M. spicata* flowers are in a terminal spike not axillary clusters.

**Habitat and Ecology:** Common in moist places, especially along streams and ditches.

**Comments:** Circumboreal. Native to temperate regions of Europe, Asia, eastern Siberia and North America. Leaves, when crushed, very aromatic. Can be used to make herbal tea.

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 3,900 ft. - 9,800 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** MEAR4

- ◆ **Flowers in dense axillary clusters at the nodes, aromatic**
- ◆ Calyx pubescent, 2.5–3 mm long; **corolla white to light purple or pink**, 4–7 mm long, rarely 5-lobed
- ◆ Nutlets 4, yellowish-brown, ovoid to ellipsoid, 0.7–1.3 mm

# *Scutellaria galericulata* L.

Marsh skullcap

Lamiaceae



Richard Scully



Richard Scully

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 4,800 ft. - 9,500 ft.

**Synonyms:** *Scutellaria epilobiifolia* A. Ham.

**USDA PLANTS Symbol:** SCGA

## Key Characteristics:

- ◆ Stems 2–8 dm tall, square, puberulent, weak but mostly erect; creeping rhizomes
- ◆ Leaves opposite, 2–6 cm long x 6–20 mm wide, glabrous above, margins toothed, bases truncate, short petiolate

**Similar Species:** *S. lateriflora* flowers are in axillary racemes, the corolla is shorter, 6–7 mm long, does not have a blue-spotted lip and is found in drier habitats.

**Habitat and Ecology:** Locally abundant along pond shores, marshes, streams and springs.

**Comments:** Circumboreal. Traditionally, skullcap was used as an anti-inflammatory, antispasmodic and for other nervous conditions.

***Stachys pilosa* Nutt. var. *pilosa***  
Hairy hedgenettle

Lamiaceae



Richard Scully



Richard Scully



Richard Scully

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Perennial  
**Elevation:** 4,800 ft. - 8,500 ft.  
**Synonyms:** *Stachys palustris* L. var. *pilosa* (Nutt.)  
Fernald  
**USDA PLANTS Symbol:** STPIPS

**Key Characteristics:**

- ◆ Stems (2) 3–8 dm tall, **square, rank odor**, simple or branched, hairy and glandular throughout
- ◆ Leaves opposite, sessile, 3.5–9 cm long x 1.5–4 cm wide, bases broadly rounded to truncate, crenate
- ◆ **Terminal spikes interrupted, subtended by leafy bracts, flowers sessile**
- ◆ Calyx 2-lobed, pubescent with slender, gland-tipped hairs, tubes 3–5 mm long, lobes 2–3.5 mm
- ◆ Corolla lavender, spotted and streaked with purple and white, upper lip 3–5 mm

**Similar Species:** *Agastache* spp. have similar looking flowers, but the calyx is bluish to purplish, the stems are glabrous or puberulent, not glandular, the terminal spikes are not interrupted, and leafy bracts are absent.

**Habitat and Ecology:** Common in moist places, along streams, ditches and lake shores, and in moist meadows.

**Comments:** Global range is throughout North America. *Stachys* spp. have been used for centuries for a wide variety of ailments ranging from antiseptic to stomach issues.

# *Sidalcea candida* A. Gray

White checkerbloom

Malvaceae



Al Schneider Southwestern Colorado Wildflowers



Richard Scully



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 6,000 ft. - 11,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** SICA3

## Key Characteristics:

- ◆ Stems 4-10 dm, retrorsely hispid below and finely stellate above; rhizomes slender
- ◆ Middle and upper leaves palmately divided with lanceolate divisions, 6-14 mm wide; basal leaves shallowly 5-7 lobed, crenate
- ◆ Flowers in terminal, bracteate racemes, variously stellate-hairy, glandular puberulent
- ◆ Petals, white to pale pink, anthers bluish-pink
- ◆ Fruits with short, erect beaks at apices

**Similar Species:** *S. neomexicana* occurs in very similar habitats. It is distinguished by the pink to rose-purple flowers, pale yellow or white anthers and the middle and upper leaves are palmately divided but with linear divisions (1-3 mm wide).

**Habitat and Ecology:** Common along streams and in wet meadows.

**Comments:** Members of the Malvaceae are recognized by the numerous stamens fused into a central column. *Hibiscus* spp. and *Gossypium hirsutum* (cotton) are two of the more economically important species found in this family.

***Menyanthes trifoliata* L.**  
Buckbean

Menyanthaceae



Karin Freeman Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

**Key Characteristics:**

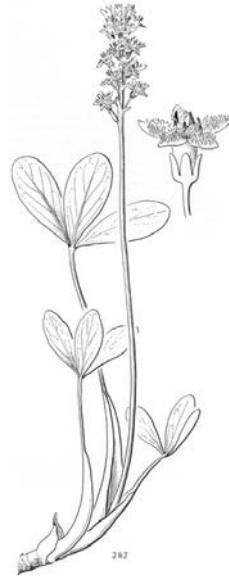
- ◆ Emergent, glabrous; rhizomes thick, covered with membranous leaf bases
- ◆ Leaves all basal, trifoliately compound with conspicuously sheathing bases
- ◆ Flowers actinomorphic, perfect in bracteate racemes

**Similar Species:** None.

**Habitat and Ecology:** Found in shallow water of ponds and lakes, slow-moving streams, and marshes.

**Comments:** *M. trifoliata* had many historical medicinal uses by Native Americans and Europeans and it is still used by modern herbalists. Some Native Americans used it as an emergency food supply. It is occasionally sold as an ornamental pond plant.

Jeanne R. Janish Vascular Plants of the Pacific Northwest



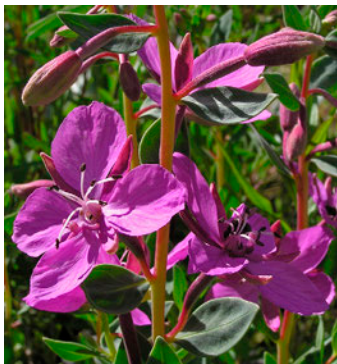
**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 5,440 ft. - 11,670 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** METR3

- ◆ Corolla 5, lobes spreading, white to pink, purplish-tinged, recurved, covered with dense crinkly hairs
- ◆ Stamines are fringed scales; capsules ellipsoid, contain shiny, yellow-brown, buoyant seeds

# *Chamerion latifolium* (L.) Holub

Dwarf fireweed

Onagraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Jamish and Bobbi Ancelet Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 6,900 ft. - 13,200 ft.

**Synonyms:** *Chamerion subdentatum* (Rydb.) Å. Löve & D. Löve, *Epilobium latifolium* L.

**USDA PLANTS Symbol:** CHLA13

## Key Characteristics:

- ◆ Stems 1–4 (7) dm long, decumbent to ascending, glabrous below, puberulent above
- ◆ Leaves mostly opposite, usually alternate above, pale green with bluish-white cast, 1.5–8 cm long x 0.5–3 cm wide
- ◆ Racemes with leafy bracts and relatively few flowers (usually less than 12)
- ◆ Sepals 10–18 mm long, puberulent; petals 15–30 mm long, bright pink; styles shorter than stamens
- ◆ Capsules 3–9 (10) cm long, usually purplish; seeds (1) 1.5–2 mm long, white hairs at apices (coma)

**Similar Species:** Related to *C. angustifolium* or common fireweed. *C. angustifolium* is much taller (10–20 dm) and the racemes are elongate with numerous flowers.

**Habitat and Ecology:** Found along streams and creeks, often in gravelly soil near or above timberline.

**Comments:** Circumboreal. Used by Native People who eat the leaves raw or steep in water for tea, the flowers and fruits are also eaten raw. It is the national flower of Greenland.



***Epilobium ciliatum* Raf.**  
Fringed willowherb

Onagraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 4  
**Duration:** Perennial  
**Elevation:** 4,650 ft. - 11,500 ft.  
**Synonyms:** *Epilobium ciliatum* Raf. var. *glandulosum* (Lehm.) Dorn  
**USDA PLANTS Symbol:** EPCI

**Key Characteristics:**

- ◆ Stems 0.5–20 dm tall, solitary, simple to much branched, basal leaves with or without turions
- ◆ Leaves opposite, 3–12 cm long x 0.5–5.5 mm wide, serrulate, teeth remote or obscure
- ◆ **Inflorescence an erect raceme, with numerous flowers, glandular-puberulent;** pedicels 2–15 mm long

- ◆ Floral tubes 0.5–2 mm long; sepals 2–6 mm long, often reddish; petals 4, white or pink, 2–10 mm long
- ◆ Capsule 3–10 cm long, seeds 1–1.5 (1.9) mm long, longitudinally finely ribbed, **coma white or dingy**

**Similar Species:** *E. leptophyllum* is likely a variety of *E. ciliatum*. The only morphological character that distinguishes *E. leptophyllum* are the leaves are not more than 3 mm broad and the lateral veins are not evident.

**Habitat and Ecology:** Common along streams, in meadows and other wet places.

**Comments:** *Epilobium* spp. are used as food plants by caterpillars of certain butterflies, moths and hawk-moths (*Lepidoptera* spp.). Turions can be seen if the base of the stem when gently pulled from the ground. Look for the withered, rounded bud-scales at the base of the stem. The new turions will be produced in the axils of the old bud-scales.

***Epilobium halleanum* Hausskn.**  
Glandular willowherb

Onagraceae

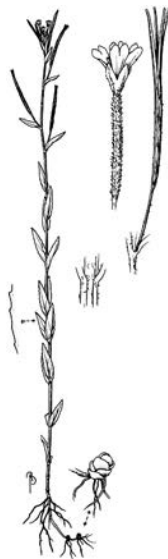


Steve Matson CalPhotos



Steve Matson CalPhotos

Bobbi Angell Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 7,000 ft. - 12,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** EPHA

**Key Characteristics:**

- ◆ Stems 1–4 (7) dm tall, spreading-hairy, viscid or glandular; **turions present**
- ◆ **Leaves opposite, linear-oblong to lanceolate**, 1–4 cm long, sessile or short-petiolate, spreading teeth

- ◆ Racemes small, tending to nod in bud; pedicels slender, 5–15 mm long in fruit
- ◆ **Floral tubes 0.5–1 mm long**; sepals 1.5–3 mm long; petals 4, pink-lavender, 3–5 mm long, notched
- ◆ Capsules 2.5–5 cm long, glabrous; seeds, 1–1.5 mm long, finely cellular-reticulate

**Similar Species:** *E. hornemannii* grows in similar habitats but does not have turions and the floral tubes are longer, up to 1.5 mm.

**Habitat and Ecology:** Common along streams, in fens, wet meadows and other wet places.

**Comments:** *Epilobium* spp. are used as food plants by caterpillars of certain butterflies, moths and hawk-moths (*Lepidoptera* spp.). Turions can be seen if the base of the stem when gently pulled from the ground. Look for the withered, rounded bud-scales at the base of the stem. The new turions will be produced in the axils of the old bud-scales.

# *Epilobium leptocarpum* Hausskn.

Slenderfruit willowherb

Onagraceae



Neal Foord Atlas of the Electronic Flora of British Columbia



Neal Foord Atlas of the Electronic Flora of British Columbia



Neal Foord Atlas of the Electronic Flora of British Columbia

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Perennial  
**Elevation:** 8,740 ft. - 10,150 ft.  
**Synonyms:** *Epilobium palustre* L. var. *gracile* (Farw.) Dorn  
**USDA PLANTS Symbol:** EPLE

## Key Characteristics:

- ◆ Stems 1–10 dm tall, herbage sparsely puberulent; turions or winter buds present at base
- ◆ Leaves opposite, 3–12 mm x 0.5–5.5 mm wide, short-petioled, **serrulate, often revolute, densely hairy on upper surface**
- ◆ Inflorescence a raceme, often glandular-puberulent; pedicels 2–15 mm long; floral tubes 0.5–2.2 mm
- ◆ Sepals 2–6 mm long, often reddish; petals 4, white to pink, 2–10 mm long; stigmas not lobed
- ◆ **Capsules 3–10 mm long, seeds 1–1.5 mm long, finely ribbed, tuft of hairs (coma) white or dingy**

**Similar Species:** The *E. ciliatum* complex is an extremely variable species, with hybridization common. Further genetic research will likely demonstrate that *E. leptocarpum* is a variety of *E. ciliatum*. USDA-NRCS PLANTS Database, as of 2012, recognizes *E. leptocarpum* as a distinct species.

**Habitat and Ecology:** Found along streams, ponds, lake margins and wet meadows.

**Comments:** *Epilobium* spp. are used as food plants by caterpillars of certain butterflies, moths and hawk-moths (*Lepidoptera* spp.). Turions can be seen if the base of the stem is gently pulled from the ground. Look for the withered, rounded bud-scales at the base of the stems. The new turions will be produced in the axils of the old bud-scales.

***Oenothera elata* Kunth ssp. *hirsutissima* (A. Gray ex S. Watson) W. Dietr.**  
Hooker's evening primrose

Onagraceae

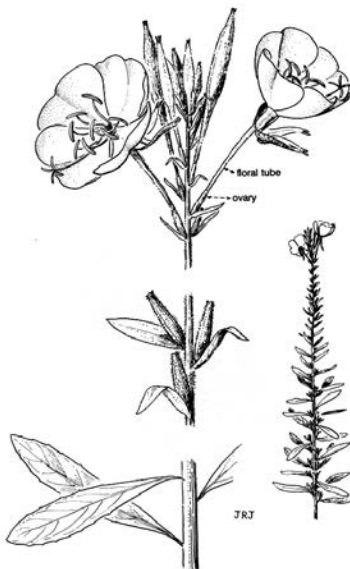


Patrick Alexander USDA-NRCS PLANTS Database



Gary A. Monroe USDA-NRCS PLANTS Database

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 5

**Duration:** Biennial, Perennial

**Elevation:** 4,000 ft. - 10,400 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** OEELH

**Key Characteristics:**

- ◆ Stems 2–25 dm tall, erect, usually branched from bases, densely to sparsely hairy or gland-tipped
- ◆ **Cauline leaves lanceolate to narrowly ovate, 5–40 cm long x 5–35 mm wide, entire to irregularly toothed**
- ◆ Flowers in terminal spike or panicle

- ◆ **Floral tubes 2.5–5.5 cm long, often reddish, pubescent; petals 4, 2–6 cm long; sepals 2.5–5.5 cm, yellow, fading orange or purplish**
- ◆ Capsules 2.5–4 cm long x 4.5–5 mm thick, cylindrical, hairy

**Similar Species:** *O. longissima* has longer floral tubes, 6–13.5 cm long.

**Habitat and Ecology:** Common in meadows, forests and along roadsides, creeks and streams.

**Comments:** Provides a nectar source for long-tongued moths including the hawk moths. Members of the Onagraceae are distinct with flower parts in 4s and inferior ovaries.

***Oenothera flava* (A. Nelson) Garrett**  
Yellow evening primrose

Onagraceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

USDA-NRCS Wetland Flora



**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,200 ft. - 10,300 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** OEFL

**Key Characteristics:**

- ◆ **Acaulescent (without a stem)**, taprooted from few-branched root-crowns
- ◆ Basal leaves 5–30 cm long x 0.5–6 cm wide, short pubescent along margins, otherwise glabrous
- ◆ Flowers erect in bud, floral tubes slender, 3–13 cm long; calyx 1–2 cm long, often turned to one side

- ◆ Petals 4, (1) 1.5–2.5 (3) cm long, slightly or not notched, **bright yellow, turning bronze in age**
- ◆ Capsule erect, 2–3 cm long, glabrous, few scattered hairs, winged

**Similar Species:** *O. howardii* has much longer petals and sepals and the leaves are pubescent throughout.

**Habitat and Ecology:** Found in moist places, meadows, and sagebrush.

**Comments:** Provides a nectar source for moths and hawkmoths. Members of the Onagraceae are distinct with flower parts in 4s and inferior ovaries.

## *Plantago eriopoda* Torr. Redwool plantain

Plantaginaceae

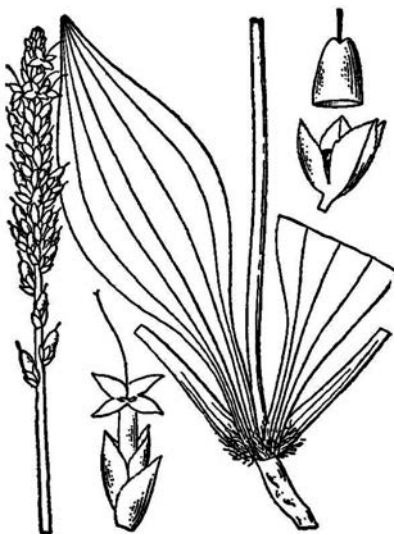


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 5,000 ft. - 9,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** PLER

### Key Characteristics:

- ◆ Stems up to 4.5 dm tall, **conspicuously and densely reddish-brown woolly at crown**; taproots stout, short
- ◆ Leaves 8–25 cm long x 1–5.5 cm wide, brittle, somewhat fleshy, tapering to an ill-defined petiole

**Similar Species:** *P. tweedyi* is very similar, but it is not woolly at the crown and the spikes are shorter (2–7 cm long).

**Habitat and Ecology:** Grows in moist, usually alkaline meadows.

**Comments:** Even though the flowers are wind pollinated, plantains do attract caterpillars that feed on the leaves. The seeds are eaten by various sparrows as well as rabbits.

***Polemonium occidentale* Greene ssp. *occidentale***  
Western polemonium

Polemoniaceae



Steve Olson



Steve Olson



Denise Culliver Colorado Natural Heritage Program

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5?T5?  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 6,300 ft. - 11,500 ft.  
**Synonyms:** *Polemonium caeruleum* L. ssp. *amygdalium* (Wherry) Munz  
**USDA PLANTS Symbol:** P00CO

**Key Characteristics:**

- ◆ Stems 4–10 dm tall, decumbent basally, otherwise erect; herbage glandular-villous, skunky-smelling
- ◆ Leaves 3–25 cm long, lower leaves long-petiolate with 9–27 leaflets, glabrous, lanceolate

**Similar Species:** *P. foliosissimum* stems are numerous and clustered, the leaflets are pubescent, the inflorescence is more compact, flat-topped and seeds are mucilaginous when wet.

**Habitat and Ecology:** Locally common along streams, in fens, moist meadows and forests.

**Comments:** The foliage of *P. occidentale* ssp. *occidentale*, when crushed, gives off a pronounced skunk-like odor.

- ◆ **Inflorescence an open branched cyme, longer than broad, skunky smell**
- ◆ Flowers campanulate (bell-shaped) not funnel-shaped, light blue to purple; sepals herbaceous
- ◆ Seeds not mucilaginous when wet

# *Polygonum bistortoides* Pursh

American bistort

Polygonaceae



Al Schneider Southwestern Colorado Wildflowers



Mark S. Brunnell CalPhotos



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 7,000 ft. - 14,000 ft.

**Synonyms:** *Bistorta bistortoides* (Pursh) Small

**USDA PLANTS Symbol:** POBI6

## Key Characteristics:

- ◆ Stems 1–3, (1) 2–7 (7.5) dm tall; rhizomes contorted
- ◆ Leaves alternate, 5–22 cm x 0.8–4.8 cm; leaf sheaths (ocrea) brown, 9–25 (32) mm long, glabrous
- ◆ **Inflorescence short cylindrical to ovoid, spike-like, 8–25 mm wide; bulblets absent**
- ◆ Flowers 1–2 per fascicle; perianth white or pale pink; tepals oblong, 4–5 mm, stamens exerted
- ◆ Achenes yellowish-brown or olive-brown, 3.2–4.2 mm long x 1.3–2 mm wide, shiny, smooth

**Similar Species:** *P. viviparum* is shorter, 0.8–3 dm tall, and the inflorescence is narrower with pink to brown bulblets in place of lower flowers.

**Habitat and Ecology:** Common along streams, in moist meadows, marshes, aspen forests and in alpine tundra.

**Comments:** *P. bistortoides* was an important food plant used by Native Peoples. The roots are either edible raw or roasted. The seeds can be dried and ground into flour or eaten raw.



***Polygonum lapathifolium* L.**  
Curlytop knotweed

Polygonaceae



Ernie Marx Eastern Colorado Wildflowers



Ernie Marx Eastern Colorado Wildflowers

Yevonn Wilson-Ramsey Flora of North America



**Wetland Status** WMVC  
**Native Status:** Native **Non-native**  
**Conservation Status:** G5  
**C-Value:** Not Assigned  
**Duration:** Annual  
**Elevation:** 3,500 ft. - 10,170 ft.  
**Synonyms:** *Persicaria lapathifolia* (L.) Gray  
**USDA PLANTS Symbol:** POLA4

**Key Characteristics:**

- ◆ Emergent, stems (0.5) 1–10 dm tall, scarcely ribbed, usually glabrous; rhizomes or stolons absent
- ◆ Leaf sheaths (ocrea) brown, 4–24 mm, bases inflated; blades usually lacking dark blotch on upper side
- ◆ Inflorescence a raceme, densely clustered, **nodding**; peduncles with granular yellow glands
- ◆ **Perianth segments greenish-white or pink, 4, outer with midvein divided at top giving an anchor-shaped appearance**
- ◆ Achenes brown to black, disk-shaped, shiny or dull, smooth

**Similar Species:** *P. pennsylvanicum* (= *P. bicornis*) has 5 perianth segments, the racemes are erect, rarely drooping, and flowers are pink or rose-colored.

**Habitat and Ecology:** Common in shallow water, margins of lakes and ponds and irrigation ditches. Though native to other regions of North America, Colorado and Wyoming consider *P. lapathifolia* as an adventive species.

**Comments:** Knotweeds and smartweeds, in general, provide seeds for waterfowl, upland game birds, marsh and song birds, deer and muskrat. The leaves provide habitat for fish and aquatic invertebrates.

# *Polygonum viviparum* L.

Alpine bistort

Polygonaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

## Key Characteristics:

- ◆ Stems (2) 8–30 (45) cm tall, rhizomes sometimes contorted
- ◆ Leaf sheaths (ocreas) brown, cylindric, 4–20 mm; petioles attached to sheaths, 6–20 mm long

**Similar Species:** *P. bistortoides* has a short, cylindric inflorescence that is wider and no bulblets are present.

**Habitat and Ecology:** Common in moist meadows, along streams and in alpine tundra.

**Comments:** The bulblets, small bulbs, usually in the leaf axils, are edible with a nutty flavor.



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 7,200 ft. - 14,000 ft.

**Synonyms:** *Bistorta vivipara* (L.) Gray

**USDA PLANTS Symbol:** POVI3

- ◆ **Inflorescence a narrowly elongate, cylindric, spike, 4–10 mm wide, red bulblets present**
- ◆ Tepals oblong, 5, pink, outer larger than inner; anthers reddish
- ◆ Achenes rare, when present, dark brown and dull

## *Rumex aquaticus* L. var. *fenestratus* (Greene) Dorn

Western dock

Polygonaceae

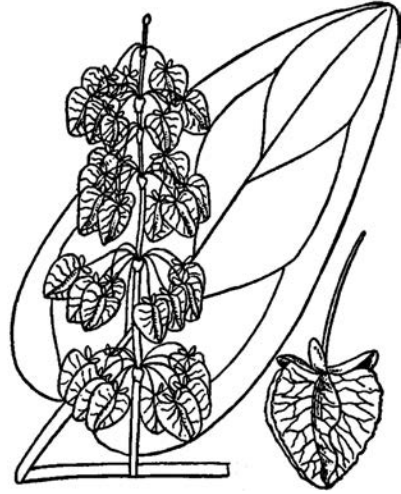


Neal Kramer CalPhotos



Neal Kramer CalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 4,500 ft. - 11,600 ft.

**Synonyms:** *Rumex aquaticus* L. ssp. *occidentalis* (S. Watson) Hultén, *Rumex occidentalis* S. Watson

**USDA PLANTS Symbol:** RUAQF

### Key Characteristics:

- ◆ Stems 5–14 dm tall, erect, glabrous, lacking axillary shoots, **often solitary**; vertical taproots
- ◆ Leaves 10–35 cm x 5–12 cm, **bases truncate or rounded, margins entire, undulate**, apices acute, **usually without basal rosette**
- ◆ Inflorescences terminal, narrowly paniculate; pedicels 5–13 (17) mm; flowers 12–25 in whorls
- ◆ **Inner tepals (valves) broadly ovate-triangular, 5–10 (12) mm x 5–8 (11) mm, no tubercles on valves**
- ◆ Achenes reddish-brown, 3–4.5 (4.8) mm long x 1.5–2.5 mm wide

**Similar Species:** *R. densiflorus* has creeping rhizomes and inner tepals or valves that are 4–7 mm long x 4–7 mm wide. *R. crispus* is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

**Habitat and Ecology:** Found in moist, meadows, along pond margins and in swampy areas.

**Comments:** Achenes are eaten by waterfowl and small mammals.

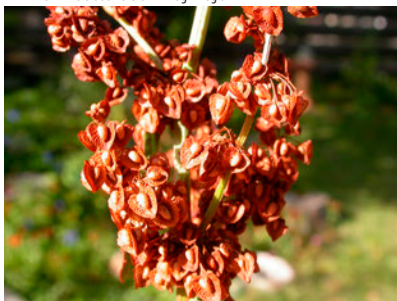
# *Rumex crispus* L.

Curly dock

Polygonaceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

**Wetland Status WMVC:** FAC  
**Native Status:** **Non-native**  
**Conservation Status:** GNR  
**C-Value:** 0  
**Duration:** Perennial  
**Elevation:** 3,500 ft. - 9,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RUCR

## Key Characteristics:

- ◆ Stems erect, 4–10 (15) dm tall, glabrous; roots vertical, spindle-shaped
- ◆ Leaf blades **strongly undulate, margins crisped**, 15-30 (35) cm long x 2-6 cm wide, petioles distinct, 3-15 cm long
- ◆ Inflorescence is terminal, half the length of stem, narrow to broadly panicate; pedicels 4-8 mm long, swollen at point of attachment
- ◆ Tepals 10–25 in whorls; inner tepals orbiculate-ovate or ovate-deltoid, 3.5–6 x 3–5 mm, **tubercle present**, base truncate or subcordate, margins entire or subentire to very weakly erose, flat, apices, with a tubercle (swelling)
- ◆ **Achenes usually reddish-brown, 2–3 mm long x 1.5–2 mm wide, enclosed in papery, winged structures, not spiny**

**Similar Species:** Leaves are broader and the winged structure around the achenes has 1 to 3 spines.

**Habitat and Ecology:** Found in disturbed places, fields, meadows, roadsides, and ditches.

**Comments:** Curly dock is the most widespread and ecologically successful species of the genus, occurring almost worldwide. Plants can contain high levels of oxalic acid, which is what give the leaves of this genus an acid-lemon flavor. Consumption of large amounts will cause mineral deficiencies due to the presence of oxalic acid.

***Rumex densiflorus* Osterh.**  
Denseflowered dock

Polygonaceae



Ernie Marx Eastern Colorado Wildflowers



Ernie Marx Eastern Colorado Wildflowers



Ernie Marx Eastern Colorado Wildflowers

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4?

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 6,200 ft. - 11,880 ft.

**Synonyms:** *Rumex pycnanthus* Rech. f.

**USDA PLANTS Symbol:** RUDE2

**Key Characteristics:**

- ◆ Stems 5–10 dm tall, erect, branched above middle (only in inflorescence), glabrous; rhizomes creeping
- ◆ Leaves 30–40 (50) cm x 10–12 cm, longer than wide, large lateral veins alternating with short veins
- ◆ Inflorescences terminal, usually dense, narrowly paniculate
- ◆ Inner tepals (valves) ovate-triangular or subcordate, 5–6 mm x 4.5–6 mm, widest at middle
- ◆ Achenes deep brown to reddish-brown, 2.5–4 (4.5) mm long

**Similar Species:** *Rumex aquaticus* var. *fenestratus* (= *R. occidentalis*) grows in a solitary manner, the inner tepals (valves) are larger, 5–10 mm long x 5–8 mm wide. *R. crispus* is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

**Habitat and Ecology:** Found in moist meadows and along streams.

**Comments:** Achenes are eaten by waterfowl and small mammals.

# *Rumex maritimus* L.

Golden dock

Polygonaceae



Doreen L. Smith CalPhotos



Doreen L. Smith CalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Annual, Biennial

**Elevation:** 3,920 ft. - 9,000 ft.

**Synonyms:** *Rumex maritimus* L. ssp. *fueginus* (Phil.) Hultén, *Rumex fueginus* Phil.

**USDA PLANTS Symbol:** RUMA4

## Key Characteristics:

- ◆ Stems (4) 5–60 (70) cm, erect, **spreading, branched almost to bases**, bumpy-pubescent
- ◆ Leaf blades lanceolate or lanceolate-linear, rarely oblong-lanceolate, 5–25 (30) cm x 1.5–3 (4) cm
- ◆ **Inflorescences are conspicuously leafy; flowers in dense golden or reddish-brown clusters**

**Similar Species:** *R. crispus* is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

**Habitat and Ecology:** Found along shores of lakes and marshes.

**Comments:** Achenes are eaten by waterfowl and small mammals.

***Rumex salicifolius* Weinm. var. *mexicanus* (Meisn.) Hitchc.**  
Mexican dock

Polygonaceae



Barry Breckling CalPhotos



Barry Breckling CalPhotos

**Key Characteristics:**

- ◆ Stems (3) 4–10 dm tall, producing axillary shoots; roots creeping
- ◆ Leaves linear-lanceolate to lanceolate, flat or indistinctly crisped margins
- ◆ Inflorescences terminal and axillary, dense or interrupted; flowers 10–25 in whorls

**Similar Species:** *R. altissimus* inner tepals are 4–6 mm long, the leaves are lanceolate to ovate-lanceolate and the achenes are larger, 2.5–3.5 mm long. *R. salicifolius* var. *denticulatus* is very similar but there are no tubercles on the valves. *R. crispus* is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

**Habitat and Ecology:** Common along streams, roadsides and in wet meadows.

**Comments:** FNA (2005) states that *Rumex salicifolius* ssp. *triangulivalvis* and *R. mexicanus* have been commonly applied to *R. salicifolius* var. *mexicanus*. Ackerfield (2015) and Weber and Wittmann (2012) recognize *R. triangulivalvis* as the accepted name.

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 4,500 ft. - 11,500 ft.

**Synonyms:** *Rumex mexicanus* Meisn., *Rumex salicifolius* Weinm. ssp. *triangulivalvis* Danser, *Rumex triangulivalvis* (Danser) Rech. f.

**USDA PLANTS Symbol:** RUSAM

- ◆ Inner tepals (valves) broadly triangular, 2.5–3.5 mm long x 2.5–3 mm wide, 3 tubercles per valve
- ◆ Achenes brown or dark reddish-brown, 1.7–2.2 mm long x 1–1.5 mm wide

***Rumex salicifolius* Weinm. var. *denticulatus* Torr.**  
Utah willow dock

Polygonaceae



Steve Matson CalPhotos

Keri Morse CalPhotos



Steve Matson CalPhotos

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T3T5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 3,610 ft. - 13,200 ft.

**Synonyms:** *Rumex californicus* Rech. f., *Rumex utahensis* Rech. f.

**USDA PLANTS Symbol:** RUSAD

**Key Characteristics:**

- ◆ Stems 1.5–4 (6) dm tall, erect, glabrous
- ◆ Leaves linear-lanceolate, 6–15 long x 2–3 cm wide, margins flat, basal leaves absent
- ◆ Inflorescence a panicle, terminal and axillary, flowers 10–20 in whorls
- ◆ Inner tepals (valve) deltoid or broadly ovate-deltoid, 2.5–3 mm x 2.5–3 mm, tubercles absent
- ◆ Achenes dark reddish-brown or almost black, 1.8–2 mm long x 1–1.3 mm wide

**Similar Species:** *R. crispus* is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

**Habitat and Ecology:** Found in meadows, along roadsides and streams.

**Comments:** Taxonomic research on *Rumex salicifolius* var. *denticulatus* is on-going. FNA (2005) states that *R. mexicanus* and *R. salicifolius*, in the broad sense, have often been applied to *R. utahensis*. Ackerfield (2015) and Weber and Wittmann (2012) recognize *R. utahensis* as the accepted name.



***Claytonia lanceolata* Pall. ex Pursh**  
Lanceleaf springbeauty

Portulacaceae (Montiaceae)



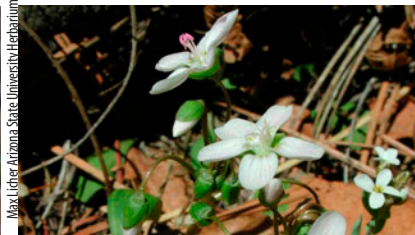
Keir Morse CalPhotos



© Gary A. Monroe



Janis Lindsey Huggins



Max Licher, Arizona State University Herbarium

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 7,000 ft. - 12,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CLLA2

**Key Characteristics:**

- ◆ Stems 1–10 cm tall; tubers globose, 5–20 mm across
- ◆ Leaves cauline, sessile, opposite, 1–6 cm long x 0.5–2 cm wide
- ◆ Inflorescences 1-bracteate, rarely with 2 bracts
- ◆ Flowers 8–14 mm across; sepals 2, 4–6 mm; petals 5, white to pink, 5–20 mm, with dark stripes
- ◆ Seeds 2–2.5 mm across, shiny, smooth

**Similar Species:** *C. rosea* also has linear cauline leaves but grows in drier habitats, usually ponderosa pine forests.

**Habitat and Ecology:** Common in melting snowbanks, subalpine meadows, moist meadows and montane forests.

**Comments:** The Portulacaceae is distinct with 2 sepals and succulent stems. The common name of spring beauty is very appropriate for this plant, for it is usually one of the first wildflowers to bloom in the spring. The tuber is edible and eaten by bears and small mammals. Deer and elk browse the leaves and flowers.

# *Montia chamissoi* (Ledeb. ex Spreng.) Greene

Water minerslettuce

Portulacaceae (Montiaceae)

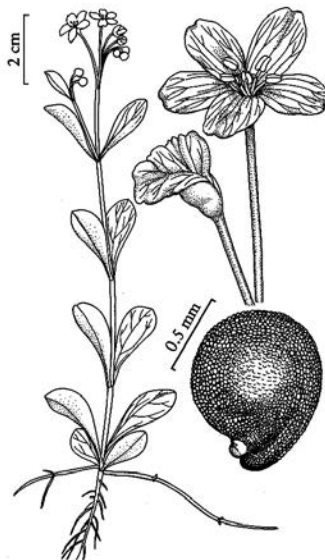


Steve Matson CalPhotos



Keir Morse CalPhotos

Barbara Alongi Flora of North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 6,000 ft. - 12,000 ft.

**Synonyms:** *Crunocallis chamissoi* (Ledeb. ex Spreng.) Rydb.

**USDA PLANTS Symbol:** MOCH

## Key Characteristics:

- ◆ Aerial stems 2–32 cm long, subterranean stems 1–15 cm; rhizomatous or stoloniferous
- ◆ Leaves cauline, 3 or more pairs, opposite; blades oblanceolate to rhombic, 2–60 mm x 1–20 mm
- ◆ Inflorescence an axillary or terminal raceme; flowers 2–10, often replaced by bulbils
- ◆ Sepals 2, 2–4 mm long; petals 5, white or pink, 2–4 mm; stamens 5, anthers pink or lavender
- ◆ Seeds 1–1.5 mm with small swellings

**Similar Species:** *Claytonia* spp. look very similar and grow in similar habitats. *Claytonia* has only basal leaves or 1–2 cauline leaves. *Montia chamissoi* has multiple pairs of cauline leaves and slender stolons at the bases.

**Habitat and Ecology:** Common along streams, at the edges of lakes, often in shade or in shallow water left from spring runoff.

**Comments:** The Portulacaceae is distinct with 2 sepals and succulent stems. Leaves are edible and are browsed by deer and elk as well as small mammals.

***Dodecatheon pulchellum* (Raf.) Merr.**  
Darkthroat shootingstar

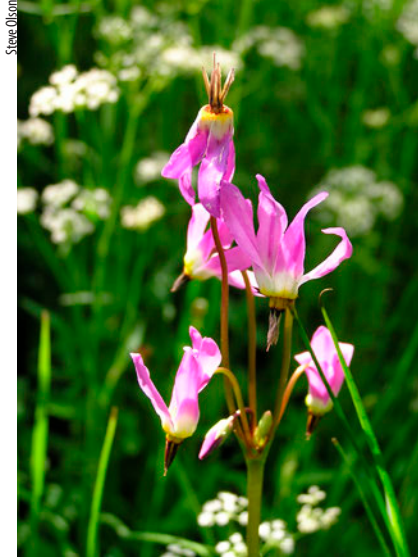
Primulaceae



Steve Olson



Slichter 2009  
Paul Slichter Flora and Fauna Northwest



Steve Olson

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 5,580 ft. - 12,080 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** DOPU

**Key Characteristics:**

- ◆ Stems (2) 10–45 (60) cm tall, glabrous, sometimes glandular-pubescent
- ◆ Leaves (3) 4–17 (25) cm x 0.5–2.5 (4.5) cm; petioles winged; blades oblanceolate to spatulate
- ◆ Inflorescences nodding, 2- to 15-flowered; bracts lanceolate; pedicels 1–5 cm, glabrous

**Similar Species:** *D. pulchellum* var. *zionense* inflorescence is minutely glandular and the leaves are longer, (8) 10–48 cm x 1.5–8.5 cm. It is only known from hanging gardens in Moffat County.

**Habitat and Ecology:** Common in wet meadows, hanging gardens, along streams and aspen or spruce forests.

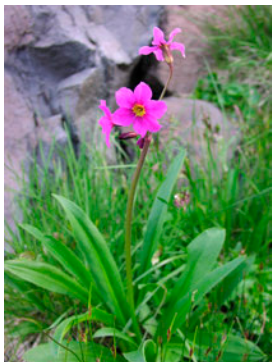
**Comments:** Key characters to look for in the Primulaceae are floral parts in fives and stamens are aligned opposite the petals. Identification is difficult once the distinctive inflorescence is gone. *D. pulchellum* has been called the American cyclamen, which is also in the Primulaceae.

- ◆ **Calyx purple-flecked, 4–8 mm, reflexed, tubes 1.5–4 mm, lobes 5, 1–6 mm; corolla tubes maroon**
- ◆ Capsules tan to light brown, often reddish-brown apically, sometimes speckled with red or maroon

# *Primula parryi* A. Gray

Parry's primrose

Primulaceae

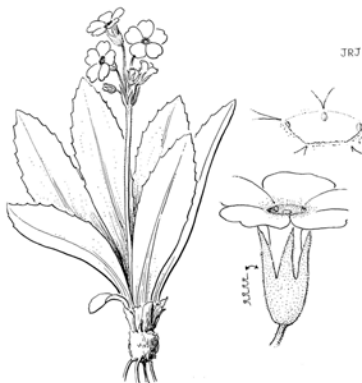


Karin Freeman Colorado Natural Heritage Program



Steve Olson

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G4G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 9,200 ft. - 14,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** PRPA

## Key Characteristics:

- ◆ Stems 15–50 cm tall; rhizomes short, stout, rosettes often clumped
- ◆ **Leaves rankly aromatic;** blades 1–33 (40) cm x 1.5–7 cm, thick, glabrous; petioles broadly winged
- ◆ Inflorescence 5- to 25-flowered; pedicels curved, thick, 10–50 mm long

**Similar Species:** *P. parryi* is the largest and showiest of the Colorado's primroses. It is also one of the 'stinkiest' with herbage that has a very strong skunky odor.

**Habitat and Ecology:** Common along streams, in moist meadows and alpine tundra.

**Comments:** Key characters to look for in the Primulaceae are floral parts in fives and stamens are aligned opposite the petals. The strong, noxious odor attracts flies as pollinators.

- ◆ **Corolla magenta,** tubes 5–20 mm, **glands prominent; calyx yellow, glandular**
- ◆ Capsules ellipsoid to cylindrical; seeds without flanged edges, reticulate

# *Glaux maritima* L.

Sea milkwort

Primulaceae (Myrsinaceae)



Steve Matson CalPhotos



Denise Culver Colorado Natural Heritage Program

Jeanne R. Janish Vascular Plants of the Pacific Northwest



capsule

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 4,900 ft. - 9,900 ft.

**Synonyms:** *Glaux maritima* L. var. *angustifolia* B.

Boivin, *Lysimachia maritima* (L.) Galasso

**USDA PLANTS Symbol:** GLMA

## Key Characteristics:

- ◆ Stems 3–25 (30) cm tall, **succulent**, glabrous, glaucous; rhizomes short or fibrous
- ◆ **Leaves opposite below, alternate above, 3–20 (25) mm long, oval, jointed to the stem**

- ◆ Flowers solitary, sessile in leaf axils
- ◆ Calyx cup-shaped, 3–5 mm long, petaloid, white-pinkish; petals absent; stamens 5
- ◆ Capsules 2–3 mm long, subglobose, few-seeded

**Similar Species:** None.

**Habitat and Ecology:** Found in moist meadows, along streams, mudflats, playa edges, often on alkaline soils.

**Comments:** Weber and Wittmann (2012) place *G. maritima* in Primulaceae. Ackerfeld (2015) places it in Myrsinaceae as *Glaux maritima*. FNA (2009) places it in Myrsinaceae but recognizes *Lysimachia maritima* as the accepted name.

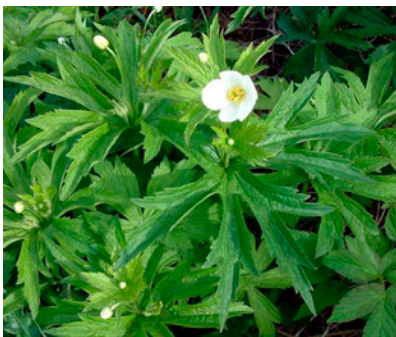
# *Anemone canadensis* L.

Canadian anemone

Ranunculaceae

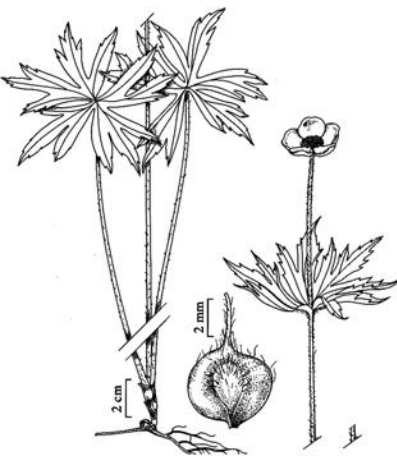


Louis M. Landry CalPhotos



Louis M. Landry CalPhotos

Yvonn Wilson-Ramsey Flora of North America



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 5,000 ft. - 9,600 ft.

**Synonyms:** *Anemodium canadense* (L.) Å. Löve & D. Löve

**USDA PLANTS Symbol:** ANCA8

## Key Characteristics:

- ◆ Stems (15) 20–80 cm tall, slender, hairs ascending; rhizomes ascending to horizontal
- ◆ Leaves basal 1–5, simple, deeply divided, single whorl of leaves on stem below inflorescence
- ◆ Inflorescence 1 (3)-flowered; peduncles puberulous to villous; involucre bracts 3
- ◆ Sepals (4) 5 (6), white, obovate, (8)10–20 (25) mm long x 5–15 mm wide; stamens 80–100
- ◆ Achene bodies obovoid to ellipsoid, 3–6 mm x 3.5–6 mm, winged, pubescent; styles 2–6 mm long

**Similar Species:** *A. narcissiflora* has thicker stems and petioles with spreading hairs, 2–4 large flowers that are arranged in an umbel, the achenes are glabrous and the styles are short, 0.8–1.5 mm. *A. parviflora* has ternately compound basal leaves, with each leaflet shallowly lobed and the stems with a single flower. It is uncommon, found in wet alpine meadows.

**Habitat and Ecology:** Common in meadows and along streams in mountains to the foothills.

**Comments:** *Anemone* spp. contain an oil glycoside, ranunculin, that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth, causing excessive salivation and intestinal irritation.

*Myosurus minimus* L.  
Tiny mousetail

Ranunculaceae



Carol Witham CalPhotos



Andrew Borchert CalPhotos

**Key Characteristics:**

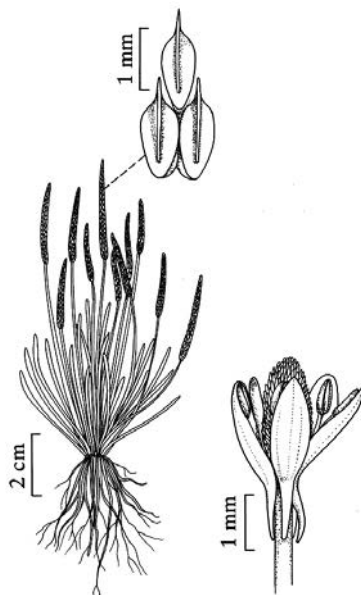
- ◆ Stems 4–16.5 cm tall
- ◆ Leaf blades narrowly oblanceolate or linear, 2.2–11.5 cm long
- ◆ **Receptacle greatly elongated in fruit**

**Similar Species:** *M. apetalus* achene beaks are divergent, not parallel and spreading from the outer face of achene.

**Habitat and Ecology:** Found in alkaline meadows, along the margins of ponds, drying puddles, in wet meadows and near springs.

**Comments:** Used by Native Americans as a medicine and for ceremonies.

Yevonn Wilson-Ramsey Flora of North America



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Annual  
**Elevation:** 4,250 ft. - 9,300 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** MYM12

- ◆ Sepals faintly or distinctly 3–5-veined, margins scarious; petal claws 1–2 times as long as blades
- ◆ Achene outer faces narrowly rhombic to elliptic or oblong, 0.05–0.4 mm; **beaks parallel and flat**

# *Ranunculus acriformis* A. Gray

Sharpleaf buttercup

Ranunculaceae

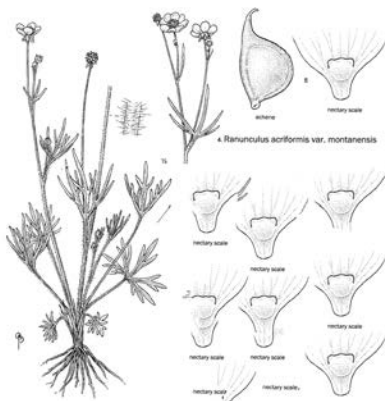


Marilyn Phillips



Colorado State University Herbarium

Bobbi Ancelet Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Perennial

**Elevation:** 7,500 ft. - 9,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** RAAC2

## Key Characteristics:

- ◆ Stems erect to 2 dm tall with short, straight hairs; ; not rooting nodally, bases not bulbous
- ◆ Basal leaf blades broadly ovate, **deeply 3-divided or 3-foliolate**, 2.2–6 cm long x 2.5–7.7 cm wide
- ◆ Ultimate leaf segments linear, margins entire, apices acute or rounded-acute
- ◆ Receptacles glabrous; sepals spreading, 4–6 mm x 2–4 mm; **petals 5, yellow**, 7–13 mm x 4–10 mm
- ◆ **Achenes glabrous, strongly flattened; beaks 1–1.2 mm, abruptly recurved**

**Similar Species:** *R. acris* achene beaks are shorter (0.2–1 mm long), straight, not strongly curved, and the ultimate leaf segments are lanceolate with toothed margins.

**Habitat and Ecology:** Found in moist meadows and along streams.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.



***Ranunculus adoneus* A. Gray**  
Alpine buttercup

Ranunculaceae



Steve Olson



Steve Olson



Steve Olson

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 10,000 ft. - 14,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RAAD

**Key Characteristics:**

- ◆ Stems 9–25 cm tall, glabrous; roots slender
- ◆ Leaves 3-parted, each division again deeply dissected, ultimate leaf segments filiform to 2 mm wide
- ◆ Flowers very showy; petals 5–10, 8–15 mm long, yellow
- ◆ Heads of achenes ovoid, 6–12 mm long x 5–9 mm wide
- ◆ Achenes 1.8–2.4 mm x 1–1.4 mm, glabrous; beaks subulate, straight, 1.2–1.7 mm long

**Similar Species:** *Ranunculus macauleyi* lower surface of sepals are densely pubescent with brown hairs.

**Habitat and Ecology:** Common in alpine tundra, usually along margins of melting snowbanks.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.

***Ranunculus alismifolius* Geyer ex Benth. var. *montanus* S. Watson**  
Waterplantain buttercup Ranunculaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T3T5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 8,500 ft. - 13,170 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RAALM

**Key Characteristics:**

- ◆ Stems 0.5–4.5 dm tall, glabrous, erect or ascending; not rooting by nodes
- ◆ Leaves entire, lanceolate to elliptic; 5.8–14.1 cm x 1.2–2.9 cm, bases acuminate, margins serrulate
- ◆ Receptacles glabrous; sepals 5, spreading or reflexed, 2–6 mm x 1–4 mm; petals 4–6, 7–11 mm x 4–8 mm
- ◆ Heads of achenes hemispheric to globose, 3–7 mm long x 4–8 mm wide, glabrous
- ◆ Achenes glabrous, beaks lance to subulate, 0.4–1.2 mm long

**Similar Species:** *R. flammula* also has entire leaves, but is stoloniferous.

**Habitat and Ecology:** Common in subalpine to alpine wet meadows, fens, shallow water of streams and ponds and along margins of melting snowbanks. The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.

# *Ranunculus cymbalaria* Pursh

Alkali buttercup

Ranunculaceae



Steve Matson CalPhotos



Steve Matson CalPhotos

Yevonn Wilson-Ramsey Flora of North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 3,600 ft. - 10,000 ft.

**Synonyms:** *Halerpestes cymbalaria* (Pursh) Greene

*ssp. saximontana* (Fernald) Moldenke

**USDA PLANTS Symbol:** RACY

## Key Characteristics:

- ◆ Stems 0.2–3 dm tall, erect; stolons prostrate, rooting nodally, glabrous
- ◆ **Basal leaves simple, undivided, ovate to cordate with crenate margins, 0.7–3.8 cm x 0.8–3.2 cm**

- ◆ Receptacles hispid-glabrous; sepals spreading, 2.5–6 mm x 1.5–3 mm; **petals 5, yellow, 2–7 mm long**
- ◆ Heads of achenes long-ovoid or cylindrical, 6–12 mm long x 4–5 (9) mm wide, ribbed
- ◆ **Achene beaks persistent, conic, straight, 0.1–0.2 mm long**

**Similar Species:** *R. flammula* is also stoloniferous and rooting at nodes, but the leaves are linear, 1–8 mm wide, not oblong or rounded, and the sepals are 2–5 mm long.

**Habitat and Ecology:** Common along margins of streams, ponds and lakes, in seepage or swampy areas and in moist meadows. The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.

# *Ranunculus eschscholtzii* Schtdl.

Eschscholtz's buttercup

Ranunculaceae

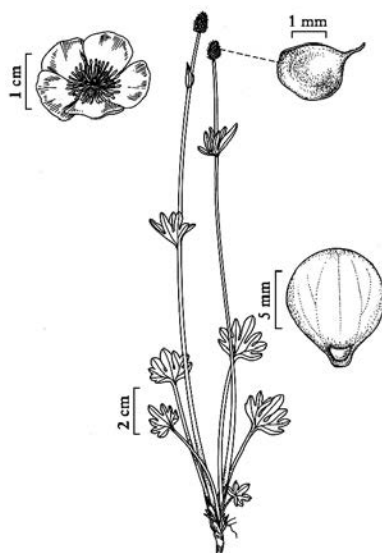


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Yevonn Wilson-Ramsey Flora of North America



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 8,000 ft. - 13,280 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** RAES

## Key Characteristics:

- ◆ Stems 4–27 cm tall, glabrous, each with 1–3 flowers, erect or decumbent
- ◆ Basal leaves 3-parted, 0.5–4.1 cm x 0.8–3.7 cm, segments again lobed, apices of segments rounded
- ◆ Flowers solitary (3), receptacles glabrous or sparsely pilose; sepals 4–8 mm x 2–6 mm, glabrous or pilose underneath
- ◆ Petals 5, 6–16 mm x 4–16 mm; nectary scales glabrous; pedicels glabrous
- ◆ Heads of achenes cylindrical or ovoid; achenes 1.4–2 mm x 1–1.6 mm; beaks lanceolate, 0.6–1.8 mm

**Similar Species:** *R. pedatifus* var. *affinis* has pilose pedicels and 2–7 flowers per stem.

**Habitat and Ecology:** Found along streams, in moist subalpine forests, alpine tundra, or often along the margins of melting snowbanks. The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.

# *Ranunculus inamoenus* Greene

Graceful buttercup

Ranunculaceae



© Al Schneider  
Al Schneider Southwestern Colorado Wildflowers



© Al Schneider  
Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 12,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RAIN

## Key Characteristics:

- ◆ Stems erect, 5–45 cm, pilose or glabrous, each with 3–7 flowers
- ◆ **Basal leaf blades reniform to orbiculate, crenate or 3-lobed;** 1–5.5 cm long x 1.1–4.5 cm wide, apices with large teeth; cauline leaves 3-5 cleft into linear, entire segments

**Similar Species:** *R. cardiophyllus* has basal leaves that are cordate to broadly obtuse, usually densely hairy, the petals are 6–15 mm long, the sepals are 5–8 mm long and the stems are covered with long, spreading hairs.

**Habitat and Ecology:** Common in meadows, spruce-fir forests, along streams and occasionally in alpine tundra. The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.

- ◆ **Receptacles pilose or glabrous; sepals 3–5 mm x 2–3 mm, pilose underneath,** hairs colorless
- ◆ Petals 5, 4–9 mm long x 2–5 mm wide; nectary scale glabrous
- ◆ Heads of achenes cylindrical; achenes 1.5–2 mm x 1.3–1.8 mm; beaks subulate, 0.4–0.9 mm long

# *Ranunculus macauleyi* A. Gray

Rocky Mountain buttercup

Ranunculaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Yevonn Wilson-Ramsey Flora of North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4  
**C-Value:** 10  
**Duration:** Perennial  
**Elevation:** 10,500 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RAMA

## Key Characteristics:

- ◆ Stems erect from short caudices, 6–15 cm tall, glabrous or sometimes pilose, each with 1–2 flowers
- ◆ Basal leaves narrowly elliptic, undivided, 1.5–4.5 cm x 0.5–1.1 cm, 3-toothed apices
- ◆ Receptacles glabrous; sepals 6–12 mm x 2.5–8 mm, densely pubescent with brown hairs
- ◆ Petals 5 (8), yellow, 10–19 mm long x 6–17 mm wide; nectary scales glabrous
- ◆ Heads of achenes ovoid or cylindrical; achenes 1.5–1.7 mm x 1.2–1.3 mm, glabrous; beaks 0.5–1.5 mm

**Similar Species:** *R. adoneus* is found in similar subalpine and alpine habitats. The basal leaves are distinctly 3-parted, with each division again deeply dissected with the ultimate leaf segments narrowly linear.

**Habitat and Ecology:** Found in alpine tundra, often along edges of melting snowbanks. It is only known from Colorado and New Mexico (SNR). The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** The global range for *R. macauleyi* extends from southwestern Colorado to northern New Mexico.

***Ranunculus macounii* Britton**  
Macoun's buttercup

Ranunculaceae



Trent M. Draper GalPhotos



Trent M. Draper GalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 9,600 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RAMA2

**Key Characteristics:**

- ◆ Stems prostrate to erect, hirsute or glabrous, sometimes emergent in shallow water; rooting at nodes
- ◆ **Basal leaf blades cordate-reniform, 3-foliolate,** 3.7–7.5 cm long x 4.5–9.5 cm wide, leaflets 3-lobed or 3-parted
- ◆ Ultimate leaf segments elliptic, margins toothed or lobulate, apices acute to broadly acute
- ◆ Receptacles hirsute; sepals spreading, 4–6 mm long x 1.5–3 mm wide; **petals 5, yellow,** 4–6 mm long x 3.5–5 mm wide
- ◆ **Heads of achenes globose; achenes 2.4–3 mm long x 2–2.4 mm wide, glabrous, narrow ribs; beaks 1–1.2 mm long**

**Similar Species:** *R. pennsylvanicus* has shorter petals 2–4 mm long and stems are erect, not rooting at nodes.

**Habitat and Ecology:** Common in moist meadows, riparian woods, along streams and often in disturbed areas.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.

# *Ranunculus pedatifidus* Sm. var. *affinis* (R. Br.) Benson

Surefoot or northern buttercup

Ranunculaceae



Robert Bieleesch GalPhotos



Robert Bieleesch GalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 7,240 ft. - 13,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** RAPEA

## Key Characteristics:

- ◆ Stems erect, 0.5–2 dm tall, pilose or glabrous, each with 1–7 flowers
- ◆ Basal leaves divided into several linear to narrowly oblanceolate lobes, 0.8–1.2 (3) cm long

- ◆ Receptacles hairy; sepals 4–6 mm x 3–5 mm, hairy; petals 5 yellow, 7–10 mm long x 5–9 mm wide
- ◆ Heads of achenes cylindrical; achenes 1.8–2.4 mm x 1.6–1.8 mm; beaks lanceolate, curved, 0.5–1 mm

**Similar Species:** *R. eschscholtzii* is found in similar habitats. The pedicels are glabrous, not hairy, and the flowers are usually solitary versus 1–7. *R. cardiophyllus* resembles *R. pedatifidus* especially if basal leaves are absent. The basal leaves on *R. cardiophyllus* are cordate and usually densely hairy.

**Habitat and Ecology:** Found in wet meadows, pond margins, scree slopes and alpine tundra.

**Comments:** Circumpolar.



# *Ranunculus pygmaeus* Wahlenb.

Pygmy buttercup

Ranunculaceae



Malcolm Manners The Flora of Svalbard



Michael Haferkamp The Flora of Svalbard

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 10,200 ft. - 13,630 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** RAPH

## Key Characteristics:

- ◆ **Stems 0.6–3.5 cm tall**, erect or ascending; caudices short, 0.6–3.5 cm, each with 1–2 flowers
- ◆ Leaves reniform, 3-parted, 0.5–0.9 cm long x 0.6–1.3 cm wide, lateral segments again lobed
- ◆ Leaf bases truncate or nearly cordate, margins entire, apices rounded to obtuse
- ◆ Receptacles glabrous; sepals 2–4 mm x 1.2–1.6 mm, hairy; petals 5, 1.2–3.5 mm x 1.1–2.8 mm
- ◆ Heads of achenes nearly globose to cylindrical; achenes 1–1.2 mm x 0.8–1.1 mm; **beaks subulate**

**Similar Species:** *R. macauleyi* also commonly occurs in the alpine but has simple leaves, not divided. *R. cardiophyllus* is a common alpine buttercup, distinguished by the densely hairy, cordate, basal leaves.

**Habitat and Ecology:** Found in wet meadows, pond margins, scree slopes and alpine tundra.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain an oil glycoside, ranunculin that is converted to protoanemonin by the action of plant enzymes released when the plant is chewed. The protoanemonin irritates the mouth causing excessive salivation and intestinal irritation.

## *Ranunculus sceleratus* L. var. *multifidus* Nutt

Cursed buttercup

Ranunculaceae



Trent M. Draper CalPhotos



Trent M. Draper CalPhotos



Trent M. Draper CalPhotos

**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5T5

**C-Value:** 1

**Duration:** Annual, Perennial

**Elevation:** 3,500 ft. - 9,300 ft.

**Synonyms:** *Hecatonia scelerata* (L.) Fourreau

**USDA PLANTS Symbol:** RASCM

### Key Characteristics:

- ◆ Emergent, grows in shallow water, **stems hollow, succulent, glabrous, rooting at bases, only rarely rooting at nodes**
- ◆ Leaves 1–5 cm long x 1.6–6.8 cm wide, deeply 3-parted with the main lobes again lobed, lobes rounded

- ◆ Sepals 3–5, reflexed from or near bases, 2–5 mm x 1–3 mm, glabrous or sparsely hirsute
- ◆ Petals 3–5, 2–5 mm long x 1–3 mm wide; nectary on petal surface poorly developed; styles absent
- ◆ **Achenes 1–1.2 mm long x 0.8–1 mm wide, smooth, glabrous; beaks 0.1 mm**

**Similar Species:** *R. sceleratus* var. *sceleratus*, a naturalized weed in North America, is a serious weed in the eastern United States and the Pacific Northwest, not yet known in Colorado. It differs from *R. sceleratus* var. *multifidus* with wrinkles on the achene faces and the leaf blades slightly lobed or parted, never deeply.

**Habitat and Ecology:** Found in shallow water of streams and ponds, on floodplains and in wet meadows. Weber and Wittmann (2012) consider it adventive. The Ranunculaceae, a primitive family, is one of the few plant families that is characterized by protogyny, where the female parts mature before the male flower parts as a strategy to avoid self-pollination.

**Comments:** All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock.

***Aconitum columbianum* Nutt.**  
Columbian monkshood

Ranunculaceae (Helleboraceae)

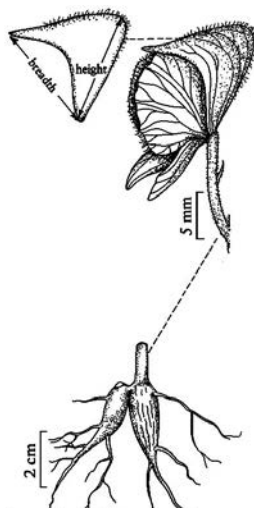


Denise Culver Colorado Natural Heritage Program



Steve Olson

Yevonn Wilson-Ramsey Flora of North America



*A. columbianum*  
subsp. *columbianum*

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,200 ft. - 12,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ACCO4

**Key Characteristics:**

- ◆ Stems erect, 2–30 dm tall, stout, twining, reclining; roots tuberous
- ◆ **Cauline leaves palmately lobed with 5 (7) segments**, 5–15 cm wide
- ◆ Inflorescence an open raceme or panicle, **flowers blue** (white), 18–50 mm from sepal tips to hoods
- ◆ Sepals 5, **pendent**, 6–16 mm, hoods conic, 11–34 mm from receptacles to top of hoods
- ◆ **Petals 2, hidden in hooded sepal, coiled spurs at apices**

**Similar Species:** *Delphinium* spp. occur with *A. columbianum* in wetlands. The flowers are also blue, but *Delphinium* spp. have 4 petals, not 2, and the upper sepals are not hood-like, but spurred at base.

**Habitat and Ecology:** Common in meadows and along streams in mountains.

**Comments:** All parts of monkshoods are toxic, with roots, seeds and new leaves especially toxic. Poison derived from the roots of *Aconitum* have been used to poison the tips of arrows by Native Americans.

***Caltha leptosepala* DC.**  
White marsh marigold

Ranunculaceae (Helleboraceae)



Karin Freeman Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

Yvonn Wilson-Ramsey Flora of North America



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 8,000 ft. - 13,500 ft.

**Synonyms:** *Psychrophila leptosepala* (De Candolle)

W. A. Weber

**USDA PLANTS Symbol:** CALE4

**Key Characteristics:**

- ◆ Stems leafless or with 1 leaf, erect from thick caudices
- ◆ **Leaves all basal;** blades pb;pmg. simple, unlobed, 1.5–11.5 (15) cm x 1–13 cm, margins entire-crenate
- ◆ Inflorescences 1- to 2-flowered; flowers 15–40 mm across
- ◆ **Sepals petaloid, petals absent, white,** drying brown, 1.5-9 x 2-5 cm; styles and stigmas 0.5–1.8 mm, straight or curved
- ◆ Fruits 4–15, spreading, short-stipitate or sessile, linear-oblong, 10–20 mm x 3–4.5 mm

**Similar Species:** *Trollius laxus* ssp. *albiflorus* also has solitary flowers. However, it has stem leaves, not just basal, arranged alternately and the blades are palmately lobed.

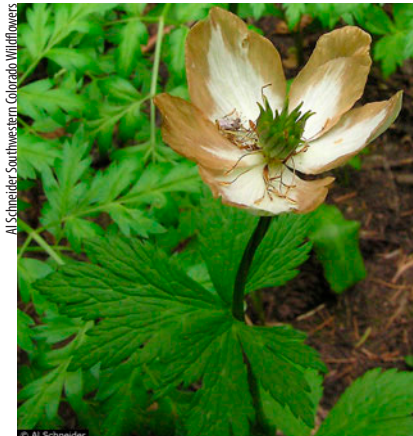
**Habitat and Ecology:** Common in moist meadows, along streams, in marshes and near seepages.

**Comments:** *C. leptosepala* contains poisonous glycosides that are present in raw plants.

***Trollius laxus* Salisb. ssp. *albiflorus* (Gray) Löve & Löve & Kapoor**  
 American globeflower Ranunculaceae (Helleboraceae)



Steve Olson



Al Schneider Southwestern Colorado Wildflowers

© Al Schneider



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G4T4  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,500 ft. - 13,690 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** TRLAA2

**Key Characteristics:**

- ◆ Stems 0.7–5.5 dm (to 8 dm in fruit), bases with few petioles persistent from previous year
- ◆ Basal leaves with petioles 4–25 cm; **alternate cauline leaves 1–3 (5), palmately lobed**
- ◆ Flowers solitary, 2.5–5 cm across
- ◆ Petaloid sepals 5–9, spreading, white, ovate to obovate or nearly orbiculate, 10–20 mm; petals 2–5 mm long
- ◆ Fruits usually 8–16 mm including beaks; beaks often somewhat recurved, sometimes straight

**Similar Species:** *Caltha leptosepala* frequently occurs with *T. laxus* ssp. *albiflorus* and has white, solitary flowers, but the leaves are entire and all basal.

**Habitat and Ecology:** Common. Found in wet meadows, along streams and in marshes.

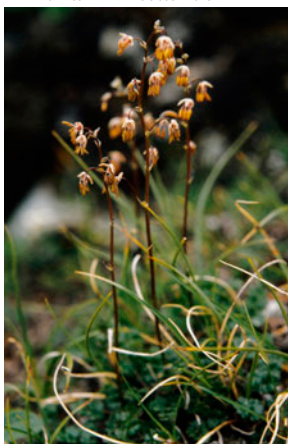
**Comments:** The mature sepals will become tinged brown to entirely brown.

***Thalictrum alpinum* L.**  
Alpine meadow-rue

Ranunculaceae (Thalictraceae)

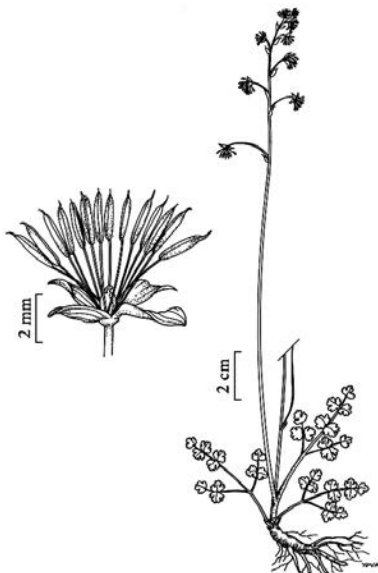


Al Schneider Southwestern Colorado Wildflowers



Biopix

Yevonn Wilson-Ramsey/Flora of North America



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 7,700 ft. - 14,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** THAL

**Key Characteristics:**

- ◆ Stems scapose or nearly scapose, 0.3–2 (3) dm, glabrous; rhizomes slender
- ◆ **Leaves mostly all basal or a single cauline leaf near bases**, 2–10 cm, twice pinnately compound
- ◆ Leaflets cuneate-obovate to orbiculate, apically 3–5 lobed, 2–10 mm, surfaces glabrous
- ◆ Pedicels recurved in fruit; sepals purplish tinged, 1–2.3 (2.7) mm
- ◆ Flowers perfect (with both stamens and a pistil); stamens 8–15; filaments purple; anthers bright yellow; achenes nearly sessile, 2–3.5 mm

**Similar Species:** Other meadow-rues are taller and flowers are imperfect (unisexual, with either stamens or a pistil).

**Habitat and Ecology:** Found in moist alpine meadows, in fens atop hummocks and along streams.

**Comments:** Native to Arctic and alpine regions of North America and Eurasia.

***Argentina anserina* (L.) Rydb.**  
Silverweed cinquefoil

Rosaceae



Amadej Imkoczy (al)Photos



Richard Scully

Louis M. Landry, CalPhotos. Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 3  
**Duration:** Perennial  
**Elevation:** 4,550 ft. - 10,000 ft.  
**Synonyms:** *Potentilla anserina* L.  
**USDA PLANTS Symbol:** ARAN7

**Key Characteristics:**

- ◆ **Low-growing, stoloniferous with red stolons; herbage without glands**
- ◆ **Leaflets 7–25, green above, silver due to densely white tomentose below, green or gray above (bi-color)**

- ◆ **Flowers yellow, solitary at nodes of stolons; pedicels 3–15 cm, silky-tomentose**
- ◆ **Sepals 3–5.5 mm long, entire to toothed; petals yellow, 5.5–11 mm long, yellow, rounded; stamens 20–25**
- ◆ **Achenes ovoid, about 2 mm long, light brown**

**Similar Species:** *Argentina anserina* is easy to recognize with the distinctive silver, white undersides of leaves and stoloniferous habit.

**Habitat and Ecology:** Common along pond and stream margins and in seepage or swampy areas, often in sandy soil and disturbed areas.

**Comments:** This plant has been cultivated as a food crop for its edible roots, but the wild plants are too small to make harvesting practical.

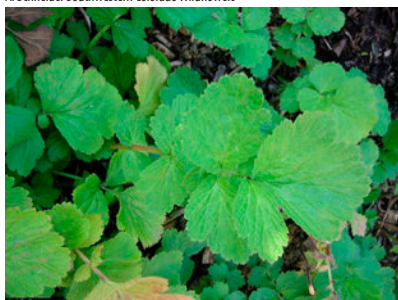
# *Geum aleppicum* Jacq.

Yellow avens

Rosaceae



© Al Schneider  
Al Schneider Southwestern Colorado Wildflowers



J.S. Peterson USDA-NRCS PLANTS Database

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 5,000 ft. - 10,000 ft.

**Synonyms:** *Geum aleppicum* Jacq. ssp. *strictum* (Aiton) R.T. Clausen

**USDA PLANTS Symbol:** GEAL3

## Key Characteristics:

- ◆ Stems 4–12 dm tall, leafy, finely puberulent; roots fibrous
- ◆ Basal leaves 15–24 cm long, petiolate, pinnately divided, 3–5 lobed, double-crenate toothed
- ◆ Cauline leaves 3–5 foliolate, **terminal leaflet enlarged with cuneate bases**; stipules 12–22 mm long

**Similar Species:** *G. macrophyllum* var. *perincisum* also has yellow flowers. It has small glandular hairs on the lower part of the styles, and the terminal leaflets of basal leaves are enlarged with cordate or rounded bases.

**Habitat and Ecology:** Found growing along streams, in moist meadows, and occasionally in coniferous forests.

**Comments:** Globally common from Alaska, throughout Canada, south to California, Arizona, New Mexico to the eastern United States.

- ◆ Cymes of few to several flowers on long pedicels; inflorescence stiffly hirsute, hairs bulbous-based
- ◆ **Flowers yellow, sepals reflexed, hairy on inside; styles geniculate, non-glandular, hairy or glabrous**



*Geum macrophyllum* Willd. var. *perincisum* (Rydb.) Raup  
Largeleaf avens

Rosaceae

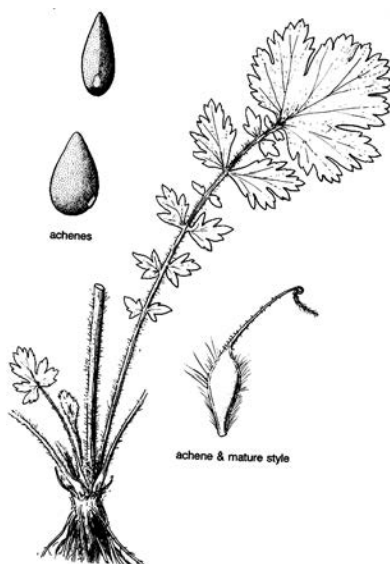


Steve Matson CalPhotos



Louis M. Landry CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,900 ft. - 11,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** GEMAP

**Key Characteristics:**

- ◆ Stems finely puberulent, few, erect or ascending, 3–8(12) dm tall, from a thick, scaly, crown
- ◆ **Terminal leaflet cordate-reniform**, 3–5 lobed, lobes coarsely once- or twice-toothed, enlarged
- ◆ Cauline leaves smaller, 3 (7)-foliolate, leaflets oblanceolate, serrate; stipules 6–18 mm long

**Similar Species:** *G. aleppicum* lower portion of the styles are glabrous or pubescent, but not glandular, and the terminal leaflets of basal leaves are not cuneate.

**Habitat and Ecology:** Common along streams, wet or moderately damp meadows and often in shade of riparian shrubs or trees.

**Comments:** Widespread throughout western United States into Canada, Alaska, east to Quebec.

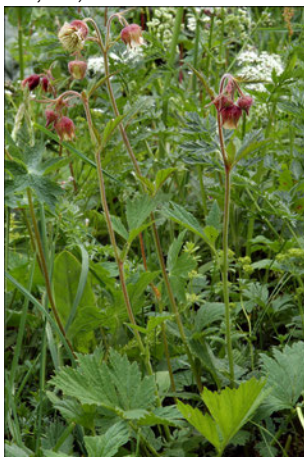
- ◆ Inflorescence stiffly hirsute; sepals green, reflexed; petals 5, **yellow**
- ◆ **Lower portion of styles glandular pubescent**, strongly hooked with stalked glands below

***Geum rivale* L.**  
Purple avens

Rosaceae



Amadej Irnkoczy CalPhotos



Amadej Irnkoczy CalPhotos

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 7,600 ft. - 10,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** GERI2

**Key Characteristics:**

- ◆ Stem 3–6 dm tall, herbage with spreading or retrorse hairs; rhizomes present
- ◆ **Leaves odd-pinnate, terminal leaflet enlarged, leaflets coarsely serrated**, slightly hairy, rough
- ◆ Inflorescence consists of **nodding cymes of flowers**; branches of each cyme are dark purple and very hairy
- ◆ Petals 5, **dull red to pale purple**, conspicuously veined; sepals 5 dark purple, hairy
- ◆ Achenes hairy, flattened with a long persistent styles, hooked; styles plumose

**Similar Species:** *Comarum palustre* (= *Potentilla palustre*), not as common, also has reddish-purple flowers but the achenes and ovaries are glabrous and the styles do not elongate or become hooked in fruit.

**Habitat and Ecology:** Found in wet meadows, willow thickets and along streams.

**Comments:** Common throughout Canada and the northern United States, south along the Rocky Mountains to New Mexico.

# *Potentilla biennis* Greene

Biennial cinquefoil

Rosaceae



Dean Wm. Taylor CalPhotos



Mary Winter CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 4  
**Duration:** Annual, Biennial  
**Elevation:** 5,850 ft. - 10,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POB17

### Key Characteristics:

- ◆ Stems 1–7 dm tall, herbage viscid-villous with fine, long, soft hairs and short, gland-tipped hairs
- ◆ Leaves reduced upward, **trifoliate**; petioles 1–5 cm long; **stipules well-developed**
- ◆ **Leaflets 10–30 mm long, crenate-serrate to coarsely serrate; cymes leafy, divaricately branched**
- ◆ **Petals yellow**, shorter than sepals; sepals glabrous on the inside
- ◆ Styles 0.5–0.7 mm long; achenes smooth, yellow, 0.6–0.7 mm long

**Similar Species:** *P. rivalis* leaves are 5-pinnate, stems are covered in long hairs that are flat against the stem and the yellow achenes are smooth.

**Habitat and Ecology:** Found growing in moist meadows, floodplains, along pond shores, streams and disturbed areas such as ditches.

**Comments:** The leaves of *Potentilla* spp. are eaten by the caterpillars of butterflies and moths (*Lepidoptera* spp.) and bumble bee (*Bombus* spp.).

# *Potentilla diversifolia* Lehm.

Varleaf cinquefoil

Rosaceae



Larry Blakely CalPhotos



Larry Blakely CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACU

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 8,700 ft. - 14,000 ft.

**Synonyms:** *Potentilla glaucophylla* Lehm. var. *glaucophylla*

**USDA PLANTS Symbol:** POD12

## Key Characteristics:

- ◆ Stems 0.5–2.5 (4) cm tall, decumbent to ascending from a branched caudex, not glandular-pubescent
- ◆ **Leaves mostly basal, green on both sides, digitately 5–7 foliolate;** petioles 2–6 cm long
- ◆ Leaflets 0.8–2.5 (4) cm long, terminal one enlarged, **glaucous**, never tomentose, irregularly toothed

**Similar Species:** *P. gracilis* can occur in similar habitats but the leaflets are always regularly toothed, never glaucous and larger, (2) 2.5–5 (8) cm long.

**Habitat and Ecology:** Common in wet meadows and alpine tundra.

**Comments:** The leaves of *Potentilla* spp. are eaten by bumble bees (*Bombus* spp.) and the caterpillars of butterflies and moths (*Lepidoptera* spp.).

**Potentilla plattensis** Nutt.  
Platte River cinquefoil

Rosaceae



Richard Scully



Richard Scully



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 6,500 ft. - 10,800 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POPL

**Key Characteristics:**

- ◆ Stems 0.5–1.5 (2.5) dm long, **decumbent**, 1-several, clustered; caudex thick, branching
- ◆ **Leaflets 11–23-foliolate, glabrous or appressed straight, stiff hairs below leaflets**
- ◆ Flowers in open, divaricately branched cymes; pedicels 1–3 (4) cm long, recurved in fruit
- ◆ Sepals 4–6 mm long, acute; **petals 3.5–6 mm long, yellow, with shallow notch**; stamens 20
- ◆ Achenes to 1.5 mm long, olive to dark brown, surfaces smooth to obscurely pitted

**Similar Species:** *Argentina anserina* is much larger, stoloniferous, and the leaflets are densely tomentose and usually bi-colored.

**Habitat and Ecology:** Found in wet meadows and along creeks.

**Comments:** The leaves of *Potentilla* spp. are eaten by bumble bees (*Bombus* spp.) and the caterpillars of *butterflies and moths* (*Lepidoptera* spp.).

**Potentilla rivalis** Nutt.  
Brook cinquefoil

Rosaceae



Richard Scully



Richard Scully

**Key Characteristics:**

- ◆ Stems (2) 4–8 dm tall, erect, **villous with appressed, non-glandular hairs**; taproots or branched caudex
- ◆ **Leaves often pinnately compound with 5 leaflets**

**Similar Species:** *P. rivalis* can also be confused with *P. paradoxa*, which has larger petals, pinnate leaves and a protuberance on the achene. *P. biennis* herbage is glandular.

**Habitat and Ecology:** Found in along streams, pond margins and ephemeral pools.

**Comments:** The leaves of *Potentilla* spp. are eaten by bumblebee (*Bombus* spp.) and the caterpillars of *butterflies and moths* (*Lepidoptera* spp.).

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Annual, Biennial

**Elevation:** 5,500 ft. - 8,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** POR13

- ◆ Inflorescence diffusely branched, leafy-bracts, many-flowered, usually long peduncles
- ◆ Sepals 2–3 mm long; **petals 1.3–2.7 mm long, yellow**; stamens 10–15
- ◆ **Achenes yellow**, 0.7–0.9 mm long, smooth or lightly wrinkled at maturity

***Galium trifidum* L. ssp. *subbiflorum* (Wiegand) Piper**  
Threepetal bedstraw

Rubiaceae

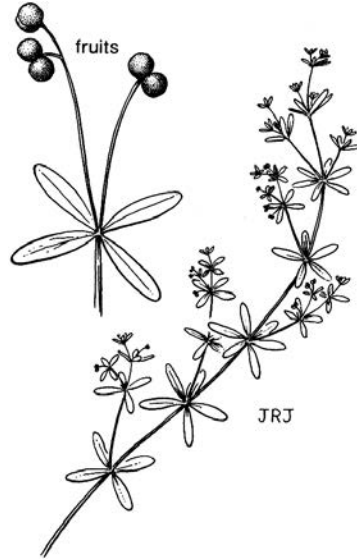


Steve Olson



Steve Olson

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 4,960 ft. - 11,300 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** GATRS2

**Key Characteristics:**

- ◆ Stems square, slender, 0.5–6 dm long, **scrambling, forming dense mats, retrorsely-scabrous**
- ◆ Leaves in whorls of 4 (5–6), linear to narrowly elliptic, 5–15 (20) mm long, blunt, 1-nerved
- ◆ Peduncles terminal or axillary, often 1–3 on axillary branches, **1- to 3-flowered**
- ◆ Corolla white with 3 (4) lobes, 0.5 mm long, obtuse
- ◆ **Fruits glabrous**, spheres, 1–2 mm across, mature segments distinct at maturity

**Similar Species:** *G. bifolium* can also be found in wetlands. The fruits are pubescent and the leaves are strongly 3-nerved with short awn tips. *G. boreale* is a much more stout, erect plant that is common. It has solitary, unbranched stems with lanceolate, blunt-tipped leaves and the flowers are in a pyramidal inflorescence.

**Habitat and Ecology:** Common in willow cars, wet meadows and shady forests.

**Comments:** *Galium* spp. belong to the Rubiaceae (coffee family). The combination of a squared stem, whorled leaves and fragrant flowers makes for an easy identification of this genus. The common name bedstraw is from the use of mattress stuffing for American pioneers due to its pleasant fragrance.

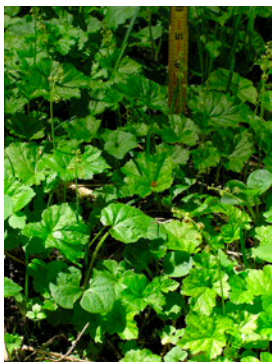
# *Mitella pentandra* Hook.

Fivestamen miterwort

Saxifragaceae

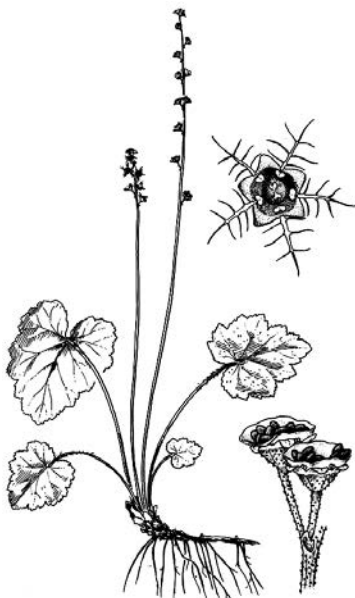


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5?

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 8,000 ft. - 12,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** MIPE

## Key Characteristics:

- ◆ Flowering stems ascending or erect, 8–48 (60) cm tall; rhizomatous
- ◆ Leaves in large, basal rosettes, toothed or mucronate lobes and margins; petioles (0.9) 1.5 cm–8.5 (14) cm
- ◆ **Inflorescences 1–3 (4), 1–2 flowers per node, not one-sided, 8–48 (50) cm long**

- ◆ Sepals spreading or recurved, greenish-yellow, triangular, 0.6–1.1 mm long x 0.7–1.2 mm wide
- ◆ **Petals greenish-yellow**, pinnatifid into 5–11 segments; stamens alternate with sepals; styles divergent

**Similar Species:** *M. stauropetala* has white petals with 3 ternate divisions and stamens opposite the sepals. Flowers are sessile or on short pedicels less than 1 mm long.

**Habitat and Ecology:** Commonly found along streams, in shady forests and in wet meadows.

**Comments:** Global range extends from Alaska south to New Mexico.



# *Saxifraga odontoloma* Piper

Brook saxifrage

Saxifragaceae

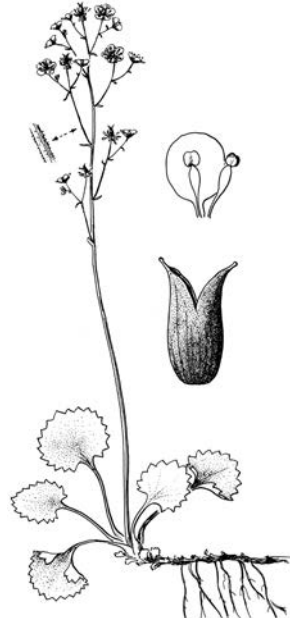


© J. L. G. Higgins  
Al Schneider Southwestern Colorado Wildflowers



Janis Lindsey Huggins

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,200 ft. - 13,360 ft.  
**Synonyms:** *Micranthes odontoloma* (Piper) W.A. Weber  
**USDA PLANTS Symbol:** SAOD2

## Key Characteristics:

- ◆ Stems solitary or grouped, **purple, gland-tipped above**; rhizomatous
- ◆ **Leaves round**, 7–40 cm, round, dentate, lacking ciliate hairs; petioles rounded, distinct from leaves
- ◆ Flowers in an open, lax panicle
- ◆ Sepals reflexed; **petals white**, each with 2 basal yellow spots, 3–4.5 mm, longer than sepals
- ◆ Capsules green to purple

**Similar Species:** *S. rhomboidea* has linear, not rounded leaves and the flowers are crowded into dense, terminal thyrses. *S. oregana* also has linear to elliptic leaves with ciliate margins, and the leaves gradually taper into the petioles.

**Habitat and Ecology:** Common in moist soil along streams and around lakes.

**Comments:** Common throughout western North America into British Columbia and Alberta. *Saxifraga* species are used as food plants by the caterpillars of some butterflies and moths.

# *Saxifraga oregana* Howell

Oregon saxifrage

Saxifragaceae



Al Schneider Southwestern Colorado Wildflowers



Janis Lindsey Huggins

## Key Characteristics:

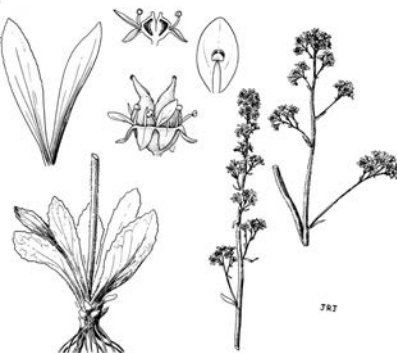
- ◆ Plants solitary or in clusters, 3–6 dm tall; rhizomes, fleshy
- ◆ Leaves all basal, elongate, narrowly oblanceolate, 6–20 cm long, cuneate base, gradually tapering to an indistinct petiole
- ◆ Flowers in a panicle, inflorescence hairy below, yellow to pink-tipped, stipitate-glandular
- ◆ Sepals reflexed; petals white, not spotted, 2 times as long as sepals; petals white, not spotted, 2–5 mm long
- ◆ Capsules green to reddish-purple

**Similar Species:** *S. rhomboidea* flowers are crowded into a dense, terminal thyse, not an open panicle. The leaves are 1–6 cm long and gradually tapering to a distinct petiole.

**Habitat and Ecology:** Common along streams and in moist meadows.

**Comments:** Global range extends from Alberta, south into the Pacific Northwest and California into Nevada, Idaho, Montana and Colorado. *Saxifraga* species are used as food plants by the caterpillars of some butterflies and moths.

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4G5

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 8,250 ft. - 14,150 ft.

**Synonyms:** *Micranthes oregana* (Howell) Small

**USDA PLANTS Symbol:** SAOR2

# *Saxifraga rhomboidea* Greene

Diamondleaf saxifrage

Saxifragaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

## Key Characteristics:

- ◆ Plants solitary or tufted, with bulbils on caudices, 0.25-3 dm tall
- ◆ Leaves all basal, 1-6 cm long, gradually tapering to a distinct petiole

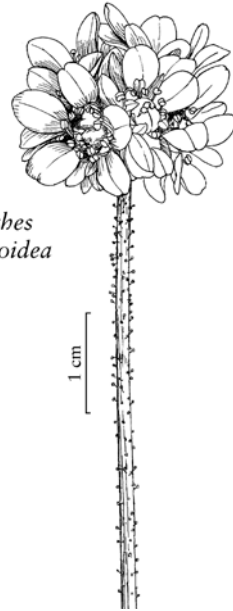
**Similar Species:** *S. oregana* flowers are in a panicle and the leaves are 6–20 cm long, gradually tapering to an indistinct petiole.

**Habitat and Ecology:** Common in moist soil along streams and around lakes, especially in subalpine and alpine meadows in snowmelt areas.

**Comments:** Global range extends from Alberta south to Arizona and New Mexico west to Nevada. *Saxifraga* species are used as food plants by the caterpillars of some butterflies and moths.

Limmy Heavy eFloras of North America

*Micranthes rhomboidea*



**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 14,000 ft.  
**Synonyms:** *Micranthes rhomboidea* (Greene) Small  
**USDA PLANTS Symbol:** SARH2

- ◆ Inflorescences (5) 10 to 40-flowered, congested, glomerate thyrses, 4-20 cm, densely cream-tipped
- ◆ Sepals ascending, ovate; petals white, not spotted, 2-4 mm, 1.5 times as long as sepals
- ◆ Capsules purple

# *Saxifraga rivularis* L.

Weak saxifrage

Saxifragaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5?

**C-Value:** Not Assigned

**Duration:** Perennial

**Elevation:** 8,370 ft. - 14,270 ft.

**Synonyms:** *Saxifraga debilis* Engelm. ex A. Gray, *Saxifraga hyperborea* R. Br. ssp. *debilis* (Engelm. ex A. Gray) Å. Löve & D. Löve & Kapoor

**USDA PLANTS Symbol:** SAR18

## Key Characteristics:

- ◆ Plants loosely tufted or matted, slender, 0.25–1 (1.5) dm tall, glabrous to densely pubescent
- ◆ Leaf blades round or reniform, 5–7-lobed, wider than longer, margins entire not ciliate
- ◆ Inflorescences 2- to 3 (5)-flowered, capitate cymes, sometimes solitary flowers, not glandular
- ◆ Sepals 1.3–2.5 mm long, erect, ovate, rounded, greenish to purplish
- ◆ Petals 2.5–6 mm long, white to pale purple, not spotted

**Similar Species:** *S. cernua* has large terminal flowers that are replaced by reddish bulblets.

**Habitat and Ecology:** Found on rocky alpine tundra, scree slopes, edge of alpine rivulet, shady and moist spruce-fir forests.

**Comments:** FNA (2009) recognizes *S. debilis*, not *S. rivularis*, as occurring in the Central and Southern Rocky Mountains, where, according to FNA, it is often incorrectly called *S. rivularis*. For consistency, we are following nomenclature of USDA-NRCS PLANTS Database.

***Parnassia fimbriata* K.D. Koenig**  
Rocky Mountain or fringed grass of Parnassus

Saxifragaceae (Parnassiaceae)

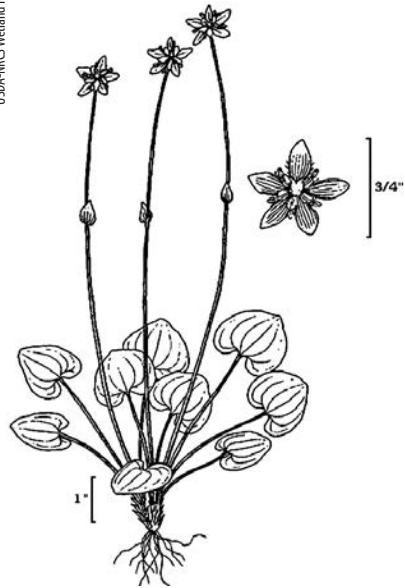


Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

USDA-NRCS Wetland Flora



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 5,800 ft. - 13,010 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** PAF13

**Key Characteristics:**

- ◆ Flowering stems 1 to several, 1.5–4 dm tall; stout rootstock and elongate rhizomes
- ◆ Leaves mostly basal, reniform to orbicular, 1.5–5 cm wide cordate to truncate at base; petioles 3–15 cm long
- ◆ Sepals (2.5) 4–6 (7) mm long, lanceolate, obtuse to rounded, hyaline, erose

- ◆ Petals 8 mm x 15 mm, with distinct veins on petals, fringed in the lower half above claws, twice as long as the sepals; staminodia tipped with yellow ball
- ◆ Capsules to 10 mm long

**Similar Species:** *P. palustris* var. *montanensis* petals are entire and are usually shorter than the sepals. *P. kotzebuei* petals are entire and shorter than sepals.

**Habitat and Ecology:** Locally common along streams, wet meadows, in subalpine and alpine zones.

**Comments:** Named for Mount Parnassus in central Greece, where it was first described.

***Parnassia palustris* L. var. *montanensis* (Fernald & Rydb. ex Rydb.) C.L. Hitchc.**  
**Mountain grass of Parnassus**  
**Saxifragaaceae (Parnassiaceae)**



© Al Schneider  
 Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G4  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,500 ft. - 10,370 ft.  
**Synonyms:** *Parnassia montanensis* Fernald & Rydb. ex Rydb., *Parnassia parviflora* De Candolle  
**USDA PLANTS Symbol:** PAPAM2

**Key Characteristics:**

- ◆ Flowering stems, (5) 11.5–34 (65) cm tall, **bearing one sessile, cauline leaf**; rootstocks short
- ◆ Leaves basal, slightly fringed near the bases; blades 1–2.5 cm long; petioles 0.4–4.5 (8.7) cm long
- ◆ Sepals (3.8) 5.2–7.2 (11) mm x 1.8–2.8 mm wide, rounded or obtuse, not reflexed in fruit
- ◆ **Petals white, 7–12 (16) mm x 3.7–7.5 (12) mm wide, 5- to 13-nerved, longer than sepals**
- ◆ **Staminodes divided into 6–20 filiform lobes, tipped with globose knobs**

**Similar Species:** *P. kotzebuei* flowering stems lack a cauline leaf, the petals are shorter (3.5–6.5 mm long) and 1- to 3-nerved.

**Habitat and Ecology:** Common and widespread, found along streams, lake margins, seepages, in fens and wet meadows.

**Comments:** Circumpolar.

***Limosella aquatica* L.**  
Water mudwort

Scrophulariaceae



Steve Matson CalPhotos



Denise Culver Colorado Natural Heritage Program

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Annual, Perennial  
**Elevation:** 5,000 ft. - 10,400 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** LIAQ

**Key Characteristics:**

- ◆ Emergent, cespitose, non-branching, usually from a single stem; short stolons
- ◆ **Leaves simple, fleshy, basal**, long-petiolate, 1–3 cm long x 3–12 mm wide, 3(5)-veined
- ◆ **Inflorescence consists of many elongated pedicels, arising from the axils of tufted leaves**
- ◆ Flowers solitary, near base of plant; **calyx green with purple spots; corolla white or pink**
- ◆ Capsules 3.2 mm long, ovoid-spherical, membranous

**Similar Species:** *Potamogeton* spp. have similar leaves and can occur with *Limosella*. However, pondweed flowers are in axillary or terminal spikes, not grouped at the base. *Isoetes* spp. have tufted, basal leaves like *L. aquatica*, but lack true flowers.

**Habitat and Ecology:** Found in shallow water, temporary pools, along muddy shores of ponds and creeks. The petioles will grow as long as the water is deep. Common throughout the western half of the United States into Canada.

**Comments:** Mudwort is a very inconspicuous herb that is often found matted in mud around lakes, reservoirs and stock ponds. Widespread throughout much of the Northern Hemisphere.

## *Castilleja miniata* Douglas ex Hook. Giant red Indian paintbrush

Scrophulariaceae (Orobanchaceae)



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

© Al Schneider

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 12,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CAMI12

### Key Characteristics:

- ◆ Flowering stems erect or ascending, often branched above, 2.5–7 (10) dm tall
- ◆ Leaves 3–7 (8) cm long, linear, entire or a few of upper leaves with 1–2 pairs of lateral lobes
- ◆ Inflorescence villous, glandular-puberulent; floral bracts lanceolate, bright red to red-orange
- ◆ Calyx 20–30 mm long, primary lobes more deeply cleft in front (9–17 mm) than in back (8–13 mm)
- ◆ Corolla 25–44 mm long, galeas 14–20 mm long, lower lips much reduced, tubes 14–26 mm long

**Similar Species:** *C. miniata* often hybridizes with *C. rhexiifolia*. The galea of *C. miniata* is usually longer, mostly 14–20 mm long but occasionally only 11 mm long, while the galea of *C. rhexiifolia* is usually shorter (8–12 mm long) and the bracts of *C. miniata* are crimson red while those of *C. rhexiifolia* are rose or purple.

**Habitat and Ecology:** Common in forests, along streams and in wet mountain meadows.

**Comments:** *C. miniata* is one of the most widespread species within the genus. *Castilleja* species are primarily pollinated by hummingbirds. What is often called the Indian paintbrush flower consists of floral bracts that look like colored petals. The true flowers are green and located within the bracts. Paintbrushes are known to be hemiparasitic, attaching to roots of other plants, usually sagebrush or other members of the sunflower family.



***Castilleja sulphurea* Rydb.**  
Sulphur Indian paintbrush

Scrophulariaceae (Orobanchaceae)



Denise Culver Colorado Natural Heritage Program



Al Schneider Southwestern Colorado Wildflowers



Berry Breckling, CalPhotos

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5?  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 6,400 ft. - 11,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** CASU12

**Key Characteristics:**

- ◆ Stems erect, often branched above, (2) 2.5–5.5 (7) dm tall, herbage scabrid-puberulent
  - ◆ **Leaves 2–5.5 (8) cm long, entire, narrowly lanceolate, more or less spreading**
  - ◆ **Inflorescence compressed then elongating in fruit, villous and glandular-puberulent, pale yellow**
- ◆ Calyx 13–23 (28) mm long, primary lobes more deeply cleft in front
  - ◆ Corolla 18–30 mm long, galea 6–12 mm long, lower lip 1–2.5 mm long, teeth short, blunt, ciliate

**Similar Species:** *C. lineata* is another yellow paintbrush that occurs in wetlands. It is distinguished by the densely tomentose herbage that dries grayish.

**Habitat and Ecology:** Common in forests, along streams and in wet mountain meadows.

**Comments:** *Castilleja* species are primarily pollinated by hummingbirds. What is often called the Indian paintbrush flower consists of floral bracts that look like colored petals. The true flowers are green and located within the bracts. Paintbrushes are known to be hemiparasitic, attaching to roots of other plants, usually sagebrush or other members of the sunflower family.

***Pedicularis crenulata* Benth.**  
Meadow lousewort

Scrophulariaceae (Orobanchaceae)



Mary Ellen Harte Forestry Images



Mary Ellen Harte Forestry Images



Mary Ellen Harte Forestry Images

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 7,200 ft. - 10,500 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** PECR

**Key Characteristics:**

- ◆ Stems pubescent in longitudinal lines, 1.5–3.5 (5) dm tall
- ◆ **Leaves simple, linear to narrowly lanceolate, serrate to crenate**
- ◆ Inflorescence a spicate-raceme, 2–10 cm long, densely-flowered, bracts leaf-like

**Similar Species:** *P. racemosa* is the other lousewort with simple, not pinnatifid leaves, and the flowers are always white.

**Habitat and Ecology:** Locally common in wet meadows, marshes and streambanks in mountains. Louseworts are hemiparasitic with many grasses and members of the Asteraceae (sunflower family).

**Comments:** *Pedicularis* spp. are primarily pollinated by bumblebees.

- ◆ Calyx 8–12 mm long, villous, lobes 2; **corolla 21–26 mm long, rose, red, purplish, or white**
- ◆ Galea 11–15 mm long, truncate and beakless at the apices, 2 lateral teeth, sometimes bristle-like

***Pedicularis groenlandica* Retz.**  
Elephanthead lousewort

Scrophulariaceae (Orobanchaceae)



Steve Olson



Denise Culver Colorado Natural Heritage Program

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,450 ft. - 13,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** PEGR2

**Key Characteristics:**

- ◆ Stems often clustered, herbage glabrous, (1) 2–4.5 (7) dm tall
- ◆ Leaves mostly basal, 6–17 (25) cm long, pin-natifid, segments narrow, dentate to crenate
- ◆ Inflorescence a spike, dense at flowering, 4–15 (27) cm long, glabrous

- ◆ Calyx with prominent veins, glabrous outside and white-ciliate inside
- ◆ Corolla violet to purple to pink, in the shape of an elephants head

**Similar Species:** *P. groenlandica* is probably the most distinct wetland plant in Colorado, and it certainly is the most photographed.

**Habitat and Ecology:** Common in wet montane and alpine meadows, streambanks and woods. Louseworts are hemiparasitic with many grasses and members of Asteraceae (sunflower family).

**Comments:** *Pedicularis* spp. are primarily pollinated by bumblebees.

***Pedicularis sudetica* Willd. ssp. *scopulorum* (A. Gray) Hultén**  
 Sudetic lousewort  
 Scrophulariaceae (Orobanchaceae)



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Al Schneider Southwestern Colorado Wildflowers



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5T3T4

**C-Value:** 8

**Duration:** Perennial

**Elevation:** 10,000 ft. - 13,500 ft.

**Synonyms:** *Pedicularis scopulorum* (A. Gray) A. Gray

**USDA PLANTS Symbol:** PESUS2

**Key Characteristics:**

- ◆ Stems longer than leaves, glabrous or glabrate below inflorescence, 1–2 (3) dm tall
- ◆ Leaves mostly basal, pinnatifid, segments narrow, dentate to crenate
- ◆ Inflorescence a woolly-villous, spicate raceme, 3–5 cm long

**Similar Species:** *P. groenlandica* from a distance resembles *P. sudetica* ssp. *scopulorum*, but it is a stouter plant that occurs in wetter habitats. *P. crenulata* has simple leaves, not pinnatifid.

**Habitat and Ecology:** Found in fens, marshes and moist meadows in subalpine and alpine zones. Louseworts are hemiparasitic with many grasses and members of the Asteraceae (sunflower family).

**Comments:** *P. sudetica* ssp. *scopulorum* global range extends from the mountains of Colorado into New Mexico. *Pedicularis* spp. are primarily pollinated by bumblebees.

***Mimulus floribundus* Lindl.**  
Manyflowered monkeyflower

Scrophulariaceae (Phrymaceae)



Gary A. Monroe USDA-NRCS PLANTS Database



Gary A. Monroe USDA-NRCS PLANTS Database

Jeanne R. Janisch Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 10  
**Duration:** Annual  
**Elevation:** 5,500 ft. - 9,200 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** MIFL2

**Key Characteristics:**

- ◆ Stems erect to decumbent, 0.3–2.2 (4) dm tall, glandular-pubescent, sometimes viscid and slimy
- ◆ **Leaves distinctly petiolate with petioles, opposite, 1–12 mm long;** blades (0.3) 0.8–2(3) cm x (1) 5–13 mm
- ◆ Calyx cylindrical, 3.5–7 (9) mm long, **glandular-pubescent**, lobes 0.8–1.6 (2) mm long, triangular, ciliate
- ◆ Corolla soon dropping after flowering, 7–14 mm long, **yellow often with red spots**
- ◆ Capsules included, 3.5–5 mm long, obovoid to elliptic

**Similar Species:** The petiolate leaves are a distinctive identification character.

**Habitat and Ecology:** Found in moist places, cliff overhangs, along streams and in moist rock crevices.

**Comments:** The genus name *Mimulus*, the diminutive form of the Latin *mimus*, “a buffon or actor in a farce or mime,” and the common name, “monkey-flower,” were both derived from the resemblance of the flowers to small, grinning, ape-like faces.

# *Mimulus glabratus* Kunth

Roundleaf monkeyflower

Scrophulariaceae (Phrymaceae)

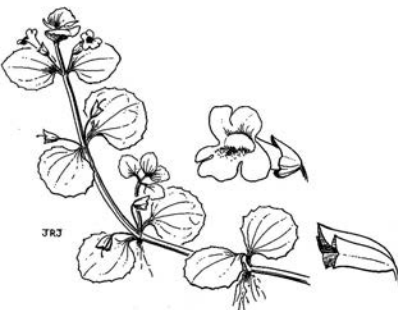


Crystal Strouse

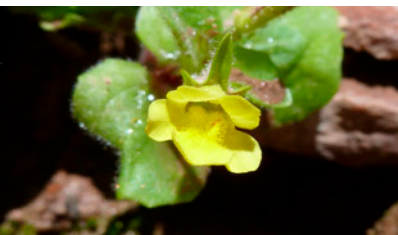


Ernie Marx Eastern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



Max Licher Arizona State University Herbarium



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 5

**Duration:** Perennial

**Elevation:** 3,510 ft. - 8,700 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** MIGL

## Key Characteristics:

- ◆ Stems 1–5 dm long, decumbent, rooting at lower nodes, glabrous to glandular-pubescent
- ◆ Leaves broadly ovate to orbicular, 1.3–2.8 mm x 15–30 mm, short-petiolate below, sessile above; blades usually broader than long, palmately 3–5 veined
- ◆ Calyx bell-shaped, 5–11 (16) mm long, glabrous, sometimes splotched with red
- ◆ Corolla throats open, not closed by palates, 10–20 mm long, yellow with red-brown spots
- ◆ Capsules included, 5–9 mm long, broadly ovate, rounded

**Similar Species:** *M. guttatus* is another yellow monkeyflower, but the corolla throats are closed at the palate and the calyx teeth are 1 mm or more in length.

**Habitat and Ecology:** Common along streams, especially around seeps and springs.

**Comments:** The genus name *Mimulus*, the diminutive form of the Latin *mimus*, “a buffon or actor in a farce or mime,” and the common name, “monkey-flower,” were both derived from the resemblance of the flowers to small, grinning, ape-like faces.

***Mimulus guttatus* DC.**  
Seep monkeyflower

Scrophulariaceae (Phrymaceae)



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Annual, Perennial  
**Elevation:** 5,000 ft. - 12,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** MIGU

**Key Characteristics:**

- ◆ Stems 0.5–5.5 (9) dm tall, **lacking stolons or rhizomes**
- ◆ **Leaves petiolate below and often sessile above;** blades (0.5) 1.5–5.5 (10) cm x (5) 10–40 (85) mm
- ◆ **Inflorescence 5 or more flowers in foliose-bracteate racemes;** pedicels 1–3.5 (5.5) cm long
- ◆ Calyx 6–16 (20) mm long, red-tinged; corolla 9–23 (30) mm long, **yellow, distinctly bilabiate**
- ◆ Capsules included, (7) 9–12 mm long, oblong or obovate, rounded distally, narrowed to stipitate bases

**Similar Species:** *M. tilingii* has a yellow corolla that is closed at the throat but the plants usually have 1–3 flowers, not more than 5. It is stoloniferous/rhizomatous, growing at much higher elevations. *M. glabratus* corolla is yellow, but the throat is mostly open, not closed at the palate.

**Habitat and Ecology:** Common along and sometimes emerged in streams, marshes, seeps and springs.

**Comments:** Widespread throughout the west to California and the Pacific Northwest.

# *Mimulus tilingii* Regel

Tiling's monkeyflower

Scrophulariaceae (Phrymaceae)



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 10

**Duration:** Perennial

**Elevation:** 9,500 ft. - 13,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** MITI

## Key Characteristics:

- ◆ Stems 0.7–2 dm tall, often decumbent, glabrous to puberulent; **stolons or rhizomes present**
- ◆ Leaf blades 1–2.6 cm x 5–15 (25) mm, **palmately 3–5 veined**; petioles 1–12 mm
- ◆ Inflorescence 1–3 (5) flowers; pedicels 1–4 (6) cm long
- ◆ Calyx 7–15 (20) mm long, inflated in fruit, pale yellow-green with red-brown spots, lobes unequal
- ◆ Corolla 17–30 mm long, **yellow with red spots, funnellform, palate densely yellow-bearded**

**Similar Species:** *M. tilingii* is difficult to distinguish from *M. guttatus* and may be an alpine form of *M. guttatus*.

**Habitat and Ecology:** Common in alpine tundra, along streams, and in wet meadows.

**Comments:** Widespread throughout western North America to the Rocky Mountains states.



***Besseyia alpina* (A. Gray) Rydb.**  
Alpine besseya

Scrophulariaceae (Plantaginaceae)



R.T. Hawke CalPhotos



Mary Ellen Harte Forestry Images

Bobbi Ancelet Vascular Plants of the Pacific (Northwest)



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4

**C-Value:** 9

**Duration:** Perennial

**Elevation:** 8,400 ft. - 14,200 ft.

**Synonyms:** *Synthyris alpina* A. Gray

**USDA PLANTS Symbol:** BEAL

**Key Characteristics:**

- ◆ Stems simple, 0.5–2 dm tall, herbage woolly to glabrate
- ◆ Basal leaves petiolate; blades (2.5) 4–6 cm long x (1) 2.5–4 cm wide, toothed margins
- ◆ Inflorescence subspicate, dense, villous
- ◆ Calyx 4–6 mm long, 4 segments elliptic-lanceolate, white-villous
- ◆ Corolla present, 5–8 mm long, blue-purple; stamens exerted with inconspicuously colored filaments

**Similar Species:** *B. plantaginea* is more robust and the flowers are white with margins that are purplish tinged.

**Habitat and Ecology:** Grows in moist rocky alpine meadows and montane rocky ridges.

**Comments:** *B. alpina* is a regional endemic, known from Colorado, Utah, New Mexico, and Wyoming.

# *Veronica americana* Schwein. Ex Benth

American speedwell

Scrophulariaceae (Plantaginaceae)



© Keir Morse

Keir Morse CalPhotos



Barry Breckling CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** OBL

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 4,980 ft. - 12,600 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** VEAM2

## Key Characteristics:

- ◆ Emergent, 0.5–3.5 (6) dm tall, glabrous, widely branched; rhizomatous
- ◆ Stems erect, ascending, usually decumbent at the base and rooting at the lower nodes
- ◆ **Leaves opposite;** blades 1.5–3 (5) cm long x 7–20 (30) mm wide, lanceolate to ovate; **petiolate**

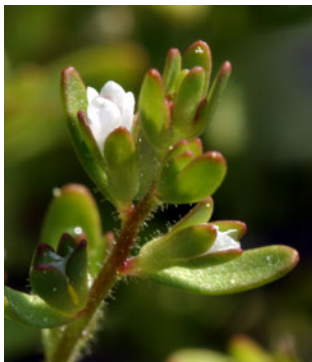
- ◆ Flowers in axillary racemes, 10- to 25-flowered, corolla blue; pedicels 5–10 mm long
- ◆ Capsules 2.5–3.8 mm long x 3–4 mm wide, entire or scarcely notched; styles 1.7–3 (4) mm long

**Similar Species:** *V. americana* is distinguished from the other speedwells that grow in shallow waters by its petiolate leaves. *V. anagallis-aquatica* leaves are sessile and clasping. *V. scutellata* leaves are sessile and clasping.

**Habitat and Ecology:** Common in shallow water, inundated meadows and along streams.

**Comments:** American speedwell is edible, tasting similar to *Nasturtium officinale* (= *Rorippa nasturtium-aquaticum*), but with a distinctly bitter taste. Common from Alaska to New Mexico to eastern United States.

***Veronica peregrina* L. ssp. *xalapensis* (Kunth) Pennell**  
 Hairy purslane speedwell Scrophulariaceae (Plantaginaceae)



Steve Matson CalPhotos



Russ Kleinman Western New Mexico University

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** Not Assigned  
**Duration:** Annual  
**Elevation:** 4,380 ft. - 10,200 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** VEPEX2

**Key Characteristics:**

- ◆ Stems erect 0.5–2 (3) dm tall, simple or branched at the bases, glandular-pubescent; taproots
- ◆ **Leaves opposite, sessile or lowermost ones narrowed to petiolar bases;** blades 0.5–2.2 long mm x 0.5–5 mm wide
- ◆ **Flowers in terminal racemes,** elongate, glandular-puberulent, bracts foliaceous; pedicels 0.5–1.5 mm long
- ◆ Calyx 3–6 mm long, segments subequal, narrowly elliptic to lanceolate; corolla inconspicuous, 2–3 mm across, whitish
- ◆ **Capsule with notch 0.2–0.5 mm deep,** style 0.1–0.4 mm long

**Similar Species:** *V. wormskjoldii* is a perennial from rhizomes. The stems are usually decumbent or prostrate at bases and pubescent with long, loose, spreading hairs. *V. serpyllifolia* var. *humifusa* is also a perennial, but has pubescent stems and the calyx has a conspicuous notch.

**Habitat and Ecology:** Common along streams, creeks, in wet meadows, seeps and springs.

**Comments:** Weber and Wittmann (2012) state that *V. peregrina* var. *xalapensis* is adventive in Colorado.

## *Veronica anagallis-aquatica* L. Water speedwell

Scrophulariaceae (Plantaginaceae)



Keir Morse CalPhotos



Keir Morse CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMC:** OBL

**Native Status:** Native **Non-native**

**Conservation Status:** G5

**C-Value:** Not Assigned

**Duration:** Biennial, Perennial

**Elevation:** 3,500 ft. - 10,200 ft.

**Synonyms:** *Veronica catenata* Pennell, *Veronica salina* Schur.

**USDA PLANTS Symbol:** VEAN2

### Key Characteristics:

- ◆ Emergent, 1–6 (10) dm tall, stems erect, branched at base, glabrous; rhizomatous
- ◆ **Leaves opposite, clasping**, lanceolate to ovate, 2–6.5 cm long x 5–25 mm wide, **sessile**
- ◆ Flowers in axillary racemes, glabrous to glandular-puberulent, more than 30-flowered
- ◆ Calyx 3–5.5 mm long, segments broadly lanceolate
- ◆ Corolla 5–10 mm across, blue or pale violet with purplish lines; capsule is not notched

**Similar Species:** *V. scutellata* has a strongly 2-lobed capsule with a conspicuous notch and the leaves are linear, 4–20 times longer than wide. Vegetatively, *Potamogeton richardsonii* can look like *V. scutellata*, but has clasping leaves and fruits in dense spikes.

**Habitat and Ecology:** Common in shallow water, streams, ditches and seeps.

**Comments:** *V. anagallis-aquatica* is widely established in North and South America, as well as Europe, Africa and Asia. USDA-NRCS PLANTS Database designates it as native, but Colorado, Wyoming, and Montana consider it adventive.

## *Veronica serpyllifolia* L. ssp. *humifusa* (Dicks.) Syme

Brightblue speedwell

Scrophulariaceae (Plantaginaceae)

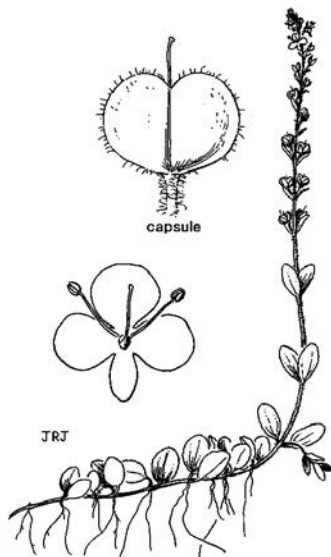


Keir Morse CalPhotos



Keir Morse CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5T5?

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 6,000 ft. - 11,500 ft.

**Synonyms:** *Veronicastrum serpyllifolium* (L.) Fourn.  
*ssp. humifusum* (Dicks.) W.A. Weber

**USDA PLANTS Symbol:** VESEH2

### Key Characteristics:

- ◆ Stems ascending, often decumbent at the bases to procumbent, 0.8–2 (3) dm tall, finely puberulent
- ◆ Leaves short-petiolate below, subsessile above; blades 1–2 (2.5) cm x 8–15 mm, rounded to obtuse
- ◆ Flowers in terminal racemes, 2.5–12 cm long, glandular-pubescent, bracts lanceolate
- ◆ Corolla 4–8 mm across, blue or white, tubes pubescent inside calyx; styles 2.2–3 mm long
- ◆ Capsules 2.8–3.7 mm x 3.5–5 mm, sparingly glandular-pubescent, not exceeding the calyx, notch evident

**Similar Species:** *V. wormskjoldii* stems are pilose with long spreading hairs, the flowers are 6–10 mm across and the capsules exceeds the calyx. The capsule notch is not as deep, 0.1–0.3 mm versus 0.3–0.8 mm in *V. serpyllifolia* var. *humifusa*.

**Habitat and Ecology:** Common in seeps, fens, wet meadows and along streams.

**Comments:** Global range extends south from Alaska to California, east to New Mexico.

***Veronica wormskjoldii* Roem. & Schult.**  
American alpine speedwell

Scrophulariaceae (Plantaginaceae)



Keir Morse CalPhotos



Steve Matson CalPhotos



Barry Brecklinor CalPhotos

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 8,000 ft. - 13,500 ft.  
**Synonyms:** *Veronica nutans* Bongard  
**USDA PLANTS Symbol:** VEWO2

**Key Characteristics:**

- ◆ Stems 1–2.5 (4) dm tall, ascending, erect, sometimes decumbent at bases, villous hispid with loose hairs
- ◆ Leaves sessile, 2–3 (4) cm x 8–18 mm, elliptic to broadly lanceolate, crenate to entire
- ◆ Inflorescence terminal racemes, 2–4 (9) cm long, viscid-villous or glandular; pedicels 2–6 mm long
- ◆ Calyx 3.5–5.5 mm long, segments oblanceolate; corolla 6–10 mm across, dark blue to pale blue
- ◆ Capsules glandular-pubescent, exceeding the calyx, notches 0.1–0.3 mm deep; styles 0.8–1.3 mm long

**Similar Species:** *V. serpyllifolia* ssp. *humifusa* has finely puberulent stems, not long or loose hairs and the capsules are 2.8–3.7 mm long, not exceeding the calyx, with conspicuous notches (0.3–0.8 mm deep).

**Habitat and Ecology:** Common along creeks and streams, in wet meadows, seepages and alpine tundra.

**Comments:** Global range extends includes most of Canada, Alaska, and western United States.

# *Viola nephrophylla* Greene

Northern bog violet

Violaceae



Gary A. Monroe USDA-NRCS PLANTS Database



Gary A. Monroe USDA-NRCS PLANTS Database

### Key Characteristics:

- ◆ Plants acaulescent; short, stout, erect caudex, not bearing stolons or rhizomes
- ◆ Leaf blades 2–5 cm x 2–5 cm, bases cordate, strongly pointed; stipules entire; petioles 2–20 cm long

**Similar Species:** *V. adunca* has longer spurs, 4–7 mm long versus 1–5 mm, which are often projected past the peduncles. The stipules are often toothed or spinulose-serrate on the margins.

**Habitat and Ecology:** Common in fens, along streams and creeks, in moist meadows, and on shady forest slopes.

**Comments:** Widespread through North America. Host plant to larvae of the Nokomis fritillary (*Speyeria nokomis*).

Bobbi Ancelet Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 8

**Duration:** Annual, Perennial

**Elevation:** 4,800 ft. - 11,000 ft.

**Synonyms:** *Viola sororia* Willd. ssp. *affinis* (LeConte)

McKinney, *Viola papilionaceae* Pursh.

**USDA PLANTS Symbol:** VINE

- ◆ Flowers present on short, erect peduncles
- ◆ Sepals 5–7.5 mm long; petals bluish-violet to deep violet, more than 10 mm long
- ◆ Spurs 1–5 mm long, blunt, not projected past peduncles; stipules entire

***Acer glabrum* Torr.**  
Rocky Mountain maple

Aceraceae (Sapindaceae)



Al Schneider Southwestern Colorado Wildflowers



Max Licher Arizona State University Herbarium



Al Schneider Southwestern Colorado Wildflowers



Shered Goodrich SENNet

**Wetland Status WMVC:** FACU  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**C-Value: 7** **Duration:** Perennial  
**Elevation:** 5,200 ft. - 10,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ACGL

**Key Characteristics:**

- ◆ Shrubs or small trees, up to 8 m; usually dioecious
- ◆ **Leaves opposite, 3-5 lobed or palmately divided into 3 separate leaflets**, leaves less than 7 cm in width, glabrous, margins toothed to finely serrate

- ◆ Leaves glabrous
- ◆ Young twigs red in color; flowers greenish-yellow
- ◆ **Fruit 2 united samaras, wings 2-3 cm long, glabrous**

**Similar Species:** *Acer negundo* leaves are ternately compound with 3 leaflets, not palmately lobed.

**Habitat and Ecology:** Common and widespread across the state along streams, in gulches and ravines, and in dry forests.

**Comments:** In midsummer the leaves develop large bright red blotches. these galls contain *Eriophyid* mites



***Acer negundo* L.**  
Boxelder

Aceraceae (Sapindaceae)



Matt Lavin



Al Schneider Southwestern Colorado Wildflowers



Matt Lavin

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 4,800 ft. - 7,900 ft.  
**Synonyms:** *Negundo aceroides* (L.) Moench  
**USDA PLANTS Symbol:** ACNE2

**Key Characteristics:**

- ◆ Trees 4–20 m tall, usually dioecious; bark thin, light brown or pale gray, furrowed
- ◆ **Leaves opposite, ternately compound with 3 leaflets** (occasionally 5 to 7)
- ◆ Terminal leaflets with evident petiolules (leaflet stalks), lower surfaces pubescent along veins
- ◆ Young twigs green to blue, often glaucous
- ◆ **Fruits of two, 1-seeded samaras, in the shape of the letter 'V'**

**Similar Species:** There are two varieties of *A. negundo* that occur in Colorado:

1a. Young branches glaucous, smooth, pale.....var. *violaceum*.

1b. Young branches with short hairs.....var. *interius*.

**Habitat and Ecology:** Common across the state along rivers, creeks and in canyon bottoms.

**Comments:** The discussion about the native status for *A. negundo* has been on-going. Weber and Wittmann (2012) state that *Negundo aceroides* (*A. negundo*) ssp. *violaceum* is introduced and *Negundo aceroides* (*A. negundo*) ssp. *interius* is native. Ackerfield (2015) states that both subspecies are non-native. The Plains Indians made sugar from the sap.

***Alnus incana* (L.) Moench ssp. *tenuifolia* (Nutt.) Breitung**  
Thinleaf alder

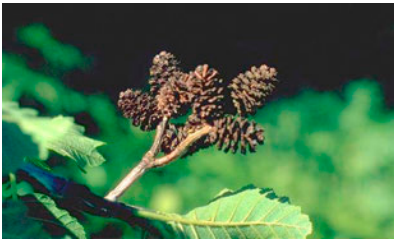
Betulaceae



Denise Culver Colorado Natural Heritage Program



Sven. McDaniel USDA-NRCS PLANTS Database



Br. Alfred Brousseau Saint Mary's College CalPhotos

**Key Characteristics:**

- ◆ **Shrubs, to 12 m tall, monoecious; bark light to dark gray, lenticels horizontal, white to light orange**
- ◆ **Leaves alternate, simple, 3.8–10 cm long; margins doubly serrate**
- ◆ **Staminate flowers 3 per bract, stamens 2–4, staminate catkins pendulous, 4–10 cm long**

**Similar Species:** *Betula occidentalis* pistillate catkins are firm, but not woody, with deciduous scales and 3 flowers per bract scale instead of 2.

**Habitat and Ecology:** Occurring along streams, bordering lakes and wet meadows and in moist gulches in foothills and mountains.

**Comments:** Bacteria on the alder roots fix atmospheric nitrogen that benefits both the alder and adjacent plants. Members of the Betulaceae have lenticels that facilitate gas exchange when plants are in saturated soils with low oxygen levels. Rabbits, muskrats, moose, elk and deer eat the leaves and twigs. Perching birds eat alder seeds, buds, and catkins. Beavers eat the bark and build dams with the stems.

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5T5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 4,700 ft. - 10,000 ft.  
**Synonyms:** *Alnus tenuifolia* Nutt.  
**USDA PLANTS Symbol:** ALINT

- ◆ **Pistillate flowers 2 per bract, pistillate catkins erect to pendulous with persistent, woody bracts**
- ◆ **Fruits thin-winged samara; winter buds blunt, bright red and minutely hairy**

# *Betula glandulosa* Michx.

Resin birch

Betulaceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

John Myers Flora of North America



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 7,200 ft. - 12,700 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** BEGL

### Key Characteristics:

- ◆ **Shrubs, low to 3 m tall;** bark dark brown, smooth, lenticels horizontal, pale, inconspicuous
- ◆ **Young twigs dotted thickly with warty resinous glands**
- ◆ **Leaves ovate to nearly round, margins crenate-serrate, teeth often gland-tipped**
- ◆ Pistillate catkins with firm, not woody, deciduous scales; pistillate flowers 3 per scale
- ◆ Samaras with wings narrower than the body

**Similar Species:** *B. occidentalis* is a larger shrub, up to 10 m tall, with leaves that are ovate or rhombic, not round. However, *B. glandulosa* and *B. occidentalis* can hybridize, producing plants with larger leaves and more irregularly serrate teeth along the margin.

**Habitat and Ecology:** Occurring along streams, in fens and willow thickets in subalpine to alpine meadows. *B. glandulosa* is wind pollinated or can reproduce by vegetatively sprouting.

**Comments:** *B. nana* has been used incorrectly as a synonym for *B. glandulosa* and may persist in some floras. Members of the Betulaceae have lenticels that facilitate gas exchange when plants are in saturated soils with low oxygen levels. Numerous wildlife species eat *B. glandulosa*, including moose, deer, elk, bears, small mammals, and birds. It also provides shelter for numerous small mammals and birds.

# *Betula occidentalis* Hook.

Water birch

Betulaceae



Susan McDougall USDA-NRCS PLANTS Database



Denise Culver Colorado Natural Heritage Program



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 9,500 ft.  
**Synonyms:** *Betula fontinalis* Sarg.  
**USDA PLANTS Symbol:** BEOC2

## Key Characteristics:

- ◆ Small trees or shrubs, up to 10 m high; bark smooth, dark reddish-brown, lenticels prominent
- ◆ Twigs covered with conspicuous reddish, resinous glands

- ◆ Leaf blades ovate, 2–6 pairs of lateral veins, margins serrate, covered with resinous glands
- ◆ Fruiting catkins cylindrical, 2.0 to 2.5 cm long
- ◆ Catkin scales glabrous, ciliate, thin, not woody, deciduous

**Similar Species:** *Alnus incana* ssp. *tenuiflora* typically occurs with *B. occidentalis* but can be distinguished by the persistent woody cones.

**Habitat and Ecology:** Occurs along streams, wet gulches and at springs and seeps.

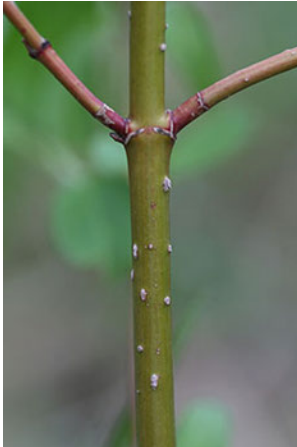
**Comments:** *B. occidentalis* is an indicator of a high, persistent water table, usually from a spring or seep. It is a good shrub to use for stream restoration projects. Members of the Betulaceae have lenticels that facilitate gas exchange when plants are in saturated soils with low oxygen levels. Sheep, mule deer and elk browse water birch. Beavers harvest the stems of water birch in the construction of dams and lodges. The Broad-tailed Hummingbird feeds on sap oozing from holes in the bark made by sapsuckers.

***Cornus sericea* L.**  
Redosier dogwood

Comaceae



Ernie Marx Eastern Colorado Wildflowers



Ernie Marx Eastern Colorado Wildflowers

Jeanne R. Jamish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 7

**Duration:** Perennial

**Elevation:** 5,000 ft. - 9,800 ft.

**Synonyms:** *Cornus stolonifera* Michaux, *Swida sericea* (L.) Holub

**USDA PLANTS Symbol:** COSE16

**Key Characteristics:**

- ◆ Shrubs, well over 2 dm high; **red twigs and branches**
- ◆ **Leaves opposite**, over 4 cm long, ovate, lateral veins running parallel with main vein
- ◆ **Flowers numerous in terminal flat-topped (corymbose) cyme**
- ◆ Flowers white, 4 petals and sepals
- ◆ **Fruits white drupes**

**Similar Species:** *C. sericea* is a common and distinctive shrub. To confirm identification, take a leaf and pull gently apart. There will be white, stringy latex in the leaf veins.

**Habitat and Ecology:** Locally common in moist gulches and cool ravines and along streams from foothills to subalpine zones. *C. sericea* is a dominant understory shrub along Colorado's riparian areas. Branch tips will root upon touching the ground and forming new shoots.

**Comments:** The fleshy fruits of dogwoods are valuable to wildlife, birds, and small mammals. The fruit ripens in late summer and some of the berries may persist on the plants into the fall and winter months. Wildlife browse the twigs, foliage and fruits. The shrubs provide excellent nesting habitat for songbirds.

# *Elaeagnus angustifolia* L.

Russian olive

Elaeagnaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



J.S. Peterson USDA-NRCS PLANTS Database

## Key Characteristics:

- ◆ Trees or shrubs, 5–12 m tall, dioecious, trunks 1–5 dm thick; stems with **coarse thorns**
- ◆ **Leaves alternate, silvery or rusty with peltate scales**, lanceolate, 1 main vein, 2–9 cm long

**Similar Species:** From a distance, *Shepherdia argentea* looks like *E. angustifolia*, but *S. argentea* has opposite leaves and red berries instead of cream colored fruits.

**Habitat and Ecology:** Common throughout Colorado. Initially planted for wind breaks and bank stabilization. Escaped from cultivation along roadsides, streams and floodplains.

**Comments:** *E. angustifolia* is designated as a List B species in the Colorado Noxious Weed Act. Managers are recommended to contact the County Weed Manger to verify identification. Once confirmed, control methods will be discussed. *Elaeagnus angustifolia* is capable of fixing nitrogen in the roots, thus being able to grow on bare soils. Even though it is non-native it does provide a source of edible fruits for a variety of birds. Pheasants and Sharp-tailed Grouse will loaf in trees, eating the fruits. It is this seed dispersal by birds which has contributed to Russian olive's spread.

**Wetland Status WMVC:** FAC  
**Native Status:** **Non-native, CO Noxious Weed List B**  
**Conservation Status:** GNR  
**C-Value:** 0  
**Duration:** Perennial  
**Elevation:** 3,700 ft. - 7,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** ELAN

- ◆ Flowers perfect, lacking petals; sepals 4, **yellow inside**, fragrant; stamens 4
- ◆ **Fruits are drupes, olive-like, cream- to brown-colored, densely covered with silver scales**

***Shepherdia argentea* (Pursh) Nutt.**  
Silver buffaloberry

Elaeagnaceae



Janis Lindsey Huggins



Karin Freeman Colorado Natural Heritage Program

USDA-NRCS PLANTS Database Britton & Brown 1913



**Wetland Status WMVC:** FACU  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 4,500 ft. - 7,710 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SHAR

**Key Characteristics:**

- ◆ Shrubs or small trees, dioecious, with opposite branching, stems usually with thorns
- ◆ **Leaves opposite**, silvery-scurfy on both sides with stellate hairs, leaf bases acute

- ◆ Flowers imperfect, sepals with glandular thickening at bases, stamens 8
- ◆ **Fruits fleshy, drupe-like achenes, red-orange color**

**Similar Species:** *Elaeagnus angustifolia* has cream-colored fruits and alternate leaves.

**Habitat and Ecology:** Common in moist places along rivers and in canyon bottoms. *S. argentea* can occur as the dominant shrub in riparian areas, especially in southwestern Colorado.

**Comments:** Provides ideal cover and nesting sites for many birds. It is a preferred food source of many songbirds and Sharp-tailed Grouse. It is also a browse source for big game animals, as well as rodents.

***Gaultheria humifusa* (Graham) Rydb.**  
Alpine spicy wintergreen

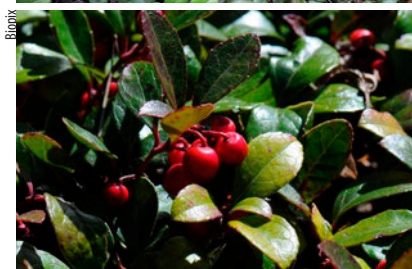
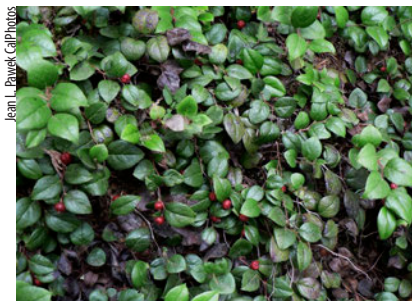
Ericaceae



Barry Breckling CalPhotos



Barry Breckling CalPhotos



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 9,020 ft. - 12,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** GAHU

**Key Characteristics:**

- ◆ Shrubs, evergreen, stems spreading, **short**, 10–30 cm, slender, stoloniferous
- ◆ Leaf blades broadly elliptic, 1–2.5 cm, bases rounded, margins serrulate, glabrous
- ◆ Inflorescences axillary, **solitary flowers**; pedicels 0.5–1.5 mm; bracteoles 1–3, green or pink-tinged
- ◆ Sepals 5, red to deep pink, 2–2.5 mm, glabrous; **petals 5, white to pale pink**, 2.5–4 mm, glabrous
- ◆ Fruits red, 5–7 mm wide

**Similar Species:** *Kalmia microphylla* also occurs in wetlands. It is distinguished by opposite leaves with entire, revolute margins and flowers on pedicels.

**Habitat and Ecology:** Found along moist streambanks, in wet meadows and moist spruce woods.

**Comments:** Most members of the heath family are poisonous to animals. Global range extends from British Columbia and Alberta, south to New Mexico.



***Kalmia microphylla* (Hook.) A. Heller**  
Alpine or bog laurel

Ericaceae

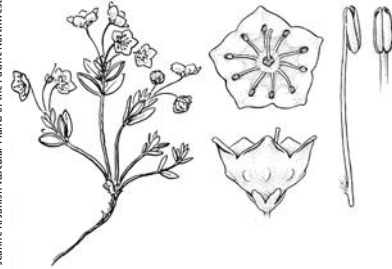


Janis Lindsey Huggins



Matt Below CalPhotos

Jeanne R. Janish Vascular Plants of the Pacific Northwest



Denise Culter, Colorado Natural Heritage Program



**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 9,100 ft. - 12,560 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** KAMI

**Key Characteristics:**

- ◆ Shrubs, spreading to erect, **very short**, 5–17 cm tall
- ◆ **Leaves opposite, evergreen, thick**, margins entire, revolute, underside with short hairs
- ◆ Inflorescence of solitary flowers in terminal racemes; pedicels 10–30 mm long
- ◆ Sepals 5, light pink-green; margins ciliate; **petals 5, rose-purple**, 8–12 mm across
- ◆ Fruits capsules, 5-locular, glabrous; seeds winged

**Similar Species:** *Arctostaphylos uva-ursi* leaves are green on both sides, not revolute and the flowers are urn-shaped.

**Habitat and Ecology:** Infrequent, but locally abundant on streambanks, in fens, and wet meadows and along lake margins in upper montane and subalpine. Grows in acidic, saturated soils.

**Comments:** *K. microphylla* is poisonous to animals, as are most members of the heath family. However, it is a larval host and/or nectar source for butterflies.

***Ribes inerme* Rydb.**  
Whitestem gooseberry

Grossulariaceae



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers



Al Schneider Southwestern Colorado Wildflowers

**Key Characteristics:**

- ◆ Shrubs 1–3 m tall; stems with spines, 0 to 3 per node, spines 1–12 mm long
- ◆ Leaves 2.0–6.0 cm wide, 3 to 5 lobed or dentate, bases truncate, long-hairy
- ◆ Inflorescence a pendant, **solitary or 1- to 4-flowered raceme**, 1.5–3.5 cm, axis glabrous
- ◆ Hypanthium glabrous, campanulate; styles pilose; filaments pubescent; sepals reflexed
- ◆ **Berries palatable, greenish or reddish-purple to gray-black, glabrous**

**Similar Species:** *R. americanum* also has glabrous ovaries and berries, but has distinctive leaves with yellow gland-dots on lower surfaces and no spines.

**Habitat and Ecology:** Common along streams, moist roadsides, in meadows and sometimes on dry slopes.

**Comments:** Fruits of *Ribes* species are a valuable food source for songbirds, chipmunks, ground squirrels, as well as numerous wildlife species and other animals. Currant and gooseberry are alternate hosts for white pine blister rust (*Cronartium ribicola*) which infests five-needled pines. Because of their association with the rust, *Ribes* spp. have been the targets of various eradication efforts in the west.

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 5,500 ft. - 10,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** RIIN2

## *Crataegus rivularis* Nutt.

River hawthorn

Rosaceae



Mary Winter CalPhotos



Mary Winter CalPhotos



Trent M. Draper CalPhotos

**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 5,400 ft. - 8,000 ft.

**Synonyms:** *Crataegus douglasii* Lindl. var. *rivularis* (Nutt.) Sarg.

**USDA PLANTS Symbol:** CRR1

### Key Characteristics:

- ◆ Shrubs or small trees, widely spreading branches, **thorns 0.5–3 (3.5) cm long**
- ◆ **Leaves sharply serrate, elliptical, not lobed, more than 4.0 cm long**
- ◆ Inflorescence a cyme; flowers (2) 5–10, perfect

- ◆ Petals 5, 4.5–7.5 mm long, white; sepals 5; stamens 10; ovaries inferior
- ◆ **Fruits pomes, mature fruits purplish-black, 10 mm across**

**Similar Species:** *C. saligna* has petals that are 3–4 mm long, leaves are lanceolate to elliptical and berries are dark blue-black.

**Habitat and Ecology:** Common on the Western Slope, along streams and in canyon bottoms.

**Comments:** Ackerfield (2015) recognizes *C. douglasii* var. *rivularis* as the accepted name. Hawthorns provide habitat and forage for songbirds, raptors, small and large mammals on the Western Slope. Flowers are important for nectar feeding insects. Fruits are particularly important for thrushes and waxwings that eat the berries or haws .

# *Crataegus saligna* Greene

Willow hawthorn

Rosaceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program



Janis Umsey-Higgins

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G3G4  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,230 ft. - 8,000 ft.  
**Synonyms:** *Crataegus douglasii* Lindl. var. *duchesnensis* S.L. Welsh  
**USDA PLANTS Symbol:** CRSA2

## Key Characteristics:

- ◆ Shrubs or small trees with long, erect stems, few branched, **thorns 0.5–3 (3.5) cm long**
- ◆ **Leaves not distinctly lobed, crenate to slightly serrate, elliptical**, less than 4.0 cm long

**Similar Species:** *C. rivularis*, the most common hawthorn on the Western Slope, has bigger leaves and fruit. *C. saligna* fruits are dark blue-black versus red.

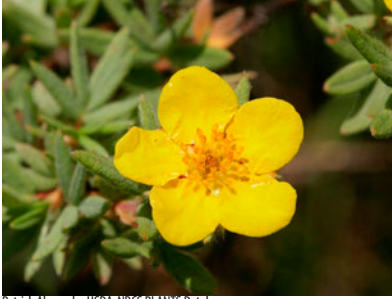
**Habitat and Ecology:** *C. saligna* is a Colorado endemic. It forms a dominant shrub layer along the White, Colorado, Gunnison, Roaring Fork and Eagle Rivers. It is also documented in Chaffee County near Poncha Springs along the Arkansas River.

**Comments:** Ackerfield (2015) recognizes *C. douglasii* var. *duchesnensis* as the accepted name. Hawthorns provide habitat and forage for songbirds, raptors, small and large mammals on the Western Slope. Flowers are important for nectar feeding insects. Fruits are particularly important for thrushes and waxwings that eat the berries or haws.

- ◆ Inflorescence a cyme
- ◆ Petals 5, 3–4 mm long, white; sepals 5; stamens 15–20; ovaries inferior
- ◆ **Fruits are pomes, blue-black, 5–8 mm across**

***Dasiphora fruticosa* (L.) Rydb. ssp. *floribunda* (Pursh) Kartesz**  
Shrubby cinquefoil

Rosaceae



Patrick Alexander USDA-NRCS PLANTS Database



Denise Culver Colorado Natural Heritage Program

Jeanne R. Janish Vascular Plants of the Pacific Northwest  
Denise Culver Colorado Natural Heritage Program



JRJ

achene



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 4

**Duration:** Perennial

**Elevation:** 7,500 ft. - 13,000 ft.

**Synonyms:** *Dasiphora floribunda* (Pursh)

Raf., *Dasiphora fruticosa* auct. non (L.) Rydb.,

*Pentaphylloides floribunda* (Pursh) Å. Löve, nom.

illeg., *Potentilla floribunda* Pursh, *Potentilla fruticosa* auct. non L.

**USDA PLANTS Symbol:** DAFRF

**Key Characteristics:**

- ◆ Shrubs, 1–10 (15) dm tall with reddish-brown shredding bark
- ◆ Leaves pinnately compound, but crowded, **leaflets linear**, usually 5, entire margins

**Similar Species:** None.

**Habitat and Ecology:** Common in moist mountain meadows, fens, open woods, and along streams.

**Comments:** Deer and elk will browse shrubby cinquefoil during the winter. It also provides shelter and nesting habitat for upland game birds such as sage grouse, songbirds and small mammals in wet meadows of high mountain parks.

- ◆ Inflorescence a corymb (flat-topped)
- ◆ Flowers perfect, sepals 5; **petals 5, yellow**; stamens 20–25
- ◆ Fruits achenes with white pubescence

# *Populus angustifolia* James

Narrowleaf cottonwood

Salicaceae



Pam Smith Colorado Natural Heritage Program

Mart. Leijn



Jeanne R. Janish Vascular Plants of the Pacific Northwest

## Key Characteristics:

- ◆ Trees to 20 m tall; bark light brown, shallowly furrowed
- ◆ Terminal buds 5-scaled, sticky and aromatic
- ◆ Leaves lanceolate to narrowly ovate, 2.5 cm or less wide

**Similar Species:** *P. x acuminata* has petioles usually over 1/3 of the blade length, leaves that are ovate and buds that are 6–7 scaled, non-aromatic and not sticky. However, there are gradations between *P. x acuminata* and *P. angustifolia*. *Salix fragilis* has yellow buds, single scales and yellow twigs that break easily.

**Habitat and Ecology:** Common along streams, rivers and in floodplains above 5,000 ft.

**Comments:** Narrowleaf cottonwood provides habitat, cover, and food for a diversity of wildlife, including squirrels, beaver, bears, white-tailed deer, and many bird species.

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 5  
**Duration:** Perennial  
**Elevation:** 4,920 ft. - 10,400 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POAN3

- ◆ Petioles usually less than 1/3 of the blade length, 0.2–0.8 cm long
- ◆ Winter buds reddish-brown, glabrous, resinous and fragrant

***Populus balsamifera* L.**  
Balsam poplar

Salicaceae



Matt Lavin



Matt Lavin



Matt Lavin

**Wetland Status WMVC:** FAC  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 6,000 ft. - 11,800 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** POBA2

**Key Characteristics:**

- ◆ Trees to 20 m tall, bark furrowed and grayish on older trunks
- ◆ Terminal buds more than 15 mm long, very resinous and sticky
- ◆ Leaf blades ovate to ovate-lanceolate, 8.0–12.0 cm long x 4.5–6.0 cm wide, pale green below
- ◆ Leaf margins minutely and finely crenate-serrate, three lowest veins arising from a central point
- ◆ Petioles usually abruptly broadening at the bases, often twisted

**Similar Species:** *P. x acuminata* occurs in similar habitats, but the petioles are usually over 1/3 of the blade length, the leaves are ovate and terminal buds are 6–7 scaled, non-aromatic and not sticky.

**Habitat and Ecology:** Common along montane and subalpine streams and rivers. Often an indicator of a seep or spring or high water table.

**Comments:** *P. balsamifera* is browsed by deer, elk and moose, particularly during the winter. It provides habitat and food for rodents, rabbits and beavers. Widespread from Alaska, Canada, south to California, Colorado, to the east coast.

***Populus deltoides* Bartram ex Marsh.**  
Plains or Rio Grande cottonwood

Salicaceae

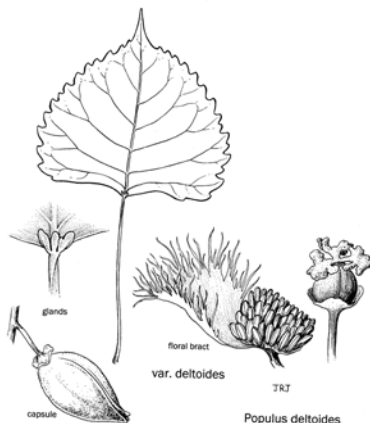


Rio Grande Cottonwood leaf blade. CNHP



Plains Cottonwood leaf blade. CNHP

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**C-Value:** 3

**Duration:** Perennial

**Elevation:** 3,500 ft. - 9,500 ft.

**Synonyms:** *Populus deltoides* H. Marshall ssp. *monilifera* (Aiton) Eckenwalder, *Populus fremontii* S.

Watson var. *wislizeni* S. Watson

**USDA PLANTS Symbol:** PODE3

**Key Characteristics:**

- ◆ Trees to 55 m tall, 35 dm across; bark light brown, deeply furrowed; twigs with stellate pith; dioecious (male and female flowers on separate plants)
- ◆ **Terminal buds more than 15 mm long, very resinous and sticky**

- ◆ Leaves 8.0–12.0 cm long x 4.5–6.0 cm wide, crenate-serrate margins
- ◆ **Leaves broadly triangular with an acuminate tips and truncate bases**
- ◆ **Petioles flattened, usually abruptly broadening at the bases**

**Similar Species:** Two varieties of *P. deltoides* occur in Colorado:

1a. Leaf tips long-acuminate, leaf bases usually with 2 round glands, pedicel length uniform, 1–6 (8 in fruit) mm.....  
*P. deltoides* ssp. *monilifera* Eastern Slope.

1b. **Leaf tips short-acuminate, leaf bases lacking glands, pedicel length uniform 1–13 (17 in fruit) mm, winter buds pubescent.....***P. deltoides* ssp. *wislizeni* Western Slope.

**Habitat and Ecology:** Common along streams and rivers and on floodplains on Eastern and Western Slopes.

**Comments:** Both the plains and the Rio Grande cottonwood provide critical habitat for many wildlife species. They provide habitat for deer, elk, beaver, porcupines, rabbits, mice and rodents. Note: there are no known native occurrences of Fremont cottonwood (*P. fremontii* ssp. *fremontii*) in Colorado.



# *Salix bebbiana* Sarg.

Bebb willow

Salicaceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

John Myers eFloras of North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 10,800 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SABE2

## Key Characteristics:

- ◆ Shrubs or small trees, (1) 2–7 (10) m tall, many-stemmed; bud scales with depressed margins; older bark is gray with black streaks
- ◆ **First year branchlets reddish-purple, hairy, older branchlets white-streaked from cracked bark**

**Similar Species:** *S. ligulifolia* (= *S. eriocephala* var. *ligulifolia*) has glabrous branches and capsules. *S. planifolia* has glaucous under the leaf, but leaves are very shiny with dark, cherry red branches.

**Habitat and Ecology:** Common along streams, wet meadows, oxbow bends and abandoned sloughs throughout the mountains to the Western Slope.

**Comments:** Bebb willow is considered one of the diamond willows which refers to the diamond-shaped patterns on their trunks. These are caused by fungi, usually in shade or poor sites. Willows are extremely important browse for moose, deer and elk, provide cover for nongame birds, game birds, waterfowl, small mammals, amphibians and nesting habitat for migratory perching birds. Willows stabilize streambanks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

## *Salix boothii* Dorn

Booth's willow

Salicaceae



Matt Lavin



Matt Lavin

Jeanne R. Janish Vascular Plants of the Pacific Northwest



Trent M. Danner CalPhotos



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 10,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SAB02

### Key Characteristics:

- ◆ Shrubs, (1) 2–4 (6) m tall, **often forming thickets**
- ◆ Leaves 2–8 (10) cm long x 0.8–2.5 (3.5) cm wide, **not glaucous, acute, hairy except when mature**
- ◆ **Catkins appear with leaves**, 1–5 cm long; peduncles 0.1–1 (1.5) cm long, leafy
- ◆ **Capsules glabrous** (2.5) 3–6 mm long; stipes 0.5–2 (2.5) long
- ◆ Flower bracts dark, persistent in fruit

**Similar Species:** *S. myrtilifolia* has similar leaves, but is a decumbent shrub, not erect and is found only in calcareous fens. *S. monticola* has yellow branches and leaves that are glaucous and squared off at the bases. *S. planifolia* has red, shiny twigs with shiny, green leaves. The largest leaf blades are 1.6–3(3.6) times as long as wide and are elliptic.

**Habitat and Ecology:** Common along streams, creeks, wet meadows, swamps, seeps and in floodplains, especially in northern and central Colorado.

**Comments:** Willows are extremely important browse for moose, deer and elk, provide cover for nongame birds, game birds, waterfowl, small mammals, amphibians, and nesting habitat for migratory passerines. Willows stabilize streambanks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

# *Salix brachycarpa* Nutt.

Shortfruit willow

Salicaceae



Denise Culver Colorado Natural Heritage Program



Al Schneider Southwestern Colorado Wildflowers

Jeanne R. Janish Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,000 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SABR

## Key Characteristics:

- ◆ Shrubs, 0.2–1.5 m (3) m tall, erect, low
- ◆ Leaves 2–4 cm long x 0.6–1.6 cm wide, **glaucous on underside, hairy both sides; petioles 1–3 (4) mm long**
- ◆ Catkins appear with leaves, 0.5–2 (3) cm long; peduncles 0.2–2 cm long, leafy
- ◆ **Capsules hairy**, 4–7 mm long; stipes 0–0.5 mm long
- ◆ Flower bracts pale, persistent in fruit

**Similar Species:** *S. glauca* has longer petioles (3–10 mm long), longer catkins (4–8 mm long) and larger leaves (3–8 cm long) and is restricted to alpine areas. *S. wolfii* has glabrous capsules and the leaves are not glaucous on underside.

**Habitat and Ecology:** Common in a wide variety of habitats from montane to high elevations, along streams, creeks, wet meadows, fens, or wet alkaline flats.

**Comments:** Willows are extremely important browse for moose, deer and elk, provide cover for nongame birds, game birds, waterfowl, small mammals, amphibians, and nesting habitat for migratory passerines. Willows stabilize streambanks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

# *Salix drummondiana* Barratt ex Hook.

Drummond's willow

Salicaceae



Denise Culver Colorado Natural Heritage Program

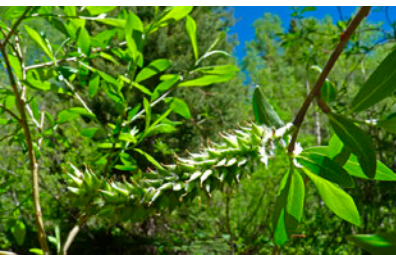


Denise Culver Colorado Natural Heritage Program

Jeanne R. Janish Vascular Plants of the Pacific Northwest



Al Schneider Southwestern Colorado Wildflowers



**Wetland Status WMVC:** FACW

**Native Status:** Native

**Conservation Status:** G4G5

**C-Value:** 6

**Duration:** Perennial

**Elevation:** 7,000 ft. - 11,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** SADR

## Key Characteristics:

- ◆ Shrubs, (1) 2–3 (6) m tall; **first year branchlets pruinose**
- ◆ Leaves 4–11 cm long x 1–2.6 cm wide, **glaucous, dense silver hairs underneath, revolute margins**

- ◆ **Catkins appear before leaves**, 1.5–6 (11) cm long; peduncles lacking
- ◆ **Capsules hairy**, 3–5.6 mm long; stipes 0.1–2 mm long
- ◆ **Flower bracts generally dark**, persistent in fruit

**Similar Species:** *S. geyeriana* leaves are shorter (2–8 cm long), only slightly hairy underneath and the peduncles are long and leafy. *S. irrorata* has glabrous capsules and the older branchlets are pruinose, not the first year's growth.

**Habitat and Ecology:** Common along streambanks, swamps and moist meadows. Widespread throughout Colorado.

**Comments:** *S. drummondiana* is the primary winter browse for moose, while use by other ungulates is generally light. Beavers prefer willows as food and building material. Willows, especially those with early spring catkins, provide nectar to native and honey bees before other food sources are available.

***Salix exigua* Nutt.**  
Narrowleaf or coyote willow

Salicaceae



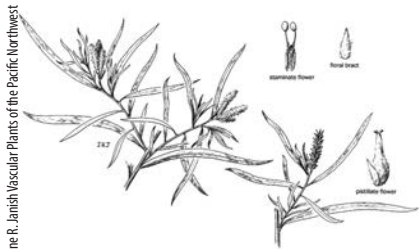
Denise Culver Colorado Natural Heritage Program



Pam Smith Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program



Jeanne R. Janisch Vascular Plants of the Pacific Northwest

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 3  
**Duration:** Perennial  
**Elevation:** 3,350 ft. - 9,600 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SAEX

**Key Characteristics:**

- ◆ Shrubs, (1) 2–3 m tall, spreading underground, **forming thickets**
- ◆ **Leaves linear, 4–16 cm long x 0.3–1.1 (2) cm wide**, pale or grayish-green

- ◆ Catkins 1.5–10 cm long, appearing with or after leaves
- ◆ Capsules glabrous, 3–5 (7) mm long; stipes absent or very short, 0–2 mm long
- ◆ Flower bracts yellow, pointed, hairy, deciduous

**Similar Species:** *S. melanopsis* has bright green leaves, older leaves are glabrous and the flower bracts have rounded or blunt tips. *S. melanopsis* is only known from central Colorado.

**Habitat and Ecology:** Abundant and common along streams and rivers, ditches and floodplains throughout Colorado.

**Comments:** Narrowleaf or coyote willow has perhaps the greatest range of all willows, from the Yukon River in Alaska to the Mississippi river in southern Louisiana, east to west in North America.

# *Salix fragilis* L.

Crack willow

Salicaceae



Matt Lavin



Matt Lavin

## Key Characteristics:

- ◆ **Trees up to 25 m tall**, trunk up to 1 m thick; **branches stout, yellow/brown, very brittle at bases**
- ◆ Leaves glaucous on underside, glandular serrate, 7–17 cm x 1.7–3.5 cm; petioles 7–20 mm long



Matt Lavin

**Wetland Status WMVC:** FAC

**Native Status:** **Non-native**

**Conservation Status:** GNR

**C-Value:** 0

**Duration:** Perennial

**Elevation:** 4,700 ft. - 9,000 ft.

**Synonyms:** None

**USDA PLANTS Symbol:** SAFR

- ◆ Catkins appear with leaves, 2–8 cm long; peduncles 1–5 cm long, leafy
- ◆ Capsules glabrous, 4–5.5 mm long; stipes 0.5–1 mm long
- ◆ **Bud scales duck bill-like, margins fused;** flower bracts pale and deciduous in fruit

**Similar Species:** *S. amygdaloides* has bud scales with free overlapping margins, leaves that typically droop on each side of branchlets and does not have yellow branches. *Populus angustifolia* saplings can be mistaken for *S. fragilis*. Look at bud scales and catkins if available.

**Habitat and Ecology:** Naturalized trees, very common along streams and pond edges in plains, foothills and lower montane regions.

**Comments:** *S. fragilis* is a non-native plant that has become naturalized in the U.S. Naturalized plants have become established in areas other than their place of origin. Naturalized plants can end up crowding out native plants. Crack willow gets its common name from how easily the twigs break off at the base, especially in the spring. Introduced in colonial times to provide charcoal for gunpowder and as a shade tree.

# *Salix geyeriana* Andersson

Geyer willow

Salicaceae



Liz Makings Arizona State University Herbarium



Steve Matson CalPhotos

John Myers eFloras of North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,800 ft. - 10,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SAGE2

### Key Characteristics:

- ◆ Shrubs, (1) 1.5–7 m; **first year branchlets pruinose**
- ◆ Leaves narrow, 2–6 cm long x 0.6–1.5 cm wide, entire, **hairy on both sides**; petioles 2–9 mm long

- ◆ Catkins appear with leaves, 0.6–2 (2.5) long; peduncles 0.1–1.8 cm long, leafy
- ◆ **Capsules 3–6 mm long, short, hairy**; stipes 0.3–1.2 mm long
- ◆ Flower bracts pale, persistent in fruit

**Similar Species:** *S. drummondiana* leaves are densely hairy and the catkins lack leafy peduncles. *S. irrorata* has glabrous or glabrate leaves, glabrous capsules and the previous year's branches are pruinose.

**Habitat and Ecology:** Common in fens, moist meadows, along streams, pond borders and irrigated pastures.

**Comments:** *S. geyeriana* often takes on the look of a "mushroom" after intense grazing by livestock or wildlife. Willows are extremely important browse for moose, deer and elk, provide cover for nongame birds, game birds, waterfowl, small mammals, amphibians, and nesting habitat for migratory passerines. Willows stabilize stream-banks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

***Salix glauca* L.**  
Grayleaf willow

Salicaceae



Denise Culver Colorado Natural Heritage Program

Denise Culver Colorado Natural Heritage Program



USDA-NRCS PLANTS Database Britton & Brown 1913

**Key Characteristics:**

- ◆ **Shrubs, usually less than 1 m tall**, occasionally to 2 m
- ◆ Leaves glaucous underneath, 3–8 cm long x 0.7–3.5 cm wide; **petioles 3–10 mm long**
- ◆ Catkins appear with leaves, 2–5 cm long; peduncles 0.5–3.5 cm long, leafy

**Similar Species:** *S. brachycarpa* has shorter petioles and catkins and leaves are generally hairier than *S. glauca*. Hybrids between *S. brachycarpa* and *S. glauca* are common.

**Habitat and Ecology:** Common along streams, in forests, subalpine and alpine tundra.

**Comments:** Alpine willows are food plants for butterfly larvae and nectar sources for adults. The best known example is the Federally Listed Endangered butterfly, Uncompahgre fritillary (*Boloria acrocnema*) that utilizes snow willow (*S. nivalis*) patches for laying eggs and then for food.

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,500 ft. - 13,500 ft.  
**Synonyms:** *Salix glauca* L. var. *villosa* (D. Don ex Hook.) Andersson  
**USDA PLANTS Symbol:** SAGL

- ◆ **Capsules hairy**, 4–8 mm long; stipes 0–2.5 mm long
- ◆ Flower bracts pale or sometimes dark, persistent in fruit



# *Salix irrorata* Andersson

Bluestem or dewystem willow

Salicaceae



Allison Shaw Colorado Natural Heritage Program



Allison Shaw Colorado Natural Heritage Program



Allison Shaw Colorado Natural Heritage Program



John Myers Flora of North America

### Key Characteristics:

- ◆ Tall shrubs, 2–7 m high; branchlets strongly pruinose on previous year's twigs
- ◆ Leaves 4.7–11.5 cm long x 0.8–2.2 cm wide, glaucous on underside, glabrous or sparsely hairy

- ◆ Catkins appear before leaves, 1.8–4.2 cm long; peduncles 0–0.5 cm long, leafy
- ◆ Capsules glabrous, 3–5 mm long; stipes 0.3–1.2 mm long
- ◆ Flower bracts dark, persistent in fruit

**Similar Species:** *S. drummondiana* has hairy capsules and leaves with dense silver hairs on the underside. *The distinguishing character for S. irrorata* is that the previous year's branchlets are distinctively pruinose, not the first year branchlets. *S. geyeriana* has hairy leaves and hairy capsules.

**Habitat and Ecology:** Grows along creeks and streams, canyon bottoms.

**Comments:** The global range includes Wyoming, Colorado, Arizona and New Mexico. Willows, especially those with early spring catkins, provide nectar to native bees and honey bees before other food sources are available. Willows stabilize streambanks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 5,100 ft. - 10,000 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SAIR

***Salix ligulifolia* (C.R. Ball) C.R. Ball ex C.K. Schneid.**  
Strapleaf willow

Salicaceae



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program

**Wetland Status WMVC:** FAC

**Native Status:** Native

**Conservation Status:** G5

**Duration:** Perennial

**C-Value:** 7

**Elevation:** 4,500 ft. - 10,000 ft.

**Synonyms:** *Salix eriocephala* Michx. var. *ligulifolia* (C.R. Ball) Dorn, *Salix lutea* Nutt. var. *ligulifolia* C.R. Ball

**USDA PLANTS Symbol:** SALI

**Key Characteristics:**

- ◆ **Shrubs to 6 m tall;** year old branchlets predominantly reddish-brown on top, yellow underneath
- ◆ **Leaves strap-shaped, glaucous,** 5–10 (12) cm x 1–2.5 (3.5) cm; petioles 3–12 (15) mm long

- ◆ **Catkins appear with leaves,** 2–6 cm long; peduncles 0–0.9 cm long, leafy when present
- ◆ **Capsules glabrous,** 3.5–6 mm long; stipes 0.5–2 (2.5) mm long,
- ◆ Flower bracts dark, persistent in fruit

**Similar Species:** *S. eriocephala* is a complex of six taxa that gradually intergrade where their ranges overlap. For Colorado, these include: *S. lutea* and *S. ligulifolia*. *S. lutea* is distinguished from *S. ligulifolia* by leaves with serrate margins, longer stipes (0.8–2 (4) mm long) and previous year's branchlets that are not reddish.

**Habitat and Ecology:** Common along floodplains, streams and next to springs.

**Comments:** Willows are extremely important browse for moose, deer and elk, provide cover for nongame birds, game birds, waterfowl, small mammals, amphibians, and nesting habitat for migratory passerines. Willows stabilize streambanks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

***Salix lucida* Muhl.**  
Greenleaf, shining, or Pacific willow

Salicaceae



Denise Culver Colorado Natural Heritage Program



Pam Smith Colorado Natural Heritage Program

John Myers Flora of North America



**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 4,200 ft. - 9,000 ft.  
**Synonyms:** *Salix lasiandra* Benth.  
**USDA PLANTS Symbol:** SALU

**Key Characteristics:**

- ◆ **Shrubs or trees (2) 3–6 (12) m tall**, smooth, gray bark becoming dark and fissured in larger individuals
- ◆ **Leaves may be glaucous on underside, tips long acuminate, glands on bases**; petioles 13–30 mm long
- ◆ **Catkins appear with leaves**, 1.7–10 cm long; peduncles 0.8–6.5 cm long, leafy
- ◆ **Capsules glabrous**, 4–7 mm long; stipes 0.5–4 mm long
- ◆ **Flower bracts pale, deciduous in fruit**

**Similar Species:** Two varieties of *S. lucida* occur in Colorado: 1a. Leaves about equally green above and below, underside of leaves not glaucous, leaf tips long-acuminate (2 cm or more), capsules 4–7 mm long, greenish-brown... *S. lucida* var. *caudata* (= *S. lasiandra* var. *caudata*). 1b. Leaves paler below than above, underside of leaves glaucous, leaf tips long acuminate, capsules mostly 4–7 mm long, greenish-brown... *S. lucida* var. *lasiandra* (= *S. lasiandra* var. *lasiandra*).

**Habitat and Ecology:** Common along rivers, creeks and streams, abandoned oxbow bends and sloughs. The bright yellow male catkins in May/June are a good diagnostic character.

**Comments:** Common from Alaska to the Midwestern United States.

# *Salix monticola* Bebb

Rocky Mountain willow

Salicaceae



Denise Culver Colorado Natural Heritage Program



Pam Smith Colorado Natural Heritage Program



Denise Culver Colorado Natural Heritage Program



Jeanne R. Janish Vascular Plants of the Pacific Northwest

## Key Characteristics:

- ◆ **Shrubs, to 6 m tall, forming thickets;** year old twigs primarily yellow or reddish-brown, glabrous
- ◆ **Leaves glaucous underneath, glabrous, 3–8 (9.5) cm x 1.5–3.5 cm, serrate, bases are “squared off”**

**Similar Species:** *S. ligulifolia* has thinner textured leaves which are often longer and narrower, with reddish-brown year old branchlets.

**Habitat and Ecology:** Common along streams, rivers, floodplains and in moist meadows. Likely the most common montane willow, in Colorado, found everywhere in the State, except for the far Eastern plains of Colorado.

**Comments:** *S. monticola*'s global range includes Saskatchewan, Wyoming, Colorado, Utah, Arizona and New Mexico. Willows are extremely important browse for moose, deer and elk, provide cover for nongame birds, game birds, waterfowl, small mammals, amphibians, and nesting habitat for migratory passerines. Willows stabilize streambanks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G4G5  
**C-Value:** 6  
**Duration:** Perennial  
**Elevation:** 5,000 ft. - 12,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SAMO2

- ◆ **Catkins appear before or with leaves,** 1–5 (6) cm long; peduncles 0–0.8 (1.7) cm long, leafy
- ◆ **Capsules glabrous,** 3–6 mm long; stipes 0.3–1.5 (2) mm long
- ◆ Floral bracts are dark, persistent, especially in winter

***Salix nivalis* Hook.**  
Snow willow

Salicaceae



Steve Matson CalPhotos



Steve Matson CalPhotos



Steve Matson CalPhotos



ALSchneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 9  
**Duration:** Perennial  
**Elevation:** 9,180 ft. - 13,500 ft.  
**Synonyms:** *Salix reticulata* L. var. *nana* Andersson,  
*Salix reticulata* L. var. *nivalis* (Hook.) Andersson  
**USDA PLANTS Symbol:** SANI8

**Key Characteristics:**

- ◆ Shrubs, **mat-forming, creeping**, less than 1 dm tall
- ◆ **Leaves glaucous below**, 0.5–3.6 cm x 0.3–3 cm, thick, reticulate veins; petioles 1–15 (28) mm long
- ◆ Catkins appear after leaves, 0.5–2 cm long; peduncles 0.2–2 cm long, lacking leaves
- ◆ Capsules hairy, 3.5–5 mm long; stipes 0.2–0.4 mm long
- ◆ Flower bracts pale, persistent in fruit

**Similar Species:** *S. petrophilla* leaves are elliptic, 7-21 mm wide, acute tips, and no reticulate veins.

**Habitat and Ecology:** Common in moist to dry tundra. Global range extends from British Columbia, Alberta south to California and New Mexico.

**Comments:** *S. nivalis* provides food and rearing habitat (egg laying) for the Uncompahgre fritillary (*Boloria acrocne*).

# *Salix planifolia* Pursh

Diamondleaf willow

Salicaceae



Denise Culver Colorado Natural Heritage Program



Pam Smith Colorado Natural Heritage Program



Jeanne B. Janisch and Laura Vogel Vascular Plants of the Pacific Northwest



Al Schneider Southwestern Colorado Wildflowers

**Wetland Status WMVC:** OBL  
**Native Status:** Native  
**Conservation Status:** G5  
**C-Value:** 7  
**Duration:** Perennial  
**Elevation:** 8,000 ft. - 13,500 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SAPL2

## Key Characteristics:

- ◆ Shrubs, to 5 m tall; **year old branchlets red and shiny**
- ◆ **Leaves shiny green on upperside, glaucous on underside**, (2) 3.5–5 (8) cm long x 0.9–1.5 (2.2) cm wide
- ◆ Catkins appear before leaves, 1.5–6 cm long; peduncles lacking or nearly so
- ◆ **Capsules hairy**, (3.5) 5–6 mm long; stipes 0–1 mm long
- ◆ Flower bracts dark, persistent in fruit

**Similar Species:** *S. planifolia* is distinctive with the shiny leaves and dark red twigs.

**Habitat and Ecology:** *S. planifolia* is one of Colorado's most distinct willows with wine red stems and green, shiny upper leaves. Likely the most common willow in the upper montane to subalpine in Colorado. Found along streams, lake margins, fens, moist meadows and wet alpine meadows.

**Comments:** Willows, especially those with early spring catkins, provide nectar to native bees and honey bees before other food sources are available.

# *Salix wolfii* Bebb

Wolf's willow

Salicaceae

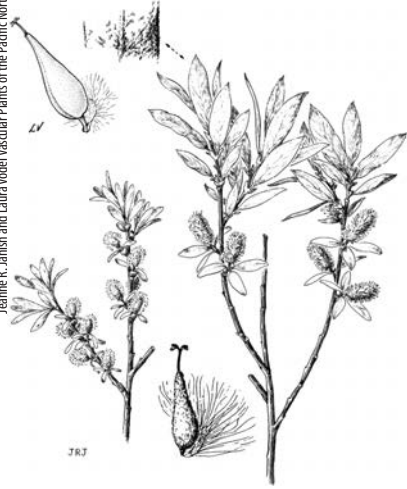


Matt Lavin



Matt Lavin

Jeanne R. Jamish and Laura Vogel/Vascular Plants of the Pacific Northwest



J.R.J.

**Wetland Status WMVC:** FACW  
**Native Status:** Native  
**Conservation Status:** G5?  
**C-Value:** 8  
**Duration:** Perennial  
**Elevation:** 7,300 ft. - 11,760 ft.  
**Synonyms:** None  
**USDA PLANTS Symbol:** SAWO

## Key Characteristics:

- ◆ Shrubs, 1 (2) m tall, freely branching, **forming thickets**
- ◆ **Leaves not glaucous underneath, entire, hairy on both sides;** petioles 2–10 mm long
- ◆ Catkins appear with leaves, 0.8–2 (3) cm long; peduncles 0–1.2 cm long, leafy when present
- ◆ **Capsules glabrous,** 3.5–5 mm long; stipes 0–0.8 mm long
- ◆ Flower bracts dark and persistent

**Similar Species:** *S. brachycarpa* has hairy capsules and is typically much larger in stature. *S. boothii* is also taller, has large, often toothed leaves, and the catkins are longer, up to 5 cm.

**Habitat and Ecology:** Locally common in fens, along streams, sloughs and abandoned oxbows in upper montane to subalpine.

**Comments:** Willows are extremely important browse for moose, deer and elk, provide cover for nongame birds, game birds, waterfowl, small mammals, amphibians, and nesting habitat for migratory passerines. Willows stabilize streambanks, shade stream and river margins, and contribute organic matter and food (e.g. leaves and insects) to adjacent water bodies.

# *Tamarix chinensis* Lour.

Saltcedar

Tamaricaceae

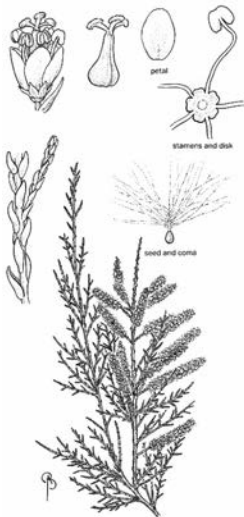


Michael H. Cota Flickr Creative Commons



Al Schneider Southwestern Colorado Wildflowers

Bobbi Angel Vascular Plants of the Pacific Northwest



**Wetland Status WMVC:** FACW  
**Native Status:** Non-native, CO Noxious Weed  
**List B**  
**Conservation Status:** GNR  
**C-Value:** 0  
**Duration:** Perennial  
**Elevation:** 3,390 ft. - 8,000 ft.  
**Synonyms:** *Tamarix pentandra* Pall., *Tamarix ramosissima* Ledebour  
**USDA PLANTS Symbol:** TACH2

## Key Characteristics:

- ◆ Shrubs or small trees 2–8 m tall, many stemmed with slender branches, forming thickets
- ◆ Bark on stems and branches reddish-brown
- ◆ Leaves small, scale-like, 1–3 mm long
- ◆ Flowers very small, pink to white, 5 petals, 1.4–2.5 mm long, appearing with and after leaves
- ◆ Capsules lance-subulate, 3–4 mm long

**Similar Species:** *T. parviflora* is not as common and has 4-merous flowers appearing before the leaves and has dark brown branches.

**Habitat and Ecology:** Common along streams and lake margins and reservoirs on the Eastern and Western Slopes where it has escaped cultivation.

**Comments:** *T. chinensis* is designated as a List B species in the Colorado Noxious Weed Act. Managers are recommended to contact the County Weed Manger to verify identification. It is a prolific seed producer, becoming a monoculture throughout lower elevation rivers (e.g., Colorado, South Platte and Arkansas Rivers). The release of the tamarisk leaf beetle (*Diorhabda* spp.) has proven to be an effective biological control on the invasive shrub. However, the Southwestern Willow Flycatcher does nests in both tamarisk and willow riparian shrublands.



# Glossary

(Adapted from *Plant Identification Terminology: An Illustrated Glossary*. Second Edition. 2003. James G. Harris and Melinda Woolf Harris, *Colorado Flora, Eastern and Western Slopes*. Fourth Editions. 2012. William A. Weber and Ronald C. Wittmann, and *Flora of Colorado*. 2015. Jennifer Ackerfied.)

- Acaulescent** – Without a stem, or the stem so short that the leaves are apparently all basal, as in the dandelion.
- Achene** – A small, dry, hard, one-celled, one-seeded, indehiscent fruit with the seed attached to the pericarp at one point.
- Actinomorphic** – Radially symmetrical, so that a line drawn through the middle of the structure along any plane will produce a mirror image on either side.
- Acuminate** – Tapering to a pointed apex with concave sides along the tip.
- Acute** – Tapering to a pointed apex with more or less straight sides.
- Adnate** – Fusion of unlike parts, as the stamens to the corolla.
- Adventive** – Not native and not fully established; locally or temporarily naturalized.
- Alien (=Exotic)** – A species that is non-native to the region or state, introduced by accident or spreading after being deliberately planted for another purpose.
- Androgynous** – With both staminate and pistillate flowers, the staminate flowers borne above the pistillate (as in some *Carex* spp.).
- Anther** – The expanded, apical, pollen-bearing portion of the stamen.
- Apical** – Located at the apex or tip.
- Attenuate** – Tapering gradually to a narrow tip or base.
- Auricle** – A small, ear-shaped appendage.
- Auriculate** – With auricles.
- Awn** – A bristle-shaped appendage.
- Basal** – Positioned at or arising from the base, as leaves arising from the base of the stem.
- Beak** – A narrow or prolonged tip, as on some fruits and seeds.
- Bidentate** – With two teeth.
- Bifid** – Deeply two-cleft or two-lobed, usually from the tip.
- Bipinnate** – Twice pinnate; with the divisions again pinnately divided.
- Bipinnatifid** – Twice pinnately cleft.
- Blade** – The broad, usually flat part of a leaf.
- Bract** – A modified leaf subtending a spike or inflorescence.
- Bractlet** – A small bract, often secondary in nature.
- Callus** – A hard thickening or protuberance; the thickened basal extension of the lemma in many grasses.
- Calyx** – The outer perianth whorl; collective term for all of the sepals of a flower.
- Campanulate** – Bell-shaped.
- Canescent** – Gray or white in color due to a covering of short, fine gray or white hairs.
- Capsule** – A dry, dehiscent fruit composed of more than one carpel.
- Carpophore** – A slender prolongation of the receptacle or carpel forming a central axis between the carpels, as in the fruits of some members of the Apiaceae and the Geraniaceae.
- Caruncle** – A protuberance or appendage near the scar on a seed marking the attachment of a seed (as in grasses).
- Catkin** – An inflorescence consisting of a dense spike or raceme of apetalous, unisexual flowers as in Salicaceae and Betulaceae; an ament.
- Cauliscent** – With an obvious leafy stem rising above the ground.
- Cauline** – Of or on the stem.
- Cespitose (Caespitose)** – Growing in dense tufts.
- Ciliate** – With a marginal fringe of hairs.
- Ciliolate** – With a marginal fringe of minute hairs.

- Clavate – Club-shaped, gradually widening toward the apex.
- Clavate – Club-shaped, gradually widening toward the apex.
- Cleistogamous – Flowers which self-fertilize without opening.
- Coma – A tuft of hairs, especially on the tip of a seed.
- Connate – Fusion of like parts, as the fusion of staminal filaments into a tube.
- Cordate – Heart-shaped, with the notch at the base.
- Coriaceous – With a leathery texture.
- Corolla – The collective name for all the petals of a flower; the inner perianth whorl.
- Corymb – A flat-topped or round-topped inflorescence, racemose, but with the lower pedicels longer than the upper.
- Corymbiform – An inflorescence with the general appearance, but not necessarily the structure, of a true corymb.
- Crenate – Rounded teeth along the margin.
- Culm – A hollow or pithy stalk or stem, as in the grasses, sedges, and rushes.
- Cyathium – An inflorescence consisting of a cup-like involucre containing a single pistil and male flowers with a single stamen; as in the *Euphorbia*.
- Cyme – A flat-topped or round-topped determinate inflorescence, paniculate, in which the terminal flower blooms first.
- Deciduous – Falling off; not evergreen; not persistent.
- Decumbent – Reclining on the ground but with the tip ascending.
- Decurrent – Extending downward from the point of insertion, as a leaf base that extends down along the stem.
- Dentate – Toothed along the margin, the teeth directed outward rather than forward.
- Dichotomous – Branched or forked into two more or less equal divisions.
- Dimorphic – With two different sized parts or positions of parts; with two forms.
- Dioecious – Flowers imperfect, the staminate and pistillate flowers borne on different plants.
- Discoid – Resembling a disk.
- Distal – end opposite point of attachment, point further away from base of plant.
- Divaricate – Widely diverging or spreading apart.
- Drupe – A fleshy, indehiscent fruit with a stony endocarp usually surrounding a single seed, as in a peach or cherry.
- Eglandular – Without glands.
- Elliptic – In the shape of an ellipse, or a narrow oval; broadest at the middle and narrower at the two equal ends.
- Emergent – Rising out of water.
- Emersed – Standing out of or rising above water surface.
- Endemic – Peculiar to a specific geographic area or edaphic type.
- Ensiform – Sword-shaped.
- Equitant – Folded along midrib with fused margins toward the tips; overlapping or straddling in two ranks, as the leaves of *Iris*.
- Erose – Margin irregularly toothed, as if gnawed.
- Eutrophication – Process by which a body of water becomes enriched in dissolved nutrients that stimulate growth of aquatic plant life resulting in the depletion of dissolved oxygen.
- Exotic (=alien) – A species that is non-native to the region or state, introduced by accident or spreading after being deliberately planted for another purpose.
- Farinose – Mealy in texture.
- Filiform – Thread-like; filamentous.
- Foliaceous – Leaf-like in color and texture; bearing leaves; of or pertaining to leaves.
- Follicle – A dry, dehiscent fruit composed of a single carpel and opening along a single side, as a milkweed pod.
- Fronde – The leaf or leaf-like part of a palm or a fern often with many divisions.

- Fusiform – Spindle-shaped; broadest near the middle and tapering toward both ends.
- Geniculate – Abrupt knee-like bends or joints.
- Gibbous – Swollen or enlarged on one side.
- Glabrate – Becoming glabrous, almost glabrous.
- Glabrous – Smooth; hairless.
- Glandular – With small granules or grains.
- Glaucous – With a waxy bluish or whitish covering.
- Glomerule – A dense cluster; a dense head-like cyme.
- Gynecandrous – With the pistillate flowers borne above the staminate.
- Habit – General appearance or form of a plant i.e., erect, prostrate.
- Halophyte – a plant that grows in waters of high salinity.
- Hastate – Arrowhead shaped with basal lobes turned outward.
- Hirsute – Pubescent with coarse, stiff hairs.
- Hispid – Rough with firm, stiff hairs.
- Hyaline – Thin, membranous and translucent or transparent.
- Hypanthium – A cup-shaped extension of the floral axis usually formed from the union of the basal parts of the calyx, corolla, and androecium, commonly surrounding or enclosing the pistils.
- Imbricate – Overlapping like tiles or shingles on a roof.
- Inflorescence – The flowering part of a plant; the arrangement of the flowers on the flowering axis.
- Invasive Species – A species that is non-native to the ecosystem, whose introduction causes or is likely to cause economic or environmental harm.
- Involucel – A small involucre; a secondary involucre, as in the bracts of the secondary umbels in the Apiaceae.
- Involucre – A whorl of bracts subtending a flower or flower cluster.
- Involute – With the margins rolled inward toward the upper side.
- Keel – A prominent longitudinal ridge, like the keel of a boat.
- Lax – Loose; with parts open and spreading, not compact.
- Lenticels – A slightly raised somewhat corky, often lens-shaped area on the surface of a young stem.
- Lenticular – Lentil shaped (lens-shaped); biconvex.
- Ligule – A strap shaped organ; the flattened part of the ray corolla in the Asteraceae; a membranous appendage arising from the inner surface of the leaf at a junction with the leaf sheath in many grasses and some sedges; a tongue-like projection at the base of leaves above the sporangia in *Isoetes*.
- Locule – The cavity of an organ, as in the cell of an ovary containing the seed or the pollen bearing compartment.
- Monoecious – Flowers imperfect, the staminate and pistillate flowers borne on the same plant.
- Monospecific – A genus which contains only one known species.
- Mucronate – Tipped with a short, sharp, abrupt point (mucro).
- Native Plant – A plant species that occurs naturally in a particular region, state, ecosystem, and habitat without direct or indirect human actions.
- Nectary Scale (as in Ranunculaceae) – The scale that subtends the nectary which contains a sugary, sticky fluid secreted by glands.
- Nerve – A prominent, simple vein or rib of a leaf or other organ.
- Oblique – With unequal sides.
- Obconic – Conical or cone-shaped, with the attachment at the narrow end.
- Obovate – Inversely ovate, with the attachment at the narrower end.
- Ocrea (Ocreae) – Sheath around the stem formed from stipules and is found in members of the Polygonaceae.

- Oil Tube** – Narrow ducts in the walls of the fruit of many members of the Apiaceae containing volatile oils.
- Oligotrophic** – Waters with a low concentration of plant nutrients that is usually accompanied by an abundance of dissolved oxygen.
- Ovate** – Egg-shaped in outline and attached at the broad end (applied to plane surfaces).
- Palea** – A chaffy scale or bract; the uppermost of the two bracts (lemma and palea) which subtend a grass floret.
- Panicle** – A branched, racemose inflorescence with flowers maturing from the bottom upwards.
- Paniculiform** – An inflorescence with the general appearance, but not necessarily the structure of a true panicle.
- Papilla (Pappilae)** – A short, rounded nipple-like bump or projection.
- Pappus (Pappi)** – The modified calyx of the Asteraceae, consisting of awns, scales, or bristles at the apex of the achene.
- Physiognomy** – Using the structure of a plant as the basis for its classification.
- Pilose** – Bearing long, soft, straight hairs.
- Pinnate** – Resembling a feather, as in a compound leaf with leaflets arranged on opposite sides of an elongated axis.
- Pinnatifid** – Pinnately cleft or lobed half the distance or more to the midrib, but not reaching the midrib.
- Plano-convex** – Flat on one side and convex on the other.
- Plumose** – Feathery; with hairs or fine bristles on both sides of a main axis, as a plume.
- Polygamous** – With unisexual and bisexual flowers on same plant.
- Procumbent** – Lying or trailing on the ground, but not rooting at the nodes.
- Prophyll** – One of the paired bracteoles subtending the flowers in some *Juncus* spp.
- Prostrate** – Lying flat on the ground.
- Proximal** – End closest to point of attachment, or point closest to base of plant.
- Pruinose** – With a waxy, powdery, usually whitish coating (bloom) on the surface; conspicuously glaucous, like a prune.
- Puberlent (Puberulous)** – Minutely pubescent; with fine, short hairs.
- Punctate** – Dotted with pits or with translucent, sunken glands or with colored dots.
- Raceme** – An unbranched, elongated inflorescence with pedicellate.
- Racemiform** – An inflorescence with the general appearance, but not necessarily the structure, of a true raceme.
- Rachilla** – The axis of a grass or sedge spikelet.
- Receptacle** – Tip of floral axis where sepals, petals, stamens and gynoecium are attached.
- Reflexed** – Bent backward or downward.
- Reniform** – Kidney-shaped.
- Replum** – Partition or septum between two valves or compartments of silicles or siliques in the Brassicaceae.
- Resupinate** – upside down, facing upward.
- Reticulate** – In the form of a network; net veined.
- Retorse** – Directed downward or backward.
- Retuse** – With a shallow notch in a round or blunt apex.
- Revolvate** – With the margins rolled backward toward the underside.
- Runcinate** – Sharply pinnatifid or cleft, the segments directed downward.
- Sagittate** – Arrowhead shaped with basal lobes downward.
- Scabrous** – Rough to the touch, due to the structure of the epidermal cells, or to the presence of short, stiff hairs.
- Scape** – Leafless peduncle arising from ground level often from a basal rosette in acaulescent plants.

- Scarious – Thin, dry, and membranous in texture, not green.
- Secund – Arranged on one side of the axis only.
- Sepal – A segment of the calyx.
- Septate-nodulose – Divided by small transverse knobs or nodules.
- Septum – A partition, as the partitions separating the locules of an ovary.
- Serrate – Saw-like; toothed along the margin, the sharp teeth pointing forward.
- Sheath – The basal portion of the rush, sedge, or grass leaf that forms a tubular cover surrounding the stem; the portion of an organ which surrounds, at least partly, another organ, as the leaf of a base of a grass surrounds the stem.
- Silicle – A dry, dehiscent fruit of the Brassicaceae, typically less than twice as long as wide, with two valves separating from the persistent placenta and septum.
- Silique – A dry dehiscent fruit of the Brassicaceae, typically more than twice as long as wide, with two valves separating from the persistent placenta and septum.
- Spatha – A bract or pair of bracts that enclose an inflorescence.
- Spatulate – Like a spatula in shape, with a rounded blade above gradually tapering.
- Spiciform – spike-shaped.
- Spike – An unbranched, elongated inflorescence with sessile or subsessile flowers or spikelets.
- Squarrose – Abruptly recurved or spreading above the base; rough or scurfy due to the presence of recurved or spreading bracts.
- Stigma – The portion of the pistil which is receptive to pollen.
- Stipitate – Borne on a stipe or stalk.
- Stipule – One of a pair of leaf-like appendages found at the base of the petiole in some leaves.
- Stramineous – Straw-like in color or texture.
- Style – The usually narrowed portion of the pistil connecting the stigma to the ovary.
- Stylopodium – A disc-like expansion or enlargement at the base of the style in the Apiaceae family.
- Submersed – Covered with water, adapted to grow under water.
- Subulate – Awl-shaped.
- Synoeious – With staminate and pistillate flowers together in same head.
- Tepals – Perianth segment not differentiated into petals and sepals (corolla or calyx).
- Terete – Round in cross section; cylindrical.
- Ternate – In threes, as a leaf which is divided into three leaflets.
- Thallus – An expanded “stem” that functions as a leaf; as in *Lemna*.
- Thyrse – A compact, cylindrical, or ovate panicle with an indeterminate main axis and cymose sub-axes.
- Tomentose – With a covering of short, matted or tangled, soft, wooly hairs; with tomentum.
- Torulose – Slightly torose (cylindrical with alternate swellings and contractions) like a small fruit with constrictions between the seeds.
- Trichome – A hair or hair-like outgrowth of the epidermis.
- Trigonus – Three-angled.
- Tripinnate – Pinnately compound three times, with pinnate pinnules.
- Truncate – With apex or base squared at the end as if cut off.
- Tubercules – Small, tuber-like swelling at base of style as in *Eleocharis*.
- Turions – Small, fleshy, scaly shoot or winter bud.
- Umbel – A flat-topped or convex inflorescence with the pedicels arising more or less from a common point, like the struts of an umbrella; a highly condensed raceme.
- Villous – Bearing long, soft, shaggy, but unmatted, hairs.



Wing – A thin, flat appendage or the border of an organ.

Zygomorphic – Bilaterally symmetrical, so that a line drawn through the middle of the flower along only one plane will produce a mirror image.

# Photo Credits

- A. S. Kers Flickr Creative Commons  
Aaron Arthur CalPhotos <http://calphotos.berkeley.edu/>  
Aaron Schusteff CalPhotos <http://calphotos.berkeley.edu/>  
Al Schneider Southwestern Colorado Wildflowers <http://www.swcoloradowildflowers.com/>  
Allison Shaw Colorado Natural Heritage Program <http://www.cnhp.colostate.edu/>  
Amadej Trnkoczy CalPhotos <http://calphotos.berkeley.edu/>  
Andrew Borchert CalPhotos <http://calphotos.berkeley.edu/>  
Annette Miller  
Anthony Mendoza SEINet <http://swbiodiversity.org>  
Anthony Salazar Vascular Plants of the Pacific Northwest  
Barbara Alongi Flora of North America  
Barry Breckling CalPhotos <http://calphotos.berkeley.edu/>  
Bee F. Gunn Flora of North America  
Bernadette Kuhn Colorado Natural Heritage Program <http://www.cnhp.colostate.edu/>  
Biopix <http://www.biopix.com/>  
Bobbi Angell Vascular Plants of the Pacific Northwest  
Br. Alfred Brousseau Saint Mary's College CalPhotos <http://calphotos.berkeley.edu/>  
Brent Miller CalPhotos <http://calphotos.berkeley.edu/>  
Carol English  
Carol Witham CalPhotos <http://calphotos.berkeley.edu/>  
Charles Webber CA Academy of Sciences CalPhotos <http://calphotos.berkeley.edu/>  
Cindy Talbot Roché and Annaliese Miller Manual of Grasses for North America  
Cindy Talbot Roché and Hana Pazdírková Manual of Grasses for North America  
Cindy Talbot Roché Manual of Grasses for North America  
Clint Gardner Flickr Creative Commons  
Colorado State University Herbarium <http://herbarium.biology.colostate.edu/>  
creative commons  
Crystal Strouse  
D. E. Herman USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
Daniel Reed Wildflowers of the Southeastern U.S. <http://2bnthewild.com/>  
Daniella Longo Acta Plantarum (Italy) <http://www.actaplantarum.org/>  
Danielle Walkup Western New Mexico University <http://www.wnmu.edu/academic/nspages/gila-flora-/herbarium.html>  
Dean Wm. Taylor CalPhotos <http://calphotos.berkeley.edu/>  
Dee Malone Colorado Natural Heritage Program <http://www.cnhp.colostate.edu/>  
Denise Culver Colorado Natural Heritage Program <http://www.cnhp.colostate.edu/>  
Diane Blaser  
Doreen L. Smith CalPhotos <http://calphotos.berkeley.edu/>  
eFloras of China <http://www.efloras.org/>  
Ernie Marx Eastern Colorado Wildflowers <http://www.easterncoloradowildflowers.com/>  
Frank Koshere University of Wisconsin-Green Bay <http://www.uwgb.edu/biodiversity/herbarium/>  
Gary A. Monroe USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
Gary Fewless University of Wisconsin-Green Bay <http://wisplants.uwsp.edu/>  
George W. Hartwell CalPhotos <http://calphotos.berkeley.edu/>  
Graham Prichard Flickr Creative Commons  
Graves Lovell Forestry Images <http://www.forestryimages.org/>  
Hurd et al. 1997 U.S. Forest Service  
Hurd et al. 1998 U.S. Forest Service  
Hurd et al. in prep. U.S. Forest Service  
Inger Greve Alsos The Flora of Svalbard <http://svalbard-flora.net/>  
Intermountain Herbarium <http://herbarium.usu.edu/>  
J. C. Dittes CalPhotos <http://calphotos.berkeley.edu/flora/>  
J.S. Peterson USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
James L. Reveal USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
Janet Wingate Denver Botanical Gardens <http://www.botanicgardens.org/>  
Janis Lindsey Huggins  
Jason Hollinger Flickr Creative Commons  
Jean L. Pawek CalPhotos <http://calphotos.berkeley.edu/flora/>  
Jeanne R. Janish and Bobbi Angell Vascular Plants of the Pacific Northwest  
Jeanne R. Janish and Laura Vogel Vascular Plants of the Pacific Northwest

Jeanne R. Janish Vascular Plants of the Pacific Northwest  
 Jessica O'Brien CalPhotos <http://calphotos.berkeley.edu/flora/>  
 Joe R. Duft USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
 John Fielder <https://www.johnfielder.com/>  
 John Game CalPhotos <http://calphotos.berkeley.edu/>  
 John H. Rumley Vascular Plants of the Pacific Northwest  
 John Hilty Illinois Wildflowers <http://www.illinoiswildflowers.info/>  
 John Myers eFloras of North America <http://www.efloras.org/>  
 John Myers Flora of North America  
 Jose Hernandez USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
 Karin Freeman Colorado Natural Heritage Program <http://www.cnhp.colostate.edu/>  
 Kathryn Kalmbach Herbarium/Denver Botanical Garden <http://www.botanicgardens.org/>  
 Keir Morse CalPhotos <http://calphotos.berkeley.edu/kgNaturePhotography> <http://www.kgnaturephotography.com/>  
 Kristian Peters Flickr Creative Commons  
 Kurt Stueber SEINet creative commons <http://swbio-diversity.org/>  
 L. Watson and M.J. Dallwitz DELTA Database <http://delta-intkey.com/>  
 Larry Allain USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
 Larry Blakely CalPhotos <http://calphotos.berkeley.edu/>  
 Laura Vogel Vascular Plants of the Pacific Northwest  
 Laurie Lange eFloras of North America <http://www.efloras.org/>  
 Lawrence S. Gilliam USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
 Len Blumin <https://www.flickr.com/photos/lenblumin/>  
 Linda A. Vorobik and Annaliese Miller Manual of Grasses for North America  
 Linda A. Vorobik and Hana Pazdírková Manual of Grasses for North America  
 Linda A. Vorobik and Linda Bea Miller Manual of Grasses for North America  
 Linda A. Vorobik Manual of Grasses for North America  
 Lindsey Koepke USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
 Linny Heagy eFloras of North America <http://www.efloras.org/>  
 Liz Makings Arizona State University Herbarium <http://nhc.asu.edu/vpherbarium/>  
 Louis M. Landry CalPhotos <http://calphotos.berkeley.edu/>  
 Malcolm Manners The Flora of Svalbard <http://svalbardflora.net/>  
 Margo Bors CalPhotos <http://calphotos.berkeley.edu/>  
 Marilyn Phillips  
 Mark Egger Flickr Creative Commons  
 Mark S. Brunnell CalPhotos <http://calphotos.berkeley.edu/>  
 Mary Ellen Harte Forestry Images <http://www.forestryimages.org/>  
 Mary Sanseverino Flickr Creative Commons  
 Mary Winter CalPhotos <http://calphotos.berkeley.edu/>  
 Matt Below CalPhotos <http://calphotos.berkeley.edu/>  
 Matt Lavin  
 Max Licher Arizona State University Herbarium <http://nhc.asu.edu/vpherbarium/>  
 Michael H. Cota Flickr Creative Commons  
 Michael Haferkamp The Flora of Svalbard <http://svalbardflora.net/>  
 Michael Menefee <http://www.michaelmenefeephotography.com/>  
 Montana Natural Heritage Program <http://mtnhp.org/>  
 Neal Foord Atlas of the Electronic Flora of British Columbia <http://www.geog.ubc.ca/biodiversity/eflora/>  
 Neal Kramer CalPhotos <http://calphotos.berkeley.edu/>  
 Nevada Native Plant Society  
 Norman Hagen  
 Pam Smith Colorado Natural Heritage Program <http://www.cnhp.colostate.edu>  
 Patrick Alexander USDA-NRCS PLANTS Database <http://plants.usda.gov/>  
 Paul Slichter Flora and Fauna Northwest <http://science.halleyhosting.com/nature/nature.htm>  
 Peter Gorman Flickr Creative Commons  
 R. K. Kupfer University of Wisconsin-Stevens Point <http://wisplants.uwsp.edu/>  
 R.T. Hawke CalPhotos <http://calphotos.berkeley.edu/>  
 Renzo Salvo Flora Italiana <http://luirig.altervista.org/>  
 Richard Scully  
 Robert Bielesch CalPhotos <http://calphotos.berkeley.edu/>



Robert H. Mohlenbrock USDA-NRCS Western Wetland Flora <http://plants.usda.gov/>

Robert L. Clark New England Wildflowers

Robert Vidéki Forestry Images <http://www.forestry-images.org/>

Robin A. Jess Vascular Plants of the Pacific Northwest Ron Wolf CalPhotos <http://calphotos.berkeley.edu/>

Russ Kleinman Western New Mexico University <http://www.wnmu.edu/>

Ryan Batten CalPhotos <http://calphotos.berkeley.edu/>

Sandy Long Manual of Grasses for North America

Scott Smith

Sherel Goodrich SEINet swbiodiversity.org

Sheri Hagwood USDA-NRCS PLANTS Database <http://plants.usda.gov/>

Steve Hurst USDA-NRCS PLANTS Database <http://plants.usda.gov/>

Steve Matson CalPhotos <http://calphotos.berkeley.edu/>

Steve Olson

Steve Yarbrough

Susan McDougall USDA-NRCS PLANTS Database

Susan Reznicek eFloras of North America <http://www.efloras.org/>

Susan Reznicek Flora of North America

Susan Spackman Panjabi Colorado Natural Heritage Program <http://cnhp.colostate.edu>

The Nature Inn at Bald Eagle <http://natureinnat-baldeagle.com/>

Thomas G. Barnes USDA-NRCS PLANTS Database <http://plants.usda.gov/>

Thomas Stoughton CalPhotos <http://calphotos.berkeley.edu/>

Thomas Voelker CalPhotos <http://calphotos.berkeley.edu/>

Tony Frates SEINet swbiodiversity.org

Trent M. Draper CalPhotos <http://calphotos.berkeley.edu/>

University of British Columbia Botanical Gardens <http://www.botanicalgarden.ubc.ca/>

USDA-NRCS PLANTS Database Britton & Brown 1913 <http://plants.usda.gov/>

USDA-NRCS PLANTS Database Hitchcock 1950 <http://plants.usda.gov/>

USDA-NRCS Wetland Flora <http://plants.usda.gov/>

Wikipedia Commons <http://commons.wikimedia.org>

William and Wilma Follette USDA-NRCS Western Wetland Flora: West Region

William Moye III Vascular Plant of the Pacific Northwest

Yevonn Wilson-Ramsey eFloras of North America <http://www.efloras.org/>

Yevonn Wilson-Ramsey Flora of North America

Zoya Akulova CalPhotos <http://calphotos.berkeley.edu/>

Robert Vidéki Forestry Images <http://www.forestryimages.org/>

Robin A. Jess Vascular Plants of the Pacific Northwest Ron Wolf CalPhotos <http://calphotos.berkeley.edu/>

Russ Kleinman Western New Mexico University <http://www.wnmu.edu/>

Ryan Batten CalPhotos <http://calphotos.berkeley.edu/>

Sandy Long Manual of Grasses for North America

Scott Smith

Sherel Goodrich SEINet swbiodiversity.org

Sheri Hagwood USDA-NRCS PLANTS Database <http://plants.usda.gov/>

Steve Hurst USDA-NRCS PLANTS Database <http://plants.usda.gov/>

Steve Matson CalPhotos <http://calphotos.berkeley.edu/>

Steve Olson

Steve Yarbrough

Susan McDougall USDA-NRCS PLANTS Database

Susan Reznicek eFloras of North America <http://www.efloras.org/>

Susan Reznicek Flora of North America

Susan Spackman Panjabi Colorado Natural Heritage Program <http://cnhp.colostate.edu>

The Nature Inn at Bald Eagle <http://natureinnat-baldeagle.com/>

Thomas G. Barnes USDA-NRCS PLANTS Database <http://plants.usda.gov/>

Thomas Stoughton CalPhotos <http://calphotos.berkeley.edu/>

Thomas Voelker CalPhotos <http://calphotos.berkeley.edu/>

Tony Frates SEINet swbiodiversity.org


Trent M. Draper CalPhotos <http://calphotos.berkeley.edu/>

University of British Columbia Botanical Gardens <http://www.botanicalgarden.ubc.ca/>

USDA-NRCS PLANTS Database Britton & Brown 1913 <http://plants.usda.gov/>

USDA-NRCS PLANTS Database Hitchcock 1950 <http://plants.usda.gov/>

USDA-NRCS Wetland Flora <http://plants.usda.gov/>



Wikipedia Commons <http://commons.wikimedia.org>  
William and Wilma Follette USDA-NRCS Western  
Wetland Flora: West Region  
William Moyer III Vascular Plant of the Pacific Northwest  
Yevonn Wilson-Ramsey eFloras of North America  
<http://www.efloras.org/>  
Yevonn Wilson-Ramsey Flora of North America  
Zoya Akulova CalPhotos <http://calphotos.berkeley.edu/>


# References

- Ackerfeld, J. 2015. Flora of Colorado. Botanical Research Institute of Texas. Fort Worth, TX.
- Aldridge, C. L. 2000. The status of Sage Grouse (*Centrocercus urophasianus urophasianus*) in Canada. In: Thorpe, J., T. A. Steves, and M. Gollop (eds.). Proceedings of the 5th Prairie Conservation and Endangered Species Workshop. Provincial Museum of Alberta Natural History Occasional Paper 24. Edmonton, Alberta, Canada: Provincial Museum of Alberta, Curatorial Section. pp. 197-205.
- Audubon Society. 1985. Field Guide to North American Trees: Eastern Region. Alfred A. Knopf, New York, N.Y.
- Baldassarre, G. A. and E. G. Bolen. 1994. Waterfowl Ecology and Management. John Wiley and Sons, Inc. New York, N.Y.
- Barkworth, M. E., L. K. Anderson, K. M. Capels, S. Long, and M. B. Piep. 2007. Manual of Grasses for North America. Intermountain Herbarium and Utah State University Press, Utah State University, Logan, UT.
- Batt, B. D. J., A. D. Afton, M. G. Anderson, C. D. Ankney, D. H. Johnson, J. A. Kadlec, and G. L. Krapu (eds.). 1992. Ecology and Management of Breeding Waterfowl. University of Minnesota Press, Minneapolis, MN.
- Beaulieu, J., G. Gauthier, and L. Rochefort. 1996. The grazing response of graminoid plants to goose grazing in the high arctic. *Journal of Ecology*. 84:905-914.
- Brackney, A. W. and J. W. Hupp. 1993. Autumn diet of Lesser Snow Geese staging in northeastern Alaska. *Journal of Wildlife Management* 57(1):55-61.
- Carter, J. 2006. Trees and Shrubs of Colorado: Revised and Expanded. Mimbres Publishing, Silver City, N.M.
- Catling, P. M. and V.R. Catling. 1989. Observations on the pollination of *Platanthera huronensis* in southwest Colorado, USA. *Lindleyana* 4:74-84.
- Colorado Department of Agriculture. 2008. Russian olive: Identification and Management. Lakewood, CO.
- Colorado Parks and Wildlife. 2011. Statewide Strategies for Wetland and Riparian Conservation. Version 2.0. Denver, CO.
- Colorado State University Extension, 2008. Native Plant Master Manual: Boulder and Larimer Counties. Fort Collins and Longmont, CO.
- Cowardin, L.M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31.
- Cronquist, A. and R. Dorn. 2005. Salicaceae In: Holmgren, N. H., P. K., A. Cronquist. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Two, Part B, subclass Dilleniidae. The New York Botanical Gardens, Bronx, N.Y.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, and J. L. Reveal. 1986. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume One (reprint), Geological and Botanical History of the Region, Its Plant Geography and a Glossary. The Vascular Cryptogams and the Gymnosperms. The New York Botanical Garden, Bronx, N.Y.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren. 1984. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Four, Subclass Asteridae (except Asteraceae). The New York Botanical Garden, Bronx, N.Y.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren. 1989. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Three, Part B, Subclass Fabales. The New York Botanical Garden, Bronx, N.Y.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren. 1994a. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Five, Asterales. The New York Botanical Garden, Bronx, N.Y.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren. 1994b (reprint). Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Six, The Monocotyledons. The New York Botanical Garden, Bronx, N.Y.
- Cronquist, A., N. H. Holmgren, and P. K. Holmgren. 1997. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Three, Part A Subclass Rosidae (except Fabales). The New York Botanical Garden, Bronx, N.Y.
- Cross, D. H. (compiled). 1988. Waterfowl Management Handbook. Fish and Wildlife Leaflet 13. U.S. Fish and Wildlife Service. Washington, D.C.

- Crowder, W. 2003. Drummond willow Plant Guide Fact Sheet. USDA-NRCS Pullman, WA.
- Culver, D. R. and J. M. Lemly. 2013. Field Guide to Colorado's Wetland Plants: Identification, Ecology and Conservation. Colorado Natural Heritage Program, Fort Collins, CO.
- Culver, D. R. 2014. Common Wetland Plants of Colorado's Eastern Plains: A Pocket Guide. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO.
- Culver, D. R. 2018. Common Wetland Plants of Colorado's Southern Rocky Mountains: A Pocket Guide. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO.
- Darrow, K. 2006. Wild About Wildflowers. WildKat Publishing Company, Glendale, AZ.
- Dodson, C. and W. W. Dunmire. 2007. Mountain Wildflowers of the Southern Rockies: Revealing Their Natural History. University of New Mexico Press, Albuquerque, N. M.
- Dorn, R. 1997. Rocky Mountain region willow identification field guide. Renewable Resources R2-RR-97-01. USDA Forest Service, Rocky Mountain Region, Denver, CO.
- Elpel, T. J. 2006. Botany in a Day: The Patterns Method of Plant Identification. 5th Edition. HOPS Press, LLC, Pony, MT.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station. Vicksburg, MS.
- Fertig, W. 2012. Heartleaf bittercress (*Cardamine cordifolia*). [website] [http://www.fs.fed.us/wildflowers/plant-of-the-week/cardamine\\_cordifolia.shtml](http://www.fs.fed.us/wildflowers/plant-of-the-week/cardamine_cordifolia.shtml) Accessed October 2012.
- Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 16+ vols. New York and Oxford.
- Great Plains Flora Association. 1986. Flora of the Great Plains. University Press of Kansas, Lawrence, KS.
- Gullion, G. W. 1964. Wildlife uses of Nevada plants. Contributions toward a Flora of Nevada No. 49. Beltsville, MD.
- Hammerson, G. A. 1999. Amphibians and Reptiles in Colorado. Second edition. University Press of Colorado, Boulder, CO.
- Harris, J. G. and M. W. Harris. 2003. Plant Identification Terminology: An Illustrated Glossary. Spring Lake Publishing, Payson, UT.
- Harrington, H. D. 1964. Manual of the Plants of Colorado. Sage Books. The Swallow Press, Inc. Chicago, IL.
- Harrington, H. D. 1967. Edible Native Plants of the Rocky Mountains. University of New Mexico Press. Albuquerque, N.M.
- Haukos, D. A. and L. M. Smith. 1997. Common Flora of the Playa Lakes. Texas Tech University Press, Lubbock, TX.
- Haukos, D. A. and L. M. Smith. 2003. Past and future impacts of wetland regulations on playa ecology in the southern Great Plains. Wetlands 23:577-589.
- Hitchcock, C. L., A. Cronquist, and M. Ownbey, Illustrations by Jeanne R. Janish. 1969. Flora of the Pacific Northwest: An Illustrated Manual. University of Washington Press, Seattle, WA.
- Hoag, J. C., S. K. Wyman, G. Bentrup, L. Holzworth, D. G. Ogle, J. Carleton, F. Berg, and B. Leinard. 2001. Users Guide to Description, Propagation and Establishment of Wetland Plant Species and Grasses for Riparian Areas in the Intermountain West. USDA-NRCS Plant Materials Technical Note No. WY-5. Aberdeen, ID.
- Holmgren, N. H., P. K. Holmgren, and A. Cronquist. 2005. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Two, Part B, subclass Dilleniidae. The New York Botanical Gardens, Bronx, N.Y.
- Holmgren, N. H., P. K. Holmgren, J. L. Reveal, and Collaborators. 2012. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Two, Part A, subclass Magnoliidae-Caryophyllidae. The New York Botanical Gardens, Bronx, N.Y.
- Huggins, J. L. 2008. Wild at Heart: A Field Guide to Plants, Birds and Mammals. People's Press, Woody Creek, CO.
- Hultén, E. 1968. Flora of Alaska and Neighboring Territories: A Manual of the Vascular Plants. Stanford University Press, Stanford, CA.
- Hurd, E. G., G. C. Tucker, and N. L. Shaw. in prep. Field guide to Intermountain Sedges: Cyperaceae (excluding Carex). USDA Forest Service, Intermountain Research Station, Boise, ID.
- Hurd, E. G., N. L. Shaw, J. Mastrogioseppe, L. C. Smithman, and S. Goodrich. 1998. Field Guide to Intermountain Sedges. General Technical Report RMRS-GTR-10, USDA Forest Service, Rocky Mountain Research Station, Ogden, UT.

- Hurd, E. G., S. Goodrich, N. L. Shaw. 1997. Field Guide to Intermountain Rushes. General Technical Report INT-306, USDA Forest Service, Intermountain Research Station, Ogden, UT.
- Jennings, William. Private Consultant. Louisville, CO.
- Johnson, B. 2001. Field guide to sedge species of the Rocky Mountain Region. Publication R2-RR-01-03. USDA Forest Service, Rocky Mountain Region, Renewable Resources, Denver, CO.
- Kelso, Sylvia (Tass). Professor. Colorado College, Colorado Springs, CO.
- Kershaw, L., A. MacKinnon, and J. Pojar. Plants of the Rocky Mountains. Lone Pine Publishing, Edmonton, AB Canada.
- Kittel, G. 2003. A Vegetative Key to the Willows of Colorado: A Preponderance of Evidence. [http://www.conps.org/pdf/Plant\\_Lists/Salix\\_Veg\\_Key.pdf](http://www.conps.org/pdf/Plant_Lists/Salix_Veg_Key.pdf) Accessed October 2012.
- Knight, A. and R. Walter. 2001. A Guide to Plant Poisoning of Animals in North America. Teton New Media, Jackson, WY.
- Knudson, M. 2006. Silver buffaloberry (*Shepherdia argentea* (Pursh) Nutt.). Plant Guide. USDA-NRCS Bismark Plant Materials Center. Bismarck, N.D.
- Krueper, D. J. 1993. Effects of land use practices on western riparian ecosystems. In: D. M. Finch and P. W. Stangel, eds. Status and management of neotropical migratory birds. U.S. Forest Service General Technical Report RM-229.
- Kuhnlein, H. V. & N. J. Turner 1991. Traditional plant foods of Canadian Indigenous peoples. Nutrition, Botany and Use. Food and Nutrition in History and Anthropology, Vol. 8. Gordon and Breach Science Publishers, Amsterdam, Neatherlands. Ladyman, J. 2006. Rubus
- Larson, G. E. 1993. Aquatic and Wetland Vascular Plants of the Northern Great Plains. USDA Forest Service General Technical Report RM-238. Rocky Mountain Research Station, Fort Collins, CO.
- Lellinger, D. B. 1985. A Field Manual of the Ferns & Fern-Allies of the United States & Canada. Smithsonian Institution, Washington, D.C.
- Lemly, J., L. Gilligan and G. Smith. 2014. Lower South Platte River Basin Wetland Profile and Condition Assessment. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO.
- Lichvar, R. and P. Minkin. 2008. Concepts and procedures for updating the National Wetland Plant List. ERDC/CRREL TN-08-03. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.
- Lichvar, R. V. 2012. The National Wetland Plant List. ERDC/CRREL TR-12-11. U.S. Army Corps of Engineer Cold Regions Research and Engineering Laboratory, Hanover, N.H.
- Lichvar, R. V., D. L. Banks, W. N. Kirchner, and N. C. Melvin. 2016. The National Wetland Plant List Species wetland ratings. *Phytoneuron* 2016-30: 1-17. Published 28 April 2016.
- Macior, L. W. 1970. The Pollination Ecology of *Pedicularis* in Colorado. *American Journal of Botany* 57(6): 716-728.
- Martin, A. C., H. S. Zim, and A. L. Nelson 1951. *American Wildlife and Plants: A Guide to Wildlife Food Habits*. Dover Publications, Inc., New York, N.Y.
- McKinstry, M. C., W. A. Hubert and S. H. Anderson (eds.). 2004. *Wetland and Riparian Areas of the Intermountain West: Ecology and Management*. University of Texas Press, Austin, TX.
- Mitsch, W. and J. G. Gosselink. 2007. *Wetlands*, Fourth Edition. Louisiana State University, Baton Rouge, LA.
- National Research Council. 1995. *Wetlands: Characteristics and Boundaries*. National Academy Press, Washington, D.C.
- Nesom, G. 2010. Narrowleaf cottonwood (*Populus angustifolia* James ). Plant Guide. USDA-NRCS National Plant Data Center, Baton Rouge, LA.
- Pezzolessi, T. P., R. E. Zartman, E. B. Fish, and M. G. Hickey. 1998. Nutrients in a playa wetland receiving wastewater. *Journal of Environmental Quality* 27:67-74.
- Phipps, J. B. 1998. Introduction to the red-fruited hawthorns (*Crataegus*) of western North America. *Canadian Journal of Botany* 76: 1863-1899.
- Reddy, K. R. and W. F. DeBusk. 1987. Nutrient storage capabilities of aquatic and wetland plants. In: *Aquatic Plants for Water Treatment*. K. R. Reddy and W. H. Smith, (eds.) pp. 337-357. Magnolia Publishing, Orlando, FL.

- Reddy, K. R., P. D. Sacco, D. A. Graetz, K. L. Campbell, and K. M. Porter. 1983. Effect of aquatic macrophytes on physioco-chemical parameters of agricultural drainage water. *Journal of Aquatic Plant Management* 21:1-7.
- Reed, P. B. 1998. National List of Plant Species that Occur in Wetlands: 1988 National Summary. Biological Report 88 (24). U.S. Department of the Interior, U.S. Fish and Wildlife Service. Washington, D.C.
- Reznicek, Anthony. Professor. University of Michigan, Ann Arbor, MI.
- Ringelman, J. K. 1991. Evaluating and Managing Waterfowl Habitat: A General Reference on the Biological Requirements and Management of Ducks and Geese Common to Colorado. Division Report No. 16. Colorado Division of Wildlife, Denver, CO.
- Rocchio, J. 2007. Floristic Quality Assessment Indices for Colorado Plant Communities. Colorado Natural Heritage Program, Fort Collins, CO.
- Rocky Mountain Bird Observatory. 2012. [website] <http://rmbo.org/> Accessed October 2012.
- Rondeau, R., K. Decker, J. Handwerk, J. Siemers, L. Grunau, and C. Pague. 2011. The State of Colorado's Biodiversity 2011. Prepared for The Nature Conservancy. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO.
- Schneider, A. 2012. Southwest Colorado Wildflowers. [website] <http://www.swcoloradowildflowers.com/> Accessed 2012.
- Scully, R. 2007. Key to Potentillas of Colorado. Unpublished. Colorado Native Plant Society.
- Scully, Richard. Lyons, CO.
- Shaw, R. B. 2008. Grasses of Colorado. University Press of Colorado, Boulder, CO.
- Skawinski, P. M. 2011. Aquatic Plants of the Upper Midwest. Self published and printed. Wausau, WI.
- Skinner, Q. D. 2010. A Field Guide to Wyoming Grasses. Education Resources Publishing, Cumming, GA.
- Smith, S.G. 1986. The Cattails (Typha): Interspecific Ecological Differences and Problems of Identification. *Lake and Reservoir Management* 2:1: 357-362.
- Stevens, M. and C. Hoag. 2006. Broad-leaved cattail *Typha latifolia* L. USDA-NRCS National Plant Data Center, Davis, CA.
- Stevens, M. and I. Dozier. 2002. Redosier Dogwood, *Cornus sericea* L. USDA-NRCS National Plant Data Center, Davis, CA.
- Svein, C. M., J. A. Crawford, and W. D. Edge. 1998. Use and Selection of brood-rearing habitat by Sage Grouse in south central Washington. *Great Basin Naturalist* 58(4): 344-351.
- Swink, F. and G. Wilhelm. 1979. Plant of the Chicago Region. Revised and expanded edition with keys. The Morton Arboretum, Lisle, IL.
- Swink F. and G. Wilhelm. 1994. Plants of the Chicago Region. 4th Edition. Morton Arboretum, Lisle, IL.
- U.S. Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). Washington, D.C.
- USDA-NRCS Plant Guide: Nebraska sedge (*Carex nebrascensis*). 2005. Prepared by Dan Ogle, Boise, ID.
- USDA-NRCS. Wetland flora: Field office illustrated guide to plant species. 1992. USDA Natural Resources Conservation Service.
- Van der Ginkel, N. A. 2001. An Atlas of Orchid Pollination: America, Africa, Asia and Australia. A. A. Balkema Publishers, Brookfield, VT.
- Washington State Department of Ecology. 2011. [website] On-line Version of an Aquatic Plant Identification Manual for Washington's Freshwater Plants <http://www.ecy.wa.gov/> Accessed October 2012
- Weber, W. A. and R. C. Wittmann. 2012. Colorado Flora: Eastern and Western Slope, 4th Edition. University Press of Colorado. Boulder, CO.
- Welsh, S. L., N. D. Atwood, S. Goodrich, and L. C. Higgins. 1993. A Utah Flora, Second Edition. Brigham Young University Press, Provo, UT.
- Whitson, T.D., L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Lee, and R. Parker. 1991. Weeds of the West. Western Society of Weed Science in cooperation with Cooperative Extension Services, University of Wyoming, Laramie, WY.

- 
- Wilson, B. L., R. E. Brainerd, D. Lytjen, B. Newhouse, and N. Otting. 2008. *Field Guide to the Sedges of the Pacific Northwest*. Oregon State University Press. Corvallis, OR.
- Wingate, J. L. 1994. *Illustrated Keys to the Grasses of Colorado*. Denver Botanical Gardens. Denver, CO.
- Wingate, J. L. 2017. *Sedges of Colorado*. Wingate Consulting, Parker, CO.

# Index

## A

### *Acer*

*glabrum* 268

*negundo* 269

*Aconitum columbianum*  
231

### *Agrostis*

*humilis* 50

*idahoensis* 51

Alder Thinleaf 270

*Alisma triviale* 17

*Alnus incana* ssp.  
*tenuifolia*  
270

Alopecurus Boreal 52

### *Alopecurus*

*aequalis* 30

*alpinus* 52

*pratensis* 53

Alpine Besseya 261

Anemone Canadian 218

*Anemone canadensis*  
218

Angelica Giant 128

*Angelica ampla* 128

*Antennaria corymbosa*  
134

*Argentina anserina* 235

### *Arnica*

Chamisso 135

Hairy 136

### *Arnica*

*chamissonis* ssp.

*foliosa* 135

*mollis* 136

Arrowgrass Seaside 120

Arrowhead Arumleaf 18

*Artemisia biennis* 137

### Aster

Rayless alkali 159

White panicle 160

### *Astragalus*

*agrestis* 173

*alpinus* 174

### Avens

Largeleaf 237

Purple 238

Yellow 236

## B

*Barbarea orthoceras*  
164

Barley Meadow 60

### *Beckmannia*

*syzigachne* 31

Bedstraw Threepetal  
243

### Bentgrass

Alpine 50

Idaho 51

*Besseya alpina* 261

### *Betula*

*glandulosa* 271

*occidentalis* 272

### Birch

Resin 271

Water 272

### Bistort

Alpine 206

American 204

Bittercress Heartleaf  
165

### Bladderwort

Common 27

Lesser 28

### Bluebells

Franciscan 162

Tall fringed 161

Blue-eyed grass

Idaho 118

Strict 119

### Bluegrass

Marsh 63

Nodding 64

Bluejoint 54

Bog orchid Purple-petal  
124

Boxelder 269

Buckbean 195

Buffaloberry Silver 275

### Bulrush

Chairmaker's 113

Cosmopolitan 114

### Bur-reed

European 46

Narrowleaf 45

### Buttercup

Alkali 223

Alpine 221

Cursed 230

Eschscholtz's 224

Graceful 225

High northern 44

Macoun's 227

Northern 228

Pygmy 229

Rocky Mountain 226

Sharpleaf 220

Surefoot 228

Waterplantain 222

## C

### *Calamagrostis*

*canadensis*

54

*Callitriche palustris* 20

*Caltha leptosepala* 232

Canarygrass Reed 62

*Cardamine cordifolia*

165

### *Carex*

*aquatilis* 79

*athrostachya* 80

*aurea* 81

*canescens* 82

*capillaris* 83

*disperma* 84

*douglasii* 85

*heteroneura* 86

*illota* 87

*interior* 88

*lenticularis* var.  
*lipocarpa* 89

*macloviana* 90

*magellanica* ssp.

*irrigua* 91

*microptera* 92

*nebrascensis* 93

*nigricans* 94

*norvegica* ssp. *stevanii*  
95

*nova* 96

*pachystachya* 97

*pellita* 98

*praeceptorum* 99

*praegracilis* 100

*pratensis* 101

*saxatilis* 102

*scopulorum* 103

*simulata* 104

*utriculata* 105

*vesicaria* 106

### *Castilleja*

*miniata* 252

*sulphurea* 253

*Catabrosa aquatica* 32

### Cattail

Broadleaf 127

Narrowleaf 126



- Ceratophyllum demersum* 21  
*Chamerion latifolium* 196  
 Checkerbloom White 194  
*Cicuta maculata* var. *angustifolia* 129  
 Cinquefoil  
 Biennial 239  
 Brook 242  
 Platte River 241  
 Shrubby 281  
 Silverweed 235  
 Varileaf 240  
*Claytonia lanceolata* 213  
 Clover  
 Cows 176  
 Longstalk 175  
 Coltsfoot Arrowleaf sweet 151  
 Coneflower  
 Cutleaf 153  
 Montane 154  
*Conioselinum maculatum* 131  
*scopulorum* 130  
*Conium maculatum* 131  
 Coon's tail 21  
 Cordgrass Alkali 65  
*Cornus sericea* 273  
*Corydalis caseana* ssp. *brandegeei* 177  
 Cottongrass  
 Chamisso's 112  
 Tall 111
- Cottonwood  
 Narrowleaf 282  
 Plains 284  
 Rio Grande 284  
 Cowbane Fendler's 133  
*Crataegus rivularis* 279  
*saligna* 280  
 Crowfoot White water 43  
 Cudweed Slender 143
- D**  
*Dasiphora fruticosa* ssp. *floribunda* 281  
*Deschampsia cespitosa* 55  
*Distichlis spicata* 56  
 Dock  
 Curly 208  
 Denseflowered 209  
 Golden 210  
 Mexican 211  
 Utah willow 212  
 Western 207  
*Dodecatheon pulchellum* 215  
 Dogwood Redosier 273  
 Duckweed Common 26
- E**  
*Elaeagnus angustifolia* 274  
*Eleocharis acicularis* 107  
*palustris* 108  
*quinqueflora* 109  
*rostellata* 110  
*Elodea canadensis* 24
- Epilobium ciliatum* 197  
*halleanum* 198  
*leptocarpum* 199  
*Equisetum arvense* 48  
*hyemale* var. *affine* 49  
*Erigeron coulteri* 138  
*elatior* 139  
*glabellus* 140  
*lonchophyllus* 141  
*peregrinus* ssp. *callianthemus* 142  
*Eriophorum angustifolium* 111  
*chamissonis* 112
- F**  
 Felwort 187  
 Marsh 186  
 Fireweed Dwarf 196  
 Fleabane  
 Large mountain 138  
 Shortray 141  
 Streamside 140  
 Subalpine 142  
 Tall 139  
 Foxtail  
 Meadow 53  
 Shortawn 30  
 Fumewort Brandegee's 177
- G**  
*Galium trifidum* ssp. *subbiflorum* 243  
*Gaultheria humifusa* 276  
 Gentian  
 Autumn dwarf 182  
 Dane's dwarf 183  
 Moss 179  
 Parry's 180  
 Perennial fringed 184  
 Pygmy 181  
 Rocky Mountain fringed 185  
 Whitish 178  
*Gentiana algida* 178  
*fremontii* 179  
*parryi* 180  
*prostrata* 181  
*Gentianella amarella* ssp. *acuta* 182  
*tenella* 183  
*Gentianopsis barbellata* 184  
*thermalis* 185  
*Geranium richardsonii* 188  
 Geranium Richardson's 188  
 Geum  
*alepicum* 236  
*macrophyllum* var. *perincisum* 237  
*rivale* 238  
*Glaux maritima* 217  
 Globeflower American 233  
 Glyceria  
*borealis* 57  
*grandis* 58

*striata* 59  
*Gnaphalium exilifolium*  
143  
Goldenweed Plantain  
152  
Gooseberry Whitestem  
278  
Green orchid  
Huron 123  
Northern 121  
Groundsel  
Balsam 149  
Falsegold 150

## H

Hairgrass  
Mountain 66  
Tufted 55  
Hawthorn  
River 279  
Willow 280  
Hedgenettle Hairy 193  
*Helenium autumnale* var.  
*montanum*  
144  
*Helianthus nuttallii* 145  
Hemlock  
Poison 131  
Water 129  
Hemlockparsley Rocky  
Mountain  
130  
*Hippuris vulgari* 23  
*Hordeum brachyan-*  
*therum* 60  
Horehound American  
water 190  
Hornwort 21  
Horsetail  
Field 48

Scouringrush 49  
*Hydrophyllum fendleri*  
189  
*Hymenoxys hoopesii*  
146  
*Hypericum scouleri* 171

## I

Indian paintbrush  
Giant red 252  
Sulphur 253  
*Iris missouriensis* 117  
Iris Rocky Mountain 117  
*Isoëtes bolanderi* 25

## J

*Juncus*  
*albescens* 67  
*arcticus* ssp. *littoralis*  
68  
*bufonius* 69  
*castaneus* 70  
*drummondii* 71  
*ensifolius* 72  
*longistylis* 73  
*mertensianus* 74  
*nodosus* 75  
*torreyi* 76  
*triglumis* 77

## K

*Kalmia microphylla* 277  
Knotweed Curlytop 205

## L

Lady's tresses Hooded  
125  
Laurel  
Alpine 277  
Bog 277

*Lemna minor* 26  
Licorice-root Idaho 132  
*Ligusticum tenuifolium*  
132  
*Limosella aquatica* 251  
*Lomatogonium rotatum*  
186  
Lousewort  
Elephanthead 255  
Meadow 254  
Sudetic 256  
*Luzula subcapitata* 78  
*Lycopus americanus* 190

## M

*Machaeranthera*  
*bigelovii* 147  
Mannagrass  
American 58  
Fowl 59  
Small floating 57  
Maple Rocky Mountain  
268  
Mare's-tail Common 23  
Marigold White marsh  
232  
Meadow-rue Alpine  
234  
*Mentha arvensis* 191  
*Menyanthes trifoliata*  
195  
*Mertensia*  
*ciliata* 161  
*franciscana* 162  
Milkvetch  
Alpine 174  
Purple 173  
Milkwort Sea 217  
*Mimulus*  
*floribundus* 257

*glabratus* 258  
*guttatus* 259  
*tilingii* 260  
Minerslettuce Water  
214  
Mint Wild 191  
*Mitella pentandra* 244  
Miterwort Fivestamen  
244  
Monkeyflower  
Manyflowered 257  
Roundleaf 258  
Seep 259  
Tiling's 260  
Monkshood Columbian  
231  
*Montia chamissoi* 214  
Mousetail Tiny 219  
Mudwort Water 251  
*Muhlenbergia filiformis*  
61  
Muhly Pullup 61  
*Myosurus minimus* 219  
*Myriophyllum sibiricum*  
22

## N

*Nasturtium officinale*  
19  
*Nuphar lutea*ssp.  
*polysepala*  
29

## O

*Oenothera*  
*elata* ssp.  
*hirsutissima* 200  
*flava* 201  
Olive Russian 274  
*Oxypolis fendleri* 133

**P***Packera*

- crocata* 148
- paupercula* 149
- pseudaurea* 150

*Parnassia*

- fimbriata* 249
- palustris* var.
- montanensis* 250

*Parnassus*

- Fringed grass of 249
- Mountain grass of 250

## Rocky Mountain 249

## Pearlwort Arctic 168

*Pedicularis*

- crenulata* 254
- groenlandica* 255
- sudetica* ssp.
- scopulorum* 256

*Petasites frigidus* var.

- sagittatus*
- 151

*Phalaris arundinacea* 62*Plagiobothrys scouleri*

- var. *hispidulus*
- 163

*Plantago eriopoda* 202

## Plantain

- Northern water 17
- Redwool 202

*Platanthera* 121

- dilatata* 122
- aquilonis* 121
- huronensis* 123
- purpurascens* 124

*Poa*

- leptocoma* 63
- reflexa* 64

*Polemonium occidentale*

- ssp.
- occidentale*
- 203

## Polemonium Western

203

*Polygonum*

- amphibium* 33
- bistortoides* 204
- lapathifolium* 205
- viviparum* 206

## Pond-lily Rocky Mountain 29

## Pondweed

- Alpine 34
- Fineleaf 41
- Horned 47
- Leafy 35
- Longleaf 37
- Richardson's 40
- Sago 42
- Small 39
- Variableleaf 36
- Whitestem 38

## Popcornflower Sleeping

163

## Poplar Balsam 283

*Populus*

- angustifolia* 282
- balsamifera* 283
- deltoides* 284

*Potamogeton*

- alpinus* 34
- foliosus* 35
- gramineus* 36
- nodosus* 37
- praelongus* 38
- pusillus* 39
- richardsonii* 40

*Potentilla*

- biennis* 239
- diversifolia* 240
- plattensis* 241
- rivalis* 242

## Primrose

- Hooker's evening 200
- Parry's 216
- Yellow evening 201
- Primula parryi* 216
- Pussytoes Flat-top 134
- Pyrrocoma uniflora* 152

**Q**

## Quillwort Bolander's 25

**R**

## Ragwort

- Arrowleaf 158
- Saffron 148
- Showy alpine 155
- Thickleaf 156
- Water 157

*Ranunculus*

- acriformis* 220
- adoneus* 221
- alismifolius* var.
- montanus*
- 222

*aquatilis* 43

- cymbalaria* 223
- eschscholtzii* 224
- hyperboreus* 44
- inamoensis* 225
- macauleyi* 226
- macounii* 227
- pedatifidus* var. *affinis*
- 228
- pygmaeus* 229

*sceleratus* var.

- multifidus*
- 230

*Rhodiola rhodantha*

172

*Ribes inerme* 278*Rorippa*

- curvipes* 166
- palustris* 167

*Rudbeckia*

- laciniata* var. *ampla*
- 153
- montana* 154

*Rumex*

- aquaticus* var.
- fenestratus*
- 207

*crispus* 208

- densiflorus* 209
- maritimus* 210
- salicifolius* var.
- denticulatus* 212
- salicifolius* var.

- mexicanus*
- 211

## Rush

- Arctic 68
- Chestnut 70
- Drummond's 71
- Knotted 75
- Longstyle 73
- Mertens' 74
- Northern white 67
- Swordleaf 72
- Three-hulled 77
- Toad 69
- Torrey's 76

**S**

*Sagina saginoides* 168  
*Sagittaria cuneata* 18  
*Salix*  
*bebbiana* 285  
*boothii* 286  
*brachycarpa* 287  
*drummondiana* 288  
*exigua* 289  
*fragilis* 290  
*geyeriana* 291  
*glauca* 292  
*irrorata* 293  
*ligulifolia* 294  
*lucida* 295  
*monticola* 296  
*nivalis* 297  
*planifolia* 298  
*wolfii* 299  
Saltcedar 300  
Saltgrass 56  
*Saxifraga*  
*odontoloma* 245  
*oregana* 246  
*rhomboidea* 247  
*rivularis* 248  
Saxifrage  
Brook 245  
Diamondleaf 247  
Oregon 246  
Weak 248  
Scentbottle 122  
*Schoenoplectus*  
*americanus* 113  
*maritimus* 114  
*pungens* 115  
*Scirpus microcarpus* 116  
*Scutellaria galericulata*  
192

**Sedge**

Analogue 104  
Beaked 105  
Black 96  
Black alpine 94  
Blister 106  
Boreal bog 91  
Chamisso 97  
Clustered field 100  
Different-nerve 86  
Douglas's 85  
Early 99  
Golden 81  
Hair-like 83  
Inland 88  
Kellogg's 89  
Meadow 101  
Mountain 103  
Nebraska 93  
Rock 102  
Sheep 87  
Silvery 82  
Slenderbeak 80  
Smallwing 92  
Softleaf 84  
Steven's 95  
Thickhead 90  
Water 79  
Woolly 98  
*Senecio*  
*amplectens* 155  
*crassulus* 156  
*hydrophilus* 157  
*triangularis* 158  
*Shepherdia argentea*  
275  
Shootingstar Darkthroat  
215  
*Sidalcea candida* 194

**Sisyrinchium**

*idahoense* var.  
*occidentale*  
118  
*montanum* 119  
Skullcap Marsh 192  
Sloughgrass American  
31  
Smartweed Longroot  
33  
Sneezeweed  
Mountain 144  
Orange 146  
*Sparganium*  
*angustifolium* 45  
*emersum* 46  
*Spartina gracilis* 65  
Speedwell  
American 262  
American alpine 266  
Brightblue 265  
Hairy purslane 263  
Water 264  
Spikerush  
Beaked 110  
Common 108  
Fewflower 109  
Needle 107  
*Spiranthes romanzof-*  
*fiana* 125  
Springbeauty Lanceleaf  
213  
*Stachys pilosa* 193  
Starwort  
Longleaf 169  
Longstalk 170  
*Stellaria*  
*longifolia* 169  
*longipes* 170

St. Johnswort Scouler's  
171

Stonecrop Redpod 172  
*Stuckenia*  
*filiformis* 41  
*pectinata* 42  
Sunflower Nuttall's 145  
*Swertia perennis* 187  
*Symphotrichum*  
*ciliatum* 159  
*lanceolatum* ssp.  
*hesperium*  
160

**T**

*Tamarix chinensis* 300  
Tansyaster Bigelow's  
147  
*Thalictrum alpinum* 234  
Threesquare Common  
115  
*Trifolium*  
*longipes* 175  
*wormskioldii* 176  
*Triglochin maritima* 120  
*Trollius laxus* ssp.  
*albiflorus*  
233  
*Typha latifolia* 127

**U**

*Utricularia*  
*macrorhiza* 27  
*minor* 28

**V**

*Vahlodea atropurpurea*  
66  
*Veronica*  
*americana* 262

*anagallis-aquatica*  
 264  
*peregrina* ssp.  
*xalapensis* 263  
*serpyllifolia* ssp.  
     *humifusa*  
     265  
*wormskjoldii* 266  
*Viola nephrophylla* 267  
 Violet Northern bog  
     267  
 Shortfruit 287  
 Snow 297  
 Strapleaf 294  
 Wolf's 299  
 Willowherb  
     Fringed 197  
     Glandular 198  
     Slenderfruit 199  
 Wintergreen Alpine  
     spicy 276  
 Woodrush Colorado 78  
 Wormwood Biennial  
     137

## W

Watercress 19  
 Waterleaf Fendler's 189  
 Watermilfoil Shortspike  
     22  
 Water-starwort Vernal  
     20  
 Waterweed Canadian  
     24  
 Whorlgrass Water 32  
 Willow  
     Bebb 285  
     Bluestem 293  
     Booth's 286  
     Coyote 289  
     Crack 290  
     Dewystem 293  
     Diamondleaf 298  
     Drummond's 288  
     Geyer 291  
     Grayleaf 292  
     Greenleaf 295  
     Narrowleaf 289  
     Pacific 295  
     Rocky Mountain 296  
     Shining 295

## Y

Yellowcress  
     Bluntleaf 166  
     Bog 167  
 Yellowrocket American  
     164

## Z

*Zannichellia palustris*  
     47