

Field Guide to Colorado's Wetland Plants

Identification, Ecology and Conservation



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For my many dear friends and family who have supported me over the years: Matt Lavin--who fostered and encouraged my passion for botany, Sue Martin and Myrna Steinkamp--who gave me my first Harrington Flora of Colorado, and Alex Chappell and John Sanderson--who introduced me to the world of wetlands. Finally to my Dad and Mom, who gave me the encouragement, opportunity and love to pursue my dreams.

-Denise Culver

Special thanks to the many colleagues at CNHP and beyond who make this work rewarding and enjoyable; to Dr. David Cooper for tremendous mentorship in wetland science; to Duncan and Heath, who fill my life with love; and to the family and friends that have supported and encouraged me over many years.

-Joanna Lemly

ERRATA

1. Page numbers in the Index are not correct. Add 16 to the number for correct page number.
2. Page 166—*Juncus articulatus*-leaves are septate
3. Page 196—*Carex aurea*-terminal spike 1 (not 4-6)
4. Page 200—*Carex canescens*-perigynia pale whitish to yellowish (not golden yellow)
5. Page 201—*Carex capillaris*-terminal spike 1 (not 2-4)
6. Page 205—*Carex diandra*-Similar Species *C. simulata* The perigynia are shiny, narrowly winged at junction of beak and body with pistillate scales completely concealing perigynia. *C. simulata* usually appears dioecious, with a few, inconspicuous flowers of the opposite sex present.
7. Page 206—*Carex disperma*-Pistillate scales acuminate (not awned at tips)
8. Page 224—*Carex limosa*-Pistillate scales are variable (not obtuse)
9. Page 236—*Carex pellita*-Stigmas 3 (not 2)
10. Page 251—*Carex viridula*-Terminal spike staminate, lateral spikes 1–8, female or androgynous, crowded at top of culms (not spikes 1-8, androgynous, crowded at top of culms)
11. Page 278—*Schoenoplectus fluviatilis*-Spikelets numerous in sessile and pedunculate clusters (not just pedunculate)
12. Page 279—*Schoenoplectus maritimus*-Spikelets over 1 cm long, mainly sessile or on short peduncles (not sessile)
13. Page 388—*Cardamine breweri*-Siliques 1.7-3.5 cm long
14. Page 450—*Lomatogonium rotatum*-Photo in lower left is incorrect.
15. Page 474—*Epilobium ciliatum*—Leaves are 5.5 mm (not cm) wide.
16. Page 546—*Ranunculus pygmaeus* Top photo is incorrect.

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Foreword

Wetlands are overlooked and often avoided areas of Colorado's landscape. Wet, brushy and buggy, with big holes, beaver channels, floating mats, and stinky soils, few botanists have paid attention to these ecosystems. However, we know that wetlands, which cover only about 2% of Colorado's land area, support a large proportion of Colorado's plant species. Many wetland species provide important clues to the geologic and climate history of Colorado, and species new to the Colorado flora are found regularly in wetland areas. The great diversity of wetland plants is due to the complex hydrologic, geomorphic and geochemical processes that create and maintain the many wetland types along Colorado's huge elevation gradient. Sedges, rushes, willows and grasses, notoriously difficult groups of species to work with, dominate the vegetation of most wetlands. Few species have showy flowers or life forms, and differences between extremely rare and common species are "subtle", to say the least. While technical dichotomous keys have long been available to cover the species occurring in wetlands, we all struggle with the keys, and in the end rarely know if our efforts have led to a correct species identification. Amateur botanists and even professional scientists need field guides that illustrate and help identify these important species.

Denise Culver and Joanna Lemly have provided us with just that . . . a ***Field Guide to Colorado's Wetland Plants: Identification, Ecology and Conservation***. This guide will allow professionals and amateurs alike to identify most vascular plant species they are likely to encounter in Colorado's wetlands. This book will assist their work in fens, marshes, wet meadows, salt flats and riparian areas and help build their knowledge of Colorado's flora. For scientists and technicians who identify wetlands and delineate their boundaries, this book will help familiarize them with species that are critical for accurately characterizing a wetland's floristic composition and determining its edge. Federal procedures for delineating jurisdictional wetland boundaries rely heavily on correctly identifying wetland plants. And for so long wetland professionals have struggled with this requirement, particularly for the many monocot species found in wetlands.

A labor of love, years in the making, this book provides descriptions, line drawings and photographs of nearly 640 vascular plant species. This is 20% of the entire Colorado flora! Each species description also characterizes its habitat, similar species, and animals/birds likely to be encountered. A map of Colorado counties where each species is known to occur is also provided. It contains a wealth of information that will facilitate work in wetland habitats for plant lovers and for those who need to work with wetland plants in Colorado and neighboring states. Hopefully this book will inspire others to complete similar comprehensive works on the flora of other ecosystems in Colorado and other western states.

David J. Cooper, Department of Forest and Rangeland Stewardship, Colorado State University, Fort Collins, CO 80523

Preface

In February 2010, the Colorado Natural Heritage Program (CNHP) and Colorado State University were awarded a U.S. Environmental Protection Agency, Region 8 Wetland Program Development Grant to develop two tools to aid in the identification and protection of Colorado's wetlands. The **Field Guide to Colorado's Wetland Plants: Identification, Ecology and Conservation** and the **Colorado Wetland Information System Website** (<http://www.cnhp.colostate.edu/cwic>). The primary goal of these products was to combine currently available wetland information into easy-to-use resources designed for both the lay person as well as the wetland scientist to not only identify wetland plants, but to apply that knowledge towards pro-active conservation and protection of one of Colorado's most valuable resources. Prior to this project, numerous field guides were needed to identify Colorado wetland plants, especially for the more challenging species (e.g., sedges, rushes and grasses). The purpose of the Field Guide is to confirm species identification, or to suggest other closely related species, as well as provide additional information on the plant's wetland indicator status, rarity, nativity, conservation status and importance to wildlife.

In 2013-2014, CNHP will be developing a complimentary **Pocket Guide to Wetland Plants of Colorado's Eastern Plains**. The pocket guide will be more portable and cover the most common wetland plants. CNHP will be seeking funding in 2014 to develop pocket guides for wetland plants of Colorado's Southern Rocky Mountains and the Plateaus and Canyons of the Western Slope.

CNHP is a non-profit organization and a research unit within the Warner College of Natural Resources at Colorado State University. General information about CNHP and the breadth of work conducted by the organization can be found at our webpage: <http://www.cnhp.colostate.edu/>. CNHP is a member of the NatureServe Network, an international network of natural heritage programs that use the same scientific methodology to monitor the status of species and natural communities from state, national, and global perspectives. The overarching mission of CNHP is:

"To preserve the natural diversity of life by contributing the essential scientific foundation that leads to lasting conservation of Colorado's biological wealth."

As part of the overall mission and among many other areas of expertise, CNHP has established a long track record of field surveys to identify wetlands worthy of conservation action throughout the state. Since 1993, CNHP has conducted surveys of biologically significant resources in 39 counties, documenting hundreds of high quality wetlands and locations of rare wetland plants and animals. In addition, CNHP has been the leading organization for information and research on wetland plant communities. In 2003, after more than ten years of field-based research, CNHP published the Field Guide to Wetland and Riparian Plant Associations of Colorado (Carsey et al. 2003), a complimentary resource to this Field Guide.

We want to make these resources work for you and welcome your feedback to make them better.

Denise and Joanna, March 2013

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Introduction to Colorado Wetlands

Colorado is one of the most biologically diverse states in the Intermountain West, with nearly 3,600 plant and animal species (Stein 2002). Wetland and riparian areas, as transitional lands between terrestrial and aquatic habitats, are among the most diverse ecosystems in the state. Colorado's wetlands range from alpine wet meadows at the base of Mount Elbert (14,440 feet) to marshes along the Arikaree River at the Kansas border (3,315 feet). Though they cover only 2% of this diverse landscape, wetlands and riparian areas are by far the most ecologically and economically significant ecosystem in Colorado.

Wetlands provide many functions that are valued by society, often referred to as ecological services. These include groundwater recharge, nutrient cycling, primary production, carbon sequestration and export, sediment transport, and channel stabilization (Millennium Ecosystem Assessment 2005). One of the most important functions valued by society is the role of wetlands in providing clean water. Wetland vegetation acts as a filter or sponge for water and sediment that may contain heavy metals, pesticides or fertilizers. Wetland vegetation also provides a buffer for flood zones, especially along larger rivers that flow through Colorado's cities and towns. In addition, wetlands play a key role in many of the recreational activities Colorado is best known for, including hunting, fishing, wildlife viewing and rafting.

Wetlands are key in providing quality wildlife habitat. In many areas of the Intermountain West, more than 90% of wildlife species depend on wetland and riparian areas at some point in their lives (Redelfs 1980 as cited in USGS 1996 and McKinstry et al. 2004). In arid climates like Colorado, where evaporation often exceeds precipitation, wetlands are an essential habitat for vast numbers of ducks, shorebirds, wading birds, cranes and raptors that either breed or stop-over in wetlands. Declines in many at-risk species can be attributed to the decline in wetland habitats upon which they depend. Among all major habitats in the state, wetland and aquatic habitats support the largest number of at-risk vertebrate species, though they represent a tiny fraction of the landscape. A significant 48% of the Colorado Parks and Wildlife Tier 1 (priority) vertebrate species depend on wetland and aquatic habitats (CPW 2006). In a recent analysis of the state's biodiversity, 41% of at-risk vertebrate species were wetland and aquatic dependent (Rondeau et al. 2011).



Beaver-created wetland. Karin Freeman.

The purpose of this guide is to provide information for amateurs and professionals alike on the plant species most closely tied to Colorado's wetlands. Obligate and facultative wetland species (Table 1) were the focus, for they occur in wetlands far more often than they occur in other environments. Because there are hundreds of facultative or facultative upland species that occur in both wetland and upland environments, not every species that may occur in wetlands is included. Instead, the focus is on Colorado's true hydrophytes, those species naturally adapted to life in wet environments.

Identifying wetland plants is essential to recognizing the wide range of wetland types across our state. CNHP hopes that recognition will lead to the desire to conserve, protect and manage our wetland resources for generations to come. In 1986, Windell et al. published the first detailed report specifically on Rocky Mountain wetlands, ***An Ecological Characterization of Rocky Mountain Montane and Subalpine Wetlands***. This publication, along with others produced since, have served as an excellent resource on higher elevation wetlands in Colorado. At the time of publication, the authors stated; "Knowledge of the structure, functions, and values of wetlands is the most important factor in decision-making about their use." Decisions impacting Colorado's wetland resources continue to be made every day; those decisions should be supported with the best data possible.

Wetland Definitions and Criteria for Identification

The word wetland encompasses many different habitats, but they all share a suite of common characteristics. Most importantly, all wetlands are ecosystems shaped by water. In Colorado, the list of wetland types include: marsh, wet meadow, riparian area, playa, seep/spring, fen, inter-dunal swale, palustrine, hanging garden, mire, and alkaline or mineral flat, among others.

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 (EPA) 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 more recent Regional Supplements (e.g., USACE 2008). 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 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.



Montane wetland. Denise Culver.

Wetland Plants

Wetland 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 that obtain a significant portion of their water from groundwater (e.g., cottonwoods, alders or willows). Phreatophytes are typically found along rivers and streams where the groundwater is near the surface.

Wetland plants are at the base of the food chain and thus a major component of energy flow within a wetland. They provide habitat for major taxonomic groups, including vertebrates, invertebrates, phytoplankton, and

zooplankton. Wetland plants influence water chemistry, acting as both a nutrient sink through uptake, and as a nutrient pump by moving compounds from sediment into the water column, thus improving water quality (Reddy et al. 1983, Reddy et al. 1987). Plants also influence the sediment and hydrologic regime by stabilizing shorelines and mitigating peak floodwaters.



Cache la Poudre River flooding. Denise Culver

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 and wetland management and for general botanical information about wetland plants. Over the years, modifications to the list have been proposed. In 2012, the USACE produced a thoroughly revised version of the list and a process for periodic updates (Lichvar 2012). The 2012 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 1). 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) (Fig 1).

Table 1. 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

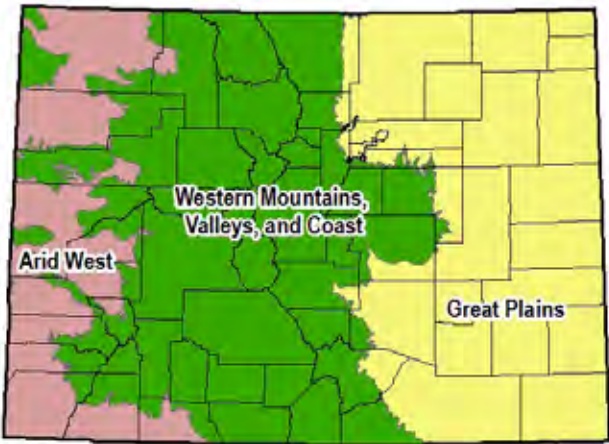


Figure 1. U.S. Army Corp of Engineers Geographic Regions within Colorado.

Wetland Hydrology

Hydrology is the single most important factor controlling the development of wetlands. Without water there would be no wetland plants, no wetland birds, no wetlands period. The timing and duration of inundation is what maintains wetlands and what characterizes each wetland type. However, hydrology is the most transitory indicator of wetlands, sometimes present for only a few weeks and gone for months at a time. As a general rule of thumb, the amount of time needed for water to have an overriding influence on the characteristics of vegetation and soil is approximately 14 consecutive days during the growing season. Wetland hydrology affects abiotic factors, including nutrient availability, soil reduction and oxidation. These, in turn, affect the plants and eventually the animals that utilize wetlands. The *hydroperiod* or hydrologic signature of a wetland is the result of the balance between inflows and outflows of water, typically called the *water budget*. The water budget includes precipitation, evapo-transpiration, overbank flooding, surface flows and groundwater levels. Determining the frequency, length and extent of inundation can be difficult once the water is gone. For clues to determine the hydroperiod, one can look at indicators above and below the wetland area, including water marks on rocks, vegetation or along the shore or streambanks, sediment deposition, debris along wetland banks, salt crusts or algal mats and cracked soil (USACE 2008).

Wetland Soils

Wetland or *hydric soils* tell “the rest of the hydrologic story.”

As a wetland is flooded, water replaces air in the soil pores, leading to anaerobic conditions that cause physical and chemical changes. Soil microbes deplete free oxygen and begin to utilize alternative metabolic pathways involving nitrogen, iron, manganese, and sulfur, producing chemical transformations in the soil. Evidence of these transformations can be seen in soil indicators, such as mottling (redoximorphic features), oxidized root channels, gleying, and a distinct, rotten egg smell. If soils are permanently saturated with cold groundwater, the rate of organic matter decomposition can slow dramatically, creating thick organic soils known as peat. Hydric soil indicators reveal



Peat soil sample. Joanna Lemly.

the general hydrologic signature, or hydroperiod, of a wetland, including how long and how frequently it has been saturated. Observing the reduction sequence in waterlogged soils is a reliable indicator for how long an area has been underwater. Even when a wetland is dry, hydric soil indicators can remain for years if not decades.



Wet meadow. Erick Carlson.

Colorado Wetland Types

There are several types of wetlands in Colorado and a variety of plants and animals that utilize them. While many specific classifications exist for different purposes, in general, Colorado wetlands can be separated into six main types: marsh, wet meadow, mineral or alkaline flat, playa, peatland, and riparian wetlands.

Marshes form in depressions created by landscape processes such as water, wind and past glacial activity. They typically contain deep water in spring and early summer, are frequently or continually inundated, and are characterized by emergent herbaceous vegetation. They form in depressions in the landscape (e.g., kettle ponds) or as fringes around lakes and along slow-flowing streams and rivers. Marshes typically have mineral soils, but can also accumulate organic material in the top soil horizon, but not enough to form true organic soil. Vegetation is usually classified as emergent, such as cattails and bulrushes, or submersed or floating leaf plants, such as pondweed, smartweed and duckweed. Marshes are found throughout Colorado, from the plains to the upper montane, wherever deep water accumulates for significant periods of time. An uncommon Colorado marsh type is found between sand dunes within Great Sand Dunes National Park and Preserve where the water table is at the surface, supporting emergent vegetation in otherwise stark surroundings.



Big Springs at Great Sand Dunes NP. Denise Culver.

Marshes provide excellent habitat and forage for waterfowl and shorebirds. Marsh wetlands in the Intermountain West are used by more than 140 species of wetland-dependent birds including, grebes, herons, egrets, bitterns and cranes. These wetlands are also utilized by 32 of the 51 species of shorebirds (Gammonly 2004). A variety of wetland obligate songbirds live in marshes, including Marsh Wren (*Cistothorus palustris*), Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) and Red-winged Blackbird (*Agelaius phoeniceus*), which are obligate species. Marsh complexes are some of the most productive waterbird areas in Colorado, especially in the San Luis Valley. They also provide food and cover for numerous mammals including moose, beaver, mink, muskrat and other small mammals (e.g., water shrews and water voles). This type of wetland is essential for several Colorado herpetiles for either part or all of their life cycles. The most common include: tiger salamander (*Ambystoma tigrinum*), western chorus frog (*Pseudacris triseriata*), painted turtle (*Chrysemys picta*), snapping turtle (*Chelydra serpentina*) and garter snakes (*Thamnophis* spp.).

Wet meadows are dominated by graminoids (sedges, rushes, grasses) and have soils saturated near the surface in early summer, but rarely have standing water and are typically dry by the end of the growing season. Wet meadows are the most common wetland type in Colorado, occurring from shortgrass prairies to the alpine. Many acres of wet meadows are found adjacent to or within irrigated pastures and are likely linked to irrigation practices. Wet meadows also occur in alpine and subalpine zones around glacially formed mountain lakes and basins that are fed by melting snowbanks throughout the summer and accumulate fine-textured soils. In general, soils for wet meadows are mineral and demonstrate typical hydric soil characters such as low chroma and redoximorphic features. Wet meadows provide habitat for waterfowl, cranes and songbirds. The Greater Sandhill Crane (*Grus canadensis tabida*) utilizes wet meadows and irrigated pastures to forage for insects, seeds, and amphibians. Subalpine wet meadows provide forage, cover and nesting habitat for songbirds such as Brown-capped Rosy Finch (*Leucosticte australis*), White-crowned Sparrow (*Zonotrichia leucophrys*), Lincoln's Sparrow (*Melospiza lincolni*) and White-tailed Ptarmigan (*Lagopus leucurus*).



Montane wet meadow. Connor Flynn.

Alkaline or salt flats include mineral flats found in the San Luis Valley, the Eastern Slope, or intermountain valleys (e.g., South Park). While sometimes referred to as playas, they differ from playas found on the Eastern Plains. These wetlands are defined by their intermittent hydrologic regime, but more importantly by soil texture and salinity. Soils usually have a clay texture and evaporation from seasonally high water tables leads to accumulation of salts. Dominant plants are referred to as *halophytes* (salt-loving) due to their ability to thrive in alkaline soils. The dominant plants include: greasewood (*Sarcobatus vermiculatus*), alkali grasses (*Puccinellia* spp.), red glasswort (*Salicornia rubra*) and sea milkwort (*Glaux maritima*). Shorebirds are probably the most common birds in salt flats. These include American Avocet (*Recurvirostra americana*), Sanderling (*Calidris alba*) and sandpipers (*Calidris* spp.).



Alkaline flat. Denise Culver.

Playas are found throughout the Eastern Plains of Colorado. They are freshwater, shallow, depressional wetlands with clay-lined basins that periodically become inundated from rainfall and surface runoff, not from groundwater discharge. Playas provide many important landscape functions, such as mitigating flooding and storing surface water for agricultural or ranching communities (Pezzolesi et al. 1998; Haukos and Smith 1994). They serve many important ecological functions such as capturing surface runoff, recharging aquifers, and providing habitat for wildlife, especially migratory birds (Haukos and Smith 1997). Wetland plants in playas are typically annuals that frequently change during a growing season in response to precipitation. The most commonly encountered plants include: ragweeds (*Ambrosia* spp.), goosefoots (*Chenopodium* spp.), kochia (*Bassia* spp.), spikerushes (*Eleocharis* spp.), and bulrushes (*Schoenoplectus* and *Scirpus* spp.). Bird use varies throughout the year and is determined by wet/dry rainfall cycles. Birds include: Mallard (*Anas platyrhynchos*), American Avocet (*Recurvirostra americana*) and Long-billed Curlew (*Numenius americanus*) (Rocky Mountain Bird Observatory 2012). The ephemeral nature of water in playas may enhance floristic diversity, which in turn leads to increased faunal diversity (Haukos and Smith 2003).

Peatlands are wetlands with peat accumulation of at least 40 cm (16 inches) of organic material in the upper 80 cm (32 inches) of the soil profile. Peat forms slowly over time where the production of organic matter is greater than the rate of decomposition due to saturation. Colorado's peatlands are defined as fens, minerotrophic peatlands that receive groundwater input percolating through surrounding mineral soil and bedrock. Fens are dominated by graminoids, chiefly sedges, and low shrubs that together form a uniform expanse of green throughout the growing season and can tolerate saturated, low oxygen conditions. Fens are relatively common throughout Colorado's upper montane and subalpine zones, between 8,000 and 12,000 feet in elevation, particularly along toe slopes where groundwater is expressed at the surface. Though relatively common, fens are essentially irreplaceable. In Colorado, peat accumulates at a rate of 20 cm (8 inches) per 1,000 years (Chimner et al. 2002). A severely damaged fen could never be replaced in our lifetime. Fens are considered a Resource Category 1 within the U.S. Fish and Wildlife Service Mitigation Policy (USFWS 1999), signifying that every reasonable effort should be made to avoid impacting this habitat. In 2002, the U.S. Forest Service Rocky Mountain Region issued a statement to avoid impacts to fens on National Forest Lands due to their irreplaceability (USFS 2002).



High Creek Fen. Denise Culver.

Fens in Colorado 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 bladderworts (*Utricularia* spp.) and sundews (*Drosera* spp.). Iron fens also have low pH and are dominated by *Sphagnum* mosses, appearing superficially like bogs. However, the acidity in iron fens is caused by the oxidation of iron pyrite (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 Colorado (e.g., San Juan Mountains). Intermediate and rich fens are found throughout the granitic subalpine zone at breaks in slope, 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*. Numerous global and state rare plants live in extreme rich fens including Greenland primrose (*Primula egalikensis*), blueberry willow (*Salix myrtilifolia*) and sparseflower sedge (*Carex tenuiflora*). Extreme rich fens appear restricted to a small area in Colorado, primarily the west and north portions of Park and Gunnison counties, with calcium-rich bedrock. Even on a global basis, extreme rich fens appear to be quite uncommon. Only three other locations of extreme rich fens exist in the Western U.S.: northwestern Montana, northwestern Wyoming, and California's Convict Creek Basin. The Wyoming and California sites appear to be floristically similar to the South Park extreme rich fens.



Roundleaf sundew. Denise Culver.

Riparian wetlands are associated with moving water and intermittent flooding. They typically have a seasonally high water table because of their proximity to subsurface water. Riparian wetlands are commonly recognized by bottomland, floodplain and streambank vegetation dominated by trees and shrubs. They are characterized by a combination of high animal diversity and high biomass productivity. Riparian wetlands are particularly productive ecosystems, receiving large inputs of water and nutrients from upstream sources during flood events. Woody plants are the dominant vegetation and include willows, alders, birch and cottonwood trees. Riparian wetlands and their associated aquatic habitat are important for nutrient cycling and food chain support, including fish, bird, and other wildlife habitat. The importance of riparian habitats to wildlife is well documented (Lohman 2004). Animal use includes moose, beaver and a large suite of landbird species (e.g. warblers, song sparrows, flycatchers, tanagers, and woodpeckers). Varied structure of woody vegetation with herbaceous understories provide the habitat structure for nesting, brood-rearing and cover, as well as production of insects and vegetation. Importantly, riparian areas provide habitat for declining species including the Southwestern Willow Flycatcher (*Empidonax trillii extimus*) and at certain times of the year, the Greater Sage-Grouse (*Centrocercus urophasianus*).



Little Grizzly Creek, North Park. Denise Culver.

Wetland-Dependent Wildlife

Wetland ecosystems support a diverse array of wildlife adapted and dependent upon varied and dynamic water regimes. Wetlands provide forage, thermal cover, and protection from predation, as well as nesting and brood-rearing habitat for numerous animals. In riparian areas, complex vegetation structure within close proximity to water provides necessary habitat and plentiful feeding opportunities. The interaction of plants and animals within wetlands is a particular emphasis of this Field Guide and wildlife use is specified on each species profile page. A list of Colorado Parks and Wildlife priority wetland-dependent wildlife species (CPW 2011) is provided in Table 2.

Table 2. CPW Wetland-dependent Priority Wildlife Species (excluding fish).

Common Name	Scientific Name	Status *
Game Birds		
Mallard	<i>Anas platyrhynchos</i>	None
Northern Pintail	<i>Anas acuta</i>	None
Gadwall	<i>Anas strepera</i>	None
American Wigeon	<i>Anas americana</i>	None
American Blue-winged Teal	<i>Anas discors</i>	None
Cinnamon Teal	<i>Anas cyanoptera</i>	None
Lesser Scaup	<i>Aythya affinis</i>	None
Birds		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC
Greater Sandhill Crane	<i>Grus canadensis tabida</i>	SC
Least Tern	<i>Sterna antillarum</i>	FE, SE
Long-billed Curlew	<i>Numenius americanus</i>	SC
Piping Plover	<i>Charadrius melodus circumcinctus</i>	FT, ST
Southwestern Willow Flycatcher	<i>Empidonax trailii extimus</i>	FE, SE
Western Snowy Plover	<i>Charadrius alexandrinus</i>	SC
Western Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	SC
American Bittern	<i>Botaurus lentiginosus</i>	None
Short-eared Owl	<i>Asio flammeus</i>	None
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	None
Lewis's Woodpecker	<i>Melanerpes lewis</i>	None
Mammals		
Meadow Jumping Mouse (both ssp.)	<i>Zapus hudsonius</i>	FT, ST
River Otter	<i>Lontra canadensis</i>	ST
Dwarf Shrew	<i>Sorex nana</i>	NA
Amphibians		
Boreal Toad	<i>Anaxyrus (Bufo) boreas</i>	SE
Northern Leopard Frog	<i>Lithobates (Rana) pipiens</i>	SC

Common Name	Scientific Name	Status *
Plains Leopard Frog	<i>Lithobates (Rana) blairi</i>	SC
Reptiles		
Common Garter Snake	<i>Thamnophis sirtalis</i>	SC
Yellow Mud Turtle	<i>Kinosternon flavescens</i>	SC

*Status Codes: FE = Federally Endangered; FT=Federally Threatened; SE=State Endangered; ST=State Threatened; SC=State Special Concern (not a statutory category)

Birds

Birds are often cited among the most visible indicators of a wetland's total productivity (Weller 1999). Eighty percent of the United States' breeding bird population and more than 50% of the 800 protected migratory bird populations rely on wetlands (Mitsch and Gooselink 2007). Wetland-dependent birds, in particular, are extremely diverse, reflecting their adaptations to these varied environments. Examples of morphological adaptations include bills that strain, peck, spear, store, and grab as well as feet that allow swimming, diving, wading and walking on mudflats. Obligate wetland birds are species that cannot survive without water. They forage for food, build nests and rear young in or near wetlands and spend the majority of their life cycle in the water.



Western Grebe. Len Blumin.

Grebes (Podicipediformes) possess a variety of beneficial adaptations for aquatic habitats: they sit low in the water; have streamlined bodies; and have lobed toes and legs located directly underneath their bodies that allow them to swim underwater with great maneuverability. However these adaptations leave them unable to walk easily on land. Grebes favor deep water and often well-vegetated wetlands. Their bills vary from short and sharp to long and spear-like. They build nests of submersed vegetation in open water or on emergent vegetation in densely vegetated marshes. Smaller grebes build free-floating nests with buoyant vegetation. Grebes commonly found in Colorado include: Pied-billed Grebe (*Podilymbus podiceps*), Horned Grebe (*Podiceps auritus*), Eared Grebe (*Podiceps nigricollis*) and Western Grebe (*Aechmophorus occidentalis*).

The order Pelecaniformes includes American Bittern (*Botaurus lentiginosus*), Snowy Egret (*Egretta thula*), Cattle Egret (*Bulbulcus ibis*), Great Egret (*Ardea alba*), Black-crowned Night Heron (*Nycticorax nycticorax*) and Great Blue Heron (*Ardea herodias*). All require thick aquatic vegetation or large trees for nesting. The Great Blue Heron nests colonially in aggregations known as rookeries, generally located in mature cottonwood tree canopies. The Black-crowned Night Heron will typically occupy the lower branches of the trees to avoid competition. American Bitterns are seldom seen in wetlands, due to their ability to remain motionless and plumage that camouflages them within dense cattails and sedges. Also in this order, Double-crested Cormorant (*Phalacrocorax auritus*) and American White Pelican (*Pelecanus erythrorhynchos*) are common spring to fall inhabitants of Colorado wetlands. They are large-bodied waterbirds associated with lakes



Great Blue Heron. Len Blumin.

and ponds. Their feet are uniquely adapted for swimming, with webbing between all four toes, rather than between three which is common to ducks. White Pelicans build nests on land, but always near open water and their food supply. Double-crested Cormorants feed mainly on fish and are divers, often feeding with pelicans.

The waterfowl order (Anseriformes) is a large group that is widely distributed in Colorado. They are the most conspicuous and abundant water birds. Nest sites vary from shores to emergent vegetation to tree cavities and cliffs adjacent to wetlands. Within this large group are the dabbling ducks. The most common Colorado dabblers include: Gadwall (*Anas strepera*), American Wigeon (*Anas americana*), Mallard (*Anas platyrhynchos*), Blue-winged Teal (*Anas discors*), Cinnamon Teal (*Anas cyanoptera*), Northern Shoveler (*Anas clypeata*) and Northern Pintail (*Anas acuta*). They are omnivores, eating invertebrates as well as seeds and other plant parts, e.g., pondweeds (*Potamogeton* spp.), horned pondweed (*Zannichellia palustris*) and widgeon grass (*Ruppia maritima*). Two species of arrowhead (*Sagittaria latifolia*, *S. graminea*), sometimes called wapato or duck potato, are excellent food sources. Duckweeds (*Lemna* spp.), common duckmeat (*Spirodela polyrrhiza*) and other small aquatic plants are especially valuable to ducklings (McAtee 1939). Watercress (*Nasturtium officinale*) and aquatic buttercups (*Ranunculus aquatilis*, *R. circinatus*) are other aquatic plants whose leaves and plant parts are often eaten by ducks. The foliage and fruits of hornwort (*Ceratophyllum demersum*) and mare's tail (*Hippuris vulgaris*) provide a constant food source. Graminoids, such as sedges (*Carex* spp.), rushes (*Juncus* spp.), spikerushes (*Eleocharis* spp.), bulrushes (*Scirpus* and *Schoenoplectus* spp.), wild millet (*Echinochloa crus-galli*), saltgrass (*Distichlis spicata*) and mannagrasses (*Glyceria* spp.) provide high protein seeds for nesting and migrating waterfowl. In addition to providing food, graminoids are also valuable for cover. Frequently they provide nesting cover for ducks, and their tufted growth furnishes concealment and bedding for other animals. Diving ducks, such as Canvasback (*Aythya valisineria*), Redhead (*Aythya americana*), Ring-necked Duck (*Aythya collaris*), Lesser Scaup (*Aythya affinis*), Bufflehead (*Bucephala albeola*), Hooded Merganser (*Lophodytes cucullatus*), Common Goldeneye (*Bucephala clangula*), Barrow's Goldeneye (*Bucephala albeola*), Common Merganser (*Mergus merganser*) and Red-breasted Merganser (*Mergus serrator*), rely on wetlands to provide habitat for their main food source of fish and macroinvertebrates. The Ruddy Duck (*Oxyura jamaicensis*) has a distinct, stiff tail to facilitate diving, and to feed on pondweeds (*Potamogeton* spp.), algae, and seeds from sedges and grasses, as well as aquatic invertebrates and crustaceans. Canada Goose (*Branta canadensis*) and the migrating Snow Goose (*Chen caerulescens*) may graze along large, slow-moving streams or streams with pools, but they tend to nest on islands or adjacent cliffs away from floods and predators.

The Gruiformes order consists of rails, coots and cranes. This group uses a variety of wetland habitats. Sora (*Porzana carolina*) and Virginia Rail (*Rallus limicola*) use dense stands of emergent vegetation for nesting and foraging; however they will also forage along unvegetated wetland edges. The American Coot (*Fulica americana*) regularly uses open water when feeding on submergent vegetation and can dive for vegetation and invertebrates in the water column. They have separate, lobate toes (with a web-like lobe) effective for diving as well as for walking on mudflats. The Greater Sandhill Crane (*Grus canadensis tabida*) utilizes both nesting areas in marshes, where they forage for amphibians and other small vertebrates, and open grasslands or fields in winter to eat grains. Greater Sandhill Cranes also require wet meadows to nest.



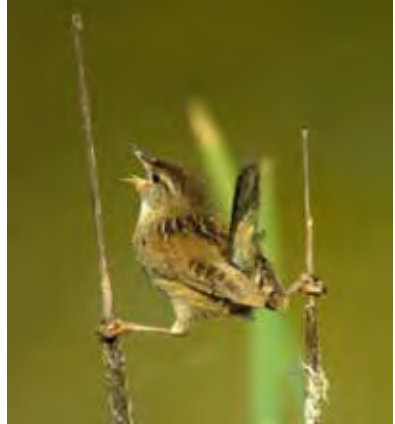
Hooded Merganser. Dave Leatherman.



American Coot. Michael Menefee.

The plover and sandpiper order (Charadriiformes) includes: American Avocet (*Recurvirostra americana*), Black-necked Stilt (*Himantopus mexicanus*), Willet (*Catoptrophorus semipalmatus*), Common Snipe (*Gallinago gallinago*), Wilson's Phalarope (*Phalaropus tricolor*) and a variety of sandpipers. They utilize shallow, fresh or alkaline waters and adjacent mudflats. This group demonstrates adaptations to water levels and substrates with variations of leg length, neck length, bill length and bill shape. The American Avocets have recurved or upturned bills to sweep the substrate and water column while wading in shallow, belly-deep water. Wilson's Phalaropes are among the most aquatic of shorebirds. They commonly swim like feathered "whirligigs," feeding on tiny crustaceans by bill dipping. They nest by or in wetlands usually in short emergent wetlands dominated by grasses and sedges. The Common Snipe is a secretive bird that looks like a sandpiper, if you ever see one. You are more likely to hear the winnowing sound that results from air rushing through the fanned tail while the breeding males make shallow dives.

Passeriformes or perching birds utilize Colorado's wetlands, especially riparian areas, due to the abundance of food and stratified nesting sites. The most commonly encountered perching birds in Colorado's wetlands are the Marsh Wren (*Cistothorus palustris*), found only in wetland habitats, and the Yellow Warbler (*Setophaga petechia*) that nests in shrubs and trees near water. Ovenbirds (*Seiurus aurocapilla*) are uncommon in Colorado and use small wetland patches along stream courses within riparian woodlands. The Common Yellowthroat (*Geothlypis trichas*) nests in tall, emergent wetland vegetation including cattails. The Willow Flycatcher (*Empidonax traillii*) is restricted to willow thickets in the southern portions of Colorado. Song Sparrows (*Melospiza melodia*) are abundant in floodplains, where they use small trees for song perches and cattail marshes and willow shrublands for nesting. Lincoln's Sparrow (*Melospiza lincolni*) breeds in riparian willow shrublands, shrubby meadows and krummholz (stunted trees) in the alpine. The Fox Sparrow (*Passerella iliaca*) is a common, but shy inhabitant of streamside willow shrublands. The White-crowned Sparrow (*Zonotrichia leucophrys*) breeds in riparian willow shrublands and brushy meadows in upper montane and alpine. The American Dipper (*Cinclus mexicanus*) exemplifies a wetland-obligate bird. The American Dipper feeds on aquatic insects that are along the shore or on rocks in rivers and streams. It has developed the ability to walk underwater as it forages. To remain underwater, it uses a combination of down and backward wing movements to move across the stream bed.



Marsh Wren. Len Blumin.

A not so obvious wetland-dependent bird is the Greater Sage-Grouse (*Centrocercus urophasianus*), a Colorado Parks and Wildlife Species of Special Concern and the largest grouse in North America (CPW 2012). The Greater Sage-Grouse requires an extensive mosaic of sagebrush of varying densities and heights, which provides for survival over winter, escape cover adjacent to lek sites, nesting cover, early brood-rearing habitat, late brood-rearing habitat and fall habitat (NPSGWG 2001). Seeps, wet meadows and riparian areas become very significant during the brood rearing season, when hens and chicks venture into these areas due to the abundance of forbs and insects that comprise the bulk of a Greater Sage-Grouse chick's diet during the first 12 weeks. Availability of forbs and invertebrates directly affects survival of Greater Sage-Grouse chicks, particularly during drought years (CPF 2000). Broodless hens and males also utilize riparian habitats, but move into these areas earlier in the summer.

Mammals

Many mammals utilize wetlands for forage, resting, or breeding and some species are wetland or riparian obligate. Moose (*Alces alces*), elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), and white-tailed deer (*Odocoileus virginianus*) are common animals that utilize wetlands, especially moose that browse exclusively on willows. Numerous bat species, especially the little brown bat (*Myotis lucifugus*), use open water from lakes, rivers and beaver

ponds to forage for insects. Water shrews (*Sorex palustris*) have fringed hind feet that are ideal for swimming and foraging underwater. Other shrews known to occur in wetlands include: pygmy shrew (*Sorex hoyi*), masked shrew (*S. cinereus*), montane shrew (*S. monticolus*), and the dwarf shrew (*S. nanus*) (Fitzgerald et al. 1994). The Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is a Federally Listed Threatened species that is found in dense riparian vegetation, usually with a well-developed shrub layer and a thick herbaceous layer. Other small mammals that can be found in riparian areas, fens and wet meadows include: long-tailed vole (*Microtus longicaudus*), montane vole (*Microtus montanus*), southern red-backed vole (*Clethrionomys gapperi*) and western jumping mouse (*Zapus princeps princeps*) (Fitzgerald et al. 1994)



Preble's meadow jumping mouse. Rob Schorr.

One of the most important mammals and a keystone to the viability of riparian systems is the American beaver (*Castor canadensis*). Beaver were historically abundant throughout the west prior to 1870, but by the early 1900s were extirpated from much of their historic habitat due to unregulated trapping (Cary 1911). Removal of the beaver changed the character of riparian areas all across Colorado (Naiman et al. 1988). Beaver and western riparian ecosystems have evolved together and are essential to each other's sustainability. Beavers have adapted to their watery niche with webbed hind feet, a waterproof coat, a paddle-like tail, nostril and ear valves that close when diving, and small eyes that are able to see underwater. Beavers build dams that create ponds, alter watersheds and enhance important ecosystem functions. These functions include slowing spring runoff, raising water tables, promoting water storage and trapping sediments. Beavers cache willow branches that eventually root and grow into dense willow shrublands, which provide forage for ungulates and nesting habitat for birds.



American beaver. Dee Malone.

The muskrat (*Ondatra zibethicus*) is often seen in beaver-created ponds. Muskrats are easily identified by their slender and hairless tail, small ears and partially webbed feet. They build small, dome-shaped lodges or burrows into streambanks and are an important indicator of a healthy wetland. Muskrats are perhaps North America's most valuable semi-aquatic furbearer (Huggins 2008). They typically inhabit the same ponds as beaver, but are able to adapt to living in human-made ponds better than beaver. The mink (*Mustela vison*) is an uncommon occupant of beaver ponds and slow-moving streams. It is weasel-like in appearance with a fully furred tail. River otter (*Lontra canadensis*) is one of the only carnivorous aquatic mammals in the Rockies and their presence is indicative of a high quality riparian system (Fitzgerald et al. 1994; CPW 2012). They were extirpated from Colorado in the early 1900s and were reintroduced in the 1970s by the CPW, which currently lists the species as threatened in Colorado. As a top predator, river otters are essential to the proper function of riverine systems and through their preference for non-game fish they actually benefit game fisheries by reducing competition for food (Davis et al. 1992).

Amphibians

The boreal or western toad (*Anaxyrus [=Bufo] boreas*) was once common in the mountains of Colorado, southern Wyoming and northern New Mexico, however it has declined throughout its range during the last 20 years (Corn et al. 1989, Carey 1993, Hammerson 1999, Loeffler 2001). Due to these declines, the boreal toad was listed in Colorado as a State Endangered species in 1993. The boreal toad was considered "warranted but precluded" for federal listing under the Endangered Species Act, but was withdrawn from consideration in 2005. It is still listed by CPW as State Endangered. Besides habitat loss, the main threat to the viability of the boreal toad is chytrid fungus or

Batrachochytrium dendrobatidis. The wood frog (*Lithobates* [= *Rana*] *sylvatica*) is listed as a Species of Special Concern by the CPW and a sensitive species by the Forest Service. The distribution of the wood frog in Colorado is limited to the mountains surrounding North Park, the upper Laramie River drainage in Larimer County and the upper tributaries of the Colorado River in Grand County between 7,900 ft. and 9,800 ft. (Hammerson 1999). The Northern leopard frog (*Lithobates* [= *Rana*] *pipiens*) and the plains leopard frog (*Lithobates* [= *Rana*] *blairi*) are classified by the CPW as Species of Concern and by the Forest Service as a sensitive species. Additional common amphibians that occur in Colorado's wetlands are the chorus frog (*Pseudacris maculata*), tiger salamander (*Ambystoma mavortium*) and the exotic bullfrog (*Lithobates* [*Rana*] *catesbiena*).



Boreal or western toad. Brad Lambert.

Reptiles

Only a few reptiles ranked as Species of Concern utilize wetlands; they include the common garter snake (*Thamnophis sirtalis*) and the yellow mud turtle (*Kinosternon flavescens*). The yellow mud turtle habitat includes permanent and intermittent streams, permanent ponds and isolates temporary ponds on the Eastern Slope. Aquatic habitats with sandy or muddy bottoms and areas with aquatic vegetation are preferred by mud turtles. The yellow mud turtle is fairly common in localized areas along the eastern margin of Colorado, especially along the Republican River. The common garter snake is found in marshes, ponds and stream edges. It is an aquatic-dependent species. Unlike the plains garter snake (*Thamnophis radix*), this species is seldom found away from water or isolated ponds. It is known primarily from tributaries of the South Platte River along the foothills of the Front Range. This area is highly threatened with residential and commercial developments and hydrological alterations (Hammerson 1999). The more commonly encountered painted turtles (*Chrysemys picta*) are mainly found in eastern Colorado with scattered occurrences in southwestern Colorado. Painted turtles require permanent water, such as ponds, reservoirs, marshes and slow-moving streams with soft, muddy beds and abundant aquatic plants and submerged logs for basking. Snapping turtles (*Chelydra serpentina*) are common species occurring throughout eastern Colorado. They are found in permanent streams, lakes, reservoirs, and ponds especially in waters with submerged vegetation or woody debris (Hammerson 1999).



Snapping turtle. Brad Lambert.

Wetland Conservation and Protection

The ecological services and values that wetlands provide to the citizens of Colorado are becoming more and more apparent. Flood abatement, clean water, wildlife habitat and recreation are just a few examples of how wetlands improve our lives. In recognition of their importance, numerous governmental agencies (e.g., CPW's Wetland Wildlife Conservation Program, USFWS's Partners for Fish and Wildlife Program) and non-government organizations (e.g., Ducks Unlimited, The Nature Conservancy, Rocky Mountain Bird Observatory, and Land Trusts) work with private landowners to restore wetland on their property or to establish conservation easements or purchase lands to protect wetlands habitats. In addition, federal and state laws regulate certain activities within or near wetlands as well as the management of specific wetland plants.

Federal and State Laws Related to Wetlands

The Federal Government has instituted several laws, policies and executive orders to protect the nation's wetlands. Currently, it is the stated goal of the United States government to maintain our current acreage of wetlands. Formally adopted in 1989 by the George H. W. Bush administration, and re-endorsed in each subsequent administration, the "No Net Loss" policy utilizes various regulations and incentives to slow development on wetlands, and to offset wetland losses with compensatory mitigation.

The Clean Water Act (CWA) of 1972 was the country's first comprehensive pollution control legislation. The CWA empowers the U.S. Army Corp of Engineers, under Section 404, to regulate discharge into navigable waters, their tributaries and associated wetlands. Through the Section 404 permit system, environmental impacts are to be avoided if possible, and mitigated if necessary. If there is no practicable alternative to filling a wetland, a permit may be issued requiring compensatory mitigation. Methods of mitigation can include the restoration of a previously existing wetland, the enhancement or preservation of an existing wetland, or the establishment of a new wetland. However, farming, ranching and timber harvest activities are not subject to Section 404 regulation.

In 1977, two Executive Orders, 11988 Protection of Floodplains and 11990 Protection of Wetlands, require Federal agencies to minimize impacts of their activities on floodplains and wetlands. The "Swampbuster" provision of the 1985 Food Security Act uses financial incentives to discourage the draining, filling or alteration of wetlands for agriculture use. Despite these laws and orders, one point needs to be emphasized—there is no specific national law in the United States that explicitly protects wetlands. Jurisdiction over wetlands has been spread over several agencies and agency policies are continually changing according to politics.

In Colorado, there is also no state law that protects wetlands, though impacts to wetlands are considered under some state water quality policies. City and county governments have implemented a variety of wetland regulations, typically within zoning codes, to protect wetland resources.

Federally Listed Threatened and Endangered Wetland Plants

When Congress passed the Endangered Species Act (ESA) in 1973, it recognized that the nation's natural heritage is of "aesthetic, ecological, educational, recreational, and scientific value to our Nation and its people." The ESA also recognized that many of our nation's native plants and animals were in danger of becoming extinct. Under the ESA, species may be listed as either endangered or threatened. Endangered means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future.

The ESA was developed to protect endangered and threatened species as well as their critical habitat. The ESA applies to both animals (vertebrates and invertebrates) and plants, but not plant communities. Unlike vertebrate animals, plants and insects receive less protection under the law. Most restrictions on harming listed plants apply only to public lands. Private landowners using federal money for habitat alteration or who have other forms of federal involvement on their land (such as CWA Section 404 wetland permits) are also restricted from harming listed plants. On private lands, listed plants are protected from collection or harm by trespassers and from misapplication of some herbicides, but no restrictions exist on direct harm or habitat alteration by landowners. In Colorado, the only plant that receives state protection is the state flower, Colorado columbine (*Aquilegia coerulea*).

Other federal agencies can designate plant species as sensitive, thus requiring special management consideration. The U.S. Forest Service (Forest Service Manual 2670.5) defines a plant or animal species as sensitive if the Regional Forester identifies a concern about the population viability as evidenced by: 1) significant current or predicted downward trends in population numbers or density, or 2) significant current or predicted downward trends in habitat capability that would reduce the species' existing distribution. The Bureau of Land Management (BLM Manual 6840.06D) designates a species as sensitive if it could easily become endangered or extinct on the public lands within a state. Twenty-nine species within this Field Guide are either on the endangered species list or considered sensitive according the USFS or BLM (Table 3).

Table 3. List of Federally Listed and Sensitive Wetland Plants

Species Name	Common Name	USFS or BLM Sensitive	Federal Status	CNHP Rarity Ranks
<i>Astragalus leptaleus</i>	Park milkvetch	USFS		G4 S2
<i>Braya glabella</i>	Smooth northern-rockcress	USFS		G5 S1
<i>Carex diandra</i>	Lesser panicled sedge	USFS		G5 S1
<i>Carex livida</i>	Livid sedge	USFS		G5 S1
<i>Cleome multicaulis</i>	Slender spiderflower	BLM		G2G3 S2S3
<i>Cypripedium parviflorum</i> var. <i>pubescens</i>	Yellow lady's slipper	USFS		G5 S2
<i>Drosera anglica</i>	English sundew	USFS		G5 S1
<i>Drosera rotundifolia</i>	Roundleaf sundew	USFS		G5 S2
<i>Epipactis gigantea</i>	Stream orchid	USFS		G4 S1
<i>Erigeron kachinensis</i>	Kachina fleabane	BLM		G2 S1
<i>Eriophorum chamissonis</i>	Chamisso's cottongrass	USFS		G5 S1
<i>Eriophorum gracile</i>	Slender cottongrass	USFS		G5 S1
<i>Eutrema penlandii</i>	Penland's eutrema		Listed Threatened	G1G2 S1S2
<i>Gaura neomexicana</i> ssp. <i>coloradensis</i>	Colorado butterfly plant		Listed Threatened	G3T2 S1
<i>Kobresia simpliciuscula</i>	Simple bog sedge	USFS		G5 S2
<i>Malaxis brachypoda</i>	White adder's-mouth orchid	USFS		G4Q S1
<i>Mimulus eastwoodiae</i>	Eastwood's monkeyflower	USFS		G3G4 S2
<i>Parnassia kotzebuei</i>	Kotzebue's grass of Parnassus	USFS		G5 S2
<i>Primula egaliksensis</i>	Greenland primrose	USFS		G4 S2
<i>Ptilagrostis porterii</i>	Porter's false needlegrass	USFS		G2 S2
<i>Rubus arcticus</i> ssp. <i>acaulis</i>	Dwarf raspberry	USFS		G5T5 S1
<i>Salix arizonica</i>	Arizona willow	USFS		G2G3 S1
<i>Salix candida</i>	Sageleaf willow	USFS		G5 S2

Species Name	Common Name	USFS or BLM Sensitive	Federal Status	CNHP Rarity Ranks
<i>Salix myrtillofolia</i>	Blueberry willow	USFS		G5 S1
<i>Salix serissima</i>	Autumn willow	USFS		G4 S1
<i>Sisyrinchium pallidum</i>	Pale blue-eyed grass	BLM		G2G3 S2
<i>Spiranthes diluvialis</i>	Ute lady's tresses		Listed Threatened	G2G3 S2
<i>Trichophorum pumilum</i>	Rolland's bulrush	BLM		G5 S2
<i>Utricularia minor</i>	Lesser bladderwort	USFS		G5 S2

Non-Native Wetland Plants and Wetland Noxious Weeds

Numerous non-native species occur within Colorado wetlands. Some are nearly ubiquitous, like the common dandelion (*Taraxacum officinale*), while others occur only rarely and cause little harm. However, aggressive, non-native species, referred to as noxious weeds, pose a significant threat to Colorado wetlands because they can replace or outcompete native species. The Colorado Department of Agriculture Noxious Weed Program lists species according to their degree of invasiveness. List A species are designated by the State Commissioner for eradication. List B weed species are species for which the State develops and implements state noxious weed management plans designed to stop the continued spread of these species. List C weed species are species for which the Commissioner will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. Currently there are 16 species on the Colorado Noxious Weed List with a wetland indicator status of OBL or FACW (Table 4). However, other noxious weeds are likely to be encountered in wetlands.

Table 4. Noxious weeds with a wetland indicator status of OBL or FACW either known or expected to occur in Colorado's wetlands.

Scientific Name	Common Name	Class	Present in CO?	Western Mountains	Arid West	Great Plains
<i>Lythrum salicaria</i>	Purple loosestrife	List A	Yes	OBL	OBL	OBL
<i>Arundo donax</i>	Giant reed	List A	No	FACW	FACW	FAC
<i>Hydrilla verticillata</i>	Hydrilla	List A	No	OBL	OBL	OBL
<i>Salvinia molesta</i>	Giant salvinia	List A	No	NI	OBL	OBL
<i>Cyperus esculentus</i>	Yellow nutsedge	List B	Yes	FACW	FACW	FAC
<i>Lepidium latifolium</i>	Broadleaved pepperweed	List B	Yes	FAC	FACW	FAC
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	List B	Yes	OBL	OBL	OBL
<i>Elaeagnus angustifolia</i>	Russian olive	List B	Yes	FAC	FACU	FAC
<i>Tamarisk chinensis</i>	Saltcedar	List B	Yes	FAC	FACW	FAC
<i>Tamarisk parviflora</i>	Smallflower tamarisk	List B	Yes	FAC	FACW	FACW
<i>Conium maculatum</i>	Poison hemlock	List C	Yes	FACW	FACW	FACW
<i>Butomus umbellatus</i>	Flowering rush	Watch List	No	FACW	FACW	FACW
<i>Eichhornia crassipes</i>	Water hyacinth	Watch List	Yes	OBL	OBL	OBL

Scientific Name	Common Name	Class	Present in CO?	Western Mountains	Arid West	Great Plains
<i>Epilobium hirsutum</i>	Hairy willowherb	Watch List	No	FACW	FACW	FACW
<i>Phragmites australis</i>	Common reed	Watch List	Yes	FACW	FACW	FACW
<i>Typha angustifolia</i>	Narrowleaf cattail	Watch List	Yes	OBL	OBL	OBL



Riparian wetland. John Fielder.

How to Use the Field Guide

Species Included in the Book

The 2012 National Wetland Plant List (Lichvar 2012) filtered for the state of Colorado formed the basis for the list of species covered in this guide. There are 1,428 species on the National Wetland Plant List for Colorado that have any one of the five wetland indicator status codes (see Table 1 on page 3). Of that list, 708 species have a wetland indicator status of OBL or FACW in at least one of Colorado's three regions. The list of OBL and FACW was compared with state-based floras (Weber and Wittmann 2012, Ackerfield 2012) and the Flora of North America's most recent treatments (Flora of North America Editorial Committee 1993+) to determine whether all the species have been confirmed to occur in Colorado. Based on this research a handful of species were found to be erroneous reports, historical occurrences, or so rare that they are not likely to be encountered and were removed from the list. Where applicable, rare species or species that could potentially occur are mentioned within the comments sections of closely related species. In addition, species were added to the list that were not found on the National Wetland Plant List that have been recognized or confirmed to be in the state by experts. Several species were included that have a wetland indicator status of FAC or lack an indicator status altogether, but are important to Colorado's wetland and riparian area, such as plains cottonwood (*Populus deltoides* = FAC) and Colorado false hellebore (*Veratrum tenuipetalum* = NI). Based on this research, 639 plant species are included in this field guide of Colorado's wetland plant species.

Basic Organization

The book contains detailed descriptions, photos and illustrations, but no dichotomous keys. Users should pair this field guide with dichotomous keys, such as Weber and Wittmann (2012) or Ackerfield (2012), 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 5). 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 5. List of physiognomic sections and number of species in Field Guide.

Section	Number of Species
Aquatics	73
Ferns and Ferns Allies	6
Grasses	59
Rushes	31
Sedges	95
Monocot Herbs	31
Dicot Herbs	290
Woody Plants	54
Total Species	639

Aquatic herbs include plants that have adapted to living in water. They lack the cuticles that terrestrial plants need to prevent dehydration, thus absorbing nutrients over their entire surfaces. Water provides physical support, so aquatic plants do not have structural cells needed for growing upright. They do 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. Aquatic herbs are further classified according to the following growth forms:

Submerged plants live in shallow waters, often rooted at some point to obtain maximum sunlight. Common examples include: some smartweeds (*Polygonum* or *Persicaria* spp.), water milfoils (*Myriophyllum* spp.), pondweeds (*Potamogeton* spp.), watercresses (*Rorippa* spp.), aquatic buttercups (*Ranunculus aquatilis*, *R. circinatus*) and mare's tail (*Hippuris vulgaris*). The aquatic fern-allies, quillworts (*Isoetes* spp.) and hairy waterclover (*Marsilea vestita*), are included in this group.

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.), common duckmeat (*Spirodela polyrrhiza*), watermeal (*Wolffia* spp.) and the water fern (*Azolla mexicana*).

Floating-leaf plants flourish in fluctuating or turbid water because they send up long stalks from often large, buried tubers. Examples include: Rocky Mountain pond-lily (*Nuphar lutea* ssp. *polysepala*), bladderworts (*Utricularia* spp.), pondweeds (*Potamogeton* spp.), water-starworts (*Callitriche* spp.) and waterweeds (*Elodea* spp.).

Ferns and fern allies are the most ancient group of plants, with primitive reproductive structures. They have a vascular system (xylem and phloem), but reproduce by spores instead of seeds, thus separating them from the flowering plants. Members of this group include horsetails (*Equisetum* spp.), moonworts (*Botrychium* spp.) and two ferns (*Adiantum capillus-veneris*, *Dryopteris expansa*).

Grasses are herbaceous monocots with narrow leaves and specific floral parts (Figure 2). 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. 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. The palea and lemma represent much-reduced sepals and the lodicules (visible only with magnification) represent the petals. Grass stems are hollow, have ligules, leaf sheaths and swollen nodes or knees. Common wetland grasses include: cordgrasses (*Spartina* spp.), brookgrass (*Catabrosa aquatica*), saltgrass (*Distichlis stricta*), managrases (*Glyceria* spp.), bluejoint reedgrasses (*Calamagrostis* spp.), bentgrasses (*Agrostis* spp.), foxtails (*Alopecurus* spp.), tufted hairgrass (*Deschampsia cespitosa*) and reed canarygrass (*Phalaris arundinacea*).

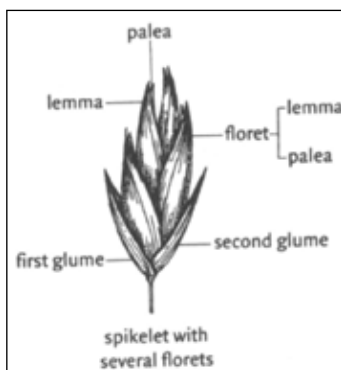


Figure 2. Grass floret.

Rushes are grass-like plants but with lily-like flowers with 3 sepals, 3 petals, 3 or 6 stamens and a pistil with a 3-parted stigma (Figure 3). The ovary is superior, eventually maturing into the capsule. For identification of rushes, the bracts, capsules and seeds are important diagnostic characters, often requiring a 10-20x hand lens to see. Most Colorado wetlands will have at least one if not several species of rushes.

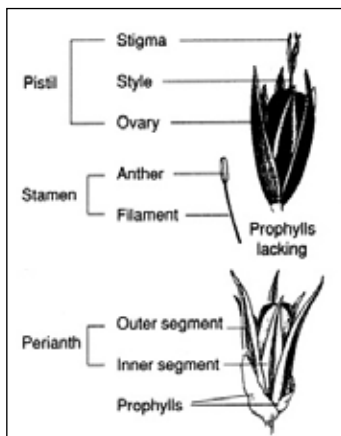


Figure 3. Rush flower.

Sedges are likely the most encountered wetland plants. They have a grass-like appearance, but can be distinguished from rushes and grasses by their 3-angled, solid pith stems (except some bulrushes that have round stems); non-jointed stems (no “knees”); closed leaf sheaths; absence of a ligule; florets that are subtended by 1 bract (=pistillate scale); and achenes that are enclosed by a bract or perigynia (Figure 4). The main identifying features for sedges are perigynia and scales. Sedges are usually a primary indicator of fens. Major genera include: sedges (*Carex* spp.), bulrushes (*Scirpus* or *Schoenoplectus* spp.), spike-rushes (*Eleocharis* spp.) and cottongrasses (*Eriophorum* spp.).

Monocot herbs are flowering plants that have one-seeded cotyledons (primary seed leaf), parallel leaf veins, floral parts in 3's and usually simple branching. Major wetland species include: Rocky Mountain iris (*Iris missouriensis*), blue-eyed grasses (*Sisyrinchium* spp.), arrowgrasses (*Triglochin* spp.), yellow starflower (*Hypoxis hirsuta*), twisted stalk (*Streptopus amplexifolius*), stream orchid (*Epipactis gigantea*), twayblades (*Listera* spp.), bog orchids (*Platanthera* spp.), lady's tresses (*Spiranthes* spp.) and cattails (*Typha* spp.).

Dicot herbs include flowering plants that have two-seeded cotyledons (seed leaves), netted leaf veins, floral parts in 4's and 5's and usually complex branching. The major plant families include: Asteraceae (sunflower), Brassicaceae (mustard), Gentianaceae (gentian), Rosaceae (rose) and Ranunculaceae (buttercup). The dicot section represents the largest group in the Field Guide.

Woody plants are defined by woody stems and branches and by buds that survive above ground in winter. Trees are woody plants that have a single, well-defined trunk and shrubs typically have branched trunks. Woody plants often grow by emerging from shallow water or damp soil much like emergent plants, but are separated from herbaceous plants due to the difference in physical structure. Examples include willows: (*Salix* spp.), thin-leaf alder (*Alnus incana* ssp. *tenuifolia*), birches (*Betula* spp.) and cottonwoods (*Populus* spp.). The most helpful characters for identification are the leaf and branch arrangement (opposite, alternate or whorled), leaf types (dissected, simple, serrate), and fruits.

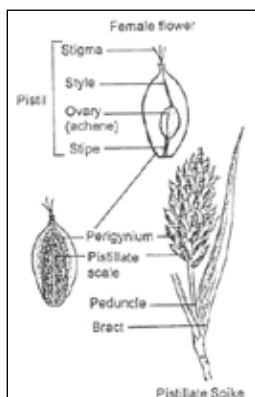


Figure 4. Female sedge flower.



Mallards. Colorado Parks and Wildlife.

Species Profile Key


Section - Phylogonomy Group

Aquatics

Scientific Name


Family Name

Alisma triviale Pursh
Northern water plantain



Key Characteristics:

- Emergent, 2–4 (12) cm tall and long from short, rounded, fleshy rhizomes.
- Leaves basal, shorter than the inflorescence; blades 3–20 cm long, petioles decumbent.
- Flowers 7–10 cm long, bearing a diffuse panicle; scape 15–30 cm long, excluding inflorescence.
- Flowers numerous, diffuse; sepals obtuse; petals white, 1–4 mm long; pedicels 1–4 cm long.
- Achenes arranged in a single ring 2–2.5 mm long; are central groove near tip; bracts erect.



Synonymy: *Alisma plantago-aquatica* L. var. *triviale* (Rostk Schmidt)

USDA PLANTS Symbol: ALTR1

ITS TSN: 111441

Wetland Status: AFW: 100 WM: 100 GP: 100

Native Status: Native

Conservation Status: G5 (S4)

C-Rating: 1


Distribution: (Perennial)

CO Elevations: 1,000–11,000 ft (1,525–1,010 m)

Similar Species: Sagittaria spp. have flowers in whorls of three with sagittate leaves; A. gramineum leaves are linear, less than 1 cm wide and achenes have 2 distinct grooves. A. subcostatum (Nakai, 1961, 1970, 2000), reported for Colorado, has shorter petals, 1–2 mm long, equaling the sepals and smaller bracts (1–4 mm across).

Habitat and Ecology: Common in wet places such as along pond edges, in ditches and marshes and wet meadows, rarely in deep water.

Comments: The Alismaceae is considered to be one of the most problematic invasives due to the retention of all ancestral characters (e.g., numerous plants and numerous clonemes). Achenes are eaten by waterfowl and small mammals. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Elpid 2006, Flora of North America 2001, Lavin 1991, Rejzler and Wootton 2012, Western Wetland Flora 1992

Description of Similar Species

Habitat and Ecology

Comments and Notes

Distribution

References

Scientific Name: USDA-NRCS PLANTS National Database (2012) was 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 2012), but is best for comparing across state borders and between various national datasets.

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

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 Flora of North America, the alternate family name is listed in parenthesis.

Photos and Illustrations: Each species includes three photos or illustrations that highlight the most diagnostic characteristics of the plant. The top photo is most often a close-up of the flowering head. Additional photos and illustrations may be of the whole plant, the growth habit, the leaves, or specific floral and fruiting parts. Photos and illustrations were compiled from numerous different sources, including many talented Colorado photographers, several internet-based photo databases, genera-specific photo collections of herbarium specimens, and botanical illustrators from around the country.

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

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.

ITIS TSN: The ITIS TSN is the Integrated Taxonomic Information System (ITIS) Taxonomic Serial Number (TSN) (<http://www.itis.gov/>). Like the USDA PLANTS Symbol, this is a unique numeric code used to differentiate species and is used by many national and international agencies.

Wetland Status: The wetland indicator status reflects the likelihood that a particular plant occurs in a wetland or upland (see Table 1 on page 3). This information is both of general interest and specifically needed for wetland delineation. The wetland indicator rating status used in this guide are from the 2012 National Wetland Plant List published by the U.S. Army Corps of Engineers (<http://rsgisias.crrel.usace.army.mil/NWPL/>) and are specific to the three regions within Colorado (AW: Arid West, WM: Western Mountains Valleys and Coasts, GP: Great Plains).

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.

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 6. Additional ranks and associated criteria used by the Natural Heritage Network are available at: <http://www.natureserve.org/>.

Table 6. Natural Heritage Network ranking system.

Rank	Interpretation
1	Critically Imperiled (typically 5 or fewer occurrences or less than 1,000 individuals)
2	Imperiled (typically 6 to 20 occurrences or between 1,000 and 3,000 individuals)
3	Vulnerable to Extirpation (typically 21 to 100 occurrences or between 3,000 and 10,000 individuals)
4	Apparently Secure (usually more than 100 occurrences and more than 10,000 individuals)
5	Demonstrably Widespread, Abundant, and Secure (typically with considerably more than 100 occurrences and more than 10,000 individuals)
NR	Not Ranked (not enough information is available on which to base a rank)
NA	Not Applicable (rarity ranking is not applicable because the species is not native to the state)

C-Value: The C-value is “coefficient of conservatism,” which represents the estimated probability that a species occurs in a landscape that is either pristine or disturbed (Swink and Wilhelm 1979; Swink and Wilhelm 1994). C-values range from 0–10 (Table 7). C-values of 0 are generally 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 7. Interpretation of C-values.

C-Values	Interpretation	Examples (C-Value)
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 triviale</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.	Blue-eyed grass (<i>Sisyrinchium pallidum</i>) (7)
10	Obligate to high quality natural areas (relatively unaltered from pre-European settlement).	Round-leaf sundew (<i>Drosera rotundifolia</i>) (10)

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

CO Elevation Range: The Colorado elevation range was derived from a compilation of herbarium records and information in the literature. These data were compiled in conjunction with data for the distribution maps and more details on the methodology can be found below under the explanation for the distribution maps.

Key Characteristics: Perhaps the most important section, the key characteristics include up to five bullets that detail the most important and distinguishing characteristics of the species. 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.












Similar Species: Species that could be easily mistaken for the main species are described in this section along with their distinguishing characteristics. The wetland indicator status is given for all similar species described. If a similar species is not covered with its own page in the book, the USDA PLANTS Code and ITIS TSN are also given. In some cases, the similar species section describes the distinguishing characteristics of two or more subspecies.

Habitat and Ecology: This section describes the general habitat and ecology of the species, including the general region of the state where it occurs. If the species is known only from a handful of counties, they are mentioned specifically.

Comments: The comments section includes a range of noteworthy information about the species. This information could include facts about wildlife use, ethnobotanical use, origins of the plant name, and evolutionary strategies of the plant or plant family. In cases where there is debate over nomenclature or over whether the plant is native to Colorado, that information is also included in comments. For species that are rare in one or more states in EPA Region 8 (Montana, Wyoming, Utah, North Dakota, and South Dakota), we have included the Natural Heritage Network Conservation Ranks for those states, as available on the NatureServe Explorer website (<http://www.natureserve.org/explorer/>).

Animal and Bird Use Icons: An emphasis of this field guide is the interaction of plants and animals within wetlands. The comments section contains written information on animal and bird use for many species. In addition to those comments, animal and bird use icons (Table 8) are a quick reference for which animal groups use each species.

Table 8. Wildlife orders and families that are obligate wetland users (silhouettes by Jim Carroll).

Symbol	Orders and Common Families
	Podicipediformes—Grebes
	Pelecaniformes—Cormorants, Pelicans, Herons, Egrets, Bitterns
	Anseriformes—Ducks, Geese, Dabbling and Wood Ducks, and Bay Ducks
	Gruiformes—Rails, Coots, and Cranes
	Charadriiformes—Sandpipers, Phalaropes, Snipes, Avocets
	Passeriformes—Flycatchers, Ovenbirds, Dippers, Wrens, Pipits, Sparrows, Blackbirds
	Galliformes—Grouse, Quail, Ptarmigan
	Small Mammals—Beaver, Muskrats, Shrews, Pikas, Rabbits
	Large Mammals—Moose, Elk, Deer, Sheep, Domestic Livestock
	Amphibians—Toads, Frogs, Snakes, Salamander, Turtles
	Insects—Butterflies, Moths, Flies, Ants

References: References include all sources used to write a particular species description.

Distribution Map: Distribution maps were derived from a compilation of herbarium records and information in the literature. Herbarium records were obtained in database or spreadsheet form from numerous herbaria that contain significant collections of Colorado species, including:

- ◆ Carter Herbarium of Colorado College, Colorado Springs (COCO)
- ◆ Colorado State University, Fort Collins (CS)

- ◆ Fort Lewis College, Durango (FLD)
- ◆ Kathryn Kalmbach Herbarium of Denver Botanic Gardens (KHD)
- ◆ Mesa Verde National Park (MEVE)
- ◆ Rocky Mountain Biological Laboratory, Gothic (RMBL)
- ◆ Rocky Mountain Herbarium at the University of Wyoming, Laramie (RM)
- ◆ University of Colorado, Boulder (COLO)

Many records were downloaded from the Southwest Environmental Information Network (SEINet) (<http://swbio-diversity.org/seinet/>) in August 2012. Records from the COLO and COCO collections were sent directly from the herbarium managers around the same time. All 383,903 individual records were consolidated into one database. Every effort was made to link the nomenclature within the records to names in the Field Guide, taking into account both synonymy and misspellings. This resulted in 80,699 records of species included in the Field Guide. County, locality, and elevation information from the records was used as the basis for the distribution maps and elevation ranges.

In addition to herbarium records, we included information from CNHP's Biotics database on species that are tracked by CNHP. Information compiled by CSU Herbarium Manager Jennifer Ackerfield was also included. Finally, maps were fine tuned with additional information from book reviewers.



Kettle pond wetland. Denise Culver.

Alisma gramineum Lej. Narrowleaf water plantain

Alismataceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: ALGR

ITIS TSN: 38896

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS SNR

C-Value: 4

Duration: Perennial

CO Elevation: 5,410–7,800 ft. (1,650–2,375 m)

Key Characteristics:

- Emergent, 0.5–3 (5) dm tall, arising from short, compact, fleshy rhizomes
- Leaves basal, linear, 5–9 cm long x 3 cm wide, longer than inflorescence, often floating
- Flowers several in whorls forming a diffuse panicle, flower stalks subtended by papery bracts
- Sepals 3, green, obtuse; petals 3, pinkish; pistils arranged in single whorl

- Achenes arranged in a single ring, 2.25 mm long, 2 grooves near tip; curved beaks



Jeanne R. Janish

Aquatics

Biopix



Similar Species: *Sagittaria* spp. have flowers in whorls of threes with sagittate leaves. *A. trivale* leaves are shorter than the inflorescence, broader, ovate to elliptic, 5–20 cm wide and achenes have only one central groove at tip. *A. subcordatum* [ALSU, OBL, ITIS 38895], reported for Colorado, has shorter petals 1–2 mm long, equaling the sepals and smaller fruiting heads, 2–4 mm across.

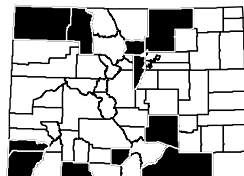
Habitat and Ecology: Found on muddy shores, in shallow water, flats and stream banks.

Comments: The Alismataceae is considered to be one of the most primitive monocots due to the retention of of ancestral characters e.g., numerous pistils and stamens. Achenes are eaten by waterfowl and small mammals. Ranked as state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Elpel 2006, Flora of North America 2000, Larson 1993, Weber and Wittmann 2012, Western Wetland Flora 1992



Alisma triviale Pursh

Northern water plantain

Alismataceae

Neil Kramer



Synonyms: *Alisma plantago-aquatica* L. ssp. *brevipes* (Greene) Sam.

USDA PLANTS Symbol: ALTR7

ITIS TSN: 182441

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 5,000–10,000 ft. (1,525–3,050 m)

Key Characteristics:

- Emergent, 2–6 (12) cm tall arising from short, crowded, fleshy rhizomes
- Leaves basal, shorter than the inflorescence; blades 5–20 cm long; petioles sheathing
- Flowers 1-few whorls forming a diffuse panicle; scape 10–50 cm long excluding inflorescence
- Flowers numerous, diffuse; sepals obtuse; petals white, 1–4 mm long; pedicels 1–4 cm long
- Achenes arranged in a single ring, 2–2.5 mm long, one central groove near tip; beaks erect

Amadei Timkozy



Jeanne R. Janish



Similar Species: *Sagittaria* spp. have flowers in whorls of threes with sagittate leaves. *A. gramineum* leaves are linear, less than 3 cm wide and achenes have 2 distinct grooves. *A. subcordatum* [ALSU, OBL, ITIS 38895], reported for Colorado, has shorter petals 1–2 mm long, equaling the sepals and smaller fruiting heads 2–4 mm across

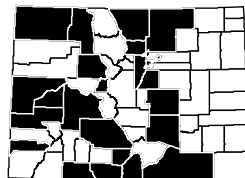
Habitat and Ecology: Common in wet places such as along pond shores, in ditches and marshes and on mud flats, rarely in deep water.

Comments: The 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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Elpel 2006, Flora of North America 2000, Larson 1993, Weber and Wittmann 2012, Western Wetland Flora 1992



Aquatics

Sagittaria brevirostra Mack. & Bush

Shortbeak arrowhead

Alismataceae

Doreen L. Smith



Synonyms: *Sagittaria engelmanniana* J.G. Sm. ssp. *brevirostra* (Mack. & Bush) Bogin

USDA PLANTS Symbol: SABR8

ITIS TSN: 38914

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2?

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,800–5,050 ft. (1,465–1,540 m)

Key Characteristics:

- ◆ Emergent, erect, to 7 dm tall, often robust; rhizomes absent, bearing corms in fall
- ◆ Leaf blades sagittate, 10–30 cm long x 20 cm wide; petioles terete-ridged, to 39 cm long
- ◆ Inflorescence a raceme or panicle of (2) 3 (5) whorls; bracts acuminate; pedicels 0.5–2 cm long
- ◆ Flowers male above and female below, glabrous; sepals ovate, reflexed; petals white, showy
- ◆ Achenes densely crowded in a globose heads; beaks recurved, prominent, 0.4–1.7 mm long



John Myers

Aquatics

Roland Barth



Similar Species: *Alisma* spp. have flowers in diffusely branched panicles, not in whorls of threes. *S. cuneata* achene beaks are straight and shorter (0.1–0.4 mm). *S. latifolia* achene beaks are horizontal, not erect.

Habitat and Ecology: Along muddy shorelines and streamsides, known from northern Colorado, likely to occur elsewhere on Eastern Slope.

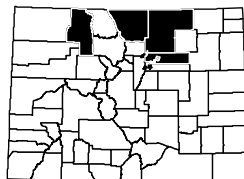
Comments: The Alismataceae is considered to be one of the most primitive monocots due to the retention of ancestral characters e.g., numerous pistils and numerous stamens. The small, flattish seeds of arrowheads are eaten by ducks and the tubers are valuable to many species of wildlife.

Muskrat, beaver and porcupine are known to eat the tubers. Considered state imperiled (S2) in Colorado.

Animal and Bird Use:



References: Ackerfield 2012, Elpel 2006, Flora of North America 2000, Great Plains Flora Association 1986, Kuhnlein and Turner 1991, Larson 1993, Weber and Wittmann 2012



Sagittaria calycina Engelm. var. *calycina*

Hooded arrowhead

Alismataceae

Scott Nemesnik



Synonyms: *Sagittaria montevidensis* Cham. & Schldtl. ssp. *calycina* (Engelm.) Bogin

USDA PLANTS Symbol: SACAC

ITIS TSN: 182450

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5? S1

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,200 ft. (1,585 m)

Key Characteristics:

- ◆ Emergent, 1–10 dm tall; corms and rhizomes present
- ◆ Leaves submerged and emergent; blades sagittate, 3–40 cm long x 2–25 cm wide; petioles round
- ◆ Inflorescence stout, leaning, fruiting pedicels recurved, thick, 0.5–5 cm long
- ◆ Sepals erect and enclosing flowers, broad, obtuse, 5–12 mm long; petals white with yellow bases
- ◆ Fruiting heads nodding to 2 cm across; achenes 2–3 mm long, equally winged

Kay Yaskievich



Scott Nemesnik



Similar Species: Readily distinguished from other *Sagittaria* spp. by the round petioles, leaning or procumbent inflorescence and erect sepals.

Habitat and Ecology: Locally common in wet places such as along pond shores; known occurrences include Las Animas, Denver (historical 1887) and Jackson Counties.

Comments: The Alismataceae is considered to be one of the most primitive monocot due to the retention of of ancestral characters e.g., numerous pistils clustered in a cone shaped, surrounded by numerous stamens. The small 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. Considered state critically imperiled (S1) in Colorado.

Animal and Bird Use:



References: Ackerfield 2012, Elpel 2006, Flora of North America 2000, Great Plains Flora Association 1986, Kuhnlein and Turner 1991, Larson 1993, Weber and Wittmann 2012



Sagittaria cuneata Sheldon

Arumleaf arrowhead

Alismataceae

Trent M. Draper



Synonyms: None

USDA PLANTS Symbol: SACU

ITIS TSN: 38917

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 3,500–10,000 ft. (1,065–3,050 m)

Key Characteristics:

- 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 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



Jeanne R. Janish

Aquatics

Louis M. Landry



Similar Species: *S. brevirostra* 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.

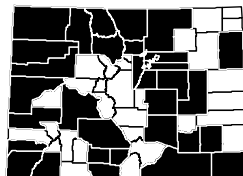
Habitat and Ecology: Common along shorelines and slow-moving streams and in swampy places, especially in sandy soils. *S. cuneata* is extremely variable. On emergent plants, the leaf petioles are often bent toward the ground. Submerged plants often grow from a basal rosette with a long, flexuous petiole 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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Great Plains Flora Association 1986, Kuhnlein and Turner 1991, Larson 1993, Weber and Wittmann 2012



Sagittaria graminea Michx.

Grassy arrowhead

Alismataceae

Louis M. Landry



Synonyms: None
USDA PLANTS Symbol: SAGR
ITIS TSN: 38907
Wetland Status AW: NI WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 S1
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 5,760 ft. (1,755 m)

Key Characteristics:

- Emergent, up to 10 dm tall; rhizomes coarse, corms and stolons absent
- Emergent leaves petiolate to 5 dm long, linear; submerged leaves lax, linear
- Inflorescence a raceme, pistillate, 1–12 whorls; pedicels 0.5–3 cm
- Sepals ovate, 5 mm long, reflexed; petals broad to 1.5 cm long, white; filaments pubescent
- Fruiting heads 4–15 mm across; achenes 1.5–2.8 mm long, dorsal wings rounded over top; beaked

Louis M. Landry



Dan Tenaglia



Similar Species: *S. graminea* has linear not lobed leaves, distinguishing it from the other *Sagittaria* spp. have leaves that are cordate or sagittate.

Habitat and Ecology: Infrequent along pond shores, known only from one specimen from Mesa de Maya in Las Animas County.

Comments: The Alismataceae is considered to be one of the most primitive monocots due to the retention of of ancestorral characters e.g., numerous pistils and stamens. 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. Considered state critically imperiled (S1) in Colorado.

Animal and Bird Use:



References: Ackerfield 2012, Great Plains Flora Association 1986, Kuhnlein and Turner 1991, Larson 1993, Weber and Wittmann 2012



Aquatics

Sagittaria latifolia Willd.

Broadleaf arrowhead

Alismataceae

Graves Lovell



Synonyms: *Sagittaria latifolia* Willd. var. *obtusata* (Muhl. ex Willd.) Wiegand, *Sagittaria latifolia* Willd. var. *pubescens* (Muhl. ex Nutt.) J.G. Sm.

USDA PLANTS Symbol: SALA2

ITIS TSN: 38908

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

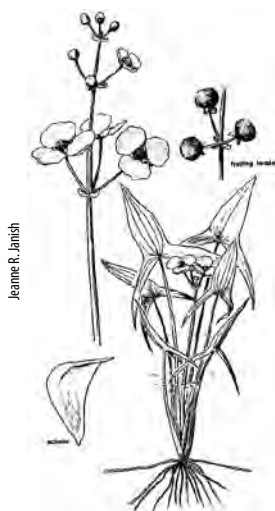
C-Value: 5

Duration: Perennial

CO Elevation: 3,800–7,500 ft. (1,160–2,285 m)

Key Characteristics:

- ◆ Emergent, 2–8 dm tall; rhizomes absent, stolons and corms present
- ◆ Leaves variable, depending on water depth; blades sagittate, 8–40 cm long x 0.4–15 cm wide
- ◆ Inflorescence 1–few, bracts free, papery; pedicels slender, 0.3–3.5 cm long
- ◆ Sepals reflexed in fruit, 4–10 mm long; petals white, showy, 7–20 mm long; filaments glabrous
- ◆ Fruiting heads 1–1.7 cm, achenes obovate, 2.5–3.5 mm long; beaks lateral, horizontal, 1–2 mm



Aquatics

Louis M. Landry



Similar Species: *S. latifolia* is distinguished from other *Sagittaria* spp. by glabrous filaments and achene beaks that are set horizontally (90 degrees from axis).

Habitat and Ecology: Common along pond shores, in muddy ditches and in swampy areas on plains and foothills.

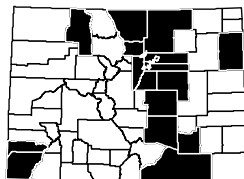
Comments: The Alismataceae is considered to be one of the most primitive monocots due to the retention of ancestral characters e.g., numerous pistils and numerous stamens. The small, flattish seeds of arrowheads are eaten by ducks and the tubers are valuable to many species of wildlife.

Muskrat, beaver and porcupine are known to eat the tubers. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Great Plains Flora Association 1986, Kuhnlein and Turner 1991, Larson 1993, Weber and Wittmann 2012



Azolla mexicana Schldl. & Cham. ex C. Presl

Mexican mosquitofern

Azollaceae (Salviniaceae)

Scott Smith



Synonyms: None

USDA PLANTS Symbol: AZME

ITIS TSN: 18009

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S4

C-Value: Not Assigned

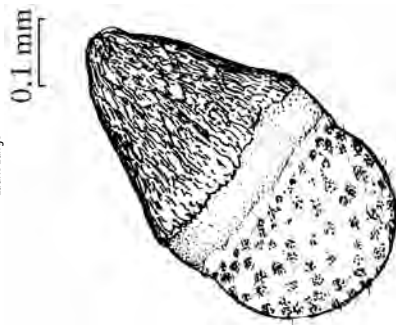
Duration: Annual, Perennial

CO Elevation: 3,580–5,560 ft. (1,090–1,695 m)

Key Characteristics:

- ◆ Free-floating, aquatic fern, forming multi-layer mats to 4 cm thick; roots thread-like
- ◆ Stems prostrate, 1–1.5 cm, forming extensive reddish mats, velvety in appearance
- ◆ Leaves scale-like, in 2 rows, small, sessile, compact, less than 1 mm wide
- ◆ Megaspores pitted like a golf ball, covered with few, long filaments

Laurie Lange



Scott Smith



Similar Species: Other small floating plants include *Lemna* spp., *Spirodela* spp. or *Wolffia* spp. The fronds of these species are bright green, not becoming red, except for the underside of fronds in *Lemna minor*.

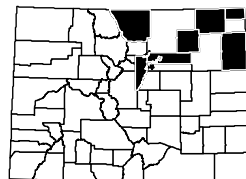
Habitat and Ecology: Uncommon, found floating on slow-moving or stagnant waters on the Eastern Slope, often with *Lemna* spp.

Comments: Blue-green algae have evolved a symbiotic relationship with *A. mexicana*. The blue-green algae live in the leaves absorbing or fixing nitrogen from the air. This provides nutrients for *Azolla* spp., while the plant provides shelter and minerals for the blue-green algae. *Azolla* spp. are used as green fertilizer in rice paddies because of the nitrogen fixing ability of the algae. Considered state imperiled (S2) in Utah.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1986, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Aquatics

Nasturtium officinale W.T. Aiton

Watercress

Brassicaceae

Thomas Stoughton



Synonyms: *Rorippa nasturtium-aquaticum* (L.)

Hayek

USDA PLANTS Symbol: NAOF

ITIS TSN: 23255

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,100–9,300 ft. (1,250–2,835 m)

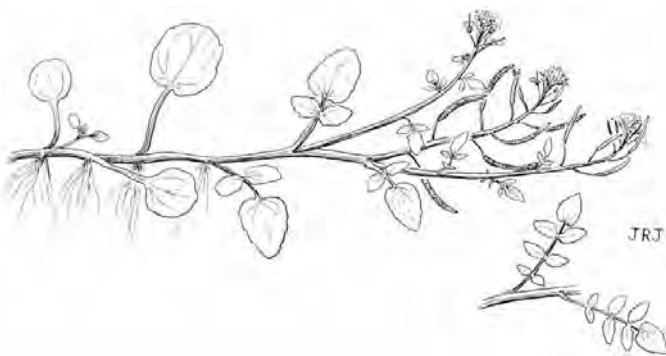
Key Characteristics:

- ◆ 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

Louis M. Landry



Jeanne R. Janish



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.

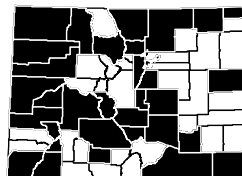
Comments: Native to Eurasia, imported to United States as a cooking herb. Eaten by ducks, muskrats and deer.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



***Subularia aquatica* L. var. *americana* (G. Mulligan & Calder) B. Boivin**
American water awlwort **Brassicaceae**

Steve Matson



Synonyms: *Subularia aquatica* L. ssp. *americana* G. Mulligan & Calder
USDA PLANTS Symbol: SUAQA2
ITIS TSN: 530601
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5T5 SNR
C-Value: Not Assigned
Duration: Annual
CO Elevation: 10,350–10,900 ft. (3,155–3,320 m)

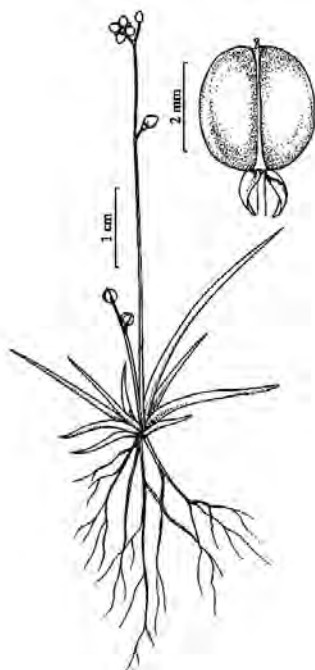
Key Characteristics:

- ◆ Emergent, stems 2–8 cm tall; short taproots densely covered in bright white, fibrous roots
- ◆ Leaves grass-like, all in a densely packed basal rosette, 0.5–4 cm long, sessile, terete
- ◆ Inflorescence a delicate, few-flowered raceme, flowers (if present) white, in 4s
- ◆ Fruits siliques, 3–4 mm long x 1.4–2 mm wide, obovoid, obtuse or rounded apically, inflated

Steve Matson



Yvonn Wilson-Ramsey



Similar Species: Can be confused with *Eleocharis acicularis* or *Isoetes* spp. However, *S. aquatica* var. *americana* has true petals and sepals.

Habitat and Ecology: Rare. Found in shallow ponds with rocky gravelly bottoms and wet meadows in the subalpine. Known in Colorado from the Never Summer Range in Larimer County and Grand Mesa in Mesa County.

Comments: *S. aquatica* ssp. *americana* is the sole representative of the genus *Subularia* in North America. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: None known.

References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Skawinski 2011, Weber and Wittmann 2012



Callitriche hermaphroditica L. Northern water-starwort

Callitrichaceae

Zoya Akulova



Synonyms: *Callitriche autumnalis* L.

USDA PLANTS Symbol: CAHE2

ITIS TSN: 32057

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 5,000–11,250 ft. (1,525–3,430 m)

Key Characteristics:

- ◆ Completely submerged, stems to 40 cm long, rooting from lower nodes
- ◆ Leaves uniformly linear-lanceolate, narrowed to clasping bases, 1-nerved, 5–20 mm long
- ◆ Flowers solitary in leaf axis, not subtended by bracts
- ◆ Staminate flowers inconspicuous; pistillate flowers minute
- ◆ Fruits small, 1–2.5 mm, orbicular, deep groove across fruits, wings present on margins

Zoya Akulova



Jeanne H. Janish



Similar Species: Other *Callitriche* species have both floating and submerged leaves. *C. hermaphroditica* has no floating leaves, only submerged.

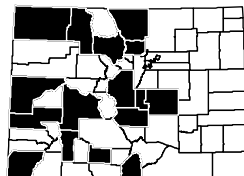
Habitat and Ecology: Found in ditches and slow-moving streams and along shallow pond and lake margins, often in calcareous waters.

Comments: Provides forage and cover for young fish and aquatic insects. Ducks eat seeds and foliage. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Callitriche heterophylla Pursh

Twoheaded water-starwort

Callitrichaceae

Neil Kramer



Synonyms: None

USDA PLANTS Symbol: CAHE3

ITIS TSN: 32053

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 6

Duration: Annual, Perennial

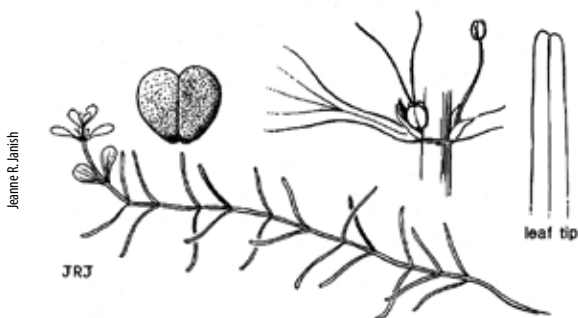
CO Elevation: 6,800–8,800 ft. (2,075–2,680 m)

Key Characteristics:

- Emergent, usually only shoot tips floating, stems 1–2 dm long, rooting at nodes
- Floating leaves oblong, broader than submerged ones, 5 mm wide, 3-nerved, surface with dots
- Submerged leaves linear, 0.5–1.5 cm long x 1 mm wide, 1-nerved, tips notched
- Flowers subtended by whitish bracts, 0.5–1.5 mm long
- Fruits 0.6–1.2 mm long, as broad as long, pits on fruit not aligned in vertical rows



Ann Butthod



Jeanne R. Janisch

JRJ

leaf tip

Similar Species: *C. palustris* has larger fruits (1–2 mm long) with pits aligned in vertical rows. *C. hermaphrodita* has only submerged linear leaves.

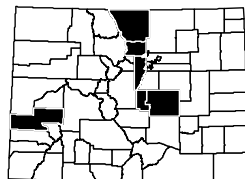
Habitat and Ecology: Uncommon in slow-moving streams, lakes, or near springs and seeps.

Comments: Provides forage and cover for young fish and aquatic insects. Ducks eat seeds and foliage. Considered state critically imperiled (S1) in Colorado and Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Callitriche palustris L.

Vernal water-starwort

Callitrichaceae

Max Lohr



Synonyms: *Callitriche palustris* L. var. *verna* (L.) Fenley ex Jeps., *Callitriche verna* L.

USDA PLANTS Symbol: CAPA52

ITIS TSN: 501143

Wetland Status AW: OBL **WM:** OBL **GP:** OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

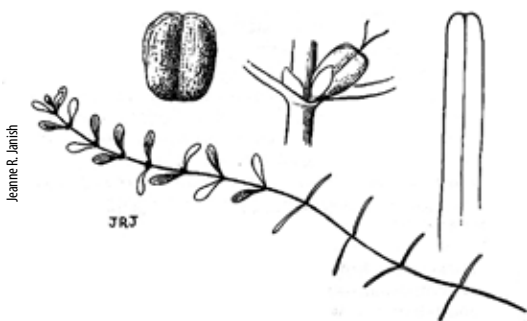
Duration: Perennial

CO Elevation: 4,850–12,300 ft. (1,480–3,750 m)

Key Characteristics:

- ◆ Emergent 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
- ◆ Flowers subtended by bracts, bracts whitish, 0.5–1.5 mm long
- ◆ Fruits 1–2 mm long, separated by shallow furrow, pit markings in vertical rows

Susan McDougall USDA-NRCS PLANTS Database



JRJ

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

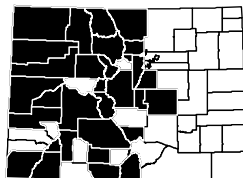
Habitat and Ecology: Common in slow-moving streams, ditches and along lake margins.

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

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Skawinski 2011, Weber and Wittmann 2012

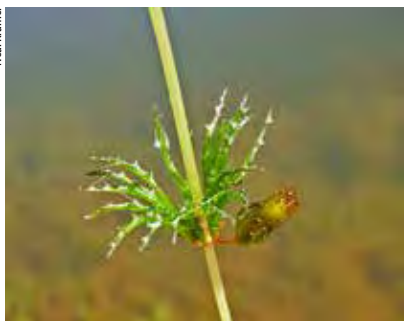


Ceratophyllum demersum L.

Hornwort or coon's tail

Ceratophyllaceae

Neil Kramer



Synonyms: *Ceratophyllum apiculatum* Cham.

USDA PLANTS Symbol: CEDE4

ITIS TSN: 18403

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 1

Duration: Perennial

CO Elevation: 3,500–9,500 ft. (1,065–2,895 m)

Key Characteristics:

- Emergent, 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

John Hilly



Yvonne Wilson-Ramsey



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

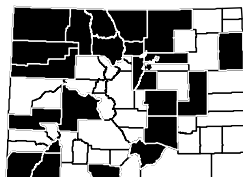
Habitat and Ecology: Common in lakes, ponds, irrigation ditches and slow-moving streams. Can be a dominant species in warm, nutrient-rich waters. Stores energy as oils and may cause natural 'oil slicks' when it decays.

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. Considered state vulnerable (S2) in Utah and Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 1997, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Myriophyllum sibiricum Kom.

Shortspike watermilfoil

Haloragaceae

Louis M. Landry



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

USDA PLANTS Symbol: MYSI

ITIS TSN: 503906

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 4,870–11,590 ft. (1,485–3,535 m)

Key Characteristics:

- Emergent, stems stout, whitish or tan; forms turions, that appear as condensed areas of leaves
- Leaves whorled, stiff, 4–14 leaflet pairs, 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




Jeanne R. Janish



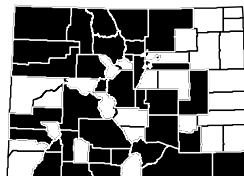
Similar Species: *M. sibiricum* can be confused with the noxious weed, *M. spicatum*. *M. spicatum* is stouter with 14–24 leaflet pairs that are of more uniform size, producing a square leaf tip rather than a pointed leaf tip. *M. verticillatum* has strongly dissected floral bracts that are feather-like and the staminate flowers have yellowish-green petals.

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

Comments: Provides cover for fish, invertebrates, insects and other small animals. Waterfowl occasionally eat the fruit and foliage. Turions appear as withered, rounded bud-scales at the base of the stem. The new turions will be produced in the axils of the old bud-scales.

Animal and Bird Use: 

References: Ackerfield 2012, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Myriophyllum spicatum L.

Eurasian watermilfoil

Haloragaceae

Joseph M. DiTomaso



Synonyms: None

USDA PLANTS Symbol: MYSP2

ITIS TSN: 27039

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Non-native, CO Noxious Weed List B

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,900–10,800 ft. (1,495–3,290 m)

Key Characteristics:

- Emergent, stems thin, flexible, reddish, to 4–8 cm long, tips of plant often red in summer
- Leaves whorled, delicate, spaced 2–3 cm apart, with 12–20 pairs of leaflets per leaf
- Flowers pinkish, 4-parted, whorled; petals only on male flowers
- Fruits 2–3 mm long, divided into 4 chambers, with 1 seed per chamber
- Turions or winter buds not present

John Hilty



John Hilty



Similar Species: *M. spicatum* may be confused with *M. sibiricum*, the native watermilfoil, which has fewer than 14 leaflet pairs per leaf, generally has stouter stems and produces winter buds. *M. verticillatum* has strongly dissected floral bracts that are feather-like and the staminate flowers have yellowish-green petals.

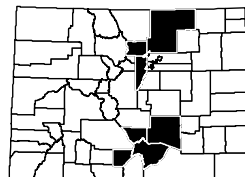
Habitat and Ecology: Occurs in still waters on lakes and streams. Currently known from South Platte and Rio Grande rivers and numerous reservoirs in the Front Range, southern Colorado and the San Luis Valley.

Comments: Eurasian watermilfoil can adversely impact aquatic ecosystems by forming dense canopies that often shade out native vegetation. Monospecific stands are indicative of excessive nutrients and pollutants. It is an aggressive weed that should be eliminated immediately upon discovery; consult with the County Extension Agency or the State Weed Coordinator for removal options.

Animal and Bird Use:



References: Ackerfield 2012, Colorado Department of Agriculture 2008, Colorado Parks and Wildlife 2012, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Myriophyllum verticillatum L.

Whorl-leaf watermilfoil

Haloragaceae

Kristian Peters



Synonyms: None

USDA PLANTS Symbol: MYVE3

ITIS TSN: 27040

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS S1

C-Value: Not Assigned

Duration: Perennial

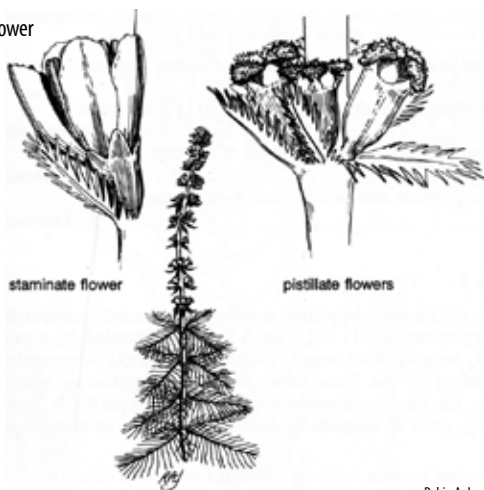
CO Elevation: 7,840–10,000 ft. (2,390–3,050 m)

Key Characteristics:

- Emergent, stems greenish-brown, up to 3 m long, often reddish when fresh; turions at stem base
- Submerged leaves 0.5–5 cm long, in whorls of 4–5 leaves, 7–17 leaflets per leaf
- Emergent leaves, deeply divided, whorled, lower leaves larger than the upper leaves
- Floral bracts strongly dissected into feather-like structures; fruit round, smooth 4-parted
- Fruits are 4-parted, smooth, 3 mm long and round



A. S. Kers




Robin A. Jess

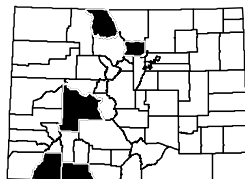
Similar Species: *M. sibiricum* has floral bracts that are entire, not finely dissected and staminate flowers with pink petals, not yellowish-green petals as in *M. verticillatum*.

Habitat and Ecology: Uncommon in quiet waters of ponds and lakes or rooting on muddy shores.

Comments: Whorl-leaf milfoil provides habitat for aquatic invertebrates, which in turn provide food for fish and wildlife. Considered state critically imperiled (S1) in Utah, Wyoming and Colorado. Turions appear as withered, rounded bud-scales at the base of the stem. The new turions will be produced in the axils of the old bud-scales.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Hippuris vulgaris L.

Common mare's-tail

Hippuridaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: HIVU2

ITIS TSN: 27069

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,680–10,800 ft. (1,730–3,290 m)

Key Characteristics:

- ◆ Emergent, 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
- ◆ 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

Scott Smith



Jeanne R. Janish



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

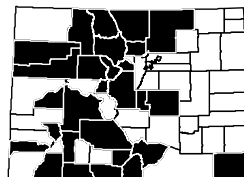
Habitat and Ecology: Common in ponds and lakes, emergent or sometimes completely submerged.

Comments: Seeds and vegetation eaten by waterfowl. Provides shelter for small animals and invertebrates. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Aquatics

Elodea bifoliata H. St. John

Twoleaf waterweed

Hydrocharitaceae

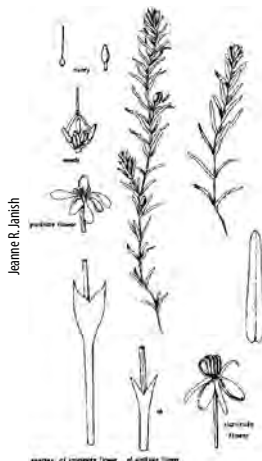
University of Arizona Herbarium



Synonyms: *Elodea longivaginata* H. St. John
USDA PLANTS Symbol: ELBI2
ITIS TSN: 38940
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G4G5 SNR
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 5,000–10,130 ft. (1,525–3,090 m)

Key Characteristics:


- Emergent, stems slender, little branched, 3–10 dm long
- Leaves mostly in 2s at nodes, opposite, 16–32 mm long x 1–3 mm wide, serrulate
- Sepals 3; petals 3, elongated floral tubes present
- Staminate spathes to 2.2–4 mm long; pistillate spathes to 67 mm
- Fruits berry-like, 2.8–3 mm long, densely covered with long hairs



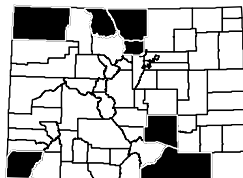
Similar Species: *E. canadensis* has leaves mostly in threes at the nodes, staminate and pistillate spathes shorter (17.5 mm long) and is much more common than *E. bifoliata*. *E. nuttallii* has narrower leaves (less than 1.7 mm wide) and shorter spathes (2.2–4 mm long).

Habitat and Ecology: Found in ponds, sloughs, reservoirs and lakes; usually eutrophic waters.

Comments: Provides food and habitat for fish, snapping turtles, waterfowl and other wildlife. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2000, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



University of Arizona Herbarium

Elodea canadensis Michx. Canadian waterweed

Hydrocharitaceae

Louis M. Landry



Synonyms: *Anacharis canadensis* (Michx.) Planch.,
Elodea brandegeae H. St. John

USDA PLANTS Symbol: ELCA7

ITIS TSN: 38937

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

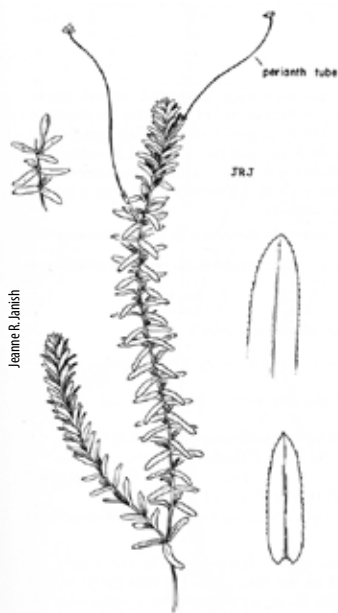
Duration: Perennial

CO Elevation: 4,860–10,820 ft. (1,480–3,300 m)

Key Characteristics:

- Emergent, stems terete, slender, freely branched; winter buds may be present
- Leaves in 3s at nodes, to 13 mm long, tips taper to blunt points, appear crowded near tips
- Flowers, if present, small, 8 mm across, white, produced on thread-like stalks
- Staminate and pistillate spathes to 13.5 mm
- Fruits berry-like, 4–5.7 mm long, seeds not covered with long hairs

Kristian Peters



Similar Species: *E. bifoliata* has leaves in 2s at the nodes and seeds that are densely covered with hairs. *E. nuttallii* has narrower leaves (less than 1.7 mm wide) and shorter spathes (2.2–4 mm long). *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. *Hydrilla verticillata*, non-native, invasive plant, is not yet known in Colorado. It differs from *Elodea* with sharply toothed leaves with a red midrib and leaves in whorls of 4–8.

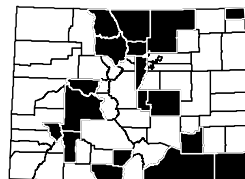
Habitat and Ecology: Found in ponds, sloughs and lakes; tolerant of polluted and eutrophic waters.

Comments: *E. canadensis* is an important part of freshwater ecosystems. It provides good habitat for many aquatic invertebrates and cover for young fish and amphibians. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Aquatics

Elodea nuttallii (Planch.) H. St. John

Western waterweed

Hydrocharitaceae

A.S. Kers



Synonyms: *Anacharis nuttallii* Planch., *Elodea occidentalis* (Pursh) H. St. John

USDA PLANTS Symbol: ELNU2

ITIS TSN: 502246

Wetland Status **AW:** OBL **WM:** OBL **GP:** OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,300–10,400 ft. (1,615–3,170 m)

Key Characteristics:

- ◆ Emergent, stems slender, terete, freely branched
- ◆ Leaves in whorls of 3 (4), tips pointed, finely toothed, 6–13 mm long x 1.7 mm wide
- ◆ Female flowers, when present, small, 8 mm, white to purple, long, thread-like stalks present
- ◆ Staminate spathes 4 mm or less long
- ◆ Seeds 4–4.6 mm long, bases often with long hairs

Aquatics

Dean Wm. Taylor



John Myers

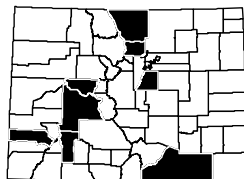
Similar Species: *E. nuttallii* is similar to *E. canadensis*, but the leaves are shorter and the plant is more delicate. *E. bifoliata* leaves are mostly in 2s and seeds are covered with long hairs.

Habitat and Ecology: Found in ponds, sloughs and lakes.

Comments: Provides food and habitat for fish, waterfowl and other wildlife. Considered state critically imperiled (S1) in Wyoming and state imperiled (S2) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2000, Larson 1993, Skawinski 2011, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Isoetes bolanderi Engelm.

Bolander's quillwort

Isoetaceae

Steve Matson



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

USDA PLANTS Symbol: ISBO

ITIS TSN: 17121

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4 SNR

C-Value: 10

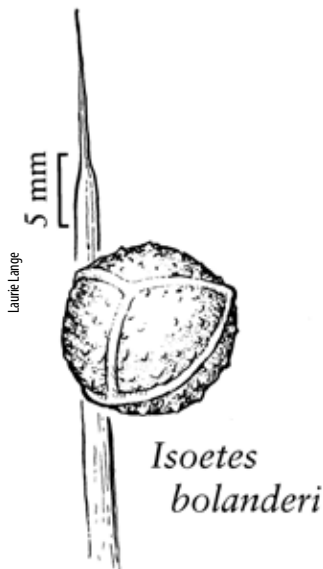
Duration: Perennial

CO Elevation: 8,200–11,680 ft. (2,500–3,560 m)

Key Characteristics:

- ◆ Submerged fern-allies, occasionally emergent, grass-like appearances
- ◆ Rootstocks nearly globose, 2-lobed
- ◆ Leaves bright green, spirally arranged, to 20 cm long, plant, abruptly tapering to fine tip
- ◆ Membrane covering less than ½ of sporangium, wall brown-streaked
- ◆ Megaspores white, 0.3–0.5 mm across, wrinkled to bearing tubercles

Steve Matson



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. In general, quillworts can be distinguished from submerged *Eleocharis* spp. and *Carex* spp. by the presence of spores and the swollen leaf bases.

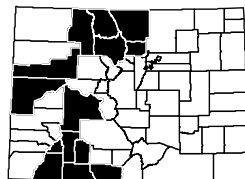
Habitat and Ecology: Found rooted in muddy bottoms in shallow alpine or subalpine lakes. Colorado's most common quillwort.

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. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 1993, Weber and Wittmann 2012



Aquatics

Isoetes occidentalis L.F. Hend.

Western quillwort

Isoetaceae

George Vatskelych



Synonyms: *Isoetes flettii* (A.A. Eaton) N.E. Pfeiffer, *Isoetes lacustris* L. ssp. *paupercula* (Engelm.) J. Feilberg, *Isoetes paupercula* (Engelm.) A.A. Eaton, *Isoetes piperi* A.A. Eaton

USDA PLANTS Symbol: ISOC

ITIS TSN: 181781

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4G5 S1S2

C-Value: 10

Duration: Perennial

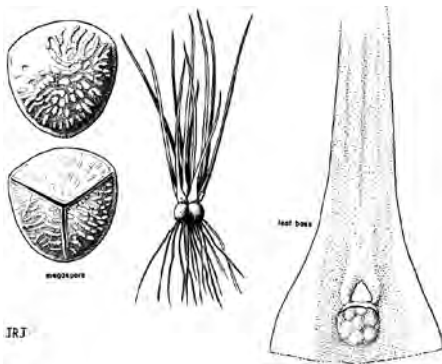
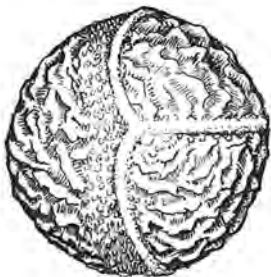
CO Elevation: 8,400–11,810 ft. (2,560–3,600 m)

Key Characteristics:

- ◆ Submerged fern-allies, grass-like appearances
- ◆ Rootstocks nearly globose, 2-lobed
- ◆ Leaves evergreen, dark green, strictly erect, stiff, gradually tapering to tips
- ◆ Membrane covering less than ½ of sporangium; sporangium wall colorless
- ◆ Megaspores mostly 0.5–0.7 mm wide with high ridges or jagged crests

Aquatics

Laurie Lange



Jeanne R. Janish

Similar Species: *I. bolanderi* has wrinkled megaspores that are 0.3–0.5 mm wide. *I. tenella* has distinctive megaspores that have thin, sharp spines. In general, quillworts can be distinguished from submerged *Eleocharis* spp. and *Carex* spp. by the presence of spores and the swollen leaf bases.

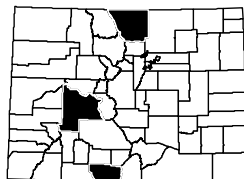
Habitat and Ecology: Uncommon in Colorado, known only from Gunnison, Larimer, and Conejos counties.

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. Considered state critically imperiled (S1) in Colorado, Utah, Wyoming, and Montana.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 1993, Weber and Wittmann 2012



Isoëtes tenella Léman

Spiny-spore quillwort

Isoetaceae

Denise Culver



Synonyms: *Isoëtes echinospora* Durieu ssp. *muricata* (Durieu) Å. Löve & D. Löve, *Isoëtes echinospora* Durieu, *Isoëtes setacea* Lam. ssp. *muricata* (Durieu) Holub, *Isoëtes echinospora* Durieu var. *savillei* B. Boivin

USDA PLANTS Symbol: ISTE5

ITIS TSN: 507546

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5?S2

C-Value: 10

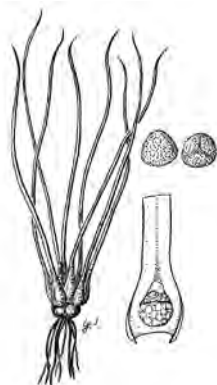
Duration: Perennial

CO Elevation: 9,380–11,480 ft. (2,860–3,500 m)

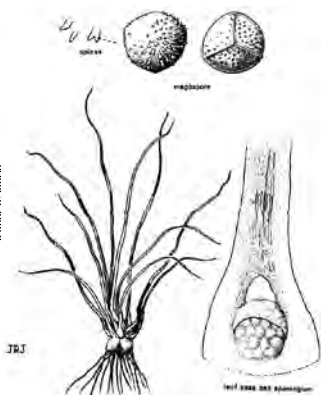
Key Characteristics:

- ◆ Submerged fern-allies, occasionally emergent, grass-like appearances
- ◆ Rootstocks nearly globose, 2-lobed
- ◆ Leaves deciduous, green to reddish green, spirally arranged, to 25 (40) cm long, tapering to tips
- ◆ Membrane covering less than ½ of sporangium, sporangium wall brown-streaked
- ◆ Megaspores white, 0.4–0.5 mm across, echinate with thin, sharp spines

Janet Wingate



Jeanne R. Irish



Similar Species: *I. tenella* is very distinctive with spiny megaspores. In general, quillworts can be distinguished from submerged *Eleocharis* spp. and *Carex* spp. by the presence of spores and the swollen leaf bases.

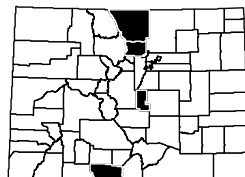
Habitat and Ecology: Rare. Found in shallow, cool, clear, oligotrophic (low nutrient content/high oxygen) water of lakes, ponds and streams. Known from Rocky Mountain National Park, Pikes Peak, and Conejos County.

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. It is considered state critically imperiled (S1) in Utah and state imperiled (S2) in Colorado and Montana.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 1993, Weber and Wittmann 2012



Aquatics

Lemna minor L.

Common duckweed

Lemnaceae

Steve Olson



Synonyms: *Lemna turionifera* Landolt

USDA PLANTS Symbol: LEMI3

ITIS TSN: 42590

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS SNR

C-Value: 2

Duration: Perennial

CO Elevation: 3,500–9,840 ft. (1,065–3,000 m)

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)



Jeanne R. Janish

Aquatics

Louis M. Landry



Similar Species: *L. gibba* [LEGI, OBL, ITIS 42591], reported for Colorado, differs in having 4–5 veins on the fronds, which are often gibbous (swollen on one side). *L. minuta* fronds are 1-nerved and do not turn red.

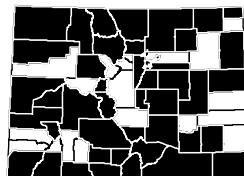
Habitat and Ecology: Commonly found in slow-moving streams, ponds and lakes. The most common duckweed in Colorado.

Comments: Duckweeds provide food for fish, snapping turtles and waterfowl and habitat for aquatic invertebrates. Because of the high nutritive value, duckweeds have been cultivated for livestock feed. Duckweed morphology is unique because they are vascular plants that are described with non-vascular descriptors (e.g., frond, stipe, thalli). Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Weber and Wittmann 2012



Lemna minuta Kunth

Least duckweed

Lemnaceae

A.S. Kers



Synonyms: *Lemna minima* Phil., non Thuill. ex P. Beauv., *Lemna minuscula* Herter

USDA PLANTS Symbol: LEM16

ITIS TSN: 503361

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 3,900–9,020 ft. (1,190–2,750 m)

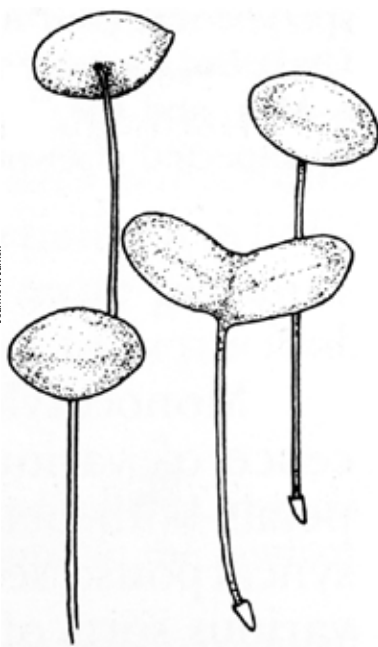
Key Characteristics:

- ◆ Free-floating, solitary fronds rarely cohering or in colonies of 2s
- ◆ Roots solitary, to 15 cm long, tips mostly rounded; sheaths not winged
- ◆ Fronds elliptical to ovoid, 1–2.5 mm long x 0.7–1.5 mm wide, asymmetrical at both ends
- ◆ Fronds green, often mottled, indistinctly 1-nerved
- ◆ Not forming turions or winter buds

Robert Vidale



Jeanne R. Janish



Similar Species: *L. minor* fronds have 3 veins and are often reddish. *L. trisulca* fronds are submerged not floating, narrowly ovate and the bases are narrowed to a stalk.

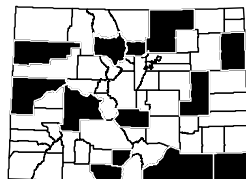
Habitat and Ecology: Found in slow-moving streams, ponds and lakes.

Comments: Duckweeds provide food for fish, snapping turtles and waterfowl and habitat for aquatic invertebrates. Because of the high nutritive value, duckweeds have been cultivated for livestock feed. Duckweed morphology is unique because they are vascular plants that are described with non-vascular descriptors (e.g., frond, stipe, thalli). Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Weber and Wittmann 2012



Aquatics

Lemna trisulca L.

Star duckweed

Lemnaceae

A.S. Kiers



Synonyms: None

USDA PLANTS Symbol: LETR

ITIS TSN: 42595

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS SNR

C-Value: 5

Duration: Perennial

CO Elevation: 5,940–9,700 ft. (1,810–2,955 m)

Key Characteristics:

- ◆ Submerged (not free-floating), roots to 2.5 cm tip pointed
- ◆ Roots, if developed, solitary, to 2.5 cm long, tips pointed
- ◆ Fronds narrowly ovate, 6–10 (12) mm long x 2.5–5 mm wide, faintly 3-nerved, symmetrical
- ◆ Frond bases narrowed into green stalks, margins finely serrate

- ◆ Fruits 0.6–0.9 mm laterally winged toward apices; seeds with 12–18 distinct ribs



Jeanne R. Janish

Aquatics


Steve Matson



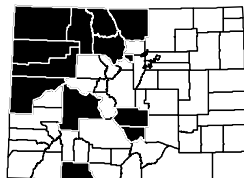
Similar Species: *L. trisulca* is the only duckweed that has submerged, serrate fronds.

Habitat and Ecology: Found in slow-moving streams, ponds and lakes. Likely more common, but under collected.

Comments: Duckweeds provide food for fish, snapping turtles and waterfowl and habitat for aquatic invertebrates. Because of the high nutritive value, duckweeds have been cultivated for livestock feed. Duckweed morphology is unique because they are vascular plants that are described with non-vascular descriptors (e.g., frond, stipe, thalli). Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Weber and Wittmann 2012

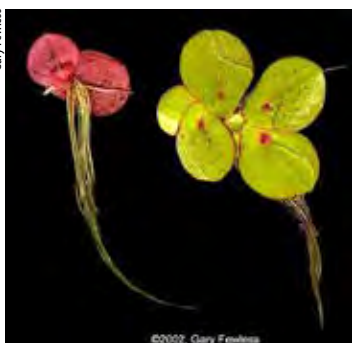


Spirodela polyrrhiza (L.) Schleid.

Common duckmeat

Lemnaceae

Gary Fewless



Synonyms: None

USDA PLANTS Symbol: SPPO

ITIS TSN: 505347

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

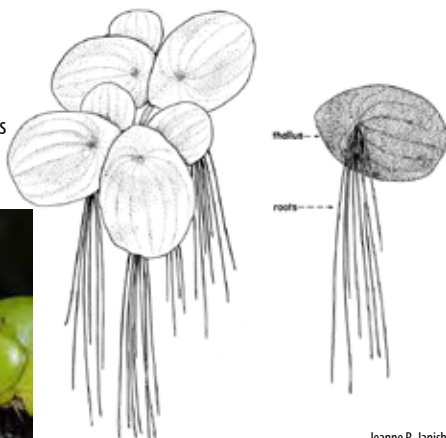
Duration: Perennial

CO Elevation: 4,020–9,200 ft. (1,225–2,805 m)

Key Characteristics:

- ◆ Free-floating, roots in clusters of 4 to 16, slender, root ends with pointed rootcaps; turions present
- ◆ Fronds 2–10, 1–1.5 times as long as wide, apices rounded, veins 5–15, red spot in centers
- ◆ Flowers surrounded by sac-like pouch with 2 or 3 staminate and 1 pistillate flower per pouch
- ◆ Fruits 1–1.5 mm, laterally winged to apices, seeds with 12–20 distinct ribs

Biopix



Jeanne R. Janish

Similar Species: *S. polyrrhiza* may be confused with duckweeds (*Lemna* spp.), which are smaller and have only a single root per thallus. *Wolffia* spp. are much smaller (1 mm in length) and have no roots at all. *Azolla mexicana* is greenish-red with a fuzzy, velvety texture.

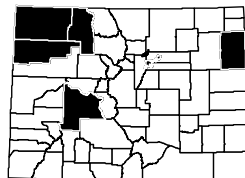
Habitat and Ecology: Uncommon in ponds and shallow pools that are often nutrient-rich. Often grows with other members of the duckweed family.

Comments: Provides a high protein food source for ducks and geese, also eaten by fish. Considered state critically imperiled (S1) in Utah and Wyoming. Turions appear as withered, rounded bud-scales at the base of the stem. The new turions will be produced in the axils of the old bud-scales.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Weber and Wittmann 2012



Aquatics

Wolffia spp. Horkel ex Schleid.

Watermeal

Lemnaceae

OSWEGO State University of New York

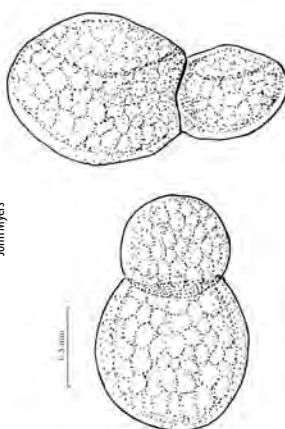


Synonyms: None
USDA PLANTS Symbol: WOLFF
ITIS TSN: 42601
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 S4
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 3,700–4,500 ft. (1,130–1,370 m)

Key Characteristics:

- ◆ Free-floating, extremely minute fronds (size of a pinhead), no roots
- ◆ Fronds spherical or oblong, 0.7–1.5 mm, 1.3 times as long as wide
- ◆ Fronds pointed at apices, bent upward, upper surfaces either transparent or intensely green
- ◆ Flowers 2, 1 staminate and 1 pistillate

- ◆ Small, balloon-like fruit (utricle) contains a tiny, 0.5 mm, smooth seed



Wolffia columbiana

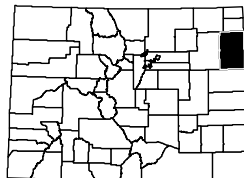
Similar Species: Two species occur in Colorado: *W. borealis* [WOB0, OBL, ITIS 505749] (upper left photo) has boat-shaped fronds with intensely green upper surfaces. *W. columbiana* [WOCO, OBL, ITIS 42602] (lower left and right photos) fronds are nearly globular with transparently green upper surfaces.

Habitat and Ecology: Rare and/or under-collected in ditches, ponds and slow-moving waters. There are no herbaria collections to verify distributions. Both species are expected to occur on the Eastern Slope.

Comments: Watermeals are extremely small, it is the smallest vascular plant. They look much like cornmeal and occur with duckweeds. Can provide a high protein food source for ducks and geese, also eaten by fish. *W. borealis* is considered state critically imperiled (S1) in Utah. *W. columbiana* is considered state imperiled (S2) in Montana and North Dakota.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Weber and Wittmann 2012



Utricularia intermedia Hayne

Flatleaf bladderwort

Lentibulariaceae

Barry Rice



Synonyms: None

USDA PLANTS Symbol: UTIN2

ITIS TSN: 34454

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: Not Assigned

Duration: Annual

CO Elevation: 10,900–10,900 ft. (3,320–3,320 m)

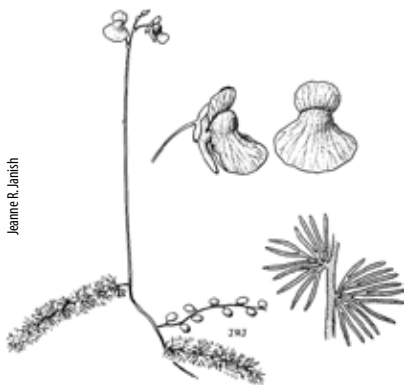
Key Characteristics:

- ◆ Emergent, carnivorous; turions form at tip of stems in fall, pubescent
- ◆ Scapes 8–25 cm long, 1–4 flowers in a lax raceme; pedicels remaining erect in fruit
- ◆ Floating and submerged leaves, numerous, 5–10 mm long, 3 times palmately divided from base
- ◆ Margins of terminal leaf divisions bristly, leaves and bladder traps on separate branches
- ◆ Corolla 10–15 mm long, deep yellow, spurs as long as the lower corolla lips



Barry Rice

Jeanne R. Janich



Similar Species: *U. ochroleuca* spurs are about $\frac{1}{2}$ length of lower corolla lip, corolla is pale yellow, tips of leaf segments, sharp, narrow and bristles on leaf margins with small teeth. *U. minor* and *U. vulgaris* leaves and bladder traps are on the same branches.

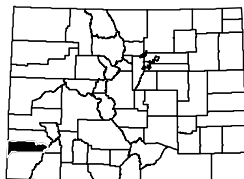
Habitat and Ecology: Rare. Found in shallow ponds, pools and rills in fens. Currently known only from Lizard Head Pass in Dolores County.

Comments: Bladderworts provide food and cover for fish, muskrats, waterfowl and aquatic invertebrates. The bladderworts are highly specialized plants that have evolved to thrive in nutrient deficient waters. They obtain nutrients with the “bladders” that open when activated by small prey (e.g., protozoa, water fleas and mosquito larvae) and captures the prey along with surrounding water. Considered state critically imperiled (S1) in Colorado, Utah and Wyoming, state imperiled (S2) in Montana.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Hultén 1968, Weber and Wittmann 2012



Utricularia macrorhiza Leconte

Common bladderwort

Lentibulariaceae

Al Schneider



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

USDA PLANTS Symbol: UTMA

ITIS TSN: 34456

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

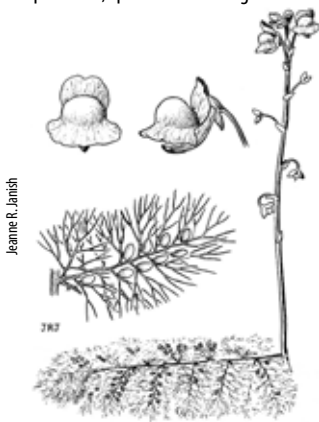
CO Elevation: 6,500–11,200 ft. (1,980–3,415 m)

Key Characteristics:

- Emergent, 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



Al Schneider




Jeanne R. Janish

2007

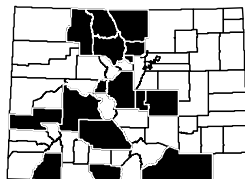
Similar Species: *U. macrorhiza* has the largest leaves of Colorado's bladderworts. The leaves are 2–3 times pinnately branched from a main rachis with rounded divisions. Other Colorado bladderworts are palmately divided without a main rachis and the divisions are flat. *U. intermedia* and *U. ochroleuca*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

Comments: Food and cover for fish, muskrats, waterfowl and aquatic invertebrates. The bladderworts are highly specialized plants that have evolved to thrive in nutrient deficient waters. They obtain nutrients with the "bladders" that open when activated by small prey (e.g., protozoa, water fleas and mosquito larvae) and captures the prey along with surrounding water. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Hultén 1968, Weber and Wittmann 2012



Utricularia minor L.

Lesser bladderwort

Lentibulariaceae



Denise Culver

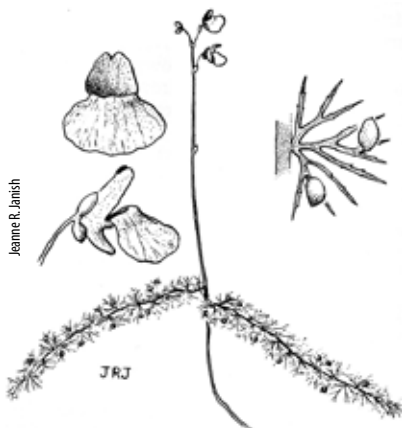
Synonyms: None
USDA PLANTS Symbol: UTMI
ITIS TSN: 34457
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 S2; USFS Sensitive
C-Value: 9
Duration: Perennial
CO Elevation: 7,050–11,200 ft. (2,150–3,415 m)

Key Characteristics:

- ◆ Emergent, 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



Denise Culver




Jeanne R. Janish

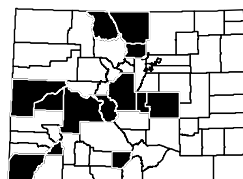
Similar Species: *U. macrorhiza* has much larger leaves and the other two bladderworts (*U. ochroleuca* and *U. intermedia*) have leaves and bladder traps on separate branches.

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 plants that have evolved to thrive in nutrient deficient waters. They obtain nutrients with the “bladders” that open when activated by small prey (e.g., protozoa, water fleas and mosquito larvae) and captures the prey along with surrounding water. Considered state critically imperiled (S1) in Utah, state imperiled (S2) in Colorado and Wyoming, and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Utricularia ochroleuca R.W. Hartm.

Yellowishwhite bladderwort

Lentibulariaceae

Denise Culver



Key Characteristics:

- ◆ Emergent, carnivorous; turions pubescent
- ◆ Leaves dichotomously divided, fewer than 20 flat ultimate segments, usually without bladders
- ◆ Tips of leaf segments sharp and narrow; bristles on leaf margins on small teeth
- ◆ Corolla pale yellow, spurs about 1/2 length of lower corolla lip, strongly bilabiate



George W. Hartwell

Synonyms: None

USDA PLANTS Symbol: UTOC

ITIS TSN: 34459

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G4? S1?

C-Value: 10

Duration: Perennial

CO Elevation: 8,990–10,000 ft. (2,740–3,050 m)

- ◆ Spurs are two-lipped, pyramidal, 3–5.5 mm long, positioned at right angles to the lower lips


Denise Culver



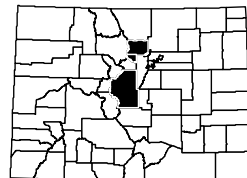
Similar Species: Other members of *Utricularia* are very similar. *U. macrorhiza* and *U. minor* bear both leaves and bladders on underwater stems, *U. ochroleuca* bears either bladders or leaves on the underwater stems. *U. minor* leaves alternate with bladder traps on the same branch.

Habitat and Ecology: Uncommon to rare in shallow ponds, pools and rills in fens. Only known from fens in Park, Boulder and Gilpin Counties. *U. ochroleuca* is not known from any other Intermountain West states.

Comments: Hultén (1968) notes that this species is regarded as the hybrid *U. intermedia* X *minor* and probably occurs throughout Alaska and northern Canada. Considered state critically imperiled (S1) in Colorado. Turions appear as withered, rounded bud-scales at the base of the stem. The new turions will be produced in the axils of the old bud-scales.

Animal and Bird Use: 

References: Ackerfield 2012, Sanderson and March 1996, Taylor 1991, Weber and Wittmann 2012



Marsilea vestita Hook. & Grev.

Hairy waterclover

Marsileaceae

Scott Smith



Synonyms: *Marsilea fourieri* C. Chr., *Marsilea mucronata* A. Braun

USDA PLANTS Symbol: MAVE2

ITIS TSN: 17998

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S4

C-Value: 7

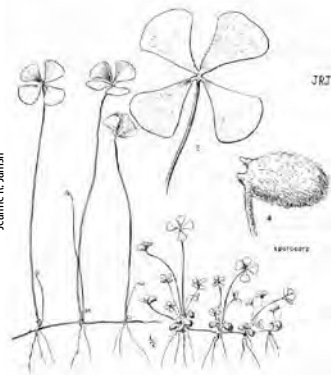
Duration: Perennial

CO Elevation: 4,100–7,530 ft. (1,250–2,295 m)

Key Characteristics:

- Emergent, fern, forming dense clones; rhizomes well-developed
- Fronds with long stipes terminating in a 4-parted leaf blades (laminae), like four-leaf clovers
- Spores borne in hairy, pubescent sporocarps arising from short, unbranched stalks
- Distal teeth of sporocarps 0.4–1.2 mm long, acute
- Scars left from deciduous hairs often appear as purple or brown specks

Jeanne R. Janisch



Crystal Strouse



Similar Species: Clovers (*Trifolium* spp.) have similar leaves, but have large compact flower heads. Clovers are never aquatic, although a few (e.g. *T. wormsjoldii*) may be found in wetlands. Wood sorrel (*Oxalis oregana*) also has similar leaves, but has leaflets of three rather than four and is a forest species and typically not found in aquatic habitats.

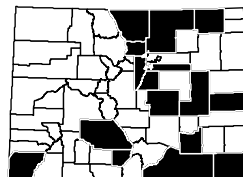
Habitat and Ecology: Plants form diffuse or dense clones in temporary pools, low swales, ditches, shallow water at the edges of ponds and in fields.

Comments: Waterclovers are small ferns with thin, long-creeping rhizomes and fronds born at the nodes. Spore cases are eaten by waterfowl and the plant provides cover for fish and invertebrates. Plants become more conspicuous along muddy banks in August and September when ponds dry up. It is considered state imperiled (S2) in Utah and state vulnerable (S3) in Montana.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 1986, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Aquatics

Menyanthes trifoliata L.

Buckbean

Menyanthaceae

Karin Freeman



Synonyms: None

USDA PLANTS Symbol: METR3

ITIS TSN: 30102

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

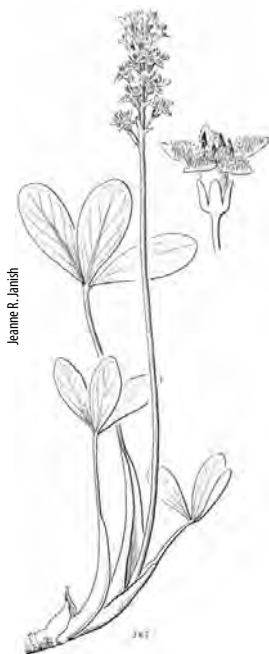
C-Value: 9

Duration: Perennial

CO Elevation: 5,440–11,670 ft. (1,660–3,555 m)

Key Characteristics:

- ◆ Emergent, glabrous; rhizomes thick, covered with membranous leaf bases
- ◆ Leaves all basal, trifoliate compound with conspicuously sheathing bases
- ◆ Flowers actinomorphic, perfect in bracteate racemes
- ◆ Corolla 5, lobes spreading, white to pink, purplish-tinged, recurved, covered with dense crinkly hairs
- ◆ Stamens are fringed scales; capsules ellipsoid, contain shiny, yellow-brown, buoyant seeds



Jeanne R. Jansh

Aquatics

Danica Oliver



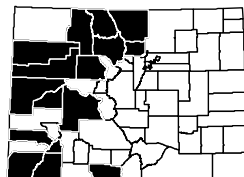
Similar Species: None.

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. Considered state critically imperiled (S1) in South Dakota and state imperiled (S2) in Utah and Wyoming.

Animal and Bird Use:  

References: Ackerfield 2012, Washington State Department of Ecology 2011, Weber and Wittmann 2012, Welsh et al. 1993



Najas guadalupensis (Spreng.) Magnus

Southern waternymph

Najadaceae

Neil Kramer



Synonyms: None

USDA PLANTS Symbol: NAGU

ITIS TSN: 38998

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

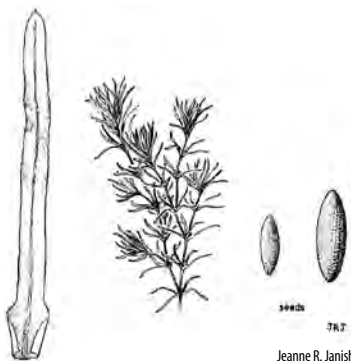
Duration: Annual

CO Elevation: 3,500–8,700 ft. (1,065–2,650 m)

Key Characteristics:

- ◆ Floating-leaves, monoecious, glabrous; roots fibrous
- ◆ Stems often profusely branched distally, 11–90 cm long x 0.1–0.8 mm wide; internodes 0.1–9 cm
- ◆ Leaves linear, opposite, clustered at nodes, sessile, sheaths 1–3.4 mm wide
- ◆ Flowers 1–3 per axil, staminate flowers located above pistillate; stigmas 4-lobed
- ◆ Fruits are achenes, yellowish-white with purple tinged, fusiform, 1.2–3.8 mm x 0.4–0.8 mm

John Hilly



Jeanne R. Janish

Similar Species: *Callitriche hermaphroditica* also has opposite, linear leaves, but has flattened fruits with deep grooves. *Zannichellia palustris* has linear leaves, but they are whorled.

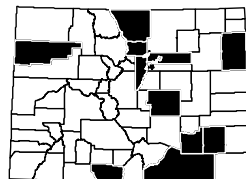
Habitat and Ecology: Submerged in fresh waters in slow-moving ditches, streams and ponds.

Comments: *Najas* spp. are considered to be excellent food sources for waterfowl. All parts of the plants are eaten by a variety of waterfowl including Lesser Scaup, Mallards, Green-winged Teals and Pintails. *Najas* is a common aquarium plant, therefore it gets introduced into local waters by improperly discarded household aquarium waters.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Maryland Dept. of Natural Resources 2011, Weber and Wittmann 2012



Aquatics

Nuphar lutea (L.) Sm. ssp. polysepala (Engelm.) E.O. Beal

Rocky Mountain pond-lily Nymphaeaceae

Denise Culver



Synonyms: *Nuphar polysepala* Engelm.

USDA PLANTS Symbol: NULUP

ITIS TSN: 524341

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 8,000–11,480 ft. (2,440–3,500 m)

Key Characteristics:

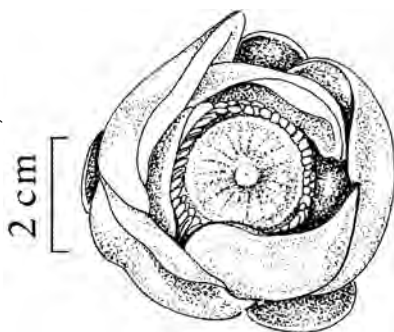
- ◆ Floating-leaves, fibrous roots with scaly, log-like rhizomes, 3–8 cm in diameter
- ◆ Leaves floating, suborbiculate to ovate, margins entire, 10–40 (45) cm long x 7–30 cm wide
- ◆ Flower and leaf stalks arise directly from the rhizome, green “stems” are leaf or flower stalks
- ◆ Flowers floating, 5–10 cm across; sepals 5–12, petaloid, green to yellow
- ◆ Fruits green to yellow, cylindric to ovoid, 4–6 (9) cm long x 3.5–6 cm wide, strongly ribbed

Aquatics

Denise Culver



Yvonn Wilson-Ramsey



Similar Species: In Colorado, this is the only pond lily you will see in the mountains. However, *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.

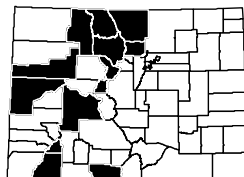
Habitat and Ecology: Found in high altitude ponds and lakes.

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. Considered state imperiled (S2) in Utah and state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Nymphaea odorata Aiton

American white waterlily

Nymphaeaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: NYOD

ITIS TSN: 18384

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,000–5,500 ft. (1,220–1,675 m)

Key Characteristics:

- ◆ Floating-leaves; branched rhizomes
- ◆ Leaves mostly floating, round, smooth and leathery, with a slit on one side
- ◆ Flower and leaf stalks arise directly from the rhizom green "stems" are leaf or flower stalks
- ◆ Flowers floating, sepals 4, green; petals 8–many, showy, white, rarely pink
- ◆ Fruits are capsules, borne on curved or coiled peduncles

Louis M. Landry



Yevonn Wilson-Ramsey

Similar Species: *Nuphar lutea* ssp. *polysepala* has heart-shaped leaves and bright yellow, cup-shaped flowers.

Habitat and Ecology: Uncommon in ponds and lakes, likely introduced from urban ponds. Known from collections near Rocky Ford in Otero County. Flowers open and close diurnally. Considered adventive in Colorado.

Comments: The leaves and roots are eaten by muskrats and deer. The seeds are eaten by waterfowl.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Aquatics

Polygonum amphibium L. var. emersum Michx

Longroot smartweed

Polygonaceae

Al Schneider



Synonyms: *Persicaria amphibia* (L.) Gray var. *emersa* (Michx.) J.C. Hickman, *Persicaria coccinea* (Muhl. ex Willd.) Greene

USDA PLANTS Symbol: POAME

ITIS TSN: 529773

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,650–10,660 ft. (1,115–3,250 m)

Key Characteristics:

- ◆ Emergent or terrestrial; rhizomes or stolons present
- ◆ Stems prostrate to ascending or erect, simple or branched, ribbed, glabrous or hairy
- ◆ Leaf blades widest near the middle, not glandular-punctate below
- ◆ Inflorescence a single, terminal raceme
- ◆ Perianth bright pink to red



Matt Below

USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: Water smartweeds 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.

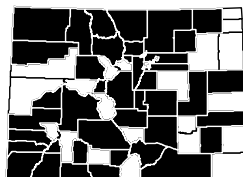
Habitat and Ecology: Found in shallow waters, margins of lakes and ponds and inundated meadows. *P. amphibium* var. *emersum* has two growth forms. The aquatic adapted plants have glabrous leaf blades with acute to rounded apices. Terrestrial forms produce lanceolate to acuminate leaf blades that are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

Comments: Water smartweeds, in general, provide seeds for waterfowl, upland game birds, marsh and song birds, deer and muskrat. Leaves provide shelter for fish and habitat for invertebrates. Common throughout the contiguous United States. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Eichhornia crassipes (Mart.) Solms

Common water hyacinth

Pontederiaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: EICR

ITIS TSN: 42623

Wetland Status AW: OBL WM: OBL GP: OBL

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

Conservation Status: G5 SNA

C-Value: 0

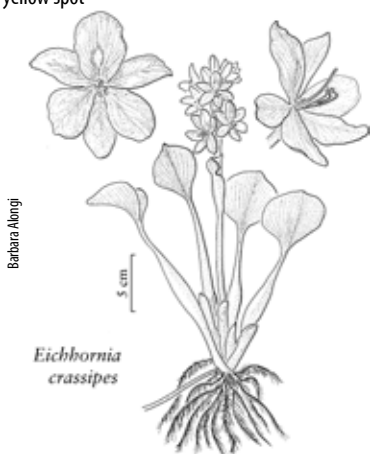
Duration: Perennial

CO Elevation: 5,000–7,800 ft. (1,525–2,375 m)

Key Characteristics:

- ◆ Free-floating, flowering stems erect, bending over after flowering; roots feathery
- ◆ Petiolate leaves floating, cordate with obtuse tips and inflated petioles bases
- ◆ Flowers in 4- to 15-flowered spikes; peduncles 5–12.5 cm
- ◆ Spathes ovate, 4–11 cm, folded with acuminate tips
- ◆ Tepals joined, ovate, blue to pink, upper tepal with yellow spot

Louis M. Landry



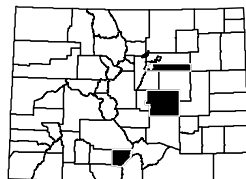
Similar Species: *E. crassipes* has distinctive round, shiny leaves that are held aloft by inflated petioles. The flowers are showy with a distinctive yellow spot on the light purple tepals.

Habitat and Ecology: *E. crassipes* is native to the Amazon Basin, it is likely it would not successfully over-winter in Colorado. It can form dense colonies that block sunlight, clog water intakes and crowd out native species. It is an aggressive weed that should be eliminated immediately upon discovery; consult with the County Extension Agency or the State Weed Coordinator for removal options.

Comments: As of 2012, water hyacinth is classified as a Watch List Species on the Colorado Weed List . It has been documented in El Paso, Alamosa (2006) and Arapahoe (2010) Counties. Water hyacinth has become a very important part of manatees' diet; no manatees yet documented in Colorado.

Animal and Bird Use: None known.

References: Ackerfield 2012, Colorado Parks and Wildlife 2012, Flora of North America 2002, Skawinski 2011, Weber and Wittmann 2012



Heteranthera limosa (Sw.) Willd.

Blue mudplantain

Pontederiaceae

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: *Pontederia limosa* Sw.

USDA PLANTS Symbol: HELI2

ITIS TSN: 42618

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,000–5,410 ft. (1,525–1,650 m)

Key Characteristics:

- Emergent from vegetative stems elongate in water over 5 cm deep; fibrous roots
- Petiolate leaves floating, lacking swollen petiole bases
- Spathes folding or clasping with acute apices
- Tepal limbs linear to narrowly elliptic, purple; stamens unequal with lateral two shorter
- Fruits are capsules

Patrick Alexander USDA-NRCS PLANTS Database



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *H. dubia* (= *Zosterella dubia*) [HEDU2, OBL, ITIS 502960], known only from a single collection in Yuma County, has yellow flowers, sessile and linear leaves.

Habitat and Ecology: Locally common in stagnant water, muddy pond edges and roadside ditches. Flowers opening within 1 hour after dawn, wilting by midday.

Comments: *H. limosa* is also called duck salad due to its importance as a food source for waterfowl and small mammals.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Potamogeton alpinus Balbis

Alpine pondweed

Potamogetonaceae

A.S. Kers



Synonyms: None

USDA PLANTS Symbol: POAL8

ITIS TSN: 39020

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 6,800–11,600 ft. (2,075–3,535 m)

Key Characteristics:

- Emergent, 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

A.S. Kers



Jeanne R. Janish

Similar Species: *P. alpinus* is the only pondweed with petiolate, submerged leaves that are usually reddish in color. Other pondweeds with lanceolate submerged leaves include *P. nodosus* and *P. gramineus* which will have floating leaves present. *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.

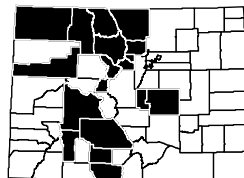
Habitat and Ecology: Found in montane to subalpine ponds and lakes.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Potamogeton amplifolius Tuck.

Largeleaf pondweed

Potamogetonaceae

Jean L. Pawek



Synonyms: None

USDA PLANTS Symbol: POAM5

ITIS TSN: 39021

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

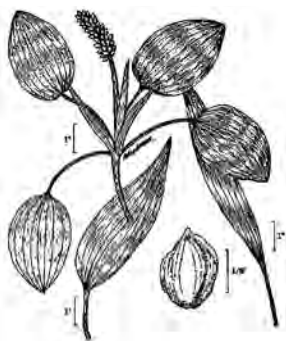
Duration: Perennial

CO Elevation: 9,500–9,500 ft. (2,895–2,895 m)

Key Characteristics:

- Emergent, stems terete, often rusty spotted, 6–10 cm long
- Submerged leaves 4–7 cm wide x 8–20 cm long, folded upwards, bow-shape; stipules 3.5–11 cm long
- Floating leaves 2–22.5 cm long, 27–49 veins; bases rounded; petioles 8–20 cm long
- Inflorescence 4.5–22.3 cm tall, held above water; spikes 34–65 mm tall, cylindric
- Fruits 4–5.5 cm long, sessile, reddish-brown, egg-shaped, 3 indistinct ridges; beaks erect

USDA-NRCS Wetland Flora




Jeanne R. Janisch



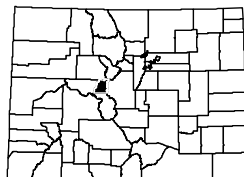
Similar Species: The submerged leaves of *P. amplifolius* are not only the largest of the Colorado pondweeds, but are bow-shaped. *P. illinoensis* leaves look similar, but the stipules are free, 3–7 cm long with 2 strong ridges on one side and are 4–10 cm long.

Habitat and Ecology: Found in lakes and ponds. Rare. One historical (1952) occurrence from Lake County, but expected elsewhere.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Considered state critically imperiled (S1) in Wyoming and South Dakota and state imperiled (S2) in North Dakota.

Animal and Bird Use: 

References: Ackerfield 2012, Skawinski 2011, Weber and Wittmann 2012



Potamogeton crispus L.

Curly pondweed

Potamogetonaceae

Graham Pritchard



Synonyms: None

USDA PLANTS Symbol: POCR3

ITIS TSN: 39007

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Non-native

Conservation Status: G5 SNA

C-Value: 0

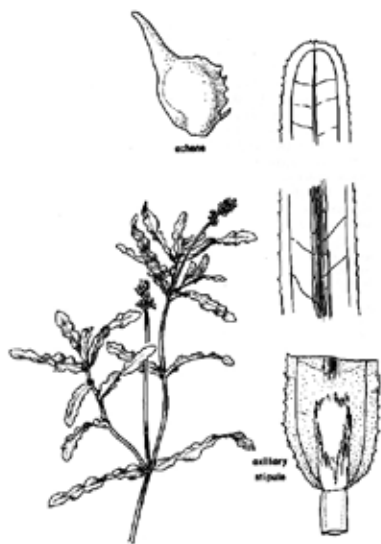
Duration: Perennial

CO Elevation: 5,250–8,000 ft. (1,600–2,440 m)

Key Characteristics:

- ◆ Emergent, stems 1–2 mm thick, parially flattened, usually branching, 4–8 dm long; turions present
- ◆ Leaves sessile, finely serrate with undulate or crispy margins, prominent midvein; petioles absent
- ◆ Stipules slightly adnate at bases, 4–10 mm long, early shredding
- ◆ Spikes dense, curved, short-cylindric, 1–2 cm long; peduncles 2–5 cm long
- ◆ Fruits brown, ovoid, body 5–5.5 mm long, 3 ridges and cone-shaped beak

Biopix



Jeanne R. Janish

Similar Species: *P. richardsonii* leaves can look similar, but *P. crispus* has distinctive serrate, curly leaves.

Habitat and Ecology: Uncommon in ponds and lakes, known only from 4 occurrences in Arapahoe, Jefferson, Jackson and Larimer Counties.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Turions appear as withered, rounded bud-scales at the base of the stem. The new turions will be produced in the axils of the old bud-scales.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Potamogeton diversifolius Raf.

Waterthread pondweed

Potamogetonaceae

Graves, Lovell



Synonyms: None

USDA PLANTS Symbol: PODI

ITIS TSN: 39026

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 5

Duration: Perennial

CO Elevation: 4,040–7,450 ft. (1,230–2,270 m)

Key Characteristics:

- ◆ Partially submerged, stems slender, terete, 0.5–1 mm thick, to 8 dm long
- ◆ Submerged leaves filiform, 1–8 cm long, 1-nerved; stipules adnate, 2–18 mm
- ◆ Floating leaves elliptic, 1.5–3 cm long, 3- to 17-nerved; petioles 5–40 mm long x 5–20 mm wide
- ◆ Lower spikes submerged, rounded, 1.5–6 mm long; upper ellipsoid to cylindric, 5–30 mm long
- ◆ Fruits olive-yellowish, flattened, 1–1.8 mm long, resemble a coiled snail shell; beak flat, small



Aquatics

Graves, Lovell



Similar Species: *P. natans* has bigger floating leaves (5–10 cm long x 2.5–6 cm wide) with 20–35 nerves.

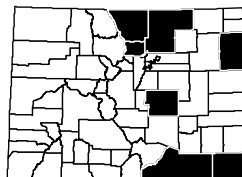
Habitat and Ecology: Uncommon in ditches and ponds sporadically throughout the Front Range.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Considered state critically imperiled (S1) in Colorado and Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Potamogeton epihydrus Raf.

Ribbonleaf pondweed

Potamogetonaceae

Louis M. Landry



Synonyms: *Potamogeton epihydrus* Raf. var. *nuttallii* (Cham. & Schltdl.) Fernald

USDA PLANTS Symbol: POEP2

ITIS TSN: 39027

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 5,550–11,400 ft. (1,690–3,475 m)

Key Characteristics:

- ◆ Partially emergent, stems flattened, 1–2 mm thick, up to 2 m long; rhizomes present
- ◆ Submerged leaves linear, ribbon-like, conspicuous midveins and median bands, 1–2 mm wide
- ◆ Floating leaves elliptic or oblong-elliptic, 11- to 25-nerved, obtuse at the tips; stipules free
- ◆ Spikes dense, cylindric, usually 2–4 cm long; peduncles as thick as the stems, 3–8 cm long
- ◆ Fruits olive to brown, concave, 2–3 mm long; dorsal keels prominent, thickly winged

Michael Butler



Jeanne R. Janish



Similar Species: *P. gramineus* and *P. illinoensis* have rounded, rarely flattened stems and submerged leaves are elliptic, not ribbon-like.

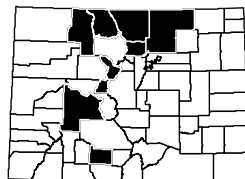
Habitat and Ecology: Uncommon, likely under collected, in mountain ponds and lakes.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Considered state critically imperiled (S1) in Utah and Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Potamogeton foliosus Raf.

Leafy pondweed

Potamogetonaceae

Neil Kramer



Synonyms: None

USDA PLANTS Symbol: POF03

ITIS TSN: 39019

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,900–10,400 ft. (1,190–3,170 m)

Key Characteristics:

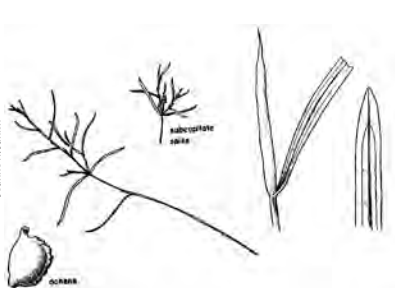
- Plants emergent, stems compressed, 0.5–1 mm wide, freely branched, to 8 dm long
- All leaves linear, 1.3–8.2 cm long x 0.3–2.3 mm wide, 1- to 5-nerved; stipules free
- Spikes short-cylindric, 1.5–7 mm long; peduncles usually clavate, recurved, 3–10 mm long
- Fruits olive, 1.4–2.7 mm long, produced in a blocky cluster on a short stalk
- Fruits with wavy dorsal keels; beak short

Aquatics

Keith Morge



Jeanne R. Janish



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

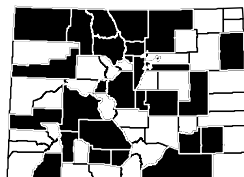
Habitat and Ecology: Found in ditches, shallow warm water ponds, lakes, springs and slow-moving streams.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. *P. foliosus* is common throughout the contiguous United States. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Potamogeton gramineus L.

Variableleaf pondweed

Potamogetonaceae

Jasont Hollinger

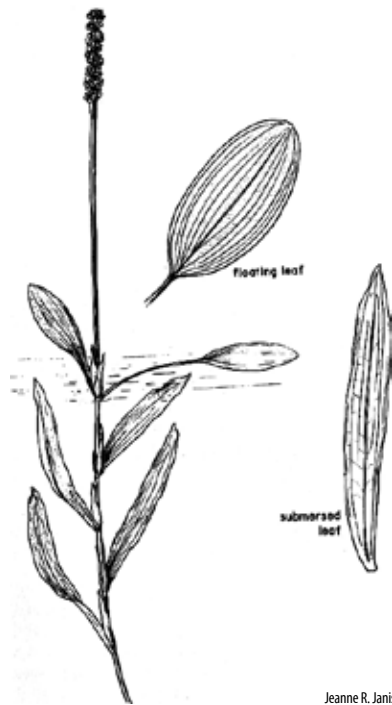


Synonyms: *Potamogeton gramineus* L. var. *maximus* Morong
USDA PLANTS Symbol: POGR8
ITIS TSN: 39032
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: 4
Duration: Perennial
CO Elevation: 5,000–11,200 ft. (1,525–3,415 m)

Key Characteristics:

- ◆ Partially emergent, 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 2–9 cm long x 1–3.5 cm wide; petioles 2–10 cm long; stipules free
- ◆ 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

Biopix




Jeanne R. Janish

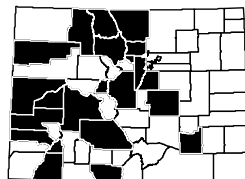
Similar Species: *P. illinoensis* has stems that are simple or just once branched and thicker (1–5 mm), the submerged leaves are 1.4–4 cm wide, 9- to 17-nerved and floating leaf blades are 4–41 cm long x 2–7 cm wide.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Potamogeton illinoensis Morong

Illinois pondweed

Potamogetonaceae

Neil Kramer



Synonyms: None

USDA PLANTS Symbol: POIL

ITIS TSN: 39035

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

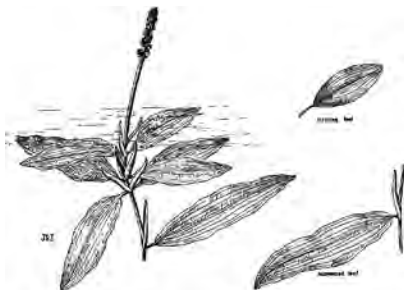
CO Elevation: 8,000–10,130 ft. (2,440–3,090 m)

Key Characteristics:

- ◆ Partially emergent, stems subterete, (1) 1.5–5 mm thick, simple or branched, to 2 m long
- ◆ Submerged leaves bow-shaped, 5–20 cm long x 1.5–4 cm wide; petioles up to 2–4 cm long
- ◆ Floating leaves often lacking, 4–14 (19) cm long x 2–7 cm wide; stipules free, 3–7 cm long
- ◆ Spikes dense, cylindric, 2–6 cm long; peduncles thicker than the stems, 4–20 (30) cm long
- ◆ Fruits olive-green or gray-green, 2.7–3.5 mm long, dorsal and lateral keels prominent

Aquatics

Joseph A. Marcus



Jeanne R. Janish

Similar Species: *P. gramineus* has shorter stipules (0.5–3 cm long) and floating leaves that are 2–5 cm long. *P. amplifolius* has bow-shaped leaves, but the leaves are distinctly folded, and are more than 3 cm wide.

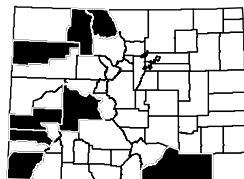
Habitat and Ecology: Uncommon, likely under collected, in ponds and lakes.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Considered state critically imperiled (S1) in Utah and Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012

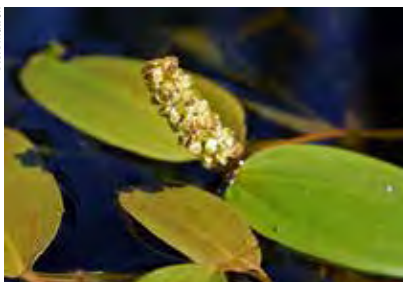


Potamogeton natans L.

Floating pondweed

Potamogetonaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: PONA4

ITIS TSN: 39008

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

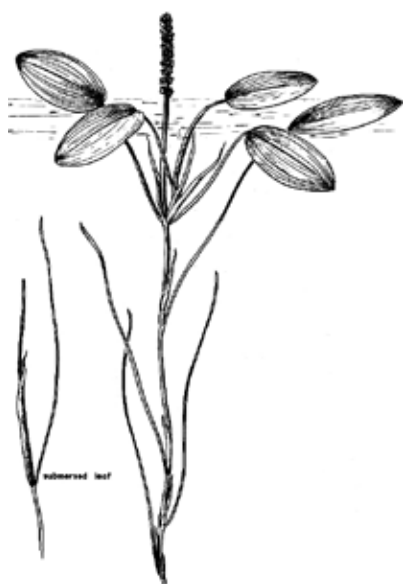
Duration: Perennial

CO Elevation: 3,770–10,170 ft. (1,150–3,100 m)

Key Characteristics:

- ◆ Partially emergent, stems terete, often rust-spotted, 3–9 dm long
- ◆ Submerged leaves linear, often disintegrating with age, 10–20 cm long x 1–2 mm wide
- ◆ Floating leaves, bases cordate, 3–10 cm long x 1–5 cm wide; stipules free
- ◆ Spikes dense, cylindrical, usually 2–5 cm long; peduncles thicker than stems, 3–10 cm long
- ◆ Fruits greenish-brown, egg-shaped, 3–5 mm long, pitted, deep wrinkles on sides

Steve Matson



Jeanne R. Janish

Similar Species: *P. diversifolius* also has linear, submerged leaves, but the floating leaves are smaller (1.5–3 cm x 0.3–2 cm wide).

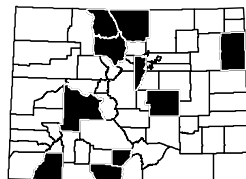
Habitat and Ecology: Uncommon, but likely under collected. Found in lakes, ponds and ditches.

Comments: *P. natans* is the most common floating-leaved pondweed in the northern temperate zone. Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Circumboreal. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming and North Dakota.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Potamogeton nodosus Poir.

Longleaf pondweed

Potamogetonaceae

Neil Kramer



Synonyms: None

USDA PLANTS Symbol: PONO2

ITIS TSN: 39009

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,500–10,100 ft. (1,065–3,080 m)

Key Characteristics:

- ◆ Partially emergent, stems subterete, 1–2 mm thick, simple or seldom branched, to 1.5 m long
- ◆ Submerged 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




John Hily



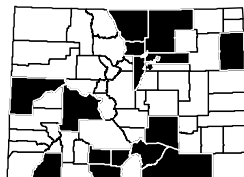
Similar Species: *P. alpinus* has leaves that are red-tinged and tapering to the stem, rather than long-petiolate with mature spikes that are 3 cm long or less. *P. natans* has submerged leaves that are sessile and less than 1 cm wide.

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. Considered state critically rare (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Potamogeton praelongus Wulfen

Whitestem pondweed

Potamogetonaceae

J. O'Brien



Synonyms: None

USDA PLANTS Symbol: POPRS

ITIS TSN: 39042

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 6,000–10,600 ft. (1,830–3,230 m)

Key Characteristics:

- ◆ Plants mostly submerged, 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, 1–3 cm long, fibrous
- ◆ Spikes dense, cylindrical, 2.5–5 cm long; peduncles elongate, 10–40 cm long
- ◆ Fruits greenish-brown, obovoid, 4–5 mm long, dorsal keels sharp; beaks 1.5 mm

Kristian Peters



Jeanne R. Janish



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.

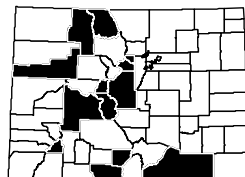
Habitat and Ecology: Found in deep water in mountain lakes and ponds.

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. Considered state critically imperiled (S1) in Wyoming and North Dakota.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Potamogeton pusillus L.

Small pondweed

Potamogetonaceae

Neil Kramer



Synonyms: None

USDA PLANTS Symbol: POPU7

ITIS TSN: 39017

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

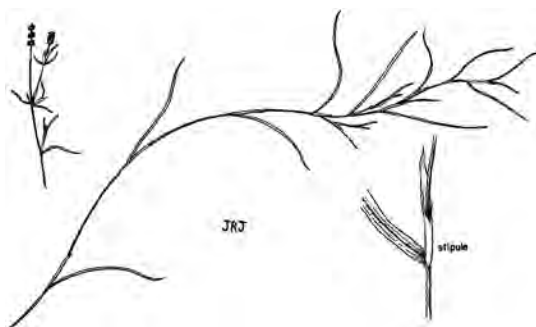
CO Elevation: 5,000–10,600 ft. (1,525–3,230 m)

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, 1.5–10 mm long; floral whorls 1–3; peduncles 0.5–6 cm long
- Fruits green to brown, obliquely obovoid, 1.5–2.2 mm long, rounded back, concave on the sides

Aquatics

Neil Kramer




Jeanne R. Janish

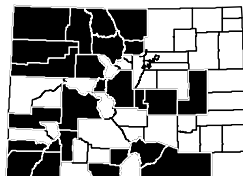
Similar Species: *P. foliosus* also has linear leaves that are submerged, but leaves lack the basal glands on the stipules, peduncles are much more stout and spikes are shorter (0.1–0.5 cm long) with 3–5 whorls of paired flowers. *Stuckenia* spp. resemble *P. pusillus*. *Stuckenia* spp. leaves are channelled 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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Potamogeton richardsonii (Benn.) Rydb.

Richardson's pondweed

Potamogetonaceae

Graham Pritchard



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

USDA PLANTS Symbol: POR12

ITIS TSN: 504558

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,770–11,500 ft. (1,150–3,505 m)

Key Characteristics:

- ◆ Plants mostly submerged, 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

Frank Koshore



Jeanne R. Jandsh



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

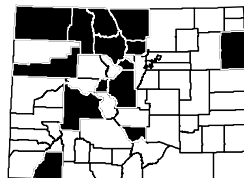
Habitat and Ecology: Found in shallow ponds and lakes.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Stuckenia filiformis (Pers.) Börner

Fineleaf pondweed

Potamogetonaceae



Synonyms: *Potamogeton filiformis* Persoon

USDA PLANTS Symbol: STF16

ITIS TSN: 565546

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

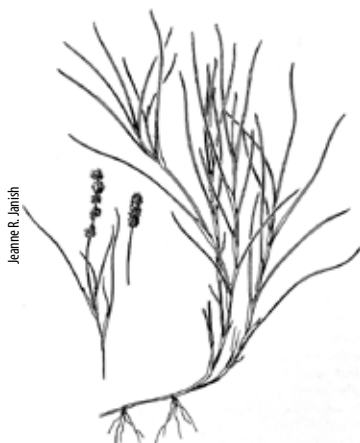
C-Value: 5

Duration: Perennial

CO Elevation: 5,880–12,200 ft. (1,790–3,720 m)

Key Characteristics:


- Plants wholly submerged, 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



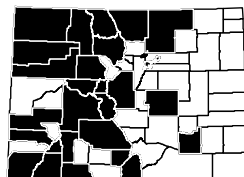
Similar Species: *S. pectinata* (= *Potamogeton pectinatus*) stipule sheaths are longer (2–3 cm long) and the leaf tips are sharp-pointed. *Potamogeton foliosus* also has linear leaves, but the peduncles are stouter and spikes are shorter (0.1–0.5 cm long) with 3–5 whorls of paired flowers. *P. pusillus* 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. Considered state imperiled (S2) in North Dakota and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Stuckenia pectinata (L.) Börner Sago pondweed

Potamogetonaceae

Watson and Dahlwitz



Synonyms: *Potamogeton pectinatus* L.

USDA PLANTS Symbol: STPE15

ITIS TSN: 757504

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 3,820–10,790 ft. (1,165–3,290 m)

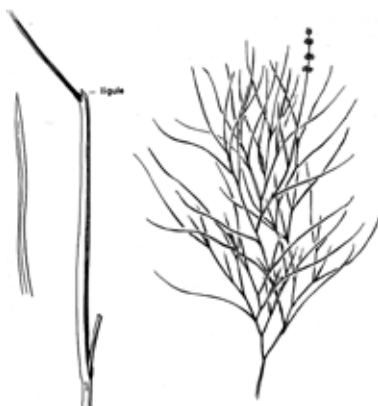
Key Characteristics:

- ◆ 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
- ◆ 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

Denise Culver



Jeanne R. Janish



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.

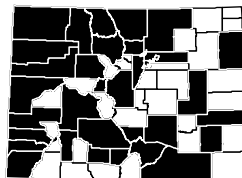
Habitat and Ecology: Commonly found in shallow mountain lakes and slow-moving streams. Leaves branch profusely like a wide fan, often spreading out along water surface.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Common throughout Alaska, Canada and the contiguous United States. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Stuckenia vaginata (Turcz.) Holub

Sheathed pondweed

Potamogetonaceae

Paul Skawinski



Synonyms: *Potamogeton vaginatus* Turcz.

USDA PLANTS Symbol: STVA8

ITIS TSN: 757506

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,800–10,790 ft. (1,465–3,290 m)

Key Characteristics:

- Plants wholly submerged, stems terete, mostly 1–2 mm thick, tubers 3–5 cm long
- Leaves filiform, 2–8 (30) cm long x 0.5–2 mm wide, 1 (3)-nerved, tips blunt, notched
- Stipule sheaths of lower leaves inflated and wider than stems, 3–6 cm long
- Spikes 3–6 cm long, with 5–12 floral whorls; peduncles slender, lax
- Fruits dark green, obliquely obovoid, 3 mm long, rounded on the back; beaks short



Similar Species: *S. filiformis* (= *Potamogeton filiformis*) does not have inflated sheaths, but does have a hyaline ligule resulting from free a portion of the sheath. *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.

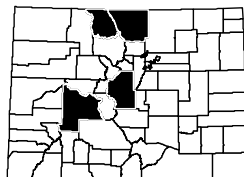
Habitat and Ecology: Found in montane lakes and ponds.

Comments: Pondweed seeds, tubers and vegetation provide important food and cover for aquatic animals and waterfowl. Common in Alaska, Canada, south to Colorado. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Larson 1993, Skawinski 2011, Weber and Wittmann 2012



Ranunculus aquatilis L.

White water crowfoot

Ranunculaceae

Keir Morse



Synonyms: *Batrachium aquatile* (L.) Dumort., *Ranunculus longirostris* Godr., *Ranunculus trichophyllus* Chaix var. *hispidulus* (E. Drew) W. Drew, *Batrachium circinatum* (Sibth.) Rchb. ssp. *subrigidum* (W. Drew) Á. Löve & D. Löve

USDA PLANTS Symbol: RAAQ

ITIS TSN: 18581

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 10

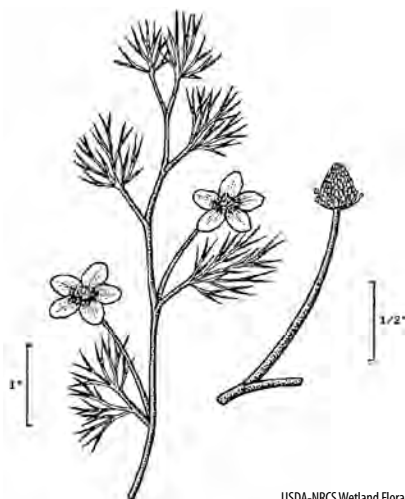
Duration: Perennial

CO Elevation: 3,500–12,300 ft. (1,065–3,750 m)

Key Characteristics:

- ◆ Submerged, 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
- ◆ Fruiting pedicels recurved at fruiting time
- ◆ Achenes cross-corrugated and pubescent; beaks persistent, filiform, 0.1–1.2 mm

Keir Morse



USDA-NRCS Wetland Flora

Similar Species: The leaves of *R. aquatilis* look like those of *Ceratophyllum demersum*, but if flowering, the white buttercup flowers are distinctive and diagnostic. Weber and Wittmann (2012) include *Batrachium longirostre*, *B. circinatum* and *B. trichophyllum* as synonyms for *B. aquatile* (= *R. aquatilis*).

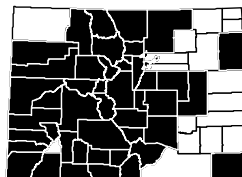
Habitat and Ecology: Common in ponds, streams and creeks.

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. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 1997, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Ranunculus gmelinii DC. Gmelin's buttercup

Ranunculaceae

Superior National Forest



Synonyms: *Ranunculus gmelinii* DC. var. *hookeri* (D. Don) L.D. Benson

USDA PLANTS Symbol: RAGM

ITIS TSN: 504726

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,290–12,000 ft. (1,610–3,660 m)

Key Characteristics:

- Emergent, stems prostrate or sometimes floating, glabrous or hirsute, rooting at nodes
- Leaves 3–5 times palmately divided, lobes 3–5 lobed, finely dissected
- Receptacles pubescent, sepals 4–5, spreading or reflexed from bases, 2–5 mm long x 2–4 mm wide
- Petals 4–14, yellow; nectary scales variable, crescent- or funnel-shaped
- Heads of achenes globose, 3–7 mm wide; achenes 1–1.2 mm wide, glabrous; beaks 0.4–0.8 mm



Maine Natural Areas Program



USDA-NRCS PLANTS Database Britton & Brown 1913

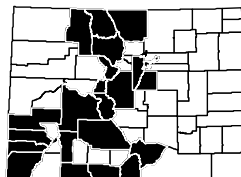
Similar Species: *R. hyperboreus* [FACW] leaves are 3–5 times ternately lobed with entire lobes, not forked. The receptacles are glabrous and achene beaks are 0.1–0.3 mm long.

Habitat and Ecology: Found in shallow ponds, along streams and in ditches.

Comments: All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain ranunculin, an oil glycoside, that is converted to protoanemonin by the action of plant enzymes that are released when chewed. Protoanemonin irritates the mouth, causing excessive salivation and intestinal irritation. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus hyperboreus Rottb.

High northern buttercup

Ranunculaceae

Biopix



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

USDA PLANTS Symbol: RAHY2

ITIS TSN: 18571

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

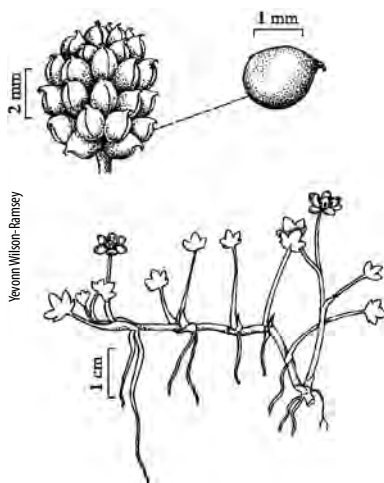
Duration: Perennial

CO Elevation: 5,500–12,480 ft. (1,675–3,805 m)

Key Characteristics:

- ◆ Emergent, 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
- ◆ 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 x 0.8–1.2 mm; beaks curved, 0.1–0.4 mm

Biopix



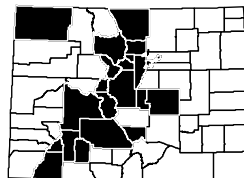
Similar Species: *R. gmelinii* [FACW] leaves are 3–5 times palmately divided, the lobes again 3–5 lobed, receptacles are pubescent and achene beak is 0.6–0.8 mm long.

Habitat and Ecology: Found floating in shallow subalpine ponds, rills in fens, along streams or stranded on mudflats.

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. Considered state critically imperiled (S1) in Utah and state vulnerable (S3) in Wyoming and Montana.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus sceleratus L. var. multifidus Nutt

Cursed buttercup

Ranunculaceae

Trent M. Draper



Synonyms: *Hecatonia scelerata* (L.) Fourreau

USDA PLANTS Symbol: RASCM

ITIS TSN: 529980

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 1

Duration: Annual, Perennial

CO Elevation: 3,600–11,260 ft. (1,095–3,430 m)

Key Characteristics:

- Emergent, stems hollow, succulent, glabrous, rooting at bases, only rarely rooting at nodes
- Leaves 1–5 x 1.6–6.8 cm, 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

Trent M. Draper



Trent M. Draper



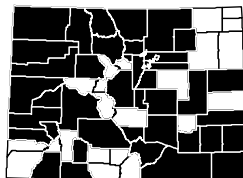
Similar Species: *R. sceleratus* var. *sceleratus* [RASCs, OBL, ITIS 529981], a naturalized weed in North America, is a serious weed in the eastern United States and the Pacific Northwest, not yet known in Colorado. It differs from *R. sceleratus* var. *multifidus* with wrinkles on the achene faces and 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.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ruppia cirrhosa (Petagna) Grande

Spiral ditchgrass

Ruppiaceae

Kristian Peters



Synonyms: *Ruppia cirrhosa* (Petagna) Grande ssp. *occidentalis* (S. Watson) Á. Löve & D. Löve, *Ruppia maritima* L. var. *occidentalis* (S. Watson) Graebn.

USDA PLANTS Symbol: RUCI2

ITIS TSN: 39065

Wetland Status AW: OBL **WM:** OBL **GP:** OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

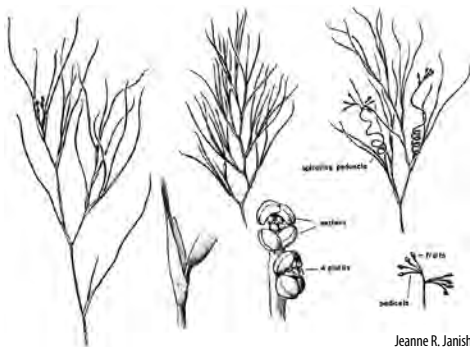
Duration: Perennial

CO Elevation: 3,800–7,500 ft. (1,160–2,285 m)

Key Characteristics:

- ◆ Submerged, rooting at proximal nodes, stems to 55 cm long
- ◆ Leaves submerged, alternate, filiform, sessile, 3.2 cm–45.1 cm long x 0.2–0.5 mm wide
- ◆ Stipules expanded and tube-like
- ◆ Flowers axillary on long, slender peduncles which coil and elongate at maturity
- ◆ Flowers with 2 sessile anthers and 4 pistils; fruits blackish-gray

Arizona State University Herbarium



Jeanne R. Janish

Similar Species: When not in flower or fruit, *Ruppia cirrhosa* can resemble *Stuckenia pectinata*, but *S. pectinata* has stipules that are not completely fused to the leaf or tube-like.

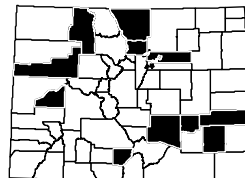
Habitat and Ecology: Uncommon in ponds and small lakes, can tolerate alkaline waters.

Comments: Provides cover and food for many aquatic species especially waterfowl. Common throughout the western and midwestern United States.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Aquatics

Limosella aquatica L.

Water mudwort

Scrophulariaceae (Plantaginaceae)

Steve Matson



Synonyms: None

USDA PLANTS Symbol: LIAQ

ITIS TSN: 33207

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Annual, Perennial

CO Elevation: 5,000–10,400 ft. (1,525–3,170 m)

Key Characteristics:

- ◆ Emergent, cespitose, non-branching, usually from a single stem; short stolons
- ◆ Leaves simple, 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



Dentae Culver



Jeanne R. Janish

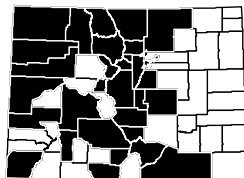
Similar Species: *Potamogeton* spp. have similar leaves and can occur with *Limosella*. However, pondweed flowers are in axillary or terminal spikes, not grouped at the base. *Isoetes* spp. have tufted, basal leaves like *L. aquatica*, but lack true flowers.

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. Considered state vulnerable (S3) in Wyoming.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Veronica americana Schwein. Ex Benth

American speedwell

Scrophulariaceae (Plantaginaceae)

Kear Moore



Synonyms: None

USDA PLANTS Symbol: VEAM2

ITIS TSN: 33399

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,980–12,600 ft. (1,520–3,840 m)

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

Barry Breckling



Jeanne R. Janish

Similar Species: *V. americana* is distinguished from the other speedwells that grow in shallow waters by its petiolate leaves. Both *V. scutellata* and *V. anagallis-aquatica* leaves are sessile and clasping.

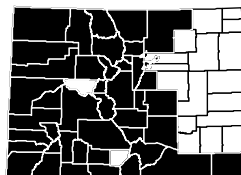
Habitat and Ecology: Common in shallow water, inundated meadows and along streams.

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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Harrington 1967, Weber and Wittmann 2012



Veronica anagallis-aquatica L.

Water speedwell

Scrophulariaceae (Plantaginaceae)

Kerl Morse



Synonyms: *Veronica catenata* Pennell, *Veronica salina* Schur.

USDA PLANTS Symbol: VEAN2

ITIS TSN: 565594

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Biennial, Perennial

CO Elevation: 3,500–10,200 ft. (1,065–3,110 m)

Key Characteristics:

- Emergent, 1–6 (10) dm tall, stems erect, branched at base, glabrous; rhizomatous
- Leaves opposite, clasping, 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

Kerl Morse



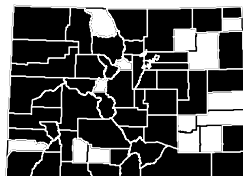
Similar Species: *V. scutellata* has a strongly 2-lobed capsule with a conspicuous notch and the leaves are linear, 4–20 times longer than wide. Vegetatively, *Potamogeton richardsonii* can look like *V. scutellata*, but has clasping leaves and fruits in dense spikes.

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.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Veronica scutellata L. Skullcap speedwell

Scrophulariaceae (Plantaginaceae)

Kerl Morse



Synonyms: None

USDA PLANTS Symbol: VESC2

ITIS TSN: 33422

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,800–8,700 ft. (1,770–2,650 m)

Key Characteristics:

- ◆ Emergent, stems 1–4 dm tall; rhizomatous
- ◆ Leaves opposite, sessile, clasping, narrowly linear, 2–7 (9) cm long x 2–8 (15) mm wide
- ◆ Flowers in racemes arising from leaf axils; pedicels filiform, becoming reflexed near apices

- ◆ Calyx segments broadly lanceolate, 2–3.5 mm; corolla 4–5 mm long, violet, pink or white
- ◆ Capsules much wider than long, strongly 2-lobed, notches 0.4–0.8 (1.0) mm deep

Kerl Morse



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *V. anagallis-aquatica* capsules are not conspicuously notched and the leaves are wider and lanceolate to ovate

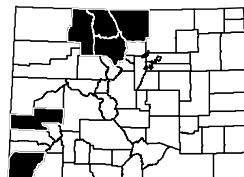
Habitat and Ecology: Uncommon in marshes and shallow water.

Comments: Common throughout Canada and northern United States. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Aquatics

Sparganium angustifolium Michx.

Narrowleaf bur-reed

Sparganiaceae

Al Schneider



Key Characteristics:

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


Al Schneider



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: Common throughout Canada and western United States. Considered state vulnerable (S3) in Wyoming. Excellent food and habitat for waterfowl. Muskrats and deer eat the entire plant.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012

Synonyms: *Sparganium emersum* Rehmman var.

multipedunculatum (Morong) Reveal

USDA PLANTS Symbol: SPAN2

ITIS TSN: 42318

Wetland Status AW: OBL **WM:** OBL **GP:** OBL

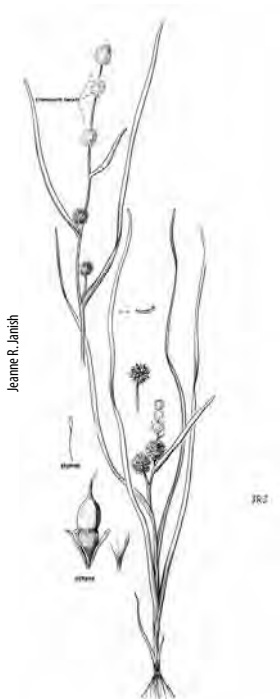
Native Status: Native

Conservation Status: G5 SNR

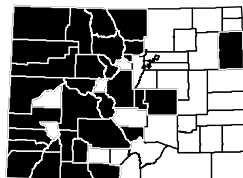
C-Value: 7

Duration: Perennial

CO Elevation: 3,370–11,900 ft. (1,025–3,625 m)



Jeanne R. Janish



Sparganium emersum Rehmann

European bur-reed

Sparganiaceae

Susan McDougall USDA-NRCS PLANTS Database



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

USDA PLANTS Symbol: SPEM2

ITIS TSN: 42315

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,370–10,130 ft. (1,025–3,090 m)

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
- ◆ 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

Steve Matson



USDA-NRCS PLANTS Database Britton & Brown 1913

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.

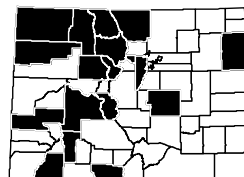
Habitat and Ecology: Not as common as *S. angustifolium*, found in shallow water of ponds and willow carrs.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Aquatics

Sparganium eurycarpum Engelm.

Broadfruit bur-reed

Sparganiaceae

Neil Kramer



Synonyms: None

USDA PLANTS Symbol: SPEU

ITIS TSN: 42316

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2

C-Value: 6

Duration: Perennial

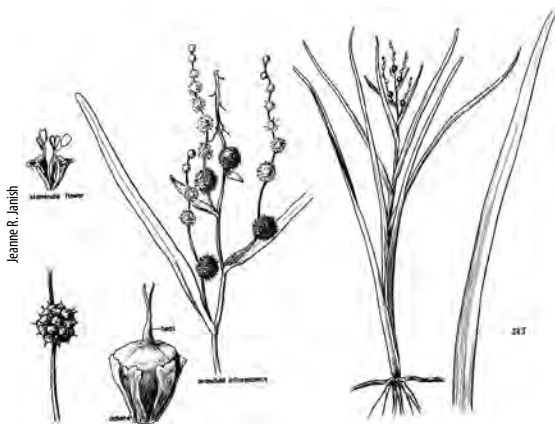
CO Elevation: 3,400–8,100 ft. (1,035–2,470 m)

Key Characteristics:

- ◆ Emergent or sometimes floating, robust, stems 0.5–2.5 m long, branches short
- ◆ Leaves erect, distinctly 'V' shaped, 2.5 m long x 6–20 mm wide
- ◆ Pistillate heads 1–6, peduncled on main rachis, sessile on branches, 1.5–5 cm across; stigmas 2
- ◆ Tepals with dark subapical spots, tips entire to subentire
- ◆ Fruits sessile, straw-colored, darkening with age, pyramidal, not constricted in the middle

Aquatics

Neil Kramer



Similar Species: Only bur-reed with 2 stigmas, sessile fruits and tepals with a spot at tip.

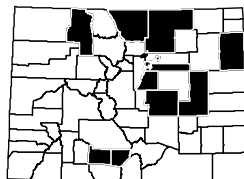
Habitat and Ecology: Found in shallow water of ponds from foothills to montane zones.

Comments: Excellent food and habitat for waterfowl. Muskrats and deer eat the entire plant. Common from Canada to Newfoundland, south to New Mexico and Florida. Considered state critically imperiled (S1) in Wyoming and state imperiled (S2) in Utah and Colorado.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Washington State Department of Ecology 2011, Weber and Wittmann 2012



Sparganium natans L.

Small bur-reed

Sparganiaceae

Keir Morse



Synonyms: *Sparganium minimum* Wallr.

USDA PLANTS Symbol: SPNA

ITIS TSN: 507177

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

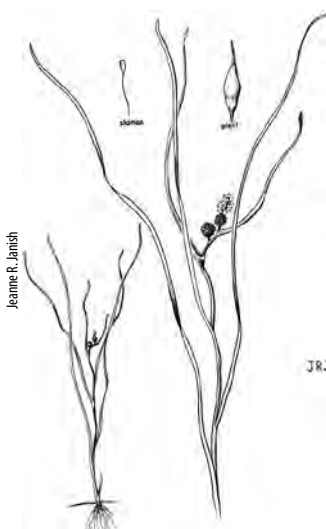
CO Elevation: 7,700–11,600 ft. (2,345–3,535 m)

Key Characteristics:

- ◆ Submerged, 3–8 (10) dm long, bract subtending lowest head equal to length of inflorescence
- ◆ Leaves limp in water, unkeeled, flat, 1–8 (10) dm long x (2) 3–6 (8) mm wide
- ◆ Pistillate heads usually 1.2 cm or less across, green-white; stigmas 1
- ◆ Staminate heads 1 or rarely 2, terminal, less than 1 cm across

- ◆ Fruits less than 1.5 mm across; beaks straight, 0.5–1.5 mm long

Keir Morse



Similar Species: *S. angustifolium* is a more robust plant overall, flower heads are sessile and fruits are 3–5 mm long with a straight beak shorter than the fruit body.

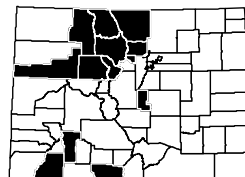
Habitat and Ecology: Uncommon. Grows in shallow water of ponds and high mountain ponds.

Comments: Excellent food and habitat for waterfowl. Muskrats and deer eat the entire plant. Stem bases and tubers are edible. Circumboreal. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Skawinski 2011, Weber and Wittmann 2012



Aquatics

Graves Lovell



Synonyms: None

USDA PLANTS Symbol: ZAPA

ITIS TSN: 39068

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 2

Duration: Perennial

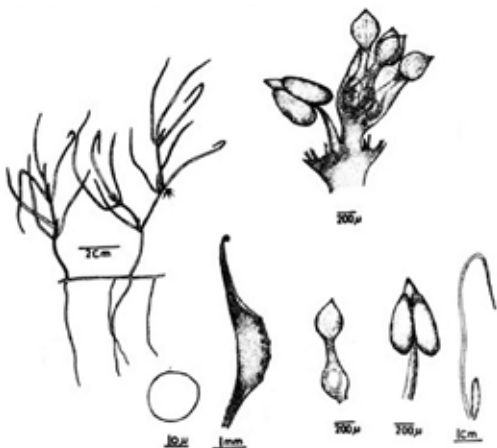
CO Elevation: 3,500–10,000 ft. (1,065–3,050 m)

Key Characteristics:

- ◆ Submerged, monoecious, with tendril-like roots and slender rhizomes
- ◆ Leaves opposite or whorled, filiform, thread-like, bright green that contrasts with the water
- ◆ Stipules forming a sheath that is adnate to leaf bases
- ◆ Fruits are achenes, forms in leaf axils, flattened, slightly curved with stout, horn-shaped beaks

Aquatics

Flora of Pakistan



Graves Lovell



Similar Species: *Stuckenia pectinata* and *Ruppia cirrhosa* are similar in appearance to horned pondweed. *Z. palustris* fruits are very distinct with the horned projections.

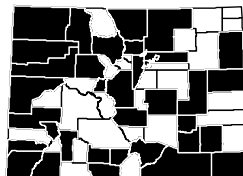
Habitat and Ecology: Found in slow-moving streams, ditches and along pond margins.

Comments: Provides food for waterfowl and small fish. Common through the contiguous United States. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Weber and Wittmann 2012, Western Wetland Flora 1992



Dryopteris expansa (C. Presl) Fraser-Jenkins & Jermy

Spreading woodfern Dryopteridaceae

Scott Smith



Synonyms: *Dryopteris assimilis* S. Walker

USDA PLANTS Symbol: DREX2

ITIS TSN: 17534

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 S1

C-Value: 10

Duration: Perennial

CO Elevation: 9,000–10,160 ft. (2,745–3,095 m)

Key Characteristics:

- ◆ Stems 10–40 cm, erect, with brown scales; leaves erect to slightly arching
- ◆ Fronds bipinnate to tripinnate, ultimate divisions sharp-pointed, widest at the bases
- ◆ Petiole scales tan, with dark, central stripes, broad, scale-like
- ◆ Sori in a single row between margin and midribs, round
- ◆ Indusia not prominent to lacking

USDA-NRCS PLANTS Database Britton & Brown 1913



Scott Smith



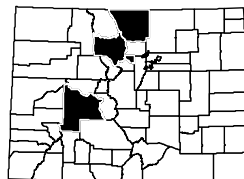
Similar Species: *Dryopteris filix-mas* [DRFL2, NI, ITIS 17535] is much more common and found in similar habitats. It has elliptic-shaped fronds that are widest near the middle, and bipinnate. The petioles scales are of two different types; broad/scale-like and narrow/hair-like.

Habitat and Ecology: Rare. Found in moist, dense spruce-fir forests and at cliff bases. It is considered to be state critically imperiled (S1) in Colorado and Wyoming and state vulnerable (S3) in Montana.

Comments: Wood ferns are found throughout North America. They are recognized by their stout, erect rhizomes and stipes which are always closely spaced and form a vase-shaped cluster. The stipes are always covered with large, brown lanceolate scales. Locally common from Alaska to California, to Colorado and upper midwestern United States. Considered state critically imperiled (S1) in Colorado and Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use: None known.

References: Ackerfield 2012, Flora of North America 1993, Lellinger 1985, Weber and Wittmann 2012



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

Scouringrush horsetail Equisetaceae

Scott Smith

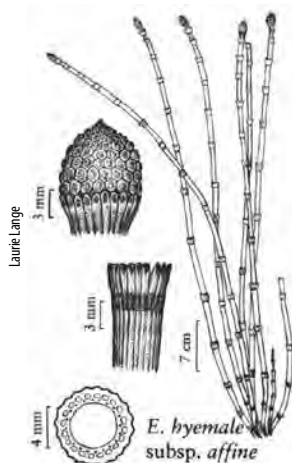


Synonyms: *Hippochaete hyemalis* (L.) Bruhin ssp. *affinis* (Engelm.) W.A. Weber
USDA PLANTS Symbol: EQHYA
ITIS TSN: 527892
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5T5 SNR
C-Value: 4
Duration: Perennial
CO Elevation: 3,650–10,140 ft. (1,115–3,090 m)

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


Scott Smith



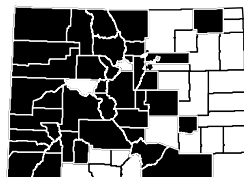
Similar Species: *E. laevigatum* [FACW] stems die back after one season, sheaths lack a dark band and cones are rounded not pointed at apices. *E. arvense* [EQAR, FAC, ITIS 17152] can be found in similar habitats. It is distinguished from other horsetails with whorls of branches at the stem nodes.

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, considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Cronquist et al. 1986, Flora of North America 1993, Lellinger 1985, Weber and Wittmann 2012



Equisetum laevigatum A. Braun

Smooth horsetail

Equisetaceae

Scott Smith



Synonyms: *Hippochaete laevigata* (A. Braun) Farw.
USDA PLANTS Symbol: EQLA
ITIS TSN: 17156
Wetland Status AW: FACW WM: FACW GP: FAC
Native Status: Native
Conservation Status: G5 SNR
C-Value: 4
Duration: Perennial
CO Elevation: 3,470–12,460 ft. (1,060–3,800 m)

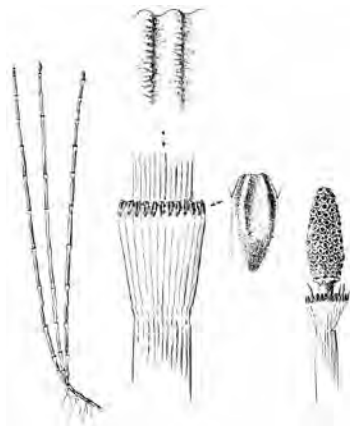
Key Characteristics:

- ◆ Stems dying after one season (annual in Colorado), 20–150 cm tall, unbranched, ridges 10–32
- ◆ Sheaths green, elongate, 7–15 mm wide with black band only at tips, lacking persistent teeth
- ◆ Teeth 10–32, jointed, shed early, leaving a dark rim on sheath
- ◆ Cone apices rounded to apiculate with blunt tips

Scott Smith



Jeanne R. Janish



Similar Species: *E. variegatum* [FAC, FACW] stems are slender, not stout and the sheaths are loose with fine-pointed persistent teeth. *E. hyemale* ssp. *affine* [FACW] has perennial stems with a dark band at the bases, not just at the top. *E. arvense* [EQAR, FAC, ITIS 17152] can be found in similar habitats. It is distinguished from other horsetails with whorls of branches at the stem nodes.

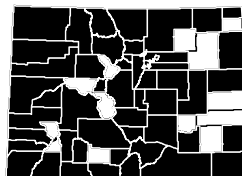
Habitat and Ecology: Common in wet meadows, edges of ditches, roadsides and streamsides.

Comments: 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, some 300 million years ago. Common throughout Canada and western and midwestern United States.

Animal and Bird Use:



References: Cronquist et al. 1986, Flora of North America 1993, Weber and Wittmann 2012



Equisetum variegatum Schleich. ex F. Weber & D. Mohr

Variegated scouringrush Equisetaceae

Scott Smith



Synonyms: *Hippochaete variegata* (Schleicher) Bruhin
USDA PLANTS Symbol: EQVA
ITIS TSN: 17149
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 S1
C-Value: 5
Duration: Perennial
CO Elevation: 3,980–11,350 ft. (1,215–3,460 m)

Key Characteristics:

- ◆ Aerial stems persisting more than a year, unbranched, 6–55 cm tall, ridges 3–12
- ◆ Sheath teeth erect, 3–12, not jointed, fine-pointed, permanent, prominent white margins
- ◆ Sheaths green with black apical band, spreading, 1–6 mm long x 1–5 mm wide, not jointed
- ◆ Cone apices pointed


Scott Smith



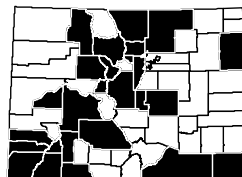
Similar Species: *E. laevigatum* [FAC, FACW] sheath teeth usually shed and cone apices are rounded with blunt tips. *E. hyemale* ssp. *affine* [FACW] has perennial stems with a dark band at the bases, not just at the top. *E. arvense* [EQAR, FAC, ITIS 17152] can be found in similar habitats. It is distinguished from other horsetails with whorls of branches at the stem nodes.

Habitat and Ecology: Found along lake shores, riverbanks, sand bars, ditches and moist woods.

Comments: 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, some 300 million years ago. Common throughout Alaska, Canada and northern United States.

Animal and Bird Use: 

References: Cronquist et al. 1986, Flora of North America 1993, Lellinger 1985, Weber and Wittmann 2012



Botrychium lanceolatum (S.G. Gmel.) Angstr.

Lanceleaf moonwort

Ophioglossaceae

Scott Smith



Synonyms: None

USDA PLANTS Symbol: BOLA

ITIS TSN: 17178

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 8,000–12,140 ft. (2,440–3,700 m)

Key Characteristics:

- Plants stout, 5–15 cm tall; dull to often lustrous when fresh, never glaucous
- Lobes of basal pinnae elongate and pointed, all but uppermost pinnae acutely lobed
- Trophophore (sterile blade) broadly deltate or pentangular, usually subsessile
- Sporophore usually ternately branched
- Sporophore stalk length shorter than or equal to the total trophophore length



Jeanne R. Janisch



Scott Smith

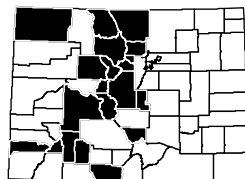
Similar Species: Long basal pinnae and a broadly triangulate outline of trophophores make this species distinguishable from other Colorado moonworts. *B. simplex* [BOSI, FAC/FACU, ITIS 17190] and *B. crenulatum* (= *B. lunaria* var. *crenulatum*) [BOCR, NI, ITIS 501019] are consistently in wetlands as well, but occur infrequently.

Habitat and Ecology: Found in open wet meadows, along shaded stream banks and on gravelly soils in the subalpine. Among Colorado's most widespread moonworts.

Comments: Moonworts are a group of primitive plants distantly related to modern ferns. They have a two generation life cycle, sporophyte and gametophyte. The sporophyte generation is what we see in the form of an above-ground 'leaf' divided into a sterile leaf-like segment and a fertile, spore-bearing segment that contains what looks like clusters of tiny grapes. Small mammals occasionally browse plants.

Animal and Bird Use: 

References: Cronquist et al. 1986, Flora of North America 1993, Root 2003, Weber and Wittmann 2012



Adiantum capillus-veneris L. Common maidenhair

Pteridaceae (Adiantaceae)

missouriplants.com



Synonyms: None

USDA PLANTS Symbol: ADCA

ITIS TSN: 17308

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S2

C-Value: 9

Duration: Perennial

CO Elevation: 4,600–7,800 ft. (1,400–2,375 m)

Key Characteristics:

- ◆ Rhizomatous with short creeping rhizomes, scales slender, brown, 1.5–3 mm long
- ◆ Fronds lax, often drooping, mostly 1–4 dm long; petioles purplish-black
- ◆ Leaf segments fan-shaped; frond once pinnate with a single main axis
- ◆ Sori discontinuous and borne on the reflexed margins of the upper lobes of ultimate segments

Jeanne R. Jansh



Central Texas Plants

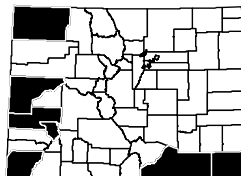
Similar Species: *A. aleuticum* [ADAL, FAC, ITIS 181788] is the other maidenhair fern known to occur in Colorado, only from the San Juan Mountain Range. The fronds are dichotomously branched with 2 main axes, not pinnate with a single axis.

Habitat and Ecology: Rare on moist cliffs, waterfall sprays, near springs and seeps, especially on sandstone or calcareous rocks or in highly mineralized soil. It is globally widespread in the tropical and warm-temperate regions.

Comments: Maidenhairs fronds are distinctive with broad, delicate fan-shaped leaflets. Due to lack of suitable habitat, in Colorado, maidenhair ferns are not common. The North American range includes southern United States. Considered state critically imperiled (S1) in South Dakota and state imperiled (S2) in Colorado.

Animal and Bird Use: None known.

References: Cronquist et al. 1986, Flora of North America 1993, Lellinger 1985, Root 2003, Spackman et al. 1997, Weber and Wittmann 2012



Agrostis exarata Trin. Spike bentgrass

Poaceae

California State University Chico



Synonyms: None

USDA PLANTS Symbol: AGEX

ITIS TSN: 40412

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

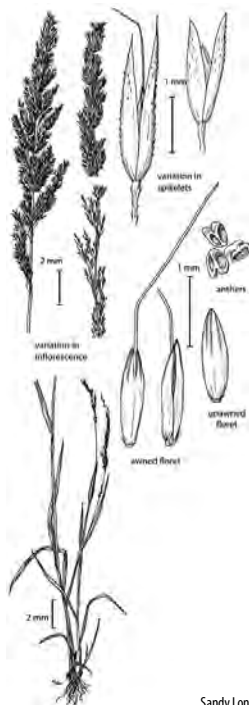
Duration: Perennial

CO Elevation: 5,000–12,570 ft. (1,525–3,830 m)

Key Characteristics:

- ◆ Cespitose; culms 2–12 dm tall, erect to decumbent, rooting at lower nodes, herbage scabrous
- ◆ Leaf sheaths open; ligules 2–8 mm long, truncate, erose-ciliate; blades flat, 2–10 mm broad
- ◆ Inflorescence a compressed panicle, 5–25 cm long; branches commonly in dense whorls
- ◆ Spikelets 1-flowered; disarticulation above glumes
- ◆ Glumes 2–4 mm long; lemmas 1–3 mm long, 5-nerved, awns 1–5 mm long; paleas minute

Ken Morse



Sandy Long

Similar Species: *A. variabilis* [AGVA, NI, ITIS 564993] is shorter in stature (less than 2 dm tall), the leaf blades are narrower (less than 2 mm broad) and the ligules are 1–2 mm long as compared to 2–8 mm long in *A. exarata*.

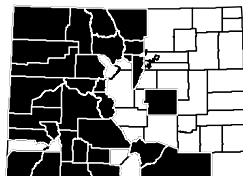
Habitat and Ecology: Moist mountain meadows and roadsides. Weber and Wittmann (2012) state that *A. exarata* is an adventive species for Colorado.

Comments: Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials. Considered state critically imperiled (S1) in North Dakota and state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Barkworth et al. 2007, Cronquist et al. 1977, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Western Wetland Flora 1992, Winge 1994



Grasses

Agrostis gigantea Roth

Redtop

Poaceae



Key Characteristics:

- ◆ Rhizomatous; stems erect from bases, up to 1.5 m tall
- ◆ Leaf sheaths open; ligules 3–6 mm long; blades flat, 3–8 mm wide x 4–20 cm long
- ◆ Inflorescence an open panicle, reddish, pyramidal-oblong, up to 20 cm long; branches spreading
- ◆ Spikelets 1-flowered, disarticulation above glumes; glumes nearly equal, about as long as spikelet
- ◆ Lemmas 1.5–2 mm long; paleas well-developed, about half the length of lemma, 0.7–1.4 mm long



Synonyms: *Agrostis alba* auct. non L., *Agrostis stolonifera* L. ssp. *gigantea* (Roth) Schübl. & G. Martens, *Agrostis stolonifera* L. var. *major* (Gaudin) Farw.

USDA PLANTS Symbol: AGGI2

ITIS TSN: 40414

Wetland Status AW: FACW **WM:** FAC **GP:** FACW

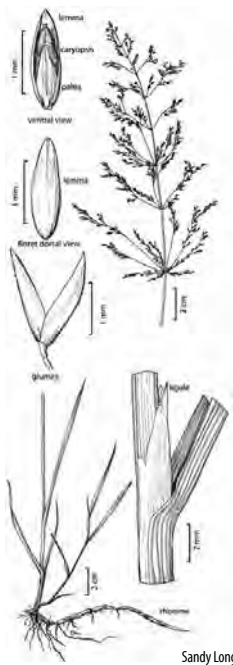
Native Status: Non-native

Conservation Status: G4G5 SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,880–10,000 ft. (1,185–3,050 m)



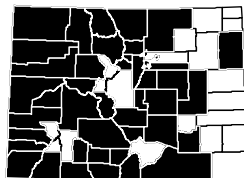
Similar Species: *A. stolonifera* [FACW, FAC] is also a large stature bentgrass that is stoloniferous and decumbent at bases. It is not as common as *A. gigantea*.

Habitat and Ecology: Common. Cultivated in irrigated hay meadows; grows along ditches and roadsides.

Comments: Non-native, escaped from hay meadows. Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use: 

References: Barkworth et al. 2007, Cronquist et al. 1977, Shaw 2008, Stubbendieck et al. 2003, Weber and Wittmann 2012, Wingate 1994



Agrostis humilis Vasey

Alpine bentgrass

Poaceae

Dean Wm. Taylor



Synonyms: *Podagrostis humilis* (Vasey) Björkman, *Podagrostis thurberiana* (Hitchc.) Hultén

USDA PLANTS Symbol: AGHU

ITIS TSN: 182505

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 10

Duration: Perennial

CO Elevation: 8,680–13,000 ft. (2,645–3,960 m)

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
- ◆ Spikelets 1-flowered; rachilla occasionally extended behind paleas as a bristle or up to 0.5 mm long
- ◆ Glumes subequal, 1.6–2.3 mm long, purple, 1-nerved; lemmas 1.5–2.5 mm long; paleas 0.9–1.6 mm

Matt Lavin



Similar Species: *A. humilis* can resemble *A. variabilis* [AGVA, FAC, ITIS 564993]. *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.

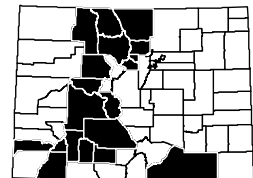
Habitat and Ecology: Found in wet meadows and tundra in subalpine and alpine zones.

Comments: Provides food and nesting material for small mammals, e.g., pika and songbirds. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Barkworth et al. 2007, Cronquist et al. 1977, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Agrostis idahoensis Nash Idaho bentgrass

Poaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: AGID

ITIS TSN: 40418

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 7,350–12,010 ft. (2,240–3,660 m)

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, not diffuse, lower branches not bearing spikelets
- ◆ 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

Grasses

Steve Matson



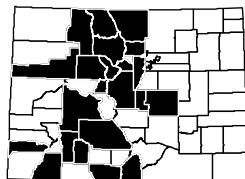
Similar Species: *A. scabra* [AGSC5, FAC, ITIS 40424] also has an awnless lemma, but the panicle is diffuse with long branches divided beyond the middle of rachis. *A. scabra* is more common at lower elevations along roadsides and trails.

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. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Agrostis stolonifera L.

Creeping bentgrass

Poaceae

Russ Kleiman and Kelly Kindscher



Synonyms: *Agrostis alba* L. var. *stolonifera* (L.) Sm., *Agrostis alba* L. var. *palustris* (Huds.) Pers., *Agrostis palustris* Huds.

USDA PLANTS Symbol: AGST2

ITIS TSN: 40400

Wetland Status AW: FACW **WM:** FAC **GP:** FACW

Native Status: Non-native

Conservation Status: G5 SNA

C-Value: 0

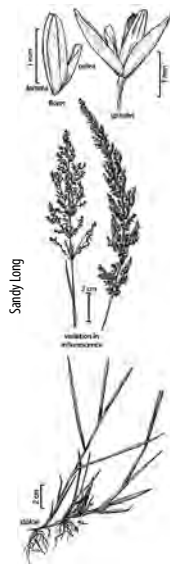
Duration: Perennial

CO Elevation: 3,600–10,520 ft. (1,095–3,205 m)

Key Characteristics:

- ◆ Stolonerous, spreading from a decumbent bases, rooting at lower nodes; culms 2–10 dm tall
- ◆ Leaf sheaths occasionally purplish or reddish; ligules membranous, 2–8 mm long; blades up to 1 cm wide
- ◆ Inflorescence a narrow panicle at maturity, 5–30 cm long; branches spreading, densely-flowered, whorled
- ◆ Spikelets 1-flowered; glumes unequal, 1.6–3 mm long, nerves scarious to ciliate, purplish
- ◆ Lemmas 1.4–2 mm long, 5-nerved, membranous, unawned; paleas well-developed, 0.7–1.4 mm long

Matt Lavin



Similar Species: *A. gigantea* [FACW, FAC] is another large stature bentgrass. It has rhizomes, not stolons, and is erect from the bases with a narrow panicle.

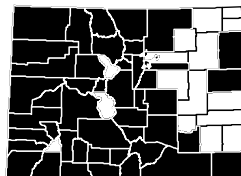
Habitat and Ecology: Grows in mesic areas along streams, stock tanks and ponds from low elevations to subalpine.

Comments: Native to Eurasia. *A. stolonifera* is often the dominant graminoid, forming monocultures, especially on disturbed sites. Provides cover for birds and small mammals. The foliage is browsed ungulates.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Grasses

Alopecurus aequalis Sobol.

Shortawn foxtail

Poaceae

Steve Matson



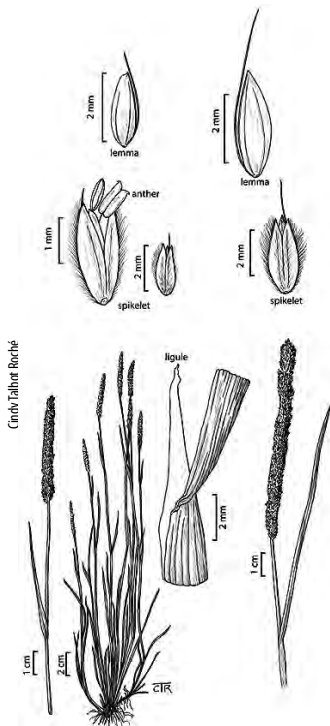
Key Characteristics:

- ◆ 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
- ◆ 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

Keith Morse



Synonyms: None
USDA PLANTS Symbol: ALAE
ITIS TSN: 40436
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: 4
Duration: Perennial
CO Elevation: 4,800–11,480 ft. (1,465–3,500 m)



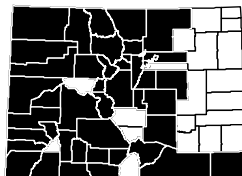
Similar Species: *A. geniculatus* [OBL] also has obtuse glumes, but the lemma awns are geniculate and longer, up to 5 mm long. *A. pratensis* [FACW] glumes are longer, 3–6 mm long, with acute tips.

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.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Alopecurus alpinus Sm.

Boreal alopecurus

Poaceae

creative commons



Synonyms: *Alopecurus alpinus* Sm. ssp. *glaucus* (Less.) Hultén, *Alopecurus magellanicus* Lam.

USDA PLANTS Symbol: ALAL2

ITIS TSN: 40432

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

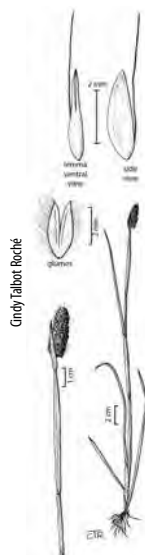
Duration: Perennial

CO Elevation: 8,530–12,800 ft. (2,600–3,900 m)

Key Characteristics:

- ◆ Rhizomatous and/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

Daniella Longo



Similar Species: *A. pratensis* [FAC, FACW] also has woolly glumes, but has a much longer inflorescence up to 10 cm long, and occurs at lower elevations. *P. alpinum* (= *P. commutatum*) [PHAL2, FAC, FACU, ITIS 41063] looks similar, but the glumes are awned not the lemmas.

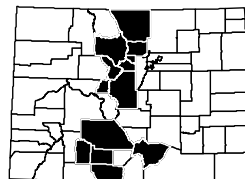
Habitat and Ecology: Grows along streams and in wet meadows at high elevations.

Comments: Global range is from Greenland to Alaska, south to Colorado, Utah and Wyoming. Considered state imperiled (S2) in Utah and Wyoming. Provides food and nesting material for small mammals, e.g., pika and alpine songbirds.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Grasses

Alopecurus arundinaceus Poir.

Creeping meadow foxtail

Poaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: ALAR

ITIS TSN: 40439

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,280–11,460 ft. (1,000–3,495 m)

Key Characteristics:

- ◆ Rhizomatous; culms 2–10 dm tall
- ◆ Leaf sheaths open; ligules membranous, 1.5–5 mm long, truncate; blades flat, 0.3–1.5 cm wide, scabrous
- ◆ Inflorescence a contracted panicle with short-pedicel spikelets, 3–10 cm long x 7–13 mm wide
- ◆ Spikelets 1-flowered, strongly flattened; glumes 3.6–5 mm long, keels ciliate, 3-nerved, tips divergent
- ◆ Lemmas 3.1–4.5 mm long, obtuse, glabrous or with scattered hairs; awns 1.5–7.5 mm, geniculate

Grasses

Matt Lavin



Matt Lavin



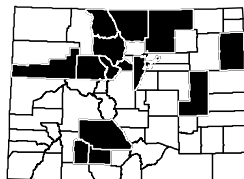
Similar Species: *A. pratensis* [FAC, FACW] lemma tips are acute and glume tips are parallel to convergent. From a distance, *Phleum pratense* [FACU] resembles *A. arundinaceus*. However, *Phleum pratense* [PHPR3, FACU, ITIS 41062] glumes have ciliate keels and horn-like awns; it is the lemmas that are awned in *A. arundinaceus*.

Habitat and Ecology: Introduced cool season pasture grass. Escaped and widely established.

Comments: Forage for large animals, including wildlife and waterfowl; however it is an aggressive grass that will become a monoculture. In northern Colorado, *A. arundinaceus* is the main hay grass for what is often referred to as mountain grass hay.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012



Alopecurus carolinianus Walter

Carolina foxtail

Poaceae

Max Licher



Synonyms: None

USDA PLANTS Symbol: ALCA4

ITIS TSN: 40440

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 4,000–4,500 ft. (1,220–1,370 m)

Key Characteristics:

- ◆ Tufted; culms 1–5 dm tall, erect to decumbent at bases
- ◆ Sheaths open to inflated, glabrous; blades flat, 3–15 cm long, scabrous above
- ◆ Inflorescence a tightly contracted panicle, cylindrical, spike-like, 2–5 cm long; spikelets 1-flowered
- ◆ Glumes 2.1–3.1 mm long, connate at bases, appressed pubescent on sides
- ◆ Lemmas 1.9–2.7 mm long, apices obtuse, awned from above bases, 3–5 mm long, geniculate

Max Licher



Jeanne R. Janish

Similar Species: *A. geniculatus* [OBL] resembles *A. carolinianus*, but it is a perennial grass with longer lemmas, 2.5–3 mm. *Cypsis alopecuroides* [OBL], also an annual, looks very similar with one floret per spikelet, but differs with a hairy ligule and a decumbent to prostrate growth habit.

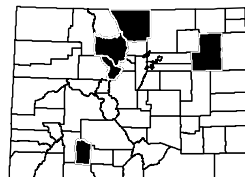
Habitat and Ecology: Uncommon. Grows in wet meadows, drying lake margins and along major watercourses. Weber and Wittmann (2012) consider it an adventive species in Colorado.

Comments: Global range includes most of contiguous United States and Canada, except for northern Canadian provinces and Alaska. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. Large herbivores, small mammals, water-fowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012



Grasses

Alopecurus geniculatus L.

Water foxtail

Poaceae

Grasses

Trent M. Draper



Key Characteristics:

- Weakly tufted; culms 2–6 dm long, decumbent and rooting at nodes
- Leaf sheaths open to inflated; ligules membranous, 2–6 mm long; blades 2–6 mm wide, scabrous
- Inflorescence a panicle, cylindrical with short-pedice spikelets, dense, spike-like, 1.5–7 cm long
- Spikelets 1-flowered, strongly flattened, 2–4 mm long; glumes 1.9–3.5 mm long, silky pubescent on sides
- Lemmas 2.5–3 mm long, glabrous, tips truncate to obtuse; awns 3.5–5 mm long, geniculate



Amelia Ryan

Synonyms: None

USDA PLANTS Symbol: ALGE2

ITIS TSN: 40437

Wetland Status AW: OBL WM: OBL GP: OBL

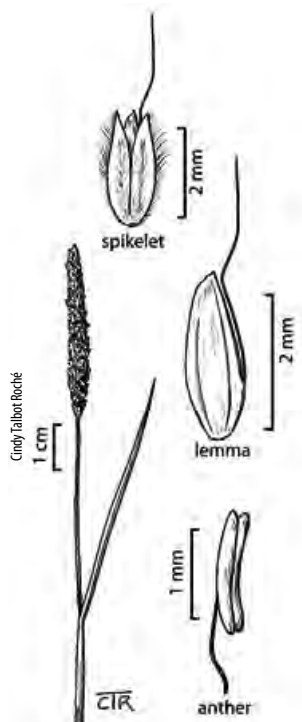
Native Status: Non-native

Conservation Status: GU SNA

C-Value: 0

Duration: Perennial

CO Elevation: 5,900–12,140 ft. (1,800–3,700 m)



Similar Species: *A. aequalis* [OBL] is similar, but has straight awns that are shorter, 0.7–3.0 mm, not exceeding the glumes.

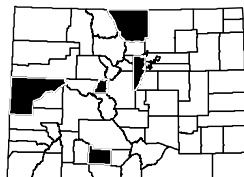
Habitat and Ecology: Grows in shallow waters, ditches, open wet meadows, shores and streambanks.

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

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012



Alopecurus pratensis L.

Meadow foxtail

Poaceae

Steve Matson



Key Characteristics:

- ◆ Cespitose, tufted; 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 dm wide
- ◆ Inflorescence a cylindrical panicle, short-pedicle 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 parallel, keels ciliate; lemmas 4–6 mm long, awns 5–8 mm

Steve Hunt USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: ALPR3

ITIS TSN: 40438

Wetland Status AW: FACW WM: FAC GP: FACW

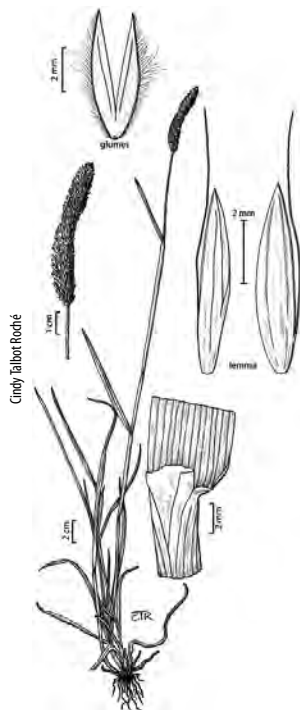
Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,280–12,800 ft. (1,000–3,900 m)



Similar Species: *A. arundinaceus* [FAC, FACW] can occur with *A. pratensis*, but the lemma apices are truncate, not acute, and the glume apices are divergent, not parallel. *Phleum pratense* [PHPR3, FACU, ITIS 41062] also has a spike-like inflorescence, but the glumes are awned or horned, not the lemmas.

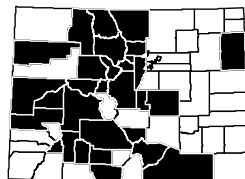
Habitat and Ecology: Frequently planted in hay meadows or road revegetation, then escaping to wet meadows adjacent to streams and ponds.

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

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Grasses

Beckmannia syzigachne (Steud.) Fernald

American sloughgrass

Poaceae

Cynthia Strouse



Synonyms: *Beckmannia syzigachne* (Steud.) Fernald
ssp. *baicalensis* (Kusnez.) Koyama & Kawano

USDA PLANTS Symbol: BESY

ITIS TSN: 41325

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Annual

CO Elevation: 5,000–11,280 ft. (1,525–3,440 m)

Key Characteristics:

- ◆ 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
- ◆ 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



Steve Hurst USDA-NRCS PLANTS Database

Linda A. Vorobik



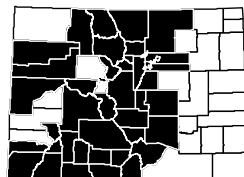
Similar Species: None.

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.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Calamagrostis canadensis (Michx.) P. Beauv.

Bluejoint

Poaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: CACA4

ITIS TSN: 40544

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,300–14,150 ft. (1,615–4,315 m)

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, included



Matt Lavin



Cindy Talbot Roché and Hana Pazdírková

Similar Species: *C. stricta* [FACW] can occur with *C. canadensis*. It has a narrower panicle versus an open panicle and the callus hairs are shorter. *C. scopulorum* [CASC, FAC, ITIS 40566] is found in seep wetlands in northwestern Colorado. It has a narrow panicle and involute leaves like *C. stricta*, but the glumes are longer, 4.5–6 mm.

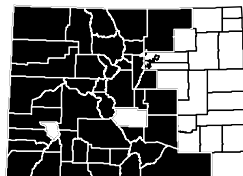
Habitat and Ecology: One of the most common riparian grasses in the mountains, occurring along mountain streams, edges of lakes and ponds from foothills to subalpine.

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.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Grasses

Calamagrostis stricta (Timm) Koeler

Slimstem reedgrass

Poaceae

Steve Matson



Key Characteristics:

- ◆ Cespitose with slender rhizomes; culms erect, 2.5–9 dm tall, glabrous
- ◆ Sheaths glabrous; ligules 0.7–6 mm long, erose-ciliate; blades 1–5 mm wide, stiff, flat to involute
- ◆ Inflorescence a narrow panicle, branches 1.4–4 cm long, tightly contracted
- ◆ Spikelets 1- to occasionally 2-flowered, 2–2.5 mm long; callus hairs 1–3 mm long
- ◆ Glumes length of spikelet; callus hairs half or as long as lemmas; lemmas equal or shorter than glumes

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: CAST36

ITIS TSN: 501106

Wetland Status AW: FACW WM: FACW GP: FACW

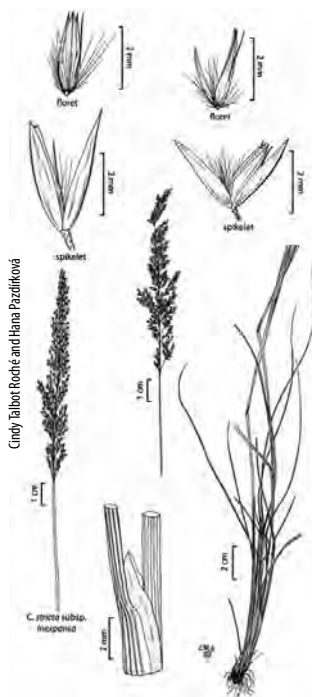
Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,500–11,800 ft. (1,370–3,595 m)



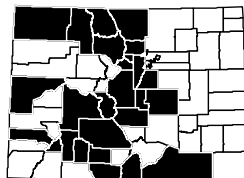
Similar Species: Shaw (2008) recognizes *C. stricta* ssp. *inexpansa* [CAST13, OBL, ITIS 523717]. *C. stricta* ssp. *inexpansa* spikelets are 3–4 mm long with callus hairs that are 2–4.5 mm long, the leaf blades are lax, the lemma awns are slightly exceeding tips of glume and the panicle branches are 1.5–9.5 cm long, narrow but pyramidal in shape. *C. scopulorum* [CASC, FAC, ITIS 40566] is found in seep wetlands in northwestern Colorado. It has a narrow panicle and involute leaves like *C. stricta*, but the glumes are longer, 4.5–6 mm.

Habitat and Ecology: Grows in wet meadows, fens, streamsides from montane to subalpine.

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

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Catabrosa aquatica (L.) P. Beauv.

Water whorlgrass

Poaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: CAAQ3

ITIS TSN: 41541

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

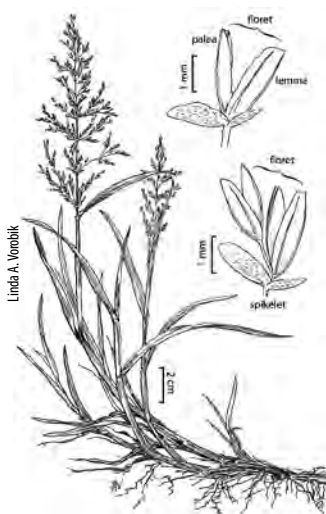
Duration: Perennial

CO Elevation: 3,710–10,800 ft. (1,130–3,290 m)

Key Characteristics:

- ◆ Stolonerous; culms 1–5 dm long, rooting at nodes, decumbent at bases, glabrous
- ◆ Leaf sheaths closed; ligules 2–6 mm long, membranous; blades flat, wrinkled
- ◆ 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, scarious, smaller than flowers
- ◆ Lemmas 2–3 mm long with 3 prominent parallel nerves, glabrous, truncate, apices erose

Matt Lavin



Similar Species: *C. aquatica*'s stoloniferous growth habit with the combination of closed leaf sheaths and 3 prominent, parallel nerves on the lemmas are diagnostic.

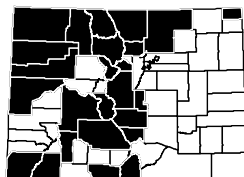
Habitat and Ecology: Grows in standing or slow-moving water throughout Colorado, less common on the Eastern Slope.

Comments: *C. aquatica* is palatable, but it is never sufficiently abundant to be a dominant forage species. Global range is throughout North America. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Cinna latifolia (Trevis. ex Goepp.) Griseb.

Drifting woodreed

Poaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: CILA2

ITIS TSN: 40584

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

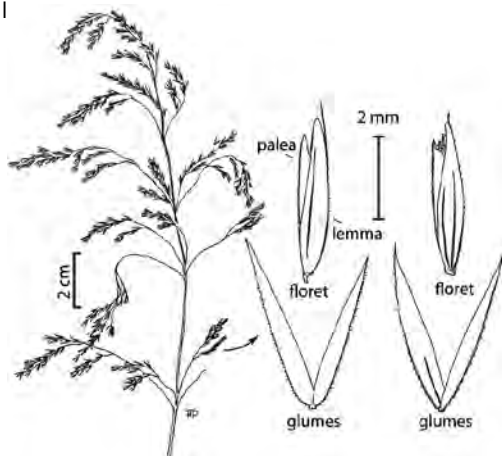
CO Elevation: 7,000–9,600 ft. (2,135–2,925 m)

Key Characteristics:

- ◆ Rhizomatous; culms 5–20 dm long, erect or decumbent, scabrous below nodes
- ◆ Leaf sheaths open; ligules 3–8 mm long, membranous; blades flat, 4–15 mm wide, lax, scabrous
- ◆ Inflorescence an open panicle, 10–30 cm l branches spreading to drooping
- ◆ Spikelets 1-flowered, 2.5–4 mm long, strongly compressed; glumes as long as spikelet, keels scabrous
- ◆ Lemmas slightly shorter than glumes, lanceolate, scabrous, 3-nerved, keels scabrous

Grasses

Steve Matson



Linda A. Vorobik and Hana Pazdírková

Similar Species: There are several *Agrostis* spp. that have open panicles with one floret per spikelet, but their spikelets never droop and they have much narrower leaf blades.

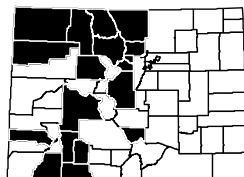
Habitat and Ecology: Grows in moist areas along river banks, lake or pond margins and fens from montane to subalpine.

Comments: Global range extends throughout North America. Considered state imperiled (S2) in Wyoming. Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Crypsis alopecuroides (Piller & Mitterp.) Schrad.

Foxtail pricklegrass

Poaceae

Matt Lavin



Synonyms: *Heleochoa alopecuroides* (Piller & Mitterp.) Host ex Roem.

USDA PLANTS Symbol: CRAL2

ITIS TSN: 41603

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

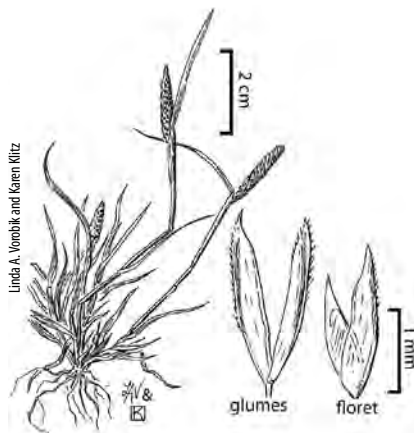
Duration: Annual

CO Elevation: 4,250–5,500 ft. (1,295–1,675 m)

Key Characteristics:

- ◆ Tufted, herbage purple to nearly black; culms 5–75 cm long, prostrate, nodes reddish-brown
- ◆ Leaf sheaths open, margins membranous; ligules hairy, 0.2–1 mm; blades flat to involute
- ◆ Inflorescence a spike-like, cylindrical panicle, lower portion often enclosed in upper sheath, purplish
- ◆ Spikelets 1-flowered, compressed, often black-tinged; glumes strongly keeled
- ◆ Lemmas lanceolate, 1-nerved, keeled, glabrous to sometimes scabrous on keels, 1.7–2.8 mm long

Matt Lavin



Similar Species: *C. alopecuroides* looks like a small, annual version of timothy grass (*Phleum pratense*), but does not have the glumes with ciliate keels and horn-like awns. *Alopecurus carolinianus* [OBL] resembles *C. alopecuroides* but has a membranous ligule, not hairy, and erect culms.

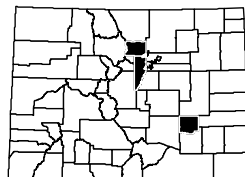
Habitat and Ecology: Uncommon in moist to wet areas along reservoirs and mudflats in Boulder, Jefferson and Crowley Counties.

Comments: An introduced warm season grass that is uncommon, but does favor muddy shorelines with fluctuating water levels in lakes and reservoirs. Small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Deschampsia cespitosa (L.) P. Beauv.

Tufted hairgrass

Poaceae

Max Lohr



Synonyms: None

USDA PLANTS Symbol: DECE

ITIS TSN: 502001

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 5,300–14,330 ft. (1,615–4,370 m)

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, fine, long hairs visible along rachilla
- ◆ 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



Max Lohr

Cindy Talbot-Roché



Similar Species: *Vahlodea atropurpurea* [FACW] (= *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.

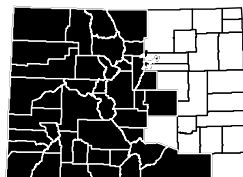
Habitat and Ecology: Common. Grows in wetlands to grassy openings from foothills to alpine.

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.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Distichlis spicata (L.) Greene

Saltgrass

Poaceae

Steve Matson



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

USDA PLANTS Symbol: DISP

ITIS TSN: 40662

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,400–10,300 ft. (1,035–3,140 m)

Key Characteristics:

- ◆ Cespitose; culms erect to ascending, strongly rhizomatous, 1–5 dm tall, strongly compressed, dioecious
- ◆ Leaf sheath open, margin and throat 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 strongly compressed, 5- to 8-flowered, disarticulation above the glumes
- ◆ Glumes unequal, lower 1-nerved; lemma 3-nerved, glabrous, keeled, 2.4–4 mm long

Steve Matson



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *D. spicata* is very distinctive with the rhizomatous growth habit, compressed spikelets and hairy collar. The genus name refers to the Latin *distichus* or *distichous* meaning arranged in two opposite rows.

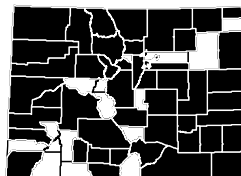
Habitat and Ecology: Commonly found along roadsides, playas, seeps, springs and mineral soil flats on both Eastern and Western Slopes.

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.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Echinochloa crus-galli (L.) P. Beauv.

Barnyardgrass

Poaceae

Luigi Riganese



Synonyms: None

USDA PLANTS Symbol: ECCR

ITIS TSN: 502210

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

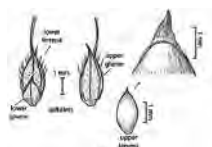
Duration: Annual

CO Elevation: 3,650–8,300 ft. (1,115–2,530 m)

Key Characteristics:

- ◆ Cespitose; culms decumbent to erect, 0.3–2 m tall, usually reddish at bases
- ◆ Leaf sheaths open; ligules absent; blades 6–65 cm long x 5–35 mm wide, generally glabrous
- ◆ Inflorescence an erect to nodding, one-sided panicle of 5–12 spike-like branches, spreading
- ◆ Spikelets with 1 well-developed floret (1 fertile and 1 sterile), crowded, oval, turgid

- ◆ Fertile lemmas rounded, 3-nerved, broad, apices acuminate to awned

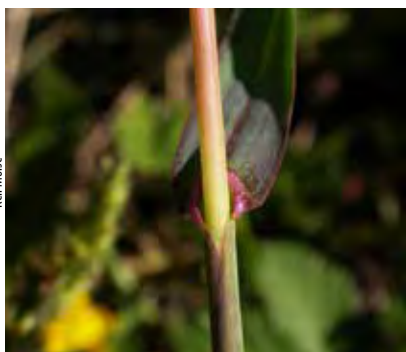


Linda A. Vorobik and Hana Pazdírková



Grasses

Keri More



Similar Species: *E. muricata* [FACW] closely resembles *E. crus-galli*. The upper lemmas are acute, not rounded, and the leathery apices extend into a membranous tips without hairs. However, these characters are difficult to discern and many taxonomists believe that the two species are not distinct.

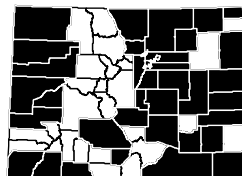
Habitat and Ecology: Commonly found along roadsides, disturbed sites, ditches, pastures and barnyards that retain runoff from low elevations to foothills.

Comments: *E. crus-galli* is grazed by livestock and wildlife. Seeds are eaten by songbirds, waterfowl, and upland game birds. It also provides cover and nesting materials for waterfowl.

Animal and Bird Use:



References: Barkworth et al. 2007, Matt Lavin personal communication, Shaw 2008, Smeins 1971, Weber and Wittmann 2012, Wingate 1994



Echinochloa muricata (P. Beauv.) Fernald

Rough barnyardgrass

Poaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: ECMU2

ITIS TSN: 40672

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 4,000–7,550 ft. (1,220–2,300 m)

Key Characteristics:

- ◆ Cespitose to spreading; culms spreading to erect, 0.3–2 m long, nodes glabrous
- ◆ Leaf sheaths open; ligules none; blades 1–27 cm long, glabrous
- ◆ Inflorescence an erect to nodding panicle of spike-like branches, generally spreading
- ◆ Spikelets 2-flowered, purple, rough, stiff hairs; upper glumes 3-nerved, lower 5-nerved
- ◆ Fertile lemmas leathery with acute leathery, membranous tips, hairs absent

Steve Matton



Louis M. Landry



Similar Species: *E. crus-galli* [FACW, FAC] upper lemmas are rounded with leathery tips that end in a line of minute hairs, which are absent on *E. muricata*. These characters are not that clear cut and it is likely that these two species are not distinct.

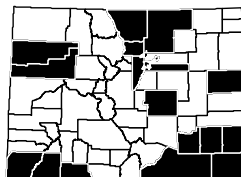
Habitat and Ecology: Found growing in moist, generally disturbed sites in Colorado.

Comments: Warm season grass common to the southern United States. It is a colonizer of disturbed wet areas, especially around irrigation ditches and culverts. Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012





Louis M. Landry

Synonyms: None
USDA PLANTS Symbol: ELV13
ITIS TSN: 40681
Wetland Status AW: FACW WM: FACW GP: FAC
Native Status: Native
Conservation Status: G5 SNR
C-Value: 5
Duration: Perennial
CO Elevation: 6,230–11,800 ft. (1,900–3,595 m)

Key Characteristics:

- ◆ Cespitose; culms erect, 3–15 dm tall, glaucous
- ◆ Leaf sheaths glaucous; auricles well-developed; ligules ciliate; blades flat, lax, scabrous
- ◆ Inflorescence an erect spike, 4–17 cm long; spikelets strongly imbricate
- ◆ Spikelets 2 per node, 3- to 5-flowered; glumes linear, bowed out, yellowish, awn-tipped

- ◆ Lemmas glabrous to minutely hairy, 6–10 mm long, 5-nerved, awn-tipped to long-awned



Louis M. Landry



Cindy Talbot Roché

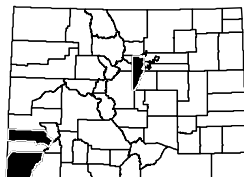
Similar Species: *E. glaucus* [ELGL, FACU, ITIS 40684] glumes do not get as thick, divergent, or as bony-textured as they do in *E. virginicus*. *E. lanceolatus* [ELLA3, UPL, ITIS 502267] is rhizomatous and the lemmas are pubescent. *E. canadensis* [ELCA4, FAC, ITIS 40683] has longer lemmas, divergent awns (15–30 mm long) and the spikes are typically nodding.

Habitat and Ecology: Infrequent. Scattered occurrences from southwestern Colorado to the Front Range.

Comments: *E. virginicus* is a very palatable and nutritious grass for wildlife, livestock, small mammals, waterfowl and songbirds.

Animal and Bird Use: 

References: Barkworth et al. 2007, Matt Lavin personal communication, Shaw 2008, Weber and Wittmann 2012



Eragrostis hypnoides (Lam.) Britton, Sterns & Poggenb.

Teal lovegrass

Poaceae

Dean Wm. Taylor



Synonyms: None

USDA PLANTS Symbol: ERHY

ITIS TSN: 40721

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

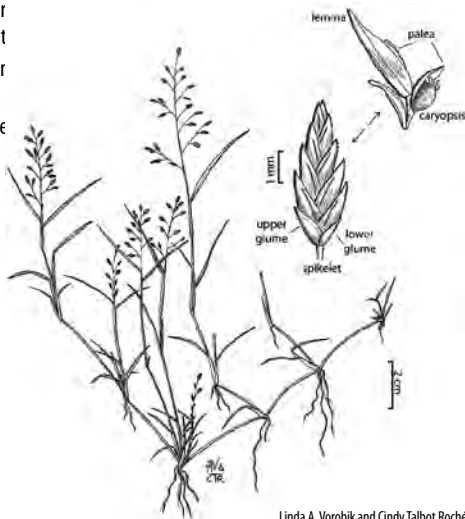
CO Elevation: 5,000–7,300 ft. (1,525–2,225 m)

Key Characteristics:

- ◆ Tufted to stoloniferous, mat-forming; culms decumbent to prostrate, rarely erect, rooting at nodes
- ◆ Sheaths hairy; ligule 0.3–0.6 mm, a ring of hair blades flat to involute, upper surface pubescent
- ◆ Inflorescence a contracted-open panicle, terminal and axillary; branches ascending to spreading
- ◆ Spikelets compressed, linear-oblong, sometime curving, 7- to 35-flowered
- ◆ Glumes, lemmas and seeds early deciduous, while paleas persistent on rachises



Steve Matson



Linda A. Vorobik and Cindy Talbot Roche

Similar Species: *E. hypnoides* is the only lovegrass that is mat-forming, often rooting at the nodes, that grows in wetlands.

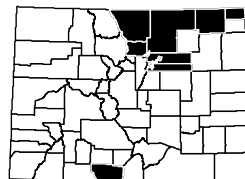
Habitat and Ecology: Uncommon, found on sandy edges of streams, lakes or ponds mainly in northeastern Colorado.

Comments: An unusual grass that is both stoloniferous and an annual. Global range extends throughout North America, but considered non-native in Colorado by Weber and Wittmann (2012). Wyoming considers it as state critically imperiled (S1). Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Grasses

Glyceria borealis (Nash) Batchelder

Small floating mannagrass

Poaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: GLBO

ITIS TSN: 40841

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

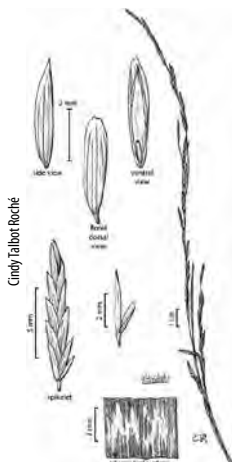
CO Elevation: 5,000–12,210 ft. (1,525–3,720 m)

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
- ◆ Spikelets 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 scaberrulous



Steve Matson



Similar Species: The main characters to look for with mannagrasses are the closed leaf sheaths and parallel nerves on the lemmas. *G. borealis* is distinguished from other mannagrasses by its narrow panicle and many-flowered-spikelets.

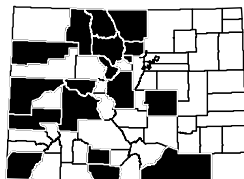
Habitat and Ecology: Grows along margins of ponds or lakes, sometimes in shallow waters from the foothills to the subalpine.

Comments: Global range from Alaska to Arizona and New Mexico east to Newfoundland and northeastern United States. Considered state imperiled (S2) in Wyoming. Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Western Wetland Flora 1992, Wingate 1994



Glyceria grandis S. Watson

American mannagrass

Poaceae

Dean Wm. Taylor



Synonyms: None

USDA PLANTS Symbol: GLGR

ITIS TSN: 502812

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,200–9,600 ft. (1,585–2,925 m)

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 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



Louis M. Landry



Similar Species: *G. grandis* is the tallest mannagrass that occurs in Colorado with culms over 1 m tall. *G. grandis* is often confused with *Torreyochloa pallida* [OBL]. *T. pallida* has open leaf sheaths and 7–9 nerves on lemmas. The main characters to look for with mannagrasses are the closed leaf sheaths and parallel nerves on the lemmas.

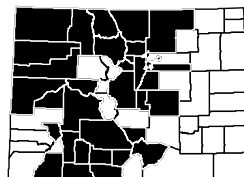
Habitat and Ecology: Occurs in wet and moist areas along streams, lakes and irrigation ditches.

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 (S1) and the east coast states. Wyoming considers it state vulnerable (S3).

Animal and Bird Use:



References: Barkworth et al. 2007, Batt et al. 1992, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Glyceria striata (Lam.) Hitchc.

Fowl mannagrass

Poaceae

Matt Lavin



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

USDA PLANTS Symbol: GLST

ITIS TSN: 40833

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,000–11,190 ft. (1,525–3,410 m)

Key Characteristics:

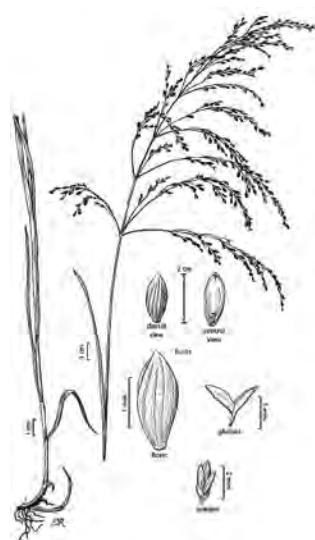
- ◆ Rhizomatous; culms slender, erect to decumbent, 2–10 (13) dm tall, often rooting at nodes
- ◆ Sheaths closed; ligules membranous, 1–3 mm long; blades flat to folded, 5–30 cm long x 2–6 mm wide
- ◆ Inflorescence a lax, open panicle, drooping at maturity, 5–20 cm long
- ◆ Spikelets 3- to 7-flowered, ovate to oblong, laterally compressed, purplish, 2.5–4 mm long
- ◆ Glumes purple-tinged, 1-nerved; lemmas 1.5–2.5 mm long, prominently 7-nerved, obtuse to oblong

Grasses

Matt Lavin



Cindy Talbot Roche



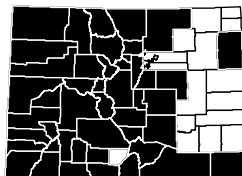
Similar Species: *G. grandis* [OBL] has wider leaf blades (6–12 mm wide) and is taller (up to 1.5 m) than *G. striata*. The main characters to look for with mannagrasses are the closed leaf sheaths and parallel nerves on the lemmas.

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.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Hierochloë hirta (Schrank) Borbás ssp. *arctica* (J. Presl) G. Weim.

Northern sweetgrass

Poaceae

Denise Culver



Synonyms: *Anthoxanthum hirtum* (Schrank) Y. Schouten & Veldkamp ssp. *arcticum* (J. Presl) G. Tucker, *Hierochloë odorata* (L.) P. Beauv. ssp. *arctica* (J. Presl) Tzvelev

USDA PLANTS Symbol: HIHIA

ITIS TSN: 40861

Wetland Status AW: FAC WM: FACU GP: FAC

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 9

Duration: Perennial

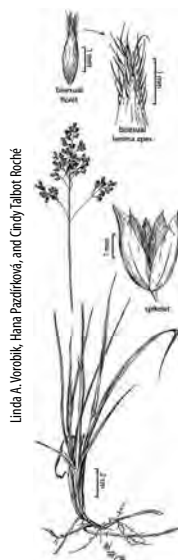
CO Elevation: 6,900–13,000 ft. (2,105–3,960 m)

Key Characteristics:

- ◆ Rhizomatous, slender, creeping rhizomes; culms 1.5–6 dm tall, erect, glabrous
- ◆ Sheaths glabrous to puberulent; ligules 2–4 mm long; blades 2–6 mm wide, mostly basal, flat
- ◆ Inflorescence a panicle, open, pyramidal, 4–15 cm long
- ◆ Spikelets 3-flowered, 4–6 mm long, broadly ovate, shiny, golden brown
- ◆ Glumes shiny, 3–5 mm long, 1-nerved; lemmas 3–5 mm long, ovate, shiny, pubescent on margins



Steve Matson



Linda A. Voroshik, Hana Pazdřiková, and Cindy Talbot Roche

Similar Species: *H. hirta* ssp. *arctica* is very distinct with the open panicle and 3-flowered, shiny, golden brown spikelets.

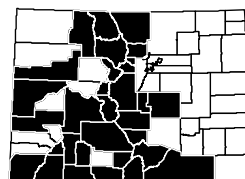
Habitat and Ecology: Infrequently found within moist areas along wet meadows, fens and riparian areas.

Comments: Northern sweetgrass, when dried, is known for its vanilla smell. The fragrance comes from the presence of coumarin, which is an anticoagulant and is the active ingredient in the drug coumadin, a blood thinner. *H. hirta* ssp. *arctica* is also used as incense and fragrance by Native Americans.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Hordeum brachyantherum Nevski

Meadow barley

Poaceae

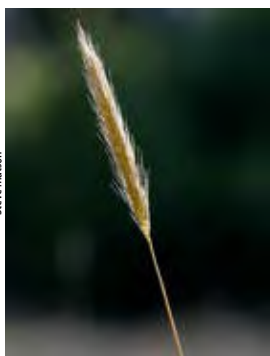
Matt Lavin



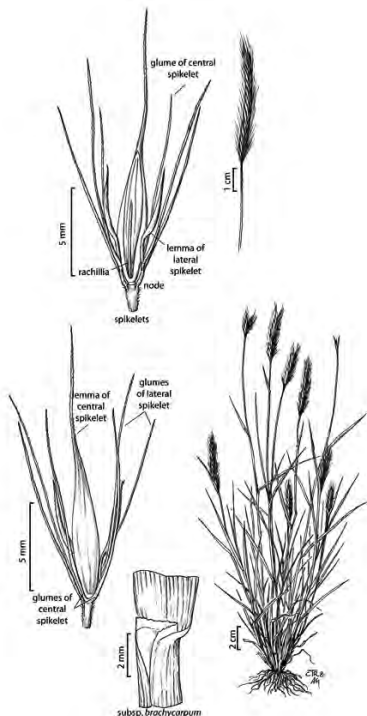
Key Characteristics:

- ◆ 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
- ◆ Spikelets 3 per node, 3–9 mm long, central spikelet perfect and sessile; lateral spikelets much reduced
- ◆ Glumes all similar, awn-like; lemmas of central florets tapering to awns less than 2 cm long

Steve Matson



Synonyms: *Critesion brachyantherum* (Nevski) Barkworth & Dewey
USDA PLANTS Symbol: HOBR2
ITIS TSN: 40875
Wetland Status AW: FACW WM: FACW GP: FAC
Native Status: Native
Conservation Status: G5 SNR
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 5,000–12,010 ft. (1,525–3,660 m)



Cindy Talbot Roché and Annaliese Miller

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

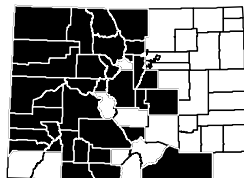
Habitat and Ecology: Commonly occurs in wet areas along streams, seeps, springs and irrigated fields in central and western Colorado. Weber and Wittmann (2012) consider it non-native to Colorado.

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

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Hordeum jubatum L. Foxtail barley

Poaceae

Steve Olson



Synonyms: *Critesion jubatum* (L.) Nevski
USDA PLANTS Symbol: HOJU
ITIS TSN: 40871
Wetland Status AW: FAC WM: FAC GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 2
Duration: Perennial
CO Elevation: 3,730–11,400 ft. (1,135–3,475 m)

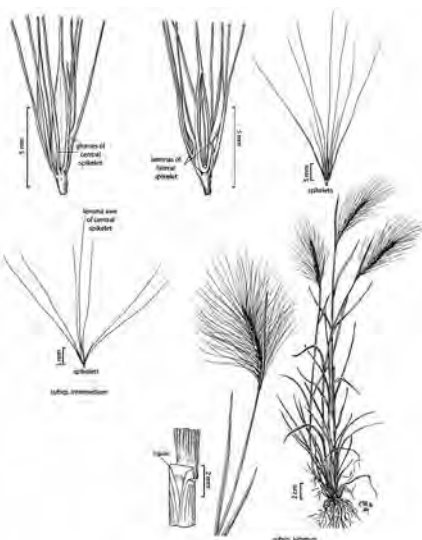
Key Characteristics:

- ◆ Cespitose; culms erect to decumbent, 2–8 dm tall, slender, soft-pubescent to glabrous
- ◆ Sheaths open; ligules ciliate membranes; blades 5–15 cm long x 2–5 mm wide, scabrous to hirsute
- ◆ Inflorescence a nodding, broad spike at maturity, 4–15 cm long (excluding awns) x 4–6 cm wide
- ◆ Spikelets 3 per node, central spikelet perfect and sessile, lateral spikelets much reduced
- ◆ Glumes of central spikelet 35–85 mm long; lemma awns of central spikelet 35–90 mm long

Steve Matson



Grady Talbot, Roché and Annaliese Miller



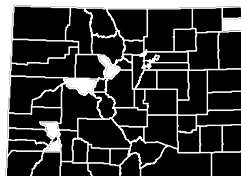
Similar Species: Shaw (2008) recognizes *H. jubatum* ssp. *intermedium* [HOJU1, FAC, FACW, ITIS 524157]. *H. jubatum* ssp. *intermedium* central spikelet glumes are 15–35 mm long and the lemma awns of the central spikelet are 11–25 mm long.

Habitat and Ecology: Common in wet areas from plains to subalpine.

Comments: Used as a forage by large animals, but after flowering awns can cause sores in mouth and often work into skin of sheep and paws of dogs. It is salt tolerant and prevails in disturbed meadows.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Grasses

Leersia oryzoides (L.) Sw. Rice cutgrass

Poaceae

Keir Morse

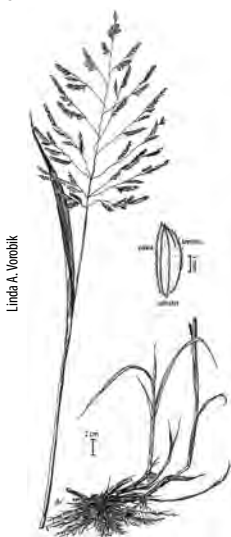


Synonyms: None
USDA PLANTS Symbol: LEOR
ITIS TSN: 40886
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 3,680–6,300 ft. (1,120–1,920 m)

Key Characteristics:

- ◆ Rhizomatous; culms weakly decumbent, 5–15 dm tall, simple to branched above, nodes pubescent
- ◆ Sheaths open, glabrous to scabrous; ligules firm, minutely erose-ciliate; blade surfaces abrasive
- ◆ Inflorescence an open panicle, 10–20 cm long, nodding to erect, cleistogamous (self-fertilizing)
- ◆ Spikelets 1-flowered, 1.5–2 mm long, on axillary panicles often enclosed in sheaths
- ◆ Glumes lacking; lemmas strongly compressed, keels and marginal nerves stiffly-ciliate, 4–5 mm long

Matt Lavin



Similar Species: None.

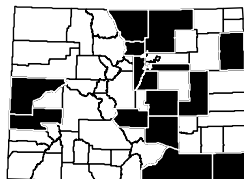
Habitat and Ecology: Grows in wet areas along irrigation ditches, streams and in standing water. Considered non-native by Weber and Wittmann (2012) and Wingate (1994).

Comments: *L. oryzoides* seeds are an important food source for waterfowl, small mammals and shorebirds. Ducks will pull up and consume underground rhizomes. The forage produced is highly palatable. Caution is advised when handling, the sharp leaves can cut skin and tear clothing. Considered state imperiled (S2) in Utah, Wyoming and Montana.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, USDA NRCS 2004, Weber and Wittmann 2012, Wingate 1994



Leptochloa fusca (L.) Kunth ssp. *fascicularis* (Lam.) N. Snow

Bearded sprangletop Poaceae

Tom Cochran

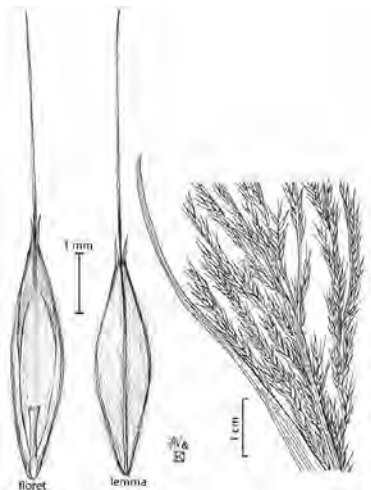


Synonyms: *Diplachne fascicularis* (Lam.) P. Beauv.
USDA PLANTS Symbol: LEFUF
ITIS TSN: 566046
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 4
Duration: Annual
CO Elevation: 3,500–6,800 ft. (1,065–2,075 m)

Key Characteristics:

- ◆ Cespitose, 1–4 (7) dm tall; culms compressed, erect to prostrate, often branching above bases
- ◆ Sheaths strongly keeled; ligules membranous; blades involute, 3–50 cm long x 2–7 mm wide
- ◆ Inflorescence an open panicle, partially enclosed in upper sheath, 3–35 branches spreading
- ◆ Spikelets 5–12 mm long, 5- to 9-flowered; glumes 1-nerved, lower 2–3 mm long; upper 2.5–5 mm long
- ◆ Lemma bases hairy, lanceolate to elliptic, 3-nerved, central nerves protruding as short awns

Tom Cochran



Linda A. Vorobik and Karen Klitz

Similar Species: *L. dubia* [LEDU, NI, ITIS 41822] is the other sprangletop that occurs in Colorado. The lemma apices are obtuse, notched often awnless and it is found in much drier areas.

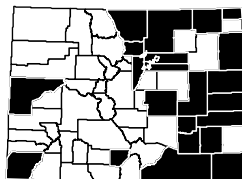
Habitat and Ecology: Grows at low elevations along muddy and sandy shores of ponds and oxbows.

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

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Western Wetland Flora 1992, Wingate 1994



Muhlenbergia asperifolia (Nees & Meyen ex Trin.) Parodi

Scratchgrass

Poaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: MUAS

ITIS TSN: 41899

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,400–11,310 ft. (1,035–3,445 m)

Key Characteristics:

- ◆ Rhizomatous; culms 1–6 dm tall, spreading, branching at bases, pale to glaucous
- ◆ Sheaths overlapping, margins hyaline; ligules erose-ciliate; blades 2–7 cm long x 1–2.8 mm wide
- ◆ Inflorescence a diffuse panicle, breaking away at maturity; branches capillary; pedicels 3–14 mm
- ◆ Spikelets 1- to 3-tiny flowered, purple; glumes purplish, puberulent-scarious on keels
- ◆ Lemmas thin, 3-nerved, 1.2–2 mm long, apices acute to mucronate; paleas as long as lemma

Matt Lavin



Linda A. Vorobik and Annaliese Miller



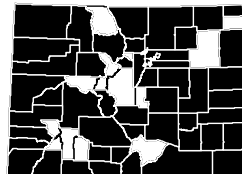
Similar Species: *M. torreyi* [MUTO2, NI, ITIS 503886] also has an open, diffuse panicle but the leaf blade margins and nerves are white and it is typically found in sandy soils. *M. asperifolia* can also be mistaken for *Sporobolus* spp., which have hairy ligules or *Agrostis* spp. whose lemmas have more than 3 nerves and no awns.

Habitat and Ecology: Common. Occurs along margins of playas, ponds, alkaline meadows and roadside ditches at low elevations.

Comments: Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



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

Pullup muhly

Poaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: MUF12

ITIS TSN: 41912

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Annual

CO Elevation: 5,860–12,000 ft. (1,785–3,660 m)

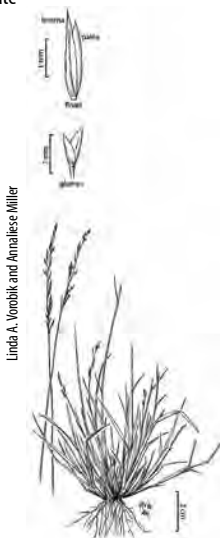
Key Characteristics:

- ◆ Tufted; culms erect to geniculate, 5–20 cm 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
- ◆ 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



Steve Matson



Linda A. Vorobik and Annalese Miller

Similar Species: *M. richardsonis* [MURI, FACU, ITIS 41938] looks similar, but it is rhizomatous with culms that are minutely bumpy and often decumbent at bases. *M. brevis* [MUBR2, NI, ITIS 41900] is a closely related annual. It differs by having a long-awned lemma, 10–20 mm and a bifid first glume.

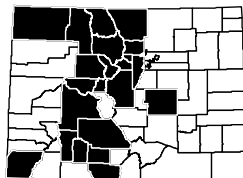
Habitat and Ecology: Found in wet areas along streams, fens and ponds in subalpine zone.

Comments: Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials. Considered state critically imperiled (S1) in North Dakota, state imperiled (S2) in Montana and state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Muhlenbergia glomerata (Willd.) Trin.

Spiked muhly

Poaceae

Louis M. Landry



Synonyms: *Muhlenbergia racemosa* (Michx.) Britton, Sterns & Poggenb. var. *cinnoides* (Link) B. Boivin

USDA PLANTS Symbol: MUGL3

ITIS TSN: 41918

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S2

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,000–5,000 ft. (1,220–1,525 m)

Key Characteristics:

- ◆ Rhizomatous with creeping, scaly rhizomes; culms slender, terete, not keeled, internodes dull
- ◆ Sheaths slightly keeled; ligules erose-ciliate, membranous; blades 2–15 cm long x 2–6 mm wide
- ◆ Inflorescence a spike-like panicle; spikelets dense clustered on panicle branches; pedicels 0–1.2 mm
- ◆ Spikelets 1-flowered, disarticulation above glume glumes subequal, 3–8 mm long

- ◆ Lemmas lanceolate with acuminate apices, 1.9–3.1 mm long, calluses pubescent, awn tips to 1 mm

Grasses

Louis M. Landry



Hitchcock 1950



Similar Species: *M. glomerata* is often confused with *M. racemosa* [FACW]. *M. racemosa* has strongly keeled culm internodes that are smooth and polished. Weber and Wittmann (2012) state that reports of *M. glomerata* in Colorado are misidentifications of *M. racemosa*.

Habitat and Ecology: Uncommon. Found in wet meadows, fens, along streams and ponds.

Comments: Considered state imperiled (S2) in Wyoming. Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use: 

References: Shaw 2008, Skinner 2010, Weber and Wittmann 2012



Muhlenbergia mexicana (L.) Trin.

Mexican muhly

Poaceae

Steve Matson



Synonyms: *Muhlenbergia mexicana* (L.) Trin. var. *filiformis* (Willd.) Scribn.

USDA PLANTS Symbol: MUME2

ITIS TSN: 41925

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,000–6,500 ft. (1,525–1,980 m)

Key Characteristics:

- ◆ Rhizomatous from creeping, scaly, rhizomes; culms much branched above bases, 3–9 dm tall
- ◆ Sheaths smooth to scabrous, keeled; ligules membranous; blades flat, lax, 2–20 cm long x 2–6 mm wide
- ◆ Inflorescence a narrow panicle, terminal and axillary; spikelets 1-flowered
- ◆ Glumes 1.5–3.8 mm long, 1-nerved, tapering to acuminate apices, keels scabrous
- ◆ Lemmas short-hairy, lanceolate, barely exceeding glumes, 3-nerved, lemma awned or awnless

Steve Matson



Linda A. Vorobik and Annaliese Miller



Similar Species: *M. thurberi* [MUTH, NI, ITIS 41944] also has hairy lemmas, but the hairs are long and soft and on the lower half of the lemmas.

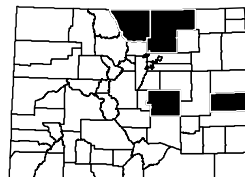
Habitat and Ecology: Found in moist shrublands and wet meadows.

Comments: Known from historical records, but is expected to be in Colorado. Shaw (2008) recognizes *M. mexicana* var. *filiformis* [MUMEF] separate from *M. mexicana* var. *mexicana*. Considered state critically imperiled (S1) in Utah and Wyoming. When present in adequate quantities, provides food for waterfowl, large and small mammals.

Animal and Bird Use:



References: Barkworth et al. 2007, Harrington 1964, Shaw 2008, Weber and Wittmann 2012



Muhlenbergia racemosa (Michx.) Britton, Sterns & Poggenb.

Marsh muhly Poaceae

Steve Olson

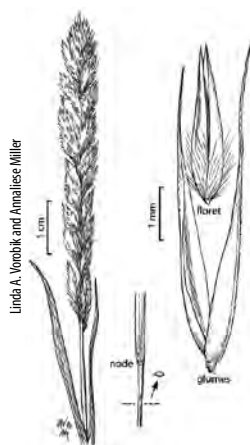


Key Characteristics:

- ◆ Rhizomatous; culms erect, 3–11 dm tall, stiff, strongly keeled, smooth
- ◆ Sheaths slightly keeled; ligules membranous, erose-ciliate; blades flat, 2–17 cm long x 2–5 mm wide
- ◆ Inflorescence a narrow, spike-like panicle, 0.8–16 cm long, dense clusters of spikelets
- ◆ Spikelets 1-flowered, sessile; glumes 1-nerved, 3–8 mm long including the awn, usually exceeding lemma
- ◆ Lemmas 2.2–3.8 mm long, 3-nerved, pilose on lower half, calluses short-bearded; paleas pilose on keels



John Hilly



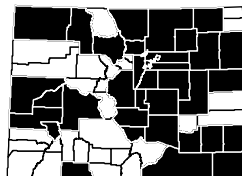
Similar Species: *M. thurberi* [MUTH, UPL, ITIS 41944] has narrower leaf blades (1–1.2 mm wide) and the lemmas are longer than glumes. *M. glomerata* [FACW] has culm internodes that are dull, puberulent, terete and is not as branched from the bases as they are in *M. racemosa*.

Habitat and Ecology: Found throughout Colorado in sagebrush shrublands, aspen forests, in seasonally wet meadows, and along streambanks to drier rocky areas.

Comments: Large herbivores, small mammals, waterfowl and songbirds depend on grasses for food and nesting materials. Considered state vulnerable (S3) in Wyoming and Montana.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Panicum dichotomiflorum Michx.

Fall panicgrass

Poaceae

Don Tate



Synonyms: None

USDA PLANTS Symbol: PADI

ITIS TSN: 40908

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,100–6,100 ft. (1,555–1,860 m)

Key Characteristics:

- ◆ Tufted, terrestrial sometimes aquatic; culms rooting at nodes when in water, succulent
- ◆ Sheaths glabrous, compressed; ligules hairy on a membranous base; blades flat, midribs obviously white
- ◆ Inflorescence a diffuse panicle, 4–40 cm long, often included in upper sheath, spreading to ascending
- ◆ Spikelets 2-flowered, lower florets sterile, upper florets fertile, narrowly elliptic, smooth, shiny
- ◆ First glumes short, 1/3 as long as spikelet, obtuse; fertile lemmas 1.8–2.3 mm long

Don Tate



Similar Species: Only annual panicgrass that grows in Colorado with a glabrous sheath. Commonly has culms that trail up to 1 m or more in length.

Habitat and Ecology: Uncommon. Grows in wet areas around ponds and lakes. Documented from Front Range. Native to eastern North America, but considered adventive in Colorado by Weber and Wittmann (2012).

Comments: When present in adequate quantities, provides food for waterfowl and small mammals.

Animal and Bird Use:



References: Barkworth et al. 2007, Newman 2006, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Panicum virgatum L.

Switchgrass

Poaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: PAV12

ITIS TSN: 40913

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,250–8,300 ft. (990–2,530 m)

Key Characteristics:

- ◆ Solitary to clumped, rhizomatous, forming dense stands; culms decumbent to erect, 0.4–3 m tall
- ◆ Sheath margins ciliate; ligules ciliate membranes; blades flat, hairs present at leaf bases
- ◆ Inflorescence an open panicle; branches ascending to spreading, solitary, paired or whorled
- ◆ Spikelets 2-flowered (look for sterile lemma); glabrous, 2.5–8 mm long, 1.2–2.5 mm wide; glumes unequal

- ◆ Fertile lemma indurate, shiny, clasping paleas at bases



Hildreth 1950

Grasses

Pam Smith



Similar Species: *Sporobolus airoides* [SPAI, FAC, ITIS 42128] from a distance looks like *P. virgatum*. *S. airoides* has a ring of hairs on the ligule, spikelets are 1-flowered and it is densely tufted. *P. virgatum* is 2-flowered, one fertile and one sterile, and disarticulates below the glumes.

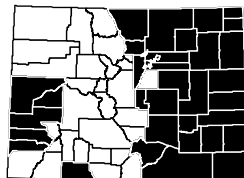
Habitat and Ecology: Commonly found on the plains and in the foothills of Eastern Colorado and the canyon bottoms on the Western Slope. It occupies areas where moisture accumulates, e.g., roadsides and ditches.

Comments: *P. virgatum* is a tallgrass prairie species that provides high quality hay for livestock and white-tailed deer. It provides nesting and cover and food for game birds, songbirds and rabbits. Considered state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use:



References: Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Phalaris arundinacea L.

Reed canarygrass

Poaceae

Matt Lavin



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

USDA PLANTS Symbol: PHAR3

ITIS TSN: 41335

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native, Non-native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,500–10,000 ft. (1,370–3,050 m)

Key Characteristics:

- ◆ Creeping rhizomes; culms 5–10 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

Louis M. Landry



Linda A. Vorobik and Hana Pazdíková



Similar Species: *Calamagrostis canadensis* [FACW] 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* [FACW] can look like *P. arundinacea*, but it has a ligule with a ciliate membrane.

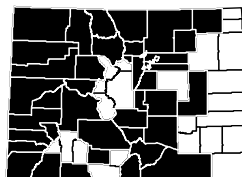
Habitat and Ecology: Common along irrigation ditches and rivers. Considered adventive in Colorado and Montana.

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.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Grasses

Phalaris caroliniana Walter

Carolina canarygrass

Poaceae

Sam Strickland



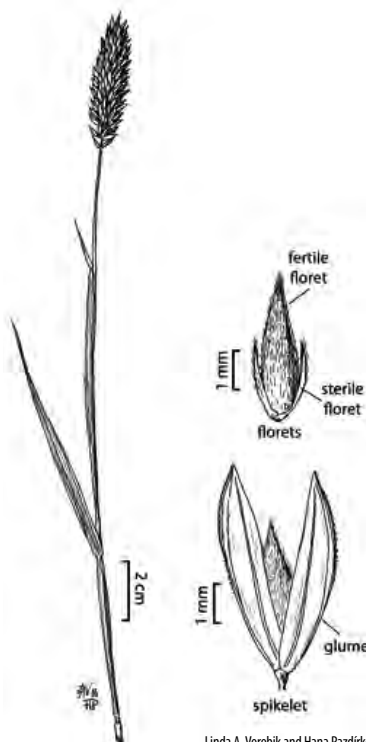
Synonyms: None
USDA PLANTS Symbol: PHCA6
ITIS TSN: 41343
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5? SNR
C-Value: Not Assigned
Duration: Annual
CO Elevation: 4,350–5,000 ft. (1,325–1,525 m)

Key Characteristics:

- ◆ Tufted; culms 2.5–6 dm tall, erect or decumbent
- ◆ Sheaths glabrous, upper ones inflated; ligules 2–6 mm long; blades 2–10 mm wide x 5–20 cm long
- ◆ Inflorescence a panicle, dense, spike-like, 2–6 cm long; spikelets 3-flowered (1 fertile, 2 sterile)
- ◆ Glumes 4–6 mm long, prominently 3-nerved, keels wingless
- ◆ Fertile lemma 3–4 mm long, appressed pubescent; sterile lemma 1.2–1.7 mm long, subulate, pubescent

Grasses

Bob Harms



Linda A. Vorobik and Hana Pazdírková

Similar Species: *P. minor* [PHM13, UPL, ITIS 41337] and *P. canariensis* [PHCA5, UPL, ITIS 41336] occur in similar habitats, but have winged glumes.

Habitat and Ecology: Uncommon, known from few disturbed sites within marshy areas and lawns in the south-eastern portion of the state.

Comments: Although considered native to the United States, many authors believe it to be non-native in Colorado and likely introduced from bird seed mixtures.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012



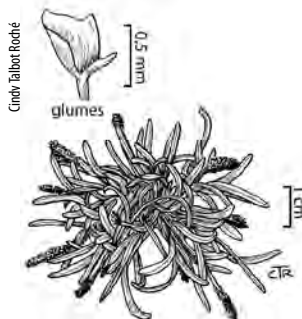
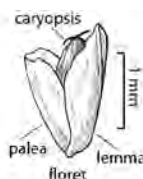
Björn Erik Sandbakk



Synonyms: None
USDA PLANTS Symbol: PHAL
ITIS TSN: 41059
Wetland Status AW: OBL WM: OBL GP: NI
Native Status: Native
Conservation Status: G5 S2
C-Value: 9
Duration: Perennial
CO Elevation: 11,700–13,790 ft. (3,565–4,205 m)

Key Characteristics:

- ◆ Densely tufted; culms less than 10 cm tall, somewhat succulent, glabrous
- ◆ Sheaths loose, closed, glabrous; ligules 0.3–1.6 mm long, acute; blades 0.6–2.8 cm long x 1.2–3 mm wide
- ◆ Inflorescence a panicle, narrow, 0.5–3.5 cm long; branches short, bearing few spikelets
- ◆ Spikelets 1-flowered, 1.4–1.8 mm long; glumes generally colorless if present
- ◆ Lemmas 1.3–1.8 mm long, keeled, apices minutely denticulate, broadly ovate; paleas 1.1–1.3 mm long



Matt Lavin



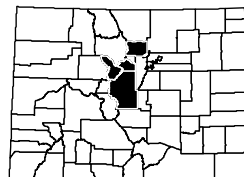
Similar Species: *Poa alpina* [FAC] and *Poa arctica* [FACW] occur in similar habitats, however they have several florets per spikelet with pubescent lemmas.

Habitat and Ecology: Rare, found along snowmelt streamlets in alpine zone.

Comments: *P. algida* is a circumpolar species that grows at high elevations in the Rocky Mountains. It is one of the first grasses to flower in the high arctic, which may contribute to its success as an early colonizer of disturbed areas. Considered state critically imperiled (S1) in Wyoming and state imperiled (S2) in Montana as well as Colorado. Provides food and nesting material for small mammals, e.g., pika and songbirds.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Phragmites australis (Cav.) Trin. ex Steud.

Common reed

Poaceae

Matt Lavin



Synonyms: *Phragmites communis* Trin.

USDA PLANTS Symbol: PHAU7

ITIS TSN: 41072

Wetland Status AW: FACW WM: FACW GP: FACW

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

Conservation Status: G5 SNR

C-Value: 0

Duration: Perennial

CO Elevation: 3,500–8,900 ft. (1,065–2,715 m)

Key Characteristics:

- ◆ Rhizomatous with stout, creeping rhizomes; culms erect, 2–6 m tall, glabrous
- ◆ Sheaths open, margins hyaline; ligules ciliate to 1 mm long; blades flat, 15–40 cm long x 2–4 cm wide
- ◆ Inflorescence a dense panicle, 15–35 cm long, often purplish, straw-colored with age; rachilla hairy
- ◆ Spikelets 3- to 10-flowered; glumes thin, lanceolate, lower 3–7 mm long, upper 5–10 mm long
- ◆ Lemma tips long-acuminate and appearing like awns, margins slightly in-rolled

Grasses

Matt Lavin



Linda A. Vorobik and Hana Pazdicková



Similar Species: Recent data indicate that there are 2 subspecies of *P. australis*: *P. australis* ssp. *americanus* (native) and *P. australis* ssp. *australis* (non-native). The native subspecies has a shiny red stem color, leaves that fall off easily, leaf color is green and lower glumes are 4–7 mm long. The non-native subspecies has a dull tan stem color, leaves that persist, leaf color that is bluish-green and lower glumes that are 2.6–4.2 mm long.

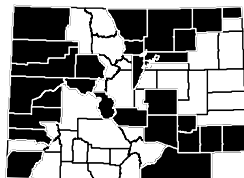
Habitat and Ecology: Grows in moist or wet areas along irrigation ditches and rivers.

Comments: The native range of *P. australis* is unclear. Regardless of its origin, it is readily eaten by cattle and horses when young. It offers excellent cover for wildlife and waterfowl along lake shores and marshes.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Poa arctica R. Br.

Arctic bluegrass

Poaceae

USDA-NRCS PLANTS Database Britton & Brown 1913



Synonyms: None

USDA PLANTS Symbol: POAR2

ITIS TSN: 41077

Wetland Status AW: FACU WM: FACU GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

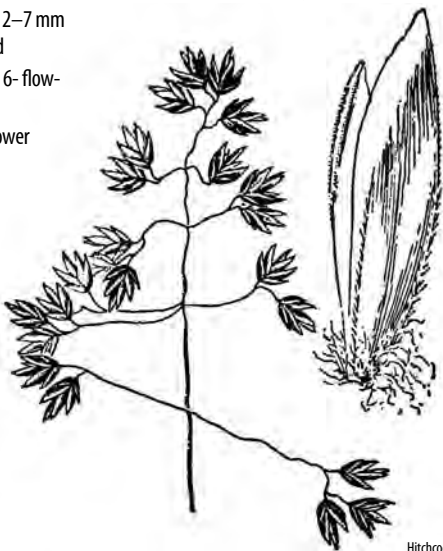
Duration: Perennial

CO Elevation: 8,550–14,430 ft. (2,605–4,400 m)

Key Characteristics:

- ◆ Solitary or loosely tufted from rhizomes; culms 1–3 dm tall, erect or decumbent
- ◆ Lemmas 3–6 mm long, keels and marginal nerves pubescent; calluses cobwebby
- ◆ Sheaths glabrous to short-pubescent; ligules 2–7 mm long, obtuse; blades keeled, tips boat-shaped
- ◆ Inflorescence an open panicle; spikelets 3- to 6-flowered, mostly purplish, laterally compressed
- ◆ Glumes lanceolate, purplish toward apices, lower 2.5–5 mm long, upper 3–5.5 mm long

Intermountain Herbarium Utah State University



Hitchcock 1950

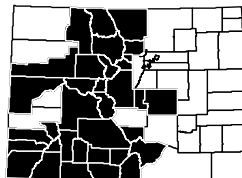
Similar Species: Three subspecies of *P. arctica* occur in Colorado: 1. Ligules 3–7 mm long; panicle branches up to ½ as long as panicle.ssp. *aperta* [POARA, ITIS 524538]. 2. Ligules 3–7 mm long; panicle branches up to 2/5 as long as panicle.ssp. *grayana* [POARG, ITIS 524539]. 3. Ligules 2–4 mm long.ssp. *arctica* [POAR2].

Habitat and Ecology: Grows mostly above timberline in alpine wet meadows.

Comments: Short bluegrasses as well as sedges and fescues are a major diet component for pikas in the alpine. *P. arctica* is widespread throughout northern North America along major mountain ranges. Considered state imperiled (S2) in Montana.

Animal and Bird Use: 

References: Roach et al. 2001, Shaw 2008, Weber and Wittmann 2012, Wingate 1994

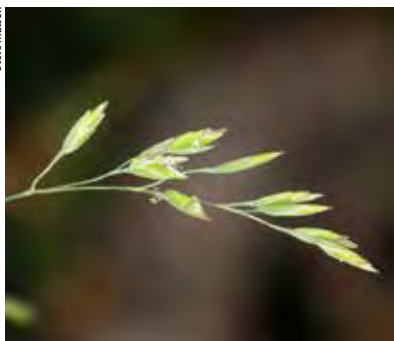


Poa leptocoma Trin.

Marsh bluegrass

Poaceae

Steve Mattson



Key Characteristics:

- ◆ Culms solitary or few, 2–10 dm tall, erect or decumbent; no rhizomes, rooting at nodes
- ◆ Sheaths terete, closed up to $\frac{3}{4}$ of their length; ligules 1–5 mm long; blades 4–10 cm long
- ◆ Inflorescence a panicle, 5–15 cm long, nodding; branches 1–3, capillary, spreading or ascending
- ◆ Spikelets 2- to 5-flowered, strongly compressed, purplish; glumes unequal, calluses sparsely cobwebby

Synonyms: None

USDA PLANTS Symbol: POLE2

ITIS TSN: 41141

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

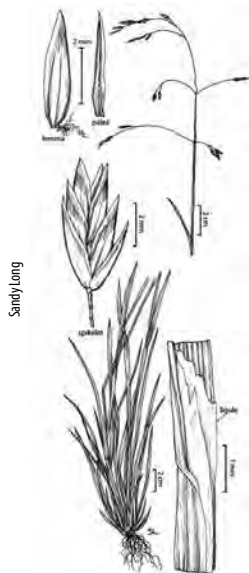
Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 7,000–13,170 ft. (2,135–4,015 m)

- ◆ Lemmas 3.5–4.5 mm long, acuminate, compressed-keeled, pubescent on keels and marginal nerves



Grasses

Steve Mattson



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

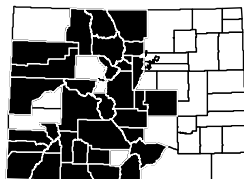
Habitat and Ecology: Found along springs, meadows, bogs, lake shores and river banks from subalpine to alpine zones.

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

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Western Wetland Flora 1992, Wingate 1994



Poa palustris L.

Fowl bluegrass

Poaceae

Keir Morse



Synonyms: None

USDA PLANTS Symbol: POPAZ

ITIS TSN: 41151

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,800–13,000 ft. (1,465–3,960 m)

Key Characteristics:

- Loosely tufted, sometimes rooting at lower nodes; culms 2.5–12 dm tall, decumbent, bases purplish
- Sheaths keeled, glabrous; ligules 1–5 mm long; blades: 1–3 mm wide, tips prow-shaped
- Inflorescence a panicle, 13–40 cm long, pyramidal, branches in rather distant whorls, 2–6 at a node
- Spikelets 2- to 5-flowered, strongly laterally compressed; glumes subulate, distinctly keeled
- Lemmas 2–3 mm long, tips bronze-colored, compressed-keeled, villous on keels and nerves

Max Licher



USDA-NRCS PLANTS Database Britton & Brown 1913

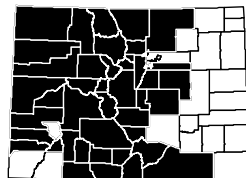
Similar Species: *P. nemoralis* ssp. *interior* (= *P. interior*) [PONEI2, FAC, ITIS 526427] also has small lemmas and spikelets, but the ligules are shorter (0.5–1.2 mm long), the panicle is less than 10 cm long and the leaf blades come off the culm at an acute angle. *P. tracyi* [POTR, NI, ITIS 41100] has a shorter ligule, 1.5–3 mm long and blades are wider, 3–7 mm wide.

Habitat and Ecology: Common grass of wet forests, meadows and open ground.

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

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Poa reflexa Vasey & Scribn. ex Vasey

Nodding bluegrass

Poaceae

Matt Lavin



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, purple-tinged, distinctly keeled

Matt Lavin



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

USDA PLANTS Symbol: PORE

ITIS TSN: 504473

Wetland Status AW: FAC WM: OBL GP: OBL

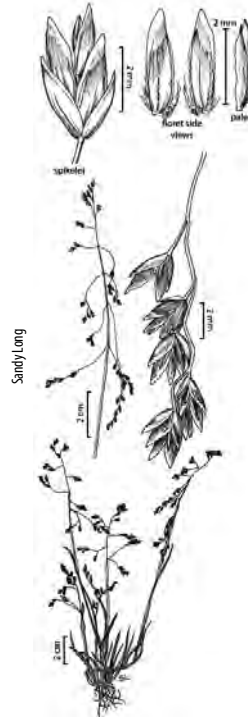
Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 5,600–13,690 ft. (1,705–4,175 m)



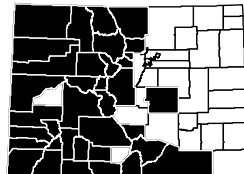
Similar Species: *P. leptocoma* [FACW, OBL] is similar, but the glumes are distinctly unequal and the hairs along the palea keels and lemma nerves are not as long and shaggy as *P. reflexa*.

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.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Poa trivialis L. Rough bluegrass

Poaceae

Greta Mordoff



Key Characteristics:

- ◆ Stoloniiferous, rooting at nodes; culms 3–10 dm tall, decumbent, often strongly geniculate
- ◆ Sheaths scabrous; ligules membranous, 3–10 mm long; blades flat, bright green, scabrous
- ◆ Inflorescence an open panicle, 6–25 cm long, branches spreading or ascending
- ◆ Spikelets strongly compressed, mostly 2- to 4-flowered; glumes distinctly keeled, sickle-shaped
- ◆ Calluses prominent with cobwebby hairs present at bases; lemmas strongly keeled, 5-nerved

Steve Hurst USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: POTR2

ITIS TSN: 41163

Wetland Status AW: FACW WM: FAC GP: FACW

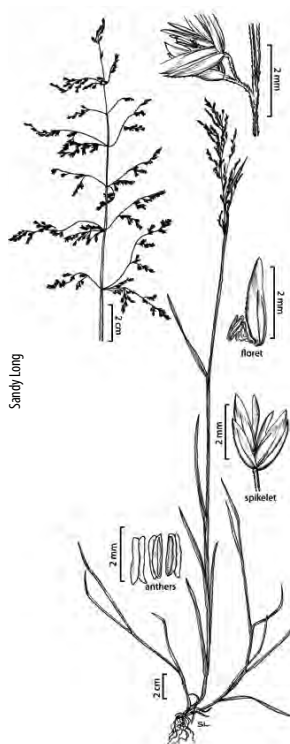
Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,640–11,100 ft. (1,110–3,385 m)



Similar Species: No other bluegrass has the combination of long ligules, flat leaf blades and sickle-shaped glumes.

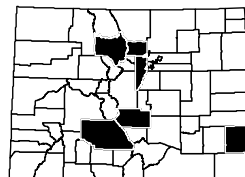
Habitat and Ecology: Found in wet areas adjacent to riparian areas, often escaped from lawns and pastures.

Comments: Introduced grass with several cultivars that are used for lawns and pastures. Provides food for waterfowl and small mammals.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Grasses

Polypogon interruptus Kunth

Ditch rabbitsfoot grass

Poaceae

Dean Wm. Taylor



Synonyms: None

USDA PLANTS Symbol: POIN7

ITIS TSN: 41174

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5? SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,800–5,460 ft. (1,465–1,665 m)

Key Characteristics:

- ◆ Tufted; culms decumbent and rooting at lower nodes, 2–8 dm tall
- ◆ Leaf sheaths smooth, thick; ligules membranous, 2–6 mm long; blades flat, scabrous
- ◆ Inflorescence an interrupted panicle, green-purple tinged, branches whorled
- ◆ Spikelets 1-flowered; glumes scabrous on keels, 2–3 mm long, awns 1.5–3.2 mm long
- ◆ Lemmas glabrous, shiny, apices obtuse

Hitchcock 1950



Grasses

Zoya Mulova



Similar Species: *P. monspeliensis* [FACW], a common, annual grass, has awned glumes, but the glume awns are much longer, 4–10 mm long.

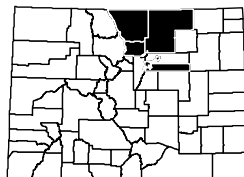
Habitat and Ecology: Found along streams, especially on sandy banks.

Comments: When available in sufficient quantities, provides food for waterfowl and small mammals.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012



Polypogon monspeliensis (L.) Desf.

Annual rabbitsfoot grass

Poaceae

Steve Mason



Synonyms: None

USDA PLANTS Symbol: POM05

ITIS TSN: 41171

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

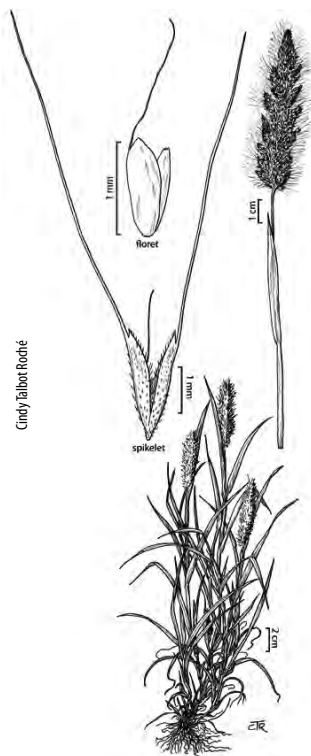
Duration: Annual

CO Elevation: 3,600–7,700 ft. (1,095–2,345 m)

Key Characteristics:

- ◆ Tufted; culms erect to ascending, rooting at lower nodes, 0.5–6.5 dm tall
- ◆ Sheaths inflated; ligules prominent, 2.5–16 mm long; blades flat, 1–20 cm long x 1–7 mm wide
- ◆ Inflorescence a compact to open panicle, appears furry, branches appressed ascending
- ◆ Spikelets 1-flowered; disarticulation at base of stipes; stipes 0.1–0.2 mm long
- ◆ Glumes 1–2.7 mm long, awns 4–10 mm long, apices bi-lobed; lemmas glabrous, shiny

Steve Mason



Cindy Talbot Rodhe

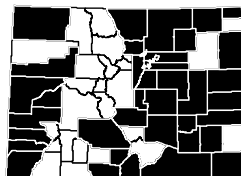
Similar Species: *P. interruptus* [FACW, OBL] is a perennial and the glume awns are shorter, 1.5–3.2 mm long.

Habitat and Ecology: Common in wet, often alkaline swales and ditches and disturbed areas such as irrigated pastures.

Comments: Not competitive with other wetland vegetation and is often replaced by tall sedges and other grasses. Often used as an ornamental in floral arrangements.

Animal and Bird Use: None known.

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Polypogon viridis (Gouan) Breistr.

Beardless rabbitsfoot grass

Poaceae

Max Lohr



Synonyms: *Agrostis semiverticillata* (Forssk.) C. Chr.,
Agrostis verticillata Vill.

USDA PLANTS Symbol: POVI9

ITIS TSN: 504522

Wetland Status AW: FACW **WM:** FACW **GP:** OBL

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,100–4,600 ft. (1,250–1,400 m)

Key Characteristics:

- ◆ Tufted to stoloniferous; culms erect to decumbent, rooting at lower nodes, 1–9 dm tall
- ◆ Leaf sheaths glabrous; ligules ciliate membranes; blades flat, 2–13 cm long x 1–6 mm wide
- ◆ Inflorescence a panicle, branches erect to spreading; spikelets 1-flowered, stipes 0.1–0.6 mm long
- ◆ Glumes 1–2.2 mm long, keels scabrous, not awned
- ◆ Lemmas 1 mm long, glabrous, shiny, erose, unawned

Grasses

Danielle Melkup



Russ Kleinman



Similar Species: Can be confused with *Agrostis* spp. since *P. viridis* does not have awns. However, *Agrostis* spp. usually have a much more open panicle and disarticulation above the glumes. *Polypogon* spp. spikelets fall as one unit (disarticulation below glumes).

Habitat and Ecology: Uncommon. Known from Baca, Las Animas and Montezuma Counties. Grows in mesic habitats associated with rivers, streams and irrigation ditches.

Comments: *P. viridis* is native to southern Europe and Middle East, but is now established in the southwestern United States and is spreading north. When available in sufficient quantities, provides food for waterfowl and small mammals.

Animal and Bird Use:  

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012



Ptilagrostis porteri (Rydb.) W.A. Weber

Porter's false needlegrass

Poaceae

Steve Olson



Key Characteristics:

- ◆ Tufted; culms erect, glabrous, 2–5 dm tall
- ◆ Leaf sheaths glabrous; ligules 1.5–3 mm long; blades filiform, 2–12 cm long x 0.3–0.6 mm wide
- ◆ Inflorescence an open panicle, 5–12 cm long; branches flexuous, slender, spreading
- ◆ Spikelets 1-flowered, 4.5–6 mm long; glumes equal, hyaline, purplish, pubescent above, 4.5–6 mm long
- ◆ Lemma awns 5–25 mm long, plumose entire length, twisted at bases, 1- to 2-geniculate

Denise Culver



Synonyms: *Ptilagrostis mongholica* (Turcz. ex Trin.) Griseb. ssp. *porteri* (Rydb.) Barkworth, *Stipa porteri* Rydb.

USDA PLANTS Symbol: PTPO

ITIS TSN: 519752

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G2 S2; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 9,070–12,000 ft. (2,765–3,660 m)



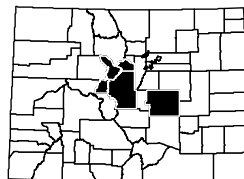
Similar Species: *P. porteri* was initially included in *Stipa* (needle grass). *Stipa* awns are much longer and not completely plumose as in *P. porteri*.

Habitat and Ecology: Rare. Occurs on hummocks in rich and extreme rich fens in central Colorado and northwestern El Paso County. Colorado is the global extent of *P. porteri*'s range.

Comments: Endemic. Considered globally imperiled (G2S2). In 2005, it was considered a candidate species to be listed as threatened by the U.S. Fish and Wildlife Service, but was denied listing.

Animal and Bird Use: None known.

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Puccinellia distans (Jacq.) Parl.

Weeping alkaligrass

Poaceae

Kristian Peters



Synonyms: None

USDA PLANTS Symbol: PUDI

ITIS TSN: 41197

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Non-native

Conservation Status: G5 SNA

C-Value: 0

Duration: Perennial

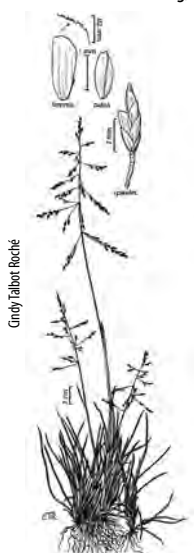
CO Elevation: 4,600–8,000 ft. (1,400–2,440 m)

Key Characteristics:

- ◆ Cespitose; culms erect to decumbent below, glabrous to scabrous, 1–5 dm tall
- ◆ Leaf sheaths prominently nerved; ligules entire, obtuse, 0.8–1.2 mm long; blades flat to involute
- ◆ Inflorescence a loosely pyramidal panicle, 5–20 cm long, lower branches often reflexed at maturity
- ◆ Spikelets 2- to 7-flowered, slightly flattened, 3–7 mm long; disarticulation above the glumes
- ◆ Glumes unequal, 0.4–1.3 mm long; upper, 1.1–1.8 mm long; lemmas 1.4–2.2 mm long, erose-ciliate

Grasses

Steve Matson



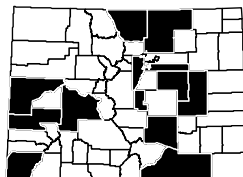
Similar Species: *P. nuttalliana* [FACW, OBL] lower branches are not reflexed and first glume (2.2–3.5 mm) and ligules (1–3 mm) are longer. *P. parishii* [OBL] is an annual grass with lemma apices that are obtuse to truncate and lemma veins that are densely hairy on the bottom.

Habitat and Ecology: Found in generally wet habitats in conjunction with clayey, alkaline soils and along highways that are treated with salt in the winter.

Comments: *P. distans* is a Eurasian native that is spreading along lake and reservoir margins throughout North America. When available in sufficient quantities, provides food for waterfowl and small mammals.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Weber and Wittmann 2012, Wingate 1994



Puccinellia nuttalliana (Schult.) Hitchc.

Nuttall's alkaligrass

Poaceae

Steve Matson



Key Characteristics:

- ◆ Cespitose; culms erect, 3–7 dm tall
- ◆ Leaf sheaths glabrous, prominently nerved; ligules 1–3 mm long; blades involute, 3–10 cm long
- ◆ Inflorescence an open, diffuse, pyramidal panicle, lower branches erect to occasionally descending
- ◆ Spikelets 3- to 7-flowered, slightly flattened, 3–12 mm long; disarticulation above the glumes
- ◆ Glumes unequal, erose; lemmas hyaline, broadly oblong, 2.2–3.5 mm long, finely erose-ciliate

Matt Lavin



Synonyms: *Puccinellia airoides* (Nutt.) S. Watson & J.M. Coult.

USDA PLANTS Symbol: PUNU2

ITIS TSN: 41200

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,600–9,300 ft. (1,400–2,835 m)



Grasses

Similar Species: *P. parishii* [OBL] is an annual grass with lemma apices that are obtuse to truncate and lemma veins that are densely hairy on the bottom. *P. distans* [FACW] lemma apices are also obtuse with lower panicle branches horizontal to descending.

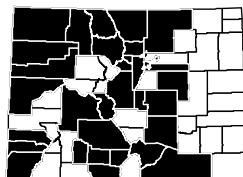
Habitat and Ecology: Common and widespread; occurs on alkaline soils from low elevations to montane.

Comments: Provides forage for large animals when present in large quantities. Small mammals, waterfowl and songbirds depend on grasses for food and nesting materials.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Western Wetland Flora 1992, Wingate 1994



Puccinellia parishii Hitchc.

Bog alkaligrass

Poaceae

Robert Soreng USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: PUPA

ITIS TSN: 41218

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G2G3 S1

C-Value: Not Assigned

Duration: Annual

CO Elevation: 7,800–7,900 ft. (2,375–2,410 m)

Key Characteristics:

- ◆ Cespitose; culms 3 to 10 cm tall, lower branches erect to reflexed
- ◆ Leaf blades flat to slightly involute, 1 mm wide
- ◆ Inflorescence a narrow panicle, few-flowered, 1–4 cm long; branches strongly ascending
- ◆ Spikelets 3- to 6-flowered, 3–5 mm long; glumes broad, strongly nerved, scarios margined
- ◆ Lemmas 1.8–2.2 mm long, apices obtuse, veins densely hairy on lower half, glabrous between veins

Grasses

Peggy Lyon



Peggy Lyon



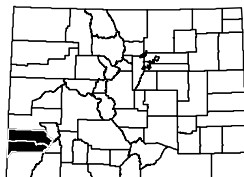
Similar Species: *P. distans* [FACW] and *P. nuttalliana* [FACW, OBL] are perennials with a more robust growth habit and taller stems, up to 7 dm tall.

Habitat and Ecology: Rare, grows on wet, marshy ground. Only known from San Miguel and Dolores Counties.

Comments: *P. parishii* is a globally imperiled (G2G3) species. The known range includes California (S1), New Mexico (S1), Colorado (S1) and Arizona (S2).

Animal and Bird Use: 

References: Barkworth et al. 2007, Hickman 1993, Hitchcock 1950



Spartina gracilis Trin.

Alkali cordgrass

Poaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: SPGR

ITIS TSN: 41270

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

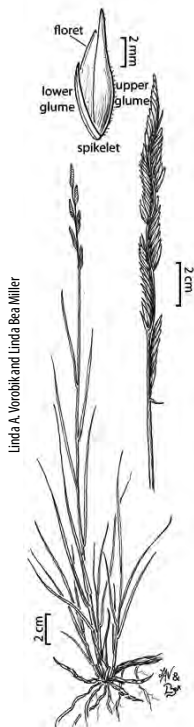
Duration: Perennial

CO Elevation: 3,900–9,900 ft. (1,190–3,020 m)

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
- ◆ 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

Steve Matson



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

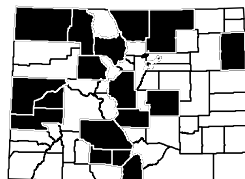
Habitat and Ecology: Found on alkaline flats and sloughs throughout Colorado, more common in the western part of the state.

Comments: *S. gracilis* is not a preferred forage for large animals, but does provide habitat for songbirds, waterfowl and small mammals. Considered state vulnerable (S3) in Montana.

Animal and Bird Use:



References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Spartina pectinata Bosc ex Link

Prairie cordgrass

Poaceae

Larry Allen USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: SPPE

ITIS TSN: 41272

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 3,500–6,900 ft. (1,065–2,105 m)

Key Characteristics:

- ◆ Strongly rhizomatous, elongated rhizomes 4–10 mm thick; culms erect up to 2.5 m tall
- ◆ Sheaths open, glabrous; ligules ciliate membranes, 2–4 mm long, truncate; blades 6–15 mm wide
- ◆ Inflorescence consists of several 1-sided spikelets, 10–50 cm long with appressed branches
- ◆ Spikelets 1-flowered, sessile, 10–25 mm long, strongly compressed
- ◆ Glumes unequal, lower 5–10 mm long, as long as floret, upper 10–20 mm long, awns over 3 mm

Grasses

Matt Lavin



Linda A. Vondra and Linda Bea Miller



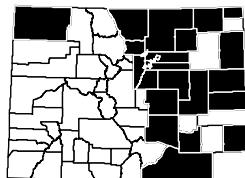
Similar Species: *S. gracilis* [FACW] is much shorter, the leaf blades are less than 5 mm wide and the glumes are not awned.

Habitat and Ecology: Occurs in moist to wet areas in warm water sloughs, irrigation ditches and along lake shores, especially on the Eastern Slope.

Comments: *S. pectinatus* is not a preferred forage, but does provide habitat for songbirds and waterfowl. This is an excellent grass for stabilizing stream-banks and pond margins. Considered state vulnerable (S3) in Wyoming and Montana.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Sporobolus texanus Vasey

Texas dropseed

Poaceae

USDA-NRCS 2009



Synonyms: None

USDA PLANTS Symbol: SPTE5

ITIS TSN: 42151

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,000–4,900 ft. (1,220–1,495 m)

Key Characteristics:

- ◆ Cespitose, fibrous roots; culms decumbent to spreading to erect, 2–7 dm tall
- ◆ Leaf sheaths sparsely hairy; ligules hairy; blades flat, involute, 2.5–13 cm long x 1–4.2 mm wide
- ◆ Inflorescence an open, diffuse panicle; pedicels over 5 mm long; spikelets 1-flowered, purple-tinged
- ◆ Glumes unequal, lower 0.5–1.7 mm long, no nerves, upper 1.7–3 mm long, 1-nerved
- ◆ Lemmas 1.8–3 mm long, apices acute; paleas 1.7–2.9 mm long; awns absent

Colorado State University Herbarium



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *S. airoides* [SPA1, FAC, ITIS 42128] is also cespitose, forming large clumps, but the pedicels on individual spikelets are much shorter, 5 mm or less long, and grows on drier soils.

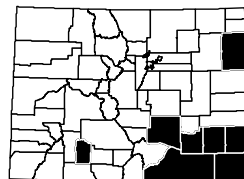
Habitat and Ecology: Uncommon. Found along streams and alkali flats primarily on Eastern Slope.

Comments: *S. texanus* provides dense cover for birds and small mammals. The foliage is browsed by deer and small mammals. The seeds are eaten by songbirds and small mammals. Global range is from Utah to Nebraska, south to Texas. Considered state critically imperiled (S1) in Utah.

Animal and Bird Use:



References: Shaw 2008, USDA NRCS 2009, Weber and Wittmann 2012, Wingate 1994



Grasses

***Torreyochloa pallida* (Torr.) Church var. *pauciflora* (J. Presl) J.I. Davis**
Pale false mannagrass **Poaceae**

Steve Matson



Synonyms: *Glyceria pauciflora* J. Presl, *Torreyochloa pauciflora* (J. Presl) Church

USDA PLANTS Symbol: TOPAP3

ITIS TSN: 531133

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5 S3?

C-Value: 5

Duration: Perennial

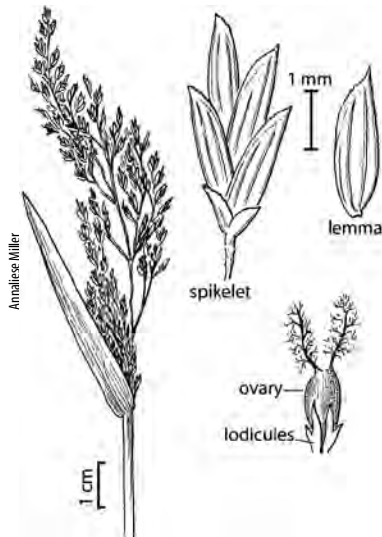
CO Elevation: 5,500–11,260 ft. (1,675–3,430 m)

Key Characteristics:

- ◆ Rhizomatous; culms decumbent to erect to occasionally matted, 2–15 dm tall, internodes hollow
- ◆ Sheaths open; ligules membranous, 2–9 mm long, truncate to acute; blades flat, 1.5–17.5 mm wide
- ◆ Inflorescence a panicle, 5–25 cm long x 1.8–16 cm wide; spikelets 2- to 8-flowered, 3.6–6.9 mm long
- ◆ Glumes unequal, lower 0.7–2.1 mm long, 1-nerved, upper 0.9–2.7 mm long, generally 3-nerved
- ◆ Lemmas 2–3.6 mm long, occasionally pubescent, 7- to 9-nerved, parallel, truncate to acute



Steve Matson



Annaliese Miller

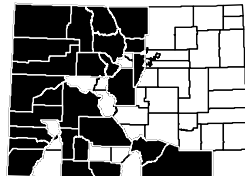
Similar Species: Can be confused with *Glyceria* spp. or *Puccinellia* spp. *Glyceria* spp. have closed, not open, leaf sheaths and lemmas with 7 prominent nerves. *Puccinellia* spp. have distinct and converging nerves on the lemmas.

Habitat and Ecology: Grows along margins of lakes, ponds and streams.

Comments: Colonizer of disturbed areas in high elevations. Global range from Alaska to New Mexico. Considered state vulnerable (S3) in Colorado and Wyoming. When present in sufficient quantities, provides food for small mammals and waterfowl.

Animal and Bird Use: 

References: Barkworth et al. 2007, Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Vahlodea atropurpurea (Wahlenb.) Fr. ex Hartm.

Mountain hairgrass

Poaceae

Susan McDougall USDA-NRCS PLANTS Database



Synonyms: *Deschampsia atropurpurea* (Wahlenb.) Scheele var. *latifolia* (Hook.) Scribn. ex Macoun

USDA PLANTS Symbol: VAAT2

ITIS TSN: 42252

Wetland Status AW: FACW **WM:** FACW **GP:** NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 9,320–13,200 ft. (2,840–4,025 m)

Key Characteristics:

- Loosely cespitose; culms erect, 1.5–8 dm tall
- Leaf sheaths open, 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
- 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

Jose Hernandez USDA-NRCS PLANTS Database



Hitchcock 1950



Similar Species: *Deschampsia cespitosa* [FACW] 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.

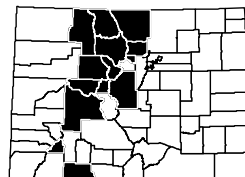
Habitat and Ecology: Grows in wet subalpine meadows and in rock outcrops on moist ledges. Often growing in bare ground below melting snow drifts.

Comments: May be considered a colonizer in newly forming riparian zones at high elevations. Global range from Alaska to Colorado. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Shaw 2008, Skinner 2010, Weber and Wittmann 2012, Wingate 1994



Grasses

Juncus acuminatus Michx.

Tapertip rush

Juncaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: JUAC

ITIS TSN: 39221

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 5,000–6,900 ft. (1,525–2,105 m)

Key Characteristics:

- ◆ Cespitose, not rhizomatous; stems erect, 2.5–8 dm tall
- ◆ Leaves 1–2, basal and cauline, 1–40 cm long; auricles obtuse-rounded, 1–1.5 mm long
- ◆ Inflorescence a terminal panicle, 5–50 flower heads; bract short, not exceeding inflorescence
- ◆ Tepals 2.6–3.5 (3.9) mm long, apices acuminate; stamens 3 or 6
- ◆ Capsules equaling tepals, 2.8–3.5 (4) mm, apices acute; seeds ellipsoid, 0.3–0.4 mm, not tailed

Rushes

Steve Matson



Similar Species: *J. nodosus* [OBL] looks similar, but it is rhizomatous or stoloniferous and the capsules are subulate, narrowing to a long beak.

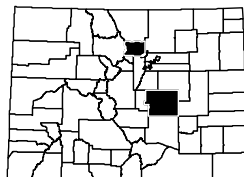
Habitat and Ecology: Rare. Found on drying shorelines, ditches, springs and wet meadows. Known only from Boulder and El Paso Counties.

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

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Juncus albescens (Lange) Fernald

Northern white rush

Juncaceae

Ryan Batten



Synonyms: *Juncus triglumis* L. ssp. *albescens* (Lange) Hultén

USDA PLANTS Symbol: JUAL2

ITIS TSN: 39247

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 10

Duration: Perennial

CO Elevation: 10,000–12,200 ft. (3,050–3,720 m)

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

Inger Greve Alsos



Jeanne R. Janish



Similar Species: *J. triglumis* [FACW] 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.

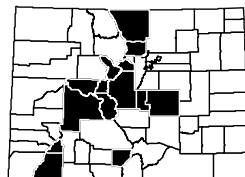
Habitat and Ecology: Common in fens and wet alpine meadows.

Comments: FNA (2000) and Ackerfield (2012) recognize *J. triglumis* var. *albescens* as the accepted name. USDA-NRCS PLANTS Database and Weber and Wittmann (2012) recognize *J. albescens*. Considered state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents and insects.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Weber and Wittmann 2012



Rushes

Juncus alpinoarticulatus Chaix

Northern green rush

Juncaceae

Anađej Trnkozy



Synonyms: *Juncus alpinus* Vill.

USDA PLANTS Symbol: JUAL4

ITIS TSN: 503247

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 5,850–11,060 ft. (1,785–3,370 m)

Key Characteristics:

- ◆ Rhizomatous; stems erect, terete, 4–50 cm tall, smooth
- ◆ Leaves cauline 1–2 (5); blades 1.5–12 cm x 0.5–1.1 mm; auricles 0.5–1.2 mm, apices rounded, scarious
- ◆ Inflorescence a terminal panicle of 5–25 heads; bract shorter than the inflorescence
- ◆ Tepals greenish- to straw-colored, lanceolate to oblong, 2–2.5 mm long; stamens 6

- ◆ Capsules usually exserted, 2.3–3.5 mm, apices round; seeds oblong to ovoid, 0.5–0.7 mm, not tailed

Rushes

Anađej Trnkozy



Hurd et al. 1997



Similar Species: *J. nevadensis* [FACW] is found within the same elevation range and habitats, but has longer auricles and tepals, with the capsules usually shorter than tepals. *J. articulatus* [OBL] seed capsules are pointed at tips, where *J. alpinoarticulatus* seed capsules are distinctly rounded on top.

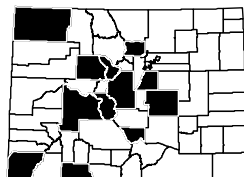
Habitat and Ecology: Found in seeps, fens, margins of ponds, lakes and streams; often on limestone or calcareous substrates.

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

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



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

Arctic rush

Juncaceae

Keir Morse



Synonyms: *Juncus arcticus* Willd. ssp. *ater* (Rydb.) Hultén, *Juncus arcticus* Willd. var. *balticus* (Willd.) Trautv., *Juncus balticus* Willd.

USDA PLANTS Symbol: JUARL

ITIS TSN: 525995

Wetland Status AW: FACW **WM:** FACW **GP:** FACW

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 4

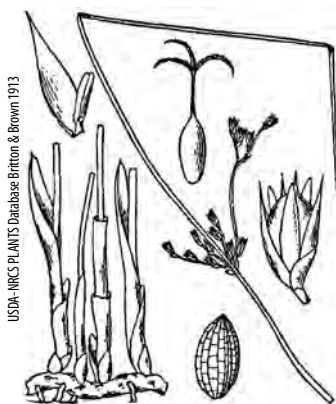
Duration: Perennial

CO Elevation: 3,400–13,360 ft. (1,035–4,070 m)

Key Characteristics:

- ◆ Rhizomatous producing dense clumps; stems 2–10 dm tall, wiry
- ◆ Leaf blades absent; sheaths bladeless, clustered at bases, light to dark brown
- ◆ Inflorescence a compact to loose panicle, appearing laterally and halfway up culm; bract 4–23 cm long
- ◆ Tepals pale to dark, lanceolate, 3.5–5 mm long; stamens 6
- ◆ Capsules 3.5–4 (4.5) mm, equal to or exceeding perianth; seeds dark amber, 0.6–0.8 mm, no tails

Brent Miller



Similar Species: *J. effusus* [FACW] 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* [FACW] 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*.

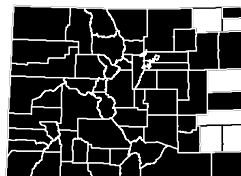
Habitat and Ecology: Very common. Grows in wet meadows, irrigation ditches, swales, lakes and rivers from plains to moderate elevation.

Comments: FNA (2000) and Ackerfield (2012) 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. Greater Sage-grouse brood habitats include riparian/wetland areas with willows, sedges, and rushes.

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012



Rushes

Juncus articulatus L.

Jointleaf rush

Juncaceae

Amadej Tinkoczy



Synonyms: None

USDA PLANTS Symbol: JUAR4

ITIS TSN: 39249

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,700–10,400 ft. (1,435–3,170 m)

Key Characteristics:

- ◆ Loosely to densely tufted, arising from short rhizomes, rooting from nodes; stems 15–50 cm tall
- ◆ Leaves 1–3 per stems; blades terete; sheath margins prolonged into rounded auricles
- ◆ Inflorescence an open panicle; bract much shorter than inflorescence, 1–3.7 cm long
- ◆ Tepals green to straw-colored, 1.8–3 mm, apices acute or acuminate; stamens 6
- ◆ Capsules exerted 1 mm beyond tepals, 2.8–4 mm long; seeds obovoid, 0.5 mm, not tailed

Rushes

Amadej Tinkoczy



Steve Yarbrough



Similar Species: *J. acuminatus* [OBL] has 3 stamens and is caespitose, not rooting at the nodes. *J. alpinoarticulatus* [OBL] bract subtending the inflorescence is shorter and the seed capsules are rounded.

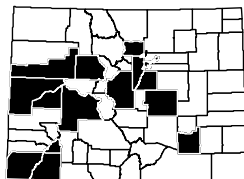
Habitat and Ecology: Uncommon in moist places, along pond shores, floodplains, roadsides and ditches.

Comments: The seeds and/or capsules are eaten to a minor extent by vertebrate animals, rodents, dabbling ducks, insects. The Greater Sage-grouse brood habitats include riparian/wetland areas with willows, sedges, and rushes.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



Juncus biglumis L.

Twoflowered rush

Juncaceae

Michael Klotzenburg



Synonyms: None

USDA PLANTS Symbol: JUB12

ITIS TSN: 39225

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G5 S3

C-Value: 10

Duration: Perennial

CO Elevation: 11,130–14,100 ft. (3,390–4,300 m)

Key Characteristics:

- Loosely caespitose; stems 0.25–1.6 dm tall
- Leaves basal, 1–4; blades septate, ascending, nearly terete, 2–7 cm long x 0.5–1.5 mm wide
- Inflorescence 1- to 2-flowered; bract dark brown-black, much longer than inflorescence
- Tepals brown to blackish, oblong, 2.5–4 mm, outer and inner series nearly equal; stamens 6
- Capsules pale, dark-purplish margins, notched, exceeding perianth; seeds 0.7–0.9 mm, short-tailed

Norman Hagen



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *J. triglumis* [FACW] has a shorter bract that does not exceed the inflorescence, the capsules are pointed, not notched. *J. albensens* [OBL] has mucronate capsules, 3–5 mm long, not notched, and the inflorescence bract is equal or longer than the inflorescence.

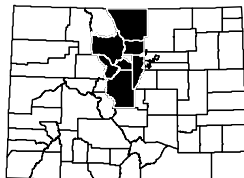
Habitat and Ecology: Infrequently found on wet gravels, frost scars and mossy margins of ponds and streams in the alpine zone.

Comments: The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails and insects. *J. biglumis* is considered state imperiled (S2) in Wyoming and state vulnerable (S3) in Colorado and Montana.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Rushes

Juncus brachycephalus (Engelm.) Buchenau

Smallhead rush

Juncaceae

Andrew Hipp



Synonyms: None

USDA PLANTS Symbol: JUBR2

ITIS TSN: 39251

Wetland Status AW: NI WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS S1

C-Value: 5

Duration: Perennial

CO Elevation: 5,550–7,640 ft. (1,690–2,330 m)

Key Characteristics:

- ◆ Cespitose; stems erect, 2–7 dm tall, smooth
- ◆ Leaves basal, 0.2–12 cm long x 0.5–2 mm wide; auricles 0.6–1.5 mm, apices rounded, scarious
- ◆ Inflorescence an open and diffuse panicle of 5–80 heads, 2- to 6-flowered
- ◆ Tepals green to light brown, lanceolate, outer 1.8–2.5 mm, inner 2–2.8 mm; stamens 3 or 6
- ◆ Capsules exserted, 2.4–3.8 mm; seeds 0.8–1.2 mm, tailed, covered with white translucent veil

USDA-NRCS PLANTS Database Britton & Brown 1913



Rushes

Andrew Hipp



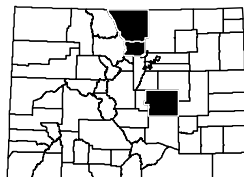
Similar Species: *J. brevicaudatus* (= *J. tweedyi*) [OBL] is also considered an eastern prairie relict, but the seeds are tailed, half as long as the body, and the perianth segments are acute versus blunt or rounded. *J. alpinoarticulatus* (= *J. alpinus*) [OBL] looks similar, but has reddish basal leaf sheaths.

Habitat and Ecology: Found in wet meadows with sandy soils. It is an eastern prairie relict, known from El Paso, Boulder and Larimer Counties.

Comments: The Colorado occurrences of *J. brachycephalus* represent the western extent of this species' range. It is considered state critically imperiled (S1) in Colorado. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails and insects.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Juncus brevicaudatus (Engelm.) Fernald

Narrowpanicle rush

Juncaceae

Louis M. Landry



Synonyms: *Juncus tweedyi* Rydb.

USDA PLANTS Symbol: JUBR4

ITIS TSN: 39253

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 5

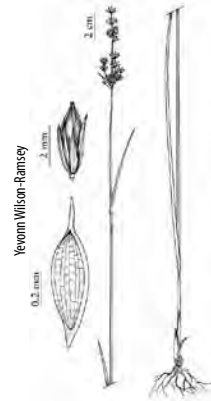
Duration: Perennial

CO Elevation: 6,800–8,300 ft. (2,075–2,530 m)

Key Characteristics:

- ◆ Cespitose; stems 1.4–5.5 cm, erect, terete
- ◆ Leaf auricles 0.5–3 mm, apices rounded to truncate, scarious; blades terete
- ◆ Inflorescence a terminal panicle, 2–35 heads, heads 2- to 8-flowered, branches erect
- ◆ Tepals green to light brown, lanceolate, outer tepals 2.3–3.2 mm long, acute
- ◆ Capsules exserted, 3.2–4.8 mm; seeds fusiform, 0.7–1.2 mm, covered with white translucent veil

Louis M. Landry



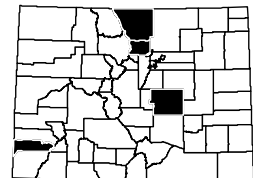
Similar Species: *J. brevicaudatus* has been documented with *J. brachycephalus* [OBL], but the seeds of *J. brachycephalus* have tails that are 1/3 as long as the body and the outer tepals are 1.8–2.5 mm long with a rounded tips and a broad, scarious margin.

Habitat and Ecology: Rare in Colorado. Found in shallow water along streams, emergent shorelines and around hot springs in Dolores, Larimer, El Paso, and Boulder Counties.

Comments: Considered state critically imperiled (S1) in Colorado and Utah. Populations occurring around hot springs in the west have been determined by some authors to be *J. tweedyi*, but no morphologic distinction appears to exist between *J. tweedyi* and *J. brevicaudatus*. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails and insects.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Rushes

Juncus bryoides F.J. Herm. Moss rush

Juncaceae

Chris Wagner



Synonyms: None

USDA PLANTS Symbol: JUBR5

ITIS TSN: 39254

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G4 S1

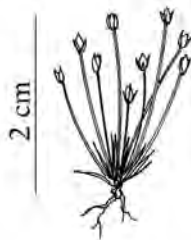
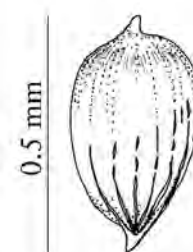
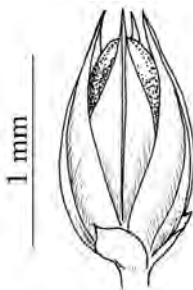
C-Value: 9

Duration: Annual

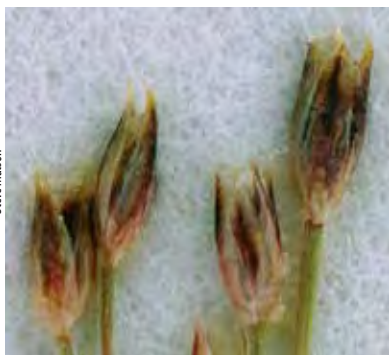
CO Elevation: 7,500–8,600 ft. (2,285–2,620 m)

Key Characteristics:

- ◆ Cespitose; stems minute, 3–2.5 cm tall
- ◆ Leaves to 0.9 cm long
- ◆ Inflorescence a terminal, solitary flower; bract subtending inflorescence 1–2, 0.3–0.9 mm long
- ◆ Tepals 6, turning inward to enclose shorter capsule; stamens 3
- ◆ Capsules pale red, 1–1.9 mm long x 0.5–1 mm wide; seeds ovoid to globose, 0.3–0.5 mm long



Yevonn Wilson-Ramsey



Steve Watson

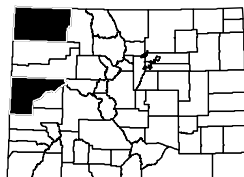
Similar Species: *J. bryoides* is often mistaken for a brown moss due to its short stature and cespitose habit.

Habitat and Ecology: Rare in Colorado, found in springs and seeps on sandstone or quartzite ledges and sandy soil of washes. Documented only in Moffat and Mesa Counties.

Comments: Considered state critically imperiled (S1) in Colorado and Utah. The global range extends from Oregon, Idaho, California, Nevada, Wyoming, Utah and Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1986, Weber and Wittmann 2012



Juncus bufonius L.

Toad rush

Juncaceae

Amadej Tmloczy



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

USDA PLANTS Symbol: JUBU

ITIS TSN: 39227

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 S4

C-Value: 3

Duration: Annual

CO Elevation: 3,370–10,000 ft. (1,025–3,050 m)

Key Characteristics:

- ◆ Tufted; stems 2–30 cm tall, slender, diffuse branching nearly to base
- ◆ Leaves much shorter than the stems; auricles absent; blades flat or involute
- ◆ Inflorescence a panicle, 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

Amadej Tmloczy



Jeanne R. Janish



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

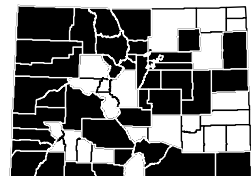
Habitat and Ecology: Commonly found in disturbed wet meadows, roadsides, muddy or drying ponds, lake shores and streams.

Comments: Considered state vulnerable (S3) in Wyoming and state secure (S4) in Colorado and Montana. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails and insects.

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012

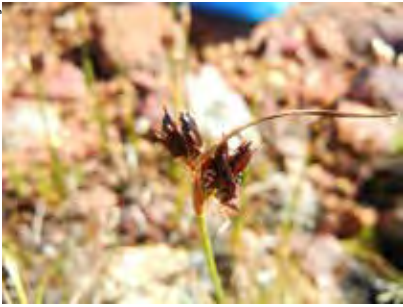


Rushes

Juncus castaneus Sm.
Chestnut rush

Juncaceae

Steve Yabrough



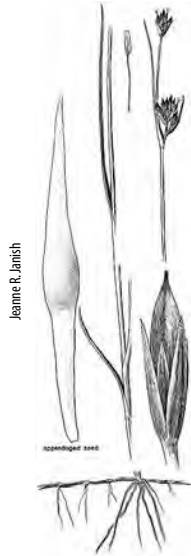
Synonyms: None
USDA PLANTS Symbol: JUCA6
ITIS TSN: 39229
Wetland Status AW: FACW WM: FACW GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: 9
Duration: Perennial
CO Elevation: 8,560–14,310 ft. (2,610–4,360 m)

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



Norman Hagen



Jeanne R. Jamish

appendaged seed

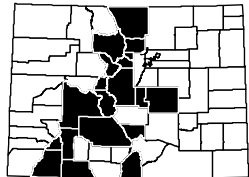
Similar Species: *J. biglumis* [OBL] is found in similar habitats, but it is cespitose versus rhizomatous, has narrower leaves (1 mm wide) that are only found at the base and the flowering heads are distinctly smaller than *J. castaneus*.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Weber and Wittmann 2012



Juncus compressus Jacq.

Roundfruit rush

Juncaceae

Biopix



Synonyms: None

USDA PLANTS Symbol: JUCO

ITIS TSN: 39260

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Non-native

Conservation Status: G5 SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,530–6,700 ft. (1,380–2,040 m)

Key Characteristics:

- ◆ Short-creeping or densely branching rhizomes, appearing cespitose; stems up to 8 dm tall
- ◆ Leaves 1–2; auricles 0.3–0.5 mm; blades flat to slightly channel, 5–35 cm long x 0.8–2 mm wide
- ◆ Inflorescence 5- to 60-flowered, moderately congested, 1.5–8 cm; bract exceeds inflorescence
- ◆ Tepals brownish, 1.7–2.7 mm, blunt, incurved tips, apices obtuse; stamens 6
- ◆ Capsules widely ellipsoid to obovoid, 2.5–3.5 mm long x 1.4–1.8 mm wide; seeds not tailed

Biopix



Biopix



Similar Species: *J. gerardii* [FACW, OBL] is similar and found in alkaline habitat, but the capsules are shorter than or equal to the tepals (2.6–3.5 mm).

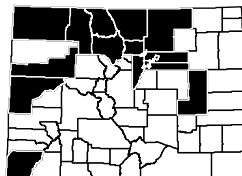
Habitat and Ecology: Found on disturbed ground, especially ditches, along railroads and roadsides; frequently on saline or alkaline soils.

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

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Rushes

Juncus confusus Coville

Colorado rush

Juncaceae

Gary A. Monroe USDA-NRCS PLANTS Database



Synonyms: *Juncus exilis* Osterh.

USDA PLANTS Symbol: JUC02

ITIS TSN: 39261

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,840–10,960 ft. (1,170–3,340 m)

Key Characteristics:

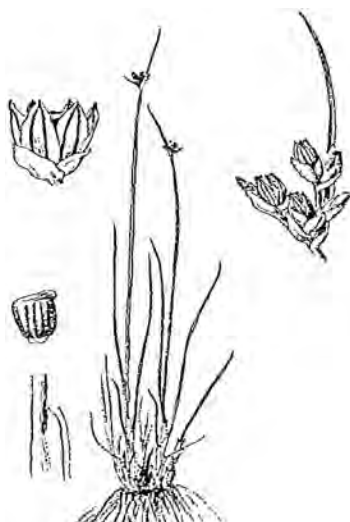
- ◆ Cespitose, rhizomes densely branched; stems (1) 5–15 (25), 3–5 dm tall
- ◆ Leaves basal, 2–4; blades flat, 3–15 cm long x 0.4–1 mm wide; auricles 0.3–0.7 mm, apices rounded
- ◆ Inflorescences 3- to 25-flowered, congested, 1–2.5 cm x 1–2 cm; bract exceeding inflorescence
- ◆ Tepals light brown with dark brown midstripe, 3.5 mm–4.3 mm; stamens 6

- ◆ Capsules 2.5–3.5 mm long, notched, shorter than tepals; seeds yellowish, 0.4 mm, not tailed



Gary A. Monroe USDA-NRCS PLANTS Database

Hurd et al. 1997



Similar Species: *J. tenuis* [FACW, FAC] has a longer inflorescence (1–8.5 cm) than *J. confusus* and the capsule apices are obtuse, not notched. *J. interior* [FACW, FAC] capsules are (3.3) 3.8–4.5 (5.5) mm long.

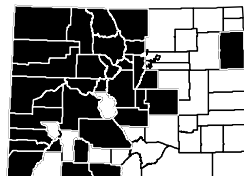
Habitat and Ecology: Common in moist meadows, grasslands, pond margins and around springs.

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

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012



Juncus dichotomus Elliott

Forked rush

Juncaceae

www.uchicago.edu



Synonyms: *Juncus platyphyllus* (Wiegand) Fernald
USDA PLANTS Symbol: JUDI
ITIS TSN: 39264
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 5,300 ft. (1,615 m)

Key Characteristics:

- ◆ Short-creeping or densely branching rhizomes; culms up to 10 dm tall
- ◆ Leaves basal, 2–3; blades terete, 10–25 cm long x 0.7–1 mm wide; auricles 0.2–0.5 mm
- ◆ Inflorescence a terminal, open, 10- to 85-flowered; bract usually greatly exceeding inflorescence
- ◆ Tepals green, lanceolate, 3.3–4.5 mm, outer and inner series nearly equal; stamens 6
- ◆ Capsules tan to brown, 2.8–3.5 (4.5) long x 1.6–2.2 mm wide; seeds 0.3–0.4 mm, not tailed

Arizona State University Herbarium



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *J. interior* [FACW, FAC] has longer (3.8–4.7 mm long) capsules and is more common than *J. dichotomus*.

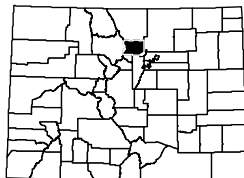
Habitat and Ecology: Rare, grows along lake shores, known only from Boulder County.

Comments: Both Ackerfield (2012) and Weber and Witmann (2012) state that *J. dichotomus* is non-native for Colorado. The seeds and/or seed capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails and insects.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Rushes

Juncus drummondii E. Mey. Drummond's rush

Juncaceae

Matt Lavin



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

Steve Matson



Synonyms: None

USDA PLANTS Symbol: JUDR

ITIS TSN: 39266

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

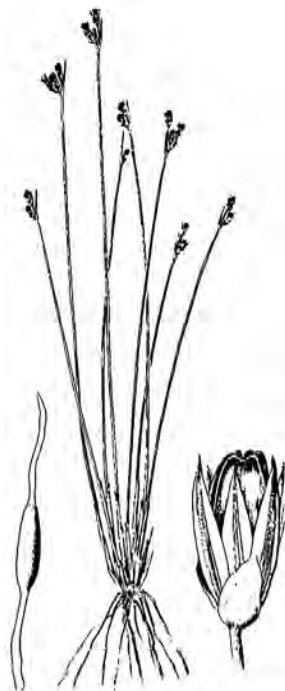
Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 8,200–14,420 ft. (2,500–4,395 m)

Hurd et al. 1997



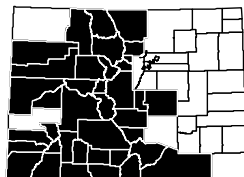
Similar Species: *J. parryi* [FAC] is found in similar habitats, but has well-developed leaf blades and an acute capsule. *J. drummondii* is very distinct with the long, stem-like involucral bract. The other two species that share this characteristic are *J. hallii* [FAC] and *J. parryi* [FAC], but both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

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



Juncus dudleyi Wiegand

Dudley's rush

Juncaceae

Robin R. Buckalew USDA-NRCS PLANTS Database



Synonyms: *Juncus tenuis* Willd. var. *dudleyi* (Wiegand) F.J. Herm.

USDA PLANTS Symbol: JUDU2

ITIS TSN: 503249

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,800–9,010 ft. (1,160–2,745 m)

Key Characteristics:

- ◆ Rhizomatous, densely branching; stems 1–20, 2–10 dm tall
- ◆ Leaves basal; auricles yellowish, 0.2–0.4 mm, hard, leathery, tips rounded; blades flat, 5–30 cm long
- ◆ Inflorescence compact, 20–80 flowers; bract usually exceeding inflorescence
- ◆ Tepals greenish, lanceolate, 4–5 mm, tips acute, inner series nearly equal, spreading
- ◆ Capsules tan, 2.9–3.6 mm long x 1.5–1.9 mm wide; seeds tan to amber, 0.4–0.67 mm, not tailed

John Hilty



USDA-NRCS PLANTS Database Britton & Brown 1913



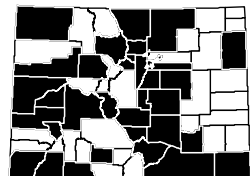
Similar Species: *J. tenuis* [FACW, FAC] has longer auricles (2–5 mm) with pointed tips. *J. interior* [FACW, FAC] has purplish auricles and sheaths. *J. confusus* [FAC, FACW] has a retuse or notched capsule.

Habitat and Ecology: Commonly found along stream banks, wet meadows and marshes.

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

Animal and Bird Use: 

References: Ackerfield 2012, Aldridge 2000, Flora of North America 1986, Sveun et al. 1998, Weber and Wittmann 2012



Rushes

AnaJel Timkozy



Key Characteristics:

- ◆ Densely tufted from short, stout rhizomes; stems terete, 40–120 cm tall
- ◆ Leaf blades absent, basal sheaths with awn-like vestiges of the blade
- ◆ Inflorescence a lateral, compound cyme, many flowered; bracts appearing to be lateral on stems
- ◆ Tepals tan or darker with greenish midstripe, lanceolate, 1.9–3.5 mm; stamens 3
- ◆ Capsules greenish tan or darker, 1.5–3.2 mm; seeds amber, 0.4–0.5 mm long

AnaJel Timkozy



Synonyms: None

USDA PLANTS Symbol: JUEF

ITIS TSN: 39232

Wetland Status AW: FACW WM: FACW GP: OBL

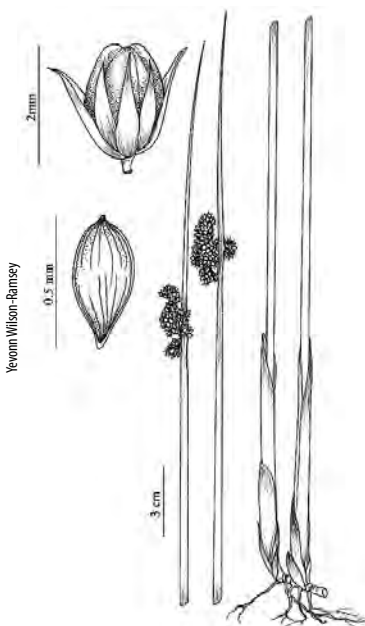
Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,920–8,560 ft. (1,500–2,610 m)



Similar Species: Resembles *J. arcticus* ssp. *littoralis* [FACW], but *J. effusus* is not rhizomatous and the inflorescence is comprised of densely bunched flowers.

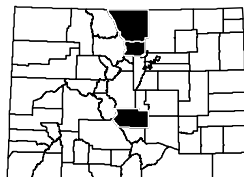
Habitat and Ecology: Uncommon in seepages, fens and wet meadows. Known only from a few collections in Boulder, Fremont and Larimer Counties.

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

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



Juncus ensifolius Wikstr.

Swordleaf rush

Juncaceae

Dean Wm. Taylor



Synonyms: *Juncus saximontanus* A. Nels., *Juncus tracyi* Rydb.

USDA PLANTS Symbol: JUEN

ITIS TSN: 39269

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S2

C-Value: 6

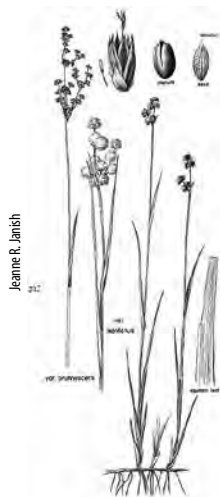
Duration: Perennial

CO Elevation: 5,250–12,600 ft. (1,600–3,840 m)

Key Characteristics:

- ◆ Rhizomatous from creeping rhizomes; culms arising singly, 2–6 dm tall
- ◆ Leaves 1–3 per stems; blades equitant and ensiform, partially septate, 2–6 mm wide
- ◆ Inflorescence paniculate, 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

Steve Matson



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*) [JUEM2, ITIS 39311]. 1b. Stamens 6. . . .var. *montanus* [JUEM2]. USDA-NRCS PLANTS Database subsumes both varieties within *J. saximontanus* [JUSA].

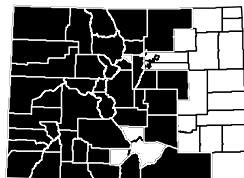
Habitat and Ecology: Common. Grows in wet meadows, marshes, lakes, seeps, springs, ditches and floodplains. *J. ensifolius* var. *montanus* is more common and widespread than *J. ensifolius* var. *ensifolius*.

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

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012



Rushes

Juncus filiformis L.

Thread rush

Juncaceae



Synonyms: None
USDA PLANTS Symbol: JUFI
ITIS TSN: 39240
Wetland Status AW: FACW WM: FACW GP: OBL
Native Status: Native
Conservation Status: G5 S2?
C-Value: 9
Duration: Perennial
CO Elevation: 6,900–10,600 ft. (2,105–3,230 m)

Key Characteristics:

- ◆ Arising singly or in tufts from creeping rhizomes; stems terete, 5–40 cm tall
- ◆ Leaves clustered at bases, bladeless, uppermost usually with bristle tips
- ◆ Inflorescence a cyme, 3- to 10-flowered, only few cm above ground; bract sharp-pointed, long
- ◆ Tepals lanceolate, acute or acuminate, subequal, slightly exceeding the capsule; stamens 6
- ◆ Capsules tan, globose, 2.5–3 mm long x 1.8–2.1 mm wide, shorter than perianth; seeds 0.5 mm, no tails



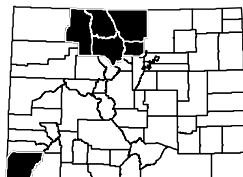
Similar Species: *J. arcticus* var. *littoralis* [FACW] has thicker and taller stems with an inflorescence appearing in the upper half of the stems.

Habitat and Ecology: Found along lake margins, moist meadows and fens.

Comments: Considered state imperiled (S2) in Utah, Wyoming and Colorado. The seeds and/or capsules are eaten to a minor extent by vertebrate animals, mostly small rodents, some dabbling ducks, rails and insects.

Animal and Bird Use: 

References: Ackerfield 2012, Aldridge 2000, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012



Juncus gerardii Loisel.

Saltmeadow rush

Juncaceae

Nelson DeBarros USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: JUGE

ITIS TSN: 503251

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

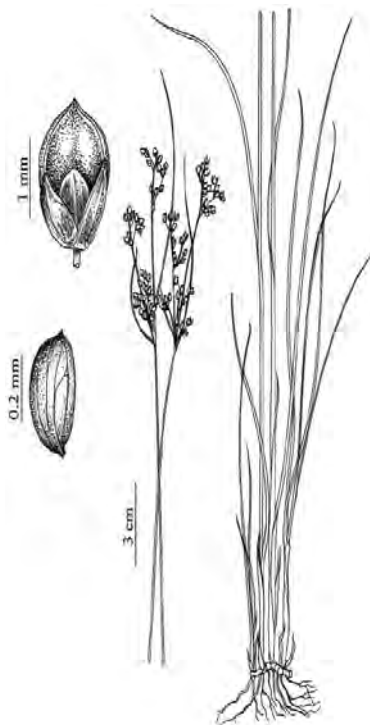
Duration: Perennial

CO Elevation: 4,800–5,000 ft. (1,465–1,525 m)

Key Characteristics:

- ◆ Rhizomatous from long-creeping rhizomes, creating large colonies; stems 2–9 dm tall
- ◆ Leaves basal, 2–4; auricles 0.4–0.6 mm, scarious; blades flat or channeled, 10–40 cm long
- ◆ Inflorescence 10- to 30-flowered, loose, 2–16 cm; bract surpassing inflorescence
- ◆ Tepals dark brown, lanceolate-ovate to oblong, 2.6–3.2 mm long; anthers 1.1–1.8 mm; stamens 6
- ◆ Capsules chestnut brown 2.5–3.2 mm long x 1.3–1.9 mm wide; seeds dark brown, 0.5–0.6 mm

Bigpix



Rushes

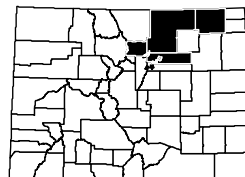
Similar Species: *J. compressus* [OBL, FACW] capsules are globose versus ellipsoid and are longer than the tepals (1.7–2.7 mm long).

Habitat and Ecology: Forms extensive colonies in salt marshes, warm water sloughs and floodplains within the South Platte River watershed.

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

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Juncus interior Wiegand

Inland rush

Juncaceae

James M. Andre



Synonyms: None

USDA PLANTS Symbol: JUIN2

ITIS TSN: 39280

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,370–9,300 ft. (1,025–2,835 m)

Key Characteristics:

- ◆ Tufted from densely branching rhizomes; culms 1–10, 2–6 dm tall
- ◆ Leaves basal, 1–2; auricles whitish-purplish tinged; blades flat, 5–15 cm long x 0.5–0.1 mm wide
- ◆ Inflorescence usually somewhat compact, 1.5–7 cm; bract usually shorter than inflorescence
- ◆ Tepals greenish, lanceolate, 3.3–4.4 mm, apices acuminate; stamens 6

- ◆ Capsules (3.3) 3.8–4.7 mm long, equal to or longer than tepals; seeds tan, 0.4–0.7 mm, not tailed



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *J. dichotomus* (= *J. platyphyllus*) [FACW] is not as common and has smaller capsules, (2.5) 2.8–3.5 (4.5) mm long.

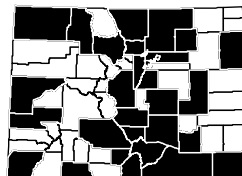
Habitat and Ecology: Common. Grows in wet meadows, along streams and pond margins.

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

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Flora of North America 2000, Sveun et al. 1998, Weber and Wittmann 2012



Max Lidier



Synonyms: None
USDA PLANTS Symbol: JULO
ITIS TSN: 503256
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 6
Duration: Perennial
CO Elevation: 4,650–10,950 ft. (1,415–3,340 m)

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

Hurd et al. 1997



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

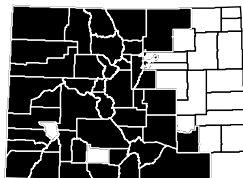
Habitat and Ecology: Common in wet meadows, seeps, springs, fens, from the high plains (i.e. Palmer Divide), to the montane and subalpine.

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.

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012



Juncus marginatus Rostk. Grassleaf rush

Juncaceae

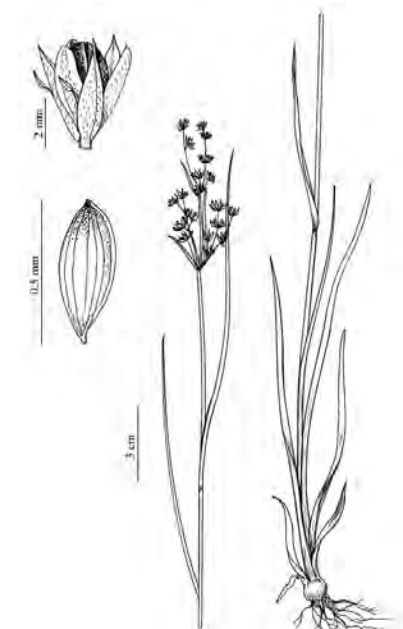
Larry Allen USDA-NRCS PLANTS Database



Key Characteristics:

- Occasionally tufted, rhizomatous from short, knotty roots; stems compressed, 3–13 dm tall
- Leaves short to 1 dm long, 1–5 mm wide, flat; auricles rounded, 0.5–1 mm long
- Inflorescence a cyme, 5–40 heads, each 2–10-flowered; bract equal to or longer than inflorescence
- Tepals dark brown, green midstripe, outer 1.8–3.2 mm, inner 2–3.5 mm; stamens 3
- Capsules brown, dark spotted, 1.8–2.9 mm; seeds yellow, fusiform, 0.4–0.7 mm, not tailed

Steve Matson



Yevonn Wilson-Ramsey

Similar Species: *J. longistylis* [FACW] has 6 stamens and longer tepals (5–6 mm long).

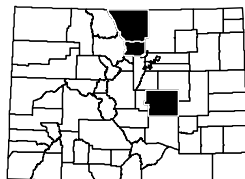
Habitat and Ecology: Uncommon. Known only from Boulder, Larimer, and El Paso Counties. Grows in moist to wet sandy, peaty, or clayey soils in wet prairies, ditches or margins of streams and lakes.

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

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Juncus mertensianus Bong.

Mertens' rush

Juncaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: JUME3

ITIS TSN: 39293

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

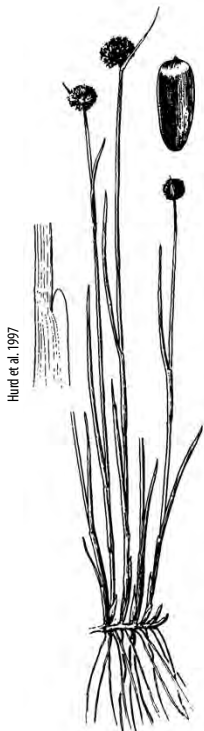
Duration: Perennial

CO Elevation: 5,040–12,790 ft. (1,535–3,900 m)

Key Characteristics:

- ◆ Rhizomatous to caespitose; 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, single head; 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

Susan McDougall/USDA-NRCS PLANTS Database



Similar Species: *J. mertensianus* is distinct with the terminal, solitary, blackish heads. *J. nevadensis* [FACW] heads are 5–30, the tepal color ranges from light brown to dark purplish brown and it is much less common.

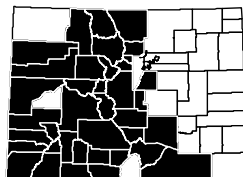
Habitat and Ecology: Common in moist montane to alpine meadows, along streams and near springs.

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

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



Rushes

Juncus nevadensis S. Watson

Sierra rush

Juncaceae

Max Lidier



Key Characteristics:

- ◆ Rhizomatous; stems terete, arising singly or few together, 1–7 dm tall
- ◆ Leaves basal, 1–3, cauline 1–2; blades 1.5–31 cm long x 0.5–2.2 mm wide; auricles 1–3.2 mm
- ◆ Inflorescence with a terminal panicle of 2–11 heads; bract erect, leaf-like, 1–8 cm long
- ◆ Tepals dark brown to white, outer tepals 2.8–6.2 mm, inner tepals 2.4–6 mm; stamens 6
- ◆ Capsules slightly exserted, chestnut brown, 2.3–3.7 mm; seeds ellipsoid, 0.4–0.5 mm, not tailed

Keir Morse



Synonyms: None

USDA PLANTS Symbol: JUNE

ITIS TSN: 39295

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 6,760–12,000 ft. (2,060–3,660 m)



Hurd et al. 1997

Similar Species: *J. mertensianus* [OBL] looks similar but usually has a solitary head with 12–60 flowers.

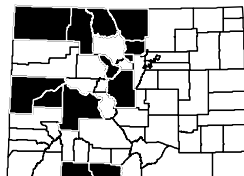
Habitat and Ecology: Uncommon along melting snowbanks, streams, near seeps and in wet meadows in montane to alpine.

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

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



Juncus nodosus L. Knotted rush

Juncaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: JUNO2

ITIS TSN: 39297

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 3,400–10,600 ft. (1,035–3,230 m)

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 heads; 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, chestnut brown, 3.2–5 mm; seeds oblong, 0.4–0.5 mm, not tailed

Louis M. Landry



Hurd et al. 1997



Similar Species: *J. torreyi* [FACW] is a much taller plant (4–10 dm tall), the leaf blades are abruptly divergent, flowering heads are sessile, tightly clustered, and the outer tepals are longer than the inner tepals. *J. acuminatus* [OBL] is caespitose, not rhizomatous.

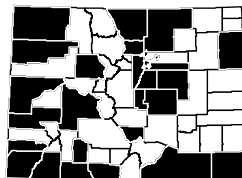
Habitat and Ecology: Common in wet meadows, fens, pond margins and streams.

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.

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012



Rushes

Juncus tenuis Willd.

Poverty rush

Juncaceae

Arnon Arthur



Synonyms: None

USDA PLANTS Symbol: JUTE

ITIS TSN: 39243

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 6,500–9,450 ft. (1,980–2,880 m)

Key Characteristics:

- ◆ Tufted from densely branching rhizomes; culms few to 20, 1.5–5 dm tall
- ◆ Leaves basal, (1) 2–3, blades flat, 3–12 cm x 0.5–1 mm; auricles 2–5 mm, apices acute, membranous
- ◆ Inflorescences 5- to 40-flowered, borne congested at branch internodes; bract longer than inflorescence
- ◆ Tepals greenish, lanceolate, 3.3–4.4 mm, outer and inner series nearly equal; stamens 6
- ◆ Capsules tan, ellipsoid, 3.8–4.7 mm long x 1.3–1.7 mm wide, equal to tepals; seeds tan, 0.55 mm



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *J. dudleyi* [FACW, FAC] auricle tips are yellow, hard and leathery with rounded tips. *J. confusus* [FACW, FAC] has auricles that are firm, but not conspicuously extended.

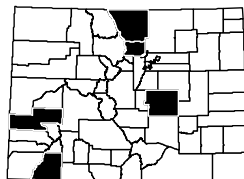
Habitat and Ecology: Uncommon in wet meadows, seeps and springs and along streams, usually disturbed areas.

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

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



Keir Morse



Juncus torreyi Coville

Torrey's rush

Juncaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: JUTO

ITIS TSN: 39320

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,400–9,840 ft. (1,035–3,000 m)

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 consists of terminal clusters of 1–23 heads; bract equals or exceeds inflorescence
- ◆ 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

Pam Smith



Hurd et al. 1997



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

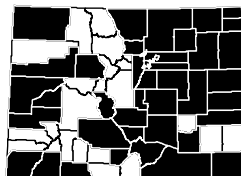
Habitat and Ecology: Common in wet meadows and along streams, ditches and pond margins. *J. torreyi* often produces galls in which the floral parts are enlarged, creating a mass of telescoping sheaths (lower left photo). The gall is the work of the sedge psyllid (*Livia maculipennis*).

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

Animal and Bird Use:



References: Ackerfield 2012, Aldridge 2000, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Sveun et al. 1998, Weber and Wittmann 2012



Rushes

Juncus triglumis L.

Three-hulled rush

Juncaceae

Renzo Salvo



Synonyms: *Juncus triglumis* L. var. *triglumis*

USDA PLANTS Symbol: JUTR4

ITIS TSN: 39239

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: 10

Duration: Perennial

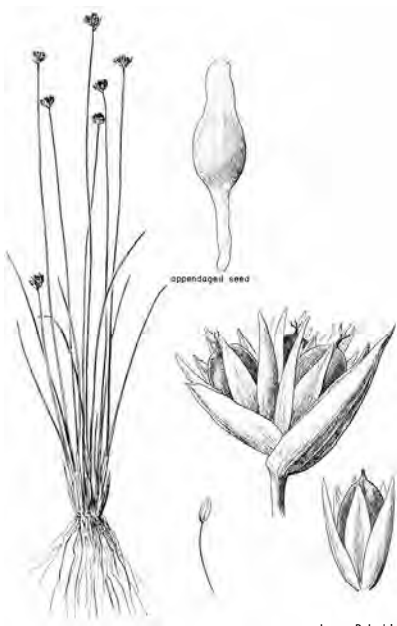
CO Elevation: 10,300–13,280 ft. (3,140–4,050 m)

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
- ◆ Tepals pale brown or darker, oblong-lanceolate, 3–5 mm, outer and inner series nearly equal; stamens 6
- ◆ Capsules mucronate, 3–5 mm; seeds fusiform, body 0.5–1 mm, tails 0.6–1 mm

Rushes

Hurd et al. 1997



Jeanne R. Janish

Similar Species: *J. albescens* (= *J. triglumis* var. *albescens*) [OBL] 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.

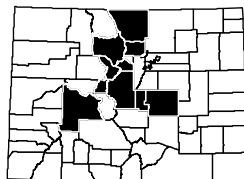
Habitat and Ecology: Grows in peat fens and wet meadows from subalpine to alpine.

Comments: FNA (2000) and Ackerfield (2012) recognize *J. triglumis* var. *albescens* and *J. triglumis* var. *triglumis*. Weber and Wittmann (2012) recognize two the variety 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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Hurd et al. 1997, Weber and Wittmann 2012



Juncus vaseyi Engelm.

Vasey's rush

Juncaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: JUVA

ITIS TSN: 39328

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5? S1

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,000–10,000 ft. (2,440–3,050 m)

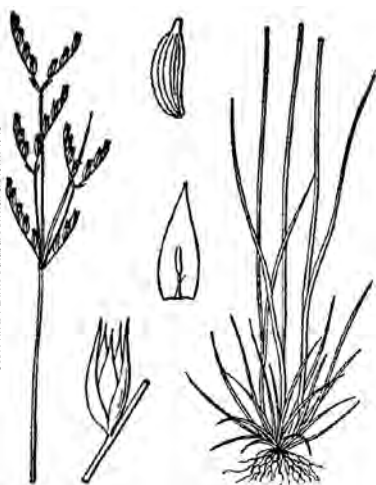
Key Characteristics:

- ◆ Tufted, rhizomes densely branching; culms 1–15, 2–7 dm tall
- ◆ Leaves basal, 2–3; auricles 0.2–0.4 mm, scarious; blades terete, 10–30 cm long x 0.5–1 mm wide
- ◆ Inflorescence terminal, 5- to 15-flowered; bract usually much shorter than inflorescence
- ◆ Tepals greenish to tan, lanceolate, 3.3–4.4 mm, outer and inner series nearly equal; stamens 6
- ◆ Capsules golden tan, 3.8–4.7 mm x 0.3–1.7 mm; seeds tan, 0.65 mm, tails 0.2–0.5 mm

Maine Natural Areas Program



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *J. confusus* [FACW] has pointed auricles, flat leaves, and capsules with a notch on top.

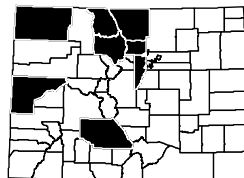
Habitat and Ecology: Uncommon to rare, occurring in permanently moist, usually exposed areas with sandy soils, such as alpine lake shores, and peaty soils in fens and wet meadows.

Comments: *J. vaseyi*'s primary range is in Canada with Colorado as the southern extent of its range. It is considered state critically imperiled (S1) in Colorado and Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Weber and Wittmann 2012



Rushes

Luzula subcapitata (Rydb.) Harrington

Colorado woodrush

Juncaceae

Veron Wilson-Ramsey



Synonyms: None

USDA PLANTS Symbol: LUSU9

ITIS TSN: 39353

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G3? S3

C-Value: 8

Duration: Perennial

CO Elevation: 10,440–13,810 ft. (3,180–4,210 m)

Key Characteristics:

- ◆ Cespitose, rhizomes short and stocky; stems 8–40 cm tall, bases thickened, glabrous
- ◆ Leaves 1–3, mostly less than 5 cm long; margins with hairs; sheaths closed
- ◆ Inflorescence a cyme, capitate, sessile, cylindrical; bract equal to or exceeding inflorescence
- ◆ 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, cylindric, 1.3 mm



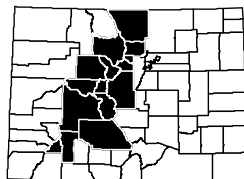
Similar Species: *L. comosa* [LUC06, FAC, ITIS 39339] is also found along subalpine streams but has short, cylindric spikes and leaf blades less than 5 mm wide. *L. parviflora* [LUPA4, FAC, ITIS 39347] flowers are on slender drooping pedicels and the leaves are not hairy, except near the throat of the 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* or *L. spicata* have a wetland indicator status of FAC, they are commonly found in Colorado wetlands.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Keri Morse



Synonyms: None

USDA PLANTS Symbol: CAAQ

ITIS TSN: 39374

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,800–14,000 ft. (1,465–4,265 m)

Key Characteristics:

- ◆ Culms arising from stout, scaly rhizomes; culm bases reddish-brown, 1–15 dm tall
- ◆ Leaf tips, especially early in growing season, glaucous, reddish-brown at maturity; blades 2.5–8 mm wide
- ◆ Terminal spikes, 1–3, staminate; lateral spikes pistillate, cylindric, 1–4 cm long, sessile
- ◆ Perigynia 2–3.6 mm long, faces nerveless, speckled reddish-brown; beaks entire, 0.1–0.3 mm long
- ◆ Pistillate scales dark with light midribs, hyaline tips; achenes shiny; stigmas 2

Denise Culver



Jeanne R. Janish

Similar Species: *C. aquatilis* can be confused with *C. nebrascensis* [OBL] especially where elevation ranges overlap. *C. nebrascensis* perigynia are distinctly nerved, longer, up to 4 mm and have a bidentate, not entire beak. *C. lenticularis* [OBL] and *C. emoryi* [OBL] look very similar, but both have perigynia that are distinctly nerved. *C. scopulorum* [FACW, OBL] perigynia are strongly papillate (bumpy) usually purple above or throughout and the achenes are dull.

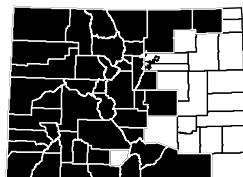
Habitat and Ecology: Common. Grows in shallow water or saturated soils within montane to subalpine zones. *C. aquatilis* frequently forms monoculture stands.

Comments: Moderately palatable to livestock, elk and deer. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges also provide nesting cover and/or concealment.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex atherodes Spreng.

Wheat sedge

Cyperaceae

kgNaturePhotography.com



Synonyms: None

USDA PLANTS Symbol: CAAT2

ITIS TSN: 39449

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,000–9,590 ft. (1,525–2,925 m)

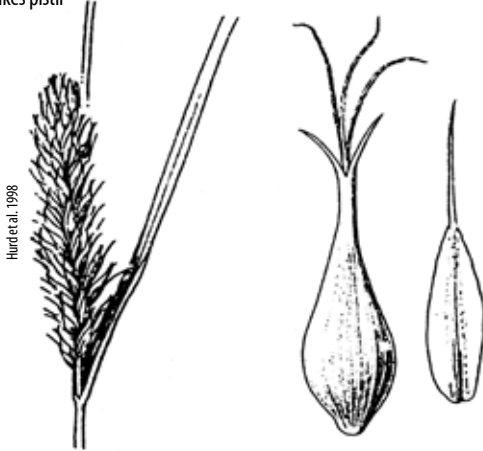
Key Characteristics:

- Loosely cespitose from rhizomes or produces vegetative shoots; culms hollow, bases reddish
- Leaf blades strongly septate-nodulose, sparsely hairy toward bases; sheaths hairy
- Terminal spikes staminate, 2–6; lateral spikes pistillate, nearly sessile, closely flowered
- Perigynia strongly nerved, 7–10 mm long; beaks flattened, 1.2–3 mm long, teeth long, divergent
- Pistillate scales lanceolate, short-ciliate, 3-nerved, green center, hyaline margins; stigmas 3

Sedges



Hurd et al. 1998



Similar Species: *C. torreyi* [CAT03, UPL, ITIS 39847] also has hairy leaf sheaths, but the perigynia have shorter beaks, 0.2–0.5 mm. *C. vesicaria* [OBL] and *C. hystericina* [OBL] both have glabrous leaf sheaths.

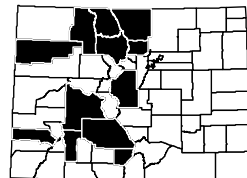
Habitat and Ecology: Grows in marshes, edges of lakes and rivers in shallow to rather deep water from lowlands to high elevations in the mountains.

Comments: *C. atherodes* is one of the few sedges that produces true vegetative shoots with nodes and internodes. The stems are also hollow, which is seldom observed in sedges. Sedges can provide forage for cattle and horses, as well as elk, deer, muskrat and beaver. *C. atherodes* is considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Reznicek personal communication, Weber and Wittmann 2012, Wilson et al. 2008



Carex athrostachya Olney

Slenderbeak sedge

Cyperaceae

The Nature Inn



Synonyms: None

USDA PLANTS Symbol: CAAT3

ITIS TSN: 501205

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,800–11,710 ft. (1,770–3,570 m)

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
- ◆ Terminal spikes gynaeandrous; 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



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. synchnocephala* [FACW] perigynia are similar with winged margins, however the perigynia are longer, 5.5–7.5 mm long. The long, lowest bract is distinctive in positive identification of *C. athrostachya*.

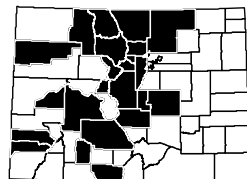
Habitat and Ecology: Common to locally abundant in moist or wet places, on margins of sloughs, reservoirs or ephemeral pools.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Steve Olson



Synonyms: None

USDA PLANTS Symbol: CAAU3

ITIS TSN: 39445

Wetland Status AW: OBL WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,600–12,680 ft. (1,400–3,865 m)

Key Characteristics:

- ◆ Loosely cespitose from slender rhizomes; culms often shorter than leaves, 5–40 cm tall
- ◆ Bracts leaf-like, sheathing, exceeding inflorescence
- ◆ Terminal spikes, 4–6, 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



Hurd et al. 1998



Hurd et al. 1998

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

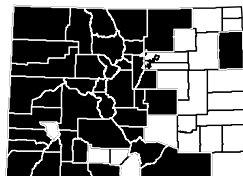
Habitat and Ecology: Common in moist or wet places, meadows, fens and along streambanks.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Western Wetland Flora 1992, Wilson et al. 2008



Carex bebbii Olney ex Fernald

Bebb's sedge

Cyperaceae

Max Licher



Synonyms: None

USDA PLANTS Symbol: CABE2

ITIS TSN: 39520

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,000–10,410 ft. (1,525–3,175 m)

Key Characteristics:

- ◆ Densely tufted without creeping rhizomes; culms 2–9 dm tall, exceeding leaves
- ◆ Inflorescence crowded, roundish, reddish-brown spikes
- ◆ Terminal spikes gynaeandrous, sessile, aggregated into ovoid heads, perigynia crowded
- ◆ Perigynia winged, 2.5–3.8 mm long, stiffly ascending, ciliate-serrulate; beaks flat
- ◆ Pistillate scales shorter, narrower than perigynia, hyaline-scarious with brown midribs; stigmas 2



Hurd et al. 1998



Max Licher

Similar Species: *C. scoparia* [FACW] has longer perigynia, 3–4 times as long as wide, that are distinctly wing-margined and pistillate scales that are long, narrow and awn-tipped.

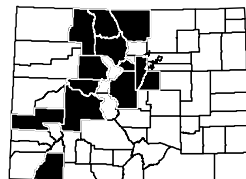
Habitat and Ecology: Infrequent and local in wet to swampy meadows, swales and ditch banks, also drier sites with seasonal moisture such as roadsides and irrigated hay meadows.

Comments: *C. bebbii* projects a 'ragged' outline from the perigynia that are crowded and slightly spreading. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex brunnescens (Pers.) Poir.

Brownish sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CABR15

ITIS TSN: 39446

Wetland Status AW: OBL WM: OBL GP: FAC

Native Status: Native

Conservation Status: G5 S4?

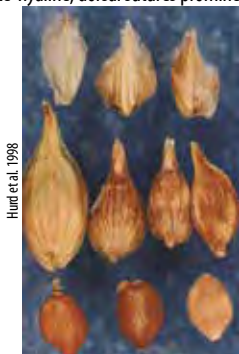
C-Value: 9

Duration: Perennial

CO Elevation: 8,150–12,010 ft. (2,485–3,660 m)

Key Characteristics:

- ◆ Densely caespitose from many short rhizomes; culms slender, arching, clustered at bases
- ◆ Bracts shorter than inflorescence; leaves flat, 1–2.5 mm wide
- ◆ Terminal spikes gynaeandrous, widely separated; perigynia 10–12 per spike
- ◆ Perigynia spongy-thickened below; beaks serrulate, white-hyaline, dorsal sutures prominent
- ◆ Pistillate scales ovate with acute tips, shorter than perigynia, white-hyaline margins; stigmas 2



Hurd et al. 1998

Hurd et al. 1998



Similar Species: *C. canescens* [OBL] perigynia have very short beaks, pistillate scales white or pale brown, wider leaves (2–4 mm) and the herbage is glaucous. *C. praeceptorum* [OBL] perigynia are conspicuously nerved and the pistillate scales are light brown with broad pale or green centers and hyaline margins.

Habitat and Ecology: Uncommon in fens, along streams and edges of wet meadows.

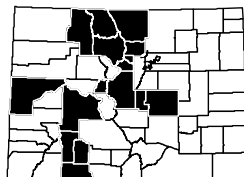
Comments: Circumboreal. *C. brunnescens* is considered critically imperiled (S1) in Utah and North Dakota, state imperiled (S2) in Wyoming, and state vulnerable (S3) in Montana.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex buxbaumii Wahlenb.

Buxbaum's sedge

Cyperaceae

kgNaturePhotography.com



Synonyms: None
USDA PLANTS Symbol: CABU6
ITIS TSN: 39452
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: 9
Duration: Perennial
CO Elevation: 7,840–10,300 ft. (2,390–3,140 m)

Key Characteristics:

- Loosely caespitose from long, slender rhizomes; foliage glaucous with reddish-brown bases
- Leaf sheaths yellowish-brown, purple-dotted ventrally, cross-fibrillose
- Terminal spikes gynaeandrous, 1–3 cm long; lateral spikes pistillate, 5–20 mm long
- Perigynia pale green, minutely beaked, glaucous or whitish with bumps; beaks reddish-tipped
- Pistillate scales lanceolate, tapering to awn-tips, narrower and longer than the perigynia; stigmas 3

Annette Miller



Hurd et al. 1998



Similar Species: *C. buxbaumii* is distinctive with the pistillate scales that produce awn-like midribs encompassing glaucous perigynia. *C. nova* [FAC, FACW] pistillate scales are shorter and it is densely tufted, not rhizomatous. *C. livida* [OBL] also has pale, green perigynia, but it has a much narrower inflorescence and the the terminal spike is staminate.

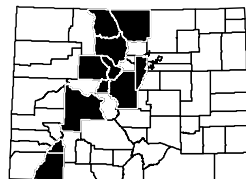
Habitat and Ecology: Widespread, but uncommon. Grows in wet meadows, edges of fens and wet aspen stands in montane zone.

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. Named for Johann Christian Buxbaum, 1693-1730, a German botanist, physician and entomologist.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex canescens L.

Silvery sedge

Cyperaceae

Max Lohr



Synonyms: None

USDA PLANTS Symbol: CACA11

ITIS TSN: 39447

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,700–12,280 ft. (2,040–3,745 m)

Key Characteristics:

- Loosely to densely clustered on short rhizomes; culms lax, widely spreading
- Leaves clustered near bases; blades flat, glaucous, 1.5–4 mm wide
- Spikes 4–8, gynaeandrous, 5–10 mm long, sessile, perigynia ascending, crowded
- Perigynia ovoid-oblong, spongy-thickened, golden yellow, 1.8–3 mm long; beak minute
- Pistillate scales broadly ovate, shorter and narrower than perigynia, white-hyaline; stigmas 2



Hurd et al. 1998



Hurd et al. 1998

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

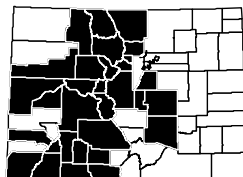
Habitat and Ecology: Common in open, wet sites, shores, river banks and wetlands in subalpine and montane zones.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Steve Olson



Synonyms: None

USDA PLANTS Symbol: CACA12

ITIS TSN: 39540

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 7,000–14,100 ft. (2,135–4,300 m)

Key Characteristics:

- ◆ Densely tufted from short roots; culms grass-like, slender, nodding, 0.3–6 dm tall
- ◆ Leaves 5–8, clustered at bases; lowest bract leaf-like with well-developed sheaths
- ◆ Terminal spikes, 2–4, staminate, 4–10 mm long; pistillate spikes nodding on slender peduncles
- ◆ 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

Jeanne R. Janish



Hurd et al. 1998



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

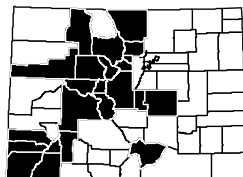
Habitat and Ecology: Common on peat or moss hummocks or wet, shaded sites on stream banks, lake shores and willow stands from upper montane to alpine zones.

Comments: Circumboreal. Considered state critically imperiled (S1) in North Dakota, state imperiled (S2) in Wyoming and state vulnerable (S3) in South Dakota. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts. Sedges provide nesting cover and/or concealment.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex capitata L. ssp. arctogena (Harry Sm.) Hiitonen

Capitate sedge

Cyperaceae

Steve Matson



Synonyms: *Carex arctogena* Harry Sm.

USDA PLANTS Symbol: CACAA2

ITIS TSN: 523755

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T4? S1

C-Value: 10

Duration: Perennial

CO Elevation: 11,140–12,300 ft. (3,395–3,750 m)

Key Characteristics:

- Loosely to densely tufted from creeping, scaly, purplish-red rhizomes; culm bases reddish
- Blades involute, filiform, stiff and glabrous, 1 mm wide; sheaths truncate at mouth
- Spike single, androgynous, globose with spreading perigynia in lower half, rachilla obvious
- Perygynia ovate-orbicular, broadly rounded bases, flattened; beaks abruptly contracted, cleft
- Pistillate scales shorter and narrower than perigynia, dark brown, margins hyaline; stigmas 2



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. nigricans* [FACW] has a similar appearance with an androgynous, solitary spike, but the perigynia are lanceolate with tapering beaks. *C. gynocrates* [OBL] perigynia are elliptic to lanceolate, narrowed and tapering at bases.

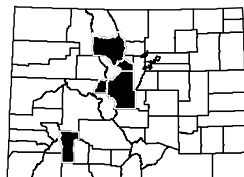
Habitat and Ecology: Uncommon in fens and wet alpine meadows.

Comments: Circumboreal. Considered state critically imperiled (S1) in Colorado and state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex conoidea Schkuhr ex Willd.

Openfield sedge

Cyperaceae

Loraine Yeatts



Synonyms: None

USDA PLANTS Symbol: CACO14

ITIS TSN: 39556

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 S1

C-Value: Not Assigned

Duration: Perennial

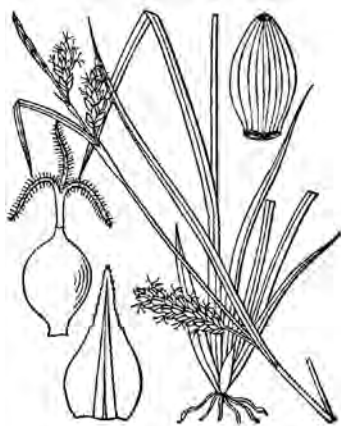
CO Elevation: 5,700–7,890 ft. (1,735–2,405 m)

Key Characteristics:

- ◆ Densely caespitose in tussocks from short rhizomes; leaf sheaths red-dotted
- ◆ Lowest bract slightly shorter to longer than terminal spike
- ◆ Terminal spike staminate, (5) 8–26 (30) long; lateral spikes pistillate, 5–29 mm long
- ◆ Perigynia shiny, straw-colored, finely-nerved, up to 25 per spike, oblong, 3–4 mm long
- ◆ Pistillate scales ovate, awned, brownish with a green center, shorter than perigynia; stigmas 3



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *C. crawei* [FACW] is not caespitose, the veins on the perigynia are distinctly raised and the lowest bract is shorter than the terminal spike. *C. buxbaumii* has glaucous perigynia and pistillate scales with awn-like midribs.

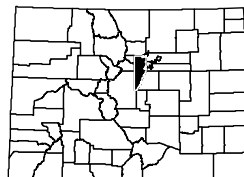
Habitat and Ecology: Rare in Colorado, grows in wet meadows.

Comments: First documented occurrence for Colorado (S1) is in Jefferson County (2008) by Dr. A. A. Reznicek, University of Michigan. The other confirmed occurrence west of the Mississippi River is in Arizona, was likely an introduction and does not appear to be persisting. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Mohlenbrock 1999



Sedges



Hurd et al. 1998

Synonyms: None

USDA PLANTS Symbol: CACR3

ITIS TSN: 39558

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S1

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,400–7,000 ft. (1,645–2,135 m)

Key Characteristics:

- ◆ Culms arising singly or few together from well-developed rhizomes; culms stiff, thick
- ◆ Lowest leaf-like bract with well-developed sheaths, shorter than terminal spikes
- ◆ Terminal spike staminate, short to long pedunculate, 1–3 cm long; lateral spikes pistillate, 1–3 cm long
- ◆ Perigynia elliptic, light green to tan, often with reddish speckles, raised veins
- ◆ Pistillate scales broadly ovate with excurrent midribs, equaling or shorter than perigynia; stigmas 3



Hurd et al. 1998

USDA-NRCS PLANTS Database Britton & Brown 1913



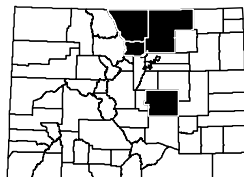
Similar Species: *C. conoidea* [FAC, FACW] is also many flowered (10–50) with distinctly nerved perigynia. However it is densely caespitose, the perigynia veins are slightly impressed versus raised, and the lower bract is usually much longer than the terminal spike. *C. capillaris* [FACW] spikes are on nodding peduncles, the perigynia are shiny and the culms are in dense tufts.

Habitat and Ecology: Rare. Grows in wet meadows, floodplains, swales and ditches in foothills and plains, often associated with limestone.

Comments: Known from the Front Range and El Paso County. Considered an eastern prairie relict; state critically imperiled (S1) in Colorado, Utah and Wyoming and state imperiled (S2) in Montana. 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex diandra Schrank

Lesser paniced sedge

Cyperaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: CADI4

ITIS TSN: 39448

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1; USFS Sensitive

C-Value: 9

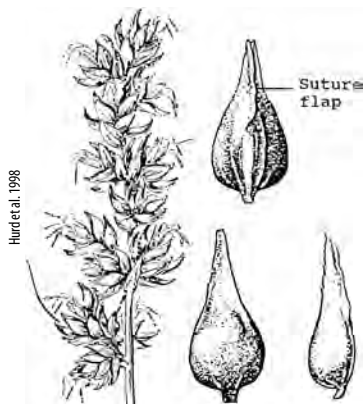
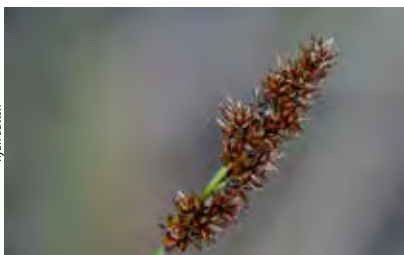
Duration: Perennial

CO Elevation: 5,120–9,710 ft. (1,560–2,960 m)

Key Characteristics:

- ◆ Densely caespitose from short rhizomes bearing fine hairs; culms sharply triangular
- ◆ Front of leaf sheaths with red or brown dots, especially near bases
- ◆ Numerous androgynous spikes, few-flowered, sessile, closely aggregated
- ◆ Perigynia 2–3 mm long, ovate, firm, glossy, dark brown, dorsal suture on ventral side; beaks tapering
- ◆ Pistillate scales oblong-ovate with acute tips, equal to or wider, brownish with pale midribs; stigmas 2

Ryan Batten



Similar Species: *C. simulata* [OBL] occurs in similar, peat-accumulating wetlands. The perigynia are shiny, but are narrowly winged with pistillate scales completely concealing perigynia. *C. simulata* is often dioecious with androgynous and gynaeandrous plants.

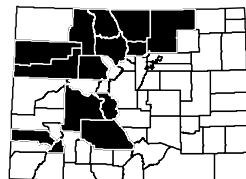
Habitat and Ecology: Uncommon along subalpine willow stands, wet meadows, moss covered logs and floating peat mats. *C. diandra* is a common indicator of fens.

Comments: Circumpolar. Considered state critically imperiled (S1) in Colorado and Utah and state imperiled (S2) in Wyoming and North Dakota. In Greek, *diandrus* means having 2 stamens, which is a misnomer for *C. diandra* because it has 3 stamens, as do most sedges. 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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



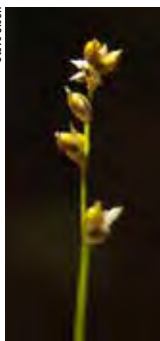
Sedges

Carex disperma Dewey

Softleaf sedge

Cyperaceae

Steve Olson



Synonyms: *Carex tenella* Schkuhr

USDA PLANTS Symbol: CAD16

ITIS TSN: 39577

Wetland Status AW: OBL WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 6,000–13,360 ft. (1,830–4,070 m)

Key Characteristics:

- Loosely tufted from long, slender rhizomes; culms very slender, weak, nodding, 1–6 dm tall
- Leaf blades thin, 0.75–2 mm wide; sheaths tight, truncate at bases
- Spikes androgynous, 2–6 flowered, lower spikes separate from upper spikes, to 5 mm long
- Perigynia 2–3 mm long, egg-shaped, finely-nerved, dark; beaks minute, minutely bidentate
- Pistillate scales ovate-triangular, awned at tips, shorter than or equaling perigynia; stigmas 2

Hurd et al. 1998



Hurd et al. 1998



Similar Species: *C. laeviculmis* [FACW] has terminal gynaeandrous spikes and the perigynia have longer beaks than *C. disperma*. *C. vulpinoidea* [OBL, FACW] has 3 or more perigynia per spike and the spikes are closely aggregated.

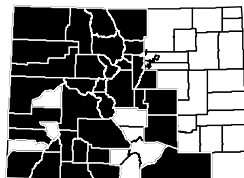
Habitat and Ecology: Common in wet meadows, fens, shady forests and along streambanks in montane zone. *C. disperma* is difficult to see in dense vegetation, especially when it occurs with other sedges.

Comments: Considered state vulnerable (S3) in Wyoming and North Dakota. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex echinata Murray ssp. echinata

Star sedge

Cyperaceae

Hurd et al. 1998



Synonyms: *Carex angustior* Mack., *Carex muricata* L.

USDA PLANTS Symbol: CAECE

ITIS TSN: 39583

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 6,950–10,800 ft. (2,120–3,290 m)

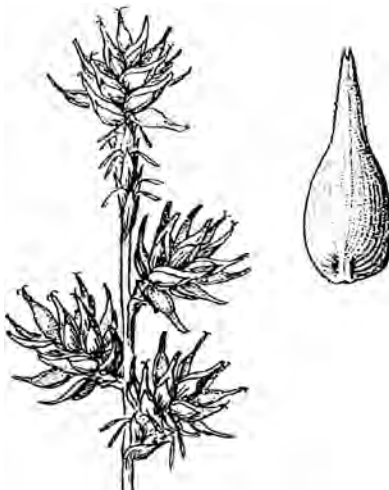
Key Characteristics:

- ◆ Densely tufted; culms equal to or exceeding leaves, 1–6 dm tall
- ◆ Leaves 1–3.3 mm wide; lowest bract small and inconspicuous
- ◆ Terminal spikes gynaeandrous, 3–6, “star shaped” due to widely spreading, deflexed perigynia
- ◆ Perigynia 2–14 veined, lance-triangular, bases spongy, 1.6–3.5 mm long; beaks bidentate
- ◆ Pistillate scales broadly ovate, shorter and narrower than perigynia, scarious; stigmas 2

Hurd et al. 1998



Hurd et al. 1998



Similar Species: *C. interior* [OBL] occurs in similar habitats and has widely spreading, ovate perigynia, but the perigynia beaks are strongly bidentate and serrate.

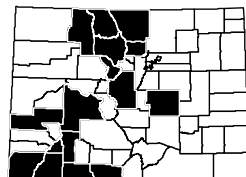
Habitat and Ecology: Uncommon in wet meadows, fens and pond margins from montane to subalpine zone.

Comments: Considered state critically imperiled (S1) in Wyoming and state vulnerable (S3) in Montana. Name derived from the Greek word, *echino* meaning hedgehog or sea urchin. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Russ Kleinman



Synonyms: *Carex stricta* Lam. var. *elongata* (Boeckeler) Gleason

USDA PLANTS Symbol: CAEM2

ITIS TSN: 39591

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

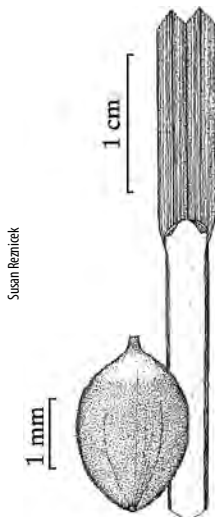
CO Elevation: 3,280–11,720 ft. (1,000–3,570 m)

Key Characteristics:

- ◆ Rhizomatous; culms obtusely angled, scabrous, 3–12 dm tall
- ◆ Leaf sheaths red-brown; bract below lowest spikes leaf-like, equal to inflorescence
- ◆ Terminal spikes staminate, 2–5, erect, lower spikes pistillate, 3–5, bases attenuate
- ◆ Perigynia green, 3- to 5-nerved on each face, flattened; beaks short 0.1–0.3 mm
- ◆ Pistillate scales equal to perigynia, apices acute, awnless; stigmas 2

Sedges

Russ Kleinman



Similar Species: *C. emoryi* [OBL] resembles *C. aquatilis* in overall appearance and habitat, but they do not usually occupy the same elevation range in Colorado. *C. emoryi* grows at much lower elevation and the lower bract is usually longer than the inflorescence.

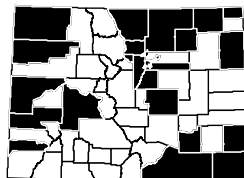
Habitat and Ecology: Grows along ditches, wet meadows, floodplains and along lake shores. *C. emoryi* is an early-flowering species, shedding perigynia by mid-June in Colorado.

Comments: Considered state critically imperiled (S1) in Wyoming. 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.

Animal and Bird Use:



References: Flora of North America 2002, Great Plains Flora Association 1986, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex exsiccata L.H. Bailey

Western inflated sedge

Cyperaceae

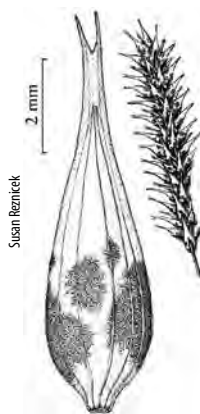
Derrick Ditchburn



Synonyms: *Carex vesicaria* L. var. *major* Boott
USDA PLANTS Symbol: CAEXS
ITIS TSN: 39596
Wetland Status AW: OBL WM: OBL GP: NI
Native Status: Native
Conservation Status: G5 SNR
C-Value: 10
Duration: Perennial
CO Elevation: 7,300–8,700 ft. (2,225–2,650 m)

Key Characteristics:

- ◆ Loosely caespitose from short, stout rhizomes; culms three-angled, 3–10 dm tall
- ◆ Leaf sheaths reddish-purple, thick, ligules longer than wider; bract longer than inflorescence
- ◆ Terminal spikes staminate, 2–4; lateral spikes pistillate, 1–3, cylindric, loosely flowered
- ◆ Perigynia green or straw-colored, inflated, long taper into indistinct beaks, 7–10 mm long
- ◆ Pistillate scales ovate, narrower and shorter than perigynia; stigmas 3



Similar Species: *C. exsiccata* is regarded by some authors as *C. vesicaria* var. *major* [CAVEM3]. We are following USDA-NRCS PLANTS Database nomenclature which distinguishes between the two species. *C. vesicaria* [CAVE6] has shorter perigynia (4–8 mm long) that are ovoid to globose instead of lanceolate with distinct beaks. In Colorado, *C. vesicaria* is much more widespread than *C. exsiccata*.

Habitat and Ecology: Rare in Colorado. Only known from a few sites in the montane and subalpine zones in Routt and Grand Counties.

Comments: FNA (2002) does not indicate *C. exsiccata* or *C. vesicaria* as occurring in Colorado, likely due to the unsettled taxonomic issue as discussed above. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex gravida L.H. Bailey

Heavy sedge

Cyperaceae

John Hilly



Synonyms: None

USDA PLANTS Symbol: CAGR4

ITIS TSN: 39621

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: GS S1

C-Value: 4

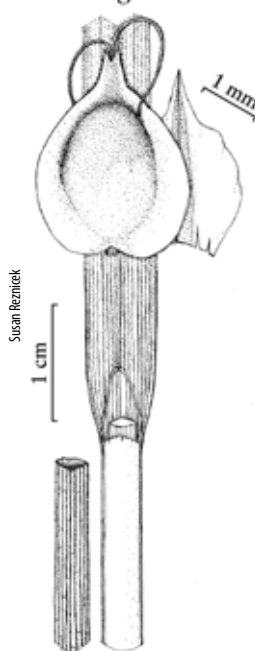
Duration: Perennial

CO Elevation: 3,370–5,850 ft. (1,025–1,785 m)

Key Characteristics:

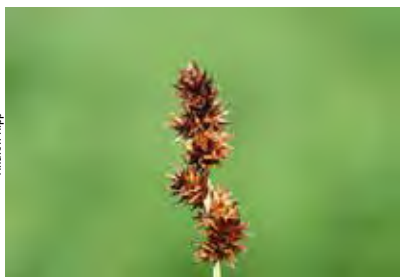
- ◆ Cespitose, without conspicuous rhizomes; culms 3–10 dm tall, 3-angled, scabrous
- ◆ Leaf sheaths with conspicuous transverse veins on backs, fronts hyaline, sometimes red-dotted
- ◆ Spikes androgynous, 5–15, 1–5 cm long x 8–15 mm wide, occasionally compound larger
- ◆ Perigynia 3–5.5 mm long, spongy bases, margins serrulate distally; beaks 0.6–1.6 mm
- ◆ Pistillate scales 2.5–4.5 mm long, equal to or longer than perigynia; stigmas 2

Carex gravida



Sedges

Andrew Hipp



Similar Species: *C. gravida* is distinctive with all androgynous spikes and serrulate perigynia beaks.

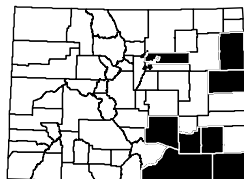
Habitat and Ecology: Found along pond margins and river bottoms, roadside ditches, in moist canyons and on sandstone rimrock, usually on calcareous soils.

Comments: Considered state critically imperiled (S2) in Wyoming and state vulnerable (S3) in Montana. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Johnston 2001, Weber and Wittmann 2012



Carex gynocrates Wormsk. ex Drejer

Northern bog sedge

Cyperaceae

Hurd et al. 1998



Synonyms: *Carex dioica* L. ssp. *gynocrates* (Wormsk. ex Drejer) Hultén

USDA PLANTS Symbol: CAGY2

ITIS TSN: 39624

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 10

Duration: Perennial

CO Elevation: 8,500–13,000 ft. (2,590–3,960 m)

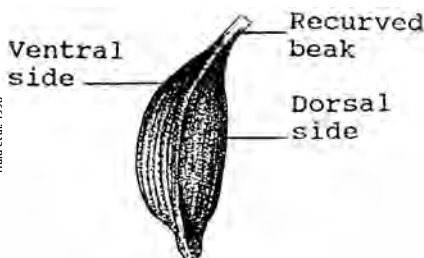
Key Characteristics:

- ◆ Culms arising singly from long, slender rhizomes; culms filiform, terete, 2–30 cm tall
- ◆ Leaves involute, filiform, 0.3–1 mm wide; bracts absent
- ◆ Single spike, androgynous, 5–15 mm long, chestnut brown, perigynia crowded, widely spreading
- ◆ Perigynia elliptic, reflexed, spongy bases, plump, leathery; beaks contracted, cleft, recurved
- ◆ Pistillate scales scarious, broadly ovate with obtuse tips, shorter and wider than perigynia; stigmas 2

Hurd et al. 1998



Hurd et al. 1998



Similar Species: *C. gynocrates* is distinct with the combination of solitary, staminate spikes and thread-like leaves.

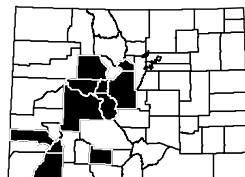
Habitat and Ecology: Uncommon in fens, wet meadows and along streams in subalpine zone.

Comments: Circumboreal. Considered state critically imperiled (S1) in North Dakota, state imperiled (S2) in Wyoming, and state vulnerable (S3) in Montana. 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.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges



Steve Matson

Synonyms: *Carex parryana* Dewey ssp. *hallii* (Olney) D.F.

Murray, *Carex parryana* Dewey var. *unica* L.H. Bailey

USDA PLANTS Symbol: CAHA3

ITIS TSN: 565044

Wetland Status AW: FACW **WM:** FACW **GP:** FAC

Native Status: Native

Conservation Status: G4?Q SNR

C-Value: 9

Duration: Perennial

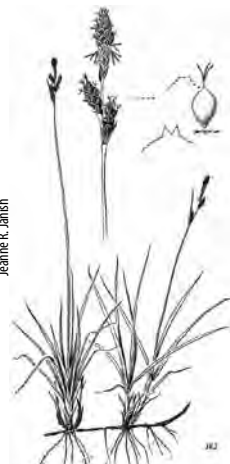
CO Elevation: 5,300–12,000 ft. (1,615–3,660 m)

Key Characteristics:

- Loosely tufted from scaly, creeping rhizomes; culms 1–3 dm tall
- Leaves 2–3.5 mm wide; lower bract shorter than or exceeding inflorescence
- Terminal spikes usually pistillate, can be staminate; lateral spikes 1–2, pistillate or absent
- Perigynia greenish-yellow, veinless, bumpy; beaks 0.2–0.3 mm, truncate, serrulate; stigmas 3
- Pistillate scales light to dark brown, margins hyaline, with obtuse tips, concealing perigynia



Steve Matson



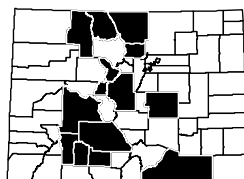
Jeanne R. Janish

Similar Species: *C. parryana* [FAC, FACW] is very similar, many authors believe it to be a synonym for *C. hallii*. To be consistent, we are following USDA-NRCS PLANTS Database nomenclature. *C. parryana* [FAC, FACW] is slightly taller than *C. hallii*, up to 3.5 dm tall, and the lateral spikes are usually 2–5 versus 1–2.

Habitat and Ecology: Scattered in open, gravelly, low prairies, sandy sloughs and wet meadows.

Comments: *C. hallii* is considered state critically imperiled (S1) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Fertig 1999, Flora of North America 2002, Great Plains Flora Association 1986, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008

Carex hassei L.H. Bailey

Salt sedge

Cyperaceae

Steve Matson



Synonyms: *Carex saliniformis* Mackenzie

USDA PLANTS Symbol: CAHA5

ITIS TSN: 39629

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,500–9,740 ft. (1,675–2,970 m)

Key Characteristics:

- ◆ Rhizomatous; culms 10–40 (70) cm tall
- ◆ Leaves green to glaucous, 2–3 mm wide, bases whitish
- ◆ Terminal spike staminate, 1.3 mm long; lateral spikes pistillate, 10–23 mm long
- ◆ Perigynia obovate, 9–15 veins, 1.8–3.2 mm long, pale green, tips curved back; nearly beakless
- ◆ Pistillate scales 2–3.2 mm, brown, rounded, sometimes awned; achenes lenticular; stigmas 2

carexworkinggroup.com



carexworkinggroup.com



Similar Species: *C. aurea* [OBL] perigynia are golden-yellow when fully mature, as well as fleshy, orbicular and coarsely ribbed.

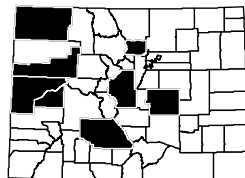
Habitat and Ecology: Uncommon in moist canyons, gulches, mesic meadows, or drier margins of lakes. FNA (2002) states that *C. hassei* probably occurs in Colorado. There are currently 15 specimens at The University of Colorado herbarium (COLO) and Denver Botanical Gardens (KHD) from Boulder, Delta, El Paso, Garfield, Mesa, Moffat, Park, and Saguache Counties.

Comments: Taxonomy of *C. hassei* is unsettled. Many authors have subsumed it with *C. aurea* or as a variety of *C. aurea*. 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.

Animal and Bird Use:



References: Flora of North America 2002, Johnston 2001, Weber and Witmann 2012, Wilson et al. 2008



Sedges

Carex heteroneura W. Boott

Different-nerve sedge

Cyperaceae

Max Lohr



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

USDA PLANTS Symbol: CAHE8

ITIS TSN: 39635

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,500–14,310 ft. (2,590–4,360 m)

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 and lateral spikes gynaeandrous, erect or nodding, clustered, sessile
- ◆ Perigynia broadly oval, pale green or pale yellow; nerves absent; beaks 0.5 mm long
- ◆ Pistillate scales ovate, acute, dark reddish-brown to black, light midribs, hyaline margins; stigmas 3



Hurd et al. 1997



Steve Matson

Similar Species: *C. atrosquama* [CAAT8, FACU, FAC, ITIS 39512] and *C. albonigra* [CAAL6, FACU, ITIS 39486] 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.

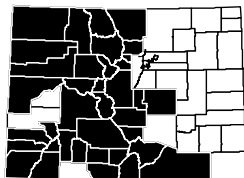
Habitat and Ecology: Common along streams and pond margins, in wet subalpine and alpine meadows and tundra.

Comments: *C. heteroneura* is highly variable, especially in size and shape of lateral spikes, size and color of perigynia and length of pistillate scales. There are numerous examples of intermediate forms making positive identification difficult. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Weber and Wittmann 2012, Wilson et al. 2008



Carex hystericina Muhl. ex Willd.

Bottlebrush or porcupine sedge

Cyperaceae

John Hilty



Synonyms: None

USDA PLANTS Symbol: CAHY4

ITIS TSN: 39456

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 3,500–11,800 ft. (1,065–3,595 m)

Key Characteristics:

- ◆ Cespitose from short, stout rhizomes, can form dense patches; culms up to 1 m tall
- ◆ Leaf blades flaccid, slightly revolute margins; bracts leaf-like, lower exceeds inflorescence
- ◆ Terminal spike staminate, ascending; pistillate spikes densely flowered, nodding, porcupine-like
- ◆ Perigynia inflated, light green, 5–7 mm long; nerves 12–20; beaks 2–2.5 mm, deeply bidentate
- ◆ Pistillate scales with long awns, 2–6 mm long, narrower than perigynia; stigmas 3

USDA-NRCS PLANTS Database Britton & Brown 1913



Hurd et al. 1997



Similar Species: *C. retrorsa* [OBL] occurs in similar habitats, but is distinguished by the brown and green carpellate scales that are not papery and awns that are acute, not stiff and narrow. *C. utriculata* [OBL] is superficially similar, but has perigynia that are inflated, abruptly contracted at the apices.

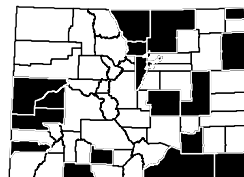
Habitat and Ecology: Occasional to common near streams, meadows, ditches and marshes from short grass prairie to montane zones. Can become weedy in wetlands with calcareous substrates. Known to hybridize with *C. utriculata* and *C. vesicaria*.

Comments: Considered state imperiled (S2) in Wyoming. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Hurd et al. 1997



Key Characteristics:

- ◆ Cespitose from short, creeping rhizomes; culms slender, stiff, 1–3 dm tall
- ◆ Spikes gynaeandrous, sessile, dark, pyramidal inflorescence, closely aggregated; bracts with short awn
- ◆ Perigynia 2.5–3.2 mm long, nerveless, spreading with exerted tips, ragged appearance
- ◆ Pistillate scales, dark, yellowish-brown centers, obtuse tips, shorter and narrower than perigynia
- ◆ Achenes broadly oval, lenticular, 0.8–1 mm wide; stigmas 2

Hurd et al. 1997



Jeanne R. Janish



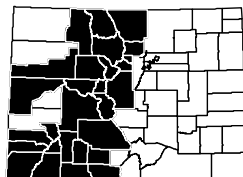
Similar Species: *C. jonesii* [FACW, OBL] and *C. neurophora* [FACW] occur in similar habitats, but both have androgynous, terminal spikes.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex interior L.H. Bailey

Inland sedge

Cyperaceae

kgNaturePhotography.com



Synonyms: None

USDA PLANTS Symbol: CAIN11

ITIS TSN: 39652

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,200–11,200 ft. (1,585–3,415 m)

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, gynaeandrous, short, sessile, perigynia widely spreading, forming a “star”
- ◆ Perigynia ovate, plump, shiny, spongy bases, contracting to short, bidentate beaks
- ◆ Pistillate scales shorter than perigynia, ovoid with obtuse tips; stigmas 2



Similar Species: *C. echinata* (= *C. angustior*) [OBL] 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*.

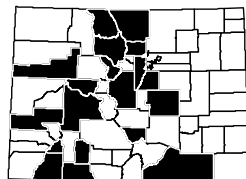
Habitat and Ecology: Widely distributed and common in wet meadows, fens and along streambanks in mountains and foothills.

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.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CAJO

ITIS TSN: 39656

Wetland Status AW: FACW WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,000–12,630 ft. (2,440–3,850 m)

Key Characteristics:

- ◆ Clustered or arising singly on short branched rhizomes; culms slender, 1.5–6 dm tall
- ◆ Leaves closely clustered near bases; blades flat, 1.5–3 mm wide; bracts short, inconspicuous
- ◆ Spikes 4–8, androgynous, small, sessile, densely aggregated into pyramidal-shaped head
- ◆ Perigynia ovate-lanceolate, swollen bases, shiny, distinct veins; beaks 0.5–2 mm long
- ◆ Pistillate scales triangular-ovate, acute tips, brown-black, lighter midveins; stigmas 2

Hurd et al. 1998



Hurd et al. 1998



Similar Species: *C. neurophora* [FACW], uncommon in Colorado, has leaf sheaths that are transversely wrinkled in front and a much stouter culm (3.5 mm thick). *C. illota* [FACW] spikes are gynaeandrous and perigynia are nerveless.

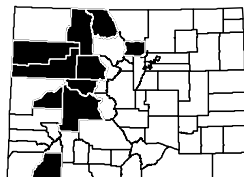
Habitat and Ecology: Uncommon along streams and lakes and in meadows and alpine tundra.

Comments: *C. jonesii* occurs in the Intermountain West to California and the Pacific Northwest. It is considered state critically imperiled (S1) in Wyoming and state imperiled (S2) in Utah. 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.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex lachenalii Schkuhr

Two-parted sedge

Cyperaceae

Hurd et al. 1998



Synonyms: *Carex bipartita* All. var. *austromontana* F.J. Herm.

USDA PLANTS Symbol: CALA10

ITIS TSN: 39408

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

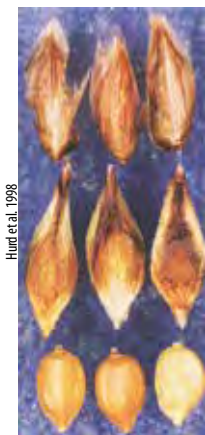
C-Value: 10

Duration: Perennial

CO Elevation: 10,980–13,240 ft. (3,345–4,035 m)

Key Characteristics:

- Loosely caespitose from short rhizomes; culms slender, 5–30 cm tall
- Leaves clustered at bases; blades flat with revolute margins; bracts inconspicuous
- Spikes 1–4, gynaeandrous, sessile, reddish-brown, perigynia ascending, aggregated
- Perigynia elliptic, dorsal suture evident, 2–3 mm long; nerves fine; beaks 0.5 mm long
- Pistillate scales oblong-ovate with obtuse tips, concealing perigynia, hyaline margins; stigmas 2



Hurd et al. 1998

Hurd et al. 1998



Similar Species: *C. praeceptorum* [OBL] has shorter (1.5–2.5 mm long) perigynia with slightly serrulate beaks.

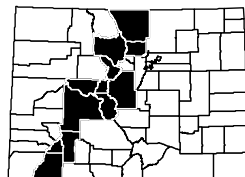
Habitat and Ecology: Found along melting snowbanks, lake margins and in alpine wetlands.

Comments: Circumboreal. *C. lachenalii* (= *C. bipartita* var. *austromontana*) is considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008





Key Characteristics:

- Loosely to densely clumped from short rhizomes; culms weak, spreading, 2–12 dm tall
- Leaf blades flat, light green or glaucous, 2–5 mm wide; bracts shorter than inflorescence
- Spikes gynaeandrous, sessile, light green or tan, flexuous, perigynia appressed-spreading
- Perigynia oblong-lanceolate, spongy-thickened; beaks serrulate, 1.1–2.7 mm long



Synonyms: *Carex deweyana* Schwein. var. *sparsiflora* L.H. Bailey

USDA PLANTS Symbol: CALA13

ITIS TSN: 39658

Wetland Status AW: FACW **WM:** FACW **GP:** FACW

Native Status: Native

Conservation Status: G5 S3

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,520–10,000 ft. (2,595–3,050 m)

- Pistillate scales ovate, covering perigynia (not the beaks), prolonged as short awn-tips; stigmas 2



Similar Species: *C. disperma* [OBL, FACW] looks similar, but the terminal spike is androgynous and the perigynia beaks are minute.

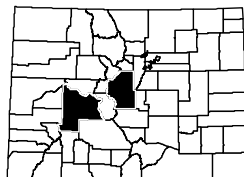
Habitat and Ecology: Rare to occasional in moist forests, meadows, seeps, shady streamsides and fens. Known from the Tarryall Mountains in Park County and north of Gothic in Gunnison County.

Comments: FNA (2002) considers the reports for Colorado false, based on misidentifications. We are including it so that it can be differentiated from other sedges or for verification. Considered state critically imperiled (S1) in Wyoming and state vulnerable (S3) in Colorado. 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.

Animal and Bird Use:



References: Flora of North America 2002, Johnston 2001, Weber and Witmann 2012, Wilson et al. 2008



Dean Wm. Taylor



Synonyms: None

USDA PLANTS Symbol: CALA11

ITIS TSN: 39459

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 8

Duration: Perennial

CO Elevation: 5,000–9,650 ft. (1,525–2,940 m)

Key Characteristics:

- ◆ Stems arising singly or few together from long, creeping rhizomes; culm bases wine-red
- ◆ Leaf blades 1–1.5 mm, involute; sheaths yellowish-brown, lower sheaths cross-filamentose
- ◆ Terminal spikes staminate, usually 2, peduncled; lateral spikes pistillate, sessile, closely flowered
- ◆ Perigynia ellipsoid, inflated, round at bases, pubescent; nerves obscured; beaks bidentate
- ◆ Pistillate scales lanceolate, ciliate at tips, 3-nerved, mucronate-awned; stigmas 3



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. pellita* (= *C. lanuginosa*) [OBL] also has pubescent perigynia, but the leaf blades are wider, culms are sharply triangular and the perigynia have distinct beaks. *C. pellita* is found at lower elevations and is more common in Colorado than *C. lasiocarpa*.

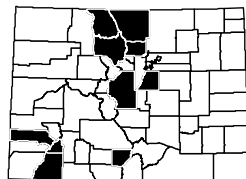
Habitat and Ecology: Rare to locally common in fens in high montane to subalpine. With a consistently high water table, *C. lasiocarpa* will form a monoculture, with a distinct look due to the pale straw color from the dried, faded and curly leaves. Or it can occur on floating mats with low cover.

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.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex lenticularis Michx. var. lipocarpa (T. Holm) L.A. Standl.

Kellogg's sedge

Cyperaceae

Susan McDougall USDA-NRCS PLANTS Database



Synonyms: *Carex kelloggii* W. Boott

USDA PLANTS Symbol: CALEL3

ITIS TSN: 39666

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 9

Duration: Perennial

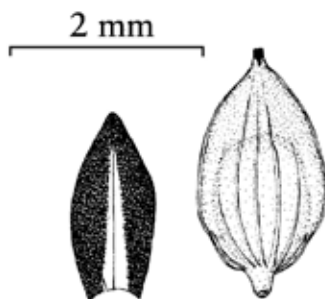
CO Elevation: 5,550–11,640 ft. (1,690–3,550 m)

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
- ◆ Terminal spike staminate, pedunculate; lateral spikes pistillate with perigynia ascending
- ◆ Perigynia ovate, 2-edged, swollen above stipe, green except for brown tips; beaks 0.1–0.3 mm
- ◆ Pistillate scales reddish, smaller than perigynia, 3-nerved, green center, hyaline margins; stigmas 2



Hurd et al. 1998



Susan Reznick

C. lenticularis
var. *lipocarpa*

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

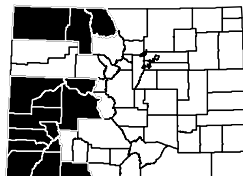
Habitat and Ecology: Occasional or locally common in wet meadows, river banks and lake margins.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex leptalea Wahlenb.

Bristlystalked sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CALE10

ITIS TSN: 39669

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 10

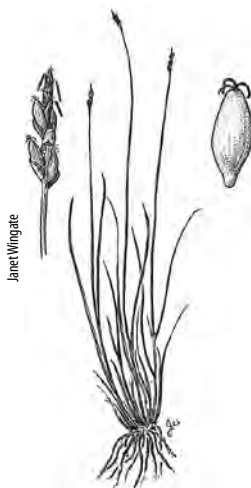
Duration: Perennial

CO Elevation: 8,790–10,250 ft. (2,680–3,125 m)

Key Characteristics:

- ◆ Densely clustered from slender rhizomes; culms sometimes arching, 1.5–7 dm tall
- ◆ Leaves 2, flat, 0.5–1.3 mm wide; sheaths membranous, brownish-tinged
- ◆ Spike solitary, androgynous, erect, linear-oblong, yellowish-green, perigynia few
- ◆ Perigynia oval, pale green or yellow, many-nerved, rounded, apices beakless
- ◆ Pistillate scales small, early deciduous; stigmas 3

Hurd et al. 1998



Similar Species: *C. livida* [OBL] terminal spike is staminate, yellowish-green and the pistillate scales are larger and ovate with mucronate tips.

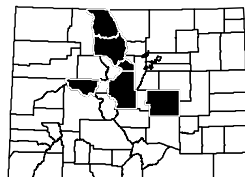
Habitat and Ecology: Rare. Grows in fens, often calcareous substrates, along pond margins and near seeps in subalpine to alpine.

Comments: Although rare in Colorado, *C. leptalea* has the widest geographic range of any North America sedge, common in the boreal regions of North America. However, in the conterminous United States it is uncommon. Considered state critically imperiled (S1) in Colorado and Utah, state imperiled (S2) in North Dakota, and state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex limosa L.

Mud sedge

Cyperaceae

Al Schröder



Key Characteristics:

- ◆ Rhizomoutous, covered with yellowish wool; culms arising single or few, 2–6 dm tall, bases reddish
- ◆ Leaves channeled, glaucous; bracts leaf-like, 2–10 cm long x 1–3 mm wide
- ◆ Terminal spike staminate, 15–27 mm long; pistillate spikes nodding, 1–2.5 cm long
- ◆ Perigynia broadly ovoid, densely papillate, glaucous, 2.3–4.2 mm long x 2 mm wide
- ◆ Pistillate scales obtuse, equal or barely exceeding perigynia, reddish-brown; stigmas 3



Hurd et al. 1998

Sedges

Annette Miller



Similar Species: *C. magellanica* ssp. *irrigua* (= *C. paupercula*) [OBL] leaves are flat, not channelled, the staminate spikes are shorter (4–13 mm long), pistillate scales are much narrower and longer than perigynia and usually awn-tipped. *C. livida* [OBL] and *C. buxbaumii* [OBL] are found in similar habitats, but both have erect spikes.

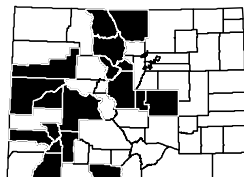
Habitat and Ecology: Locally common in fens, floating peat mats and saturated grounds within wet meadows.

Comments: Circumboreal. *C. limosa* is considered state imperiled (S2) in Colorado and North Dakota and state vulnerable (S3) in Utah, Wyoming, and Montana. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex livida (Wahlenb.) Willd.

Livid sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CALI

ITIS TSN: 39675

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 8,870–10,000 ft. (2,705–3,050 m)

Key Characteristics:

- ◆ Culms arising from white, creeping rhizomes; culms 0.5–6 dm tall; basal leaves persistent
- ◆ Leaf blades channeled, glaucous, 0.5–3.5 mm wide; bracts leaf-like, exceeding inflorescence
- ◆ Terminal spike staminate, yellowish-green, short-pedunculate; perigynia appressed
- ◆ Perigynia rhombic, tapered at apices, leathery, glaucous, 2.5–5 mm long; beaks absent or 0.2 mm
- ◆ Pistillate scales ovate, obtuse, mucronate tips, pale green centers, brown hyaline margins; stigmas 3

Annette Miller



Denise Culver



Similar Species: The whitish or bluish-green foliage may cause this species to be confused with other glaucous sedges. *C. aurea* [OBL] has golden yellow, globose perigynia and *C. limosa* [OBL] has nodding spikes.

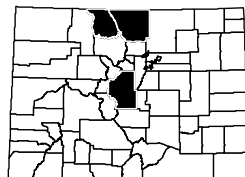
Habitat and Ecology: In Colorado, *C. livida* typically occurs on acidic soils or low pH waters, usually on floating mats of peat.

Comments: Circumboreal. It occurs sporadically throughout northern North America, becoming increasingly rare in its southern range. Considered state critically imperiled (S1) in Colorado and Utah and state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Keir Morse



Synonyms: *Carex subfusca* W. Boott, *Carex macloviana* d'Urv. ssp. *subfusca* (W. Boott) T. Koyama

USDA PLANTS Symbol: CAMA9

ITIS TSN: 39681

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

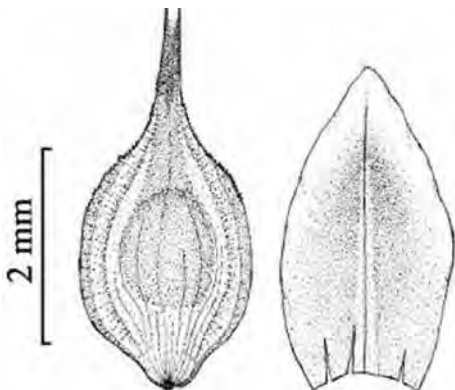
CO Elevation: 6,890–12,200 ft. (2,100–3,720 m)

Key Characteristics:

- ◆ Densely cespitose; culms 16–60 cm, 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, individually indistinct
- ◆ Perigynia ovate, 3.5–4.3 mm long, brown, glossy metallic sheen; beaks terete, hyaline tips
- ◆ Pistillate scales golden brown to reddish, whitish-gold midstripe, ovate, hyaline margins; stigmas 2

Sedges

Steve Matson



Susan Reznicek

Similar Species: *C. bebbii* [OBL] has smaller perigynia (2.5–3.8 mm long) with flat perigynium beaks. *C. micropetala* [CAM17, FAC, FACU, ITIS 39699] and *C. ebenea* [CAEB, NI, ITIS 39580] look similar to *C. macloviana* and commonly occur on the drier edges of wetlands. The main differences are that both have darker inflorescence and perigynia that are flat in cross section. *C. pachystachya* [FAC] looks very similar, distinguished by pistillate scales that are much narrower, without conspicuous white hyaline margins.

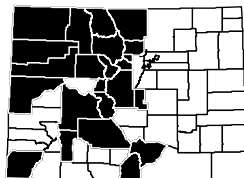
Habitat and Ecology: Common in meadows, along ponds and in alpine tundra.

Comments: USDA-NRCS PLANTS Database does not show *C. macloviana* occurring in Colorado. However, FNA (2002), Johnston (2001), Ackerfield (2012) 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Johnston 2001, Weber and Wittmann 2012



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

Boreal bog sedge

Cyperaceae

kgNaturePhotography.com



Synonyms: *Carex paupercula* Michx.

USDA PLANTS Symbol: CAMAI2

ITIS TSN: 523770

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,300–11,500 ft. (2,530–3,505 m)

Key Characteristics:

- Loosely clustered in small tufts from rhizomes; 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
- Terminal spike staminate, 4–12 mm long; pistillate spikes nodding
- Perigynia glaucous, papillate, dark brown, apices 2.2–3 mm long; marginal nerves prominent
- Pistillate scales lanceolate, narrower and longer than perigynia, awn-tipped; stigmas 3



Hurd et al. 1998



Hurd et al. 1998

Similar Species: Commonly mistaken for *C. limosa* [OBL], however *C. limosa* [OBL] has grooved leaf blades, longer staminate spikes (15–27 mm) and pistillate scales that are obtuse, equalling or exceeding the perigynia.

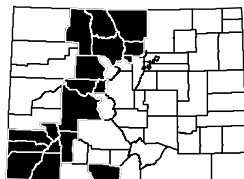
Habitat and Ecology: In Colorado, *C. magellanica* ssp. *irrigua* is an indicator of peat accumulating wetlands, scattered to infrequent on wet lake shores, and willow carrs in upper montane or subalpine zones.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex microglochin Wahlenb.

Fewseeded bog sedge

Cyperaceae

Max Lohr



Synonyms: None

USDA PLANTS Symbol: CAM16

ITIS TSN: 39697

Wetland Status AW: OBL WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5: SNR

C-Value: 9

Duration: Perennial

CO Elevation: 9,240–12,000 ft. (2,815–3,660 m)

Key Characteristics:

- ◆ Culms arising singly from slender, creeping rhizomes; culms 2–25 cm tall, stiff, prominently ribbed
- ◆ Leaf blades stiff, involute, 0.3–0.6 mm wide
- ◆ Spike solitary, androgynous, yellowish to golden brown; perigynia few, ascending, deflexed
- ◆ Perigynia yellowish, narrow and pointed, sharply reflexed; rachilla hooked, 0.5–2.8 mm long
- ◆ Pistillate scales oblong, wider but shorter than perigynia, early deciduous; stigmas 3



Hurd et al., 1998



Hurd et al., 1998

Similar Species: *C. microglochin* is very distinct with a solitary spike and sharply deflexed perigynia.

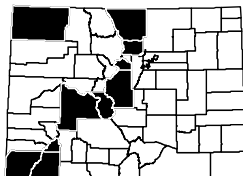
Habitat and Ecology: Occasional to rare in calcareous wetlands, subalpine willow carrs and fens.

Comments: Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012



Carex misandra R. Br.

Shortleaved sedge

Cyperaceae

Hurd et al. 1998



Synonyms: *Carex fuliginosa* Schkuhr ssp. *misandra* (R. Br.) Nyman

USDA PLANTS Symbol: CAMI10

ITIS TSN: 39422

Wetland Status AW: FACU WM: FACU GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 7,300–14,000 ft. (2,225–4,265 m)

Key Characteristics:

- ◆ Densely tufted without creeping rhizomes; culms slender, nodding, 0.5–3 dm tall
- ◆ Leaf blades 1.5–3.5 mm wide; sheaths reddish-brown; bracts leaf-like, short
- ◆ Terminal spikes gynaeandrous, nodding, pedunculate; pistillate spikes with perigynia ascending
- ◆ Perigynia 0.9–1.3 mm wide, tapering to apices, ciliate margins, few nerves; beaks bidentate
- ◆ Pistillate scales ovate, black, shorter than perigynia, margins and apices white-hyaline; stigmas 3



Hurd et al. 1998



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *C. capillaris* [FACW] has a similar look with the peduncled spikes, but the terminal spikes are staminate.

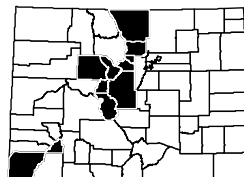
Habitat and Ecology: Found in alpine tundra, on scree slopes and sedge meadows.

Comments: Circumboreal. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Carex nebrascensis Dewey

Nebraska sedge

Cyperaceae

Trent M. Draper



Synonyms: None

USDA PLANTS Symbol: CANE2

ITIS TSN: 39711

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,500–10,500 ft. (1,065–3,200 m)

Key Characteristics:

- ◆ Culms arising singly from stout, scaly rhizomes, forming dense stands; culm bases red-tinged
- ◆ Leaf blades blue-green to glaucous, 3–12 mm wide; bracts leaf-like, exceeds inflorescence
- ◆ Terminal spikes, 1–2, staminate, 1.5–4 cm long; lateral spikes pistillate, pedunculate, 1.5–7 cm long
- ◆ Perigynia strongly veined, straw-colored, becoming red-dotted at maturity, 2.7–4.1 mm long
- ◆ Pistillate scales lanceolate, midribs extend to serrulate awns, reddish-brown; stigmas 2



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. aquatilis* [OBL] 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.

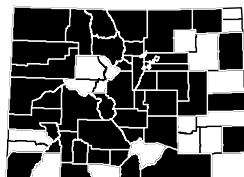
Habitat and Ecology: Common in wet meadows, streamsides, springs, lakesides, alkaline meadows from plains to upper montane zones. *C. nebrascensis* thrives in saturated soils, including high alkalinity.

Comments: *C. nebrascensis* is a valuable forage species used by big game and livestock. It provides cover nesting waterfowl, seeds for small mammals and birds and muskrats and geese graze the shoots. It can be used as a key species to determine grazing pressure. Considered state imperiled (S2) in North Dakota.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, USDA NRCS 2005, Weber and Wittmann 2012, Wilson et al. 2008



Carex neurophora Mack.

Alpine nerve sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CANE6

ITIS TSN: 39716

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: Not Assigned

Duration: Perennial

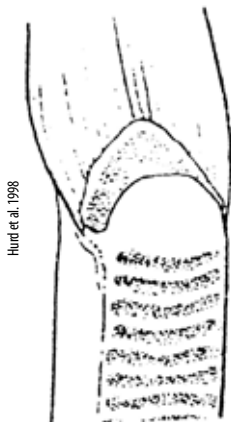
CO Elevation: 8,770–11,400 ft. (2,675–3,475 m)

Key Characteristics:

- ◆ Clustered without creeping rhizomes; culms sharply triangular, 2–8 dm tall
- ◆ Leaf blades 4–5, borne on lower culm, not clustered at bases; sheaths cross-corrugated
- ◆ Spikes androgynous, sessile, brownish-red tinged, densely aggregated into ovoid heads
- ◆ Perigynia lanceolate, shiny, dark brown, swollen bases; nerves finely striate; beaks tapered
- ◆ Pistillate scales ovate, brown, pale midribs, as wide as perigynia and half as long; stigmas 2



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. jonesii* [FACW, OBL] is found in similar habitats, but leaf sheaths are not cross-corrugated (see lower right illustration), the leaves are clustered near bases and the culms are shorter, up to 6 dm tall. *C. illota* [OBL] grows up to 4 dm tall and the perigynia taper to smooth, entire beaks. *C. simulata* [OBL] has narrowly winged perigynia with short, abruptly narrowed beaks, 0.2–0.5 mm long.

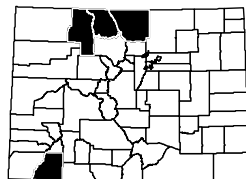
Habitat and Ecology: Rare. Grows along subalpine streams and wet meadows.

Comments: Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex nigricans C.A. Mey.

Black alpine sedge

Cyperaceae

Susan McDougall USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: CANI2

ITIS TSN: 39718

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 8

Duration: Perennial

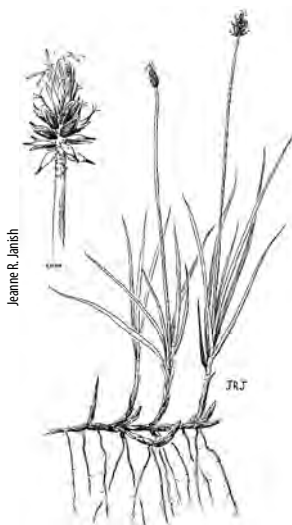
CO Elevation: 9,700–13,400 ft. (2,955–4,085 m)

Key Characteristics:

- Loosely caespitose 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
- 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



Hurd et al. 1998



Similar Species: *C. engelmannii* [CAEN3, NI, ITIS 39593] is also few-flowered, but perigynia are erect to spreading, not reflexed, and broadly obovate. *C. pyrenaica* [CAPY3, NI, ITIS 39777] is similar, but perigynia are ascending, not widely spreading, the leaves are narrower, up to 1.5 mm wide, and it is densely caespitose.

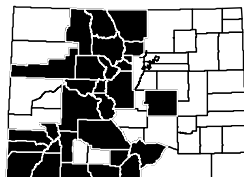
Habitat and Ecology: Common in snowmelt basins, wet meadows, edges of fens and streambanks in the subalpine and alpine zones.

Comments: *C. nigricans* is considered state vulnerable (S3) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex norvegica Retz. ssp. stevenii (T. Holm) A.E. Murray

Steven's sedge Cyperaceae

Steve Olson



Synonyms: *Carex media* R. Br. var. *stevenii* (T. Holm)

Fernald, *Carex stevenii* T. Holm

USDA PLANTS Symbol: CANOS

ITIS TSN: 523779

Wetland Status AW: FAC WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5T4? SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,000–14,000 ft. (1,830–4,265 m)

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 spikes gynaeandrous, cylindric, bi-colored; lateral spikes pistillate, up to 10 mm long
- ◆ Perigynia 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

Hurd et al. 1998



Hurd et al. 1998



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

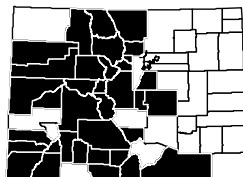
Habitat and Ecology: Common along streams, wet meadows, stream banks, occasionally reaching lower alpine tundra in Colorado.

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 (2012) and Weber and Wittmann (2012) recognize *C. stevenii*.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012



Sedges

Carex nova L.H. Bailey

Black sedge

Cyperaceae

Steve Matson



Synonyms: *Carex elbertiana* L. Kelso

USDA PLANTS Symbol: CANO3

ITIS TSN: 39722

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 10

Duration: Perennial

CO Elevation: 7,400–14,270 ft. (2,255–4,350 m)

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 spikes gynaeandrous, 3–5, short, broad, bi-colored; pistillate spikes, crowded
- ◆ Perigynia broadly elliptic, strongly flattened, 2–3.5 mm wide; beaks 0.4–0.7 mm long
- ◆ Pistillate scales ovate-oblong, equaling or shorter than perigynia, dark brown to purple; stigmas 3



Hurd et al. 1998

Hurd et al. 1998



Similar Species: Two varieties of *C. nova* are recognized in Colorado: 1a. Perigynia margins and beaks granular-roughened or serrulate. . . . var. *nova*. 1b. Perigynia margins and beaks smooth. . . . var. *pelocarpa* (= *C. pelocarpa*) [CAPEs, FAC, FACU, ITIS 39748].

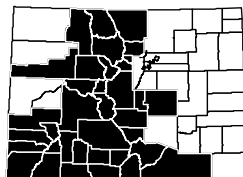
Habitat and Ecology: Common in meadows, along streams, in fens and spruce-fir forests.

Comments: Considered state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Weber and Wittmann 2012



Steve Matson



Synonyms: *Carex arctica* Dewey

USDA PLANTS Symbol: CAPA18

ITIS TSN: 39741

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 5,240–9,900 ft. (1,595–3,020 m)

Key Characteristics:

- Loosely tufted with scaly, creeping rhizomes; culms stiff, reddish-tinged, 1–3.5 dm tall
- Leaves crowded near culm bases; blades 2–4 mm wide, revolute margins
- Terminal spike staminate, 5–20 mm long, purple, reddish-brown; lateral spikes pistillate, 2–5
- Perigynia 2–2.5 mm long, midvein lighter color, often raised; veinless; beaks 0.2 mm
- Pistillate scales light to dark brown, margins broadly hyaline, concealing perigynia; stigmas 3



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. hallii* [FAC, FACW] looks very similar, many authors believe it is a synonym for *C. parryana*. *C. hallii* [FACW, FAC] terminal spikes are usually pistillate and the lateral spikes are absent or pistillate. *C. scirpoidea* var. *pseudoscirpoidea* [FAC] is also similar in appearance and habit, but it has hairy perigynia with dioecious spikes.

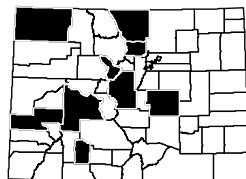
Habitat and Ecology: Found in meadows, on moist slopes, around lakes and streams, and along roadsides and ditches.

Comments: Ranked as state imperiled (S2) in Utah and Wyoming and state vulnerable (S3) in Montana. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Weber and Wittmann 2012



Matt Lavin



Synonyms: *Carex lanuginosa* auct. non Michx.
USDA PLANTS Symbol: CAPE42
ITIS TSN: 507767
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: 6
Duration: Perennial
CO Elevation: 3,280–14,000 ft. (1,000–4,265 m)

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, margins revolute; sheaths wine-red tinged
- ◆ Terminal spike staminate, 2–5 cm long, sessile; lateral spikes pistillate, 1–6 cm long, cylindric
- ◆ Perigynia hairy, broadly ovoid, spongy bases, 1.5–2 mm wide; beaks deeply bidentate or forked
- ◆ Pistillate scales lanceolate with long acuminate tips and hairy awns, ciliate; stigmas 2

Sedges

Hurd et al. 1998



Jeanne R. Jansh



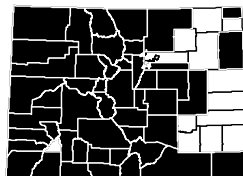
Similar Species: *C. lasiocarpa* [OBL] is much less common. The leaves are narrower (2 mm wide or less), the culms are obtusely triangular and the perigynia beaks are not forked. *C. lasiocarpa*, where it occurs, typically forms extensive stands, while *C. pellita* usually occurs as sporadic individuals.

Habitat and Ecology: Common and widespread along streambanks, wet meadow and in fens.

Comments: *C. pellita* is commonly planted in wetland restoration projects using either seeds or plugs. 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex praeceptorum Mack.

Early sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CAPR22

ITIS TSN: 808445

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,480–12,630 ft. (2,585–3,850 m)

Key Characteristics:

- ◆ Cespitose with small clumps developing from short rhizomes; culms 1–3 dm tall
- ◆ Leaves clustered toward bases; blades grooved, 1.2–2.5 mm wide
- ◆ Spikes 4–6, gynaeandrous, green when young, sessile, aggregated into oblong-ovoid heads
- ◆ Perigynia ovate, spongy bases, yellowish-brown; beaks sparingly serrulate, 0.25–0.5 mm
- ◆ Pistillate scales light brown with broad pale-green center, hyaline margins; stigmas 2

Hurd et al. 1998



Hurd et al. 1998



Similar Species: *C. lachenalii* [OBL] 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* [OBL] resembles *C. praeceptorum*, but has pistillate scales that are white with green midveins.

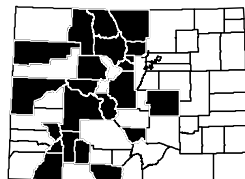
Habitat and Ecology: Uncommon and inconspicuous in fens, wet meadows and along streams in alpine and upper subalpine.

Comments: Occurs throughout the Intermountain West, west to the Pacific Northwest and California. Considered state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex praegracilis W. Boott

Clustered field sedge

Cyperaceae

Susan McDougall USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: CAPR5

ITIS TSN: 39767

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,280–11,430 ft. (1,000–3,485 m)

Key Characteristics:

- ◆ Culms arising singly or few together from creeping rhizomes; bases dark purple-black
- ◆ Leaves basal; blades flattened, 1–3 mm wide; sheaths with white-hyaline inner band
- ◆ Spikes androgynous, 5–15, sometimes dioecious, 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* [OBL] perigynia are broadly ovate, shiny brown (when mature) and are abruptly short beaked versus the long, tapering beaks as in *C. praegracilis*. *C. praegracilis* is sometimes dioecious, it is possible to find clumps that lack any perigynia. Therefore thinking that there are 2 or more species. On closer inspection, all the clumps usually turn out to be *C. praegracilis*.

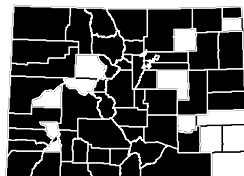
Habitat and Ecology: Common in open, moist, wet, to drying swales, prairies, irrigation ditches and hay meadows, often in alkaline soils.

Comments: Important winter or early spring forage for cattle, horses and wildlife. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex praticola Rydb.

Meadow sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CAPR7

ITIS TSN: 39770

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

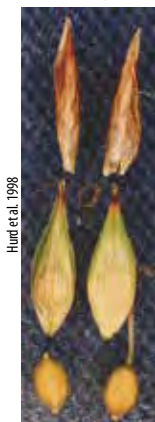
C-Value: 6

Duration: Perennial

CO Elevation: 6,200–12,400 ft. (1,890–3,780 m)

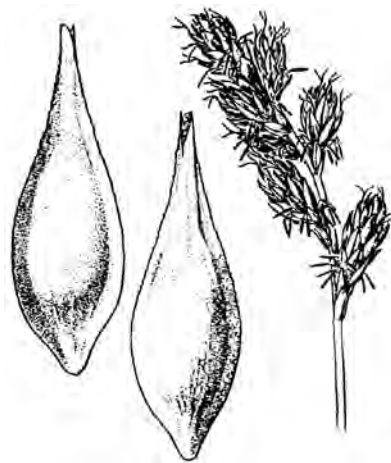
Key Characteristics:

- ◆ Densely or loosely tufted 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, gynaeandrous, separated along culm; inflorescence slender, nodding
- ◆ Perigynia 4–6.5 mm long, tapered to bases and apices, wing-margined, pale green or straw-colored
- ◆ Pistillate scales narrowly ovate, concealing perigynia, reddish-brown, pale green centers; stigmas 2



Hurd et al. 1998

Hurd et al. 1998



Similar Species: *C. praeceptorum* [OBL] looks similar with gynaeandrous spikes, but the perigynia are ovate, not tapered, and the pistillate scales are brown with hyaline margins. *C. leporinella* [CALE9, FACW, OBL, ITIS 39668] (G5S2) is uncommon in Colorado, known from Delta, Rio Blanco, San Juan and Routt Counties. It looks similar, but perigynia are smaller (3.2–4.0 mm long x 0.8–1.2 mm wide), sharp-edged, with ill-defined beaks.

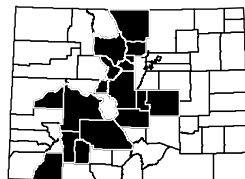
Habitat and Ecology: Common in aspen forests, moist to dry meadows in the montane to subalpine.

Comments: *C. praticola* has been documented throughout the Intermountain West into the Pacific Northwest and California. Ranked as state vulnerable (S3) in Wyoming. Waterfowl, shorebirds, upland gamebirds, and songbirds eat sedge seeds frequently in small to fair amounts.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Karin Freeman



Synonyms: None

USDA PLANTS Symbol: CARE4

ITIS TSN: 39783

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 7

Duration: Perennial

CO Elevation: 6,100–9,200 ft. (1,860–2,805 m)

Key Characteristics:

- ◆ Densely clustered on very short rhizomes; culms stout, stiff, 2–10 dm tall
- ◆ Leaf blades septate-nodulose, 3–10 mm wide; bracts leaf-like, 3–9 times longer than the inflorescence
- ◆ Terminal spike staminate, linear; pistillate spikes crowded, near bases of bracts
- ◆ Perigynia inflated, round bases, yellowish; nerves rib-like; beaks 2–3.5 mm long, bidentate
- ◆ Pistillate scales yellowish-reddish-brown, 3-nerved, green centers, narrower than perigynia; stigmas 3



Similar Species: *C. hystericina* [OBL] looks similar, but has papery, pistillate scales, narrowing to stiff, narrow, ciliate awns and the perigynia have strongly raised nerves. *C. vesicaria* [OBL] and *C. utriculata* [OBL] have large perigynia, but they are not reflexed or horizontally spreading.

Habitat and Ecology: Uncommon to rare in wet meadows, fens, edges of streams, lakes and rivers on the west slope.

Comments: Dr. A.A. Reznicek (University of Michigan) states that the *C. retrorsa* specimens for Colorado need to be verified. *C. retrorsa* is considered state critically imperiled (S1) in Colorado and Utah and state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Reznicek personal communication, Weber and Wittmann 2012, Wilson et al. 2008



Andrew Hipp



Synonyms: None

USDA PLANTS Symbol: CASA8

ITIS TSN: 39793

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G4G5 S1

C-Value: 9

Duration: Perennial

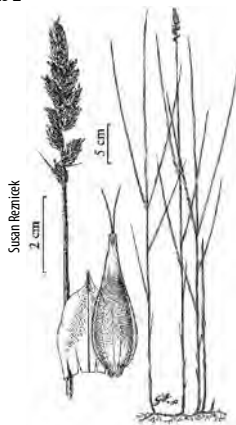
CO Elevation: 4,800–10,500 ft. (1,465–3,200 m)

Key Characteristics:

- ◆ Culms arising singly from thick, brown-black, creeping rhizomes or true vegetative shoots
- ◆ Upper leaf sheaths green-nerved; ligule conspicuously tubular, hyaline
- ◆ Terminal spikes 10–20, androgynous or staminate, lowest spikes androgynous
- ◆ Perigynia thin-margined above, tips concave, 2.5–4 mm long; beaks serrulate
- ◆ Pistillate scales narrower and shorter than perigynia; stigmas 2



Linda W. Curtis



Susan Reznick

Similar Species: *C. praegracilis* [FACW] has leaf sheaths that have white-hyaline inner bands, dark purplish-brown to nearly black basal sheaths and perigynia that are wing-margined, not thin-margined as *C. sartwellii*. *C. diandra* [OBL] terminal spikes are androgynous, the perigynia are dark brown with serrulate beaks and the dorsal suture flap is conspicuous.

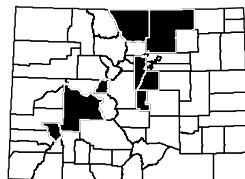
Habitat and Ecology: Rare along creeks and pond margins, wet marshes, fens, ditches, wet meadows and sloughs.

Comments: One of the few sedges that produces true vegetative shoots that are not leaves, with nodes and internodes. Considered state critically imperiled (S1) in Colorado, state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Johnston 2001, Weber and Wittmann 2012



Carex saxatilis L.

Rock sedge

Cyperaceae

Denise Culver



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

ITIS TSN: 39431

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 8,900–12,500 ft. (2,715–3,810 m)

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, persistent styles; beaks dark-tinged
- ◆ Pistillate scales ovate, apices erose, shorter and narrower than perigynia, dark-reddish; stigmas 2 (3)



Similar Species: *C. saxatilis* has a persistent, contorted, bony styles continuous with the achene and 2 stigmas. *C. aquatilis* [OBL] has delicate styles, pistillate spikes that are erect, not drooping, and greenish-yellow perigynia, speckled with reddish-brown spots. In late season, *C. utriculata* [OBL] perigynia can darken, but they are rarely as dark and shiny as *C. saxatilis*.

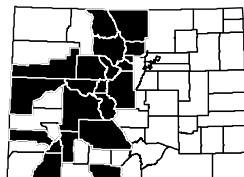
Habitat and Ecology: Common along streams and lakes, in fens, near melting snowbanks and in alpine meadows.

Comments: Considered state imperiled (S2) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex scoparia Schkuhr ex Willd.

Broom sedge

Cyperaceae

Max Lidier



Synonyms: None

USDA PLANTS Symbol: CASC11

ITIS TSN: 39432

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,350–10,200 ft. (1,630–3,110 m)

Key Characteristics:

- ◆ Densely caespitose from short rhizomes; culms sharply triangular, 1.5–10 dm tall
- ◆ Leaves 2–6, borne on lower part of culm, not clustered, yellowish-green, 1–3 mm wide
- ◆ Spikes 3–12, gynaeandrous, sessile, spikes distinct, aggregated into globose head
- ◆ Perigynia 1.2–2 mm wide, margins 0.2–0.6 mm wide, scale-like; beaks ill-defined, serrate
- ◆ Pistillate scales lanceolate, often short, awn-pointed, narrower and shorter than perigynia; stigmas 2



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. bebbii* [OBL] perigynia are 2.5–3.8 mm long with a flat beak. *C. egglestonii* [CAEG, NI, ITIS 39585] is an alpine species that can occur with *C. scoparia*. *C. egglestonii* has larger perigynia (2.6–3.8 mm wide). *C. phaeocephala* [CAPH2, UPL, FAC, ITIS 39753] and *C. leporinella* [CALE9, NI, ITIS 39668] inflorescences look similar, but the beaks are terete, not flat and serrulate. *C. scoparia* beaks are flat and serrulate to the tips.

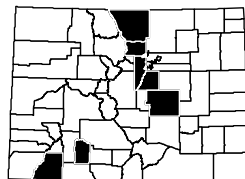
Habitat and Ecology: Locally common along streams and lake margins and in wet meadows from foothills to upper montane.

Comments: Considered state critically imperiled (S1) in Utah, Wyoming, and Montana. North Dakota lists it as possibly extirpated (SH). 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex scopulorum T. Holm

Mountain sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CASC12

ITIS TSN: 39800

Wetland Status AW: FACW WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 7,000–14,400 ft. (2,135–4,390 m)

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
- Terminal spike staminate, bi-colored, 1–3 cm long; pistillate spikes many-flowered, spreading
- Perigynia orbicular to obovoid, strongly biconvex, turgid, inflated; beaks reddish-black
- Pistillate scales obovate, narrower, shorter than perigynia, black to dark reddish-brown; stigmas 2 (3)



Hurd et al. 1998

Hurd et al. 1998

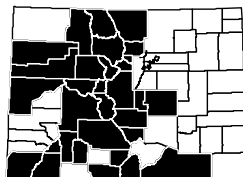


Similar Species: From a distance, *C. aquatilis* [OBL] can resemble *C. scopulorum*, but *C. aquatilis* perigynia are not as inflated and the lowest bract is usually longer than the inflorescence.

Habitat and Ecology: Common and abundant throughout subalpine and alpine zones.

Comments: Considered state imperiled (S2) in Utah and state vulnerable (S3) in Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012

Carex simulata Mack.

Analogous sedge

Cyperaceae

Hurd et al. 1998



Synonyms: None

USDA PLANTS Symbol: CAS12

ITIS TSN: 39806

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,000–10,830 ft. (1,525–3,300 m)

Key Characteristics:

- ◆ Culms arising singly or few together from well-developed, brown rhizomes; culms 1–9 dm tall
- ◆ Leaves 2–5, clustered at bases; blades 1–4 mm wide
- ◆ 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

Hurd et al. 1998



Denise Culver



Similar Species: *C. praegracilis* [FACW] can occur with *C. simulata*, but can easily be distinguished (especially at maturity) by the perigynia that are not as round or shiny. *C. douglasii* [FACU] looks very similar but occurs in much drier, alkaline habitats.

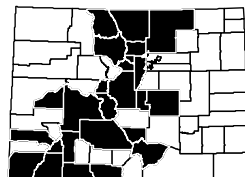
Habitat and Ecology: Widespread, common in wet meadows from foothills to upper montane. Monospecific stands are an indicator of peat-accumulating wetlands.

Comments: An unusual growth form of *C. simulata* 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 (see lower right photo). Considered state vulnerable (S3) in Utah and Wyoming. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex stipata Muhl. ex Willd.

Awlfruit sedge

Cyperaceae

kgNaturePhotography.com



Synonyms: None
USDA PLANTS Symbol: CAST5
ITIS TSN: 39434
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 5,000–9,600 ft. (1,525–2,925 m)

Key Characteristics:

- ◆ Densely clumped from rhizomes; culms stout, narrow-winged, serrulate, 3.5–10 dm tall
- ◆ Leaf blades flat, flaccid, 4–11 mm wide; sheaths cross-rugulose ventrally and convex
- ◆ Spikes androgynous, yellowish-brown, “prickly” appearance, 2 cm wide x 3–10 cm long
- ◆ Perigynia lance-shaped, swollen bases, nerves 15, prominent; beaks dark, serrulate margins
- ◆ Pistillate scales ovate-triangular, acuminate tips, shorter than perigynia; stigmas 2



Hurd et al. 1998



Hurd et al. 1998

Similar Species: *C. stipata* is a fairly large-headed sedge, distinguishing it from the closely related *C. neurophora* [FACW] or *C. jonesii* [FACW, OBL]. *C. vulpinoides* [FACW, OBL] has cross-rugulose sheaths, but the perigynia are broadly ovate, pistillate scales are 3-nerved center terminating in a long awn.

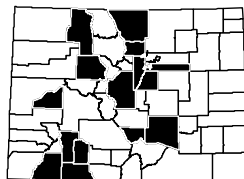
Habitat and Ecology: Occasional to frequent in sloughs, wet meadows, ditches and wet swales in foothills and lower mountain valleys.

Comments: *C. stipata* grows along wet marsh edges that are seasonally flooded. The pithy tissue at base of the perigynia helps it float, facilitating water-borne seed dispersal. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



carexworkinggroup.com

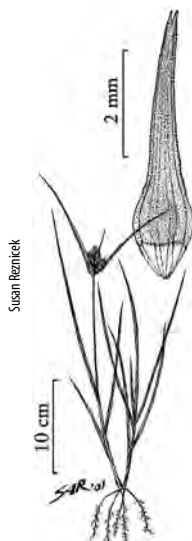


Synonyms: None
USDA PLANTS Symbol: CASY
ITIS TSN: 39833
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G4 S1
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 8,850–9,550 ft. (2,695–2,910 m)

Key Characteristics:

- ◆ Distinctly cespitose; culms 8–40 cm tall; can appear to be annual due to diffuse roots
- ◆ Leaf blades 12 cm long; sheath fronts white-hyaline; bracts long ascending
- ◆ Spikes 3–8, densely clustered, gynaeandrous, straw-colored, 10–16 mm long
- ◆ Perigynia 5.5–7.5, green or golden brown, 3–12 veined; beak tips white, serrulate
- ◆ Pistillate scales white or gold hyaline, acuminate, narrower, shorter than perigynia; stigmas 2

carexworkinggroup.com



Similar Species: *C. athrostachya* [FACW] also has the lowest bract extending beyond the inflorescence, but the scales are brown and the perigynia are ovate.

Habitat and Ecology: Disturbed seasonally wet shores of pond and streams. A short-lived perennial that can bloom and set seed in the first year, acting as an annual. Known from Boulder and Summit Counties.

Comments: Considered state critically imperiled (S1) in Colorado and Montana. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008





Key Characteristics:


- ◆ Loosely cespitose from slender rhizomes; culms slender, 10–50 cm long
- ◆ Leaf blades green, 0.5–2 mm wide
- ◆ Spikes gynaeandrous, very short, 3- to 10-flowered, terminal cluster of 3 or more spikelets
- ◆ Perigynia green, beakless, 3–3.5 mm long, ascending
- ◆ Pistillate scales white hyaline with green centers, crowded at culm tips; stigmas 2



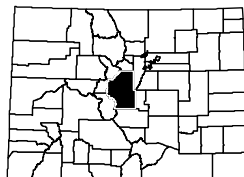
Similar Species: *C. leptalea* [OBL] has only one slender androgynous spike and 3-angled achenes. *C. interior* [OBL] has distinct beaked perigynia with swollen bases.

Habitat and Ecology: Rare in the contiguous United States. Known in Colorado from a single population in a rich fen in northern Park County. Occurs in sphagnum bogs in northern U.S. and Canada.

Comments: The Colorado occurrence is disjunct from the northern boreal regions of North America. Considered state critically imperiled (S1) in Colorado and state imperiled (S2) in Montana. 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Spackman et al. 1997, Weber and Wittmann 2012, Wilson et al. 2008



Carex utriculata Boott

Northwest Territory sedge

Cyperaceae

Keir Morse



Synonyms: None

USDA PLANTS Symbol: CAUT

ITIS TSN: 501288

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 5,200–12,790 ft. (1,585–3,900 m)

Key Characteristics:

- ◆ Culms arising singly from deep-seated rhizomes forming monospecific stands, 3–12 dm tall
- ◆ Leaf blades, septate-nodulose; sheaths spongy, crosswalls between veins; bracts long sheathing
- ◆ Terminal spike staminate, linear, pistillate, erect with “corn-cob” appearance
- ◆ Perigynia strongly inflated, abruptly contracted at apices, nerves prominent; beaks bidentate
- ◆ Pistillate scales ovate, tips acute, smaller than perigynia; stigmas 3

Keir Morse



Hurd et al. 1998



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

Habitat and Ecology: One of the most common and robust species 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.

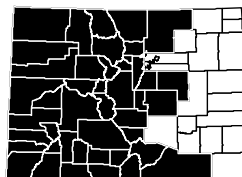
Comments: In the past, some floras have treated *C. utriculata* as a variation of *C. rostrata*. *C. rostrata* is a distinct species with different leaf shape and anatomy, occurring in northern U.S. and Canada, but not in Colorado.

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.

Animal and Bird Use:



References: Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex vesicaria L.

Blister sedge

Cyperaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: CAVE6

ITIS TSN: 39467

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,200–11,800 ft. (1,585–3,595 m)

Key Characteristics:

- ◆ Culms loosely caespitose 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 cylindric, perigynia appressed
- ◆ Perigynia 3.5–10 mm long, inflated, papery, reddish-brown, nerves 10–20; beaks bidentate
- ◆ Pistillate scales ovate to lanceolate, acute tips, smaller than or equal to perigynia; stigmas 3

Steve Matson



Hurd et al. 1998



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

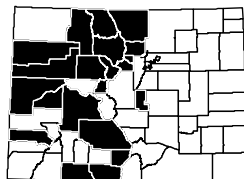
Habitat and Ecology: Frequent to common in very wet sites, marshes, fens and wet meadows in montane and subalpine zones.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Carex viridula Michx.

Little green sedge

Cyperaceae

Denise Culver



Synonyms: *Carex oederi* Retz.

USDA PLANTS Symbol: CAV15

ITIS TSN: 39868

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 9

Duration: Perennial

CO Elevation: 7,700–12,500 ft. (2,345–3,810 m)

Key Characteristics:

- ◆ Cespitose; culms 2–40 cm tall
- ◆ Leaf blades 1–3.1 mm wide; bracts widely spreading at right angle, longer than inflorescence
- ◆ Spikes 1–8, androgynous, crowded at top of culms
- ◆ Perigynia widely spreading, yellowish-green; beaks slightly bidentate
- ◆ Pistillate scales shorter than perigynia, pale brown; stigmas 3

Patrick Alexander USDA-NRCS PLANTS Database



Denise Culver



Similar Species: *C. retrorsa* [OBL] perigynia are also widely spreading, but are inflated with rib-like nerves, and the terminal spikes are staminate.

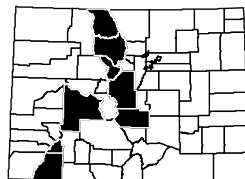
Habitat and Ecology: Rare to infrequent on stream banks or in fens in montane and subalpine zones.

Comments: Considered state critically imperiled (S1) in Colorado and Wyoming and South Dakota and state imperiled (S2) in Utah. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Johnston 2001, Weber and Wittmann 2012, Wilson et al. 2008



Sedges

Carex vulpinoidea Michx.

Fox sedge

Cyperaceae

kgNaturePhotography.com



Synonyms: None

USDA PLANTS Symbol: CAVU2

ITIS TSN: 39442

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 4,250–8,000 ft. (1,295–2,440 m)

Key Characteristics:

- ◆ Culms clustered, arising from stout rhizomes, stiff, 2–10 dm tall
- ◆ Leaf blades flat, 2–5 mm wide; sheaths cross-rugose, red-dotted; bracts hair-like
- ◆ Spikes numerous, androgynous, few-flowered, densely aggregated into linear heads
- ◆ Perigynia broadly ovate, sharp-edged, spongy-margined to rounded bases; beaks bidentate
- ◆ Pistillate scales ovate with 3-nerved center terminating in long awns; stigmas 2



Similar Species: *C. stipata* [OBL] spike morphology resembles *C. vulpinoidea*. *C. stipata* perigynia are lance-triangular versus broadly ovate and the beaks are long tapering.

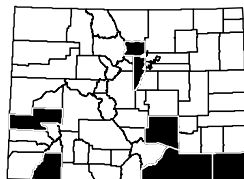
Habitat and Ecology: Occurs in marshes, standing water, ditches and wet meadows from plains to foothills.

Comments: *C. vulpinoidea* is a clumping sedge that will naturalize where planted. It is planted in locations that remain moist, near streams, springs, ponds and moist woods. It is an excellent colonizer of wetland mitigation sites. However, it spreads rapidly and may be weedy in some regions or habitats, displacing desirable vegetation if not properly managed. 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hurd et al. 1998, Johnston 2001, USDA NRCS 2004, Weber and Wittmann 2012, Wilson et al. 2008



Cyperus acuminatus Torr. & Hook. ex Torr.

Tapertip flatsedge

Cyperaceae

Hurd et al. in prep.



Synonyms: None

USDA PLANTS Symbol: CYAC2

ITIS TSN: 39883

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Perennial

CO Elevation: 4,680–6,800 ft. (1,425–2,075 m)

Key Characteristics:

- ◆ Tufted; culms slender, 0.5–4 dm tall, roundly 3-angled, thickened at bases
- ◆ Leaves few, all from near bases, slender, 1–2 mm wide
- ◆ Involucral bracts unequal, most surpassing the inflorescence
- ◆ Spikelets 3–7 mm long, borne in dense, globose clusters, strongly flattened; stigmas 3

Hurd et al. in prep.



- ◆ Floral scales 1.5–2 (2.5) mm long, strongly 3-nerved, acuminate-recurved at tips

USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *C. squarrosus* (= *C. aristatus*) [OBL] scales are (5) 7- to 9-nerved with a slender, recurved, short but distinct awn tips, and it is more common in Colorado than *C. acuminatus*.

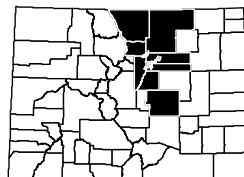
Habitat and Ecology: Locally common occurring along streambanks and other wet places in valleys and lowlands, tolerant of alkali soils.

Comments: Considered state critically imperiled (S1) in Utah, Wyoming, and Montana. *Cyperus* spp. seeds are important for both resident and migrating waterfowl.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Cyperus bipartitus Torr.

Slender flatsedge

Cyperaceae



Hurd et al. in prep.

Synonyms: *Cyperus rivularis* Kunth

USDA PLANTS Symbol: CYBI6

ITIS TSN: 501914

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 10

Duration: Annual

CO Elevation: 3,860–5,400 ft. (1,175–1,645 m)

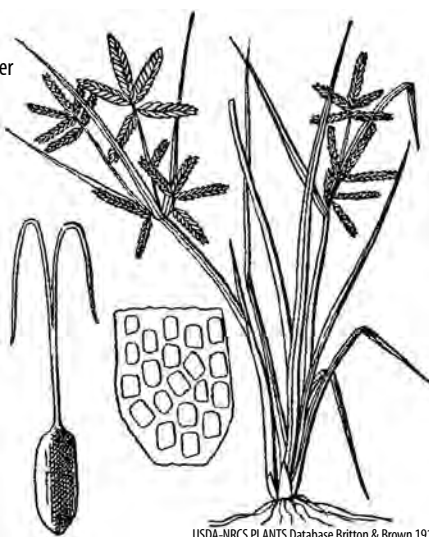
Key Characteristics:

- ◆ Tufted; culms slender, 0.5–2 (3) dm tall, roundly 3-angled
- ◆ Leaves basal, 1–3, V-shaped, 1–8 mm long x 1–2 mm wide; bracts unequal, surpassing inflorescence
- ◆ Inflorescence consists of 1 spike; spikelets 3–5 (8) per capitate cluster, 3–15 mm long
- ◆ Floral scales 2–2.5 mm long, blunt, dark, reddish-brown with prominent, pale midribs; stigmas 2

- ◆ Achenes black, network of ridges forming square cells, 1–1.3 mm long x 0.8 mm wide, punctate



Hurd et al. in prep.



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *C. odoratus* [FACW] has 3 stigmas, 3-sided achenes and the spikelets break easily into sections at the scale bases.

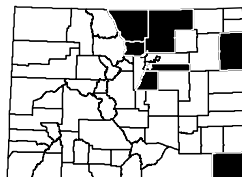
Habitat and Ecology: Infrequent along emergent shorelines, ditches, often in disturbed places; tolerant of alkali soils.

Comments: Widespread throughout the contiguous United States. *C. bipartitus* is considered state critically imperiled (S1) in Wyoming, Montana and North Dakota. *Cyperus* spp. seeds are important for both resident and migrating waterfowl.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Cyperus erythrorhizos Muhl.

Redroot flatsedge

Cyperaceae

Larry Allain USDA-NRCS PLANTS Database



Key Characteristics:

- ◆ Tufted with red roots; culms stout, 1–7 dm tall, roundly 3-angled
- ◆ Leaves well-developed, crowded toward bases; blades 2–9 mm wide
- ◆ Involucral bracts elongate, unequal

Hurd et al. in prep.



Synonyms: None

USDA PLANTS Symbol: CYER2

ITIS TSN: 39887

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Perennial

CO Elevation: 3,770–6,700 ft. (1,150–2,040 m)

- ◆ Spikes 1–4 cm long, with numerous, spirally arranged spikelets; spikelets 3–12 mm long

- ◆ Floral scales 1.2–1.6 mm long; achenes 0.6–1.2 mm long; stigmas 3

Hurd et al. in prep.



Similar Species: *C. esculentus* [FACW, FAC] is a perennial flatsedge with small tubers at end of rhizomes, floral scales that are 1.8–3 (3.5) mm long and 1–2 mm long achenes.

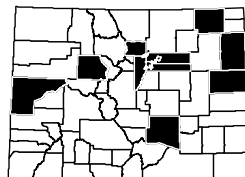
Habitat and Ecology: Uncommon along drying margins of ponds and lakes. Ackerfield (2012) states *C. erythrorhizos* is adventive in Colorado.

Comments: Widespread in the contiguous United States. *C. erythrorhizos* is considered state critically imperiled (S1) in Wyoming and possibly extirpated (SH) in Montana. *Cyperus* spp. seeds are important for both resident and migrating waterfowl. The Greek word for red is *erythro*, referring to the reddish roots.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Hurd et al. in prep.



Synonyms: None

USDA PLANTS Symbol: CYES

ITIS TSN: 39888

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Non-native, CO Noxious Weed List B

Conservation Status: GS SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,430–5,280 ft. (1,045–1,610 m)

Key Characteristics:

- ◆ Culms stout, 1–7 dm tall, sharply 3-edged; rhizomes slender, terminating in small tubers
- ◆ Leaves clustered at bases; blades 3–8 mm wide
- ◆ Involutral bracts elongate, unequal, slightly wider than leaves
- ◆ Spikelets in open cylindric spikes, slender, 0.5–5 cm long, 1–2 mm wide; stigmas 3
- ◆ Floral scales (2) 2.5–3 (4) mm long, several-nerved, broad and overlapping; achenes 1–1.6 mm long

Sedges

Matt Lavin



Hurd et al. in prep.



Similar Species: *C. erythrorhizos* [OBL] has scales that are 1.2–1.6 mm long and achenes that are 0.6–1.2 mm long. *C. esculentus* is distinct with the presence of tubers.

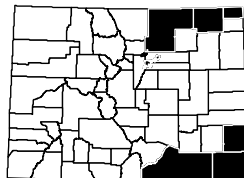
Habitat and Ecology: Uncommon along drying pond margins, often in sandy soils. Adventive in Colorado.

Comments: Considered state critically imperiled (S1) in Utah. *C. esculentus* is an important food source for waterfowl, deer and turkey. The tubers on the roots are high in carbohydrates and protein. *C. esculentus* var. *sativus* or Chufa is an African variety of *C. esculentus* that is used extensively for a food source for over wintering and migrating waterfowl. The word *esculentus* is Greek for edible.

Animal and Bird Use:



References: Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Ted Bodner



Synonyms: None

USDA PLANTS Symbol: CYOD

ITIS TSN: 39894

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

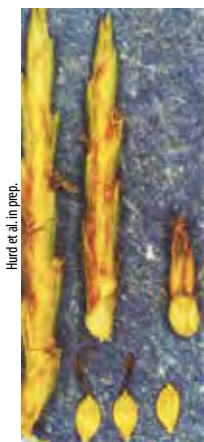
Duration: Annual, Perennial

CO Elevation: 3,650–4,720 ft. (1,115–1,440 m)

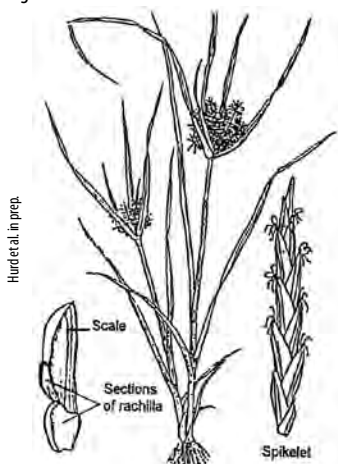
Key Characteristics:

- ◆ Tufted with fibrous roots; culms up to 1 m tall, 3-angled, bases not swollen or corm-like
- ◆ Leaves shorter than culm, up to 10 mm wide
- ◆ Spikes with several, spreading spikelets up to 25 mm long

- ◆ Spikelets breaking easily into sections comprised of a scale, internode, wings and achene
- ◆ Floral scales ovate, 1–2.8 mm long, imbricate; stigmas 3



Hurd et al. in prep.



Hurd et al. in prep.

Similar Species: *C. odoratus* is easily identified by the cylindric spikelets in which the corky rachilla of the mature spikelet disarticulates at the base of each scale. The mature spikelet breaks into segments each consisting of a scale and an internode of the rachilla clasping the achene with the corky wings.

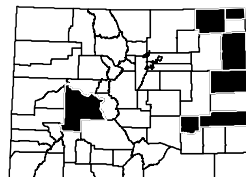
Habitat and Ecology: Locally common on wet sand and mud along riverbanks, ponds, sloughs and marshes. Weber and Wittmann (2012) consider *C. odoratus* adventive.

Comments: Likely the most abundant flatsedge in the Great Plains region, including on the Eastern Slope of Colorado. *Cyperus* spp. seeds are important for both resident and migrating waterfowl. The roots are reported to smell like violets.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Great Plains Flora Association 1986, Weber and Wittmann 2012



Cyperus squarrosus L.

Bearded flatsedge

Cyperaceae

Patrick Alexander USDA-NRCS PLANTS Database



Key Characteristics:

- ◆ Tufted; culms slender, 0.3–1.5 dm tall, 3-angled
- ◆ Leaves few, all borne near bases, 0.5–2 (2.5) mm wide, as long or longer than inflorescence
- ◆ Spikelets borne in dense clusters, 4–10 mm long, flattened
- ◆ Floral scales evident, 7- to 9-nerved, 1–1.7 mm long, slender, outward-curved awn-tips
- ◆ Achenes 3-ranked, 0.6–1.0 mm long; stigmas 3

Steve Matson



Synonyms: *Cyperus aristatus* Rottb., *Cyperus inflexus* Muhl.

USDA PLANTS Symbol: CYSQ

ITIS TSN: 501940

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Annual

CO Elevation: 3,500–7,570 ft. (1,065–2,305 m)

Hurd et al. in prep.



Similar Species: *C. squarrosus* is distinct with the slender, recurved tips on the floral scales that terminate in slender, short, sharp awns.

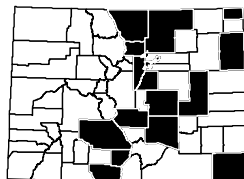
Habitat and Ecology: Common on drying pond borders, wet places in valleys and lowlands.

Comments: Widespread throughout Canada and contiguous United States. Considered state imperiled (S2) in Wyoming. Herbage is sweet-scented, especially when dried. *Cyperus* spp. seeds are important for both resident and migrating waterfowl.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Eleocharis acicularis (L.) Roem. & Schult.

Needle spikekrush

Cyperaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: ELAC

ITIS TSN: 40025

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

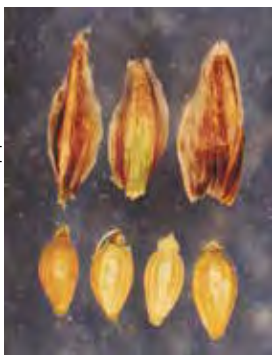
Duration: Annual, Perennial

CO Elevation: 3,650–10,170 ft. (1,115–3,100 m)

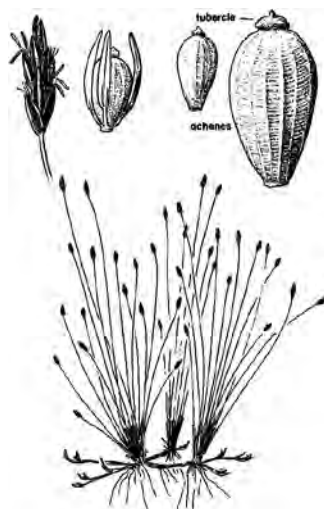
Key Characteristics:

- ◆ Diminutive, from slender, branching rhizomes, often forming dense clumps
- ◆ Culms filiform, not compressed, 1–60 cm tall
- ◆ Floral scales 1.5–2.5 mm long, with greenish midribs; styles 2
- ◆ 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

Hurd et al. in prep.



Jeanne R. Janish



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

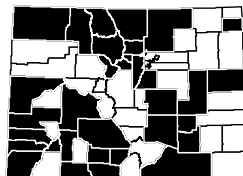
Habitat and Ecology: Very common along marshes, muddy shores and fens, from plains to high elevations in mountains.

Comments: Circumboreal. *E. acicularis* is abundant and ecologically important throughout much of its range.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Hoag et al. 2001, Weber and Wittmann 2012



Sedges

Eleocharis bolanderi A. Gray

Bolander's spikerush

Cyperaceae

Steve Matson



Synonyms: *Eleocharis montevidensis* Kunth var.

bolanderi (A. Gray) V.E. Grant

USDA PLANTS Symbol: ELBO

ITIS TSN: 40032

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 7,350–9,000 ft. (2,240–2,745 m)

Key Characteristics:

- ◆ Densely tufted, rhizomes caudex-like, hidden by culms and roots
- ◆ Culms subterete with 6 prominent ridges when dry, 0.8–3 dm tall
- ◆ Floral scales spreading in fruit, dark brown to blackish, apices entire, acute; styles 3
- ◆ Bristles 3–6, reddish-brown, retrorsely barbellate, distinctly shorter than achene
- ◆ Achenes pale yellow; tubercle depressed, 3-lobed, broader than high

Sedges

Hurd et al. in prep.



Steve Matson



Similar Species: *E. compressa* [FACW] achenes have tubercles at the apices forming distinct caps and the floral scale apices are notched or bifid.

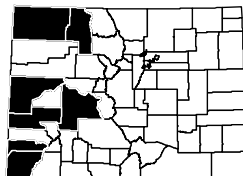
Habitat and Ecology: Uncommon along springs and seeps, wet meadows and moist soils along streams on Western Slope, but expected on Eastern Slope.

Comments: Global range extends from Oregon to Idaho, California, Nevada, Utah and Colorado. Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Hoag et al. 2001, Weber and Wittmann 2012



Eleocharis compressa Sull.

Flatstem spikerush

Cyperaceae

John Hilty



Synonyms: *Eleocharis elliptica* Kunth var. *compressa* (Sull.) Drapalik & Mohlenbr.

USDA PLANTS Symbol: ELC02

ITIS TSN: 40012

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

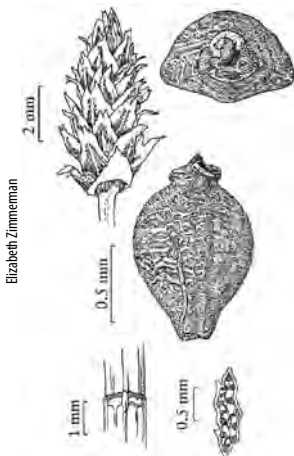
C-Value: 7

Duration: Perennial

CO Elevation: 4,000–7,600 ft. (1,220–2,315 m)

Key Characteristics:

- ◆ Cespitose, mat-forming, rhizomes evident
- ◆ Culms greatly compressed or flattened up to 45 cm tall
- ◆ Floral scales acuminate, brown with light margin, apices commonly bifid
- ◆ Bristles shorter than achene; styles 3
- ◆ Achenes 3-angled, yellow or dark brown, obovoid, neck very short, slightly wrinkled



Elizabeth Zimmerman



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *E. elliptica* [ELEL4, FACW, ITIS 502236] has been reported for Colorado. It is similar to *E. compressa*, but the floral scales are shallowly notched with rounded tips, not acute.

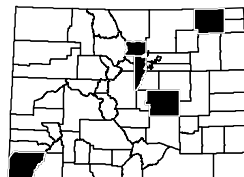
Habitat and Ecology: Uncommon on damp soil to shallow water of seasonally wet seeps, depressions, grasslands, meadows, ditches and waste places.

Comments: Global range includes most of Canada, North Dakota south to Colorado, New Mexico, Texas, to the east coast. Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Great Plains Flora Association 1986, Hoag et al. 2001, Weber and Wittmann 2012



Sedges

Eleocharis engelmannii Steud.

Engelmann's spikerush

Cyperaceae

Hurd et al. in prep.



Synonyms: *Eleocharis obtusa* (Willd.) Schult. var. *detonsa* (A. Gray) Drapalik & Mohlenbr.

USDA PLANTS Symbol: ELEN

ITIS TSN: 502237

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G4G5Q SNR

C-Value: 4

Duration: Annual

CO Elevation: 5,000–7,500 ft. (1,525–2,285 m)

Key Characteristics:

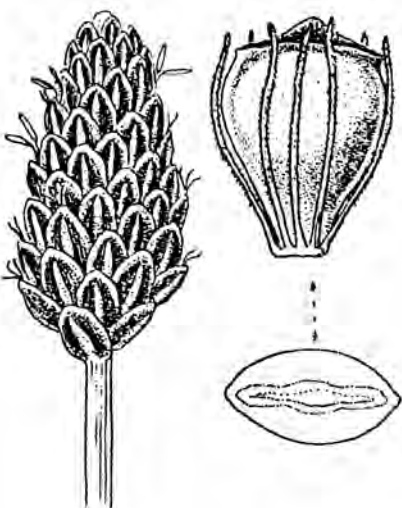
- ◆ Cespitose; culms erect up to 50 cm tall, sheaths firm and oblique at the apices
- ◆ Leaf sheath apices obtuse to acute, teeth to 0.3 mm
- ◆ Floral scales oblong or ovate, purplish-brown, keeled, green midribs and scarious margins
- ◆ Bristles 6 or 7, equaling or exceeding the achenes; styles 2 (3)
- ◆ Achenes shiny, lenticular, 0.7–1.2 mm long; tubercles half the achene width

Sedges

Hurd et al. in prep.



Hurd et al. in prep.



Similar Species: *E. obtusa* [OBL] does not have keeled floral scales. *E. atropurpurea* [ELAT, OBL, FACW, ITIS 40027], reported for the Eastern Slope, is similar in growth habit, but can be distinguished by the shiny black achenes.

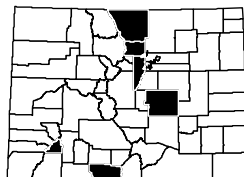
Habitat and Ecology: Uncommon along drying ponds, marshes, and disturbed places on the Eastern Slope.

Comments: Widespread throughout contiguous United States, rare in Canada. Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Great Plains Flora Association 1986, Hoag et al. 2001, Weber and Wittmann 2012



Eleocharis montevidensis Kunth

Sand spikerush

Cyperaceae

Larry Allain USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: ELM02

ITIS TSN: 40057

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

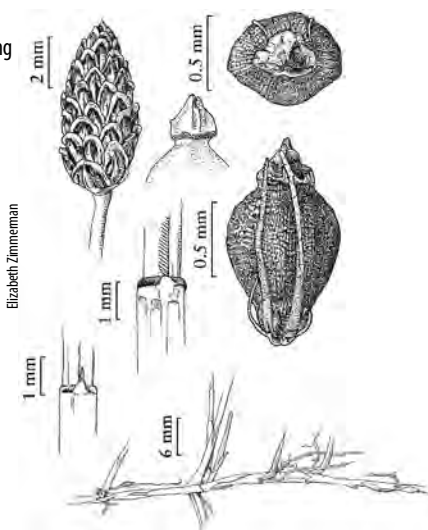
Duration: Perennial

CO Elevation: 4,500–5,000 ft. (1,370–1,525 m)

Key Characteristics:

- ◆ Mat-forming, stout, black rhizomes, long, 0.7–2 mm thick, conspicuous
- ◆ Culms glaucous, rounded with 5–10 blunt ridges when dry, 25–50 cm tall
- ◆ Bristles 5–6, stout, unequal, shorter than or equaling achenes
- ◆ Achenes dark brown, obovoid, 3-angled, glossy, pitted surface; styles 3
- ◆ Tubercles brown to whitish, pyramidal, as high as wide or sometimes greatly depressed

Steve Matson



Similar Species: *E. montevidensis* is distinguished from other spikerushes with differentiated tubercles, glaucous stems and purple-black scales.

Habitat and Ecology: Uncommon in wet soil, ponds, lakes, streams, springs, seeps, marshes, ditches, grasslands.

Comments: Global range includes California, Arizona, New Mexico, Colorado, Kansas, Oklahoma, Texas, and the southeastern states. Only known in Colorado from Mesa and Montezuma Counties.

Animal and Bird Use:



References: Flora of North America 2002, Great Plains Flora Association 1986, Weber and Wittmann 2012



Sedges

Eleocharis obtusa (Willd.) Schult.

Blunt spikerush

Cyperaceae

Louis M. Landry



Synonyms: *Eleocharis obtusa* (Willd.) Schult. var. *ellipsoidalis* Fernald ex Svens., *Eleocharis obtusa* (Willd.)

Schult. var. *gigantea* (C.B. Clarke) Fernald

USDA PLANTS Symbol: ELOB2

ITIS TSN: 40017

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Annual, Perennial

CO Elevation: 5,000–7,620 ft. (1,525–2,325 m)

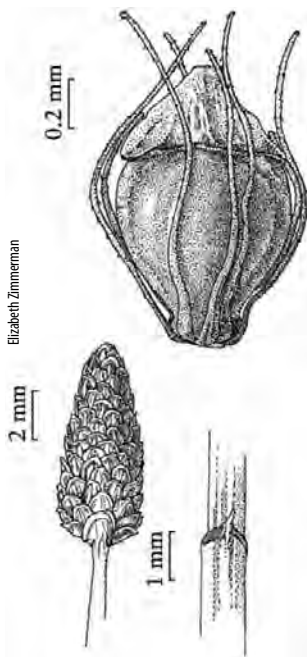
Key Characteristics:

- ◆ Cespitose; culms 0.3–5 dm tall; leaf sheath apices obtuse to acute, teeth to 0.3 mm
- ◆ Spikelets broadly ovoid to ellipsoid, apices rounded to acute, 5–13 mm long
- ◆ Floral scales orange or brown or straw-colored, elliptic, 1.5 mm–2.5 mm long x 1–1.5 mm wide
- ◆ Bristles 6–7, slightly to greatly exceeding tubercle; stamens 3; styles (2) 3
- ◆ Achenes 0.9–1.2; tubercles deltoid, shiny brown or green

Louis M. Landry



Elizabeth Zimmerman



Similar Species: *E. engelmannii* [OBL] floral scales are keeled and tubercles are 0.1–0.4 mm long.

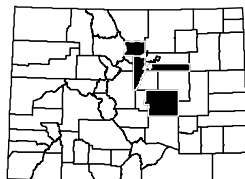
Habitat and Ecology: Uncommon, found along margins of ponds and lakes.

Comments: Occurs through Canada and the lower United States. Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hoag et al. 2001, Weber and Wittmann 2012



Eleocharis palustris (L.) Roem. & Schult.

Common spikerush

Cyperaceae

Hurd et al. in prep.



Synonyms: *Eleocharis erythropoda* Steud., *Eleocharis macrostachya* Britton, *Eleocharis xyridiformis* Fernald & Brack.

USDA PLANTS Symbol: ELPA3

ITIS TSN: 40019

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 3,350–10,700 ft. (1,020–3,260 m)

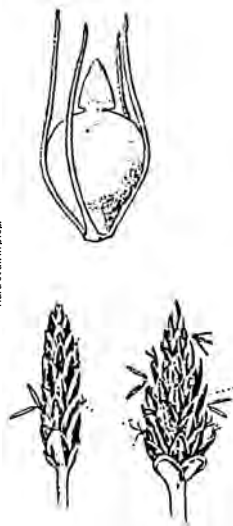
Key Characteristics:

- ◆ 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; styles 2
- ◆ Achenes biconvex to lenticular, yellow to brown, tubercles pyramidal, twice as high as wide

Hurd et al. in prep.



Hurd et al. in prep.



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

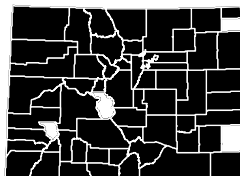
Habitat and Ecology: Common along ditches, streams, pond margins and in moist meadows.

Comments: Circumboreal. *E. palustris* is the most widespread and common species of the extremely difficult *E. palustris* complex. In Colorado the following species are in this complex: *E. palustris*, *E. macrostachya*, *E. erythropoda*, *E. xyridiformis*. The differences among these species are difficult to discern, especially in the field. For purposes of this field guide, we recognize *E. palustris*. Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Hoag et al. 2001, Weber and Wittmann 2012



Eleocharis parvula (Roem. & Schult.) Link ex Bluff, Nees & Schauer

Dwarf spikerush Cyperaceae

Janell Hillman



Synonyms: *Eleocharis coloradoensis* (Britton) Gilly, *Eleocharis parvula* (Roem. & Schult.) Link ex Bluff, Nees & Schauer var. *anachaeta* (Britton) Svens.

USDA PLANTS Symbol: ELPA5

ITIS TSN: 40020

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

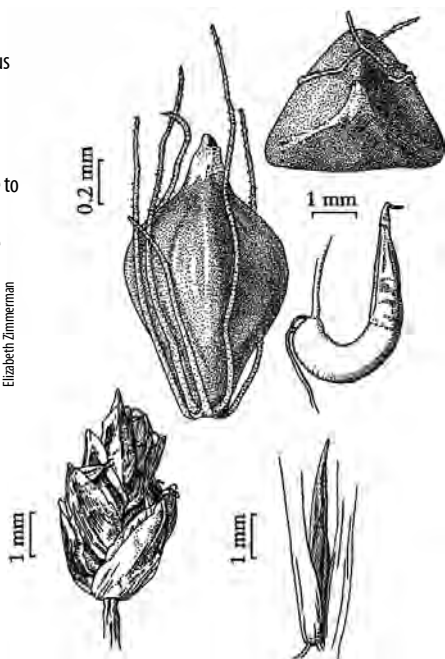
Duration: Annual, Perennial

CO Elevation: 3,920–10,500 ft. (1,195–3,200 m)

Key Characteristics:

- ◆ Diminutive, less than 7 cm tall; from inconspicuous slender rhizomes, forming dense mats
- ◆ Culms filiform, 2–6 cm tall, 0.1–0.3 mm wide
- ◆ Floral scales 1.3–2 mm long; styles 3
- ◆ Bristles 6, straw-colored, usually equaling achene to slightly exceeding tubercle
- ◆ Achenes 3-sided, 0.9–1.3 mm long, including the short, inconspicuous tubercle

Elizabeth Zimmerman



Hurd et al. in prep.



Similar Species: *E. acicularis* [OBL] has similar stature, but the achenes have distinct caps.

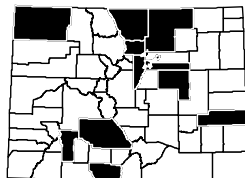
Habitat and Ecology: Occurs in wet or drying mud flats within saline or alkaline wetlands.

Comments: Most authors, including USDA-NRCS PLANTS Database and Ackerfield (2012), have included *E. coloradoensis* in with *E. parvula*. However, FNA (2002) and Weber and Wittmann (2012) have kept them separate due to the achenes being distinctly warted and often pitted, with apices that are usually truncate and tubercles clearly distinct from the achene. Widespread throughout North America, except Alaska and northern Canada. Considered state critically imperiled (S1) in North Dakota and Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Eleocharis quinqueflora (Hartmann) O. Schwarz

Fewflower spikerush

Cyperaceae

Steve Olson



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

USDA PLANTS Symbol: ELQU2

ITIS TSN: 502240

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 5,250–12,260 ft. (1,600–3,735 m)

Key Characteristics:

- ◆ Clustered stems on rather short, stout rhizomes, with bulbs at bases; culms 1–3 dm tall
- ◆ Floral scales usually subtending flowers; styles 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



Hurd et al. in prep.



Hurd et al. in prep.

Similar Species: *E. rostellata* [OBL] 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* [OBL] achenes have distinct longitudinal ridges and cross-ridges, with tubercles forming distinct apical caps.

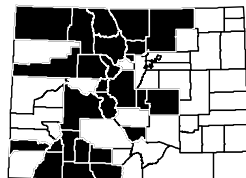
Habitat and Ecology: Common along lake and pond margins, streams, wet meadow, fens, seeps, springs and hot springs in upper montane and subalpine.

Comments: *E. quinqueflora* is considered state vulnerable (S3) in Wyoming. Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Hoag et al. 2001, Weber and Wittmann 2012



Sedges

Eleocharis rostellata (Torr.) Torr.

Beaked spikerush

Cyperaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: ELRO2

ITIS TSN: 40022

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

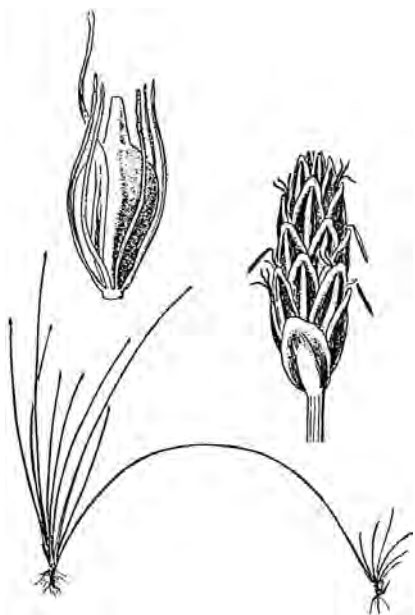
Duration: Perennial

CO Elevation: 5,500–9,000 ft. (1,675–2,745 m)

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; styles 3
- ◆ Tubercles pyramidal; anthers brown, 2–2.4 mm

Hurd et al. in prep.



Hurd et al. in prep.

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

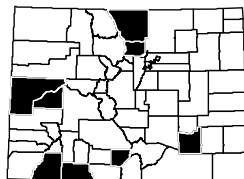
Habitat and Ecology: Uncommon in fens, saline/alkaline wet meadows, seeps and springs especially on Western Colorado. It will form large monospecific colonies due to the growth habit of rooting culm tips. When walking through a stand of *E. rostellata*, one can be tripped by the arching stolons.

Comments: Considered state critically imperiled in South Dakota, state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana. Spikerushes provide habitat and food for waterfowl, shorebirds, small mammals, beavers and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Eleocharis wolffii (A. Gray) A. Gray ex Britton

Wolf's spikerush

Cyperaceae

Louisiana Natural Heritage Program



Synonyms: None

USDA PLANTS Symbol: ELWO

ITIS TSN: 40074

Wetland Status AW: NI WM: OBL GP: OBL

Native Status: Native

Conservation Status: G3G4 SNR

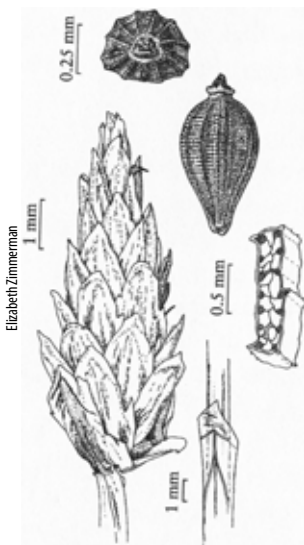
C-Value: 10

Duration: Perennial

CO Elevation: 4,270–5,000 ft. (1,300–1,525 m)

Key Characteristics:

- ◆ Mat-forming; culms decumbent, compressed, inrolled, 1–4 dm tall
- ◆ Floral scales 2.7–3.5 mm, orange-brown; midribs prominent, green or straw-colored
- ◆ Perianth bristles absent; anthers 1.1–1.75 mm; styles 2
- ◆ Achenes obovoid, 3-angled, 0.8–1.0 mm long, numerous longitudinal ridges with crossbars
- ◆ Tubercle brown, pyramidal, depressed



Elizabeth Zimmerman

Louisiana Natural Heritage Program



Similar Species: *E. acicularis* [OBL] culms are filliform, not compressed or inrolled.

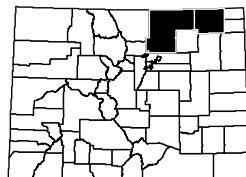
Habitat and Ecology: Rare along margins of ponds and low swales.

Comments: *E. wolffii* is thought to be extirpated from Colorado, known from Logan (1997) and Weld (1937) Counties. Considered globally vulnerable (G3G4), mainly known from the midwest and the east coast to southeastern United States.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Great Plains Flora Association 1986, Weber and Wittmann 2012



Sedges

Eriophorum angustifolium Honck.

Tall cottongrass

Cyperaceae

Al Schneider



Synonyms: *Eriophorum polystachion* L.

USDA PLANTS Symbol: ERAN6

ITIS TSN: 40080

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 7,000–12,800 ft. (2,135–3,900 m)

Key Characteristics:

- ◆ Colonial from long creeping rhizomes; 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
- ◆ Perianth bristles 15–30 mm long, white; anthers 2–5 mm long; achenes black, 2–5 mm

Sedges

Denise Culver



Denise Culver



Similar Species: *E. gracile* [OBL] 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. *E. viridicarinum* [ERV19, OBL, ITIS 40106] has been reported for Colorado, but there are no confirmed specimens. It differs with prominent, enlarged midrib scales that are shorter (4–6 mm long).

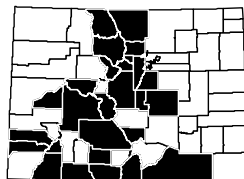
Habitat and Ecology: Common in marshes, fens, meadows and lake shores. Uniform stands appear reddish due to red leaf tips, especially late in the growing season.

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 is a food source for waterfowl and ungulates.

Animal and Bird Use:



References: Ackerfield 2012, Beaulieu et al. 1996, Brackney and Hupp 1993, Flora of North America 2002, Reznicek personal communication, Weber and Wittmann 2012



Eriophorum chamissonis C.A. Mey.

Chamisso's cottongrass

Cyperaceae

Susan Panjabi



Synonyms: *Eriophorum altaicum* Mein. var. *neogaeum* Raymond

USDA PLANTS Symbol: ERCH7

ITIS TSN: 40093

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 10,000–13,200 ft. (3,050–4,025 m)

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

Janet Wingate



Dee Malone



Similar Species: *E. scheuchzeri* [ERSC2, OBL, ITIS 40088] 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 what is needed to sort out the single headed cottongrasses.

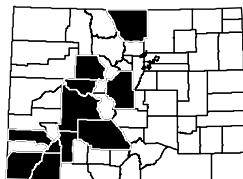
Habitat and Ecology: Uncommon in fens, marshes and sedge hummocks in montane to alpine.

Comments: Considered state critically imperiled (S1) in Colorado and North Dakota, and state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Reznicek personal communication, Weber and Wittmann 2012



Sedges

Eriophorum gracile W.D.J. Koch

Slender cottongrass

Cyperaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: ERGR8

ITIS TSN: 40096

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 8,100–12,270 ft. (2,470–3,740 m)

Key Characteristics:

- ◆ Colonial from long-creeping rhizomes; culms 2–6 dm tall
- ◆ Leaves folded, triangular leaves, 30 cm long x 1–2 mm wide, upper leaf blades shorter than sheaths
- ◆ Spikelets 2–5 in sub-umbels, narrowly ovoid, 15–25 mm in fruit; peduncles 5–30 mm, scabrous
- ◆ Scales black to dark gray, black tips, broadly ovate, 3–4 mm, midribs prominent, apices obtuse
- ◆ Perianth bristles 10–15 mm, white; achenes narrowly obovoid, 1.5–3 mm

Sedges

Annette Miller



Denise Culver



Similar Species: *E. angustifolium*, which is more common, has wider leaves (3–6 mm) that turn red, anthers that are longer (2–5 mm) and scales without ribs. However, *E. gracile* and *E. angustifolium* often occur together.

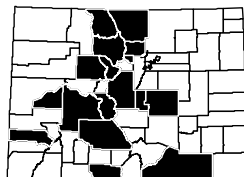
Habitat and Ecology: Locally abundant in wet meadows, fens, lakes shores; indicator of peaty soils.

Comments: Cottongrass is a food source for waterfowl and ungulates. It is considered state critically imperiled (S1) in North and South Dakota, state imperiled (S2) in Colorado and Wyoming and state vulnerable (S3) in Montana. Globally common from Alaska throughout Canada and the northern United States.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Fimbristylis puberula (Michx.) Vahl var. *interior* (Britton) Kral

Hairy fimbry Cyperaceae

Hurd et al. in prep.



Synonyms: *Fimbristylis interior* Britton

USDA PLANTS Symbol: FIPUI

ITIS TSN: 528172

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 9

Duration: Perennial

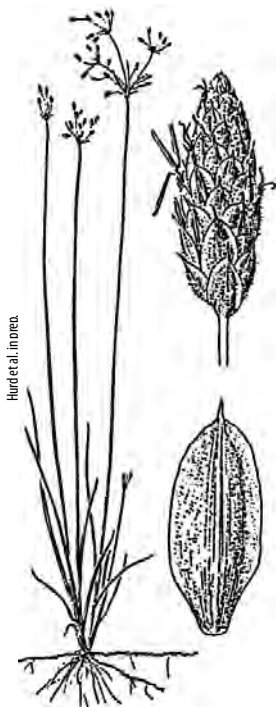
CO Elevation: 3,600–3,900 ft. (1,095–1,190 m)

Key Characteristics:

- ◆ Cespitose, to 10 dm tall; culm bases with swollen short, knotty, contorted rhizomes
- ◆ Leaves narrowly linear, 1–2 mm wide; sheaths ciliate
- ◆ Scapes slender, wand-like, 1 mm thick; lower involucral bracts exceed panicle
- ◆ Spikelets red-brown, broadly ovoid, 5–10 mm; achenes reticulate with ribs
- ◆ Fertile scales broadly ovate, obtuse, 2.5–3.5 mm, midribs extending into small tips



Hurd et al. in prep.



Hurd et al. in prep.

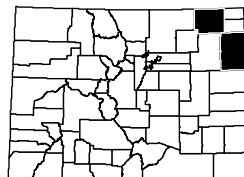
Similar Species: *Fimbristylis puberula* looks like a small bulrush, but has round not triangular stems with reticulate achenes.

Habitat and Ecology: Rare on floodplains, moist clays to sands or sandy peats in prairies. Known from the South Platte River Watershed.

Comments: Global range extends from Nevada and New Mexico east to the Atlantic and Gulf of Mexico states, north to Ontario. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Kobresia simpliciuscula (Wahlenb.) Mack.

Simple bog sedge

Cyperaceae

Steve Olson



Synonyms: *Kobresia bipartita* (All.) Dalla Torre

USDA PLANTS Symbol: KOSI2

ITIS TSN: 503282

Wetland Status AW: FACW **WM:** FACW **GP:** NI

Native Status: Native

Conservation Status: G5 S2; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 9,200–13,200 ft. (2,805–4,025 m)

Key Characteristics:

- ◆ Strongly rhizomatous, not forming dense tufts; culms 5–35 cm tall
- ◆ Leaf blades 2–20 cm long x 0.2–1.5 (2) mm wide, erect to curved, sheaths persistent, dull
- ◆ Spikelets several, unisexual, 1-flowered, upper staminate, lower carpellate, (8) 10–35 mm long
- ◆ Perigynia brown, 2.5–3.2 mm, margins free to bases; achenes 2–3 mm
- ◆ Scales brown, 2–3 mm, margins hyaline, midveins distinct, apices shorter than the perigynia



Hurt et al. in prep.



Elizabeth Zimmerman

Similar Species: *K. myosuroides* [KOMY, FACU, ITIS 40140] and *K. sibirica* [KOSI, FAC, NI, ITIS 40141] can both occur in the same habitat. Both have spikelets that consist of 1 staminate and 1 carpellate floret, all the flowers are attached to the central stem. *K. myosuroides* has larger spikes 1–3 cm long and forms dense hummocks in fens. *K. sibirica* spikes are shorter 1–2 cm long and forms dense hummocks in moist tundra solifluction slopes and alpine lakeshores.

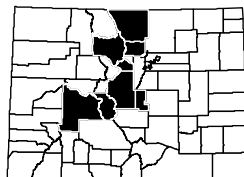
Habitat and Ecology: Uncommon in fens, moist gravelly tundra, rocky slopes, usually on calcareous soils in subalpine and alpine zones.

Comments: Circumpolar. Considered state critically imperiled (S1) in Utah and Wyoming, state critically imperiled (S2) in Colorado and state vulnerable (S3) in Montana.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Lipocarpa aristulata (Coville) G. Tucker

Awned halfchaff sedge

Cyperaceae

John Hilty



Synonyms: *Hemicarpha aristulata* (Coville) Smyth, *Hemicarpha micrantha* (Vahl) Pax var. *aristulata* Coville

USDA PLANTS Symbol: LIAR6

ITIS TSN: 503497

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5? SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,300–5,580 ft. (1,615–1,700 m)

Key Characteristics:

- ◆ Tufted; stems hardly over 10 cm tall, round
- ◆ Leaves slender, filiform, basal, ligules absent
- ◆ Inflorescence solitary, spikelets 1–2, lateral, ovoid, bracts 1–2, longest erect
- ◆ Scales 2, first scale rhomboid, widest at mid-length, second scale oblong, veinless
- ◆ Achenes smooth, obovoid to terete, 0.5–0.8 mm long x 0.25–0.35 mm wide

John Hilty



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *Scirpus* spp. and *Schoenoplectus* spp. look similar, but have more than 1 spike and are usually much more robust plants.

Habitat and Ecology: Uncommon along drying pond margins, sandy soils, emergent shorelines, stream banks, ponds and ditches. Known from historical occurrences in Larimer (1893) and Boulder (1954, 1958) Counties.

Comments: Global range extends from Washington, south to California to Texas north to Michigan and Indiana. Considered state critically imperiled (S1) in Utah.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Rhynchospora alba (L.) Vahl

White beaksedge

Cyperaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: RHAL3

ITIS TSN: 40151

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: Not Assigned

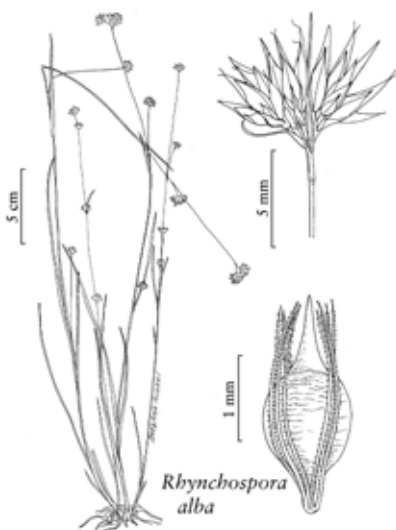
Duration: Perennial

CO Elevation: 4,800–8,550 ft. (1,465–2,605 m)

Key Characteristics:

- ◆ Densely caespitose, 6–75 cm; culms erect or curved, leafy, nearly terete, few ribbed, slender
- ◆ Leaves mostly overtopped by culm; blades filiform, flat, 0.5–1.5 mm long
- ◆ Inflorescence of clusters 1 or 2–3 florets, widely spaced, hemispheric, 1.5–2.5 cm wide
- ◆ Spikelets pale brown to nearly white, ellipsoid, 3.5–5.5 mm, midribs mucronate
- ◆ Perianth bristles 2–12, retrorsely barbellate; tubercle subulate, 0.5–1.2 mm long

Jessica O'Brien



Barbara Alongi

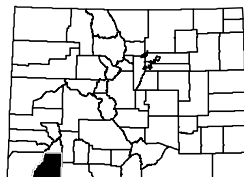
Similar Species: *R. alba* looks like it a *Juncus* spp. from a distance. Upon closer observation, there are no tepals, but perianth bristles and tubercles as in *Eleocharis* spp.

Habitat and Ecology: Rare. Known from poor fens and floating mats in La Plata County.

Comments: The Colorado occurrence is a disjunct population from populations in the midwest, east, southeast and western United States.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Schoenoplectus acutus (Muhl. ex Bigelow) Á. Löve & D. Löve

Hardstem bulrush

Cyperaceae

Hurd et al. in prep.



Synonyms: *Schoenoplectus lacustris* (L.) Palla ssp. *acutus* (Muhl. ex Bigelow) Á. Löve & D. Löve

USDA PLANTS Symbol: SCAC3

ITIS TSN: 507785

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 3,480–8,870 ft. (1,060–2,705 m)

Key Characteristics:

- ◆ Stout, rhizomatous, forming large colonies; culms round, 1–3 m tall, over 1 cm thick
- ◆ Involucral bracts solitary, 2–10 cm long, erect, resembling a prolongation of the culm
- ◆ Spikes dull, gray-brown, 8–15 mm long, sessile in small clusters
- ◆ Scales 3.5–4 mm long, reddish-brown marks on pale, gray-white background, margins ciliate
- ◆ Scale midribs firm, scabrous, exserted as short awn-tips; bristles fragile

Hurd et al. in prep.



Similar Species: *S. tabernaemontani* [OBL] has smaller scales (2–3.5 mm long), straight or bent awns and the spikelets are often all solitary.

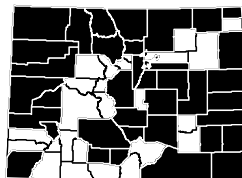
Habitat and Ecology: Fresh often calcareous to brackish marshes and muddy shores of lakes and streams in water as deep as 1 m. Often grows with *Typha* spp.

Comments: Common throughout the west, considered state vulnerable (S3) in Wyoming. *S. acutus* is an important habitat for waterfowl, especially Western Grebes that rely on large bulrush islands with open water channels for nesting sites. Bulrushes also provide food and habitat for upland game birds, songbirds, beaver and muskrats. They provide cover for waterfowl, fish, amphibians, and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Schoenoplectus fluviatilis (Torr.) M.T. Strong

River bulrush

Cyperaceae

Hurd et al. in prep.



Synonyms: *Bolboschoenus fluviatilis* (Torr.) Soják, *Bolboschoenus maritimus* (L.) Palla ssp. *fluviatilis* (Torr.) Á. Löve & D. Löve, *Scirpus fluviatilis* (Torr.) A. Gray

USDA PLANTS Symbol: SCFL11

ITIS TSN: 521092

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 3,900–5,480 ft. (1,190–1,670 m)

Key Characteristics:

- ◆ Stout, rhizomatous with large bulb-like nodules; culms sharply 3-edged, 10–20 dm tall
- ◆ Involucral bracts 3–6, surpassing inflorescence, widest bract 4–15 mm wide
- ◆ Spikelets numerous in several, pedunculate clusters, umbellate in appearance
- ◆ Perianth bristles tightly attached to achene, equal to the length of achene
- ◆ Achenes grayish-dark brown, dull, trigonous, apices rounded; beaks 0.2–0.8 mm



Hurd et al. in prep.



Hurd et al. in prep.



Similar Species: *S. maritimus* [OBL] spikelets are sessile, with perianth bristles short to half the length of the achene.

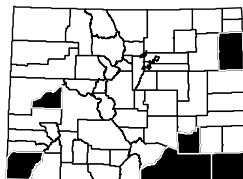
Habitat and Ecology: Uncommon in marshes, shores and standing water, tolerant of alkali conditions. Frequently forms dense, monospecific, often entirely vegetative stands.

Comments: Widespread throughout the west, but considered state critically imperiled (S1) in Utah. Seeds and rhizomes are used by waterfowl and songbirds. Vegetative matter is used by beaver and muskrats for food. Provides cover nesting waterfowl, amphibians, small mammals and fish.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Schoenoplectus maritimus (L.) Lye

Cosmopolitan bulrush

Cyperaceae

Hurd et al. in prep.



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

USDA PLANTS Symbol: SCMA8

ITIS TSN: 521093

Wetland Status AW: OBL **WM:** OBL **GP:** OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

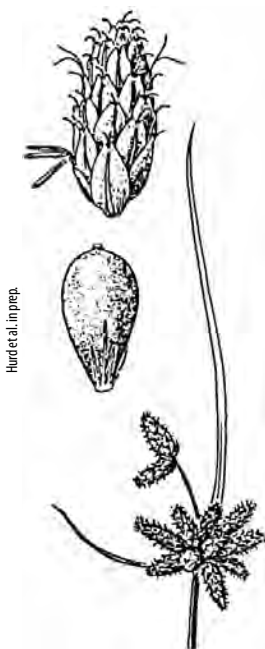
CO Elevation: 3,580–9,500 ft. (1,090–2,895 m)

Key Characteristics:

- ◆ Stout, rhizomatous, bearing firm tubers; culms 2–15 dm tall
- ◆ Involucral bracts 1–4, surpassing inflorescence, bracts 1–6 mm wide
- ◆ Spikelets sessile, over 1 cm long
- ◆ Perianth bristles not persistent on achene
- ◆ Achenes dark brown, glossy, apices rounded-truncate; beaks 0.1–0.4 mm



Hurd et al. in prep.



Hurd et al. in prep.

Similar Species: *S. fluviatilis* [OBL] spikelets are pedunculate and perianth bristles are equal to or longer than achenes.

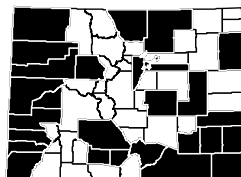
Habitat and Ecology: Common in marshes, wet meadows and margins of ponds, especially in alkaline or saline wetlands. *S. maritimus* is very tolerant of alkali conditions and is spreading with other halophytes in roadside ditches where road salts accumulate.

Comments: Seeds and rhizomes are used by waterfowl, upland game birds and songbirds. The vegetative matter is used by beaver and muskrats for food. Provides cover nesting waterfowl, amphibians, small mammals and fish.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Schoenoplectus pungens (Vahl) Palla

Common threesquare

Cyperaceae

Steve Matson



Synonyms: *Scirpus pungens* Vahl.

USDA PLANTS Symbol: SCPU10

ITIS TSN: 508146

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,470–8,870 ft. (1,060–2,705 m)

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
- ◆ Involute bract subtending the inflorescence 3–20 cm long
- ◆ Scales 3.5–6 mm long, yellowish-brown, midribs firm, exerted from broad notch as short awns
- ◆ Bristles retrorsely barbellate, 4–6, unequal, not exceeding achenes; beaked

Sedges

Hurd et al. in prep.



Hurd et al. in prep.



Similar Species: *S. americanus* [SCAM6, OBL, ITIS 508141] is expected to occur in Colorado. 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 deep. *Scirpus nevadensis* [OBL], superficially resembles *S. pungens*, but has round stems, scales without awns and beakless achenes.

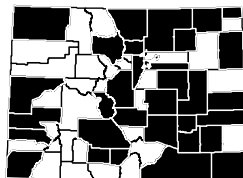
Habitat and Ecology: Very common along marshes, lakes, fens and perennial and intermittent streams, tolerant of alkali conditions.

Comments: *S. pungens* seeds and rhizomes are important food source and nesting cover for muskrats, geese, fish, amphibians and other waterfowl.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Schoenoplectus saximontanus (Fernald) Raynal

Rocky Mountain bulrush

Cyperaceae

Hurd et al. in prep.



Synonyms: *Scirpus saximontanus* Fernald, *Scirpus supinus* L. var. *saximontanus* (Fernald) T. Koyama

USDA PLANTS Symbol: SCSA8

ITIS TSN: 565498

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: 8

Duration: Perennial

CO Elevation: 4,650–4,650 ft. (1,415–1,415 m)

Key Characteristics:

- ◆ Tufted with very short, inconspicuous rhizomes
- ◆ Culms round, 1–2 (4) dm tall, less than 1.5 mm wide, often arching to decumbent,
- ◆ Involucre bract erect, 2–10 cm long, appearing as a continuation of culm
- ◆ Inflorescence appearing lateral; scales 2.5–3.5 mm long, tips entire, acute
- ◆ Achenes with prominent horizontal ridges, sharply 3-angled



Hurd et al. in prep.



Jeanne R. Jarish

182

Similar Species: *S. saximontanus* is a distinct bulrush with a slender growth habit and the spikelets that are equally trigonous with 3-parted styles.

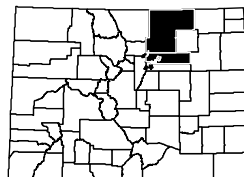
Habitat and Ecology: Rare along muddy to emergent shorelines, lake or reservoir shores, ditches, often in disturbed areas

Comments: Considered state critically imperiled (S1) in Colorado, Wyoming and Utah. Seeds and rhizomes are used by waterfowl, upland game birds and songbirds. The vegetative matter is used by beaver and muskrats for food. Provides cover nesting waterfowl, amphibians, small mammals and fish.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Schoenoplectus tabernaemontani (C.C. Gmel.) Palla

Softstem bulrush

Cyperaceae

Hurd et al. in prep.



Synonyms: *Scirpus lacustris* L. ssp. *creber* (Fernald) T. Koyama, *Scirpus lacustris* L. ssp. *validus* (Vahl) T. Koyama, *Scirpus tabernaemontani* C.C. Gmel.

USDA PLANTS Symbol: SCTA2

ITIS TSN: 507797

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 3,470–11,480 ft. (1,060–3,500 m)

Key Characteristics:

- ◆ Rhizomatous; culms 1–3 dm tall, round, 2–10 mm thick, easily crushed between fingers
- ◆ Inflorescence of oval, pedunculate, subterminal spikes
- ◆ Spikelets solitary, 15–200, overall reddish-brown appearance
- ◆ Scales 2–3.5 mm long, ciliate, awns straight or bent, 0.2–0.8 mm long, midribs pale
- ◆ Perianth bristles 6, brown, equaling achenes, dense with downward spines

Hurd et al. in prep.



Louis M. Landry



Similar Species: *S. acutus* [OBL] has spikelet scales that are 3.5–4 mm long with mostly strongly contorted awns 0.5–2 mm long, spikelets are never solitary and the stems are not easily crushed between fingers.

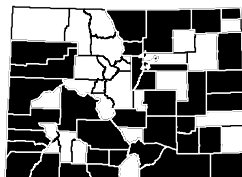
Habitat and Ecology: Common along marshes and muddy shores of lakes and streams in water as deep as 1 m and tolerant of alkali waters.

Comments: *S. tabernaemontani* provides important habitat for waterfowl, especially Western Grebes, that rely on large bulrush islands with open water channels for nesting sites. Bulrushes also provide food and habitat for upland game birds, songbirds, beaver and muskrats.

Animal and Bird Use:



References: Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Scirpus microcarpus J. Presl & C. Presl

Paniced bulrush

Cyperaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: SCMI2

ITIS TSN: 40235

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,860–9,450 ft. (1,175–2,880 m)

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 subtended by several leaf-like bracts that are unequal in length
- ◆ Scales green-black, broadly ovate, apices rounded, 1.5 mm long, minute point
- ◆ Perianth bristles persistent, 4 (6), stout, straight; achenes lenticular; styles 2

Hurd et al. in prep.



Hurd et al. in prep.



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

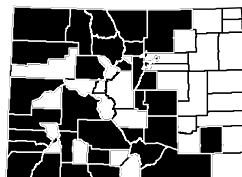
Habitat and Ecology: Found along muddy shores of marshes, moist meadows and ditches.

Comments: Common and widespread throughout Canada, western and northwestern United States. Considered state vulnerable (S3) in Wyoming. Seeds and rhizomes are used by waterfowl, upland game birds and songbirds. The vegetative matter is used by beaver and muskrats for food. Provides cover nesting waterfowl, amphibians, small mammals and fish.

Animal and Bird Use:



References: Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Scirpus nevadensis S. Watson

Nevada bulrush

Cyperaceae

Steve Matson



Synonyms: *Amphiscirpus nevadensis* (S. Watson)

Oteng Yeboah

USDA PLANTS Symbol: SCNE

ITIS TSN: 40269

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4 SNR

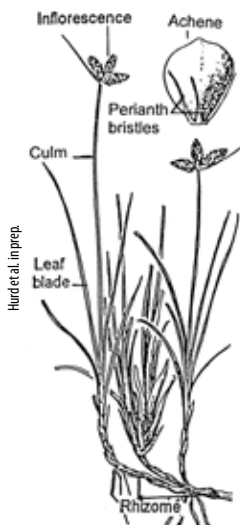
C-Value: 7

Duration: Perennial

CO Elevation: 6,300–8,400 ft. (1,920–2,560 m)

Key Characteristics:

- ◆ Rhizomes 1–4 mm wide, hard; culms round, 10–70 cm tall, hard, wiry
- ◆ Leaves 5–10, narrow to 2 mm wide, ligules present, ciliate
- ◆ Spikelets sessile at tip of culms, in compact clusters, subtended by stiff-green bracts
- ◆ Scales pale to dark reddish-brown, margins hyaline, ciliate, midribs pale, firm
- ◆ Perianth bristles 1–3, pale brown, unequal; achenes greenish-brown, beakless



Hurd et al. in prep.

Similar Species: *S. nevadensis* can resemble dwarfed forms of *Schoenoplectus pungens* [OBL]. *S. pungens* has triangular stems, not round, awned scales and beaked achenes.

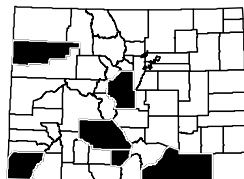
Habitat and Ecology: Found on alkaline salt flats and moist to seasonally wet wetlands. Achenes are distinctly cellular-reticulate, can be observed with 10x hand lens.

Comments: Current sedge systematics strongly supports the recognition of the name *Amphiscirpus* for *S. nevadensis*. However, to be consistent in nomenclature, we have chosen to follow the USDA-NRCS PLANTS Database. Considered state critically imperiled (S1) in Utah, state imperiled (S2) in Wyoming, and state vulnerable (S3) in Montana.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Reznicek personal communication, Weber and Wittmann 2012



Scirpus pallidus (Britton) Fernald

Cloaked bulrush

Cyperaceae

Hurd et al. in prep.



Synonyms: None

USDA PLANTS Symbol: SCPA8

ITIS TSN: 40270

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 4,670–8,340 ft. (1,425–2,540 m)

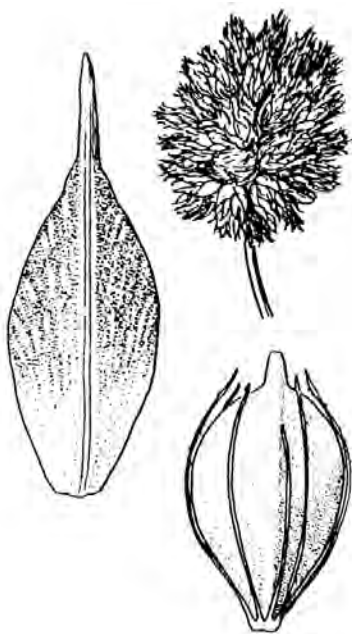
Key Characteristics:

- ◆ Cespitose, short, tough, rhizomes; culms upright, 3-edged, nodes without axillary bulblets
- ◆ Basal leaf sheaths green or whitish at bases
- ◆ Inflorescence terminal, spikes aggregated into dense heads, subtended by leaf-like bracts
- ◆ Scales with conspicuous, thickened midribs exerted as short awns to 0.5 mm
- ◆ Perianth bristles persistent, 6, stout, equaling achenes; achenes 3-sided; styles 3



Hurd et al. in prep.

Hurd et al. in prep.



Similar Species: *S. microcarpus* [OBL] usually has 2 styles, achenes are lenticular, not 3-sided and the inflorescence scales do not have well-defined points or short awns.

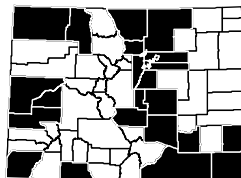
Habitat and Ecology: Found in marshes, streamsides, wet meadows and ditches.

Comments: Provides food, cover and nesting habitat for waterfowl, songbirds, fish, and amphibians. Considered state vulnerable (S3) in Wyoming and Montana.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Scirpus pendulus Muhl. Rufous bulrush

Cyperaceae

Keir Morse



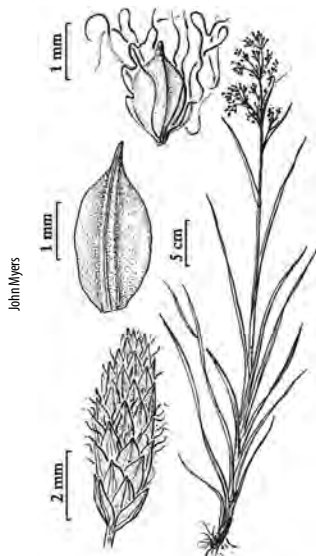
Synonyms: *Scirpus lineatus* auct. non Michx.
USDA PLANTS Symbol: SCPE4
ITIS TSN: 40273
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 5,300–5,350 ft. (1,615–1,630 m)

Key Characteristics:

- ◆ Cespitose, rhizomes short, stout; culm nodes without axillary bulblets
- ◆ Leaves 5–7 per culm; sheaths whitish; blades 15–40 cm long
- ◆ Spikes not aggregated into heads, each spike on an individual peduncle
- ◆ Spikelets in open cymes, central spikelet of each cyme sessile, others long-pedicellate; styles 3
- ◆ Scales brown to red-brown with green midribs, ovate, 2 mm, apices mucronate, 0.1–0.3 mm



Keir Morse



Similar Species: *S. pendulous* differs from other bulrushes with solitary spikelets on long pedicels, except for the central spikelet, the perianth bristles are twice as long as the achene and strongly contorted.

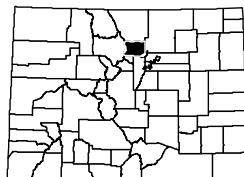
Habitat and Ecology: Uncommon in moist places and fields, where it has escaped cultivation. Known from 3 collections in Boulder County. It is considered an adventive in Colorado by Weber and Wittmann (2012) and Ackerfield (2012).

Comments: Considered state critically imperiled (S1) in Wyoming. Provides food, cover and nesting habitat for waterfowl, songbirds, fish and amphibians.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Trichophorum pumilum (Vahl) Schinz & Thell. Rolland's bulrush

Cyperaceae

Steve Olson



Synonyms: *Scirpus pumilus* Vahl, *Scirpus rollandii* Fernald

USDA PLANTS Symbol: TRPU18

ITIS TSN: 507803

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 S2; BLM Sensitive

C-Value: 10

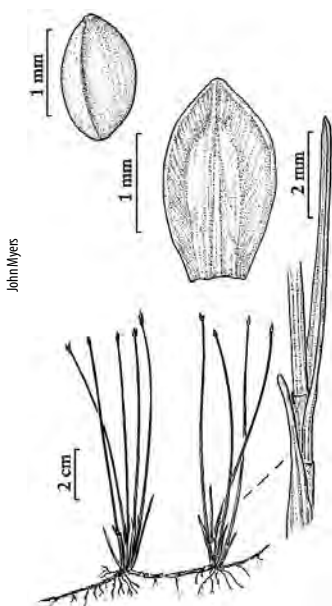
Duration: Perennial

CO Elevation: 9,300–11,000 ft. (2,835–3,355 m)

Key Characteristics:

- Loosely caespitose, rhizomes long, slender; culms grooved, round, 5–14 cm, smooth
- Leaf blades 2–8.4 mm long x 0.4–0.5 mm wide, much shorter than culms; basal sheaths brown
- Spikelets solitary and terminal at culm tips
- Spikelets 3–6 flowered, 3–4.6 mm long x 1.7–2.8 mm wide; bracts shorter than spikelets
- Scales brown, apices obtuse, perianth bristles absent; achenes black, no stylopodiums

Dylan Neubauer



Similar Species: *Eleocharis quinqueflora* [OBL] occurs in similar habitats, but has white to pale gray or faint yellowish (not black) achenes and does not have leaves that attach directly to culm. *E. acicularis* has achenes with distinct longitudinal ridges and cross-ridges and a distinct apical cap.

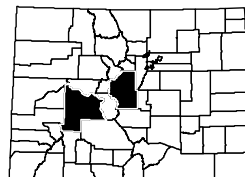
Habitat and Ecology: Rare on peat hummock, streamlets or rills in calcareous fens. Currently only known from Park and Gunnison Counties.

Comments: Circumboreal. Considered state critically imperiled (S1) in Wyoming, state imperiled (S2) in Colorado and state vulnerable (S3) in Montana.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Sedges

Acorus calamus L.

Calamus

Acoraceae

Louis M. Landry



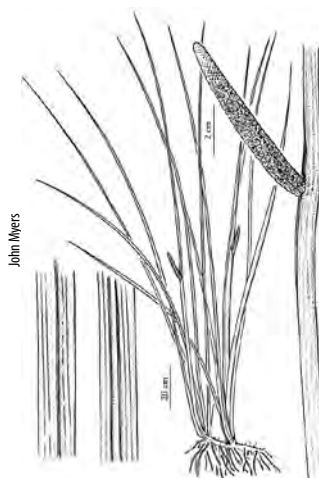
Synonyms: None
USDA PLANTS Symbol: ACCA4
ITIS TSN: 564989
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: G4? S1
C-Value: 5
Duration: Perennial
CO Elevation: 3,500–5,100 ft. (1,065–1,555 m)

Key Characteristics:

- ◆ Stems 9–15 dm tall, cattail-like, aromatic; rhizomatous
- ◆ Leaves sword-like, erect, linear, 9–12 dm long x (4) 7 (10) mm wide, midvein raised
- ◆ Spadices 4–9 cm long, apices obtuse, appearing lateral due to leaf-like spathes, 10–70 cm long
- ◆ Flowers inconspicuous, arranged in a densely flowered spadices, yellowish-green to brown
- ◆ Fruits berries with leathery pericarps

Monocot Herbs

Crystal Strouse



Similar Species: Vegetatively, *A. calamus* resembles *Typha* spp., but the leaves are sword-shaped as in *Iris missouriensis*.

Habitat and Ecology: Rare in wet meadows and ditches, known only in Larimer and Boulder Counties. Boulder occurrence was destroyed in 1957. Easily recognized by crushing leaves, which produces a strong and spicy citrus smell.

Comments: Introduced to North America by early European settlers who grew it for medicinal uses. The native status of *A. calamus* is being debated among taxonomists. Many believe that there are two subspecies, one native to North America and one not. Regardless of its origin it provides a food source for muskrats and wood ducks.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2000, Great Plains Flora Association 1986, Weber and Wittmann 2012



Tradescantia occidentalis (Britton) Smyth

Prairie spiderwort

Commelinaceae

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: TROC

ITIS TSN: 39168

Wetland Status AW: FACU WM: FACW GP: UPL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,500–8,400 ft. (1,065–2,560 m)

Key Characteristics:

- ◆ Stems, 5–90 cm tall with white sap, erect or ascending
- ◆ Leaves spirally arranged, sessile; blades linear-lanceolate, apices acuminate, glaucous
- ◆ Inflorescence terminal, often axillary; subtended by 2 leaf-like bracts
- ◆ Flowers pedicellate; glandular-puberulent; sepals with apical tufts of hairs; petals blue
- ◆ Stamens free; filaments bearded; capsules 4–7 mm; seeds 2–4 mm

Al Schneider



USDA-NRCS PLANTS Database Britton & Brown 1913



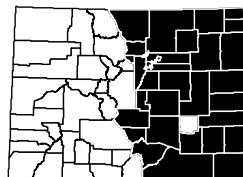
Similar Species: Can be mistaken for a lily, but most lilies have sepals and petals of equal size and color, while spiderworts have smaller, green sepals. *Commelina* spp., the other genus in this family, have inflorescences that are subtended by spathe instead of leaf-like bracts and occur in much drier habitats.

Habitat and Ecology: Common in sandy soil on the Eastern Slope and lower foothills. *T. occidentalis* is not typically considered a wetland plant in all regions, but does have a Wetland Indicator status of FACW for the Western Mountains region.

Comments: All members of the Commelinaceae have three, nearly equal-sized petals and sharply folded leaves where the base of each leaf wraps around the succulent stem. In Wyoming, it is considered state vulnerable (S3).

Animal and Bird Use: 

References: Ackerfield 2012, Elpel 2006, Weber and Wittmann 2012



Iris missouriensis Nutt.

Rocky Mountain iris

Iridaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: IRMI

ITIS TSN: 43221

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 5,500–13,550 ft. (1,675–4,130 m)

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

Monocot Herbs

Al Schneider



Jeanne R. Jamish



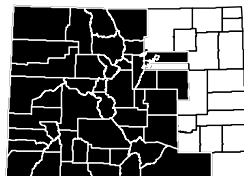
Similar Species: *I. pseudacorus* [IRPS, OBL, ITIS 43194] which has bright, yellow flowers has recently been documented along streams in the Front Range, especially Boulder Creek. It is an aggressive weed that should be eliminated immediately upon discovery; consult with the County Extension Agency or State Weed Coordinator for removal options. *I. missouriensis* can resemble a lily, but lilies have 6 stamens, *Iris* have 3.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Cronquist et al. 1977, Elpel 2006, Knight and Walter 2001, Weber and Wittmann 2012



Sisyrinchium demissum Greene

Stiff blue-eyed grass

Iridaceae

Russ Kleinman and Richard Felger



Synonyms: None

USDA PLANTS Symbol: SIDE4

ITIS TSN: 43255

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2

C-Value: 7

Duration: Perennial

CO Elevation: 6,400–9,240 ft. (1,950–2,815 m)

Key Characteristics:

- ◆ Cespitose; stems branched with 1 or 2 nodes, up to 4.8 dm tall, often glaucous, glabrous
- ◆ Leaf blades glabrous; bracts subtending spathes leaf-like
- ◆ Spathes 2 or more, pedunculate, to 14 cm long, outer and inner bracts equal length
- ◆ Flowers 1–7, perianth light to dark blue, yellow eye, tepals, truncate, 9–10 mm long
- ◆ Capsules tan, globose, 4–7.5 mm; seeds globose, 0.8–2 mm, granular or rugulose

Russ Kleinman and Richard Felger



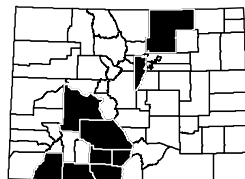
Similar Species: *S. demissum* is the only Colorado blue-eyed grass for which the outer and inner spathe bracts are equal in length and the stems are branched. Other blue-eyed grasses have outer spathe bracts that are longer than the inner and stems that are simple and unbranched.

Habitat and Ecology: Uncommon in wet meadows and along streams, tolerant of alkaline soils.

Comments: *Sisyrinchium* spp. flowers bloom for only one day, however there are numerous flowering stems per plant. Source of nectar for native bees, wasps, butterflies, and other insects. Global range extends from Nevada, Utah, Colorado, where it is considered state imperiled (S2), to Arizona, New Mexico and Texas.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



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



Synonyms: *Sisyrinchium occidentale* E.P. Bicknell
USDA PLANTS Symbol: SIIDO
ITIS TSN: 530395
Wetland Status AW: FACW WM: FACW GP: OBL
Native Status: Native
Conservation Status: G5T3T5 SNR
C-Value: 7
Duration: Perennial
CO Elevation: 3,900–10,890 ft. (1,190–3,320 m)

Key Characteristics:

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



Barry Breckling



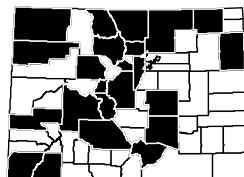
Similar Species: *S. pallidum* [NI] has pale blue flowers, outer spathe bracts that are longer (28–38 mm long) and the tips of outer tepals are not awned. *S. montanum* [SIMO2, FAC, ITIS 43269] has blue-violet flowers with outer spathe bracts that are longer (40–70 mm) and the inner bracts have a narrow hyaline margin.

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. Considered state vulnerable (S3) in Wyoming. Source of nectar for native bees, wasps, butterflies, and other insects.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Sisyrinchium pallidum Cholewa & Douglass M. Hend.

Pale blue-eyed grass

Iridaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SIPA11

ITIS TSN: 505250

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G2G3 S2; BLM Sensitive

C-Value: 7

Duration: Perennial

CO Elevation: 7,100–9,640 ft. (2,165–2,940 m)

Key Characteristics:

- ◆ Cespitose, green to olive when dry, to 3 dm tall
- ◆ Stems simple, 1–2 mm wide, glabrous, margins entire
- ◆ Outer spathes 28–38 mm, connate for 2.6–4.3 mm; inner spathes with keels evenly curved, acute apices
- ◆ Tepals pale blue, bases yellow; outer tepals 7.6–10 mm, apices slightly notched, bristle tips

Allison Shaw



- ◆ Capsules beige, globose, 3–5 mm; seeds globose, 0.8–1.2 mm, granular or rugulose



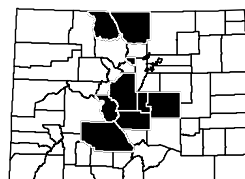
Similar Species: *S. pallidum* is difficult to discern by only the flower color, especially from *S. montanum*. However, *S. pallidum* outer spathes are usually connate for more than 2.6 mm and outer tepals are slightly notched to round at tips. *S. montanum* [SIM02, FAC, ITIS 43269] and *S. idahoense* var. *occidentale* [FACW, OBL] outer spathes are connate less than 2.6 mm and outer tepals are rounded but never notched.

Habitat and Ecology: Locally common in poorly drained, montane meadows and fens and along streams, tolerates alkaline soils.

Comments: *S. pallidum* is a regional endemic, globally imperiled (G2G3), known only from Colorado (S2) and Wyoming (S2). Source of nectar for native bees, wasps, butterflies, and other insects.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Weber and Wittmann 2012



Triglochin maritima L. Seaside arrowgrass

Juncaginaceae

Steve Matson



Synonyms: *Triglochin concinna* Burt-Davy

USDA PLANTS Symbol: TRMA20

ITIS TSN: 38988

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

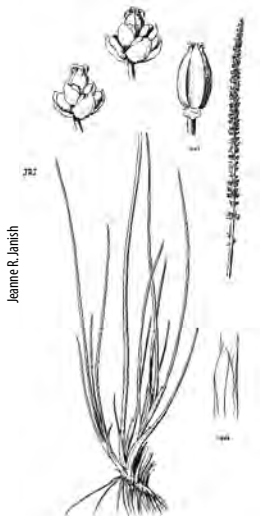
C-Value: 6

Duration: Perennial

CO Elevation: 4,920–11,250 ft. (1,500–3,430 m)

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
- ◆ 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



Jeanne R. Janish

Monocot Herbs

Steve Matson



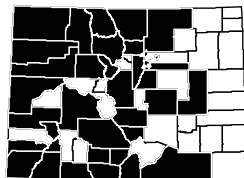
Similar Species: *Triglochin* spp. can resemble large *Plantago* spp. from a distance, which are dicots and would have net-veination of leaves. *T. palustris* [OBL] has 3 stigmas, fruits that are linear with narrow bases and fruiting receptacles with wings.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Cronquist et al. 1977, Flora of North America 2002, Knight and Walter 2001, Weber and Wittmann 2012



Triglochin palustris L. Marsh arrowgrass

Juncaginaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: TRPA28

ITIS TSN: 38989

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

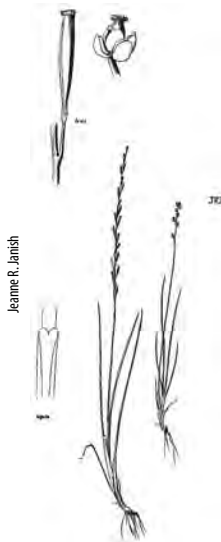
Duration: Perennial

CO Elevation: 5,100–11,060 ft. (1,555–3,370 m)

Key Characteristics:

- ◆ Slender, erect, 1.5–6 dm tall; arising from stout, ascending rhizomes
- ◆ Leaves linear, 5–30 cm long x 1–2 mm wide, sharp-pointed, ligule bilobed, divided
- ◆ Scapes 1–2 dm long, purple at bases, terminated by spike-like racemes, flowers not densely grouped
- ◆ Tepals elliptic, 1.1–1.6 mm long x 0.7–0.9 mm wide, apices round; stigmas 3
- ◆ Fruits are receptacles with wings, linear to clavate, 5–8.3 mm long, narrowed at bases

Louis M. Landry



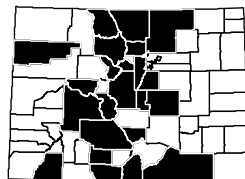
Similar Species: *T. maritima* [OBL] has 6 stigmas with fruits that are linear to globose, not narrowed at the bases, and the flowers usually densely grouped.

Habitat and Ecology: Uncommon 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 concentrated when plants are young. Common throughout Alaska, Canada and the United States, except in the southeastern states. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Knight and Walter 2001, Weber and Wittmann 2012



Allium schoenoprasum L. var. *sibiricum* (L.) Hartm.

Wild chives Liliaceae (Alliaceae)

Louis M. Landry



Key Characteristics:

- ◆ Stems scapose, 2–5 dm tall, from sheathing bulbs persisting as coarse fibers
- ◆ Leaves round and hollow, 2–7 mm wide
- ◆ Involucre bracts of scapes 3- to 7-nerved

Synonyms: *Allium sibiricum* L.

USDA PLANTS Symbol: ALSCS

ITIS TSN: 526875

Wetland Status AW: FACW WM: FACW GP: FACU

Native Status: Native

Conservation Status: G5T5 S1

C-Value: 7

Duration: Perennial

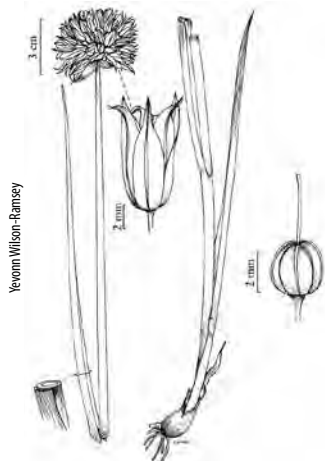
CO Elevation: 5,000–8,600 ft. (1,525–2,620 m)

- ◆ Umbels with 30–50 flowers; tepals purple drying pink or white

- ◆ Seed coats shiny; cell surface minutely roughened



Louis M. Landry



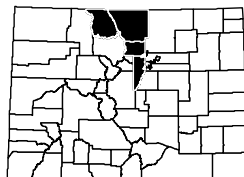
Similar Species: Other *Allium* spp. can be in wetlands, but not consistent enough to warrant a Wetland Indicator Status Code of OBL or FACW (e.g., *A. geyeri* [ALGE, FACU, ITIS 42643] and *A. brevistylum* [ALBR2, NI, ITIS 42717]). *A. schoenoprasum* var. *sibiricum* is the only wild chive or onion in Colorado that has hollow leaves.

Habitat and Ecology: Uncommon along streams and in wet meadows. *A. schoenoprasum* var. *sibiricum* is native in North America, but is also cultivated and has widely escaped from rural gardens.

Comments: *A. schoenoprasum* var. *sibiricum* leaves are edible by humans either raw or cooked. However, all members of *Allium* possess an alkaloid that causes severe anemia in cattle, horses and dogs. Onions are not toxic to humans because we have spleens that neutralize the alkaloids (thiosulphates) found in onions. Global range extends from Alaska, Canada, Pacific Northwest, Montana, Wyoming (S4), Colorado (S1) to the upper midwest.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 2002, Knight and Walter 2001, Weber and Wittmann 2012



Hypoxis hirsuta (L.) Coville

Common goldstar

Liliaceae (Hypoxidaceae)

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: HYH12

ITIS TSN: 503146

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S1

C-Value: 10

Duration: Perennial

CO Elevation: 5,000–8,100 ft. (1,525–2,470 m)

Key Characteristics:

- ◆ Scapose, (4) 5–17 (25) cm tall, densely pubescent; thick rhizomes or corms
- ◆ Leaves basal, grass-like, (1) 2–5 (15) mm wide, soft, glabrous or sparsely to densely pubescent.
- ◆ Flowers in cymes or umbels, clustered at ground, 6 tepals, 6–10 (15) mm long, yellow
- ◆ Ovaries inferior, usually densely pubescent
- ◆ Capsules crowned by persistent flower parts; seeds black, lustrous, 1–1.5 mm, coarsely rough



Monocot Herbs

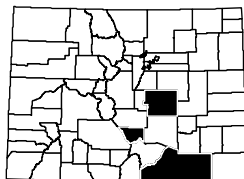
Similar Species: *H. hirsuta*, vegetatively, is reminiscent of *Sisyrinchium* but is distinct when flowering.

Habitat and Ecology: Uncommon in moist meadows and fens, currently known from the Eastern Slope in El Paso, Custer and Las Animas Counties.

Comments: The global range extends from the eastern United States and Canada to Saskatchewan and Colorado and New Mexico. Considered state critically imperiled (S1) in Colorado. *H. hirsuta* is a tall-grass prairie relict.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Flora of North America 2002, Weber and Wittmann 2012



Streptopus amplexifolius (L.) DC. var. *chalazatus* Fassett Tuberle twistedstalk Liliaceae (Uvulariaceae)

Barry Breckling



Synonyms: *Streptopus fassettii* Á. Löve & D. Löve
USDA PLANTS Symbol: STAMC
ITIS TSN: 530587
Wetland Status AW: FAC WM: FAC GP: FACW
Native Status: Native
Conservation Status: G5T5 SNR
C-Value: 7
Duration: Perennial
CO Elevation: 6,700–11,200 ft. (2,040–3,415 m)

Key Characteristics:

- ◆ Stems branched, stout, 5–12 dm, often with reddish hairs basally; thick rhizomes
- ◆ Leaves 5–15 cm long x 2.5–6 cm wide; bases cordate-clasping, stalked glands at pedicel joints
- ◆ Flowers 1–2 per leaf axil; dangling at the ends of slender, geniculate pedicels
- ◆ Perianth campanulate; tepals spreading, recurved at tips, white to greenish-yellow, 9–15 mm long
- ◆ Berries whitish-green maturing to yellowish-orange or red, ellipsoid, 10–12 mm long

Barry Breckling



Yevonn Wilson-Ramsey

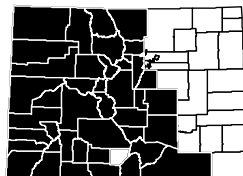
Similar Species: *Prosartes trachycarpa* (= *Disporum trachycarpum*) [PRTR4, FACU, ITIS 43044] flowers are terminal with hairy, relatively straight pedicels, stems are densely pubescent and fruits are orange. *Maianthemum racemosum* ssp. *amplexicaule* (= *Smilacina amplexicaulis*) [MARAA, FAC, ITIS 524296] and *M. stellatum* (= *Smilacina stellata*) [MAST4, FAC, ITIS 503656] produce flowers in a terminal panicle or raceme versus flowers solitary or paired in leaf axils.

Habitat and Ecology: Common along streams and in moist forests and meadows.

Comments: Considered state vulnerable (S3) in Wyoming. Berries are edible.

Animal and Bird Use: 

References: Ackerfield 2012, Darrow 2006, Flora of North America 2002, Weber and Wittmann 2012



Veratrum tenuipetalum A. Heller

Colorado false hellebore

Liliaceae (Melanthiaceae)

Al Schneider



Synonyms: None

USDA PLANTS Symbol: VETE4

ITIS TSN: 505649

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G4?Q S4?

C-Value: 4

Duration: Perennial

CO Elevation: 7,500–11,810 ft. (2,285–3,600 m)

Key Characteristics:

- ◆ Stems 1.5–3 m tall from stout, thick rhizomes
- ◆ Leaves numerous, oblong-lanceolate, 2.5–4 dm long, 1–2 dm wide, strongly nerved or pleated
- ◆ Inflorescence a densely flowered, pyramidal, terminal panicle, 2–8 dm long
- ◆ Flowers campanulate, dull white or greenish, tepals lanceolate, slightly erose, glands Y-shaped
- ◆ Capsules narrowly ovoid, 2–3.6 mm long, glabrous

Al Schneider



Al Schneider



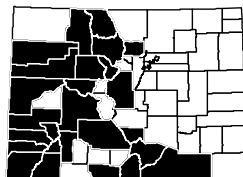
Similar Species: *Frasera speciosa* [FRSP, UPL, ITIS 502660] looks like *Veratrum* from afar, but upon closer inspection, *V. tenuipetalum* leaves are distinctive with parallel veins, quickly distinguishing between the two plants.

Habitat and Ecology: Common in moist places along streams, in seeps/springs and seasonally wet meadows.

Comments: *V. tenuipetalum* does not have a Wetland Indicator Code, but the closely related *V. californicum* [VECA2] is ranked FACW for Arid West, OBL for Great Plains, and FAC for Western Mountains, therefore is included in the Field Guide. *V. tenuipetalum* contains over 50 alkaloids. It is the most toxic when it first emerges in spring and the roots are more toxic than leaves. *V. tenuipetalum* grows at a rate of 2 inches per day. It is estimated that it can live for over 20 years, forming clones that can be hundreds of years old.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Cronquist et al. 1977, Darrow 2006, Flora of North America 2002, Knight and Walter 2001, Weber and Wittmann 2012



Zigadenus elegans Pursh

Mountain deathcamas

Liliaceae (Melanthiaceae)

Gary A. Monroe USDA-NRCS PLANTS Database



Synonyms: *Anticlea elegans* (Pursh) Rydb.
USDA PLANTS Symbol: ZIEL2
ITIS TSN: 43158
Wetland Status AW: FACU WM: FACU GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 6
Duration: Perennial
CO Elevation: 6,500–14,310 ft. (1,980–4,360 m)

Key Characteristics:

- ◆ Erect herb, 1.5–7 (10) dm tall, from deep-seated globose bulbs
- ◆ Leaves basal, linear, 1–2.5 (3.5) dm long x 2–15 (20) mm wide
- ◆ Inflorescence a 3- to several-flowered raceme or a branched terminal panicle
- ◆ Tepals 7–12 mm long x 15–20 mm wide, disc-shaped, white, cream or greenish
- ◆ Gland on inside of tepals deeply obcordate; stamens shorter than tepals



Louis M. Landry



Jeanne R. Lanish

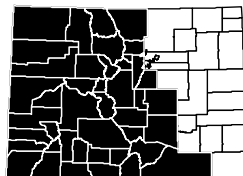
Similar Species: The only other death camas in Colorado with a deeply obcordate gland is *Z. vaginatus* (= *Anticlea vaginata*) [ZIVA, FAC, ITIS 505802]. It has white flowers with tepals up to 8 mm long, the inflorescence is paniculate with 1–4 lower branches. It is known only from hanging gardens in Moffat County.

Habitat and Ecology: Common in dry to wet meadows, forests and alpine tundra.

Comments: *Zigadenus* spp. contain steroidal alkaloids, similar to the ones in *Veratrum tenuipetalum*. The entire plant is toxic, especially the bulbs. Gastrointestinal disease, hypotension and death will occur if ingested. Common throughout Alaska, Canada into the Pacific Northwest, Intermountain West and Midwest.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2002, Knight and Walter 2001, Weber and Wittmann 2012



Calypso bulbosa (L.) Oakes

Fairy slipper

Orchidaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: CABU

ITIS TSN: 43508

Wetland Status AW: FAC WM: FACU GP: FACW

Native Status: Native

Conservation Status: G5 S4?

C-Value: 8

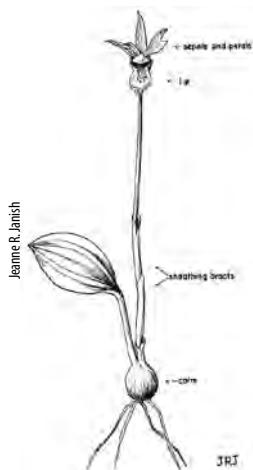
Duration: Perennial

CO Elevation: 7,000–10,600 ft. (2,135–3,230 m)

Key Characteristics:

- Stems scapose, succulent; arising from corns, plicate, leathery
- Leaf solitary, produced in autumn, withering in spring, sheathing bracts usually 2
- Lip petals purplish at bases, whitish toward tips, saccate, inflated pouches, tepals purplish to magenta
- Yellowish hairs near middle of lip pouch with dark purplish stripes on inner surface
- Fruits are capsules

Al Schneider



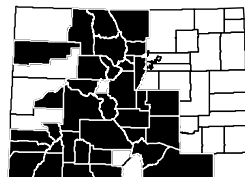
Similar Species: Other Colorado orchids have either yellow or brown tepals.

Habitat and Ecology: Uncommon. Found under pine and spruce trees in moist, shaded forests and along streams. *C. bulbosa* is not usually considered a wetland plant. It is included here due to its Wetland Indicator Status of FACW Status in the Great Plains region.

Comments: *C. bulbosa* is pollinated by bumblebees. The plant relies on pollination by deception, as do most orchids. It attracts insects to the anther-like yellow hairs at the entrance to the pouch and forked nectary-like structures at the end of the pouch, but produces no nectar that would nourish them. Insects quickly learn not to revisit it, perhaps explaining the small variation in the flower's appearance. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Boyden 1982, Flora of North America 2002, Scott Smith personal communication, Weber and Wittmann 2012



Cypripedium parviflorum Salisb. var. *pubescens* (Willd.) Knight

Yellow lady's slipper

Orchidaceae (Cypripediaceae)

Denise Culver



Synonyms: *Cypripedium calceolus* L. ssp. *parviflorum* (Salisbury) Hultén, *Cypripedium calceolus* L. var. *pubescens* (Willd.) Correll

USDA PLANTS Symbol: CYPAP3

ITIS TSN: 534229

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S2; USFS Sensitive

C-Value: 9

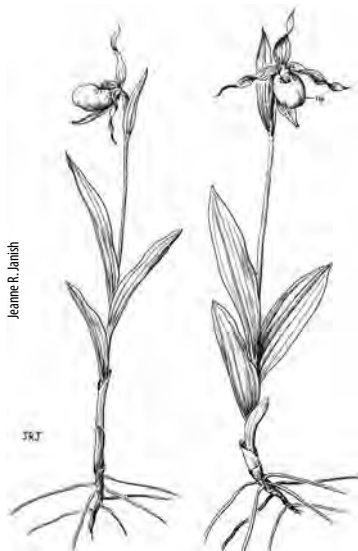
Duration: Perennial

CO Elevation: 6,240–10,000 ft. (1,900–3,050 m)

Key Characteristics:

- ◆ Stems erect, 1–4 (7) dm tall, stout, densely covered with hair
- ◆ Leaves 3–5, alternate, several nerved, glandular pubescent
- ◆ Flowers large, 20–50 mm long, yellow, usually solitary or occasionally 2 per stem
- ◆ Sepals and petals greenish-yellow, often purplish-brown, wavy margins, dorsal sepals twisted
- ◆ Lip petals leathery, yellow, forming a pouch with purple dots at opening, yellow hairs at tips

Scott Smith



Jeanne R. Janish

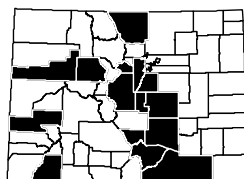
Similar Species: *C. fasciculatum* [CYFA, FACU, ITIS 43543] has small purple or brown-purple flowers. *Calypso bulbosa* [FAC, FACW, FACU] has a single pink flower and a single leaf.

Habitat and Ecology: Uncommon but widely scattered in moist aspen and pine/fir forests.

Comments: Global range extends south from Alaska, throughout Canada, Washington, Idaho (S1) Utah (S1) Arizona (S1), New Mexico (S2), Montana, Wyoming (S2) south to Texas, throughout the midwest to the southeast, north to the northeast United States. Carpenter bees are known as the primary pollinators. *C. parviflorum* var. *pubescens* has a faint rose or musty smell.

Animal and Bird Use: 

References: Ackerfield 2012, Argue 2012, Flora of North America 2002, Weber and Wittmann 2012



Epipactis gigantea Douglas ex Hook.

Stream orchid

Orchidaceae

Karin Freeman



Synonyms: None

USDA PLANTS Symbol: EPGI

ITIS TSN: 43481

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4 S1; USFS Sensitive

C-Value: 9

Duration: Perennial

CO Elevation: 4,800–7,940 ft. (1,465–2,420 m)

Key Characteristics:

- ◆ Stems erect, glabrous, 2–10 dm tall; rhizomatous, forming extensive stands
- ◆ Leaves 4–14, ovate, ovate-elliptic to narrowly lanceolate, 5–20 cm long
- ◆ Inflorescence a lax, few-flowered raceme
- ◆ Lips 3-lobed, greenish, 2 upper petals tipped pink, lower lip veins red, gold on bottom
- ◆ Fruits are capsules, ellipsoid, glabrate, 20–25 mm long



Susan Tweit



Carolyn Crawford

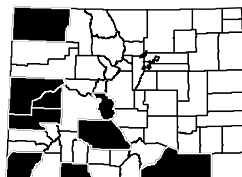
Similar Species: None.

Habitat and Ecology: Uncommon in hanging gardens, wet slopes near hot springs and seep/springs.

Comments: The lower lip and tongue move when the flower is touched or shaken, reflected by its other common name of chatterbox orchid. *E. gigantea* is pollinated primarily by syrphid flies, but wasps are also regular pollinators. The plant attaches a pollinium to the back of the pollinator, that is then transferred to next flower. Considered state critically imperiled (S1) in Wyoming and South Dakota, state imperiled (S2) in Colorado and state vulnerable (S3) in Montana and Utah.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Rocchio et al. 2006, Weber and Wittmann 2012



Listera borealis Morong

Northern twayblade

Orchidaceae

David R. McAdoo



Synonyms: None

USDA PLANTS Symbol: LIB04

ITIS TSN: 43631

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G4 S2

C-Value: 9

Duration: Perennial

CO Elevation: 8,020–11,000 ft. (2,445–3,355 m)

Key Characteristics:

- ◆ Stems slender to stout, slightly 4-angled, succulent, glabrous, 4–26 cm tall; fibrous roots
- ◆ Leaves 2, opposite, near middle of stems, lanceolate to elliptic, 0.7–3 cm wide, bases rounded
- ◆ Terminal racemes 5- to 20-flowered, lax, peduncles and rachises glandular-pubescent
- ◆ Flowers bluish-green, veins darker green; pedicels filiform, 3.5–7 mm, glandular-pubescent

- ◆ Sepals and petals strongly reflexed, lips notched into 2 oblong lobes, margins ciliate



Carolyn Crawford

Monocot Herbs

David R. McAdoo



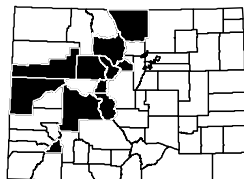
Similar Species: *L. convallarioides* [FAC, FACW] occurs in similar habitats. The lip petal gradually narrows toward the bases and the leaves are suborbiculate to broadly ovate and wider (1.5–6 cm). *L. borealis* lip petal is the same width throughout and leaves are lanceolate, 1.5–5.8 cm wide. *L. cordata* [FAC, FACW, FACU] leaves have cordate bases and the lip cleft splits into 2 linear-lanceolate lobes.

Habitat and Ecology: Uncommon in moist, shady forests and in mossy seeps.

Comments: Global range extends from Alaska, Canada, Pacific Northwest, Idaho, Utah (S1), Colorado (S2), Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Listera convallarioides (Sw.) Nutt. ex Elliott

Broadblipped twayblade

Orchidaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: LICO5

ITIS TSN: 43633

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 S2

C-Value: 10

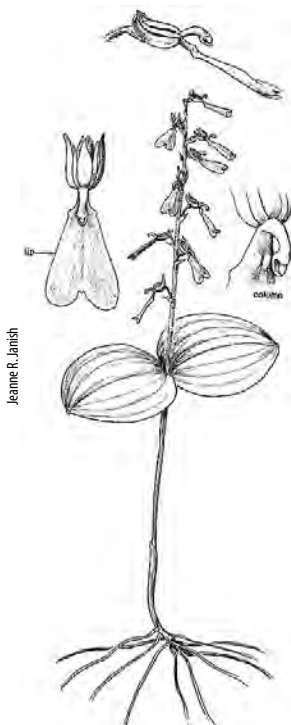
Duration: Perennial

CO Elevation: 6,800–9,460 ft. (2,075–2,885 m)

Key Characteristics:

- ◆ Stems green, succulent, glabrous, 5–37 cm tall; stoloniferous
- ◆ Leaf blades green, broadly ovate, 2–7 cm long x 1.5–5.8 cm wide, apices obtuse, rounded bases
- ◆ Inflorescences 5- to 20-flowered, lax, 20–120 mm; peduncles whitish glandular-pubescent
- ◆ Flowers yellowish-green, faintly tinged with purple, lip petals narrowing to the bases
- ◆ Fruits capsules ellipsoid, 8 x 5 mm, glabrous

Steve Matson



Jeanne R. Janish

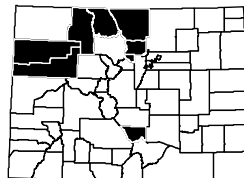
Similar Species: *L. borealis* [FACW] occurs in similar habitats, but has a lip petal that is the same width throughout, not narrowing, and the leaves are lanceolate or elliptic. *L. cordata* [FAC, FACW, FACU] have leaves with cordate bases, not rounded.

Habitat and Ecology: Uncommon in shady, moist forests along streams.

Comments: Considered state critically imperiled (S1) in South Dakota, state imperiled (S2) in Colorado and Wyoming, and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Listera cordata (L.) R. Br. Heartleaf twayblade

Orchidaceae

Stefano Doglio



Key Characteristics:

- Stems 5–33 cm tall, green to reddish-purple, succulent, glabrous; fibrous roots
- Leaves 2, opposite, near middle of stems; blades ovate-cordate, 0.9–2 cm long x 1.8–3.8 cm wide
- Terminal racemes 5–20-flowered, lax to dense, peduncles and rachises glandular-puberulent
- Flowers green to yellow-green; pedicels slender, 2–3 mm
- Lips 3–4 mm wide, cleft to middle into two 2 linear-lanceolate lobes, margins glabrous

Jessica O'Brien



Synonyms: *Listera cordata* (L.) R. Br. ex Ait. f. var. *nephrophylla* (Rydb.) Hultén

USDA PLANTS Symbol: LICO6

ITIS TSN: 43634

Wetland Status AW: FACW WM: FAC GP: FACU

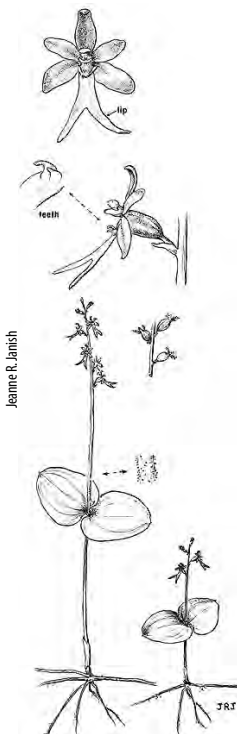
Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,000–12,800 ft. (2,440–3,900 m)



Jeanne R. Janisch

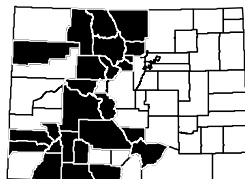
Similar Species: *L. convallarioides* [FAC, FACW] and *L. borealis* [FACW] have leaves with rounded, not cordate, bases and flower lips that are cleft with ciliate margins.

Habitat and Ecology: Locally common in moist, shady forests and in mossy places along streams.

Comments: Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. Global range includes Alaska, Canada, Pacific Northwest, California, Intermountain West and upper midwest states.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Malaxis brachypoda (A. Gray) Fernald

White adder's-mouth orchid

Orchidaceae

Scott Smith



Synonyms: *Malaxis monophyllos* (L.) Sw. ssp. *brachypoda* (A. Gray) Á. Löve & D. Löve

USDA PLANTS Symbol: MABR5

ITIS TSN: 503665

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4Q S1; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 7,200–8,030 ft. (2,195–2,450 m)

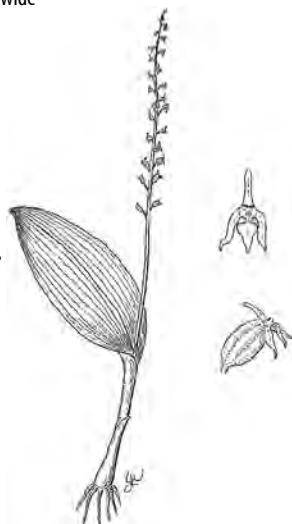
Key Characteristics:

- Stems erect, 3–30 cm tall, swollen at bases into pseudobulbs, 4–8 mm in diameter
- Leaves 1 (rarely 2) near bases, petiolate bases sheathing stems
- Flowers in a terminal, spicate raceme with inconspicuous bracts
- Tepals green or whitish-green; spurless, lips 3-lobed, central lobe longest with acuminate tips
- Fruits are capsules ascending, ellipsoid, 5 mm long x 3 mm wide

Pam Smith



Janet Wingate



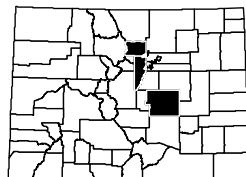
Similar Species: *Platanthera obtusa* (= *Lysiella obtusata*) [FACW] also has a single leaf, but the flowers are spurred.

Habitat and Ecology: Rare along mossy, shaded streams. Currently known from collections in Boulder and Jefferson Counties. There is an historical record from El Paso County collected by E. A. Bessey in 1895.

Comments: A moth is the most likely pollinator of *Malaxis brachypoda* due to various characteristics of the flowers. Others speculate that fungal gnats and possibly small flies are the pollen vectors. The Colorado occurrences are disjunct from its more northern and eastern range. Global range includes Alaska, Canada, Washington (S1), California (S1), Colorado (S1), Texas to upper midwest and northwest United States.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Flora of North America 2002, Schulz 2003, Weber and Wittmann 2012



Platanthera aquilonis Sheviak

Northern green orchid

Orchidaceae

Cystal Strouse



Key Characteristics:

- ◆ Stems erect to decumbent, 7–35 cm tall, succulent; roots fasciculate, fleshy
- ◆ 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

Monocot Herbs

Scott Smith



USDA-NRCS PLANTS Database Britton & Brown 1913

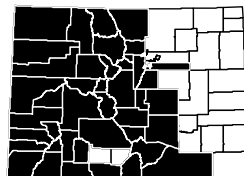
Similar Species: *Platanthera aquilonis* is a North American diploid species long confused with the tetraploid Icelandic *P. hyperborea* (L.) Lindley, that occurs only in Iceland. The two species differ in column structure, the shape of the lip and viscidium (sticky part that attaches to pollinator).

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.

Animal and Bird Use: 

References: Ackerfield 2012, Catling and Catling 1989, Flora of North America 2002, Weber and Wittmann 2012



Platanthera dilatata (Pursh) Lindl. ex Beck

Scentbottle

Orchidaceae

Scott Smith



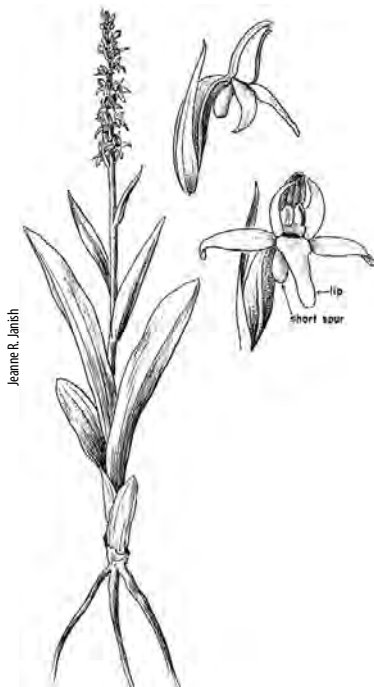
Synonyms: *Limnorchis dilatata* (Pursh) Rydberg ssp. *albiflora* (Chamisso) Löve & Simon
USDA PLANTS Symbol: PLD13
ITIS TSN: 43425
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 8
Duration: Perennial
CO Elevation: 7,000–12,600 ft. (2,135–3,840 m)

Key Characteristics:

- ◆ Erect to decumbent, 1–13 dm tall, succulent; roots fasciculate
- ◆ Leaves few to several, ascending to recurved, scattered along stem, 3.5–32 cm long x 0.3–7 cm wide
- ◆ Inflorescence a spike, very lax to very dense
- ◆ Flowers white, showy, conspicuous, lip petals broadened and dilate at bases
- ◆ Spurs equal to lips, clavate to slightly capitate



Scott Smith



Jeanne R. Jarish

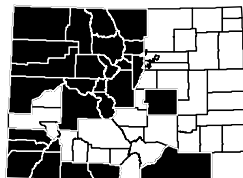
Similar Species: *P. dilatata* can be distinguished from other Colorado *Platanthera* spp. with the white, not greenish-yellow flowers. *P. dilatata* var. *albiflora* [PLDIA, FACW, ITIS 196400] differs only in the spur length; spurs are shorter than the lips.

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 (S2) to South Dakota (S1) to upper midwest, northeast United States and eastern Canada.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, van Ginkel 2001, Weber and Wittmann 2012



Platanthera huronensis (Nutt.) Lindl.

Huron green orchid

Orchidaceae

Derek Anderson



Synonyms: *Habenaria huronensis* (Nutt.) Spreng., *Platanthera hyperborea* (L.) Lindl. var. *huronensis* (Nutt.) Luer

USDA PLANTS Symbol: PLHU2

ITIS TSN: 565412

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5? SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,800–11,800 ft. (1,770–3,595 m)

Key Characteristics:

- ◆ Stems 1–10 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, not showy, whitish-green; corolla often whiter than calyx
- ◆ Sepals spreading; lips lanceolate to linear, 5–12 mm long x 2–4 mm wide, bases rounded-dilated

- ◆ Spurs cylindric, 4–12 mm, apices tapered; rostellum lobes divergent, directed downward



R. K. Kupfer



Jeanne R. Janish

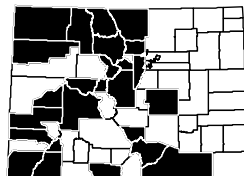
Similar Species: *P. purpurascens* [OBL] spurs are half to $\frac{3}{4}$ length of the lip petals and are short and saccate, often scrotiform. *P. aquilonis* [NI] lips are ovate, rarely lanceolate, abruptly and broadly dilated at bases and the spurs are markedly clavate.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002



Platanthera obtusata (Banks ex Pursh) Lindl.

Bluntleaved orchid

Orchidaceae

Al Schneider



Synonyms: *Lysiella obtusata* (Banks ex Pursh) Britton & Rydberg

USDA PLANTS Symbol: PLOB

ITIS TSN: 43411

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 10

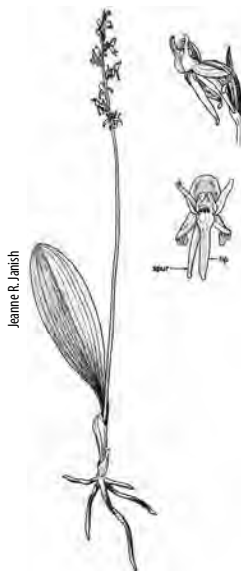
Duration: Perennial

CO Elevation: 8,000–11,200 ft. (2,440–3,415 m)

Key Characteristics:

- ◆ Stems 5.5–35 cm tall, erect to decumbent; roots fasciculate, fleshy
- ◆ Leaves 1 (rarely 2), basal, elliptic, spreading-ascending on base of stems
- ◆ Flowers not showy, greenish-white to yellowish-green; corolla whiter than calyx
- ◆ Sepals reflexed; petals rhombic, margins entire, lips linear to 1.5 mm wide
- ◆ Spurs equal in length to lips, slender, conic, 3–8 (10) mm long

Al Schneider



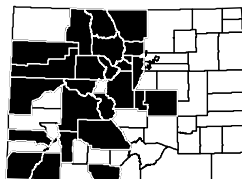
Similar Species: *Malaxis brachypoda* [FACW] also only has 1 leaf, resembling *P. obtusata*. The lip petals in *M. brachypoda* lack spurs and the single leaf(s) does not taper to a sheathing base.

Habitat and Ecology: Uncommon in moist spruce-fir forests and along streams.

Comments: *P. obtusata* is pollinated by nectar-feeding mosquitos. Global range extends from Alaska south to Canada, to the Pacific Northwest, Idaho (S1), Montana (S2), Wyoming (S2), Utah (S1), Colorado to upper midwest and northeast United States.

Animal and Bird Use: 

References: Ackerfield 2012, Darrow 2006, Flora of North America 2002, Weber and Wittmann 2012



Platanthera purpurascens (Rydb.) Sheviak & Jennings

Purple-petal bog orchid

Orchidaceae

Scott Smith



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

USDA PLANTS Symbol: PLPU7

ITIS TSN: 894633

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 5,000–12,000 ft. (1,525–3,660 m)

Key Characteristics:

- Stems 1.8–10 dm tall, erect to decumbent, succulent; roots fasciculate, fleshy
- 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
- Spurs half to sometimes $\frac{3}{4}$ the length of lip petals, short and saccate, strongly clavate



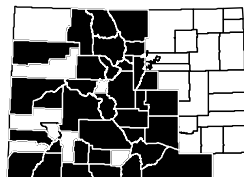
Similar Species: *P. huronensis* [OBL] has longer spurs, surpassing the lip petals, and flowers that are whitish-green. Taxonomy for *P. purpurascens* is unresolved. Ackerfield (2012) states that *P. purpurascens* is the correct name for *P. stricta* or *P. saccata* in Colorado. Weber and Wittmann (2012) do not include this species.

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

Comments: *P. purpurascens* has a distinctive musty scent. Global range from Alaska south to British Columbia, Alberta, Montana, south to New Mexico, west to California and Washington. Considered state critically imperiled (S1) in Wyoming and state imperiled (S2) in Utah.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002



Platanthera sparsiflora (S. Watson) Schltr. var. *ensifolia* (Rydb.) Luer
Stream bog orchid Orchidaceae

Scott Smith



Synonyms: *Limnorchis ensifolia* Rydb., *Platanthera sparsiflora* (S. Wats.) Schltr., *Platanthera tescamnis* Sheviak & Jennings

USDA PLANTS Symbol: PLSPE

ITIS TSN: 529718

Wetland Status AW: FACW **WM:** FACW **GP:** FACW

Native Status: Native

Conservation Status: G4G5T4? S3

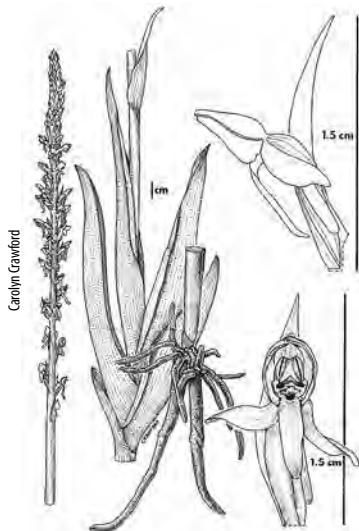
C-Value: 9

Duration: Perennial

CO Elevation: 6,000–10,800 ft. (1,830–3,290 m)

Key Characteristics:

- ◆ Stems 2–12.5 dm tall, succulent; roots fasciculate, slender and tuberous, fleshy
- ◆ Leaves few to several; blades ovate-linear, 6.5–30 cm long x 0.8–5 cm wide
- ◆ Flowers green or yellowish-green; lip petals 0.8–1.6 mm wide
- ◆ Spurs 4.5–7 mm long, equaling or only slightly longer than the lips
- ◆ Pollen remaining enclosed in anther sacs



Carolyn Crawford



Scott Smith

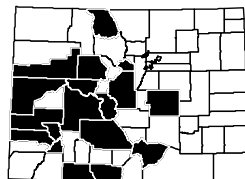
Similar Species: *P. zothecina* [PLZO, NI, ITIS 196425] has longer spurs (12–12 mm long) and lip petals that are 1–3 mm wide. Known only from Moffat County.

Habitat and Ecology: Uncommon in canyons, floodplains, meadows and along streams.

Comments: Sheviak and Jennings (2006) propose that *P. tescamnis* Sheviak & W.F. Jennings is the correct taxonomic name. Global range includes Oregon, Nevada, Utah, Arizona, Colorado (S3) and New Mexico.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 2002, Sheviak and Jennings 2006, Weber and Wittmann 2012



Spiranthes diluvialis Sheviak

Ute lady's tresses

Orchidaceae

John Giez



Synonyms: None

USDA PLANTS Symbol: SPD16

ITIS TSN: 196426

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G2G3 S2; Listed Threatened

C-Value: 7

Duration: Perennial

CO Elevation: 5,330–6,240 ft. (1,625–1,900 m)

Key Characteristics:

- ◆ Stems 2–6.2 dm tall; leaves restricted to bases of stem, ascending, linear-lanceolate
- ◆ Spikes tightly spiraled, 3 flowers per cycle of spiral, rachises pubescent, glands stalked
- ◆ Flowers white to ivory, diverging at about 90 degree angles or higher from rachises
- ◆ Tepals united only at bases, not forming a hood above the lips, lateral tepals spreading
- ◆ Corolla lips not distinctly constricted in middle, margins undulate



Scott Smith



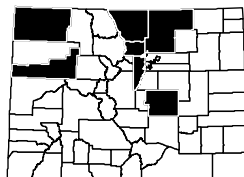
Similar Species: *S. romanzoffiana* [FACW, OBL] tepals converge to form a hood above the lips, the outer lateral tepals are upcurved, not spreading, and the inflorescence is so tightly packed that the rachises are not easily visible.

Habitat and Ecology: Uncommon on floodplains, along streams and in moist meadows and swales.

Comments: *S. diluvialis* is Listed Threatened (LT) and globally imperiled (G2G3). The global range extends from British Columbia, south to Washington, Idaho, Utah, Nevada, Colorado, Wyoming and Montana. This orchid has extremely small seeds that likely require mycorrhizal fungi to germinate. Bees and bumblebees are the most important pollinators of this species.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Sheviak 1984, Sipes and Tepedino 1995, Weber and Wittmann 2012



Spiranthes romanzoffiana Cham.

Hooded lady's tresses

Orchidaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: SPRO

ITIS TSN: 43473

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,460–11,290 ft. (1,665–3,440 m)

Key Characteristics:

- ◆ Stems 8–55 cm tall; leaves linear to linear-lanceolate, elliptic, or oblanceolate
- ◆ Corolla lips fiddle-shape, reflexed, apices broadly dilated, veins typically 3, lateral veins spreading
- ◆ 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

Scott Smith



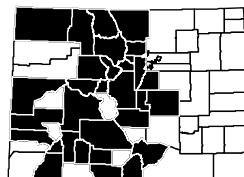
Similar Species: *S. diluvialis* [FACW] tepals are only united at bases, not forming a hood, the outer lateral tepals are spreading, not upcurved, inflorescences are loose and rachises can be seen between flowers.

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. Considered state critically imperiled (S1) in North Dakota and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2002, Weber and Wittmann 2012



Typha angustifolia L.

Narrowleaf cattail

Typhaceae

Aaron Arthur



Synonyms: None

USDA PLANTS Symbol: TYAN

ITIS TSN: 42325

Wetland Status AW: OBL WM: OBL GP: OBL

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

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

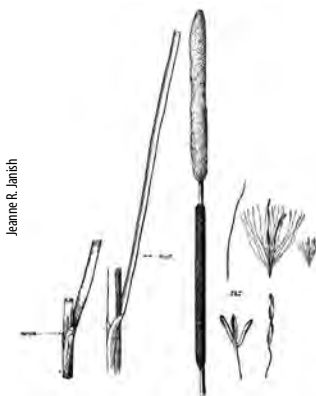
CO Elevation: 3,350–8,200 ft. (1,020–2,500 m)

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
- ◆ 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



Neal Kramer



Jeanne R. Janish

Similar Species: *T. latifolia* [OBL] spikes are not separated by an axis segment. *T. domingensis* [OBL] staminate and pistillate spikes are separated, but the staminate spikes are longer than the pistillate. However, *T. angustifolia* can hybridize with both *T. latifolia* and *T. domingensis*.

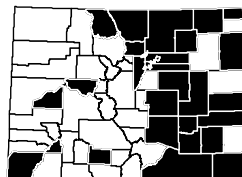
Habitat and Ecology: Found in shallow, slow-moving waters of ponds and streams. Discussion of the native status of *T. angustifolia* is on-going. It is native according to Ackerfield (2012) and Weber and Wittmann (2012), but according to USDA-NRCS PLANTS Database it can be native with non-native populations that have been established by humans.

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 for many songbirds as well.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Stevens and Hoag 2006, Weber and Wittmann 2012



Typha domingensis Pers.

Southern cattail

Typhaceae



Keir Morse

Synonyms: None

USDA PLANTS Symbol: TYDO

ITIS TSN: 42327

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,400–6,450 ft. (1,035–1,965 m)

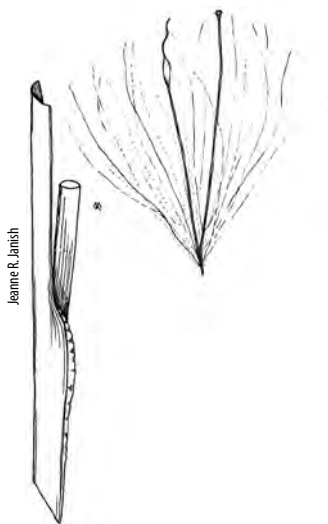
Key Characteristics:

- ◆ Stems 2.5–4 m tall, stout; arising from spreading rhizomes
- ◆ Leaves equaling the inflorescence, light yellowish-green, 6–12 (15) mm wide
- ◆ Mucilage glands present on leaf blades; leaf sheaths open at throat
- ◆ Spike-bearing stems as long as leaves, pistillate and staminate portions separated by 5–8 cm

- ◆ Pistillate spikes light brown, 15–25 cm long; staminate spikes 1.4 x longer, tan to orange-brown



Dr. Alfred Brousseau



Similar Species: *T. latifolia* [OBL] spikes are not separated by an axis segment. *T. angustifolia* [OBL] staminate/pistillate spikes are separated, but staminate spikes are same length as the pistillate. However, *T. domingensis* can hybridize with both *T. latifolia* and *T. angustifolia*.

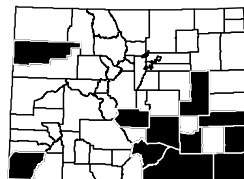
Habitat and Ecology: Found in shallow water of ponds, creeks and streams.

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 for Marsh Wrens, Red-winged and Yellow-headed Blackbirds.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Stevens and Hoag 2006, Weber and Wittmann 2012



Typha latifolia L.

Broadleaf cattail

Typhaceae

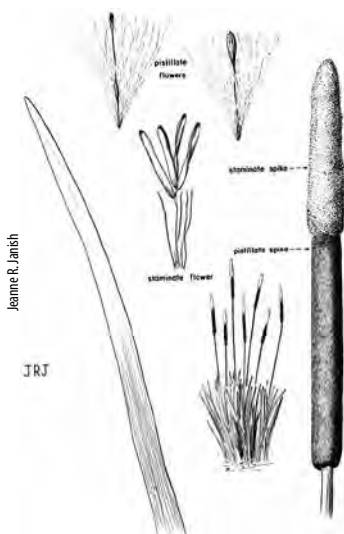
Al Schneider



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
- ◆ 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

Steve Matson



Similar Species: *T. angustifolia* [OBL] and *T. domingensis* [OBL] staminate and pistillate spikes are separated, exposing a portion of the axis. However, *T. angustifolia* can hybridize with both *T. latifolia* and *T. domingensis*.

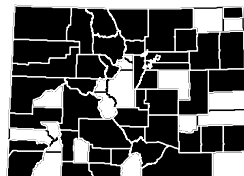
Habitat and Ecology: Common, found in shallow water of ponds, ditches, slow-moving streams and creeks throughout the state.

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 for Marsh Wrens, Red-winged and Yellow-headed Blackbirds.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1977, Flora of North America 2000, Stevens and Hoag 2006, Weber and Wittmann 2012



Sesuvium verrucosum Raf.

Verrucose seapurslane

Aizoaceae

James M. Andre



Synonyms: *Sesuvium erectum* Correll

USDA PLANTS Symbol: SEVE2

ITIS TSN: 19909

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Perennial

CO Elevation: 3,900–7,580 ft. (1,190–2,310 m)

Key Characteristics:

- ◆ Stems prostrate, branched, not rooting at nodes
- ◆ Leaves opposite, succulent; stipules lacking
- ◆ Flowers solitary in leaf axils; pedicels absent or to 2 mm long
- ◆ Calyx lobes rose or orange, 2–10 mm; petals absent; stamens 30; styles 5
- ◆ Capsules ovoid-globose, 4–5 mm; seeds 20–40, 0.8–1 mm, shiny, smooth

Dean Wm. Taylor



James M. Andre



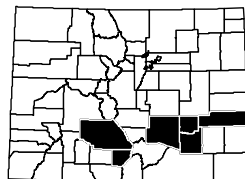
Similar Species: Same growth habit as *Portulaca oleracea* [POOL, FAC, ITIS 20422] but the flowers are yellow and the leaves are tear-shaped and not as succulent. *Trianthema portulacastrum* [FACW] is in the same family, the leaves have stipules and there are 5–10 stamens.

Habitat and Ecology: Uncommon. Generally occurring on alkaline wetlands or mineral flats in San Luis Valley and lower Arkansas River Valley.

Comments: Circumtropical. Widespread extending throughout the southern United States to California. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Weber and Wittmann 2012



Trianthema portulacastrum L.

Desert horsepurslane

Aizoaceae

Neal Kramer



Synonyms: None

USDA PLANTS Symbol: TRPO2

ITIS TSN: 19940

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Perennial

CO Elevation: 3,920–3,930 ft. (1,195–1,200 m)

Key Characteristics:

- ◆ Stems prostrate, diffusely branched, succulent, glabrous
- ◆ Leaves alternating along stems, apices obtuse, notched; stipules dilated; petioles equal to blades
- ◆ Flowers solitary, sessile, axillary, covered by sheathing stipules
- ◆ Calyx 3–5 mm, lobes purple, lanceolate, 2.5 mm; stamens 5–10
- ◆ Capsules cylindric, curved, 4–5 mm, corky, apical wings 2, erect, crest-like

Dicot Herbs

James M. Andrie



Similar Species: *Sesuvium verrucosum* [FACW] does not have stipules on leaves and has numerous (up to 30) stamens.

Habitat and Ecology: Found in disturbed places, recently reported for southeastern Colorado.

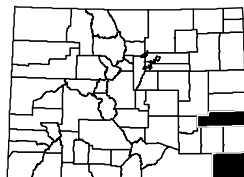
Comments: Seed dispersal is achieved by seeds remaining lodged in the detached cap of capsule, which can float and re-establish away from the parent. In the southwestern United States, *T. portulacastrum* is a host plant of the beet leafhopper.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003



Barbara Alongi



Amaranthus blitoides S. Watson

Mat amaranth

Amaranthaceae

John Hilty



Synonyms: *Amaranthus graecizans* auct. non L. p.p.

USDA PLANTS Symbol: AMBL

ITIS TSN: 20723

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Non-native

Conservation Status: GNR SNR

C-Value: 0

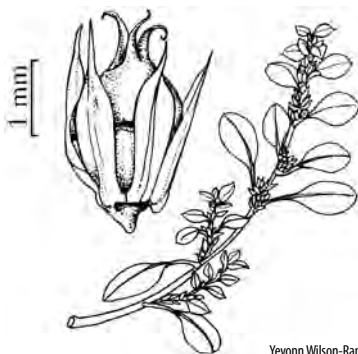
Duration: Annual

CO Elevation: 3,860–9,470 ft. (1,175–2,885 m)

Key Characteristics:

- ◆ Stems glabrous, prostrate, fleshy, radiating in all directions from central taproots
- ◆ Leaf petioles half as long as blades; blades 1–2 (4) cm long x 0.5–1 (1.5) cm wide, bases wedge-shaped
- ◆ Inflorescence dense, axillary flowers; bracts of pistillate flowers narrow, thin, 1.5–5 mm long
- ◆ Tepals (3) 4–5, narrowly ovate to broadly linear; stigmas 3
- ◆ Fruits (utricle) 1.7–2.5 mm, equaling tepals; seeds black, 1.3–1.6 mm wide, dull

Joseph M. DiTomasso



Yevonn Wilson-Ramsey

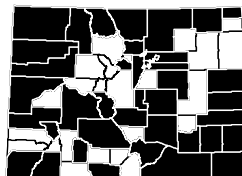
Similar Species: *A. albus* [AMAL, FACU, ITIS 20719] can also be prostrate, but the flower bracts have long excurrent (awn-like) midribs that equals or exceeds the tepal lengths.

Habitat and Ecology: Locally common in waste places, dry prairies, fields and roadsides.

Comments: *A. blitoides* was originally native to central and eastern United States, but it is now widely naturalized throughout the temperate North America. *Amaranthus* spp. seeds and young plants are edible. The seeds were ground by Native Americans to make pinole, a sweetened flour.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Harrington 1967, Weber and Wittmann 2012



Angelica ampla A. Nelson

Giant angelica

Apiaceae

Ernie Marx



Synonyms: None

USDA PLANTS Symbol: ANAM

ITIS TSN: 29433

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G3G4 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 5,600–11,190 ft. (1,705–3,410 m)

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



Allison Shaw



Janis Lindsey Huggins

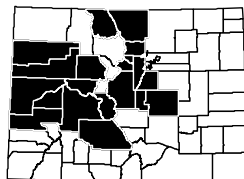
Similar Species: *Cicuta maculata* var. *angustifolia* [OBL] is not as stout, the leaf segments are lanceolate and the veins in leaves terminate in the angles between teeth. *A. pinnata* [FACW] is a much smaller plant with flat-topped umbels and the involucre bracts are lacking.

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

Comments: *A. ampla* is a regional endemic, globally vulnerable (G3G4). It is locally common in Colorado and New Mexico, but considered state imperiled (S2) in Wyoming. Angelica has been used for centuries for its medicinal properties for a range of ailments. It is recommended that no Apiaceae species be eaten as many species in this family are very poisonous (e.g. water and poison hemlock).

Animal and Bird Use: 

References: Ackerfield 2012, Harrington 1964, Huggins 2008, Weber and Wittmann 2012



Angelica pinnata S. Watson Small-leaf angelica

Apiaceae

Max Licher



Synonyms: None

USDA PLANTS Symbol: ANPI2

ITIS TSN: 29448

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

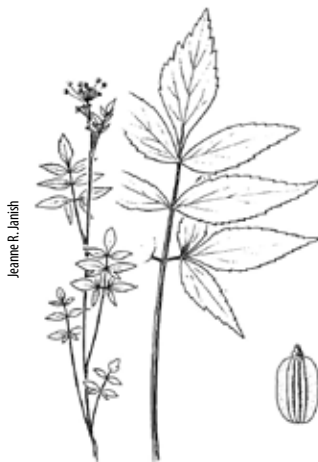
Duration: Perennial

CO Elevation: 5,000–10,400 ft. (1,525–3,170 m)

Key Characteristics:

- ◆ Stems slender, 3–10 dm tall, glabrous; taproots coarse
- ◆ Leaves pinnately compound, lower pinnae with 3 crowded leaflets, leaflets sessile, 3–9 cm long
- ◆ Inflorescence a flat-topped umbel, bractlets of involucls absent or short; pedicels 3–8 mm long
- ◆ Flowers white-pinkish; stylopodiums conic; carpophores bifid to bases; fruits glabrous, 3–6 mm long
- ◆ Dorsal ribs well-developed, but narrower than lateral ribs

Max Licher



Jeanne R. Janish

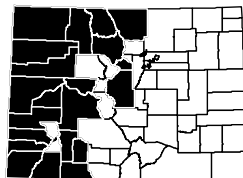
Similar Species: *A. grayi* [ANGR3, NI, ITIS 29443] is another short statured angelica present in Colorado. It grows at much higher elevations than *A. pinnata*. It is distinguished by bractlets of involucls that are conspicuous, linear to lanceolate, usually over 1 mm wide and smaller leaflets, only 1–5 cm long.

Habitat and Ecology: Locally common along streamsides and in aspen groves, more common on the Western Slope.

Comments: Considered state vulnerable (S3) in Wyoming. Angelica has been used for centuries for its medicinal properties for a range of ailments. It is recommended no species in this family be eaten for many are poisonous (e.g. water and poison hemlock).

Animal and Bird Use: 🦋

References: Ackerfield 2012, Cronquist et al. 1997, Harrington 1964, Weber and Wittmann 2012



Berula erecta (Huds.) Coville

Cutleaf waterparsnip

Apiaceae

Kristian Peters



Synonyms: None

USDA PLANTS Symbol: BEER

ITIS TSN: 29596

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 3,600–7,800 ft. (1,095–2,375 m)

Key Characteristics:

- ◆ Stems 2–8 dm tall, branched, often stoloniferous at bases, when crushed, smells like parsnip
- ◆ Submerged leaves (if present) often filiform-dissected; pale ring present on leaf stalk
- ◆ Aerial leaves pinnately compound, leaflets narrowly elliptic-oblong, deeply toothed
- ◆ Inflorescence consists of compound umbels, involucre evident, narrow; flowers white
- ◆ Stylopodiums conic, carpophores bifid to bases; fruits 1.5–2 mm long, obscurely ribbed

Dicot Herbs

Pam Smith



Jaime R. Janish



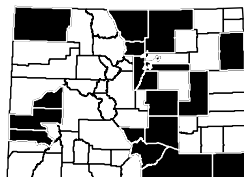
Similar Species: *Cicuta maculata* var. *angustifolia* [OBL] looks similar, but has horizontally divided tuberous taproots, not stolons and the leaf veins terminate in between leaf serrations.

Habitat and Ecology: Localized in wet places or in shallow water in the valleys and plains.

Comments: *B. erecta* is toxic. If skin comes into contact with the wet foliage, it can become sensitive to light and lead to severe sunburn. Widespread throughout the contiguous United States. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Larson 1993, Weber and Wittmann 2012



Cicuta maculata L. var. *angustifolia* Hook.

Water hemlock

Apiaceae

Scott Smith



Synonyms: None

USDA PLANTS Symbol: CIMAA

ITIS TSN: 182152

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GSTS SNR

C-Value: 3

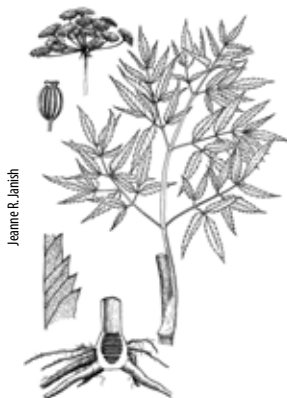
Duration: Perennial

CO Elevation: 3,400–10,800 ft. (1,035–3,290 m)

Key Characteristics:

- ◆ Stems 5–25 dm tall, glabrous; roots tuberous, horizontally divided with cross partitions
- ◆ Leaves once-pinnately to thrice-pinnately, leaf veins terminate between serrations
- ◆ Inflorescence a flat, compound umbel; involucre 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

Al Schneider



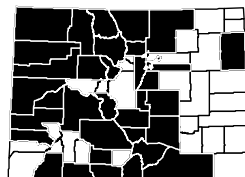
Similar Species: *Angelica* spp. have taproots, not tuberous roots, and leaf segments are ovate with ribs of fruit forming wings. *Conium maculatum* [FACW] has distinctive stems with purple spots. In past, floras, *Cicuta douglasii* has been used incorrectly as a synonym for *C. maculata* var. *angustifolia*. *C. douglasii* only occurs in the California, Nevada, Washington, Oregon, Idaho, Montana, Alaska and British Columbia.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Knight and Walter 2001, Larson 1993, Weber and Wittmann 2012



Conioselinum scopulorum (A. Gray) J.M. Coul. & Rose

Rocky Mountain hemlockparsley

Apiaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: COSC2

ITIS TSN: 29471

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,000–14,310 ft. (1,525–4,360 m)

Key Characteristics:

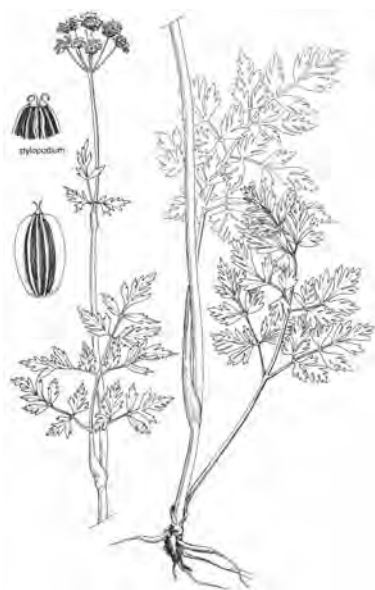
- Stems solitary, 3–12 dm tall, sparingly branched; cluster of 2 to several, tuberous-thickened roots
- Leaves 1–2, pinnately or ternate-pinnately dissected, ultimate leaf lobes with 1 principal vein
- Inflorescence consists of compound umbels; pedicels 3–6 mm long
- Flowers white; stylopodiums conic; carpophores bifid to bases
- Fruits elliptic-oblong, lateral ribs winged, dorsal ribs more narrowly winged, low and corky

Dicot Herbs

Al Schneider



Robin A. Jess



Similar Species: *Ligusticum porteri* [LIPO, FACU, ITIS 29532]

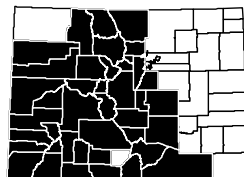
looks similar, but is typically much taller (over 1 m tall) with numerous large leaves, the petiole bases are persistent and fibrose (not deciduous as in in *C. scopulorum*), and the fruits are oblong, not flattened dorsally.

Habitat and Ecology: Common in mountains in wet places such as along streams and wet meadows.

Comments: Global range includes Oregon, Utah, Arizona, Wyoming (S2), Colorado and New Mexico.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Conium maculatum L. Poison hemlock

Apiaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: COMA2

ITIS TSN: 29473

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Non-native, CO Noxious Weed List C

Conservation Status: G5 SNA

C-Value: 0

Duration: Biennial

CO Elevation: 3,610–8,100 ft. (1,100–2,470 m)

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 involucrel small, numerous bractlets
- ◆ Flowers white, styles reflexed; stylopodiums depressed-conic; carpophores entire
- ◆ Fruits glabrous, prominent ribs raised, often wavy; oil tubes numerous and small

Jeanne R. Jarlish



Denise Culver



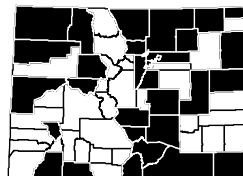
Similar Species: *Carum carvi* [CACA19, NI, ITIS 29610] is another non-native plant found in similar habitats. The stems are not purple-spotted and the fruits smell like caraway.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Knight and Walter 2001, Larson 1993, Weber and Wittmann 2012, Whitson et al. 1991



Heracleum maximum Bartram

Common cowparsnip

Apiaceae

Steve Olson



Synonyms: *Heracleum lanatum* Michx., *Heracleum sphondylium* L. ssp. *montanum* (Schleich. ex Gaudin) Briq.

USDA PLANTS Symbol: HEMA80

ITIS TSN: 502953

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,020–13,690 ft. (1,530–4,175 m)

Key Characteristics:

- ◆ Stems 1–3 dm tall, robust, single-stemmed; stout taproots or clusters of fibrous roots
- ◆ Leaves once-ternate, broad, coarsely toothed, palmately lobed, leaflets mostly 1–3 dm long
- ◆ Inflorescence flat-topped, umbels compound, 1–2 dm wide on axillary and terminal peduncles
- ◆ Flowers white, sweet smelling; stylopodiums conic; styles short, erect or recurved
- ◆ Fruits strongly flattened dorsally, dorsal ribs narrow, lateral ribs broadly winged

Dicot Herbs

Gary A. Monroe USDA-NRCS PLANTS Database



Bobbi Angell and Jeanne R. Zanish



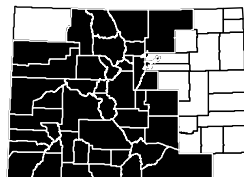
Similar Species: *H. maximum* is a very distinct wetland plant that has maple-shaped leaflets and leaf sheaths that are over 2 cm wide.

Habitat and Ecology: Common in moist areas such as streambanks or in wet meadows.

Comments: Furanocoumarins are phototoxins that are found in the hairs and sap of *H. maximum*. When this chemical gets on the skin, then exposed to sunlight, it can cause an itchy rash similar to poison ivy.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012, Zobel and Brown 1990



Ligusticum tenuifolium S. Watson

Idaho licorice-root

Apiaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: LITE2

ITIS TSN: 29535

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 S4

C-Value: 8

Duration: Perennial

CO Elevation: 6,900–13,200 ft. (2,105–4,025 m)

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

Denise Culver



Jeanne R. Janisch



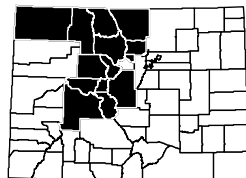
Similar Species: *L. filicinum* [LIFI, NI, ITIS 29530] also has leaves dissected into linear segments, but is a more robust plant, 5–12 dm tall, with 1 or more developed cauline leaves and basal leaves that are usually 10–25 cm wide.

Habitat and Ecology: Uncommon in meadows, along streambanks and on moist slopes in the mountains.

Comments: Considered state critically imperiled (S1) in Wyoming. The common name, licorice root, is from the distinctive odor from in the roots and seeds.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Harrington 1964, Weber and Wittmann 2012



Oxypolis fendleri (A. Gray) A. Heller

Fendler's cowbane

Apiaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: OXFE

ITIS TSN: 29546

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,500–13,360 ft. (1,980–4,070 m)

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
- ◆ Flowers white to purple; stylopodiums conic, carpophores bifid to bases
- ◆ Fruits elliptic, strongly flattened dorsally, dorsal ribs filiform, lateral ribs broadly thin-winged

Dicot Herbs

Denise Culver



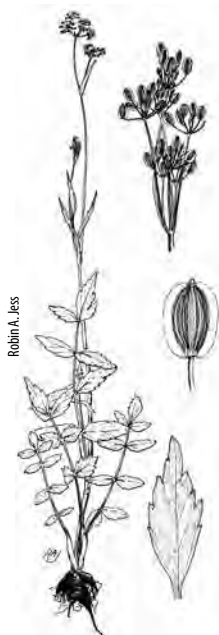
Similar Species: *Berula erecta* [FACW] leaflets are also once pinnate. The leaflets are narrowly elliptical-oblong, deeply toothed, with the lowest leaf pair usually with a large lobe. *Podistera eastwoodiae* [POEA, NI, ITIS 29828] leaflets are pinnately divided with ultimate leaf divisions deeply 2–3 lobed resulting in a distinct fan-shape, and the umbels are very conspicuous with bright yellow flowers.

Habitat and Ecology: Common in wet places and along streambanks in the montane zone.

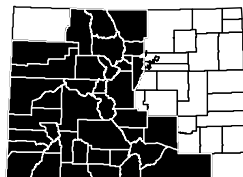
Comments: Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Robin A. Jess



Sium suave Walter

Hemlock waterparsnip

Apiaceae

Anita Gould



Synonyms: None

USDA PLANTS Symbol: SISU2

ITIS TSN: 29558

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,300–9,100 ft. (1,615–2,775 m)

Key Characteristics:

- ◆ Stems stout, solitary, 4–20 cm tall, strongly ribbed; from very short, erect crown
- ◆ Leaves once pinnate, leaflets linear to lanceolate, 2–9 cm long x 1.5–10 (20) mm wide, serrate
- ◆ Umbels compound; involucre with leafy, often reflexed bracts
- ◆ Flowers white or greenish, styles short, reflexed, stylopodiums depressed
- ◆ Fruits broadly elliptic to orbicular, 2–3 mm long

Louis M. Landry



Jeanne R. Janish



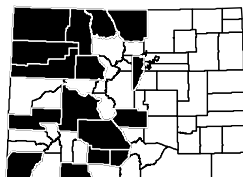
Similar Species: The stem bases of *S. suave* are partitioned like *Cicuta maculata* var. *angustifolia* [OBL], but the leaves are 2–3 times compound and the leaf veins end in the notch, not the tip. *Oxypolis fendleri* [FACW] has once pinnate leaves and can occur in similar habitats. *O. fendleri* differs with a hairy inflorescence and strongly flattened fruits.

Habitat and Ecology: Locally common in swampy places and shallow water.

Comments: *S. suave* is not poisonous, it was used by Native Americans as food. However, it typically grows with *Cicuta maculata* var. *angustifolia*, which is deadly.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Larson 1993, Weber and Wittmann 2012



Asclepias incarnata L. Swamp milkweed

Asclepiadaceae

Ernie Marx



Synonyms: None

USDA PLANTS Symbol: ASIN

ITIS TSN: 30241

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,400–9,000 ft. (1,035–2,745 m)

Key Characteristics:

- ◆ Stems 4–15 dm tall, solitary, juice milky, pubescent in lines pointing downward on nodes and petioles
- ◆ Leaves opposite, lanceolate, 6–15 cm wide, acute-tipped, entire, rounded at bases
- ◆ Inflorescences few to many at end of stems and branches
- ◆ Flowers 9–11 mm tall, calyx lobes white or green; corolla lobes reflexed, bright pink
- ◆ Follicles spindle shaped, 5–8 cm long; seeds 6.5–9 mm long; seeds with white hairs

Dicot Herbs

Ernie Marx



Ernie Marx



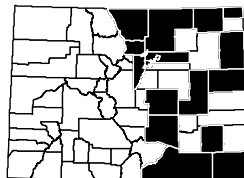
Similar Species: *A. speciosa* [ASSP, FAC, ITIS 30304] has large pinkish flowers, much wider leaves and stout, woolly follicles.

Habitat and Ecology: Locally common along ditches, streams, in marshes and other wet areas of the plains and foothills.

Comments: Milkweeds are poisonous to animals. They contain toxic cardenolides, which are steroids, that can cause heart failure. The monarch butterfly and its caterpillars (*Danaus plexippus*) have the ability to store the poisonous compounds in their tissues to deter predators.

Animal and Bird Use: 

References: Ackerfield 2012, Knight and Walter 2001, Larson 1993, Weber and Wittmann 2012



Almutaster pauciflorus (Nutt.) Á. Löve & D. Löve

Alkali marsh aster

Asteraceae

Trent M. Draper



Synonyms: *Aster hydrophilus* Greene ex Woot. & Standl., *Aster pauciflorus* Nutt.

USDA PLANTS Symbol: ALPA14

ITIS TSN: 507576

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 4,700–9,900 ft. (1,435–3,020 m)

Key Characteristics:

- ◆ Stems 1.5–4 dm tall, single or clumped, erect to decumbent, glandular-pubescent; roots slender
- ◆ Leaves alternate, 1–10 cm, simple, glaucous, succulent, 1-nerved, lanceolate to linear
- ◆ Flowers in heads, 1–1.5 cm across; involuclral bracts in 3–4 series, glandular
- ◆ Ray flowers white to purple, 5–10 mm long, coiling at maturity; disk flowers yellow
- ◆ Pappi single series of barbellate, straw-colored bristles; achenes glabrous, 7- to 10-nerved

Trent M. Draper



Anthony Salazar



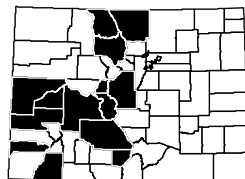
Similar Species: *A. pauciflorus* is a distinctive aster with the stems and leaves densely covered with glandular hairs, 1-nerved leaves, and rounded, spindle shaped achenes.

Habitat and Ecology: Occurs in meadows or moist places especially where soil is alkaline.

Comments: *A. pauciflorus* is considered a halophyte, referring to its tolerance of growing in soils and water with a high level of salinity.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Larson 1993, Weber and Wittmann 2012



Ambrosia linearis (Rydb.) Payne

Streaked bur ragweed

Asteraceae

Jim Loddegar



Synonyms: None

USDA PLANTS Symbol: AMLI3

ITIS TSN: 36513

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G3 S3

C-Value: 4

Duration: Annual

CO Elevation: 4,280–6,600 ft. (1,305–2,010 m)

Key Characteristics:

- ◆ Sub-shrub or coarse herbs, 2–4 dm tall, branching from bases; taproots prominent
- ◆ Leaves sessile, 1.5–2.5 cm long, margins revolute, deeply pinnate-lobed, lobes linear
- ◆ Leaf margins revolute, upper surfaces green, lower surfaces white, woolly-tomentose
- ◆ Pistillate heads 1-flowered, ray flowers absent; involucre on staminate flowers 5 mm long
- ◆ Mature achenes bur-like with long, sharp spines (up to 9) with hooked tips

Dicot Herbs

Denise Culver



Ann Fernwick



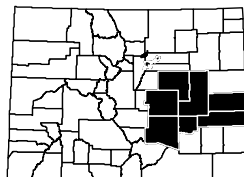
Similar Species: *A. tomentosa* [AMT03, NI, ITIS 36520] is also common along roadsides and streams, but the leaves are petiolate and much longer (3–15 cm long) than *A. linearis*. *A. psilostachya* [AMPS, FAC, ITIS 36516] leaves are usually once-pinnatifid with divisions that are linear-lanceolate, but leaves are petiolate, not sessile and the pistillate inflorescence does not have spines.

Habitat and Ecology: Rare. Found on sandy or sandy clay soils in seasonally moist habitats along margins of intermittent streams, playa lakes, roadsides and ditches.

Comments: Endemic to the Eastern Slope of Colorado. Considered globally and state vulnerable (G3S3) in Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Spackman et al. 1997, Weber and Wittmann 2012



Arnica chamissonis Less. ssp. *foliosa* (Nutt.) Maguire

Chamisso arnica

Asteraceae

University of British Columbia Botanical Gardens



Synonyms: None

USDA PLANTS Symbol: ARCHF

ITIS TSN: 184938

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,200–12,290 ft. (1,890–3,745 m)

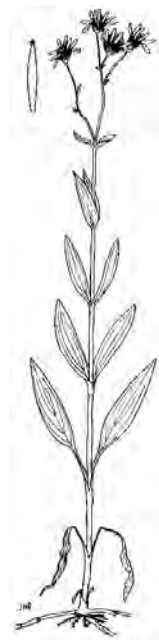
Key Characteristics:

- ◆ Stems 2–10 dm tall; rhizomes long, nearly naked
- ◆ Leaves opposite, 5–10 pairs along stems, no basal leaves
- ◆ Conspicuous ray flowers up to 5 cm wide
- ◆ Involucral bracts obtuse or acuminate, bearing a tuft of long hairs at the tip
- ◆ Disk and ray flowers yellow to orange

Clint Gardner



John H. Rummley



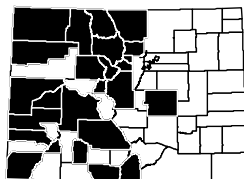
Similar Species: *A. longifolia* [FACW], found on the west slope around springs and seeps, has involucral bract tips that are sharply acute and glandular pubescent.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Huggins 2008, Weber and Wittmann 2012



Arnica longifolia D.C. Eaton

Spearleaf arnica

Asteraceae

Keith Morse



Key Characteristics:

- ◆ Stems 3–6 dm tall, numerous, leafy, commonly densely tufted, often in large clones
- ◆ Leaves opposite, 5–7 pairs, entire, lowest leaves sessile, no basal leaves
- ◆ Involucral bract tips sharply acute, glandular-puberulent
- ◆ Conspicuous yellow ray and disk flowers; pappi straw-colored to tawny, barbellate to sub-plumose
- ◆ Achenes 4–6 mm long, glabrous to glandular and hairy



John H. Rumley

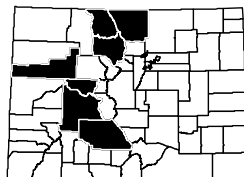
Similar Species: *A. chamissonis* ssp. *foliosa* [FACW] has involucre bract tips that are obtuse or acuminate, bearing a tuft of hairs at the tips, and is more common than *A. longifolia*.

Habitat and Ecology: Infrequent in well-drained soils around seeps, springs, along cliffs and river banks, more common on the Western Slope.

Comments: Europeans and Native Americans have used salves and creams of Arnica to treat bruises, sprains, muscle aches and inflammation.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Weber and Wittmann 2012



Artemisia arctica Less.

Boreal sagebrush

Asteraceae

Steve Matson



Synonyms: *Artemisia arctica* Lessing ssp. *saxicola* (Rydberg) Hultén, *Artemisia norvegica* Fr. var. *saxatilis* (Besser) Jeps.

USDA PLANTS Symbol: ARAR9

ITIS TSN: 35432

Wetland Status AW: FACU WM: FACU GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 10,000–12,200 ft. (3,050–3,720 m)

Key Characteristics:

- ◆ Stems 2–6 dm tall, herbage loose with long-hairs to nearly glabrous
- ◆ Basal leaves tufted, petiolate, pinnately dissected; blades 2–10 cm long, cauline leaves reduced upward
- ◆ Inflorescence a raceme with up to 30 heads, heads 7–10 mm wide
- ◆ Involucres 4–7 mm high, glabrous to villous, prominent dark-colored margins
- ◆ Disk-corollas yellowish-purplish, long-hairy; achenes narrowed to summit, glabrous to hairy

Steve Matson



Steve Matson



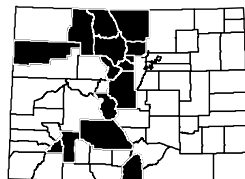
Similar Species: *A. scopulorum* [ARSC, NI, ITIS 35493] is distinguished by smaller heads (3–6 mm broad) and smaller leaves (0.5–3.5 cm long). *A. pattersonii* [ARPA18, NI, ITIS 35485], often found with *A. scopulorum*, is distinguished by the long, woolly hairs between the flowers on receptacles.

Habitat and Ecology: Common in meadows and rocky slopes in the subalpine and alpine. Included here because of its Wetland Indicator Status of FACW for the Great Plains region. However, in Colorado, *A. arctica* is exclusively a subalpine species.

Comments: Ackerfield (2012) and FNA (2006) recognize *A. norvegica* var. *saxatilis* as the accepted name. Weber and Wittmann (2012) recognize *A. arctica* ssp. *saxicola*.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Artemisia biennis Willd.

Biennial wormwood

Asteraceae



Ernie Marx

Synonyms: None

USDA PLANTS Symbol: ARB12

ITIS TSN: 35451

Wetland Status AW: FACW WM: FACW GP: FACU

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Biennial

CO Elevation: 5,000–11,610 ft. (1,525–3,540 m)

Key Characteristics:

- ◆ Stems 3–30 dm tall, solitary, reddish, coarse, not aromatic, glabrous
- ◆ Leaves 5–15 cm long, green, lobed nearly to the mid-ribs into several narrow, sharply toothed segments
- ◆ 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



Max Licher

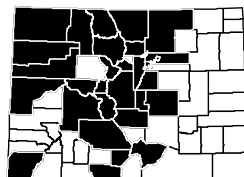
Similar Species: *A. dracunculus* [ARDR4, NI, ITIS 35462] has entire leaves. *A. campestris* [ARCA12, NI, ITIS 183748] occurs in similar habitats, but has leaves that are tomentose and smaller heads, 1–3 mm wide.

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 (2012).

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Weber and Wittmann 2012



Bidens bigelovii A. Gray

Bigelow's beggarticks

Asteraceae

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: BIBI

ITIS TSN: 35716

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S3

C-Value: Not Assigned

Duration: Annual

CO Elevation: 4,000–9,000 ft. (1,220–2,745 m)

Key Characteristics:

- ◆ Stems up to 8 dm tall, glabrous
- ◆ Leaves opposite, up to 8 cm long, 2 or 3 pinnatifid, oblong with wedge-shaped bases
- ◆ Involucral bracts in 2 distinct series, ciliate margins, pubescent only at bases near peduncles
- ◆ Disk flowers yellow; ray flowers very small or absent, white
- ◆ Pappi 2–4 awns or teeth, retrorsely barbed; achenes pubescent, strongly dimorphic

Western New Mexico University Herbarium



Western New Mexico University Herbarium



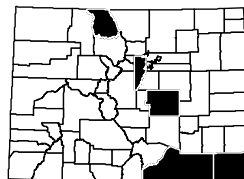
Similar Species: *B. tenuisecta* [FACW] involucral bracts are hispid-hirsute, not ciliate, and the ultimate leaf segments are very narrow, usually less than 2 mm wide.

Habitat and Ecology: Found in wet soils along streams and pond edges and in drier soils of canyons and hillsides.

Comments: Beggarticks provide a protein rich food source for waterfowl.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, U.S. Fish and Wildlife Service 1988, Weber and Wittmann 2012



Bidens cernua L.

Nodding beggartick

Asteraceae

Western New Mexico University Herbarium



Key Characteristics:

- ◆ Stems 1–12 dm tall, branching, nodding, glabrous with spreading hairs, often bushy
- ◆ Leaves simple, 3–18 cm long x 0.5–4.5 cm wide, acuminate, toothed, sessile, clasping at the bases
- ◆ Involucral bracts 5–10, lance-linear, surpassing the disk; peduncles recurved below head
- ◆ Disk flowers 5-lobed; ray flowers, if present, 6–8, yellow, to 1.5 cm long
- ◆ Achenes black or brown with 4 awns with distinct paler cartilaginous apices



Anthony Salazar

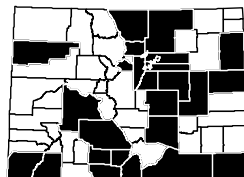
Similar Species: *B. tripartita* (= *B. comosa*) [FACW] also has simple leaves, but they are petiolate, the heads are erect, not nodding, and the corolla of disk flowers is usually 4-lobed.

Habitat and Ecology: Common along streams, ditches, or disturbed areas.

Comments: Beggarticks provide a protein rich food source for waterfowl.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Larson 1993, U.S. Fish and Wildlife Service 1988, Weber and Wittmann 2012, Whitson et al. 1991



Bidens frondosa L.

Devil's beggartick

Asteraceae

Karin Freeman



Synonyms: None

USDA PLANTS Symbol: BIFR

ITIS TSN: 35707

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 3,920–7,000 ft. (1,195–2,135 m)

Key Characteristics:

- ◆ Stems erect, 1.5–8 dm tall, usually branched, often purplish, glabrous, hairy at upper nodes
- ◆ Leaves ternate, some pinnately divided into 5 leaflets, the leaflets ovate to lanceolate, serrate
- ◆ Involucral bracts 5–10, green, usually surpassing disk, ciliate on margins
- ◆ Disk flowers 4- or 5-lobed, orange-yellow; flowering heads small, 10 mm wide
- ◆ Achenes flat, 1-nerved, 2 retrorsely barbed awns, dark brown to black, 4–9 mm long

Karin Freeman



John H. Rumley

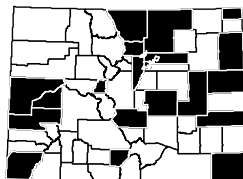
Similar Species: *B. vulgata* [FACW] is not as common, but occurs in similar habitats. The flowering heads are larger, 15–25 mm across, and disk flowers are yellow.

Habitat and Ecology: Common in disturbed wet areas along ditches, stock ponds and levees.

Comments: Considered adventive in Colorado. Beggarticks provide a protein rich food source for waterfowl.

Animal and Bird Use: 

References: Ackerfield 2012, Larson 1993, U.S. Fish and Wildlife Service 1988, Weber and Wittmann 2012



Bidens tenuisecta A. Gray

Slimlobe beggarticks

Asteraceae

Max Licher



Synonyms: None

USDA PLANTS Symbol: BITE

ITIS TSN: 35734

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

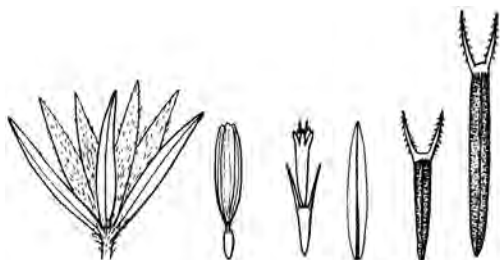
CO Elevation: 5,060–9,510 ft. (1,540–2,900 m)

Key Characteristics:

- ◆ Stems 1.5–15 dm high, branched from bases, glabrous; taproots present
- ◆ Leaves 3–9 cm long, pinnately 2 or 3 times dissected into small, narrow, linear ultimate segments
- ◆ Inner involucre bracts hispid-hirsute, outer glabrous
- ◆ Flower heads terminal on peduncles up to 2 dm long; ray flowers 5–8, erect, yellow, 3–6 mm long
- ◆ Achenes glabrous, 6–8 mm long; awns 2, up to 3 mm long

Dicot Herbs

Max Licher



Anthony Salazar

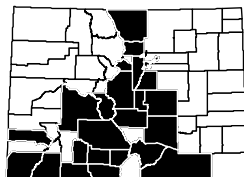
Similar Species: *B. bigelovii* [FACW] has involucre bracts with ciliate margins and the ultimate leaf segments are broader, usually greater than 2.5 mm wide, with wedge-shaped bases.

Habitat and Ecology: Found in wet soils along streams, ditches, roadsides and disturbed places.

Comments: Beggarticks provide a protein rich food source for waterfowl.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, U.S. Fish and Wildlife Service 1988, Weber and Wittmann 2012



Bidens tripartita L.

Threelobe beggarticks

Asteraceae

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: *Bidens comosa* (A. Gray) Wiegand

USDA PLANTS Symbol: BITR

ITIS TSN: 35709

Wetland Status AW: OBL WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 3,740–7,800 ft. (1,140–2,375 m)

Key Characteristics:

- ◆ Stems 1–20 dm tall, straw-color, glabrous
- ◆ Leaves simple, serrate, 3–15 cm long x 4 cm wide, tapering to bases
- ◆ Outer involucre bracts ascending, 6–12, large and leafy; flower heads erect, disk 1–2 cm wide
- ◆ Disk flowers 4-lobed; ray flowers, if present, yellow, up to 4 mm long, broadly bell-shaped
- ◆ Achenes 5–10 mm long, smooth; pappi of 3 awns, center awn shorter than the lateral awns

USDA-NRCS Wetland Flora



Patrick Alexander USDA-NRCS PLANTS Database



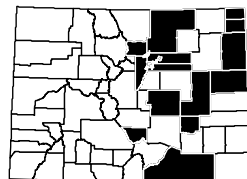
Similar Species: *B. cernua* [FACW] leaves are sessile and flower heads are usually nodding.

Habitat and Ecology: Found along streams and ditches, along roadsides and disturbed places.

Comments: Beggarticks provide a protein rich food source for waterfowl.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, U.S. Fish and Wildlife Service 1988, Weber and Wittmann 2012



Bidens vulgata Greene

Big devils beggartick

Asteraceae

John Hilty



Synonyms: *Bidens frondosa* L. var. *puberula* Wiegand, *Bidens puberula* (Wiegand) Rydb., *Bidens vulgata* Greene var. *puberula* (Wiegand) Greene

USDA PLANTS Symbol: BIVU

ITIS TSN: 500995

Wetland Status AW: FACW WM: OBL GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,000–7,600 ft. (1,525–2,315 m)

Key Characteristics:

- ◆ Stems 2–12 dm tall, glabrous to densely villous-puberulent
- ◆ Leaves ternate, some pinnately divided into 5 leaflets, the leaflets ovate to lanceolate, serrate
- ◆ Outer involucre bracts in well-developed heads; 10–16, usually 13, leafy; disk 15–25 mm wide
- ◆ Disk flowers yellow, 2.5–3.5 mm; ray flowers absent or up to 5, yellow, 2.5–3.5 mm long
- ◆ Achenes up to 12 mm long, dark or olive or yellow

Dicot Herbs

John Hilty



John Hilty



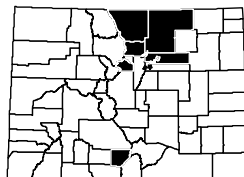
Similar Species: *B. frondosa* [FACW] outer involucre bracts are mostly 8, the flower heads are small (10 mm wide) and disk flowers are orange, not yellow.

Habitat and Ecology: Not as common as *B. frondosa* but found in similar habitats, often in disturbed areas, along ditches and in muddy soils.

Comments: Beggarticks provide a protein rich food source for waterfowl.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Weber and Wittmann 2012



Cirsium parryi (A. Gray) Petr. Parry's thistle

Asteraceae

Ernie Marx



Synonyms: *Cirsium pallidum* (Woot. & Standl.) Woot. & Standl.

USDA PLANTS Symbol: CIPA

ITIS TSN: 36395

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 5

Duration: Biennial, Perennial

CO Elevation: 5,000–14,330 ft. (1,525–4,370 m)

Key Characteristics:

- ◆ Stems 3–10 dm tall, cobwebby hairs; taproots present
- ◆ Leaves shallowly lobed, almost entire, spines 2–15 mm long, glabrate above and below
- ◆ Outer involucre bracts spinulose-ciliate with terminal spines, 1–5 mm long, inner w/dilated fringed tips
- ◆ Flower heads solitary or 2–4 clustered at end of stems, 20–30 mm, corolla greenish-yellow
- ◆ Achenes tan to dark brown, 4–6 mm

Ernie Marx



Ernie Marx



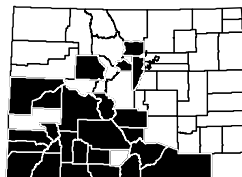
Similar Species: *C. parryi* is easily distinguished from other thistles with the greenish-yellow corolla and cobwebby hairs. There are many other thistles that have Wetland Indicator Status of FAC and can be in wetlands. Of particular importance are the non-native, noxious weeds, *Cirsium arvense* (= *Brexa arvensis*) [CIAR4, FAC, ITIS 36335], *Carduus nutans* [CANU4, FACU, UPL, ITIS 35787] and *Cirsium vulgare* [CIVU, FACU, UPL, ITIS 36428].

Habitat and Ecology: Found along streamsides in open subalpine forests and alpine meadows primarily in southern and central Colorado.

Comments: *C. parryi* global range is from southern Colorado, southern New Mexico and northern Arizona (S1).

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Harrington 1964, Weber and Wittmann 2012



Erigeron coulteri Porter

Large mountain fleabane

Asteraceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: ERC06

ITIS TSN: 35845

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 7,600–14,310 ft. (2,315–4,360 m)

Key Characteristics:

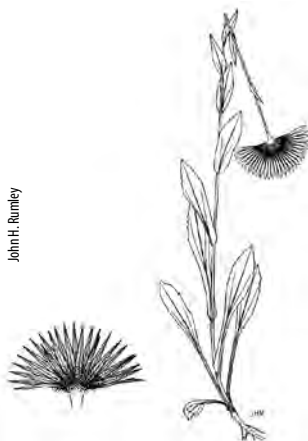
- ◆ Stems 1–6 dm tall, usually leafy; rhizomes slender
- ◆ Leaf blades broadly oblanceolate, 40–120 mm long, margins entire or with shallow teeth
- ◆ Involucral bracts villous hirsute, covered with multicellular hairs with black cross-walls
- ◆ Flower heads solitary or occasionally 2 or 3; rays white, 9–25 mm long; disk 3–4.4 mm long
- ◆ Achenes 2-nerved, hairy at least along the nerves and near the top; pappi 20–25 bristles

Dicot Herbs

Al Schneider



John H. Rumley



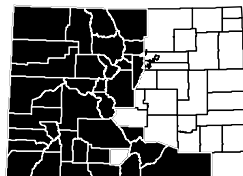
Similar Species: *E. elatior* (FACW) involucral bracts are woolly-villous with multicellular hairs, without the black cross-walls. In general, the difference between *Erigeron* spp. and the *Aster* complex, including *Almutaster*, *Symphyotrichum*, and *Virgularster*, is that the phyllaries are equal 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 open mountain meadows, along streams and in spruce or aspen forests.

Comments: One can see the hairs, 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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Erigeron elatior (A. Gray) Greene

Tall fleabane

Asteraceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: EREL9

ITIS TSN: 35857

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G4 S4

C-Value: 7

Duration: Perennial

CO Elevation: 5,550–14,400 ft. (1,690–4,390 m)

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
- ◆ Involucre 7–12 mm high, densely woolly, shiny, multicellular hairs, some with purplish cross-walls
- ◆ Flowering heads usually 1; rays 75–150, pink or pink purple
- ◆ Achenes hairy, 2-nerved; pappi double, inner 15–20 bristles

Al Schneider



Al Schneider



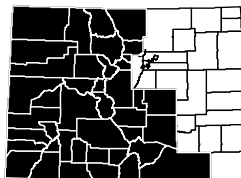
Similar Species: *E. coulteri* [FACW] involucre is covered with hairs with black cross-walls, not short and woolly as in *E. elatior*. In general, the difference between *Erigeron* spp. and the *Aster* complex, including *Almutaster*, *Symphyotrichum*, and *Virgularia*, is that the phyllaries are equal 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 open mountain meadows, along streams, and in spruce or aspen forests.

Comments: The major pollinators for *Erigeron* spp. are butterflies, moths, bees and flies.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Erigeron glabellus Nutt.

Streamside fleabane

Asteraceae

Kurt Stueber



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

Synonyms: None

USDA PLANTS Symbol: ERGL2

ITIS TSN: 35873

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Biennial, Perennial

CO Elevation: 5,000–11,500 ft. (1,525–3,505 m)

- ◆ Ray flowers 125–175, 1 mm wide, white to pink or blue, 8–15 mm; disk flowers 4–5.5 mm long

- ◆ Achenes 1.2–1.5 mm, 2-nerved, faces sparsely strigose; double pappi, inner of 16–20 bristles

Dicot Herbs

Kurt Stueber



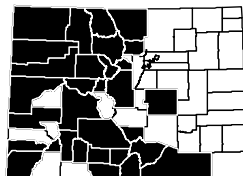
Similar Species: *E. glabellus* var. *pubescens* [ERGLP, FACW, ITIS 527945] has hirsute to hirsute-villous stems. *E. formosissimus* [ERF03, FAC, ITIS 35869] is glandular with stems that are curved at the bases.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Erigeron humilis Graham

Arctic alpine fleabane

Asteraceae

Mel Harte



Synonyms: None

USDA PLANTS Symbol: ERHU

ITIS TSN: 35807

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G4 S1

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 11,000–13,600 ft. (3,355–4,145 m)

Key Characteristics:

- ◆ Stems loosely erect, 1–3 cm tall, herbage loosely villous; fibrous roots from short, simple caudex
- ◆ Basal leaves mostly oblanceolate, 1–2.5 cm long, cauline leaves reduced, linear or lance-linear, acute
- ◆ Heads solitary, disks 10–20 mm wide, involucre 6–9 mm, woolly-villous, hairs with blackish cross-walls
- ◆ Rays white-purple, 3.5–6 mm long x 0.5–1 mm wide; disk flowers 3.4 mm–4.8 mm long
- ◆ Achenes 2.2–2.5 mm; 2-nerved; pappi obscurely double, inner of 20–30 bristles

Mel Harte



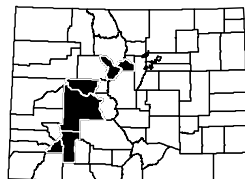
Similar Species: *E. melanocephalus* [ERME2, FAC, ITIS 35900] is a much more common alpine daisy. The involucre are woolly with hairs that contain dark purple, not black, cross-walls. The ray flowers are much more well-developed, up to 11 mm long.

Habitat and Ecology: Uncommon on mossy turf between rocks in alpine tundra.

Comments: *E. humilis* is circumpolar, its range extends south into Idaho, Utah, Colorado, Wyoming and Montana. It is considered to be state critically imperiled (S1) in Utah as well as Colorado, state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana. The major pollinators for *Erigeron* spp. are butterflies, moths, bees and flies.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Erigeron kachinensis S.L. Welsh & Glen Moore

Kachina fleabane

Asteraceae

Loraine Yeatts



Synonyms: None

USDA PLANTS Symbol: ERKA

ITIS TSN: 35884

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G2 S1; BLM Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 4,800–6,600 ft. (1,465–2,010 m)

Key Characteristics:

- ◆ Stems decumbent to ascending, 6–18 cm tall, from a branching caudex, forming stolons late in season
- ◆ Basal leaves broadly oblanceolate or ovate, rounded at apices, glabrous
- ◆ Flowering heads 1–4, involucre 3–4.5 mm high, finely glandular to glabrous, imbricate, green
- ◆ Rays 10–25, white to lavender or pinkish, 4–7 mm long x 1–2.5 mm wide; disk flowers 2.7 mm–3.5 mm long
- ◆ Achenes 1.8–2 mm, 2-nerved; inner pappi 12–14, straw-colored bristles

Dicot Herbs

Loraine Yeatts



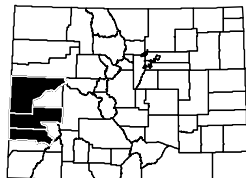
Similar Species: No other member of the Asteraceae grows in this uncommon habitat of canyon alcoves, seeps and springs.

Habitat and Ecology: Rare. Found in wet, saline soils in alcoves and seeps in canyon walls.

Comments: Globally imperiled (G2), only known from Colorado (S1) and Utah (S2). The type specimen was documented at Natural Bridges National Monument in Utah, near Kachina Natural Bridge by Dr. Stanley Welch.

Animal and Bird Use: 

References: Ackerfield 2012, Colorado Native Plant Society 1997, Cronquist 1994, Flora of North America 2006, Weber and Wittmann 2012



Erigeron lonchophyllus Hook. Shortray fleabane

Asteraceae

Al Schneider

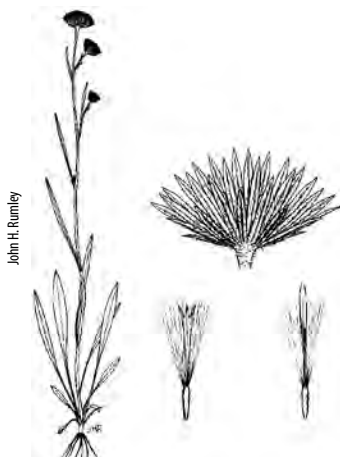


Synonyms: *Trimorpha lonchophylla* (Hook.) G.L. Nesom
USDA PLANTS Symbol: ERLO
ITIS TSN: 35897
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 5
Duration: Biennial, Perennial
CO Elevation: 5,100–11,500 ft. (1,555–3,505 m)

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

Al Schneider



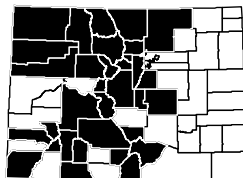
Similar Species: *E. acris* [ERAC2, FAC, ITIS 35811] is similar, but has a corymbiform (flat-topped) inflorescence, the leaves are broader, peduncles are glandular, not as linear, and the ray flowers are in 2 series. In general, the difference between *Erigeron* spp. and the *Aster* complex, including *Almutaster*, *Symphyotrichum*, and *Virgulaster*, is that the phyllaries are equal 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Larson 1993, Weber and Wittmann 2012



***Erigeron peregrinus* (Banks ex Pursh) Greene ssp. *callianthemus* (Greene) Cronq.**
Subalpine fleabane **Asteraceae**

Al Schneider



Synonyms: *Erigeron glacialis* (Nutt.) A. Nelson

USDA PLANTS Symbol: ERPEC

ITIS TSN: 35923

Wetland Status AW: FAC WM: FACW GP: NI

Native Status: Native

Conservation Status: G5T4T5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,800–14,310 ft. (2,075–4,360 m)

Key Characteristics:

- ◆ Stems 5–55 (70) cm tall; fibrous roots from stout, thick rhizome
- ◆ Leaves 50–100 mm long x 5–25 mm wide; peduncles hairy beneath heads, herbage otherwise glabrous
- ◆ 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 wide rays)
- ◆ Phyllaries curve outward, covered with dark, club-shaped, red-tipped hairs

Al Schneider



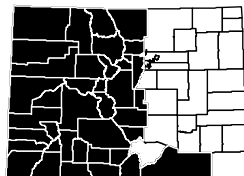
Similar Species: *E. eximius* [EREX4, NI, ITIS 35862] has slender rhizomes, pappi are double and it does not have the distinctive pubescence below the phyllaries. In general, the difference between *Erigeron* spp. and the *Aster* complex, including *Almutaster*, *Symphyotrichum*, and *Virgulaster*, is that the phyllaries are equal 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 (2012) recognize *E. glacialis* [ITIS 780894] as the accepted name; stating that *E. peregrinus* is restricted to northwestern United States and Canada.

Animal and Bird Use:

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



***Eupatoriadelphus maculatus* (L.) King & H. Rob. var. *bruneri* (A. Gray) King & H. Rob.**
Spotted joe pye weed

Asteraceae

Karin Freeman



Synonyms: *Eupatorium maculatum* L. var. *bruneri* (A. Gray) Breitung, *Eutrochium maculatum* (L.) E.E.

Lamont var. *bruneri* (A. Gray) E.E. Lamont

USDA PLANTS Symbol: EUMAB

ITIS TSN: 535286

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GST4TSQ SNR

C-Value: 8

Duration: Perennial

CO Elevation: 4,960–7,500 ft. (1,510–2,285 m)

Key Characteristics:

- ◆ Stems densely puberulent, 6–15 dm tall, speckled or evenly purplish
- ◆ Leaves in whorls of 3–6, lanceolate to ovate-lanceolate, 6–20 cm long x 2–6 cm wide
- ◆ Heads in flat-topped, corymbose arrays; involucre bracts greenish
- ◆ Disk flowers blue, pink, purple or white; ray flowers absent
- ◆ Achenes usually 5-angled; pappi with a single whorl of numerous capillary bristles

John H. Rumley



Vonne Zdenek



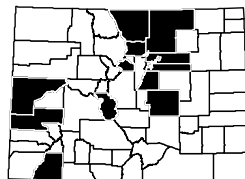
Similar Species: None.

Habitat and Ecology: Found in moist places by irrigation ditches, dams, wet meadows and streams.

Comments: Weber and Wittmann (2012), Ackerfield (2012) and FNA (2006) recognize *Eutrochium maculatum* var. *bruneri* as the accepted name. This plant is often used in gardens to attract butterflies, especially monarch and swallowtail butterflies. Considered state imperiled (S2) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Larson 1993, Weber and Wittmann 2012



Euthamia graminifolia (L.) Nutt.

Flat-top goldentop

Asteraceae

Frank Mayfield



Synonyms: *Solidago graminifolia* var. *septentrionalis* Fernald

USDA PLANTS Symbol: EUGRS

ITIS TSN: 37352

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,200–7,500 ft. (1,585–2,285 m)

Key Characteristics:

- ◆ Stems glandular-punctate, glabrous, not sticky, 3–15 dm tall; rhizomatous
- ◆ Leaf blades 3- or 5-nerved, 3.7–13 cm long x (2.1) 3–12 mm wide, obscurely gland-dotted, barely viscid
- ◆ Heads large, 1.5–28 cm across, 20–40-flowered in flat-topped clusters; involucre 3–5.3 mm
- ◆ Ray flowers yellow, (7) 17–22 (35); disk flowers (3) 5–7 (13), corollas 2.6–3.4 mm long
- ◆ Achenes several-nerved, 1 mm long, short-hairy; pappi of numerous white capillary bristles

Dicot Herbs

Frank Mayfield



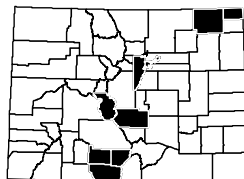
Similar Species: *E. gymnospermoides* [EUGY, FACU, ITIS 37353] has smaller heads with fewer than 20 flowers. The leaves are prominently 1-nerved and conspicuously resinous.

Habitat and Ecology: Common in the San Luis Valley, lower South Platte River, and upper Arkansas River Valley. Grows along streams and ditches in sandy soil or drier sites.

Comments: *Euthamia* was formerly included in *Solidago*. Arrangements of flowering heads, gland-dotted leaves and DNA data demonstrate that *Euthamia* is distinct from *Solidago*. Important nectar plant for butterflies, moths and skippers.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Larson 1993, Weber and Wittmann 2012



Euthamia occidentalis Nutt.

Western goldentop

Asteraceae

Jonathan Goffin



Synonyms: *Solidago occidentalis* (Nutt.) Torr. & A. Gray

USDA PLANTS Symbol: EUOC4

ITIS TSN: 37356

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 3,650–7,200 ft. (1,115–2,195 m)

Key Characteristics:

- ◆ Stems erect, stout, 4–20 dm tall, freely branched above, glabrous, glaucous
- ◆ Leaves sessile, lance-linear, 3-nerved, up to 12 cm long x 1 cm wide, punctate
- ◆ Inflorescence elongate or rounded, interrupted with lateral clusters arising from axils of leafy bracts
- ◆ Ray flowers yellow, (15) 17–22 (28); disk flowers (7) 9–11 (18); corollas 3.1–4.2 mm
- ◆ Achenes oblong to narrowly ellipsoid, terete, 2- to 4-nerved; pappi persistent, white

Jonathan Goffin



John H. Rumley



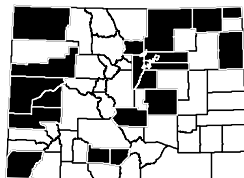
Similar Species: *E. gymnospermoides* [EUGY, FACU, ITIS 37353] and *E. graminifolia* [FACW] have broad, flat-topped inflorescences and are usually much shorter than *E. occidentalis*.

Habitat and Ecology: Found along rivers and irrigation ditches, especially common along lower South Platte and Colorado Rivers.

Comments: *Euthamia* was formerly included in *Solidago*. Arrangements of heads, gland-dotted leaves and DNA data demonstrate that *Euthamia* is distinct from *Solidago*. Important nectar plant for butterflies, moths and skippers.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Flaveria campestris J.R. Johnst.

Alkali yellowtops

Asteraceae

Mike Haddock



Synonyms: None

USDA PLANTS Symbol: FLCA

ITIS TSN: 37378

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G4 SNR

C-Value: 6

Duration: Annual

CO Elevation: 3,740–4,930 ft. (1,140–1,505 m)

Key Characteristics:

- ◆ Stems 3–9 dm tall, glabrous or slightly villous at nodes; taproots present
- ◆ Leaves lanceolate or lance-linear, opposite, sessile, 3–9 cm long x 6–22 mm wide, margins serrate
- ◆ Heads crowded in small, dense cymes terminating the branches and subtended by 3 leafy bracts
- ◆ Ray flowers 0 or 1, yellow, apices notched; disk flowers 5–6, corolla tubes 0.8–1.3, funnelform
- ◆ Achenes small, black, 8–10 ribbed; pappi none

Dicot Herbs

Mike Haddock



USDA-NRCS PLANTS Database Britton & Brown 1913



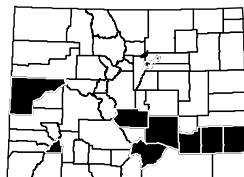
Similar Species: *F. campestris* is distinguished by the crowded inflorescence with 5–6 flowers per head, subtended by 3 leafy bracts and linear leaves with serrate margins.

Habitat and Ecology: Uncommon along ditches and along margins of streams and ponds, usually in alkaline soil.

Comments: *F. campestris* is considered a halophyte, referring to its tolerance of growing in soils and water with a high level of salinity. It is a nectar source for bees and butterflies

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Gnaphalium exilifolium A. Nelson

Slender cudweed

Asteraceae

Barry Breckling



Synonyms: *Gnaphalium grayi* A. Nelson & J.F. Macbr.

USDA PLANTS Symbol: GNEX

ITIS TSN: 508109

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G3G4Q SNR

C-Value: 5

Duration: Annual

CO Elevation: 4,500–10,800 ft. (1,370–3,290 m)

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 linear, 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

Max Licher



Max Licher



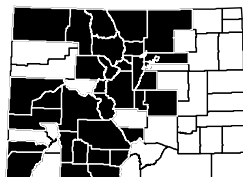
Similar Species: *G. uliginosum* [GNUL, FAC, ITIS 502816] flowering heads are capitate, not axillary and the lower leaves are oblanceolate. *G. palustre* [FACW, OBL] has wider leaves (2–10 mm wide) and the bracts subtending the heads are much shorter.

Habitat and Ecology: Found along streams and pond margins.

Comments: *G. exilifolium* is considered globally vulnerable (G3G4Q). Its global range includes Utah, Arizona, New Mexico, Colorado, Wyoming (S2) and South Dakota.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Gnaphalium palustre Nutt.

Western marsh cudweed

Asteraceae

Moosorn Ranch



Synonyms: *Filaginella palustris* (Nutt.) Holub

USDA PLANTS Symbol: GNPA

ITIS TSN: 36709

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Annual

CO Elevation: 5,000–8,970 ft. (1,525–2,735 m)

Key Characteristics:

- ◆ Stems 3–15 cm tall, usually much branched, white-woolly, especially upwards on stems
- ◆ Leaves oblanceolate or oblong, mostly 1–3.5 cm long x 2–10 mm wide, not subtending flowering heads
- ◆ Heads in dense glomerules at branch ends and sometimes in leaf axils, no ray flowers
- ◆ Phyllaries pale, densely woolly
- ◆ Corollas purplish or whitish; achenes oblong, glabrous

Dicot Herbs

Matt Lavin



John H. Rumley

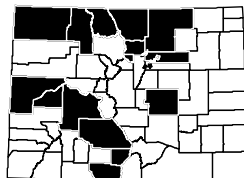
Similar Species: *G. uliginosum* [GNUL, FAC, ITIS 502816] subtending leaves are linear, exceeding the clusters of flowering heads and the phyllaries are usually dark colored. *G. exilifolium* [FACW, FAC] flowering heads are axillary, spike-like along the upper portion of the main stems.

Habitat and Ecology: Found in sandy or alkaline soil of moist places along streams and ponds.

Comments: *G. palustre* is wide ranging from western Canada south to New Mexico and Arizona. It is considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Helenium autumnale L. var. *montanum* (Nutt.) Fernald

Mountain sneezeweed

Asteraceae

Thomas C. Barnes USDA-NRCS PLANTS Database



Synonyms: *Helenium montanum* Nutt.

USDA PLANTS Symbol: HEAUM

ITIS TSN: 528350

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T5 SNR

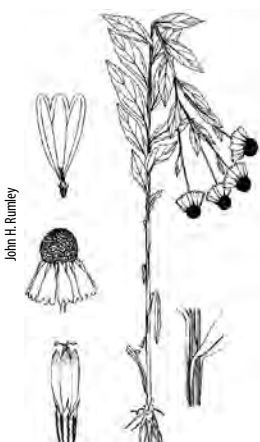
C-Value: 5

Duration: Perennial

CO Elevation: 3,500–8,530 ft. (1,065–2,600 m)

Key Characteristics:

- ◆ Stems 3–11 dm tall, winged by decurrent leaves, puberulent, especially above; fibrous roots
- ◆ Leaves ovate-lanceolate or oblanceolate, glandular punctuate, tapered to narrow bases
- ◆ Heads 5–7 per plant in a panicle; peduncles 3–10 cm, hairy; receptacles globose
- ◆ 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



John H. Rumley



Larry Allan USDA-NRCS PLANTS Database

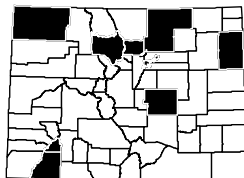
Similar Species: *H. microcephalum* [HEMI, FACW, ITIS 36018] is an annual from a taproot with reddish-brown disk flowers. It is only known from one specimen from the Mesa de Maya Region in Las Animas County.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Helianthella quinquenervis (Hook.) A. Gray

Fivenerve helianthella

Asteraceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: HEQU2

ITIS TSN: 37597

Wetland Status AW: FACU WM: FACU GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 7,200–13,690 ft. (2,195–4,175 m)

Key Characteristics:

- ◆ Stems 5–15 dm tall, several from a branching caudex, usually without a basal cluster of leaves
- ◆ Leaves with 2 prominent pairs of lateral veins, 10–45 cm long x 1.5–10 cm wide
- ◆ Heads relatively large, disks yellow, 1.5–4 cm wide, nodding; involucre bracts pale yellow
- ◆ Ray flowers pale yellow, 2–4.5 cm long; disk flowers 25–40 mm wide; receptacle bracts thin, soft
- ◆ Achenes strongly compressed, margins ciliate; pappi awn-like scales

Dicot Herbs

Al Schneider



John H. Rumley



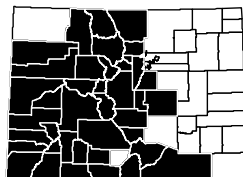
Similar Species: *H. parryi* [HEPA, UPL, ITIS 37596] also has nodding heads, but is smaller in stature, the basal leaves are prominently 3-nerved, the flowering heads are smaller and disk flowers are 15–20 mm wide.

Habitat and Ecology: Common in mountain meadows, aspen forests and sagebrush slopes.

Comments: *H. quinquenervis* grows primarily in the Rocky Mountains, Great Basin and Black Hills.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Helianthus nuttallii Torr. & A. Gray

Nuttall's sunflower

Asteraceae

Ernie Marx



Synonyms: None

USDA PLANTS Symbol: HENU

ITIS TSN: 36662

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 4,700–9,400 ft. (1,435–2,865 m)

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; involucre bracts lance-linear, 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

Ernie Marx



John H. Rumley

Similar Species: FNA and USDA-NRCS PLANTS Database recognize *H. nuttallii* ssp. *rydbergii* [HENUR, ITIS 36665]. 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* [HEPU3, NI, ITIS 36679] is 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.

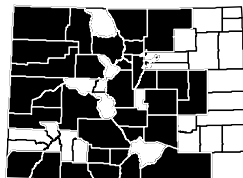
Habitat and Ecology: Common in wet places such as ditches, moist meadows and along streams or pond borders.

Comments: Achenes are eaten by songbirds and some waterfowl.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Machaeranthera bigelovii (A. Gray) Greene

Bigelow's tansyaster

Asteraceae

Al Schneider



Synonyms: *Dieteria bigelovii* (A. Gray) D.R. Morgan & R.L. Hartman var. *bigelovii*

USDA PLANTS Symbol: MABI

ITIS TSN: 37980

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 3

Duration: Biennial, Perennial

CO Elevation: 4,900–11,040 ft. (1,495–3,365 m)

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

Dicot Herbs

Al Schneider



Al Schneider



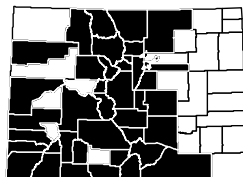
Similar Species: *M. canescens* [MACA2, UPL, ITIS 37984] (= *Dieteria canescens*) involucre bracts have some glandular hairs, but not as conspicuously hairy on both the bracts and peduncles, and the leaves are narrower, 1.5–5 mm wide.

Habitat and Ecology: Common along roadsides, on open slopes, in meadows and forest clearings.

Comments: *M. bigelovii* and *M. canescens* commonly hybridize. *M. bigelovii* is considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Packera debilis (Nutt.) W.A. Weber & Å. Löve

Weak groundsel

Asteraceae

Denise Culver



Synonyms: *Senecio debilis* Nutt.

USDA PLANTS Symbol: PADE22

ITIS TSN: 565353

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 S1

C-Value: 10

Duration: Perennial

CO Elevation: 7,920–9,250 ft. (2,415–2,820 m)

Key Characteristics:

- ◆ Stems 1–2 (4), clustered, 2–5 dm tall; fibrous-rooted, caudices weakly branched, relatively short
- ◆ Basal leaves toothed or with crenate margins, 20–40 mm long; cauline leaves gradually reduced upwards
- ◆ Heads 6–20, open or compact, corymbiform arrays; peduncles glabrous or sparsely hairy
- ◆ Ray flowers absent, disk flowers yellow
- ◆ Achenes 1–2 mm, glabrous; pappi 4.5–5.5 mm

Denise Culver



John H. Rumley



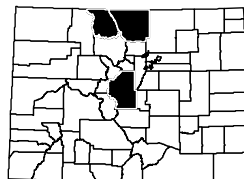
Similar Species: Often misidentified as *Packera pauciflora* [PAPA19, FAC, ITIS 518154] which also has no ray flowers. *P. pauciflora* does not occur in Colorado, found in Wyoming and Montana and the Pacific Northwest, to Canada and Alaska.

Habitat and Ecology: Uncommon in moist meadows, streambanks and fens usually on alkaline soils.

Comments: *P. debilis* is the most abundant of the rayless species of *Packera* in the southern Rocky Mountains. It is considered a halophyte, referring to its tolerance of growing in soils and water with a high level of salinity. Considered state critically imperiled (S1) in Colorado, state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Packera paupercula (Michx.) Á. Löve & D. Löve

Balsam groundsel

Asteraceae

Peter Gorman



Synonyms: *Senecio pauperculus* Michx.

USDA PLANTS Symbol: PAPA20

ITIS TSN: 518155

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 S1

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,130–10,700 ft. (2,480–3,260 m)

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



John H. Rumley

Dicot Herbs

Daniel Reed



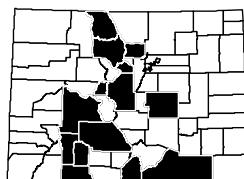
Similar Species: *P. tridenticulata* [PATR7, NI, ITIS 518159] frequently has leaves that are 3-toothed but the bracteoles at the involucre base are conspicuous. It is also a shortgrass forb, not typically found in wetlands. *P. pseud aurea* [FACW] basal leaves are broadly ovate-cordate and regularly 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. Considered state critically imperiled (S1) in Colorado and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



***Packera pseud aurea* (Rydb.) Weber & Löve var. *flavula* (Greene) Trock & Barkley**
Falsegold groundsel **Asteraceae**

Al Schneider



Synonyms: *Senecio pseud aureus* Rydb. ssp. *flavulus* (Greene) G.W. Douglas & G. Ruyle-Douglas

USDA PLANTS Symbol: PAPSF

ITIS TSN: 526300

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T2T4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,500–11,600 ft. (1,370–3,535 m)

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; 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

Al Schneider



John H. Rumley

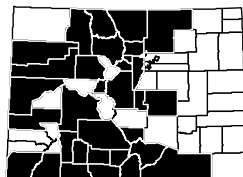
Similar Species: *P. paupercula* [FACW] basal leaves are narrower, tapering to cuneate bases with cauline leaves that are prominently pinnatifid with rounded sinuses.

Habitat and Ecology: Common in moist meadows, along streambanks and in forest openings.

Comments: Known from southern Wyoming (S1) through central Colorado to northern New Mexico.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



***Petasites frigidus* (L.) Fr. var. *sagittatus* (Banks ex Pursh) Cherniawsky**
Arrowleaf sweet coltsfoot **Asteraceae**

Montana Natural Heritage Program



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
- ◆ 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

Montana Natural Heritage Program



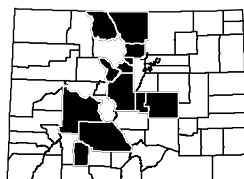
Similar Species: None.

Habitat and Ecology: Uncommon to locally abundant in wet marshes, meadows, fens and roadside ditches; usually occurs with *Menyanthes trifoliata* at higher elevations.

Comments: Considered state imperiled (S2) in North Dakota and state vulnerable (S3) in Montana.

Animal and Bird Use:

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Pyrrocoma uniflora (Hook.) Greene

Plantain goldenweed

Asteraceae

Steve Matson



Synonyms: *Haplopappus uniflorus* (Hook.) Torr. & Gray

USDA PLANTS Symbol: PYUN2

ITIS TSN: 504704

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,000–13,810 ft. (2,440–4,210 m)

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

John H. Rumley



Steve Matson



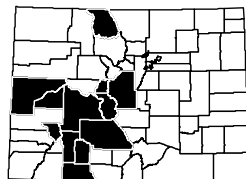
Similar Species: *P. clementis* (= *Haplopappus clementis*) [PYCLC, NI, ITIS 529941] occurs in similar habitats but the involucral bracts are obovate to ovate, about 2 mm wide, green and herbaceous and the basal leaves are entire, often villous-ciliate margins without tufts of hairs in the axils.

Habitat and Ecology: Grows in wet or dry, often alkaline meadows in valleys and lower parts of mountains.

Comments: Considered state vulnerable (S3) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Rudbeckia montana A. Gray

Montane coneflower

Asteraceae

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: *Rudbeckia occidentalis* Nutt. var. *montana* (A. Gray) Perdue

USDA PLANTS Symbol: RUM09

ITIS TSN: 508139

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5T2T4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,350–10,500 ft. (1,935–3,200 m)

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



Bobbi Angell

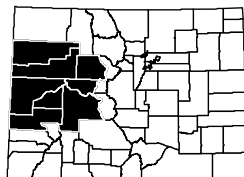
Similar Species: *R. montanum* is distinct with elongate columns (receptacles) of disk flowers. All other *Rudbeckia* spp. have ray flowers.

Habitat and Ecology: Commonly found along streams, aspen forests, and moist meadows.

Comments: The global range for *R. montana* is Colorado, Oregon and Utah. In Utah, considered state critically imperiled (S1).

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Senecio amplexans A. Gray Showy alpine ragwort

Asteraceae

Al Schneider



Synonyms: *Ligularia amplexans* (A. Gray) W. A. Weber
USDA PLANTS Symbol: SEAM
ITIS TSN: 36093
Wetland Status AW: FACW WM: FACU GP: FACW
Native Status: Native
Conservation Status: G4 SNR
C-Value: 8
Duration: Perennial
CO Elevation: 8,200–14,420 ft. (2,500–4,395 m)

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
- ◆ Phyllaries 13 or 21, tips often black or brownish, with scattered black hairs underneath

- ◆ Ray flowers 15–25 mm long, yellow; achenes glabrous

Al Schneider



Al Schneider



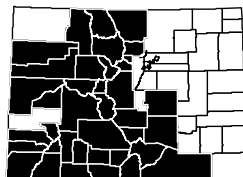
Similar Species: *S. amplexans* var. *holmii* (= *Ligularia holmii*) [SEAMH, ITIS 530299] is shorter, up to 2 dm tall, the principal leaves are basal, and the involucre bracts are glabrous, sometimes purplish-tinged.

Habitat and Ecology: Common in open forests, subalpine mountain meadows and alpine tundra.

Comments: The Latin word *amplect* means to '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*.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Schneider 2012, Weber and Wittmann 2012



Senecio crassulus A. Gray

Thickleaf ragwort

Asteraceae

Al Schneider



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

Synonyms: None

USDA PLANTS Symbol: SECR

ITIS TSN: 36116

Wetland Status AW: FACU WM: FACU GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,000–14,420 ft. (1,830–4,395 m)

Dicot Herbs

Al Schneider



Al Schneider



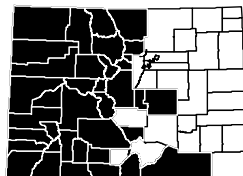
Similar Species: *S. hydrophilus* [OBL] occurs at lower elevations and has very glaucous, entire leaves and numerous, crowded flowering heads. *Hymenoxys hoopesii* (= *Dugaldia hoopesii*) [HYHO, FACU, ITIS 507616] also has orange flowers but has simple leaves and pappi of awned scales.

Habitat and Ecology: Common in montane meadows, on subalpine and alpine slopes.

Comments: Considered state vulnerable (S3) in Wyoming. Charles Parry collected this plant in Colorado and it was named by Asa Gray in 1883. The word *crass* is Latin for thick and *Senecio* is from the Latin *senes* which means old man; referring to the white pappus hairs.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Schneider 2012, Weber and Wittmann 2012



Senecio hydrophilus Nutt.

Water ragwort

Asteraceae

J. C. Dittus



Synonyms: None

USDA PLANTS Symbol: SEHY2

ITIS TSN: 36144

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Biennial, Perennial

CO Elevation: 6,300–9,190 ft. (1,920–2,800 m)

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

Steve Matson



John H. Rumley

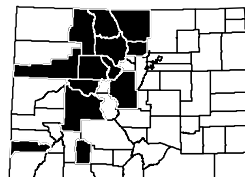
Similar Species: *S. hydrophilus* is very distinct with glaucous herbage and is often the only ragwort that can grow in saturated soils or standing water.

Habitat and Ecology: Found in wet meadows, fens and marshes.

Comments: Considered state vulnerable (S3) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Senecio triangularis Hook. Arrowleaf ragwort

Asteraceae

Denise Culver



Synonyms: None
USDA PLANTS Symbol: SETR
ITIS TSN: 36090
Wetland Status AW: FACW WM: FACW GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: 7
Duration: Perennial
CO Elevation: 6,500–13,480 ft. (1,980–4,110 m)

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

Denise Culver



John H. Rumley



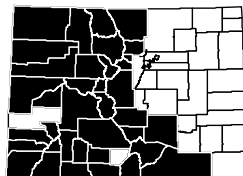
Similar Species: *S. serra* var. *admirabilis* [SESEA, FAC, ITIS 530331] is found in similar habitats, but the leaves are lanceolate and taper from the bases with finely serrate margins.

Habitat and Ecology: Common along streams and in moist meadows in the mountains.

Comments: An important nectar source for butterflies, moths, and flies.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Schneider 2012, Weber and Wittmann 2012



Solidago gigantea Aiton

Giant goldenrod

Asteraceae

Matt Lavin



Synonyms: *Solidago serotina* Aiton, non Retz.

USDA PLANTS Symbol: SOGI

ITIS TSN: 36259

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

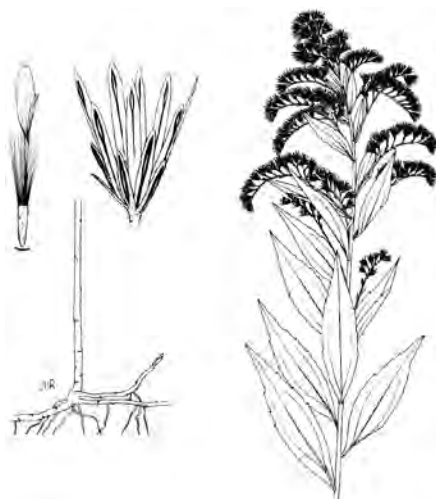
Duration: Perennial

CO Elevation: 3,370–9,760 ft. (1,025–2,975 m)

Key Characteristics:

- ◆ Stems (5) 10–15 dm tall, sometimes glaucous; rhizomes short to long creeping
- ◆ Leaves narrowly elliptical, margins sharply serrate for at least half the leaf length
- ◆ Inflorescence a pyramidal panicle with recurved, secund branches
- ◆ Ray flowers 9–15, conspicuous, yellow
- ◆ Achenes short-pubescent, 1.3–1.5 mm long

Thomas G. Barnes USDA-NRCS PLANTS Database



John H. Rumley

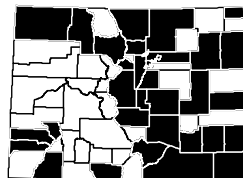
Similar Species: *S. missouriensis* [SOMI2, NI, ITIS 36277] leaf margins are entire or remotely toothed and the plant is shorter, 1.5–9 dm tall. *S. canadensis* [SOCA6, FACU, ITIS 36224] has hairy leaves and stems.

Habitat and Ecology: Common in moist places, especially on the plains.

Comments: Considered state critically imperiled (S1) in Utah and state vulnerable (S3) in Wyoming and Montana. Goldenrods are attractive sources of nectar for bees, flies, wasps, and butterflies.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Dicot Herbs

Symphotrichum boreale (Torr. & A. Gray) Å. Löve & D. Löve

Northern bog aster

Asteraceae

kgNaturePhotography.com



Synonyms: *Aster borealis* (Torr. & A. Gray) Prov., *Aster junciformis* Rydb., *Aster laxifolius* Nees var. *borealis* Torr. & A. Gray

USDA PLANTS Symbol: SYB02

ITIS TSN: 522185

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,000–9,500 ft. (1,525–2,895 m)

Key Characteristics:

- ◆ Stems simple, unbranched, 1–9 dm, often reddish to slightly glaucous towards top; rhizomes slender
- ◆ Cauline leaves are all linear, no basal leaves, mostly 2–5 mm wide
- ◆ Heads borne singly or in open, lax, panicle arrays, branches ascending
- ◆ Ray flowers 25–35, white to rose or lavender; disk flowers 25–30 mm long x 0.5–1 mm wide
- ◆ Achenes yellowish-tan or brown with purple streaks or grayish-tan, obovoid, 3- to 5-nerved



Mrs. W.D. Bonford



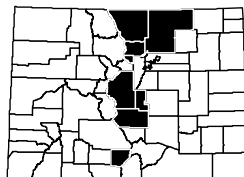
Similar Species: *S. porteri* (= *Aster porteri*) [SYPO4, NI, ITIS 522235] stems are much more branched and arise from a cluster of basal leaves. The leaves are glabrous, often ciliate-margined and there are white spinulose tips on the involucre bracts. It is also found in much drier habitats.

Habitat and Ecology: Infrequent to rare in calcareous fens, marshes, stream and pond margins.

Comments: Considered state imperiled (S2) in Wyoming and state vulnerable (S3) in South Dakota.

Animal and Bird Use: 

References: Flora of North America 2006, Weber and Wittmann 2012



Symphyotrichum ciliatum (Ledeb.) G.L. Nesom

Rayless alkali aster

Asteraceae

Robert L. Clark



Synonyms: *Aster brachyactis* S.F. Blake, *Brachyactis ciliata* (Ledeb.) Ledeb. ssp. *angusta* (Lindl.) A.G. Jones

USDA PLANTS Symbol: SYCI2

ITIS TSN: 522190

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 4,700–7,950 ft. (1,435–2,425 m)

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; involucre bracts distinctly acute
- 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

Trent M. Draper



John H. Rumley



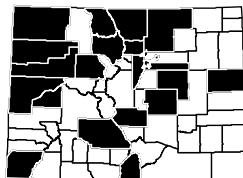
Similar Species: *S. frondosum* [FACW] has rays up to 2 mm long, that are pinkish and involucre bracts are oblong to narrowly oblanceolate.

Habitat and Ecology: Found along borders of lakes or streams in wet, saline soil.

Comments: Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Symphotrichum frondosum (Nutt.) G.L. Nesom

Short-rayed alkali aster

Asteraceae

Robert L. Clark



Synonyms: *Aster frondosus* (Nutt.) Torr. & A. Gray, *Brachyactis frondosa* (Nutt.) A. Gray

USDA PLANTS Symbol: SYFR2

ITIS TSN: 522210

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,000–9,000 ft. (1,525–2,745 m)

Key Characteristics:

- ◆ Stems branching, 0.5–14 dm tall, glabrous, except for remotely ciliate margins of leaves; taproots
- ◆ Leaves linear, sessile or sub-petiolate, seldom over 6 cm long, 1 cm wide
- ◆ Heads numerous in an open panicle to a spike
- ◆ Phyllaries oblong to narrowly oblanceolate, obtuse or acute, moderately imbricate
- ◆ Ray flowers about 2 mm long, pink to purplish, surpassing the short styles



Robert L. Clark



John H. Rumley

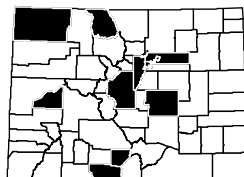
Similar Species: *S. ciliatum* [FACW] virtually has no rays and the involuclal bracts are acute to acuminate. *S. frondosum* can also be confused with *Erigeron acris* [ERAC2, FACU, ITIS 35811] or *E. lonchophyllus* [FACW]. Both have ray flowers in 1 series and the ray flowers are narrower, usually less than 0.5 mm.

Habitat and Ecology: Found along borders of lakes or streams in moist, saline soil.

Comments: The global range extends from British Columbia south to California, Arizona and New Mexico. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



***Symphotrichum lanceolatum* (Willd.) Nesom ssp. *hesperium* (Gray) Nesom**
White panicle aster **Asteraceae**

Louis M. Landry



Synonyms: *Aster hesperius* A. Gray, *Aster lanceolatus* Willd. ssp. *hesperius* (A. Gray) Semple & Chmielewski

USDA PLANTS Symbol: SYLAH

ITIS TSN: 526755

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5T5? SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,500–11,580 ft. (1,065–3,530 m)

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

Louis M. Landry



USDA-NRCS Wetland Flora



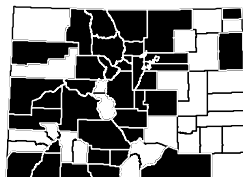
Similar Species: *S. spatulatum* [SYSP, FAC, ITIS 522249] has hairs on the stem that are uniform, hairs found consistently under the flowering heads, and the flowering heads are fewer (3–10) per branch. *S. foliaceum* (= *Aster foliaceus*) [SYF02, UPL, FAC, ITIS 522208] has middle cauline leaves that 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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:

References: Ackerfield 2012, Cronquist et al. 1994, Flora of North America 2006, Weber and Wittmann 2012



Symphyotrichum novae-angliae (L.) G.L. Nesom

New England aster

Asteraceae

Jeff Abbas



Synonyms: *Virgulus novae-angliae* (L.) Reveal & Keener

USDA PLANTS Symbol: SYN02

ITIS TSN: 522226

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S1

C-Value: 5

Duration: Perennial

CO Elevation: 5,300–7,800 ft. (1,615–2,375 m)

Key Characteristics:

- ◆ Stems up to 1 m tall, caespitose; thick, woody, branched caudices, or short, fleshy rhizomes
- ◆ Leaves lanceolate, often stiff; margins ciliate; bases auriculate, cordate, clasping
- ◆ Heads in leafy, often crowded, panicle or corymb; bracts 1–4, foliaceous
- ◆ Involucres often purple at tips; ray flowers dark rose to purple; disk flowers yellow, becoming purple

- ◆ Achenes purple or brown, dense with long hairs; pappi tawny, barb tips sometimes rose-tinged

Dicot Herbs

Jeff Abbas



USDA-NRCS Wetland Flora



Similar Species: *S. ascendens* [SYAS3, NI, ITIS 522184] has ray flowers that are violet and involucral bracts with small spine tips.

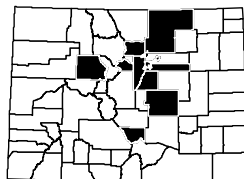
Habitat and Ecology: Found along roadsides and in open meadow. Weber and Wittmann (2012) state it is either an eastern prairie relict or an introduced species.

Comments: *S. novae-angliae* commonly escapes from cultivation. It is considered introduced in Montana, Oregon, Utah, Washington, and Wyoming. It is likely that some occurrences in Colorado might also be considered introduced.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012



Vernonia baldwinii Torr. ssp. *interior* (Small) Faust

Interior ironweed

Asteraceae

Ernie Marx



Synonyms: *Vernonia interior* Small

USDA PLANTS Symbol: VEBAI2

ITIS TSN: 38624

Wetland Status AW: NI WM: FACW GP: FACU

Native Status: Native

Conservation Status: G5T5 S1

C-Value: 4

Duration: Perennial

CO Elevation: 3,940–5,250 ft. (1,200–1,600 m)

Key Characteristics:

- ◆ Stems 6–10 (15) dm tall, upper stems puberulent to tomentose
- ◆ Leaves short-pubescent, broadly ovate-lanceolate, 4–17 cm long x 2–6 cm wide, serrate
- ◆ Heads in corymbiform arrays; involucre bracts puberulent, often gland-dotted, sometimes curved
- ◆ Disk flowers purple; no ray flowers
- ◆ Achenes 2.5–3 mm; pappi purplish, outer scales 0.2–1 mm, inner scales 5–7 mm

Ernie Marx



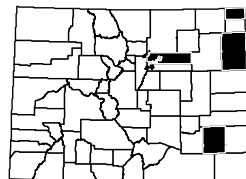
Similar Species: *V. fasciculata* [VEFA2, FAC, 38629] and *V. marginata* [VEMA2, FACU, ITIS 38642] occur in similar habitats but have glandular-punctate leaves.

Habitat and Ecology: Uncommon on the Eastern Slope, usually found along roadsides or ditches.

Comments: The global range is from Minnesota and South Dakota, south to Texas and Louisiana. It is considered state critically imperiled (S1) in Colorado. This plant can aggressively colonize by rhizomes.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2006, Great Plains Flora Association 1986, Weber and Wittmann 2012



Impatiens capensis Meerb.

Jewelweed

Balsaminaceae

John Glezenmanner



Synonyms: None

USDA PLANTS Symbol: IMCA

ITIS TSN: 29182

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,300–6,400 ft. (1,615–1,950 m)

Key Characteristics:

- ◆ Stems hollow, glabrous, often succulent with nodes more or less swollen
- ◆ Leaves simple, pale or glaucous beneath, elliptical, 3–10 cm long, serrate with mucronate teeth
- ◆ Flowers in pedunculate clusters or in leaf axils, zygomorphic
- ◆ Flowers orange to reddish, with red-brown spots; spurs 6 mm or more, bent back, parallel to body
- ◆ Seeds 4–5 mm long with 4 corky longitudinal ridges, mottled green to brown

Dicot Herbs

Louis M. Landry



Louis M. Landry



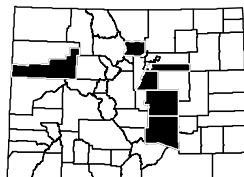
Similar Species: None.

Habitat and Ecology: Found in shaded, moist places along irrigation ditches and streams.

Comments: Weber and Wittmann (2011) state that when the leaves are held under water they assume a silvery sheen. The mature capsules will explode with the slightest touch dispersing seeds several meters. Bumble and honey bees are common pollinators.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Heliotropium curassavicum L.

Salt heliotrope

Boraginaceae (Heliotropiaceae)

Jonathan Coffin



Synonyms: *Heliotropium curassavicum* L. var. *oculatum* (A.A. Heller) I.M. Johnst.

USDA PLANTS Symbol: HECU3

ITIS TSN: 31635

Wetland Status AW: FACU WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

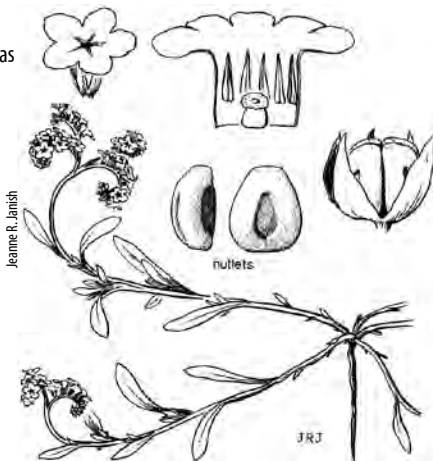
Duration: Annual, Perennial

CO Elevation: 3,920–7,560 ft. (1,195–2,305 m)

Key Characteristics:

- ◆ Stems glabrous, several, prostrate, 1–8 dm long; roots stout, creeping
- ◆ Leaves all cauline, lowermost ones scaly, larger ones oblanceolate, 4–6 cm long x 6–10 mm wide
- ◆ Inflorescence a terminal, coiled cyme
- ◆ Calyx 2–3 mm long, lobes persistently erect; stigmas sessile, expanded as wide as ovaries
- ◆ Corolla tubes 2–4 mm long, white, corolla limbs 3–15 mm wide; nutlets 2–2.5 mm long, silky hairs

Jonathan Coffin



Dicot Herbs

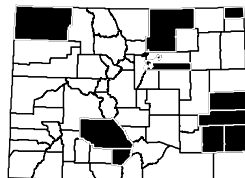
Similar Species: Two varieties of *H. curassavicum* occur in Colorado: 1a. Corolla limb 5–15 mm wide, white or purplish tinged or yellow on the throat; leaves tending to be broader, larger ones 10–18 mm wide.....var. *obovatum* [HECU02, ITIS 528373]. 1b. Corolla limb 3–6 mm wide, with a purple throat and eye; leaves narrower, larger ones usually not over 10 mm wide.....var. *oculatum* [HECU0, ITIS 528374].

Habitat and Ecology: Uncommon in saline soil along drying lake borders.

Comments: Weber and Wittmann (2012) consider *H. curassavicum* as adventive.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mertensia ciliata (James ex Torr.) G. Don

Tall fringed bluebells

Boraginaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: MEC13

ITIS TSN: 31668

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

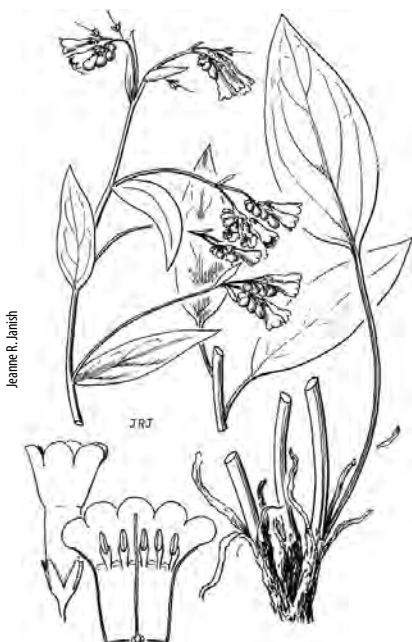
C-Value: 7

Duration: Perennial

CO Elevation: 5,000–14,310 ft. (1,525–4,360 m)

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 flowers
- ◆ Calyx 1.5–3 (4) mm long, glabrous on back with ciliate margins; corolla tubular to campanulate, blue
- ◆ Nutlets 4, usually wrinkled or rugose



Jeanne R. Janich

Dicot Herbs

Denise Culver



Similar Species: *M. franciscana* [FACW, OBL] leaves have stiff, short hairs on the upper surface and the hairs are usually thickened at the bases. *M. lanceolata* [MELA3, NI, ITIS 31681] is shorter, the corolla tube has a ring of hairs inside and it grows in much drier habitats.

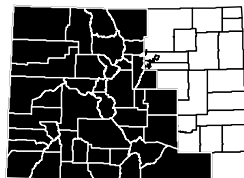
Habitat and Ecology: Common in moist places along streams and creeks.

Comments: Leaves and flowers are eaten by deer, elk and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Huggins 2008, Weber and Wittmann 2012



Mertensia franciscana A. Heller

Franciscan bluebells

Boraginaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: MEFR2

ITIS TSN: 31679

Wetland Status AW: OBL WM: FACW GP: FACW

Native Status: Native

Conservation Status: G3G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,000–14,150 ft. (1,830–4,315 m)

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

Al Schneider



Jeanne R. Janish

Similar Species: *M. ciliata* [FACW] herbage is glabrous or slightly hairy with short stiff hairs.

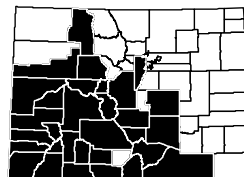
Habitat and Ecology: Common in moist places along streams and creeks from western and southern counties.

Comments: Leaves and flowers are eaten by deer, elk and small mammals. Named for the San Francisco Peaks in northern Arizona.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Myosotis scorpioides L.

True forget-me-not

Boraginaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: MYSC

ITIS TSN: 31697

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Non-native

Conservation Status: G5 SNA

C-Value: 0

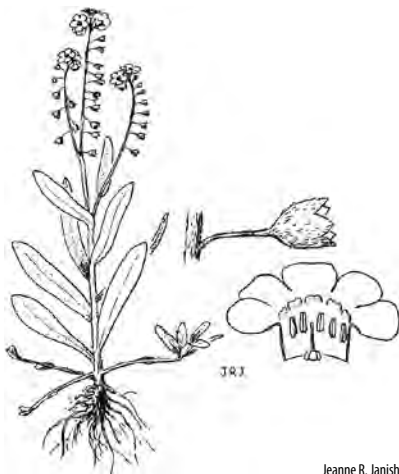
Duration: Perennial

CO Elevation: 5,320–9,650 ft. (1,620–2,940 m)

Key Characteristics:

- ◆ Stems 2–6 dm tall; fibrous roots often creeping at bases, commonly stoloniferous
- ◆ Lower leaves oblanceolate, 2.5–8 cm long x 7–20 cm wide
- ◆ Inflorescence terminal, becoming loose and open; pedicels spreading
- ◆ Calyx tubes with stiff, appressed hairs that are neither spreading nor hooked

- ◆ Corolla blue or white, yellow center; styles equaling or often surpassing the black nutlets



Jeanne R. Janish

Dicot Herbs

Louis M. Landry



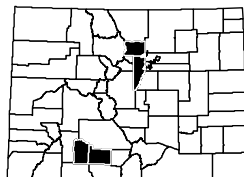
Similar Species: *Hackelia floribunda* [HAFL2, FAC, ITIS 31927] resembles *M. scorpioides* but has hooked nutlets and is much more widespread.

Habitat and Ecology: Uncommon. Grows in shallow water and wet soils. .

Comments: Native of Europe becoming widespread in the United States. Attracts small butterflies that feed on the nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



***Plagiobothrys scouleri* (Hook. & Arn.) I.M. Johnst. var. *hispidulus* (Greene) Dorn**
Sleeping popcornflower **Boraginaceae**

A. Schneider



Synonyms: *Plagiobothrys hispidulus* (Greene) I.M. Johnst., *Plagiobothrys scopulorum* (Greene) I.M. Johnst.

USDA PLANTS Symbol: PLSCH

ITIS TSN: 529700

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 3

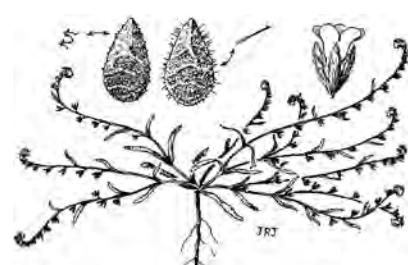
Duration: Annual

CO Elevation: 5,000–11,350 ft. (1,525–3,460 m)

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

A. Schneider



Jeanne R. Janish

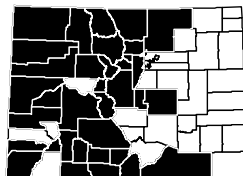
Similar Species: *P. leptocladus* [PLLE, FACW, OBL, ITIS 320007] occurs in southern Wyoming and is expected in northern Moffatt or Routt counties. The calyx lobes are elongate and thick, curving toward the same side of the fruit and the nutlet scar is at the base.

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.

Animal and Bird Use:

References: Ackerfield 2012, Cronquist et al. 1984, Harrington 1964, Weber and Wittmann 2012



Barbarea orthoceras Ledeb.

American yellowrocket

Brassicaceae

Mary Sasseverino



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

Margo Bos



Synonyms: None

USDA PLANTS Symbol: BAOR

ITIS TSN: 22740

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Biennial, Perennial

CO Elevation: 4,800–11,770 ft. (1,465–3,585 m)



Yvonne Wilson-Ramsey

B. orthoceras

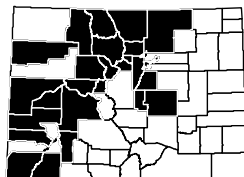
Similar Species: *B. vulgaris* [BAVU, FACU, ITIS 22741] has longer styles up to 3.5 mm long and the auricles are glabrous.

Habitat and Ecology: Found along streams, creeks, ditches, roadsides and within wet meadows, often disturbed areas.

Comments: Pollinated by flies, bees, beetles.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012, Western Wetland Flora 1992, Whitson et al. 1991



Braya glabella Richardson

Smooth northern-rockcress

Brassicaceae

Ryan Tamnery



Synonyms: None

USDA PLANTS Symbol: BRGL

ITIS TSN: 501054

Wetland Status AW: FAC WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 S1; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 11,700–12,700 ft. (3,565–3,870 m)

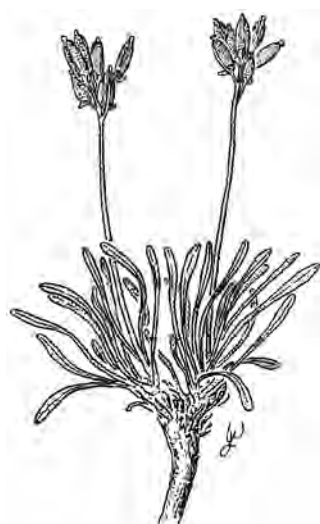
Key Characteristics:

- Stems with a single cauline leaf, 0.5–1.7 (2.3) dm tall, trichomes simple, 2 or 3 forked
- Leaves all basal, fleshy, margins entire or 1–2 weak teeth per side
- Inflorescence a raceme, often loosely elongated in fruit
- Petals white or purplish
- Fruits siliques or silicles, 3.5–8.3 times as long as wide; styles (0.3) 0.5–1.6 (2) mm

Allen et al. 2007



Janet Wingate



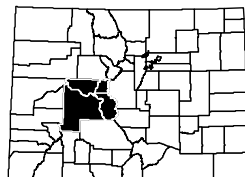
Similar Species: Certain alpine *Draba* spp. resemble *B. glabella*, but their fruits are conspicuously flattened and the flowers can be either yellow or white.

Habitat and Ecology: Uncommon on rocky, often calcareous, alpine tundra, solifluction lobes and often found in disturbed mining areas.

Comments: Circumpolar. Colorado and Wyoming occurrences represent disjunct populations from northern North America to Siberia. Considered state critically imperiled (S1) in both states.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Weber and Wittmann 2012



Cardamine breweri S. Watson

Brewer's bittercress

Brassicaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: CABR6

ITIS TSN: 22781

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 6,280–9,500 ft. (1,915–2,895 m)

Key Characteristics:

- ◆ Stems erect or decumbent, glabrous, 1.5–6 dm, glabrous; rhizomes slender
- ◆ Leaves all cauline, petiolate, 3–13 cm long x 2–4.5 cm wide, pinnately compound, 3–5 foliolate
- ◆ Terminal leaflet much larger than lateral ones
- ◆ Flowers white; pedicels (7) 10–20 cm long
- ◆ Fruits erect, siliques, linear; styles 0.2–1.2 mm long

Dicot Herbs

Steve Matson



USDA-NRCS Wetland Flora



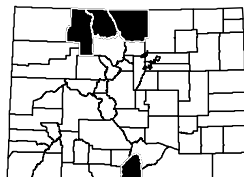
Similar Species: *C. cordifolia* [FACW, OBL], the more common bittercress, has simple leaves with toothed margins.

Habitat and Ecology: Uncommon along streams 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 conveys the mustard family's 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 to deter predators.

Animal and Bird Use: 

References: Ackerfield 2012, Fertig 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Cardamine cordifolia A. Gray

Heartleaf bittercress

Brassicaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: CACO6

ITIS TSN: 22789

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,000–14,310 ft. (1,830–4,360 m)

Key Characteristics:

- ◆ Stems erect or decumbent, 2–4 (8) dm tall, glabrous or densely puberulent with simple, spreading hairs
- ◆ Leaves cauline, petiolate, 1–6 (8) cm long x 2–7 cm wide, 1.5–5 (6) cm wide, 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

Steve Olson



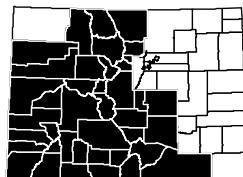
Similar Species: Other bittercresses have pinnately or ternately compound leaves. Superficially *C. cordifolia* resembles *Nasturtium officinale* (= *Rorippa nasturtium-aquaticum*) [OBL], a much shorter species with smaller flowers found commonly in wetlands and shallow waters across Colorado.

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's 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.

Animal and Bird Use: 

References: Ackerfield 2012, Fertig 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Cardamine pensylvanica Muhl. ex Willd.

Pennsylvania bittercress

Brassicaceae

Rebecca Radloff



Synonyms: None

USDA PLANTS Symbol: CAPE3

ITIS TSN: 22772

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S2?

C-Value: 9

Duration: Annual, Biennial, Perennial

CO Elevation: 5,000–10,500 ft. (1,525–3,200 m)

Key Characteristics:

- ◆ Stems erect or decumbent, 1.5–5 dm tall, sparsely hirsute with simple hairs; roots fibrous
- ◆ Basal leaves withering; cauline leaves pinnatifid, lobes pointing downward on stem
- ◆ Terminal leaflet usually much larger, bases not auriculate; petiole 1–3.5 cm
- ◆ Sepals oblong, 1.3–2.3 mm long; petals white, 2–3.5 (4) mm long; pedicels 3.5–10 mm
- ◆ Fruits erect, siliques, 1.6–3 cm long, linear; styles 0.6–1 mm long

Dicot Herbs

Rebecca Radloff



Jeanne R. Janish



Similar Species: *C. oligosperma* [CAOL, FAC, ITIS 22805] forms a basal rosette of leaves. *C. breweri* [FACW] has longer fruiting pedicels, (7) 10–20 mm long, with glabrous or sparsely pubescent stems.

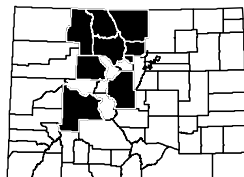
Habitat and Ecology: Uncommon in moist meadows, forests, along streams and lake margins.

Comments: In most mustards, the presence of sulfur and nitrogen containing glucosinolates (also known as mustard oil) helps reduce herbivory and imparts the family's 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.

Animal and Bird Use:



References: Ackerfield 2012, Fertig 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Eutrema penlandii Rollins

Penland's eutrema or Penland's mock wallflower

Brassicaceae

Scott Smith



Synonyms: *Eutrema edwardsii* R. Brown ssp. *penlandii* (Rollins) W. A. Weber

USDA PLANTS Symbol: EUPE10

ITIS TSN: 22952

Wetland Status AW: NI WM: OBL GP: NI

Native Status: Native

Conservation Status: G1G2 S1S2; Listed Threatened

C-Value: 9

Duration: Perennial

CO Elevation: 11,850–13,790 ft. (3,610–4,205 m)

Key Characteristics:

- ◆ Stems simple or few from caudex, 0.8–3 (4.5) dm tall, glabrous, often glaucous
- ◆ Cauline leaves cauline (0.7) 1–3 (4) cm long x 3–10 mm wide, bases cuneate; shortly petiolate or sessile
- ◆ Racemes elongated in fruit; fruiting pedicels (1.5) 3–10 (15) mm long; flowers small, white
- ◆ Sepals ovate, 1.5–3 mm long, margins membranous; petals spatulate, 3–5 mm long x 1.5–3 mm wide
- ◆ Siliques (0.7) 1–2 (2.5) cm x 2–3 mm, 4 prominent ribs, glabrous



Scott Smith



Yeom Wilson-Ramsey

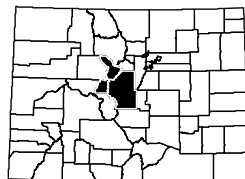
Similar Species: *Draba* spp. occur in similar habitats, but they will be distinguished by a dense rosette of basal leaves, hairs and siliques that are flattened at a right angle, without ribs.

Habitat and Ecology: Very rare, found on talus slopes, solifluction lobes, glaciated hills, grassy margins of streams, and wet areas of peat ridges in the Mosquito Range.

Comments: *E. penlandii* is endemic to Hoosier Pass along the Continental Divide. It is Listed Threatened, considered globally critically imperiled (G1G2). Weber and Wittmann (2012) and FNA (2010) recognize *E. edwardsii* as the accepted name.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Weber and Wittmann 2012



Lepidium latifolium L.

Broadleaved pepperweed

Brassicaceae

Jenn Foman Orth



Synonyms: *Cardaria latifolia* (L.) Spach

USDA PLANTS Symbol: LELA2

ITIS TSN: 503379

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Non-native, CO Noxious Weed List B

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,940–7,720 ft. (1,200–2,355 m)

Key Characteristics:

- ◆ Stems 4–15 dm tall, glabrous; from a vigorous colony-forming rhizomatous base
- ◆ Leaves petiolate, middle and upper leaves 4.5–13 cm long x 1.6–3 cm wide, sessile, usually serrate
- ◆ Basal leaves not pinnately lobed or pinnatifid
- ◆ Flowers white
- ◆ Siliques 2–3 mm long x 2–2.5 mm wide, broadly ovate; styles 0.05–0.1 long, lacking an apical notch

Dicot Herbs

Jenn Foman Orth



Jeanne R. Jamish



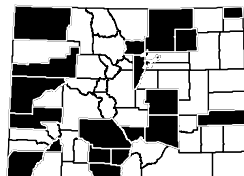
Similar Species: No other Colorado pepperweeds have the combination of no apical notch on fruits and entire basal leaves.

Habitat and Ecology: Found in disturbed areas, along ditches and roadsides and in grasslands.

Comments: Native to Europe and Asia. Leaves, shoots and fruits are edible. In most mustards, the presence of sulfur and nitrogen containing glucosinolates (also known as mustard oil) helps reduce herbivory and imparts the family's 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.

Animal and Bird Use: 

References: Ackerfield 2012, Holmgren et al. 2005, Weber and Wittmann 2012, Whitson et al. 1991



Rorippa curvipes Greene

Bluntleaf yellowcress

Brassicaceae

Aaron Schusteff



Synonyms: None

USDA PLANTS Symbol: ROCU2

ITIS TSN: 23000

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Annual, Perennial

CO Elevation: 4,700–13,170 ft. (1,435–4,015 m)

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, 2.5–8 mm long, rounded, constricted near middle; styles 0.5–0.7 mm long

Aaron Schusteff



Aaron Arthur



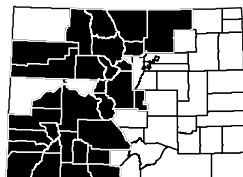
Similar Species: *R. palustris* [OBL] has erect, usually solitary stems that are densely hairy.

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's 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Rorippa palustris (L.) Besser

Bog yellowcress

Brassicaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: ROPA2

ITIS TSN: 23006

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Biennial, Perennial

CO Elevation: 5,000–11,250 ft. (1,525–3,430 m)

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 lobe larger; petioles auriculate and clasping stem
- ◆ 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



Barry Breckling

USDA-NRCS PLANTS Database Britton & Brown 1913



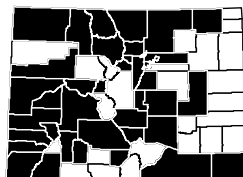
Similar Species: *R. sinuata* [FACW, FAC] is pubescent with oval, white and inflated hairs.

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's 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Rorippa sinuata (Nutt.) Hitchc.

Spreading yellowcress

Brassicaceae

Russ Kleinman



Synonyms: None

USDA PLANTS Symbol: ROSI2

ITIS TSN: 23014

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

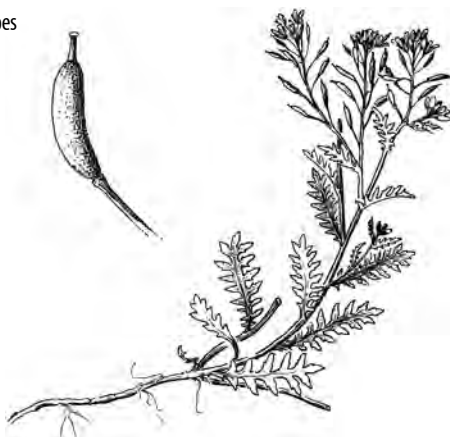
Duration: Perennial

CO Elevation: 3,470–9,500 ft. (1,060–2,895 m)

Key Characteristics:

- ◆ Stems prostrate to decumbent, 1–3 dm long, pubescent with white, inflated hairs
- ◆ Leaves all cauline, fleshy, lower ones short-petiolate, 3–8 cm long x 6–17 mm wide
- ◆ Blades deeply pinnatifid with rounded lobes, lobes entire or sometimes coarsely toothed
- ◆ Flowers yellow, petals 3–4.5 (5.5) mm long
- ◆ Siliques 4–7 mm long x 1.3–2.4 mm wide, curved upward, terete, glabrous; styles 0.6–2 mm long

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Jeanne R. Janish

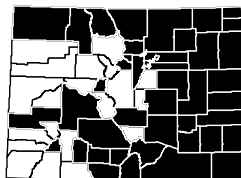
Similar Species: Other *Rorippa* spp. are glabrous or hirsute and lack the white inflated hairs.

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's 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Dicot Herbs

Rorippa sphaerocarpa (A. Gray) Britton

Roundfruit yellowcress

Brassicaceae

Max Licher



Synonyms: None

USDA PLANTS Symbol: ROSP4

ITIS TSN: 23015

Wetland Status AW: FACW WM: FAC GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Annual

CO Elevation: 5,490–10,140 ft. (1,675–3,090 m)

Key Characteristics:

- ◆ Stems single to many from the bases, decumbent to erect, 1–2 dm long; glabrous or sparingly hirsute
- ◆ Leaves 4–10 cm long x 13–32 mm wide, oblanceolate or oblong, petiolate
- ◆ Leaves deeply pinnatifid, terminal lobe larger than the lateral, upper cauline leaves auriculate
- ◆ Flowers yellow, petals 0.7–1 (1.3) mm long
- ◆ Siliques 1.5–2.5 mm long x 1.5–2.3 mm thick, globose to ovoid, terete; styles 0.2–0.5 mm long



USDA-NRCS PLANTS Database Britton & Brown 1913

Dicot Herbs

Max Licher



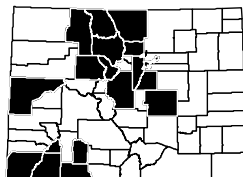
Similar Species: Only Colorado yellowcress with globose fruits.

Habitat and Ecology: Uncommon along shores of ponds, lakes, streams, ditches and moist places.

Comments: In most mustards, the presence of sulfur and nitrogen containing glucosinolates (also known as mustard oil) helps reduce herbivory and imparts the family's 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Rorippa sylvestris (L.) Besser

Creeping yellowcress

Brassicaceae

John Hilly



Synonyms: None

USDA PLANTS Symbol: ROSY

ITIS TSN: 23017

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Non-native

Conservation Status: G5 SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,800–4,800 ft. (1,465–1,465 m)

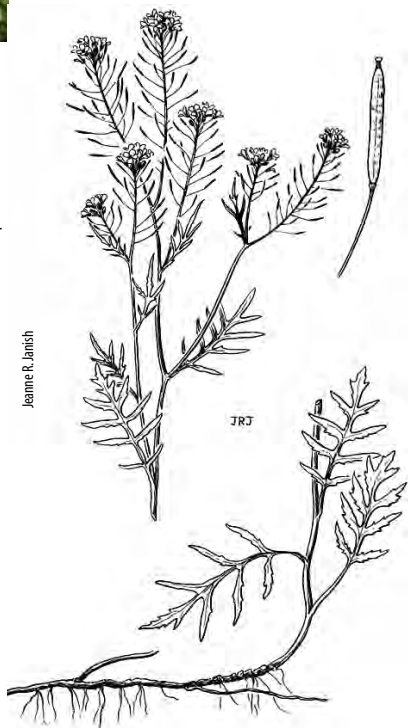
Key Characteristics:

- ◆ Stems 1 or several, branched, decumbent to ascending, sometimes erect, 1.5–6 dm long
- ◆ Leaves all cauline or basal rosette in first year plants, lower leaves 7–15 cm long
- ◆ Leaf blades 2–4 cm wide, pinnately lobed to pinnatifid, toothed, terminal lobe not much larger
- ◆ Flowers yellow, petals 2.8–6 mm long
- ◆ Siliques 5–13 mm long x 0.8–1 mm wide, linear, terete, slightly upcurved; styles 0.5–1.0 mm long

Biopix



Jeanne R. Janish



Dicot Herbs

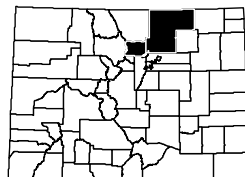
Similar Species: Other *Rorippa* spp. have lanceolate or globose fruits and much smaller petals, less than 10 mm long.

Habitat and Ecology: Uncommon weed in gardens and plantings.

Comments: Known only from Boulder and Weld Counties, expected elsewhere.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Holmgren et al. 2005, Weber and Wittmann 2012



Thellungiella salsuginea (Pall.) O.E. Schulz

Saltwater cress

Brassicaceae

eflora of China 2012



Synonyms: *Arabidopsis salsuginea* (Pall.) N. Busch, *Eutrema salsugineum* (Pallas) Al-Shehbaz & Warwick

USDA PLANTS Symbol: THSA

ITIS TSN: 23382

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G4G5 S1

C-Value: 10

Duration: Annual, Biennial, Perennial

CO Elevation: 8,400–9,200 ft. (2,560–2,805 m)

Key Characteristics:

- ◆ Stems simple or few to several from caudex, branched basally, (0.6) 1–3 (4) dm tall; glaucous
- ◆ Cauline leaves sessile; blades 0.4–1.7 (2.5) cm long x 1–7 (10) mm wide, bases deeply sagittate
- ◆ Racemes elongated in fruit; fruiting pedicels 3–10 mm, divaricate-ascending
- ◆ Sepals oblong, 1–1.5 mm long x 0.5–0.6 mm wide; petals obovate, 2–3 mm long x 1–1.7 mm wide
- ◆ Siliques sessile, linear, terete, distinctly twisted, 0.7–1.6 (2) cm long x (0.7) 0.8–1 mm wide

Dicot Herbs

eflora of China 2012



Karrie Darrow

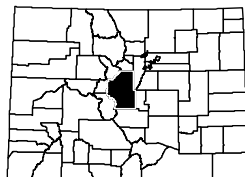
Similar Species: None.

Habitat and Ecology: Uncommon on alkaline ground and salty marshes around Antero Reservoir. In Colorado known only from Park County.

Comments: Ackerfield (2012) and FNA (2010) recognize *Eutrema salsugineum* as the accepted name. Global range is from Asia to Canada. Known from only a few other localities in North America. *T. salsuginea* genome has served as a useful tool to explore adaptive evolution in understanding how plants tolerate extreme abiotic conditions, such as alkaline soils.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Weber and Wittmann 2012



Thelypodium integrifolium (Nutt.) Endl. ex Walp.

Entireleaved thelypody

Brassicaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: THIN

ITIS TSN: 23398

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Biennial

CO Elevation: 4,720–8,500 ft. (1,440–2,590 m)

Key Characteristics:

- ◆ Stems paniculately branched, (2) 4.5–17 (28) dm tall, glaucous throughout, glabrous
- ◆ Cauline leaves sessile, tapering gradually, not sagittate
- ◆ Racemes elongated or sub-umbellate in fruit; central rachises (0.5) 1.2–10 (25) cm long
- ◆ Petals usually lavender to purple, rarely white, (4.5) 5.5–8 (10.5) mm long
- ◆ Siliques torulose, divaricate-ascending to ascending, straight or incurved, (1) 1.5–3 (4) cm long

Al Schneider



Al Schneider



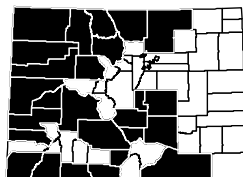
Similar Species: *T. sagittatum* [FACW] also occurs on alkaline flats, but has distinctive sagittate leaves.

Habitat and Ecology: Common on dry hillsides, in pinyon-juniper and sagebrush. Less common in wet meadows and near streams and seeps.

Comments: Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2010, Weber and Wittmann 2012



***Thelypodium sagittatum* (Nutt. ex Torr. & A. Gray) Endl. ex Walp.**
 Arrow or slender thelypody Brassicaceae

Denise Culver



Synonyms: None
USDA PLANTS Symbol: THSA2
ITIS TSN: 23410
Wetland Status AW: FACW WM: FACW GP: FACU
Native Status: Native
Conservation Status: G4 S1
C-Value: 7
Duration: Biennial, Perennial
CO Elevation: 5,000–9,600 ft. (1,525–2,925 m)

Key Characteristics:

- ◆ Stems branched, (2) 3–8 (12.5) dm tall, glaucous, glabrous or sparsely to densely pubescent
- ◆ Petals spatulate to oblanceolate, white or lavender to purple, (0.5) 1–3 (4) mm wide
- ◆ Cauline leaves sessile with sagittate, clasping bases
- ◆ Siliques torulose, (0.5) 0.8–1 (1.2) mm wide long
- ◆ Racemes dense; fruiting pedicels 5–11 (20) mm long

Dicot Herbs

Denise Culver



Steve Dewey



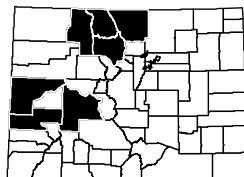
Similar Species: *T. paniculatum* [THPA6, NI, ITIS 23407] also has clasping, sagittate leaf bases, but the seeds are plump, not flattened, siliques are wider, 1.2–2.3 mm, and the petals are 2.5–5 mm wide.

Habitat and Ecology: Rare. Found along streams, in moist meadows and on alkaline flats.

Comments: Considered state critically imperiled (S1) in Colorado and state imperiled (S2) in Montana.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 2010, Weber and Wittmann 2012



Lobelia cardinalis L.

Cardinalflower

Campanulaceae

Thomas C. Barnes USDA-NRCS PLANTS Database



Synonyms: *Lobelia cardinalis* L. ssp. *graminea* (Lam.) McVaugh

USDA PLANTS Symbol: LOCA2

ITIS TSN: 34505

Wetland Status AW: OBL WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S2

C-Value: 7

Duration: Perennial

CO Elevation: 3,550–5,550 ft. (1,080–1,690 m)

Key Characteristics:

- ◆ Stems 4–12 dm tall; roots fibrous
- ◆ Leaves 6–13 cm long x 5–20 mm wide, sessile, serrate, upper becoming progressively smaller
- ◆ Inflorescence a raceme, densely flowered; flowers zygomorphic, solitary in leaf axils
- ◆ Sepals 6–12 mm long, ciliate, linear; corolla crimson, 23–33 mm long, lower lip 10–16 mm long
- ◆ Corolla lobes oblanceolate to ovate, deeply cleft, spreading, deflexed; fruits are capsules

Steve Olson



USDA-NRCS Wetland Flora

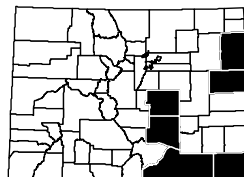
Similar Species: Colorado's only other *Lobelia* is *L. siphilitica* var. *ludoviciana*, which has blue flowers.

Habitat and Ecology: Uncommon in wet meadows, floodplains and seeps on the Eastern Slope.

Comments: Considered state imperiled (S2) in Colorado. Cardinalflower is a tall beautiful showy plant that is pollinated by hummingbirds. It also has many medicinal uses; roots were boiled to treat fever sores, upset stomach and cramps.

Animal and Bird Use: 

References: Ackerfield 2012, Anderson 2002, Cronquist et al. 1984, Weber and Wittmann 2012



Lobelia siphilitica L. var. *ludoviciana* A. DC.

Great blue lobelia

Campanulaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: LOSIL

ITIS TSN: 528853

Wetland Status AW: NI WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T5? SNR

C-Value: 7

Duration: Perennial

CO Elevation: 3,500–6,970 ft. (1,065–2,125 m)

Key Characteristics:

- ◆ Stems 3–10 dm tall with fibrous roots
- ◆ Leaves lanceolate, 2–15 cm long x 0.6–4.5 cm wide, reduced upward, apices acute, margins serrate
- ◆ Inflorescence a raceme, densely flowered; flowers zygomorphic, solitary in leaf axils
- ◆ Sepals bell-shaped, 8–20 mm long x 4–8 mm wide, glabrous, lobes often ciliate, linear
- ◆ Corolla deep blue and white striped in the throat, 1.5–3 cm long, lower lip deflexed



USDA-NRCS PLANTS Database Britton & Brown 1913

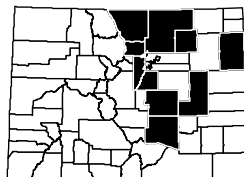
Similar Species: *L. cardinalis* has crimson red flowers.

Habitat and Ecology: Uncommon in wet meadows and along creeks and ditches.

Comments: Considered state critically imperiled (S1) in Wyoming. Pollinated by bees.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Cleome multicaulis DC.

Slender spiderflower

Capparaceae

Renée Bondeau



Synonyms: None

USDA PLANTS Symbol: CLMU

ITIS TSN: 22621

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G2G3 S2S3; BLM Sensitive

C-Value: 4

Duration: Annual

CO Elevation: 7,500–7,950 ft. (2,285–2,425 m)

Key Characteristics:

- ◆ Stems 2–7 dm tall, slender, erect with unbranched to sparingly branched stems
- ◆ Leaves sessile and palmately compound with 3 narrow leaflets, 1–2 cm long x less than 1.5 mm wide
- ◆ Petals 4, pink or pinkish-white, 4–6 mm long, borne on stalks in the axils of reduced leaves
- ◆ Stamens 6, equal in length to the petals
- ◆ Capsules 0.6–1.8 cm long, with a stalk-like base (gynophore) that droop at maturity; seeds globose

Steve O'Kane



Georgia Doyle



Similar Species: *C. serrulata* [CLSE, FAC, ITIS 22626] is more robust, with broader leaflets and larger fruits.

Habitat and Ecology: Uncommon to locally abundant in moist (not saturated), saline or alkaline soils along margins of ponds or wet meadows, playa lakes or dried lakebeds. In Colorado, known from the San Luis Valley.

Comments: *C. multicaulis* was proposed for listing under the Endangered Species Act in 1976. It was not listed, but remained a Category 2 candidate until the U.S. Fish and Wildlife Service terminated the program in 1996. It is considered globally imperiled (G2G3), state critically imperiled (S1) in Wyoming, Arizona and Texas, state imperiled (S2S3) in Colorado and is likely extirpated (SH) in New Mexico.

Animal and Bird Use: 

References: Ackerfield 2012, Fertig 2000, Weber and Wittmann 2012



Sagina saginoides (L.) Karst.

Arctic pearlwort

Caryophyllaceae (Alsinaceae)

Keir Morse



Synonyms: None

USDA PLANTS Symbol: SASA

ITIS TSN: 20035

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Biennial, Perennial

CO Elevation: 5,900–13,400 ft. (1,800–4,085 m)

Key Characteristics:

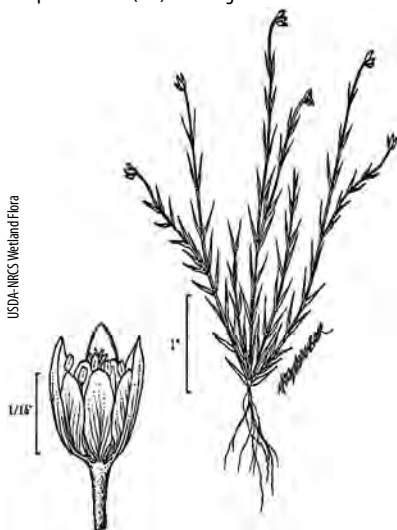
- ◆ Stems ascending or sometimes procumbent, tufted or becoming caespitose in alpine habitats, glabrous
- ◆ Leaves linear, 10–20 mm, not succulent, apices apiculate, glabrous, tufts of leaves in axils absent
- ◆ Petals 5, (1) 1.5–2 mm long, shorter than or equaling sepals; stamens 5 or 10
- ◆ Sepals elliptic, 2–2.5 mm, margins white hyaline, apices obtuse to rounded
- ◆ Capsules 2.5–3 (3.5) mm long

Dicot Herbs

Keir Morse



USDA-NRCS Wetland Flora



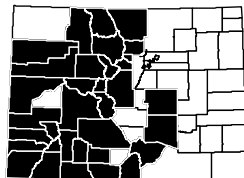
Similar Species: *S. caespitosa* (= *Spergella caespitosa*) [SACA10, NI, ITIS 521859] occurs in the alpine, but is densely caespitose, forming tight mats and the sepals are commonly purplish with scarious margins.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Silene uralensis (Rupr.) Bocquet

Apetalous catchfly

Caryophyllaceae

Alfred Cook



Synonyms: *Gastrolychnis apetata* (L.) Tolm. & Kozh ssp. *uralensis* (Rupr.) A. Löve & D. Löve, *Gastrolychnis uralensis* Rupr.

USDA PLANTS Symbol: SIUR

ITIS TSN: 20133

Wetland Status AW: FACW WM: FAC GP: NI

Native Status: Native

Conservation Status: G4 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 11,850–14,170 ft. (3,610–4,320 m)

Key Characteristics:

- ◆ Cespitose, stems simple, 5–30 cm, pubescent with purple-glandular hairs; taproots present
- ◆ Leaves basal, 1–5 cm long, glabrous or softly pubescent; cauline in 1–3 pairs; blades 0.5–2.5 cm long
- ◆ Inflorescence nodding, slender, single, terminal flowers, densely glandular-pubescent, slightly viscid
- ◆ Calyx inflated, papery; petals dusky purple, 6–10 mm wide in flower
- ◆ Corolla dingy pink to purple, longer than calyx; pedicels nodding

Alfred Cook



Alfred Cook



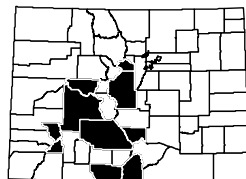
Similar Species: *S. hitchguirei* (= *S. uralensis* ssp. *montana*) [SIURM, UPL, ITIS 20136] occurs in similar habitats but the pedicels are erect in flower, sometimes spreading in fruit, calyx is not inflated and the petals are white or pink.

Habitat and Ecology: Uncommon in alpine tundra on unstable scree slopes.

Comments: The nearly closed flower with only slightly emerging petals and fully enclosed stamens, suggests a high level of self pollination, even though most other *Silene* spp. are insect pollinated.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Flora of Svalbard, Weber and Wittmann 2012



Spergularia maritima (All.) Chiov.

Media sandspurry

Caryophyllaceae (Alsinaceae)

Isidro Martinez



Synonyms: *Spergularia media* (L.) C. Presl ex Griseb.

USDA PLANTS Symbol: SPMA10

ITIS TSN: 505308

Wetland Status AW: FACW WM: FAC GP: FACU

Native Status: Non-native

Conservation Status: GNR SNR

C-Value: 0

Duration: Annual, Perennial

CO Elevation: 4,750–5,970 ft. (1,450–1,820 m)

Key Characteristics:

- ◆ Stems 5–40 cm long, erect or prostrate, robust
- ◆ Leaves linear-filiform, over 6 times as long as stipules, 10–50 mm long, often fascicled in axils
- ◆ Leaf stipules 2–6 mm long, deltoid, often short-acuminate; flower bracts foliaceous
- ◆ Sepals 3–6 mm long, ovate; petals as long or shorter than sepals, white to light rose; stamens 9–10
- ◆ Capsules 5.5–7 mm long; seeds smooth, usually with a conspicuous winged margin

Dicot Herbs

Isidro Martinez



Luigi Riganese



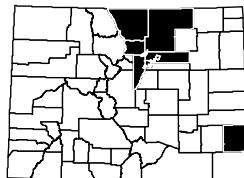
Similar Species: *Spergularia rubra* [SPRU, FACU, ITIS 20153] leaves are 2–3 times as long as stipules and the flowers are pink with wingless seeds.

Habitat and Ecology: Uncommon in disturbed pastures, on dry salt flats and in alkaline soils.

Comments: *S. maritima* is considered one of the 'highway halophytes' that have spread along highways that are heavily salted during the winter. The primary pollinators are likely bees or ants that are attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Harrington 1964, Weber and Wittmann 2012



Spergularia salina J. Presl & C. Presl

Salt sandspurry

Caryophyllaceae (Alsinaceae)

A.S. Kers



Synonyms: *Spergularia marina* (L.) Griseb.

USDA PLANTS Symbol: SPSA5

ITIS TSN: 507251

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Annual, Biennial, Perennial

CO Elevation: 5,000–9,200 ft. (1,525–2,805 m)

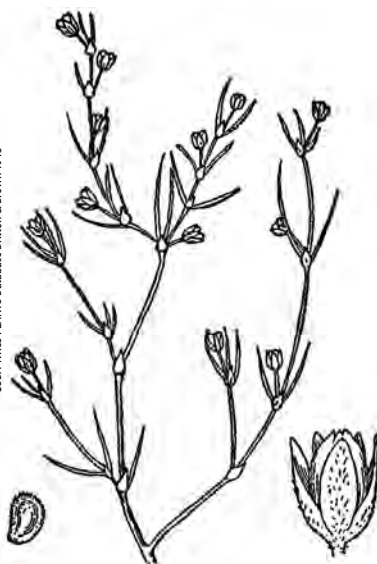
Key Characteristics:

- ◆ Stems erect or prostrate, usually much-branched, 8–25 (30) cm, densely glandular-pubescent
- ◆ Leaf stipules inconspicuous, leaf blades linear, 1.5–4 cm long, fleshy
- ◆ Flowers in a cyme or solitary, axillary; pedicels reflexed and oriented to one side in fruit
- ◆ Sepals connate, 2.5–4.5 (4.8) mm long, lobes often 3–veined, ovate to elliptic
- ◆ Petals white or pink to rosy, 0.8–1 times as long as sepals; stamens 2–3 (5); styles 0.4–0.7 mm

A.S. Kers



USDA-NRCS PLANTS Database Britton & Brown 1913



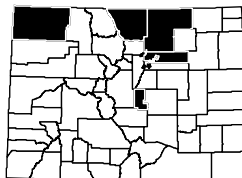
Similar Species: Other *Spergularia* spp. have glabrous leaves with glandular pubescence only on the inflorescence.

Habitat and Ecology: Uncommon in disturbed pastures, sandy soil along rivers and on alkaline soil.

Comments: *S. salina* is considered one of the 'highway halophytes' that have spread along highways that are heavily salted during the winter. The primary pollinators are likely bees or ants that are attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Stellaria borealis Bigelow

Boreal starwort

Caryophyllaceae (Alsinaceae)

Keir Morse



Synonyms: None

USDA PLANTS Symbol: STB03

ITIS TSN: 505357

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 7,100–10,640 ft. (2,165–3,245 m)

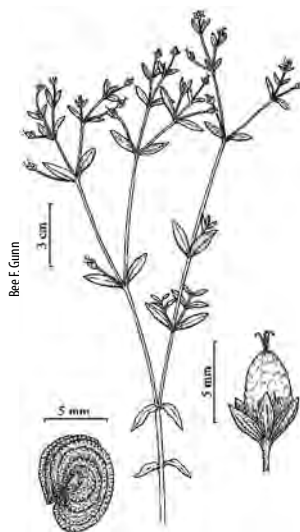
Key Characteristics:

- ◆ Stems prostrate to ascending, matted, sharply 4-angled, 25–50 cm tall, glabrous to finely papillate
- ◆ Leaves sessile, usually 2–3 cm long, margins sometimes ciliate towards bases, apices acute
- ◆ Inflorescences with flowers solitary, terminal and axillary, or in terminal, lax, leafy cymes
- ◆ Sepals 5, 2–5 mm long, 1–3 veined, midvein extending to near apices, lateral veins visible only at bases

- ◆ Petals 5, white, 1–3 mm long; stamens 5; styles 3, 0.9–1.6 mm; capsules broadly ovate, green or tan

Dicot Herbs

Mel Harte



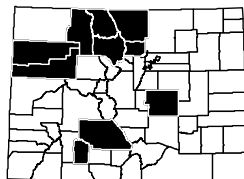
Similar Species: *S. calycantha* [FACW] also has flowers that are in solitary and terminal cymes but the mature capsules are dark purple, the sepals are shorter, 2–2.5 mm long and usually obscurely 1-veined.

Habitat and Ecology: Uncommon along streams, rocky slopes, and willow thickets.

Comments: Considered state vulnerable (S3) in Wyoming. The primary pollinators are likely bees, attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Stellaria calycantha (Ledeb.) Bong.

Northern starwort

Caryophyllaceae (Alsinaceae)

Jason Hollinger



Synonyms: None

USDA PLANTS Symbol: STCA

ITIS TSN: 20175

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Annual, Perennial

CO Elevation: 8,000–12,570 ft. (2,440–3,830 m)

Key Characteristics:

- ◆ Stems erect or trailing, branched, 4-angled, weak, to 25 cm, forming clumps from slender rhizomes
- ◆ Leaves sessile, ovate to elliptic, 5–25 mm long, bases round, margins entire, apices acute, ciliate
- ◆ Inflorescence a terminal, 1- to 5-flowered cyme; bracts foliaceous; pedicels ascending, not reflexed
- ◆ Sepals 5, obscurely veined, ovate, 2–2.5 mm; petals absent or shorter than sepal; styles 3, curved
- ◆ Mature capsules dark purple, globose, 3–5 mm long

Michael Charters



Paul Slichter



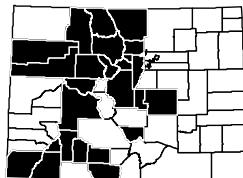
Similar Species: *S. borealis* [FACW] has mature capsules that are green or tan, the sepals are prominently 1–3 veined and leaves are usually lanceolate or linear-lanceolate.

Habitat and Ecology: Uncommon in fens, willow thickets, along lake shores and on shady, moist slopes.

Comments: Considered state vulnerable (S3) in Wyoming. The primary pollinators are likely bees, attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Stellaria crassifolia Ehrh. Fleshy starwort

Caryophyllaceae (Alsinaceae)

Biopix



Synonyms: None

USDA PLANTS Symbol: STCR

ITIS TSN: 20164

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 8,000–11,700 ft. (2,440–3,565 m)

Key Characteristics:

- ◆ Stems diffusely branched, 4-angled, 3–30 cm tall, forming mats from slender rhizomes
- ◆ Leaves sessile, obscure midribs, 0.2–0.8 cm long, succulent; blades in terminal buds becoming fleshy
- ◆ Inflorescence usually solitary, terminal, in axils of distal leaves forming open, diffuse cymes
- ◆ Sepals 5, 3-veined, 3–3.5 mm, margins straight, narrow, apices acute, glabrous or rarely pubescent
- ◆ Petals 5, 2.5–5 mm, conspicuous, pointed, equaling to slightly longer than sepals; stamens 5 or 10

Dicot Herbs

Biopix



Jean L. Pawelek



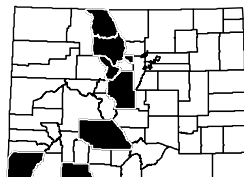
Similar Species: *S. crassifolia* is distinctive from other starworts by forming fleshy terminal buds or propagules that survive under the snow and are readily dispersed in the spring runoff.

Habitat and Ecology: Uncommon in meadows, along streams and in moist places.

Comments: Considered state critically imperiled (S1) in Utah and Montana and state imperiled (S2) in Wyoming. The primary pollinators are likely bees, attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Stellaria longifolia Muhl. ex Willd.

Longleaf starwort

Caryophyllaceae (Alsinaceae)

Max Lohr



Synonyms: None

USDA PLANTS Symbol: STLO

ITIS TSN: 20185

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

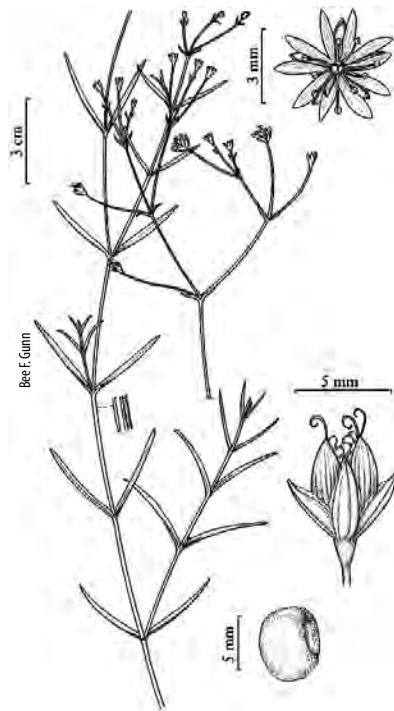
Duration: Perennial

CO Elevation: 5,940–11,900 ft. (1,810–3,625 m)

Key Characteristics:

- ◆ Stems erect or branched, 4-angled, 10–35 cm, glabrous, angles with minutely warty projections
- ◆ Leaves sessile; blades yellowish-green, 0.8–4 cm long x 1–3 mm wide
- ◆ Inflorescence 2- to many-flowered, 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

Al Schneider



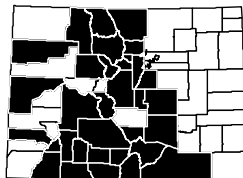
Similar Species: Usually *S. longifolia* has conspicuous petals, but sometimes the petals can be shorter than sepals, confusing it with *S. umbellata* [FACW], which does not have roughened or scabrous stem angles.

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

Comments: Considered state imperiled (S2) in Utah and state vulnerable (S3) in Wyoming. The primary pollinators are likely bees, attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Stellaria longipes Goldie

Longstalk starwort

Caryophyllaceae (Alsinaceae)

Keir Morse



Synonyms: None

USDA PLANTS Symbol: STLQ2

ITIS TSN: 20168

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

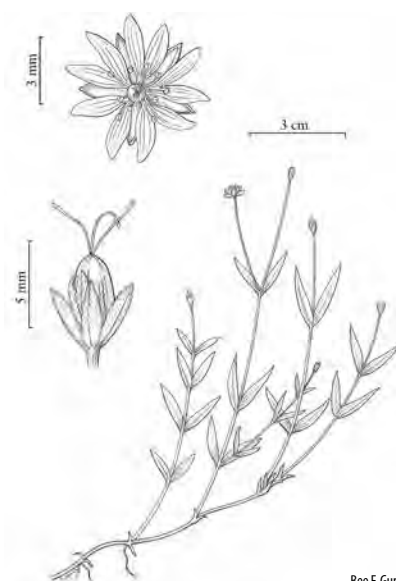
CO Elevation: 5,300–14,310 ft. (1,615–4,360 m)

Key Characteristics:

- Stems erect, 4-angled, 3–32 cm tall, forming small to large clumps or mats, from slender rhizomes
- Leaves 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-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



Keir Morse



Bee F. Gunn

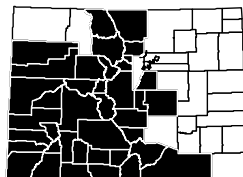
Similar Species: *S. graminea* [STGR, FACU, ITIS 20181] also has leaves with prominent midribs and sepals that are 3-veined, but is a weedy plant found in drier area, at elevations below 6,000 ft.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Stellaria obtusa Engelm.

Rocky Mountain chickweed

Caryophyllaceae (Alsinaceae)

Tanya Harvey



Synonyms: None

USDA PLANTS Symbol: STOB

ITIS TSN: 20190

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,300–10,100 ft. (2,530–3,080 m)

Key Characteristics:

- ◆ Stems prostrate, 4-angled, 3–23 cm, glabrous, creeping, often matted but not forming cushions
- ◆ Leaves sessile or short-petiolate, 0.2–1.2 cm long x 0.9–7 mm wide, glabrous or ciliate near bases
- ◆ Inflorescence of solitary flowers, axillary; bracts absent
- ◆ Sepals 4 (5), veins obscure, midribs sometimes apparent, 1.5–3.5 mm; petals absent
- ◆ Stamens 10 or fewer; styles 3 (4), curled, shorter than 0.5 mm

Tanya Harvey



Dean Wm. Taylor



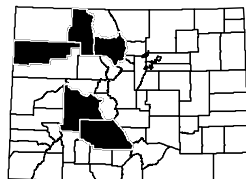
Similar Species: Other related *Stellaria* spp. have linear leaves and 5 sepals.

Habitat and Ecology: Uncommon in spruce-fir and aspen forests and along streams.

Comments: Considered state imperiled (S2) in Utah and Wyoming. The primary pollinators are likely bees or ants that are attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Stellaria umbellata Turcz. ex Kar. & Kir.

Umbrella starwort

Caryophyllaceae (Alsinaceae)

Richard Scully



Synonyms: None

USDA PLANTS Symbol: STUM

ITIS TSN: 20197

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 7,000–14,310 ft. (2,135–4,360 m)

Key Characteristics:

- ◆ Stems erect, 4-angled, 5–20 cm, glabrous, forming small clumps or mats
- ◆ Leaf bases clasping, connate around stems, ciliate, 3–9 cm long x 1–3 mm wide, succulent
- ◆ Inflorescence terminal, 2- to 21-flowered, subumbellate, often with 1 or 2 axillary flowers below
- ◆ Sepals 5, 3-veined, lanceolate, 2.5–3 mm, margins narrow, apices obtuse, glabrous; petals absent
- ◆ Seeds brownish, round, 0.5–0.7 mm wide, shallowly rugose

Dicot Herbs

Richard Scully



Al Schneider



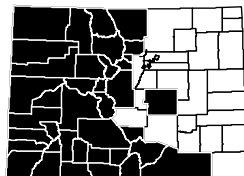
Similar Species: *S. irrigua* [STIR, NI, ITIS 20183] has similar leaves and inflorescence but petals are present and the plant is strongly purplish-tinged throughout. *S. longifolia* [FACW] has conspicuous petals, that are shorter than the sepals.

Habitat and Ecology: *S. umbellata* is one of the most common starworts encountered along Colorado's streams, in moist forests and in alpine tundra.

Comments: The primary pollinators are likely bees or ants that are attracted by nectar.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Atriplex patula L.

Spear saltbush

Chenopodiaceae (Amaranthaceae)

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: ATPA4

ITIS TSN: 20509

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Non-native

Conservation Status: G5 SNA

C-Value: 0

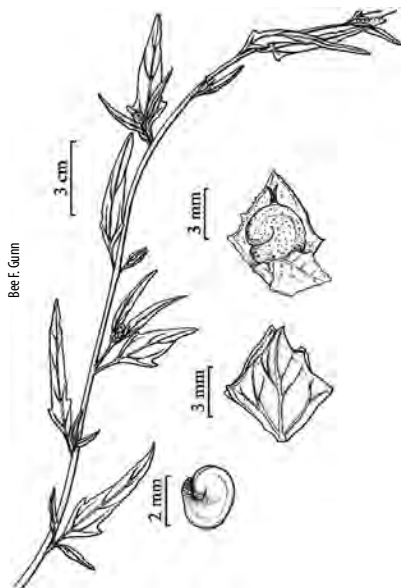
Duration: Annual

CO Elevation: 4,960–8,400 ft. (1,510–2,560 m)

Key Characteristics:

- ◆ Stems (1.5) 3–9 (15) dm tall, erect and branched, branches green, obtusely angled or striate
- ◆ Leaves green above and below, thin
- ◆ Flowers are compact, in interrupted spiciform or paniculiform clusters
- ◆ Fruiting bracts united to just below the middle, rhombic with wedge-shaped bases
- ◆ Seeds of 2 kinds, brown or black, 1–2 mm wide

Matt Lavin



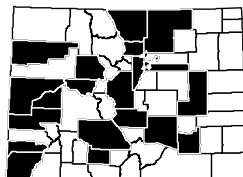
Similar Species: *A. subspicata* [ATSU2, NI, ITIS 192285] also has rhombic fruits that are united to the middle. These two species can be difficult to separate. Ackerfield (2012) notes they do not appear to be distinct species.

Habitat and Ecology: Weedy plants found in gardens, fields and other disturbed places.

Comments: *Atriplex* spp. are able to grow on soils with high levels of selenium. These plants accumulate selenium in their cells and will cause death if eaten in large enough quantities.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Knight and Walter 2001, Weber and Wittmann 2012



***Bassia hyssopifolia* (Pall.) Kuntz**

Fivehorn smotherweed

Chenopodiaceae (Amaranthaceae)

Steve Matson

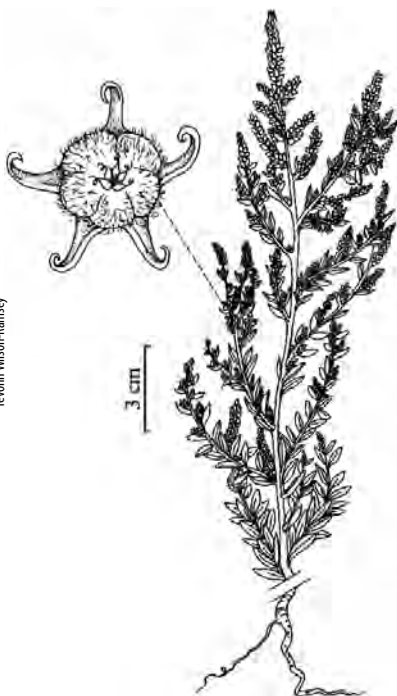
**Key Characteristics:**

- ◆ Stems 0.5–10 dm tall, hirsute or villous hairs
- ◆ Leaves alternate, glabrous, sessile or subsessile, lanceolate or linear, margins entire
- ◆ Flowers perfect or pistillate in glomerules in spikes
- ◆ Sepals 5, pubescent with curved, hooked spines at maturity
- ◆ Achenes flattened, enclosed by membranous calyx

Steve Matson



Yevonn Wilson-Ramsey



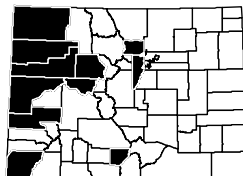
Similar Species: *Bassia scoparia* (= *Kochia scoparia*) [BASC5, FAC, ITIS 565741], the very common weed, has a hairy fruiting perianth and leaves that are hairy when young, becoming glabrous.

Habitat and Ecology: Weedy plant found in disturbed places, irrigation ditches, along borders of drying alkaline ponds and along roadsides.

Comments: *B. hyssopifolia* contains oxalates that will cause kidney failure if eaten in large quantities.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Weber and Wittmann 2012



Chenopodium chenopodioides (L.) Aellen

Low goosefoot

Chenopodiaceae (Amaranthaceae)

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Synonyms: *Chenopodium rubrum* L. var. *glomeratum* Wallr

USDA PLANTS Symbol: CHCH

ITIS TSN: 20602

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: GNR SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 7,000–10,000 ft. (2,135–3,050 m)

Key Characteristics:

- ◆ Stems erect to prostrate, much-branched, 0.1–3.5 dm tall, glabrous; red overall color
- ◆ Leaf blades deltate, 0.8–6 cm long x 0.2–3.5 cm wide, bases cuneate, margins entire or dentate
- ◆ Inflorescence a spike, glomerules sessile, subglobose, 3–4 mm across; bracts 0.2–1.5 cm
- ◆ Perianth segments 3, fused to apices into 0.5–0.8 mm tubes; glabrous, green and covering fruit
- ◆ Utricles ovoid, pericarps non-adherent, reticulate-punctate; seeds 0.6–0.9 mm across, black, smooth

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Similar Species: *C. rubrum* [FACW, OBL] sepals are free to the base not fused. Other common goosefoots that have Wetland Indicator Status of FAC or FACU and commonly occur in wetlands include; *C. berlandieri* [CHBE4, NI, ITIS 20594] and *C. album* [CHAL7, FACU, ITIS 20592]. Both have leaves that are linear, not triangular, and leaves and sepals that are farinose, not glabrous.

Habitat and Ecology: Uncommon in moist or disturbed places along borders of lakes and ponds, known only from southwestern Colorado.

Comments: *Chenopodium* spp. contain oxalates that will cause kidney failure if eaten in large quantities.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Knight and Walter 2001, Weber and Wittmann 2012



Chenopodium rubrum L.

Red goosefoot

Chenopodiaceae (Amaranthaceae)

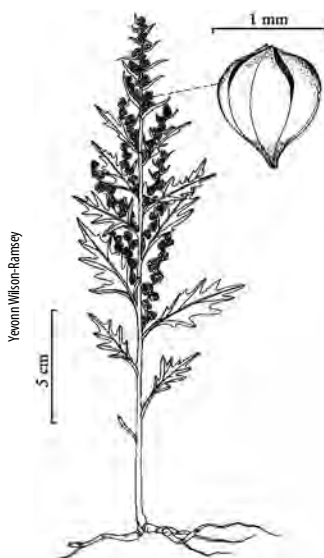
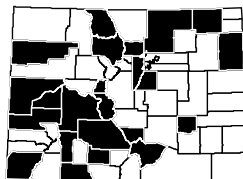


Key Characteristics:

- ◆ Stems erect to ascending or prostrate, much-branched, 0.1–6 (8) dm tall, glabrous
- ◆ Leaves green, glabrous or only slightly farinose beneath
- ◆ Inflorescence of lateral glomerules, sessile on numerous axillary and terminal spikes
- ◆ Perianth segments 3 or 4, usually free at bases, apices broadly acute to rounded

**Synonyms:** None**USDA PLANTS Symbol:** CHRU**ITIS TSN:** 20630**Wetland Status** AW: FACW WM: FACW GP: OBL**Native Status:** Native**Conservation Status:** G5 SNR**C-Value:** 2**Duration:** Annual**CO Elevation:** 3,900–10,600 ft. (1,190–3,230 m)

- ◆ Fruits are ovoid, reticulate-punctate, seeds 0.6–1 (.2) mm across, reddish-brown, smooth

**Similar Species:** *C. chenopodioides* [FACW, FAC] is distinguished from *C. rubrum* by the fused sepals.**Habitat and Ecology:** Uncommon in moist or disturbed places, usually in alkaline or saline soil.**Comments:** *Chenopodium* spp. contain oxalates that will cause kidney failure if eaten in large quantities. The North American range is throughout the western and midwestern portion of North America. Considered state vulnerable (S3) in Wyoming.**Animal and Bird Use:****References:** Ackerfield 2012, Flora of North America 2003, Knight and Walter 2001, Weber and Wittmann 2012

Salicornia rubra A. Nelson Red swampfire

Chenopodiaceae (Amaranthaceae)

Denise Culver



Synonyms: *Salicornia europaea* L. ssp. *rubra* (A. Nelson) Breitung

USDA PLANTS Symbol: SARU

ITIS TSN: 20651

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Annual

CO Elevation: 5,500–9,000 ft. (1,675–2,745 m)

Key Characteristics:

- ◆ Stems succulent, green with red or purple bases, becoming completely red at maturity
- ◆ Leaves simple, opposite, reduced, scale-like, glabrous
- ◆ Inflorescences consists of spikes, terminal on each stem, jointed
- ◆ Fertile segments (joints) consists of 2 axillary, opposite, usually 3-flowered cymes embedded in stem
- ◆ Anthers commonly not exerted, (0.2) 0.3–0.4 mm long

Robert Shrivski



Trent M. Draper



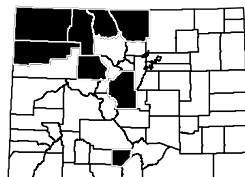
Similar Species: None.

Habitat and Ecology: Found on margins of drying alkaline ponds, playas and in alkaline soil of wet meadows.

Comments: *S. rubra* is considered a halophyte, a plant that is tolerant of soils and water with a high salinity. The global range of *S. rubra* extends throughout western North America, but because of its specialized habitat its distribution is local and sporadic. It is considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Weber and Wittmann 2012



Suaeda calceoliformis (Hook.) Moq.

Pursh seepweed

Chenopodiaceae (Amaranthaceae)

George W. Harwell



Synonyms: *Suaeda depressa* (Pursh) S. Watson var. *erecta* S. Watson, *Suaeda occidentalis* (S. Watson) S. Watson

USDA PLANTS Symbol: SUCA2

ITIS TSN: 505402

Wetland Status AW: FACW **WM:** FACW **GP:** FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Annual, Perennial

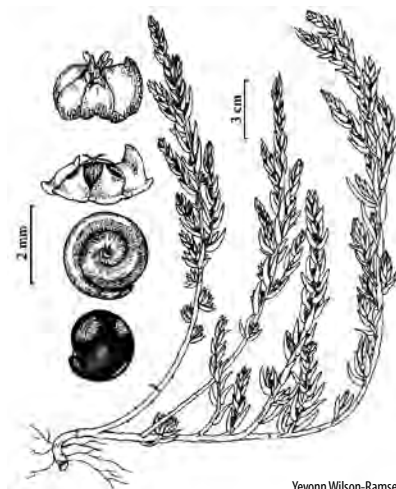
CO Elevation: 4,720–8,450 ft. (1,440–2,575 m)

Key Characteristics:

- ◆ Stems decumbent to erect, green to dark red, usually striped, 0.5–8 (10) dm tall, glaucous
- ◆ Leaves tightly ascending; blades linear-lanceolate, upper surfaces flat, (5) 10–40 mm long
- ◆ Glomerules crowded in 1–6 cm long, compound spikes, 3- to 5 (7)-flowered; bracts leaf-like
- ◆ Perianth irregular shape (1–3 segments larger), fleshy conical outgrowth on back of perianth is horned
- ◆ Seeds lenticular, black, shiny

Dicot Herbs

George W. Harwell



Yvonn Wilson-Ramsey

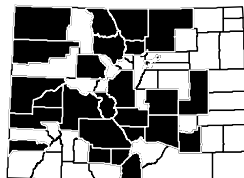
Similar Species: *S. moquinii* (= *S. nigra*) [OBL] is a perennial from a woody caudex with a perianth that is radially symmetrical and all segments equal, not keeled.

Habitat and Ecology: Found on alkaline or saline flats, along the margins of lakes or drying ponds.

Comments: *S. calceoliformis* is considered a halophyte, a plant that is tolerant of soils and water with high salinity. Common throughout alkaline wetlands in North America.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Weber and Wittmann 2012



Suaeda moquinii (Torr.) Greene

Mojava seablite

Chenopodiaceae (Amaranthaceae)

Max Licher



Synonyms: *Suaeda nigra* (Rafinesque) J.F. Macbride, *Suaeda torreyana* S. Watson

USDA PLANTS Symbol: SUMO

ITIS TSN: 505404

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 4,300–8,900 ft. (1,310–2,715 m)

Key Characteristics:

- ◆ Stems spreading or erect, branched, green to red; woody stems brown to gray-brown
- ◆ Leaves sessile, glaucous, (5) 10–30 mm long x 1–2 mm wide, glabrous or loosely hairy
- ◆ Perianth radially symmetrical, all segments are equal, not keeled on back, lacking wings at bases
- ◆ Bracts usually narrowed at base; ovaries vase-shaped
- ◆ Seeds variable in size and color, 0.5–2 mm long, black or brown

Max Licher



Steve Watson



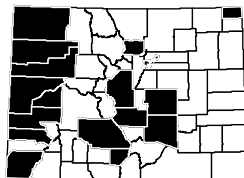
Similar Species: *S. calceoliformis* [FACW] is an annual with an irregular perianth, segments that are keeled on the back, and horned or hooded at the tips.

Habitat and Ecology: Found on alkaline or saline flats and dry hillsides.

Comments: FNA (2003), Ackerfield (2012) and Weber and Wittmann (2012) recognize *Suaeda nigra* as the accepted name, not *S. moquinii*. It is considered a halophyte, a plant that is tolerant of soils and water with high salinity.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Weber and Wittmann 2012



Suckleya suckleyana (Torr.) Rydb.

Poison suckleya

Chenopodiaceae (Amaranthaceae)

Hank Jorgensen



Synonyms: None

USDA PLANTS Symbol: SUSU2

ITIS TSN: 505406

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

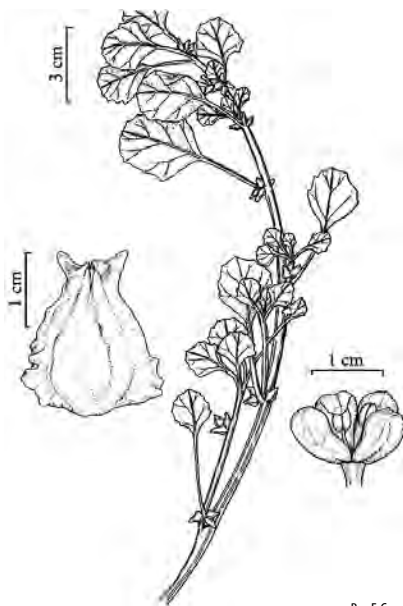
C-Value: 4

Duration: Annual

CO Elevation: 3,550–8,380 ft. (1,080–2,555 m)

Key Characteristics:

- ◆ Stems stout, purplish-red, prostrate, 5–30 cm tall
- ◆ Leaves 1–3 cm long x 0.5–2 cm wide, fleshy, triangular, acute teeth; flowers inconspicuous in leaf axils
- ◆ Staminate flowers with 4 perianth lobes, 2 segments longer than others
- ◆ Pistillate flowers with 4 marginal fused perianth lobes; stigmas 2
- ◆ Fruits are reddish-brown, enclosed by 2 papery, dark brown scales joined at tips



Bee F. Gunn

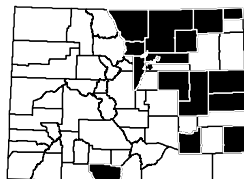
Similar Species: None.

Habitat and Ecology: Found along margins of lakes and ponds, in dried lake bottoms and dry beds of seasonal pools and in pastures. Primarily found on the Eastern Slope.

Comments: *S. suckleyana* contains cyanogenic glycosides that can produce hydrogen cyanide. When chewed or crushed, the glycosides become cyanide. The global range for *S. suckleyana* is Alberta and Saskatchewan south to Texas. Considered state critically rare (S1) in Montana and state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2003, Knight and Walter 2001, Weber and Wittmann 2012



Hypericum majus (A. Gray) Britton

Large St. Johnswort

Clusiaceae (Hypericaceae)

Corey Raimond



Synonyms: None

USDA PLANTS Symbol: HYMA2

ITIS TSN: 21446

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: GS SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,000–7,600 ft. (1,525–2,315 m)

Key Characteristics:

- ◆ Stems erect, 5 (7) cm tall; rhizomatous
- ◆ Leaves opposite, gland-dotted, 1–4 cm long x 1 cm wide
- ◆ Inflorescence a flat-topped, leafless cyme
- ◆ Sepals 5; petals 5, 4–7 mm long, not black gland-dotted along margins, stamens 15–35
- ◆ Capsule ovoid, purplish, 3–7 mm long, included or barely exceeding the sepals

Steve Olson



USDA-NRCS PLANTS Database Britton & Brown 1913

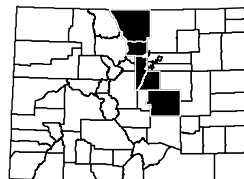
Similar Species: *H. perforatum* [HYPE, NI, ITIS 21454], an introduced weed, has linear to lanceolate leaves, the plants are often branched above and found in dry rocky meadows, along roadsides and streams. *H. scouleri* [FACW] has oval or elliptic leaves, petals with black gland-dotted margins and stems that are branched.

Habitat and Ecology: Uncommon along the margins of ponds or on floodplains.

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 usually result in death, but animals lose weight and develop skin irritation when exposed to sunlight.

Animal and Bird Use: 

References: Ackerfield 2012, Knight and Walter 2001, Weber and Witmann 2012, Whitson et al. 1991



Hypericum scouleri Hook.

Scouler's St. Johnswort

Clusiaceae (Hypericaceae)

Al Schneider



Synonyms: *Hypericum formosum* Kunth

USDA PLANTS Symbol: HYSC5

ITIS TSN: 503143

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,000–10,370 ft. (1,525–3,160 m)

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
- ◆ 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

Dicot Herbs

Al Schneider



Patrick Alexander USDA-NRCS PLANTS Database



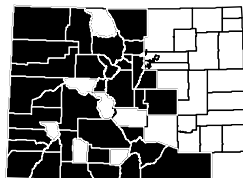
Similar Species: *H. perforatum* [HYPE, NI, ITIS 21454], an introduced weed, has linear to lanceolate leaves, plants are often branched above and found in dry rocky meadows, along roadsides and streams. *H. majus* [FACW] does not have black gland-dotted sepal margins.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Knight and Walter 2001, Weber and Witmann 2012, Whitson et al. 1991



Rhodiola rhodantha (A. Gray) H. Jacobsen

Redpod stonecrop

Crassulaceae

Steve Olson



Synonyms: *Clementsia rhodantha* (A. Gray) Rose,
Sedum rhodanthum A. Gray

USDA PLANTS Symbol: RHRH4

ITIS TSN: 565455

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

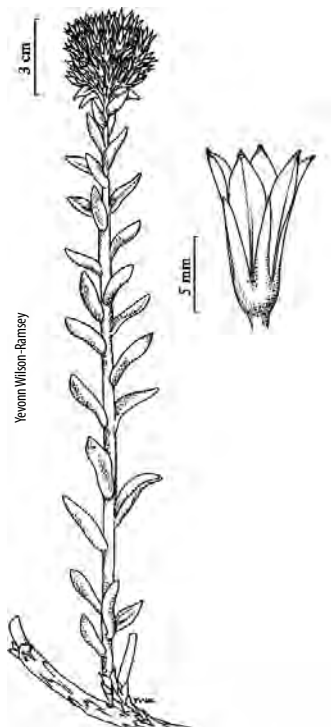
Duration: Perennial

CO Elevation: 8,000–14,420 ft. (2,440–4,395 m)

Key Characteristics:

- ◆ Stems erect or decumbent, 0.3–6 dm tall, commonly branching to form clumps, fleshy
- ◆ 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

Al Schneider



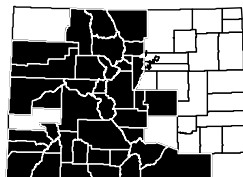
Similar Species: *R. integrifolia* [RHIN11, NI, ITIS 5200043] has crimson-red petals and flowers are in a flat-topped cluster.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Huggins 2008, Schneider 2012, Weber and Wittmann 2012



Drosera anglica Huds. English sundew

Droseraceae

Sara Brinton



Synonyms: *Drosera longifolia* L.

USDA PLANTS Symbol: DRAN

ITIS TSN: 22018

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G5 S1; USFS Sensitive

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,500–8,550 ft. (2,590–2,605 m)

Key Characteristics:

- ◆ Stems none; carnivorous, leaf upper surfaces and margins bearing gland-tipped, sticky hairs
- ◆ Leaves in a basal rosette, spreading to erect; blades 15–35 mm long x 2–7 mm wide
- ◆ Peduncles 1, 6–25 cm long bearing several flowers

◆ Calyx 4–6 mm; corolla, 4–5, white; styles 2-lobed

◆ Seeds 1–1.5 mm, longitudinally striate-netted



Sara Brinton

USDA-NRCS PLANTS Database Brinton & Brown 1913



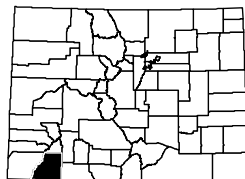
Similar Species: *D. rotundifolia* [OBL] has much shorter, rounder leaves and flowers are pink or white.

Habitat and Ecology: Uncommon in lower pH or acidic fens. In Colorado known only from southwest Colorado. Closest known populations are in Grand Teton and Yellowstone National Park.

Comments: The leaf blades are covered with stalked mucilaginous glands. Prey are lured to the traps by the plants brilliant reddish coloration, which is a result of a high concentration of the pigment plumbagin in petioles and glandular hairs. Once triggered by insect movement, the prey is trapped within the folded blade. Sessile glands then secrete digestive enzymes. Circumpolar. Considered state critically imperiled (S1) in Colorado, state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Hickman 1993, Swales 1975, Weber and Wittmann 2012



Drosera rotundifolia L.

Roundleaf sundew

Droseraceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: DRRRO

ITIS TSN: 22017

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 8,860–9,600 ft. (2,700–2,925 m)

Key Characteristics:

- ◆ Stems none; carnivorous, gland-tipped, sticky hairs on upperside of leaf blades
- ◆ Leaves in a basal rosette, spreading to erect, orbicular, 4–12 mm long; petioles 1.3–5.0 cm long
- ◆ Inflorescence a cyme or raceme-like, 1–few flowers; peduncles 5–25 cm tall, glabrous
- ◆ Calyx 4–6 mm, fused at bases; corolla white to pink, radial, 5 petals; styles 2-lobed to base
- ◆ Seeds spindle-shaped, 1–1.5 mm

Denise Culver



Robin Conrath



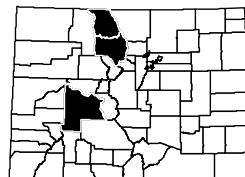
Similar Species: *D. anglica* [OBL] has white flowers and long narrow leaves.

Habitat and Ecology: Uncommon in acidic fens and floating peat mats in mountains.

Comments: The leaf blades are covered with stalked mucilaginous glands. Prey are lured to the traps by the plants brilliant reddish coloration, which is a result of a high concentration of the pigment plumbagin in petioles and glandular hairs. Once triggered by insect movement, the prey is trapped within the folded blade. Sessile glands then secrete digestive enzymes. Circumpolar. Considered state imperiled (S2) in Colorado and Wyoming, state vulnerable (S3) in Montana and state critically imperiled (S1) in North Dakota.

Animal and Bird Use: 

References: Ackerfield 2012, Hickman 1993, Swales 1975, Weber and Wittmann 2012



Bergia texana (Hook.) Seub. ex Walp.

Texas bergia

Elatinaceae

Jane Ruyt



Synonyms: None

USDA PLANTS Symbol: BETE

ITIS TSN: 21402

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2

C-Value: Not Assigned

Duration: Annual, Perennial

CO Elevation: 5,250–5,580 ft. (1,600–1,700 m)

Key Characteristics:

- ◆ Stems ascending and often reddish, 1–2.5 (4) dm tall, spreading to 3 dm, glandular pubescent
- ◆ Leaves elliptic to oblong, acute, tapering almost to the base of the petioles, serrulate, 3 cm long
- ◆ Flowers solitary in axils or on very short pedicels
- ◆ Sepals 5, acuminate, 3–4 mm long, midribs green; petals 5, white, oblong, not exceeding the sepals
- ◆ Capsules globose or nearly so, to 3 mm wide



Jeanne R. Janish

Dicot Herbs

Neal Kemer



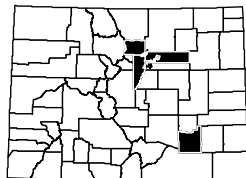
Similar Species: *Elatine* spp., the other genus in this family, are mat-forming and have linear to spatulate, glabrous leaves and 3 sepals.

Habitat and Ecology: Uncommon along margins of drying ponds and mudflats.

Comments: Seeds are eaten by waterfowl and small mammals. Considered state critically imperiled (S1) in Utah.

Animal and Bird Use:  

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Elatine brachysperma A. Gray

Shortseed waterwort

Elatinaceae

Denise Culver



Synonyms: *Elatine obovata* (Fassett) H. Mason, *Elatine triandra* Schkuhr var. *brachysperma* (A. Gray) Fassett

USDA PLANTS Symbol: ELBR5

ITIS TSN: 21406

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 S2

C-Value: Not Assigned

Duration: Annual

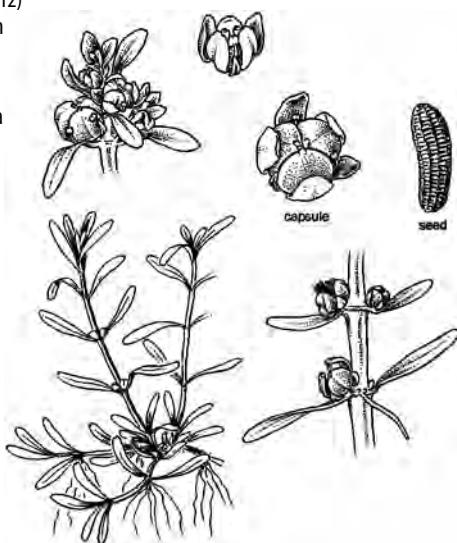
CO Elevation: 5,020 ft. (1,530 m)

Key Characteristics:

- ◆ Stems succulent, rooting at the nodes, glabrous, decumbent to erect, 1–5 (12) cm tall
- ◆ Leaves succulent, tips rounded at apices, 3–6 (12) mm long x 1.5–3 mm wide, pitted above, bum below
- ◆ Flowers solitary in the axils, sessile
- ◆ Sepals 2; petals 3, equal, wider than sepals; sta 3, alternate with petals

- ◆ Capsules globose, 3 mm wide; seeds with 10–15 pits per longitudinal row

Denise Culver



Jeanne R. Janish

Similar Species: *E. rubella* (= *E. triandra*) [OBL] differs with leaves that are notched at apices and seeds with 15–25 pits per longitudinal row. *Bergia texana* [OBL] has 5 sepals and petals and is glandular-pubescent.

Habitat and Ecology: Uncommon or overlooked in moist soils along margins of ponds and mudflats.

Comments: Seeds are eaten by waterfowl and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Hickman 1993, Weber and Wittmann 2012



Barry Breckling



Synonyms: *Elatine triandra* auct. non Schkuhr p.p.

USDA PLANTS Symbol: ELRU

ITIS TSN: 502233

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,250–10,000 ft. (1,600–3,050 m)

Key Characteristics:

- ◆ Stems succulent, rooting at the nodes, creeping, spreading to 2 dm long or tall, often red
- ◆ Leaves succulent, glabrous, tips blunt to notched, 3–6 (12) mm long x 1.5–3 mm wide, pitted above
- ◆ Flowers 1–2 per node, sessile
- ◆ Sepals 2; petals 3, stamens 3, alternate with sepals
- ◆ Capsules globose, 3 mm wide; seeds with 15–25 pits per longitudinal row

Dicot Herbs

Barry Breckling



Zoya Alukova



Similar Species: *E. brachysperma* [OBL, FACW] differs with leaves that are rounded at apices and seeds with 9–15 pits per longitudinal row. *Bergia texana* [OBL] has 5 sepals and petals and is glandular-pubescent.

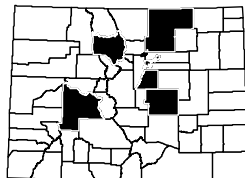
Habitat and Ecology: Uncommon or overlooked in moist soil along margins of ponds and mudflats.

Comments: Seeds are eaten by waterfowl and small mammals. Only known in the contiguous United States from California, Colorado and Wyoming (S3).

Animal and Bird Use:



References: Ackerfield 2012, Hickman 1993, Weber and Wittmann 2012



Apios americana Medik. Groundnut

Fabaceae

David Anderson



Synonyms: None

USDA PLANTS Symbol: APAM

ITIS TSN: 25390

Wetland Status AW: NI WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 S1

C-Value: 3

Duration: Perennial

CO Elevation: 5,180–5,900 ft. (1,580–1,800 m)

Key Characteristics:

- ◆ Stems twining or climbing over other plants; rhizomes slender with tuberous thickenings
- ◆ Leaves odd-pinnately compound, egg-shaped, 2–10 cm long x 1.8–7 cm wide, sometimes hairy
- ◆ Flowers in axillary racemes; flowers purple-brown, in rounded clusters among leaves
- ◆ Sepals 5, united, bilabiate, upper 4 lobes very short or absent, lower lobes longer; petals 5
- ◆ Fruits straight or slightly curved, 5–10 mm long x 6–12 mm wide, usually with 1 seed

Thomas G. Barnes USDA-NRCS PLANTS Database



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: No other legume has the combination of pinnate leaves, creeping habit and purple-brown flowers.

Habitat and Ecology: Rare. Found in moist, shady thickets and along streams. In Colorado, only known from Boulder County.

Comments: Groundnut is an eastern prairie relict. Considered state critically imperiled (S1) in Colorado. Fruits and tubers are edible, an important food source for Native Americans and early pioneers.

Animal and Bird Use: 

References: Ackerfield 2012, Stevens 2006, Weber and Wittmann 2012



Astragalus agrestis Douglas ex G. Don

Purple milkvetch

Fabaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: ASAG2

ITIS TSN: 25405

Wetland Status AW: FAC WM: FACW GP: FACU

Native Status: Native

Conservation Status: G5 SNR

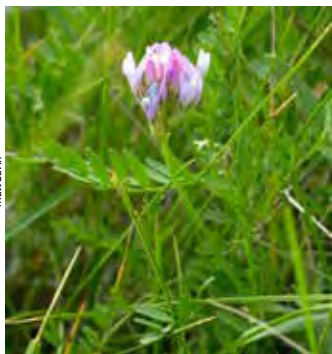
C-Value: 6

Duration: Perennial

CO Elevation: 4,900–11,130 ft. (1,495–3,390 m)

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 crowded peduncles, 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



Matt Lavin

USDA-NRCS PLANTS Database Britton & Brown 1913



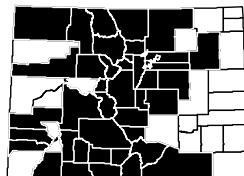
Similar Species: *A. laxmannii* var. *robustior* (= *A. adsurgens* var. *robustior*) [ASLAR, NI, ITIS 566195] flowers are in an elongated head, not globose. *A. cicer* [ASCI4, NI, ITIS 25464] has longer fruits, 10–14 mm long, that are brown to green with black hairs and ochroleucous flowers.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1989, Weber and Wittmann 2012



Astragalus argophyllus Nutt.

Silverleaf milkvetch

Fabaceae

Garry A. Monroe USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: ASAR4

ITIS TSN: 25421

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,950–8,540 ft. (1,815–2,605 m)

Key Characteristics:

- Stems tufted or matted, 0–10 (15) cm long, silvery, basifixed (attached at base) hairs
- Leaves 1.5–12 (15) cm long; leaflets narrowly obovate, 2–10 mm long
- Racemes loosely 2- to 8 (10)-flowered; peduncles 1.5–9 cm long
- Calyx tubes 6.5–12 mm long; flowers 9–14, whitish and purple-tinged, keels 16–19 mm
- Fruits pubescent but not entirely covered with hair

Steve Matson



Jeanne R. Janish



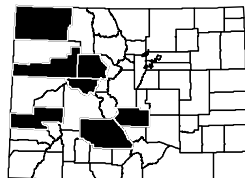
Similar Species: *A. lotiflorus* [ASL04, NI, ITIS 25568] is found in similar habitats, but has campanulate calyx tubes (3–4.5 mm long). *A. shortianus* [ASSH3, NI, ITIS 25678] has pink-purple flowers with larger fruits (25–40 mm long) and is known mainly from the Eastern Slope with a few occurrences in Grand and Eagle Counties.

Habitat and Ecology: Locally common in wet meadow, on sandy or rocky soil, or often in sagebrush or piñon-juniper shrublands.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1989, Weber and Wittmann 2012



Astragalus bodinii Sheldon

Bodin's milkvetch

Fabaceae

John Maunder



Synonyms: None

USDA PLANTS Symbol: ASBO

ITIS TSN: 25439

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G4 S2

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 7,550–10,940 ft. (2,300–3,335 m)

Key Characteristics:

- ◆ Stems prostrate, (1) 2–6 dm tall, with basifixed (attached at bases) hairs; stipules connate, clasping
- ◆ Leaves 1–7 (9) cm long; leaflets 9–17, 3–15 mm long x 1–8 mm wide
- ◆ Flowers in loose or few-flowered raceme, 3- to 15-flowered; peduncles 1–12 cm
- ◆ Sepals 4–7 mm long; petals pink-purple, banner recurved, 8–11 mm long, keels obtuse, 6–8 mm long
- ◆ Pods sparsely covered with black hairs, uniformly pubescent, ascending, sessile

Dicot Herbs

Jeanne R. Janish



John Maunder



Similar Species: *A. molybdenus* [ASM08, NI, ITIS 25590] is also a low-growing vetch, but is slightly taller with inflated pods, and is typically found in the alpine zone. *A. gracilis* [ASGR3, NI, ITIS 25528] is prostrate, but the pods have densely appressed-white hairs and leaflets are very narrow.

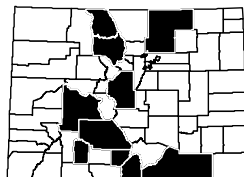
Habitat and Ecology: Uncommon in moist meadows, along streams and in aspen groves.

Comments: Photos were taken in Newfoundland, not in Colorado. There are likely both ecological and morphological differences between the populations. We were unable to find photos from the western United States or Colorado. *A. bodinii* is found from Alaska to New Mexico. It is considered to be state critically imperiled (S1) in Utah, state imperiled (S2) in Colorado and state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1989, Weber and Wittmann 2012



Astragalus canadensis L.

Canadian milkvetch

Fabaceae

Christopher Noll



Synonyms: None

USDA PLANTS Symbol: ASCA11

ITIS TSN: 25451

Wetland Status AW: FAC WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

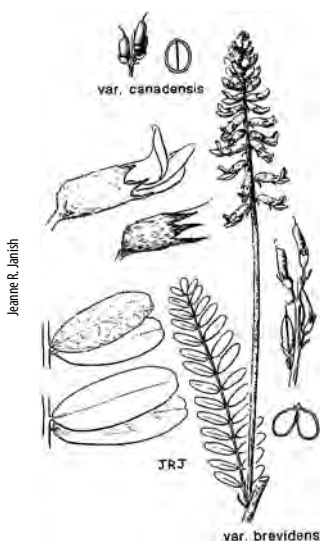
Duration: Perennial

CO Elevation: 5,000–9,300 ft. (1,525–2,835 m)

Key Characteristics:

- Stems (1) 1.5–10 (12) dm tall, foliage hairy with dolabriform (pick-ax shape) hairs; stipules connate
- Leaflets green, either glabrous or pubescent above, (7) 13–35, broadly lanceolate, oblong
- Racemes densely many-flowered, often hairy with minute, short, soft hairs
- Petals greenish-white, ochroleucous, banners 12–17.5 mm long, keels obtuse, 10–13.5 mm
- Calyx tubes 4.5–10.5 mm long, teeth 1.2–4.5 mm long; pods 10–20 mm long, terete, glabrous

Christopher Noll



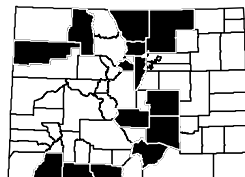
Similar Species: *A. canadensis* var. *brevidens* [ASCAB, ITIS 192393] has shorter, stems 1–5.5 dm tall, the pods are deeply grooved dorsally, strigulose, but becoming glabrate in age.

Habitat and Ecology: Uncommon in moist meadows, along creeks and mountain woodlands.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1989, Weber and Wittmann 2012



Astragalus leptaleus A. Gray

Park milkvetch

Fabaceae

Scott Smith



Synonyms: None

USDA PLANTS Symbol: ASLE9

ITIS TSN: 25560

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4 S2; USFS Sensitive

C-Value: 8

Duration: Perennial

CO Elevation: 7,600–9,770 ft. (2,315–2,980 m)

Key Characteristics:

- Stems up to 20 cm long, weak-stemmed; rhizomatous, mat-forming
- Leaves 15 to 27 elliptic-shaped leaflets per leaf; upper leaflet surface glabrous
- Racemes 2- to 3 (5)-flowered; peduncles not elongate, filiform
- Flowers white with purple-tipped keels, calyx tubes 2.7–3.5 mm long with short, straight hairs
- Pods 1–2.5 cm long, drooping, flattened, covered with black and white hairs

Dicot Herbs

Scott Smith



Scott Smith



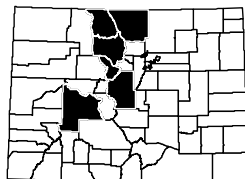
Similar Species: *A. alpinus* [ASAL7, FAC, ITIS 25393] differs in having a purple-tipped keels, purple-margined banners, flowers that are often concealed by foliage and pods with more black hairs. *A. bodinii* [FACW] has a stouter root and purple flowers.

Habitat and Ecology: Found in wet meadows, swales, hummocks and along streams under willows.

Comments: *A. leptaleus* is a Rocky Mountain regional endemic, known from Colorado (S2), Idaho (S3), Montana (S3) and possibly extirpated (SH) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Barneby 1964, Handley 2012, Isely 1985, Ladyman 2006, Weber and Wittmann 2012



Trifolium longipes Nutt. Longstalk clover

Fabaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: TRLO

ITIS TSN: 26270

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 S3

C-Value: 8

Duration: Perennial

CO Elevation: 6,100–12,780 ft. (1,860–3,895 m)

Key Characteristics:

- ◆ Stems 0.5–4 dm tall; stipules herbaceous, 8–40 mm long
- ◆ Leaflet margins toothed entire length, 0.5–5 cm long, glabrous on upper side, pubescent underneath
- ◆ Inflorescence usually 1–3 flowers; heads ovoid or inversely pyramidal, 20–65 flowers ascending
- ◆ Petals greenish-white, ochroleucous, striped with purple or bright pink or purple, banners apiculate
- ◆ Calyx teeth 2.9–6.5 mm long

Al Schneider



USDA-NRCS Wetland Flora

Similar Species: *T. pratense* [TRPR2, FACU, ITIS 26313], a non-native, is often in wetlands. It has solitary, sessile flower heads, subtended by stipules versus flowering heads on pedicels as in *T. longipes*. *T. kingii* [TRK1, FAC, ITIS 26263] has glabrous leaves and stems and reflexed flowers.

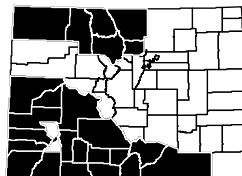
Habitat and Ecology: Found along streams, in meadows, and shaded forests.

Comments: *T. longipes* is common throughout the Intermountain West, desert southwest, the Pacific Northwest and California. In generally, clovers are one of the best nitrogen fixing plants available.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1989, Weber and Wittmann 2012



Trifolium wormskioldii Lehm. Cows clover

Fabaceae

Neil Kramer



Synonyms: *Trifolium fendleri* Greene

USDA PLANTS Symbol: TRWO

ITIS TSN: 505586

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Annual, Perennial

CO Elevation: 4,500–9,510 ft. (1,370–2,900 m)

Key Characteristics:

- ◆ Stems (0.5)1–5 (6.5) dm tall, weak, often succulent, glabrous; stipules toothed
- ◆ Leaflets 3, commonly oblanceolate or elliptic-oblanceolate, all serrulate or spinulose-denticulate
- ◆ Flowering heads mostly 1–3 headed, pedunculate, involucre 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

Jeanne R. Janish



Dicot Herbs

Br. Alfred Brousseau



Similar Species: *T. parryi* [TRPA5, FAC, ITIS 26304] is acaulescent, 0.4–2.5 dm tall, has entire stipules, involucre bracts that are free or connate for about a third of their length with entire margins and toothed apices.

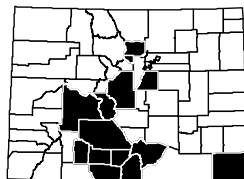
Habitat and Ecology: Uncommon in moist meadows, along streams and other wet places.

Comments: Considered state critically imperiled (S1) in Utah. In generally, clovers are one of the best nitrogen fixing plants available.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1989, Weber and Wittmann 2012



***Corydalis caseana* A. Gray ssp. *brandegeei* (S. Watson) G.B. Ownbey**
Brandegee's fumewort **Fumariaceae**

Denise Culver



Synonyms: *Corydalis brandegeei* S. Watson
USDA PLANTS Symbol: COCAB2
ITIS TSN: 523908
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5T3T4 S3S4
C-Value: 7
Duration: Perennial
CO Elevation: 6,900–12,020 ft. (2,105–3,665 m)

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

Karin Freeman



Denise Culver



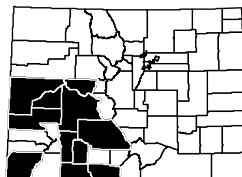
Similar Species: *C. caseana* ssp. *brandegeei* resembles *Astragalus* in the Fabaceae. The morphological differences are that Fabaceae has 10 stamens (9 fused, 1 free) versus Fumariaceae that has 6 stamens (fused in 2 sets of 3). Fabaceae has 5 petals that are fused to form a keel; Fumariaceae has 4 petals in 2 whorls of 2. Fruits in Fabaceae are legumes and in Fumariaceae 2-valved capsules.

Habitat and Ecology: Found in forests and open meadows, often along streams and creeks, known from southwestern and central Colorado.

Comments: *C. caseana* ssp. *brandegeei* is a regional endemic, found only in southwestern and central Colorado (S3) and northcentral New Mexico. 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.

Animal and Bird Use: 

References: Ackerfield 2012, Darrow 2006, Flora of North America 1997, Weber and Wittmann 2012



Centaurium exaltatum (Griseb.) W. Wight ex Piper

Desert centaury

Gentianaceae

Paul Stichler



Synonyms: None

USDA PLANTS Symbol: CEEEX

ITIS TSN: 30030

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S1

C-Value: 7

Duration: Annual

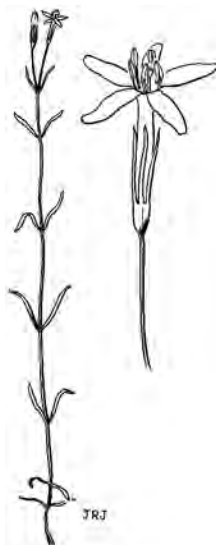
CO Elevation: 5,800–6,200 ft. (1,770–1,890 m)

Key Characteristics:

- ◆ Stems 1–4 (6) dm tall, 1 to few, cymosely branched, branches ascending, becoming 4-angled, winged
- ◆ Leaves opposite, 1–3 (5) cm long x (1) 2–17 mm wide, linear to broadly lanceolate, acute, sessile
- ◆ Inflorescence a terminal cyme; pedicels 1–6.5 cm long
- ◆ Corolla salverform, lobes 1–6 mm long; calyx pink to rose-pink, lobes 5–8 mm long
- ◆ Anthers 1.7–3.2 mm long, twisting at maturity



Jeanne R. Janish



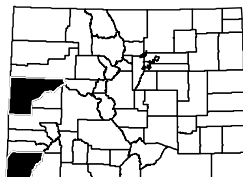
Similar Species: *C. arizonicum* [CEAR12, NI, ITIS 507847] is known to occur in moist places in southern Colorado. It has longer corolla lobes, 8–12 mm. *C. pulchellum* [CEPU3, FACU, ITIS 30036] has much shorter pedicels, 0.3–0.5 cm long, and calyx lobes are 4–5 mm long.

Habitat and Ecology: Rare. Found in moist places along streams, in marshes and seasonal ponds on Western Slope.

Comments: The global range extends from British Columbia south to California, New Mexico, Nebraska and South Dakota. Considered state critically imperiled (S1) in Colorado (S1).

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



***Eustoma exaltatum* (L.) Salisb. ex G. Don ssp. *russellianum* (Hook.) Kartesz**
Showy prairie gentian **Gentianaceae**

Scott Smith



Synonyms: *Eustoma grandiflorum* (Raf.) Shinnery
USDA PLANTS Symbol: EUEXR
ITIS TSN: 566032
Wetland Status AW: OBL WM: OBL GP: FACW
Native Status: Native
Conservation Status: G5 S3S4
C-Value: 7
Duration: Annual, Perennial
CO Elevation: 3,370–5,500 ft. (1,025–1,675 m)

Key Characteristics:

- ◆ Stems 2.5–6 dm tall, with 1 to several stems, erect
- ◆ Leaves opposite, elliptic-oblong to lance-ovate, glaucous, 3-veined, 1.5–7.5 cm long x 0.3–5 cm wide
- ◆ Inflorescence a cymose-paniculate, in clusters of 2–6 flowers; pedicels to 6 cm long
- ◆ Calyx deeply cleft, lobes keeled, linear-lanceolate, 1.2–2.3 cm long x 2–3 mm wide
- ◆ Corolla campanulate, deeply cleft, blue-purple, pink or whitish, 3.5–5 cm long x 1.5–2.4 cm wide

Scott Smith



USDA-NRCS PLANTS Database Britton & Brown 1913

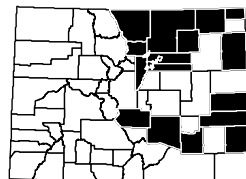
Similar Species: None.

Habitat and Ecology: Uncommon in shortgrass prairies swales on Eastern Slope, often in alkaline soil.

Comments: Considered state critically imperiled (S1) in Wyoming and South Dakota and state vulnerable (S3S4) in Colorado. Bees are the primary pollinators.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Gentiana algida Pall.

Whitish gentian

Gentianaceae

Al Schneider

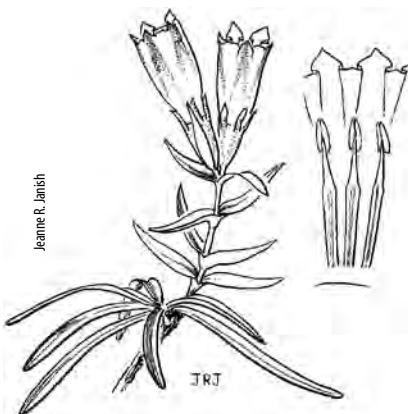


Key Characteristics:

- ◆ 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

Dicot Herbs

Al Schneider



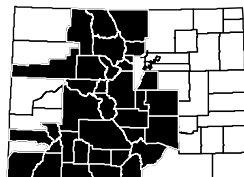
Similar Species: None.

Habitat and Ecology: Common in moist subalpine and alpine meadows.

Comments: Circumpolar. Range includes Alaska, Montana, Wyoming (S2) Colorado, New Mexico and Utah. Bees are the primary pollinators.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012



Gentiana fremontii Torr.

Moss gentian

Gentianaceae

John Game



Synonyms: *Chondrophylla aquatica* auct. non (L.) W.A. Weber

USDA PLANTS Symbol: GEFR

ITIS TSN: 502742

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G4 SNR

C-Value: 9

Duration: Annual, Biennial

CO Elevation: 7,200–12,000 ft. (2,195–3,660 m)

Key Characteristics:

- Stems 0.2–1.2 dm tall, usually several, curved-ascending, glabrous
- Leaves basal 5–12 mm long, cauline 4–7 mm long, conspicuously white-margined
- Inflorescence a single terminal flower, pedicels to 10 mm long
- 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

John Game



John Game



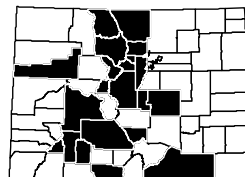
Similar Species: *G. prostrata* (= *Chondrophylla prostrata*) [FACW] leaves and sepals are not white-margined, flowers are deep blue and capsules are included in the corolla tubes.

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 (S2) and New Mexico. Considered state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Gentiana parryi Engelm.

Parry's gentian

Gentianaceae

Ron Wolf



Synonyms: *Pneumonanthe parryi* (Engelm.) Greene

USDA PLANTS Symbol: GEPA

ITIS TSN: 29980

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 7,000–14,420 ft. (2,135–4,395 m)

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
- ◆ Calyx tubes 10–18 mm long; leaf-like bracts subtending the flowers, ovate, often hiding the calyx
- ◆ Corolla purple, barrel-shaped

Dicot Herbs

Barry Breckling



Ron Wolf



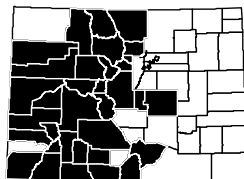
Similar Species: *G. affinis* [GEAF, FACU, ITIS 29964] has shorter calyx tubes, 4–10 mm long, and the leaf-like bracts subtending the flowers are lanceolate or linear, not hiding the calyx. The corolla is tubular-funnelform not barrel-shaped.

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 (S2), Utah, Arizona, Colorado and New Mexico. Bees are the primary pollinators.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Darrow 2006, Huggins 2008, Weber and Wittmann 2012



Gentiana prostrata Haenke

Pygmy gentian

Gentianaceae

Ron Wolf



Synonyms: *Chondrophylla prostrata* (Haenke) J.P. Anderson

USDA PLANTS Symbol: GEPR3

ITIS TSN: 29983

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 9

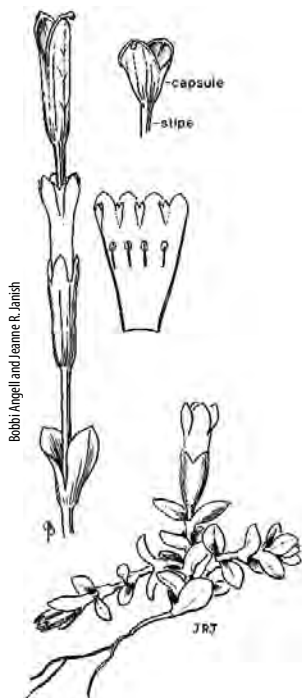
Duration: Annual, Biennial, Perennial

CO Elevation: 7,000–14,310 ft. (2,135–4,360 m)

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

Ron Wolf



Bobbi Angell and Jeanne R. Jamsh

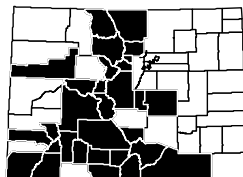
Similar Species: *G. fremontii* [FACW, OBL] has leaves and sepals that are conspicuously white-margined.

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. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Darrow 2006, Weber and Wittmann 2012



***Gentianella amarella* (L.) Börner ssp. *acuta* (Michx.) J.M. Gillett**
Autumn dwarf gentian Gentianaceae

Steve Matson



Synonyms: *Gentiana amarella* L. ssp. *acuta* (Michx.) Hultén, *Gentianella acuta* (Michx.) Hiitonen, *Gentianella strictiflora* (Rydb.) W.A. Weber

USDA PLANTS Symbol: GEAMA

ITIS TSN: 30060

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 8

Duration: Annual, Biennial

CO Elevation: 5,450–14,430 ft. (1,660–4,400 m)

Key Characteristics:

- ◆ Stems simple or sometimes 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 tubes 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

Dicot Herbs

Steve Matson



Barry Breckling



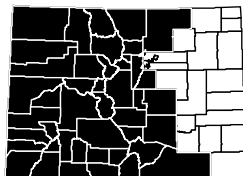
Similar Species: *G. amarella* ssp. *heterosepala* (= *G. heterosepala*) [FACW] has conspicuously unequal calyx lobes, the outer lobes are much larger and leaf-like, usually enclosing the inner 2 lobes.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Gentianella tenella (Rottb.) Börner

Dane's dwarf gentian

Gentianaceae

Steve Matson



Synonyms: *Comastoma tenellum* (Rottb.) Toyokuni

USDA PLANTS Symbol: GETE4

ITIS TSN: 30072

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 10

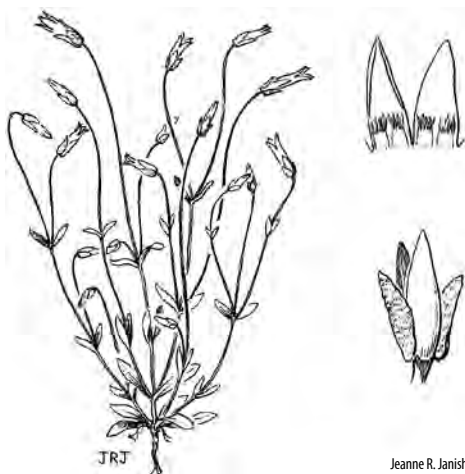
Duration: Annual

CO Elevation: 8,500–14,310 ft. (2,590–4,360 m)

Key Characteristics:

- ◆ Cespitose, stem 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

Steve Matson



JRJ

Jeanne R. Janish

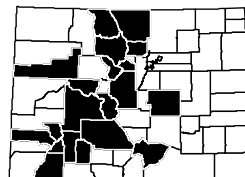
Similar Species: Other *Gentianella* spp. have corolla lobes with a single row of hairs inside.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Gentianopsis barbellata (Engelm.) Iltis

Perennial fringed gentian

Gentianaceae

Barry Breckling



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
- ◆ Calyx lobes without a prominent purplish vein in the center

Synonyms: *Gentiana barbellata* Engelm.

USDA PLANTS Symbol: GEBA2

ITIS TSN: 30079

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G3G4 S3?

C-Value: 9

Duration: Perennial

CO Elevation: 8,400–14,330 ft. (2,560–4,370 m)

- ◆ Corolla tubes 12–18 mm long, deep blue, fragrant, margins conspicuously fimbriate, apices erose-dentate

Dicot Herbs

Al Schneider



Al Schneider



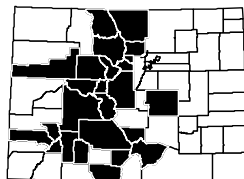
Similar Species: *G. thermalis* [FACW, OBL] flowers are on long pedicels and the sepal lobes have a prominent purplish vein in the center.

Habitat and Ecology: Found on moist slopes, meadows, alpine tundra and in aspen forests.

Comments: Considered globally vulnerable (G3G4), state imperiled (S2) in Utah and Wyoming and state vulnerable (S3) in Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Gentianopsis thermalis (Kuntze) Iltis

Rocky Mountain fringed gentian

Gentianaceae

Al Schneider



Synonyms: *Gentianella detonsa* (Rottb.) G. Don var. *elegans* (A. Nelson) Dorn

USDA PLANTS Symbol: GETH

ITIS TSN: 30090

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G4?Q SNR

C-Value: 8

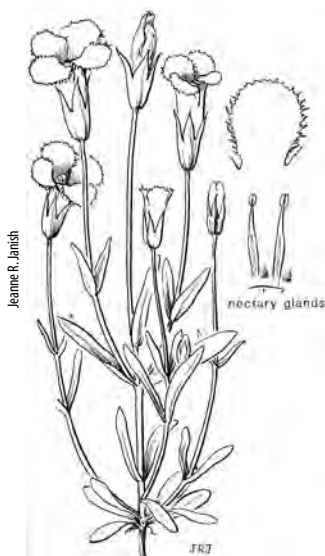
Duration: Annual

CO Elevation: 6,000–14,000 ft. (1,830–4,265 m)

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, margins fimbriate, apices erose

Steve Olson



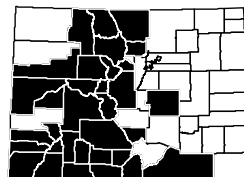
Similar Species: *G. barbellata* [FACW] flowers are sessile, not on long peduncles.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Lomatogonium rotatum (L.) Fr. ex Fernald

Marsh felwort

Gentianaceae

Steve Olson



Synonyms: *Pleurogyne rotata* (L.) Griseb.

USDA PLANTS Symbol: LORO

ITIS TSN: 29992

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2

C-Value: 9

Duration: Annual, Biennial

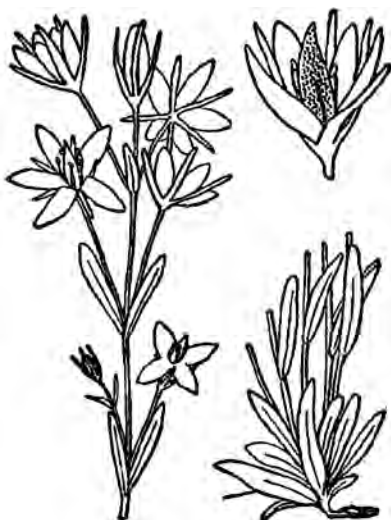
CO Elevation: 7,600–10,500 ft. (2,315–3,200 m)

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, rotate with 2 scaly appendages at base of each lobe



Scott Smith



USDA-NRCS PLANTS Database Britton & Brown 1913

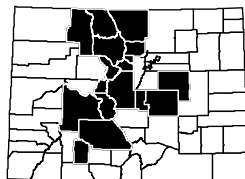
Similar Species: *Centaurium exaltatum* [FACW] has white flowers, but the flowers are salverform, not rotate.

Habitat and Ecology: Uncommon in moist meadows, along lake and stream margins and in fens.

Comments: Widespread and locally abundant, circumboreal species. Rare at the southern extent of its range. Considered state critically imperiled (S1) in Montana and Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Steve Olson

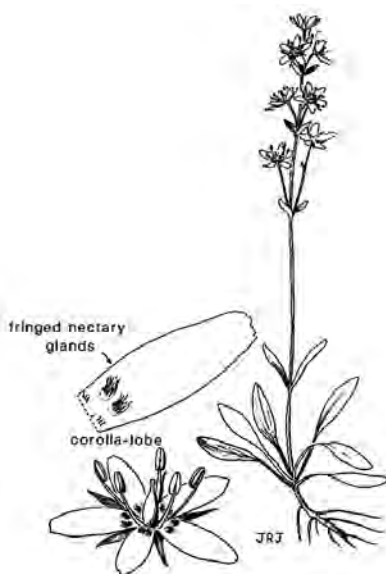


Synonyms: None
USDA PLANTS Symbol: SWPE
ITIS TSN: 30118
Wetland Status AW: FACW WM: FACW GP: FAC
Native Status: Native
Conservation Status: G5 SNR
C-Value: 8
Duration: Perennial
CO Elevation: 7,700–14,150 ft. (2,345–4,315 m)

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 nectar glands

Steve Olson



Jeanne R. Janish

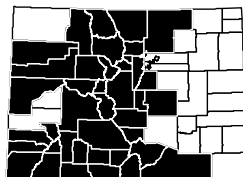
Similar Species: *S. perennis* flowers can fade to white, resembling *Lomatogonium rotatum* [OBL].

Habitat and Ecology: Common along streams, wet meadows and willow carrs.

Comments: Global range extends from Alaska, south to California, Arizona and New Mexico. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012

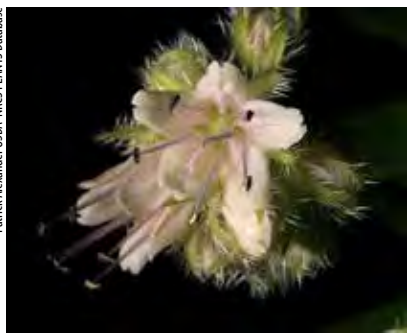


Hydrophyllum fendleri (A. Gray) A. Heller

Fendler's waterleaf

Hydrophyllaceae

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: HYFE

ITIS TSN: 31392

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,430–13,690 ft. (1,655–4,175 m)

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



Al Schneider

Jeanne R. Jansh



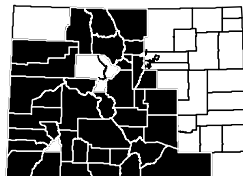
Similar Species: *H. capitatum* [HYCA4, NI, ITIS 31391] flowers are pale to dark lavender and sometimes white, in a ball-like cluster and the leaf lobes have entire margins with 1–2 deeply cleft lobes at tips.

Habitat and Ecology: Common in moist, often shady places throughout the state.

Comments: Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. Flies and butterflies are the primary pollinators.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012



Lycopus americanus Muhl. ex W. Bartram

American water horehound

Lamiaceae

Richard Scully



Synonyms: None

USDA PLANTS Symbol: LYAM

ITIS TSN: 32254

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 3,770–7,500 ft. (1,150–2,285 m)

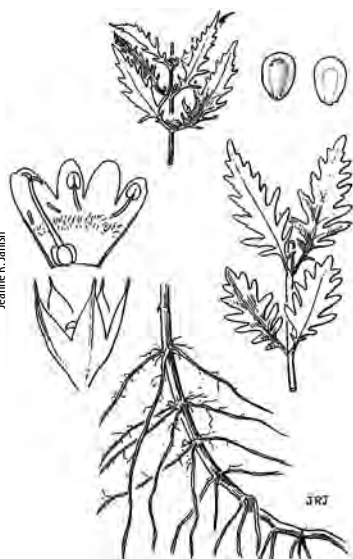
Key Characteristics:

- Stems 2–8 dm tall, square, simple or branched, hairy at the nodes, especially upward
- Lower leaves pinnatifid, others irregularly sharply serrate
- Calyx lobes 5, narrow, firm, slender-pointed, with midnerve surpassing the mature nutlets
- Corolla 4-lobed, white, 2–3 mm long, barely if at all surpassing calyx; stamenes small, club-shaped
- Nutlets with a smooth, corky ridge, lateral ridges confluent around the top

Richard Scully



Jeanne R. Janish



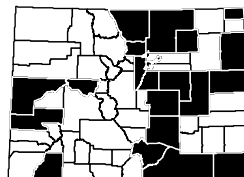
Similar Species: *L. asper* [OBL] and *L. uniflorus* [OBL] leaf margins are sharply, but evenly serrate, not pinnatifid and both arise from tuberous roots.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Dicot Herbs

Lycopus asper Greene

Rough bugleweed

Lamiaceae

Michigan Flora Online



Key Characteristics:

- ◆ Stems 2–8 dm tall, square, spreading-hairy on the angles; rhizomes tuberous, thickened at the tips
- ◆ Leaves 3.5–10 cm long x 0.6–3.5 cm wide, broad-based, sessile, margins evenly serrate
- ◆ Calyx lobes 5, narrow, firm, subulate-pointed, with midnerve, distinctly surpassing nutlets
- ◆ Corolla white, 3–5 mm long, only slightly surpassing the calyx, 4-lobed; staminodes small, club-shaped

Synonyms: None

USDA PLANTS Symbol: LYAS

ITIS TSN: 32256

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

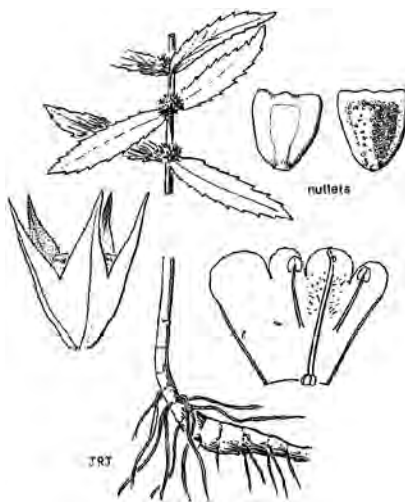
Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 4,800–7,740 ft. (1,465–2,360 m)

- ◆ Nutlets without a smooth, corky ridge, inner side of nutlets shorter



Jeanne R. Janish

Dicot Herbs

USDA-NRCS PLANTS Database



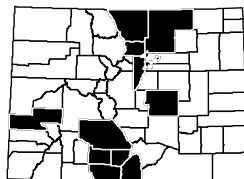
Similar Species: *L. americanus* [OBL] does not have tubers and the leaf blades are irregularly serrate. *L. uniflorus* [OBL] has a shorter calyx, 1.3–1.6 mm long, equaling or shorter than nutlets.

Habitat and Ecology: Locally common in moist places.

Comments: Even though *Lycopus* spp. are in the mint family, they do not have aromatic leaves. They are pollinated mainly by bees. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Lycopus uniflorus Michx.

Northern bugleweed

Lamiaceae

Richard Scully



Synonyms: None

USDA PLANTS Symbol: LYUN

ITIS TSN: 32257

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,600–5,410 ft. (1,400–1,650 m)

Key Characteristics:

- ◆ Stems 3–6 dm tall, square, simple or sparingly branched, pubescent; rhizomes tuberous, thickened
- ◆ Leaves shallowly serrate, 2–10 cm long x 1–4 cm wide, punctuate, glabrous, veins sparsely pubescent
- ◆ Calyx 1.3–1.6 mm long, equal or shorter than the nutlets
- ◆ Stamens 2; styles exerted

- ◆ Nutlets 1–1.2 mm long, crest undulate to scarcely toothed

Richard Scully



USDA-NRCS PLANTS Database Britton & Brown 1913

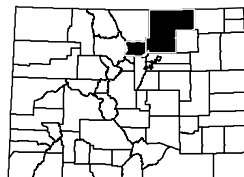
Similar Species: *L. asper* [OBL] calyx is longer, 2.5–4.5 mm long, much exceeding the nutlets.

Habitat and Ecology: Uncommon in moist places, currently only known from Boulder and Weld Counties.

Comments: Even though *Lycopus* spp. are in the mint family, they do not have aromatic leaves. They are pollinated mainly by bees. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Mentha arvensis L.

Wild mint

Lamiaceae

Richard Scully



Synonyms: None

USDA PLANTS Symbol: MEAR4

ITIS TSN: 565302

Wetland Status AW: FACW **WM:** FACW **GP:** FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

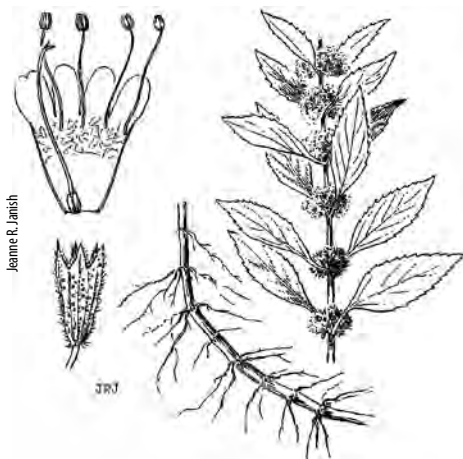
CO Elevation: 3,900–9,800 ft. (1,190–2,985 m)

Key Characteristics:

- ◆ Stems 2–8 dm tall, square, ascending or erect; creeping rhizomes
- ◆ Leaf blades 2–8 cm long x 6–40 mm wide, glabrous or hairy, serrate, acuminate, short-petiolate
- ◆ Flowers in dense axillary clusters at the nodes
- ◆ 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

Dicot Herbs

Richard Scully



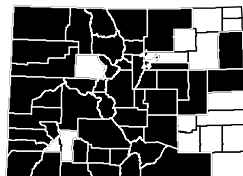
Similar Species: *M. spicata* [FACW] flowers are in a terminal spike not axillary clusters. Members in the Verbenaceae are sometimes confused with mints because they have square stems and opposite leaves, however they are not aromatic.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012

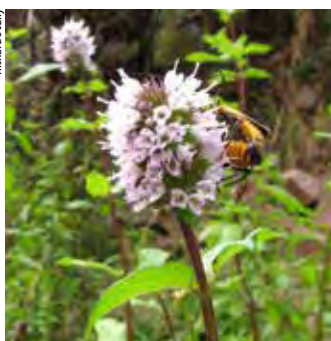


Mentha × piperita L.

Peppermint

Lamiaceae

Richard Scully



Synonyms: None

USDA PLANTS Symbol: MEPI

ITIS TSN: 32275

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: GNA SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,900–5,900 ft. (1,800–1,800 m)

Key Characteristics:

- ◆ Stems 3–10 dm tall, square, ascending or erect, glabrous or glandular; rhizomatous
- ◆ Leaves opposite, serrate, 3–6 cm long x 1.5–3 cm wide, bases wedge-shaped; petioles 4–15 mm long
- ◆ Flower clusters in a terminal spike
- ◆ Calyx 2.5–4 mm long, lobes hispid-ciliate, tubes without hairs
- ◆ Corolla 3.5–5 mm long, pink-lavender to white

Richard Scully



Jeanne R. Janish

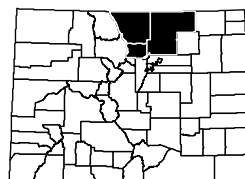
Similar Species: *M. spicata* [FACW] leaves are sessile or short petiolate and the calyx is shorter, 1–3 mm long. Members in the Verbenaceae are sometimes confused with mints because they have square stems and opposite leaves, however they are not aromatic.

Habitat and Ecology: Uncommon in moist places and disturbed areas. Weber and Wittmann (2012) consider it non-native.

Comments: Originating from the hybridization between *M. spicata* and *M. aquatica*. This hybrid is usually sterile.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mentha spicata L.

Spearmint

Lamiaceae

Richard Scully



Synonyms: None

USDA PLANTS Symbol: MESP3

ITIS TSN: 32272

Wetland Status AW: OBL WM: FACW GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,820–9,200 ft. (1,470–2,805 m)

Key Characteristics:

- ◆ Stems 3–10 dm tall, square, ascending or erect, glabrous or glandular; creeping rhizomes
- ◆ Leaves sessile; blades lance-ovate, 2–7 cm long x 0.8–2.5 cm wide; petioles not over 3 mm long
- ◆ Flower clusters in a terminal spike
- ◆ Calyx 1–3 mm long, lobes hispid-ciliate, tubes without hairs
- ◆ Corolla 2–4 mm long, pale-lavender to white

Dicot Herbs

Louis M. Landry



Jeanne R. Janish

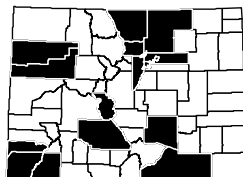
Similar Species: *M. x piperita* [FACW] leaves are conspicuously petiolate. *M. arvensis* [FACW] flowers are in dense axillary clusters at leaf nodes. Members in the Verbenaceae are sometimes confused with mints because they have square stems and opposite leaves, however they are not aromatic.

Habitat and Ecology: Common in moist places and disturbed areas.

Comments: The 'spear' in spearmint is from the sharply pointed leaves.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Scutellaria galericulata L.

Marsh skullcap

Lamiaceae

Richard Scully



Synonyms: *Scutellaria epilobiifolia* A. Ham.

USDA PLANTS Symbol: SCGA

ITIS TSN: 32798

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

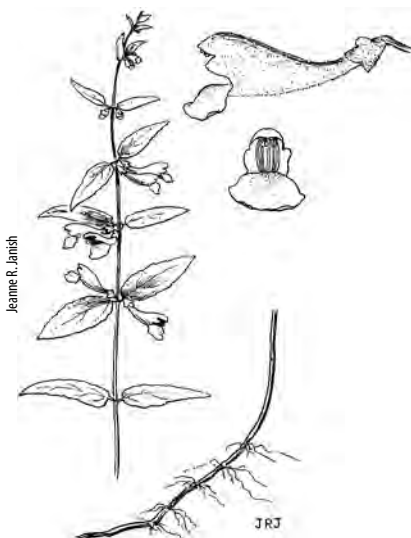
CO Elevation: 4,800–9,500 ft. (1,465–2,895 m)

Key Characteristics:

- ◆ Stems 2–8 dm tall, square, puberulent, weak but mostly erect; creeping rhizomes
- ◆ Leaves 2–6 cm long x 6–20 mm wide, glabrous above, margins toothed, bases truncate, short petiolate
- ◆ Flowers 2 per node arising from leaf axils
- ◆ Calyx 3.5–4.5 mm with erect cap (scutellum) on upper lip

- ◆ Corolla blue, marked with white, 1.5–2 cm long, upward arching part of lower lip bumpy, not hairy

Richard Scully



Jeanne R. Janish

J.R.J.

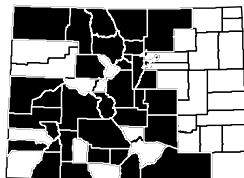
Similar Species: *S. lateriflora* [FACW] flowers are in axillary racemes, the corolla is shorter, 6–7 mm long and it does not have a blue-spotted lip.

Habitat and Ecology: Locally abundant along pond shores, marshes, streams and springs.

Comments: Circumboreal. Considered state vulnerable (S3) in Wyoming. Traditionally, skullcap was used as an anti-inflammatory, antispasmodic and for other nervous conditions.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Scutellaria lateriflora L.

Blue skullcap

Lamiaceae

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: None
USDA PLANTS Symbol: SCLA2
ITIS TSN: 32765
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 10
Duration: Perennial
CO Elevation: 3,900–5,250 ft. (1,190–1,600 m)

Key Characteristics:

- Stems glabrate, simple to variously branched above, (1) 2–6 (10) dm tall; creeping rhizomes
- Leaves opposite, 3–11 cm long x 1.5–5.5 cm wide, crenate to serrate, bases obtuse to truncate
- Flowers in axillary racemes, arising from axils of reduced leaf-like bracts
- Calyx 2–3 mm long; corolla 6–7 mm long, tubes straight, lower lip less than twice as wide as tubes
- Corolla 6–7 mm long, blue, tube straight, lower lip less than twice as wide as tube



Richard Scully



USDA-NRCS PLANTS Database Britton & Brown 1913

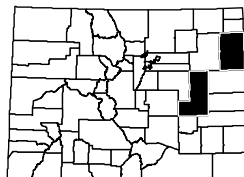
Similar Species: *S. galeiculata* [OBL] flowers are 2 per node arising from the leaf axils, not in axillary racemes.

Habitat and Ecology: Rare. Found along streams and near springs on the Eastern Slope, currently known from two collections in Lincoln and Yuma Counties.

Comments: Traditionally, skullcap was used as an anti-inflammatory, antispasmodic and other nervous conditions.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Stachys pilosa Nutt. var. *pilosa*

Hairy hedgenettle

Lamiaceae

Richard Scully



Synonyms: *Stachys palustris* L. var. *pilosa* (Nutt.) Fernald

USDA PLANTS Symbol: STPIP5

ITIS TSN: 566319

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 4,800–11,480 ft. (1,465–3,500 m)

Key Characteristics:

- ◆ Stems (2) 3–8 dm tall, rank odor, simple or branched, hairy and glandular throughout
- ◆ Leaves 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 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

Richard Scully



Richard Scully



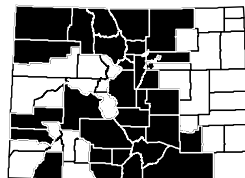
Similar Species: *Agastache* spp. has similar looking flowers, but the calyx is bluish to purplish, the stems are glabrous or puberulent, not glandular, the terminal spikes are not interrupted, and leafy bracts are absent.

Habitat and Ecology: Common in moist places, along streams, ditches and lake shores, and in moist meadows.

Comments: Global range is throughout North America. Considered state vulnerable (S3) in Wyoming. *Stachys* spp. have been used for centuries for a wide variety of ailments ranging from antiseptic to stomach issues.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



***Teucrium canadense* L. var. *occidentale* (A. Gray) E.M. McClint. & Epling**
Western germander **Lamiaceae**

Richard Scully



Synonyms: None
USDA PLANTS Symbol: TECAO
ITIS TSN: 530632
Wetland Status AW: FACW WM: FAC GP: FACW
Native Status: Native
Conservation Status: G5T5? SNR
C-Value: 3
Duration: Perennial
CO Elevation: 3,500–7,500 ft. (1,065–2,285 m)

Key Characteristics:

- ◆ Stems 2–10 dm tall, erect, solitary, hairy and glandular throughout; rhizomatous
- ◆ Leaves short petiolate, narrowly elliptic, serrate blades 3–10 cm long x 1–4 cm wide
- ◆ Inflorescence a crowded, spike-like raceme
- ◆ Calyx 5–7 mm long, 3 upper teeth deltoid, 2 lower teeth longer, lance-subulate
- ◆ Corolla purplish, 11–18 mm long, appearing 1-lipped, upper lip of corolla deeply cleft

Dicot Herbs

Janet Novak



Eleanor Saulys



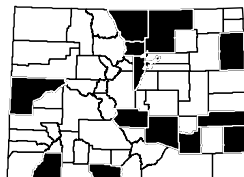
Similar Species: *T. laciniatum* [TELA, NI, ITIS 32359] has leaves that are deeply pinnatifid and white flowers.

Habitat and Ecology: Found in moist places along streams, lakes and ditches.

Comments: Considered state critically imperiled (S1) in Utah and Wyoming. Long-tongued bees are the most important pollinators, including bumblebees and honeybees.

Animal and Bird Use:

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Floerkea proserpinacoides Willd.

False mermaidweed

Limnanthaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: FLPR

ITIS TSN: 29167

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: GS SNR

C-Value: Not Assigned

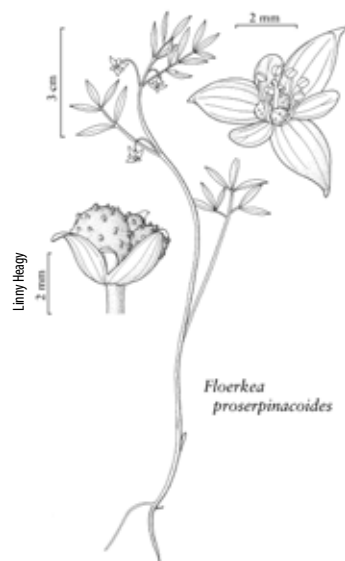
Duration: Annual

CO Elevation: 6,500–11,500 ft. (1,980–3,505 m)

Key Characteristics:

- ◆ Stems decumbent to erect, (3) 5–30 (38) cm, herb-age glabrous
- ◆ Leaves pinnately divided, leaflet blades 3–7, 7–12 mm long x 1–3.5 mm wide, margins entire
- ◆ Flowers axillary on long pedicels, spreading or nodding, 0.5–2 cm
- ◆ Petals and sepals 3, 2–6 mm, petals white, greenish-white, or pale pink, petals shorter than sepals
- ◆ Stamens 6, minute; fruits are bumpy, spherical nutlets

John Hilly



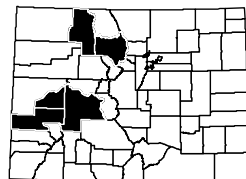
Similar Species: None.

Habitat and Ecology: Uncommon in moist meadows on west slope.

Comments: The flower of *F. proserpinacoides* is the logo for the Flora of North America project because of this taxon's ubiquitous (but obscure) occurrence in many areas of North America, and the diverse aspects of the family including economic and horticultural value, endangered species status and fruitful subject of scientific research. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: None known.

References: Ackerfield 2012, Cronquist et al. 1997, Flora of North America 2010, Weber and Wittmann 2012



Ammannia robusta Heer & Regel

Grand redstem

Lythraceae

Trent M. Draper



Synonyms: None

USDA PLANTS Symbol: AMR03

ITIS TSN: 182101

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 4,530–5,630 ft. (1,380–1,715 m)

Key Characteristics:

- Stems 2–10 dm tall, freely branched when well-developed, glabrous; roots fibrous
- Leaves thick and fleshy, linear, up to 10 cm long, conspicuous central vein, clasping, dilated bases
- Flowers (1) 3 per axil, sessile, stout peduncles; pedicels up to 1 mm long
- Floral tubes 3.5–4.5 mm long, 8-ribbed, enclosing the fruit, open at top
- Sepals 0.5 mm long; petals 4, 2–3 mm long, pale lavender, white, or pink; stamens 4 (8), yellow

Dicot Herbs

Trent M. Draper



Trent M. Draper



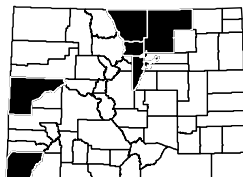
Similar Species: *Rotala ramosior* [OBL] has finely grooved floral tubes, the upper leaves are attenuate at the base, not clasping, and the flowers are solitary in the axils.

Habitat and Ecology: Uncommon in moist places such as temporary pools or depressions and along margins of ponds in shallow still water and on drying mudflats. Weber and Wittmann (2012) consider it an adventive in Colorado.

Comments: Seed capsules are eaten by ducks in the fall and winter. Considered state critically imperiled (S1) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Lythrum alatum Pursh

Winged loosestrife

Lythraceae

Frank Mayfield



Synonyms: None

USDA PLANTS Symbol: LYAL4

ITIS TSN: 27081

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 3,400–6,040 ft. (1,035–1,840 m)

Key Characteristics:

- Stems to 12 dm tall, central stem strongly winged, hairless, slender and erect
- Leaves 1.5–6 cm long x 7–15 mm wide, sessile, rounded bases, lower leaves opposite
- Inflorescence a tall narrow spike, flowers solitary or paired in axils
- Floral tubes purple, 4–6 mm long, conspicuous longitudinal striations, 6 lobes flare out from calyx
- Calyx green or purple with 6 triangular teeth; stamens 6

Grey Raimond



USDA-NRCS PLANTS Database Britton & Brown 1913

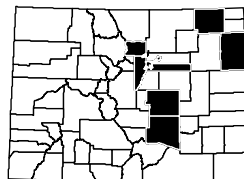
Similar Species: *L. salicaria* [OBL] can be confused with *L. alatum*. *L. salicaria* (purple loosestrife) is a noxious, aggressive, non-native plant that can form dense stands. *L. salicaria* has a square, wingless stem, narrow leaves, 3 or more flowers per axil and 12 stamens not 6.

Habitat and Ecology: Uncommon in moist places, along margins of wetlands and wet meadows.

Comments: A nectar source for bees, butterflies, skippers, and bee flies. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Lythrum salicaria L.

Purple loosestrife

Lythraceae

Ernie Marx



Synonyms: None

USDA PLANTS Symbol: LYSA2

ITIS TSN: 27079

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Non-native, CO Noxious Weed List A

Conservation Status: G5 SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,600–7,100 ft. (1,400–2,165 m)

Key Characteristics:

- ◆ Stems 5–15 (20) dm tall, colonial, sub-glabrous or pubescent, clustered stems; long rhizomes
- ◆ Leaves opposite or sometimes whorled, sessile, lanceolate to nearly linear, 3–10 cm long
- ◆ Inflorescence a spike-like panicle, flowers 3 or more in axil of each bract, lower bracts leafy
- ◆ Floral tubes 4–6 mm long, green, 8- to 12-nerved; sepal lobes narrow, thread-like
- ◆ Petals 6, rose-purple, 7–12 mm long; stamens mostly 12; stigmas and anthers bent up



Jeannie R. Jamish

Dicot Herbs

Ernie Marx



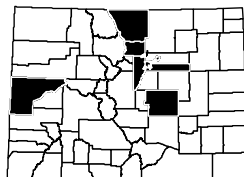
Similar Species: *L. alatum* [OBL] is a native loosestrife that has a winged stem and flowers that are solitary or paired in the axils.

Habitat and Ecology: Locally common in moist places, along margins of ponds, in irrigation ditches and wetlands.

Comments: Purple loosestrife is one of the most aggressive, non-native wetland plant, quickly outcompeting native plants and becoming a monoculture. It is an aggressive weed that should be eliminated immediately upon discovery; consult with the County Extension Agency or the State Weed Coordinator for removal options .

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Rotala ramosior (L.) Koehne

Lowland rotala

Lythraceae

www.southeasternflora.com



Synonyms: None

USDA PLANTS Symbol: RORA

ITIS TSN: 27115

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS S1

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,250–5,250 ft. (1,600–1,600 m)

Key Characteristics:

- ◆ Stems erect or nearly prostrate, sometimes creeping at base with more erect branches, up to 15 cm tall
- ◆ Leaves opposite, arranged at right angles to leaf pair above and below, tapered to petioles
- ◆ Flowers solitary in axils, sessile, subtended by a pair of bracts
- ◆ Floral tubes 2–3 mm long, columnar; flowers bell-shaped
- ◆ Sepals alternate with triangular appendages; petals white or pink, 1 mm long

www.southeasternflora.com



www.southeasternflora.com



Similar Species: *Ammannia robusta* [OBL] flowers are lavender to red and the leaves are sessile with clasping leaf bases.

Habitat and Ecology: Rare. Found in temporary pools or depressions and along margins of ponds in shallow still water and on drying mudflats.

Comments: Considered state critically imperiled (S1) in Montana and Colorado. Seeds and capsules eaten by waterfowl.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Iliamna rivularis (Douglas ex Hook.) Greene

Streambank wild hollyhock

Malvaceae

Trent M. Draper



Synonyms: None

USDA PLANTS Symbol: ILRI

ITIS TSN: 21812

Wetland Status AW: FACW WM: FAC GP: NI

Native Status: Native

Conservation Status: G5 S3?

C-Value: 8

Duration: Perennial

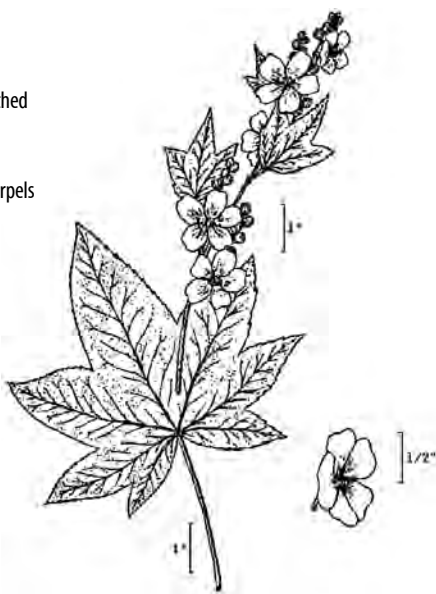
CO Elevation: 6,000–10,300 ft. (1,830–3,140 m)

Key Characteristics:

- ◆ Stems 7–15 dm tall, few to many from woody caudex, herbage minutely stellate pubescent
- ◆ Leaves 3 to 7 lobed, cordate to truncate basally, 2.5–15 cm long x 2–16 cm broad, margins toothed
- ◆ Flowers in interrupted spicate inflorescences, subtended by bracts
- ◆ Petals white, pink or rose; ovaries with many carpels
- ◆ Fruits are capsules with 3 seeds per capsule



Barry Beckling



USDA-NRCS Wetland Flora

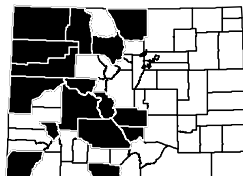
Similar Species: There is an on-going discussion whether *I. crandallii* [ILCR, NI, ITIS 503158] and *I. grandiflora* [ILGR, FACW, ITIS 21808] are distinct species from *I. rivularis*. Weber and Wittmann (2012) separate them out according to sepal width, pedicel length, involucre bract width and calyx length. Ackerfield (2012) recognizes *I. rivularis* as the accepted name for *I. crandallii* and *I. grandiflora*.

Habitat and Ecology: Found in meadows, along streams and creeks, and forest borders.

Comments: *I. rivularis* is highly preferred by sheep and cattle as well as elk and mule deer. Considered state vulnerable (S3) in Wyoming and Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Fire Effects Information System 2012, Weber and Wittmann 2012



Sidalcea candida A. Gray

White checkerbloom

Malvaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: SICA3

ITIS TSN: 21859

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G4 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 6,000–12,460 ft. (1,830–3,800 m)

Key Characteristics:

- ◆ Stems retrorsely hispid below and finely stellate above; rhizomes slender
- ◆ Middle and upper leaves palmately divided with lanceolate divisions; lower leaves orbicular
- ◆ 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

Richard Scully



Al Schneider



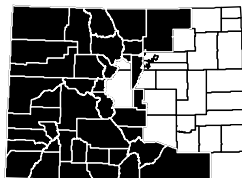
Similar Species: *S. neomexicana* [FACW] occurs in very similar habitats. It is distinguished by the pink to rose-purple flowers, pale yellow or white anthers and the middle and upper leaves are palmately divided but with linear divisions.

Habitat and Ecology: Common along streams and in wet meadows.

Comments: Considered state imperiled (S2) in Wyoming. 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.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012, Welsh et al. 1993



Sidalcea neomexicana A. Gray

Rocky Mountain checkerbloom

Malvaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: SINE3

ITIS TSN: 21891

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4? SNR

C-Value: 5

Duration: Perennial

CO Elevation: 5,000–11,100 ft. (1,525–3,385 m)

Key Characteristics:

- ◆ Stems sparsely hirsute with simple or forked hairs; thickened taproots
- ◆ Middle and upper leaves palmately divided with linear divisions (1–3 mm wide)
- ◆ Flowers in terminal, bracteate racemes
- ◆ Petals rose pink, often fading blue purple, 11–19 mm long; anthers pale yellow or white
- ◆ Fruits with short, curved beaks



USDA-NRCS Wetland Flora

Dicot Herbs

Al Schneider



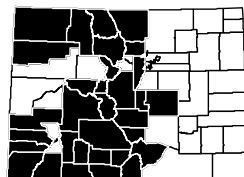
Similar Species: *S. candida* [FACW] has white to pale pink flowers versus rose colored in *S. neomexicana*. The leaves are also palmately divided but with wider divisions (6–4 mm wide).

Habitat and Ecology: Common along streams and in wet meadows.

Comments: Considered state imperiled (S2) in Wyoming. 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.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012, Welsh et al. 1993



Camissonia subacaulis (Pursh) P.H. Raven

Diffuseflower evening primrose

Onagraceae

Garry A. Monroe USDA-NRCS PLANTS Database



Synonyms: *Taraxia subacaulis* (Pursh) Rydb.

USDA PLANTS Symbol: CASU18

ITIS TSN: 27555

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 7,600–8,300 ft. (2,315–2,530 m)

Key Characteristics:

- ◆ Acaulescent, herbage glabrous; taproots stout
- ◆ Leaves in a basal rosettes; blades tapering into petioles, 5–30 cm long, margins minutely ciliate
- ◆ Flowers yellow, basal, sessile in leaf axils, opening in the morning and wilting soon after
- ◆ Floral tubes 1.5–3 mm long; sepals 6–15 mm long, separately reflexed; petals 7–15 mm long, erose
- ◆ Capsules sessile 1.3–2.5 cm long, 5–7 mm thick, 4-angled quadrangular, each valve with evident midribs

Barry Beckling



Jeanne R. Jamish

Similar Species: *C. breviflora* (= *T. breviflora*) [CABR22, FAC, ITIS 27474] leaves are pinnatifid, plants are densely hairy, and not glabrous. *Oenothera acutissima* [OEAC, NI, ITIS 503994] occurs in similar habitats in northwestern Colorado where water collects along rocks and gullies. It has yellow flowers with red margins on the sepals and narrow leaves, less than 1.5 cm wide.

Habitat and Ecology: Uncommon in grasslands, meadows and moist places.

Comments: The hawk-moth is specialized for pollinating members of Onagraceae. Members of the Onagraceae are distinct with flower parts in 4s and inferior ovaries.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Chamerion latifolium (L.) Holub

Dwarf fireweed

Onagraceae

Al. Schneider



Synonyms: *Chamerion subdentatum* (Rydb.) Á. Löve & D. Löve, *Epilobium latifolium* L.

USDA PLANTS Symbol: CHLA13

ITIS TSN: 510758

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

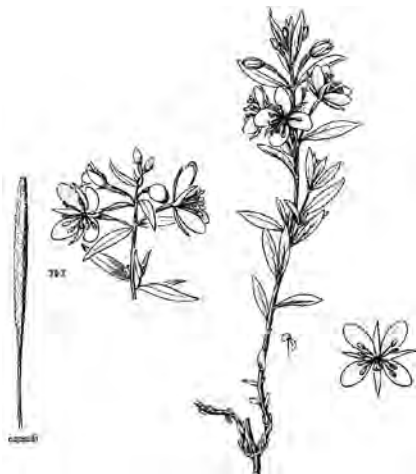
CO Elevation: 6,900–13,200 ft. (2,105–4,025 m)

Key Characteristics:

- ◆ Stems 1–4 (7) dm long, decumbent to ascending, glabrous below, puberulent above
- ◆ Leaves opposite, usually alternate above, 1.5–8 cm long x 0.5–3 cm wide, pubescent
- ◆ 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)

Dicot Herbs

Al. Schneider



Bobbi Angell and Jeanne R. Janish

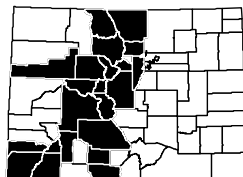
Similar Species: Related to *C. angustifolium* [CHAN9, FAC, ITIS 510756] or common fireweed. *C. angustifolium* is much taller and the racemes are elongate with numerous flowers.

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. Considered state critically imperiled (S1) in Utah and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Circaea alpina L.

Small enchanter's nightshade

Onagraceae

Scott Smith



Synonyms: None

USDA PLANTS Symbol: CIAL

ITIS TSN: 27563

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,200–12,000 ft. (1,890–3,660 m)

Key Characteristics:

- ◆ Stems 0.5–5.5 dm tall, simple or branched, delicate; rhizomes, stolons or tubers
- ◆ Leaves opposite, ovate, denticulate; blades 1–7 (9.5) cm long x 0.8–5.7 cm wide
- ◆ Flowers white to pink, tiny, in a raceme; pedicels subtended by minute bracts
- ◆ Sepals 1–2 mm long, white to pinkish, notched near the middle
- ◆ Fruits pubescent with hooked hairs, seeds lacking tuft of hairs (coma) at upper end

Ull-Lorimer



Jeanne R. Janish

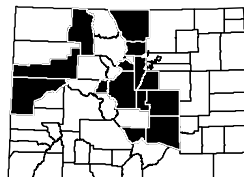
Similar Species: *C. alpina* is distinctive with the combination of opposite leaves and fruits with hooked hairs.

Habitat and Ecology: *C. alpina* Found along streams and creeks, springs and other shady, moist places.

Comments: Small enchanter's nightshade is not related to the nightshade family (Solanaceae), which includes deadly nightshades (*Solanum* spp.). Members of the Onagraceae are distinct with flower parts in 4s and inferior ovaries.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Epilobium ciliatum Raf. Fringed willowherb

Onagraceae

Al Schneider



Key Characteristics:

- ◆ Stems 0.5–20 dm tall, solitary, simple to freely branched, basal leaves with or without turions
- ◆ Leaves opposite, 3–12 cm long x 0.5–5.5 cm wide, serrulate, teeth remote or obscure
- ◆ Inflorescence an erect raceme, with numerous flowers, glandular-puberulent; pedicels 2–15 mm long

Synonyms: *Epilobium ciliatum* Raf. var. *glandulosum* (Lehm.) Dorn

USDA PLANTS Symbol: EPCI

ITIS TSN: 27293

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

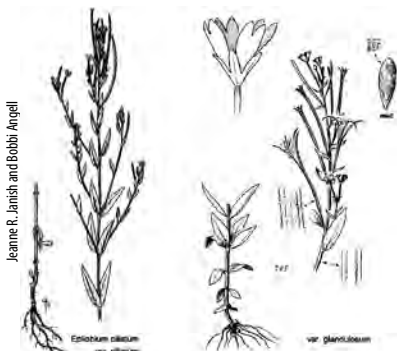
Duration: Perennial

CO Elevation: 4,650–11,500 ft. (1,415–3,505 m)

- ◆ Floral tubes 0.5–2 mm long; sepals 2–6 mm long, often reddish; petals 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

Dicot Herbs

Al Schneider



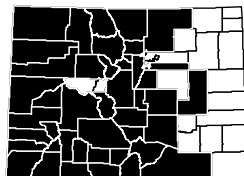
Similar Species: *E. ciliatum* is probably the most commonly encountered willow-herb in Colorado's wetlands. It is distinguished by the much-branched inflorescence and ridged seeds. *E. leptophyllum* [OBL, FACW] is likely a variety of *E. ciliatum*. The only morphological character that distinguishes *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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Steve Matson



Synonyms: None

USDA PLANTS Symbol: EPHA

ITIS TSN: 27304

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

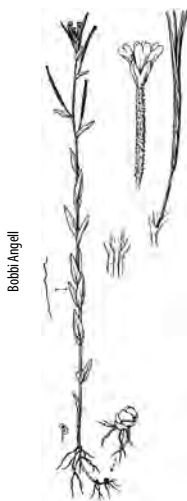
Duration: Perennial

CO Elevation: 6,600–14,310 ft. (2,010–4,360 m)

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 pink-lavender-white, 3–5 mm long, notched
- ◆ Capsules 2.5–5 cm long, glabrous; seeds, 1–1.5 mm long, finely cellular-reticulate

Steve Matson



Bobbi Angell

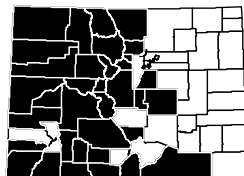
Similar Species: *E. hornemannii* [FACW] grows in similar habitats but does not have turions and the floral tubes are longer, up to 1.5 mm.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Epilobium hornemannii Rchb.

Hornemann's willowherb

Onagraceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: EPHO

ITIS TSN: 27306

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,900–13,480 ft. (1,495–4,110 m)

Key Characteristics:

- ◆ Stems 1–4 dm tall, gland-tipped hairs, arising from scaly, rhizome-like bases, lacking turions
- ◆ Leaves 1.5–4 (5.5) cm long up to 2 cm wide, short-petiolate or sessile, entire, obtuse or rounded
- ◆ Inflorescence glandular-pubescent, few flowers in axils of leafy bracts; pedicels 0.5–2.5 cm long
- ◆ Floral tubes 1–1.5 mm long; sepals 2–4.5 mm long, purple, petals pink-purple, 2.5–9 mm long
- ◆ Capsules erect, 4–5.5 cm long, slender, 1 mm thick, seeds 0.9–1.6 mm long, bumpy

Dicot Herbs

Al Schneider



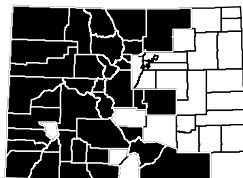
Similar Species: *E. halleianum* [FACW] occurs in similar habitats but has turions, the capsules are shorter, 2.5–5 cm long and the floral tubes are only 0.5–1 mm long. *E. lactiflorum* [FACW] has white or pink-tipped flowers and smooth seeds.

Habitat and Ecology: Common along streams, in meadows and other wet places.

Comments: *E. hornemannii* var. *hornemannii* and var. *lactiflorum* are considered state vulnerable (S3) in Wyoming. *Epilobium* spp. are used as food plants by caterpillars of certain butterflies, moths and hawk-moths (*Lepidoptera* spp.).

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Epilobium lactiflorum Hausskn. Milkflower willowherb

Onagraceae

Barry Breckling



Synonyms: *Epilobium hornemannii* Rchb. var. *lactiflorum* (Hausskn.) D. Löve

USDA PLANTS Symbol: EPLA3

ITIS TSN: 27309

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,680–13,690 ft. (2,035–4,175 m)

Key Characteristics:

- Stems 1–4 dm tall, gland-tipped hairs, arising from scaly, rhizome-like bases, lacking turions
- Leaves 1.5–4 (5.5) cm long up to 2 cm wide, short-petiolate or sessile, entire, obtuse or rounded
- Inflorescence glandular-pubescent, few flowers in axils of leafy bracts; pedicels 2–4.5 cm long
- Floral tubes 1–1.5 mm long; sepals 2–4.5 mm long, purple; petals white, 2.5–9 mm long
- Capsules erect, 4–5.5 cm long, slender, 1 mm thick, seeds 0.9–1.6 mm long, bumpy

Lindsey Koepke USDA-NRCS PLANTS Database



Susan McDougall USDA-NRCS PLANTS Database



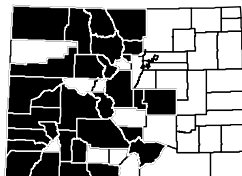
Similar Species: *E. hornemannii* [FACW] has shorter pedicels (0.5–2.5 cm long) and pink or purple flowers. *E. hornemannii* and *E. lactiflorum* both have very similar morphological characters and are likely varieties of *E. hornemannii*.

Habitat and Ecology: Common along streams, in meadows and forest rills.

Comments: Ackerfield (2012) and Cronquist et al. (1997) recognize *E. lactiflorum* as the accepted name for *E. hornemannii* var. *lactiflorum*. *Epilobium* spp. are used as food plants by caterpillars of certain butterflies, moths and hawk-moths (*Lepidoptera* spp.).

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012



Epilobium leptocarpum Hausskn.

Slenderfruit willowherb

Onagraceae

Neal Ford



Synonyms: None

USDA PLANTS Symbol: EPLE

ITIS TSN: 27310

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,740–10,150 ft. (2,665–3,095 m)

Key Characteristics:

- ◆ Stems 1–4 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, with distinct veins
- ◆ 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 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

Dicot Herbs

Neal Ford



Neal Ford



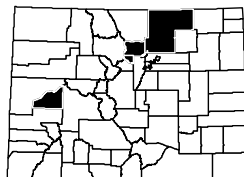
Similar Species: The *E. ciliatum* complex is an extremely variable species, with hybridization common. Further genetic research will likely demonstrate that *E. leptocarpum* is a variety of *E. ciliatum*. USDA-NRCS PLANTS Database, as of 2012, recognizes *E. leptocarpum* as a distinct species.

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.

Animal and Bird Use: 

References: Cronquist et al. 1997, Weber and Wittmann 2012



Epilobium leptophyllum Raf.

Bog willowherb

Onagraceae

Louis M. Landry



Synonyms: *Epilobium palustre* L. var. *gracile* (Farw.)

Dorn

USDA PLANTS Symbol: EPLE2

ITIS TSN: 27311

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 3,900–11,120 ft. (1,190–3,390 m)

Key Characteristics:

- ◆ Stems 2 dm tall, densely hairy; stolons slender, terminating in a turion
- ◆ Leaves opposite, sessile, linear, 1.5–7 cm long x 1–7 mm wide, revolute
- ◆ Inflorescence a raceme nodding in bud, densely silvery with appressed hairs; pedicels 1–4 mm
- ◆ Floral tubes 0.8–1.5 mm long; sepals 2.5–4.5 mm long; petals white to pink, 3.5–7 mm long
- ◆ Capsules 3.5–8 mm long, silvery with appressed hairs, seeds 1.5–2.2 mm long, tuft of hairs persistent

Louis M. Landry



Bobbi Angell



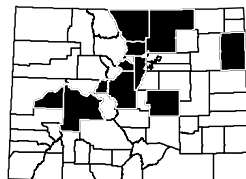
Similar Species: The *E. palustre* complex is extremely variable. Ackerfield (2012) recognizes *E. leptophyllum* as *E. palustre* var. *gracile*. Cronquist et al. (1994) state that *E. leptophyllum* is closely related to *E. palustre*.

Habitat and Ecology: Found in wet meadows, fens and marshy ground

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 stem. The new turions will be produced in the axils of the old bud-scales.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Epilobium palustre L.

Marsh willowherb

Onagraceae

Kristian Peters



Synonyms: *Epilobium palustre* L. var. *grammadophyllum* Hausskn.

USDA PLANTS Symbol: EPPA

ITIS TSN: 27320

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 7,100–10,200 ft. (2,165–3,110 m)

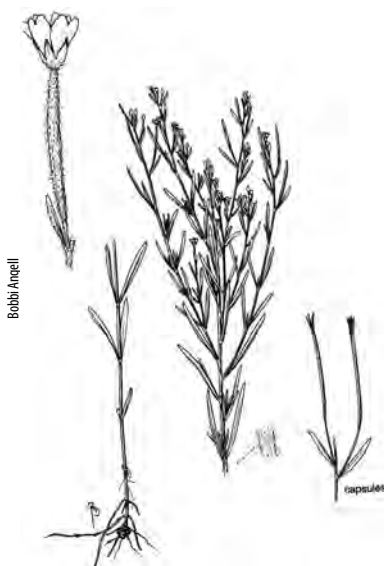
Key Characteristics:

- ◆ Stems 1–5 (8) dm tall, sparsely puberulent; stolons slender
- ◆ Leaves opposite, sessile, 2–7 cm long x 2–15 mm wide, entire, often revolute
- ◆ Inflorescence a raceme nodding in bud, densely silvery with appressed hairs; pedicels 0.5–2.5 cm
- ◆ Floral tubes 1–2 mm long; sepals 2–4 mm long; petals white-pink, 4–6 mm long, evidently notched at tips

- ◆ Capsules 3–7 mm long, silvery with appressed hairs; seeds 1.5–2 mm long, tuft of hairs persistent

Dicot Herbs

Louis M. Landry



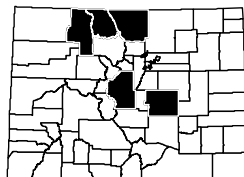
Similar Species: *E. ciliatum* [FACW] does not have the densely hairy, grayish-canescens inflorescence and capsules.

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.). *E. palustre* is considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012

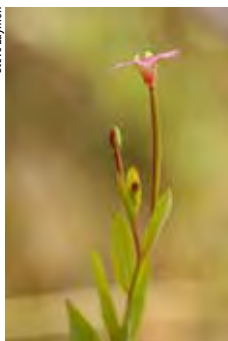


Epilobium saximontanum Hausskn.

Rocky Mountain willowherb

Onagraceae

Steve Laymon



Synonyms: None

USDA PLANTS Symbol: EPSA

ITIS TSN: 27323

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 6,520–12,600 ft. (1,985–3,840 m)

Key Characteristics:

- ◆ Stems 1–5 dm tall, puberulent to glandular upward; taproots; turions present
- ◆ Leaves opposite, clasping; blades 8–55 mm long x 3–16 (25) mm wide; margins irregularly dentate
- ◆ Flowers few to many in terminal, bracteate racemes; hypanthium short; pedicels 5 (8) mm long
- ◆ Sepals 1–3 mm long; petals 2–4.5 mm long, white, rarely purple
- ◆ Capsules 2–6 cm long, erect, appressed to stem; seeds longitudinally striate, 1–1.5 mm long

Colorado State University Herbarium



Bobbi Annell

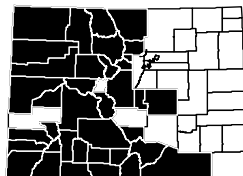
Similar Species: *E. saximontanum* hybridizes with *E. halleanum*, *E. ciliatum* and *E. hornemannii*, making identification difficult.

Habitat and Ecology: Common along streams, lake margins, wet meadows and fens.

Comments: Considered state vulnerable (S3) in Wyoming. *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 stem. The new turions will be produced in the axils of the old bud-scales.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012, Welsh et al. 1993



***Gaura neomexicana* Woot. ssp. *coloradensis* (Rydb.) P.H. Raven & Gregory**
Colorado butterfly plant **Onagraceae**

Crystal Strouse



Synonyms: *Oenothera coloradensis* Rydb. ssp. *coloradensis* (Woot.) W.L. Wagner & Hoch.

USDA PLANTS Symbol: GANEC

ITIS TSN: 27659

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G3T2 S1; Listed Threatened

C-Value: 8

Duration: Biennial

CO Elevation: 5,250–6,400 ft. (1,600–1,950 m)

Key Characteristics:

- ◆ Stems 1 to few, 5–8 dm tall, reddish, pubescent stems
- ◆ Leaves lance-shaped, margins smooth or wavy-toothed, 5–10 cm long, leaves reduced upwards
- ◆ Inflorescence a raceme with staggered flowering, lacking glandular hairs; hypanthium 7–12 mm

- ◆ Sepals 9–11 mm; petals 4, 8–10 mm long x 1–1.5 cm wide, white, turning pink with age

- ◆ Fruits hard, nut-like, 4-angled, sessile

Dicot Herbs

Crystal Strouse



Bonnie Heidel

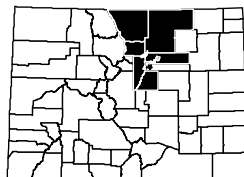
Similar Species: *Gaura mollis* (= *Oenothera curtifolia*) [FACU] has a narrow, elongate inflorescence at all stages and white flowers less than 3 mm long. *G. neomexicana* ssp. *neomexicana* [GANEN, FACW, FAC, ITIS 27658] has inflorescence branches with glandular hairs and it is found only in southern Colorado and northern New Mexico.

Habitat and Ecology: Rare. Found in moist meadows and on sub-irrigated soils on level or slightly sloping floodplains and drainage bottoms. Recently, several new occurrences have been documented in Adams, Jefferson and Douglas Counties. The occurrences are very small, 1–2 individuals in highly disturbed urban wetlands.

Comments: *G. neomexicana* ssp. *coloradensis* is a regional endemic restricted to southeastern Wyoming and northern Colorado. The flowers open at dusk and are pollinated by moths. First-year rosettes are key to identifying plants.

Animal and Bird Use: 

References: Ackerfield 2012, Colorado Native Plant Society 1997, Fertig and Heidel 2008, Weber and Wittmann 2012



***Oenothera elata* Kunth ssp. *hirsutissima* (A. Gray ex S. Watson) W. Dietr.**
Hooker's evening primrose **Onagraceae**

Patrick Alexander USDA-NRCS PLANTS Database

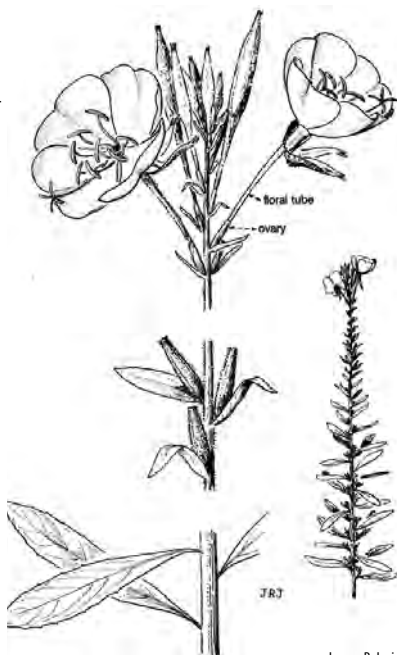


Synonyms: None
USDA PLANTS Symbol: OEELH
ITIS TSN: 524352
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: GST5 SNR
C-Value: 5
Duration: Biennial, Perennial
CO Elevation: 4,000–10,400 ft. (1,220–3,170 m)

Key Characteristics:

- ◆ Stems 0.5–2 m tall, erect, usually branched from bases, densely to sparsely hairy or gland-tipped
- ◆ Leaves basal, 5–15 cm long x 1.5–4 cm wide, pubescent; cauline leaves 5–15 cm long x 5–25 mm wide
- ◆ Flowers in terminal spike or panicle
- ◆ Floral tubes 2–4 (5) cm long, often reddish, pubescent; petals 2–6 cm long; sepals 2–6 cm, yellow
- ◆ Capsules 2.5–4 cm long x 4.5–5 mm thick, cylindric, strigose and hirsute

Gary A. Monroe USDA-NRCS PLANTS Database



Jeanne R. Janish

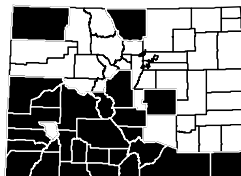
Similar Species: *O. longissima* [OBL] has longer floral tubes, 6–13.5 cm long. *O. villosa* [OEVI, FAC, ITIS 27421] petals and sepals are not over 20 mm long.

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.

Animal and Bird Use:

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012



Oenothera flava (A. Nelson) Garrett

Yellow evening primrose

Onagraceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: OEFL

ITIS TSN: 27397

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

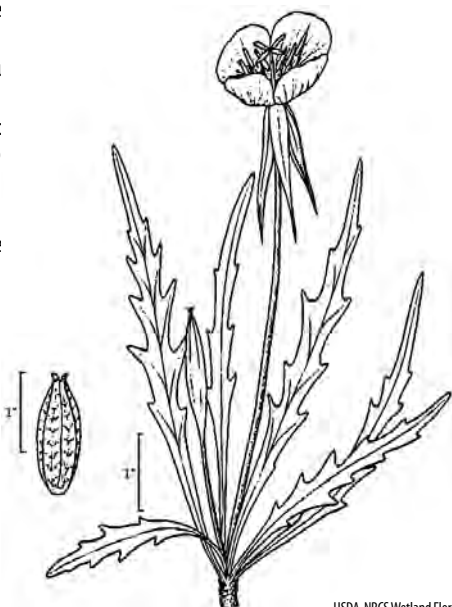
CO Elevation: 5,200–10,300 ft. (1,585–3,140 m)

Key Characteristics:

- ◆ Acaulescent (without a stem), taprooted from fe
branched root-crowns
- ◆ Leaves 5–30 cm long x 0.5–6 cm wide, short pu
cent along margins, otherwise glabrous
- ◆ Flowers erect in bud, floral tubes slender, 3–13 c
long; calyx 1–2 cm long, often turned to one sid
- ◆ Petals (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 scatte
hairs, winged



Al Schneider



USDA-NRCS Wetland Flora

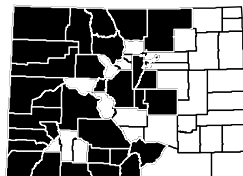
Similar Species: *O. howardii* [OEHO2, NI, ITIS 504002] has much longer petals and sepals and the leaves are pubescent throughout.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Oenothera longissima Rydb.

Longstem evening primrose

Onagraceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: OELO

ITIS TSN: 27428

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G4 S1

C-Value: Not Assigned

Duration: Biennial, Perennial

CO Elevation: 4,800–5,100 ft. (1,465–1,555 m)

Key Characteristics:

- ◆ Stems 7–30 dm tall, crisp-puberulent with pustulate hairs
- ◆ Leaves 7–40 cm x 1–4.5 cm, hairy with short, stiff hairs, sessile or short-petiolate
- ◆ Inflorescence an elongate, terminal spike, flowers sessile in axils of foliar bracts
- ◆ Floral tubes 6–13.5 cm long; sepals 2.5–5.5 cm long, reflexed; petals spreading, bright yellow
- ◆ Capsules erect, 3–5.5 cm long, rounded-quadrangular; seeds numerous in 2 rows

Al Schneider



Al Schneider



Similar Species: *O. elata* [FACW] has similar petals and sepals, but the floral tubes are much shorter, 2–4 cm long.

Habitat and Ecology: Uncommon in moist places, desert washes, cliffside seeps, hanging gardens, and along roadsides and irrigation ditches.

Comments: Considered state critically imperiled (S1) in Colorado. The type locality for *O. longissima* is at Natural Bridges National Monument in Utah. Provides a nectar source for moths and hawkmoths. Members of the Onagraceae are distinct with flower parts in 4s and inferior ovaries.

Animal and Bird Use: 

References: Ackerfield 2012, Bill Jennings personal communication, Cronquist et al. 1997, Weber and Wittmann 2012



Plantago elongata Pursh

Prairie plantain

Plantaginaceae

Gary A. Monroe USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: PLEL

ITIS TSN: 32877

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 S4

C-Value: Not Assigned

Duration: Annual

CO Elevation: 5,000–6,890 ft. (1,525–2,100 m)

Key Characteristics:

- ◆ Stems 3–20 cm tall, rough-puberulent to glabrous; taprooted
- ◆ Leaves rough-puberulent to glabrous, woolly at bases, linear, 1-nerved, succulent, 2–10 cm long
- ◆ Spikes glabrous, 1–10 cm long, slender, loosely to closely flowered, rachises partly exposed
- ◆ Bracts fleshy, broadly ovate, spurred-keeled, 2 mm long

- ◆ Corolla small, lobes 0.5–1 mm long, usually spreading or reflexed; stamens 2

Dicot Herbs

Gary A. Monroe USDA-NRCS PLANTS Database




Jeanne R. Janish



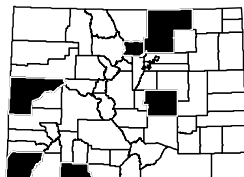
Similar Species: Only annual plantain known to occur in Colorado. Other plantains either have much wider leaves or have white, woolly hairs throughout.

Habitat and Ecology: Uncommon on seasonally moist alkaline flats.

Comments: Even though the flowers are wind pollinated, plantains do attract caterpillars that feed on the leaves. The seeds are eaten by sparrows as well as small mammals.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Plantago eriopoda Torr. Redwool plantain

Plantaginaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: PLER

ITIS TSN: 504434

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

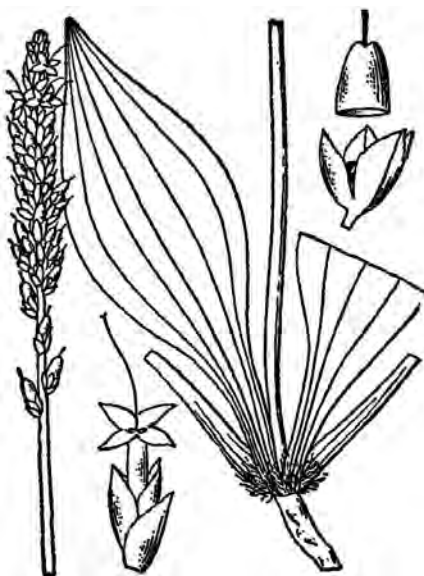
Duration: Perennial

CO Elevation: 3,500–9,500 ft. (1,065–2,895 m)

Key Characteristics:

- ◆ Stems up to 4.5 dm tall, reddish-brown, woolly at crown; taproots stout, short
- ◆ Leaves 8–25 cm long x 1–5.5 cm wide, brittle, somewhat fleshy
- ◆ Spikes elongate, 5–20 cm long at maturity
- ◆ Corolla lobes 1–1.5 mm long
- ◆ Capsules 3–4 mm long; seeds 2.0–2.7 mm long

Al Schneider



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *P. tweedyi* [PLTW, NI, ITIS 32894] is very similar, but it is not woolly at the crown and the spikes are shorter (2–7 cm long).

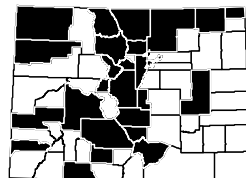
Habitat and Ecology: Grows in moist, usually alkaline meadows.

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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Dicot Herbs

Navarretia saximontana S.C. Spencer

Rocky Mountain pincushion plant

Polemoniaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: -NA-

ITIS TSN: 845261

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 6,000–8,360 ft. (1,830–2,550 m)

Key Characteristics:

- ◆ Stems erect, 2–12 cm, simple or branched, branches prostrate to ascending, puberulent
- ◆ Leaves 5–20 mm long with 6 to 13 primary lobes on upper leaf
- ◆ Inflorescence a dense, terminal cymose head, glabrous to villous, not white tomentose
- ◆ Calyx 5–8 mm long, villous inside, lobes unequal; corolla white to pale lavender or blue, 4–7 mm long
- ◆ Stigmas usually 2, rarely 3; styles 1.9–3 (3.4) mm long; capsules 2–3 mm long

Dicot Herbs

Carol Whitman



Steve Matson



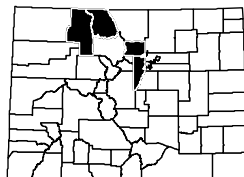
Similar Species: *N. intertexta* [NAIN2, FACW, ITIS 31316] has longer styles, 3.5–10 mm long and the corolla is longer, not shorter than the longest sepal lobes. *N. intertexta* has not been confirmed in Colorado. *N. breweri* [NABR,FAC, ITIS 31325] has yellow flowers and 3 stigmas.

Habitat and Ecology: Uncommon in open forests, dry slopes and along margins of drying ponds.

Comments: Global range extends from Alberta and Saskatchewan south to Arizona. Considered state imperiled (S2) in Montana. *N. saximontana* is included, even though it does not have a PLANTS Symbol, for it is on the Wetland Plant List for Colorado.

Animal and Bird Use: None known.

References: Ackerfield 2012, Cronquist 1994, Weber and Wittmann 2012



Phlox kelseyi Britton ssp. *salina* (M.E. Jones) Wherry

Saline phlox

Polemoniaceae

Wikipedia Commons



Synonyms: None

USDA PLANTS Symbol: PHKES

ITIS TSN: 524490

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G4T3?Q S1

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 9,000–9,300 ft. (2,745–2,835 m)

Key Characteristics:

- ◆ Stems caespitose, numerous, 1 dm long, prostrate, hairy, sometimes glandular
- ◆ Leaves succulent, up to 2.5 cm long x 1–2.5 mm wide, margins thickened, ciliate toward the bases
- ◆ Flowers short-pedicellate or sessile, solitary at the end of stems; calyx lobes flattened
- ◆ Corolla light blue to white, tubes 10–13 mm long, equaling or surpassing calyx, lobes 6–9 mm long
- ◆ Styles 3.5–7.5 mm long

USDA-NRCS PLANTS Database Britton & Brown 1913



Biopix



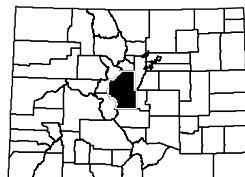
Similar Species: There are no similar species found in alkaline mineral wetlands. *P. longifolia* [PHL02, NI, ITIS 30956], an upland species, might be at the edge of a wetland. It is distinguished with a open cyme of flowers on long, slender pedicels and it is not mat-forming

Habitat and Ecology: Rare. Found on sedge hummocks in moist alkaline meadows and fens in South Park.

Comments: Weber and Wittmann (2012) state that the occurrences of *P. kelseyi* ssp. *salina* represent lower altitude occurrences of *P. pulvinata* [PHPU5, NI, ITIS 30980], a common alpine plant found near the Continental Divide. It is very fragrant with a cinnamon or clover smell that likely attracts bees for pollination. Considered state critically imperiled (S1) in Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Polemonium occidentale Greene ssp. *occidentale*

Western polemonium

Polemoniaceae

Steve Olson



Synonyms: *Polemonium caeruleum* L. ssp. *amygdalium* (Wherry) Munz

USDA PLANTS Symbol: POOCO

ITIS TSN: 524548

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5?T5? SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,300–11,500 ft. (1,920–3,505 m)

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
- ◆ Inflorescence an open branched cyme, longer than broad
- ◆ Flowers campanulate (bell-shaped) not funnel-shaped, light blue to purple; sepals herbaceous
- ◆ Seeds not mucilaginous when wet

Dicot Herbs

Steve Olson



Denise Culver



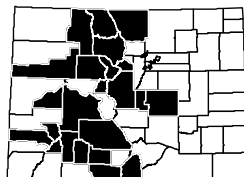
Similar Species: *P. foliosissimum* [POFO, FACU, ITIS 31012] stems are numerous and clustered, the leaflets are pubescent, the inflorescence is more compact, flat-topped and seeds are mucilaginous when wet.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012, Welsh et al. 1993



Koenigia islandica L.

Island purslane

Polygonaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: KOIS

ITIS TSN: 20844

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G4 S2?

C-Value: 9

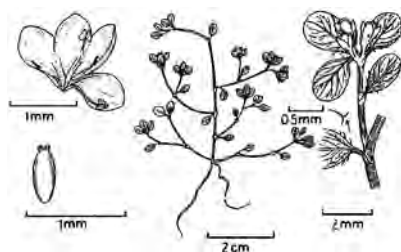
Duration: Annual

CO Elevation: 10,000–13,500 ft. (3,050–4,115 m)

Key Characteristics:

- ◆ Stems (0.5) 1–8 (20) cm tall, reddish, rooting adventitiously from nodes, glabrous; taproots
- ◆ Leaves cauline, oblanceolate to obovate, blunt, sessile, opposite to whorled
- ◆ Leaf sheaths (ocrea) brownish, broadly funnelliform, 1–1.5 mm, margins oblique; petioles 2–10 mm
- ◆ Tepals 3, greenish or tinged white or pink at tips
- ◆ Achenes triangular, dark brown

Denise Culver



eFlora of Pakistan

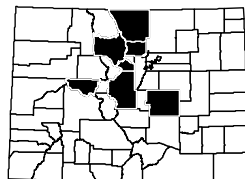
Similar Species: *Epilobium* spp. seedlings can resemble *K. islandica*. *Epilobium* spp. also have reddish stems and opposite leaves, but *Koenigia islandica* lacks the whitish or pinkish flowers and hairy seeds.

Habitat and Ecology: Very inconspicuous plant in moist alpine tundra, streams, fens and lake shores.

Comments: *Koenigia islandica* is among the smallest of terrestrial flowering plants and one of the few annual species in arctic and alpine floras. Circumpolar. Considered state critically imperiled (S1) in Utah and Wyoming and state imperiled (S2) in Montana and Colorado.

Animal and Bird Use: None known.

References: Ackerfield 2012, Fertig 2000, Flora of North America 2005, Weber and Wittmann 2012



Polygonum aviculare L.

Narrowleaf knotweed

Polygonaceae

Keir Monge



Synonyms: *Polygonum arenastrum* Jord. exBoreau

USDA PLANTS Symbol: POAV

ITIS TSN: 20876

Wetland Status AW: FACW WM: FAC GP: FACU

Native Status: Non-native

Conservation Status: GNR SNR

C-Value: 0

Duration: Annual, Perennial

CO Elevation: 3,460–12,790 ft. (1,055–3,900 m)

Key Characteristics:

- ◆ Stems prostrate, prominently 8–16 ribbed, bluish-green, sometimes whitish with powdery mildew
- ◆ Leaves lanceolate, elliptic, obovate, or spatulate, upper leaves longer than flowers
- ◆ Inflorescence an axillary, cyme uniformly distributed or aggregated; pedicels 1.5–5 mm long
- ◆ Perianth 2–3 mm long, not constricted or beaked, green or reddish-brown
- ◆ Tepals purple to pink; achenes dull, rough, dark brown

Dicot Herbs

Keir Monge



Keir Monge



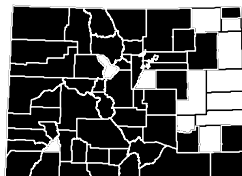
Similar Species: *P. argyrocoleon* [POARS, FAC, ITIS 20873] is another non-native knotweed. It is distinguished by shiny, smooth achenes, the upper leaves are shorter than the flowers, the pedicels are shorter (1–2 mm long) and the leaves are linear to lanceolate.

Habitat and Ecology: Common weed in disturbed places along roadsides and ditches.

Comments: The scientific name of *P. aviculare* pertains to birds, which eat the seeds and young leaves.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Polygonum bistortoides Pursh

American bistort

Polygonaceae

Al Schneider

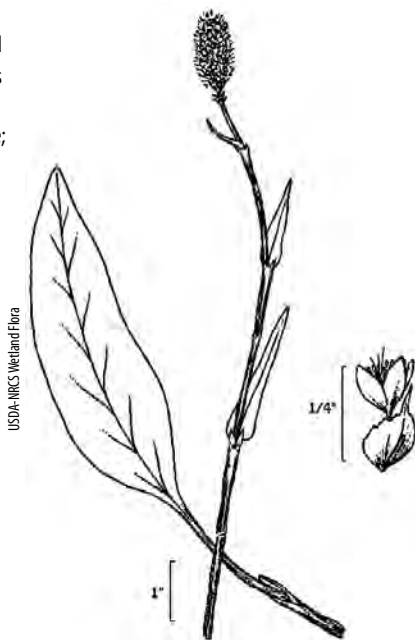


Synonyms: *Bistorta bistortoides* (Pursh) Small
USDA PLANTS Symbol: POBI6
ITIS TSN: 20879
Wetland Status AW: FACW WM: FACW GP: OBL
Native Status: Native
Conservation Status: G5 SNR
C-Value: 7
Duration: Perennial
CO Elevation: 7,000–14,430 ft. (2,135–4,400 m)

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 cylindric to ovoid, 8–25 mm wide; bulblets absent
- ◆ Flowers 1–2 per fascicle; perianth white or pale pink; tepals oblong, 4–5 mm, stamens exserted
- ◆ Achenes yellowish-brown or olive-brown, 3.2–4.2 mm long x 1.3–2 mm wide, shiny, smooth

Mark S. Brummell



Similar Species: *P. viviparum* [FACW] is shorter, 0.8–3 dm tall and the inflorescence is narrower with pink to brown bulblets in place of lower flowers.

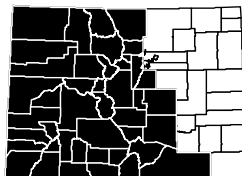
Habitat and Ecology: Common along streams, in moist meadows, marshes, aspen forests and in alpine tundra.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Dicot Herbs

Polygonum hydropiper L.

Marshpepper knotweed

Polygonaceae

Louis M. Landry



Synonyms: *Persicaria hydropiper* (L.) Opiz

USDA PLANTS Symbol: POHY

ITIS TSN: 20856

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

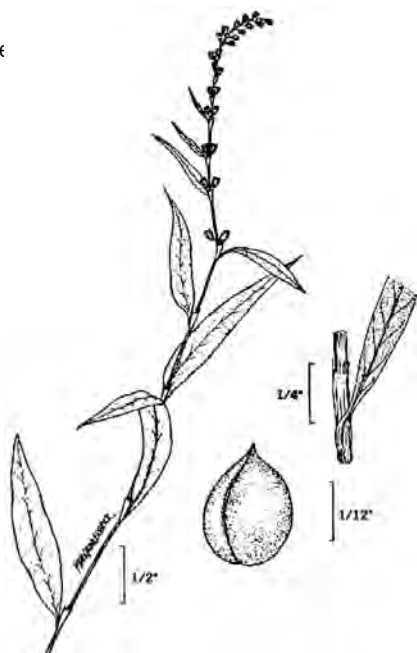
Duration: Annual

CO Elevation: 4,960–7,610 ft. (1,510–2,320 m)

Key Characteristics:

- ◆ Stems 2–8 (10) dm tall, branched, without noticeable ribs; glandular-punctate, fibrous roots
- ◆ Leaf sheaths with marginal bristles, swollen, filled with cleistogamous (self-fertilized) flowers
- ◆ Flowers loosely arranged in a raceme
- ◆ Perianth greenish at bases with white or pink tips, glandular-punctate with numerous dots
- ◆ Achenes dull and minutely roughened

Joseph M. DiTomaso



USDA-NRCS Wetland Flora

Similar Species: *P. punctata* (= *Persicaria punctata*) [FACW] spreads from rhizomes, has sheaths that are not swollen and achenes that are shiny and smooth.

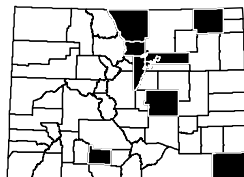
Habitat and Ecology: Found in shallow water, irrigation ditches and along margins of lakes and ponds.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Polygonum lapathifolium L.

Curlytop knotweed

Polygonaceae

Ernie Marx



Synonyms: *Persicaria lapathifolia* (L.) Gray

USDA PLANTS Symbol: POLA4

ITIS TSN: 20860

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 3,500–10,170 ft. (1,065–3,100 m)

Key Characteristics:

- ◆ 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 lacking dark blotch on upper side
- ◆ Inflorescence a raceme, densely clustered, nodding; peduncles with granular yellow glands
- ◆ Perianth segments 4, outer with midvein divided at top with branches recurved, greenish-white or pink

- ◆ Achenes brown to black, disk-shaped, shiny or dull, smooth

Ernie Marx



Yeom Wilson-Ramsey



Similar Species: *P. pennsylvanicum* (= *P. bicornis*) [FACW] has 5 perianth segments, the racemes are erect, rarely drooping, and flowers are pink or rose-colored.

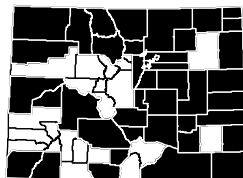
Habitat and Ecology: Common in shallow water, margins of lakes and ponds and irrigation ditches. Though native to other regions of North America, Colorado and Wyoming consider *P. lapathifolia* as an adventive species.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Dicot Herbs

Polygonum pensylvanicum L.

Pennsylvania smartweed

Polygonaceae

Dan Tenaglia



Key Characteristics:

- ◆ Stems 1–20 dm tall, ribbed, glandular or stipitate-glandular
- ◆ Racemes erect or rarely arching; peduncles with stalked red-purple glands
- ◆ Perianth glabrous or rarely glandular, segments 5, without anchor-shaped vein
- ◆ Tepals pink or rose, rarely greenish-white; styles and stamens not exserted

Synonyms: *Persicaria bicornis* (Raf.) Nieuwl., *Persicaria pensylvanica* (L.) Small

USDA PLANTS Symbol: POPE2

ITIS TSN: 20861

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

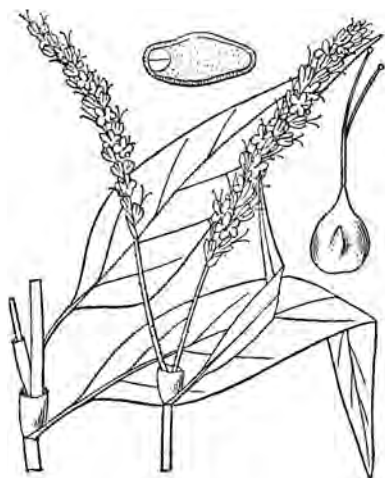
Conservation Status: G5 SNR

C-Value: 1

Duration: Annual

CO Elevation: 3,700–8,560 ft. (1,130–2,610 m)

- ◆ Achenes brownish-black to black, one side usually concave and other with central hump, shiny



USDA-NRCS PLANTS Database Britton & Brown 1913

Dicot Herbs



Dan Tenaglia

Similar Species: *P. lapathifolia* [FACW] has 4 perianth segments, the outer ones with a midvein that is divided at the top giving the nerve an anchor shape.

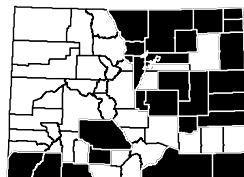
Habitat and Ecology: Common in shallow water, margins of lakes and ponds and irrigation ditches.

Comments: USDA-NRCS PLANTS Database subsumes *P. bicornis* with *P. pensylvanica*. Ackerfield (2012) and Weber and Wittmann (2012) separate out the species: 1a. Stamens or styles exserted; achene with central bump within a depression on one side.*P. bicornis* [PEBI4]. 1b. Stamens and styles included; achene lacking central bump on one side.*P. pensylvanicum*. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Polygonum persicaria L.

Spotted ladythumb

Polygonaceae

Keir Morse



Synonyms: *Persicaria maculata* (Raf.) Gray, *Persicaria maculosa* Gray, *Polygonum persicaria* L. var. *angustifolium* Beckh.

USDA PLANTS Symbol: POPE3

ITIS TSN: 20915

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Non-native

Conservation Status: G3G5 SNA

C-Value: 0

Duration: Annual, Perennial

CO Elevation: 3,650–8,200 ft. (1,115–2,500 m)

Key Characteristics:

- Stems 1–7 (13) dm, glabrous; roots arising from nodes, rhizomes and stolons absent
- Leaves with a prominent dark blotch on upper side; leaf sheaths (ocreas) with cilia or bristles
- Flowers densely clustered in a raceme, pink, greenish white to pink; peduncles glabrous
- Tepals pink, not gland dotted
- Achenes brownish black to black, disk shaped, shiny, smooth

Keir Morse



Similar Species: The only smartweed consistently with a dark spot on the leaves or what is referred to as the lady's thumbprint.

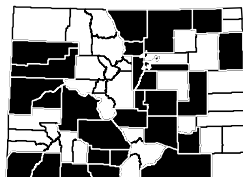
Habitat and Ecology: Common in shallow water, margins of lakes and ponds and irrigation ditches.

Comments: Water 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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Dicot Herbs

Polygonum polygaloides Wall. ex Meisn.

Milkwort knotweed

Polygonaceae

Steve Matson



Synonyms: *Polygonum kelloggii* Greene var. *kelloggii*

USDA PLANTS Symbol: POPO4

ITIS TSN: 20918

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 7,100–10,630 ft. (2,165–3,240 m)

Key Characteristics:

- ◆ Stems 2–15 cm tall, erect, green, usually divaricately branched, wiry, glabrous
- ◆ Leaves 10–40 mm long x 1–2.5 mm wide, 3-veined, glabrous; leaf sheaths (ocreas) 4–8 mm
- ◆ Inflorescence a dense, terminal, spike-like raceme, ovoid, 3–15 mm long x 5–15 mm wide
- ◆ Perianth 1.5–2.3 mm; tepals overlapping, uniformly white or pink; stamens 3
- ◆ Achenes enclosed in perianth, light yellow to greenish-brown, 1.3–1.7 mm, smooth, shiny



Keith Morse




Barry Breeding



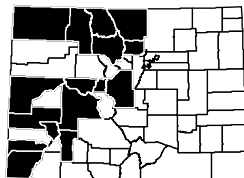
Similar Species: Other knotweeds have racemes that are loose, not in dense spikes, tepals have green centers or white to pink margins, black achenes and stems are either simple or branched from the bases.

Habitat and Ecology: Easily overlooked in moist meadows, forest openings, near drying pools and seeps.

Comments: Considered state vulnerable (S3) in Montana. Water smartweeds, in general, provide seeds for waterfowl, upland game birds, marsh and song birds, deer and muskrat.

Animal and Bird Use:   

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Polygonum punctatum Elliott

Dotted smartweed

Polygonaceae

Keir Morse



Synonyms: *Persicaria punctata* (Elliot) Small
USDA PLANTS Symbol: POPUS
ITIS TSN: 20862
Wetland Status AW: OBL WM: OBL GP: OBL
Native Status: Native
Conservation Status: GS SNR
C-Value: Not Assigned
Duration: Annual, Perennial
CO Elevation: 4,980–10,500 ft. (1,520–3,200 m)

Key Characteristics:

- Stems 1.5–12 dm tall, glabrous, glandular-punctate; rhizomes often present
- Leaves glandular-punctate, leaf sheaths (ocreas) ciliate with bristles, 1–11 mm long, clasping
- Flowers loosely arranged in a terminal raceme, sometimes axillary, not enclosed within leaf sheaths
- Perianth greenish, rarely pinkish, glandular-punctate with numerous dots; tepals 5
- Achenes shiny, smooth, 2.2–3.2 mm long x 1.5–2.2 mm wide

Keir Morse



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *P. hydropiper* [FACW] has dull and minutely roughened achenes and axillary inflorescences that are enclosed in the leaf sheath.

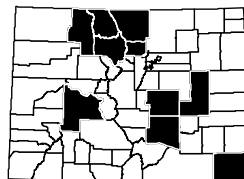
Habitat and Ecology: Uncommon along margins of ponds and irrigation ditches. Considered adventive in Colorado.

Comments: Considered state imperiled (S2) in North Dakota. Water smartweeds, in general, provide seeds for waterfowl, upland game birds, marsh and song birds, deer and muskrat.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Dicot Herbs

Polygonum ramosissimum Michx.

Bushy knotweed

Polygonaceae

North Dakota State



Synonyms: None

USDA PLANTS Symbol: PORA3

ITIS TSN: 20921

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 2

Duration: Annual

CO Elevation: 3,500–9,400 ft. (1,065–2,865 m)

Key Characteristics:

- Stems 1–10 (20) dm tall, yellowish-green or bluish-green, profusely branched, not wiry
- Leaves 8–70 mm x 4–18 mm, yellowish- or bluish-green; petioles 2–4 mm; leaf sheaths 6–12 mm
- Inflorescences axillary or terminal, spike-like; pedicels enclosed in or exerted from ocrea
- Perianth (2) 2.2–3.6 (4) mm; tepals overlapping, greenish-yellow, rarely pink or white
- Achenes smooth or roughened, 4–15 mm



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *P. aviculare* [FAC, FACW, FACU] stems are prostrate and the tepals are pink or white.

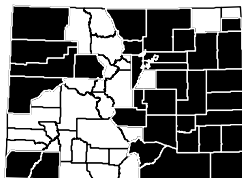
Habitat and Ecology: Found in disturbed places, along roadsides and in moist places.

Comments: Considered state vulnerable (S3) in Wyoming. Water smartweeds, in general, provide seeds for waterfowl, upland game birds, marsh and song birds, deer and muskrat.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Polygonum sagittatum L.

Arrowleaf tearthumb

Polygonaceae

Louis M. Landry



Synonyms: *Persicaria sagittata* (L.) Gross.

USDA PLANTS Symbol: POSA5

ITIS TSN: 20863

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: GS S1

C-Value: Not Assigned

Duration: Annual, Perennial

CO Elevation: 5,500–11,400 ft. (1,675–3,475 m)

Key Characteristics:

- ◆ Stems 3–20 dm tall with numerous, retrorse, yellow barbs, vine-like or sprawling
- ◆ Leaves (3) 5–13 mm, bases sagittate, margins entire, ciliate with yellow barbs; petioles 0.5–4 cm
- ◆ Flowers in a rounded, capitate inflorescence
- ◆ Perianth white or greenish-white, often tinged pink; tepals 5
- ◆ Achenes light to dark brown to black, 2.5 mm long x 1.8–2.5 mm wide

Louis M. Landry



USDA-NRCS Wetland Flora

Similar Species: This is the only Colorado smartweed that has yellow, retrorse barbs on leaves and stems.

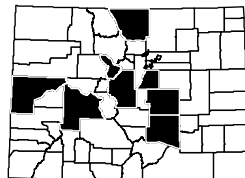
Habitat and Ecology: Uncommon in shady places, meadows and along streams.

Comments: Common in the eastern and midwestern states. Considered state critically imperiled (S1) in Colorado and possible extirpated (SH) from North Dakota. Water smartweeds, in general, provide seeds for waterfowl, upland game birds, marsh and song birds, deer and muskrat.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Polygonum viviparum L.

Alpine bistort

Polygonaceae

Al Schneider



Synonyms: *Bistorta vivipara* (L.) Gray

USDA PLANTS Symbol: POVI3

ITIS TSN: 20864

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 7,200–14,430 ft. (2,195–4,400 m)

Key Characteristics:

- Stems 8–30 cm tall, rhizomes sometimes contorted
- Leaf sheaths (ocreas) brown, cylindric, 4–20 mm; petioles attached to sheaths, 6–20 mm long
- Inflorescence a narrowly elongate, cylindric, spike, 4–10 mm wide, red bulblets present
- Tepals oblong, 5, pink, outer larger than inner; stamens included or excluded, anthers reddish
- Achenes rare, when present, dark brown and dull



Al Schneider

Dicot Herbs


USDA-NRCS PLANTS Database Britton & Brown 1913



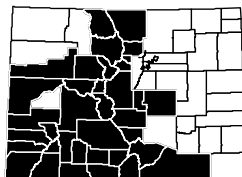
Similar Species: *P. bistortoides* [FACW] has a short, cylindric inflorescence that is larger and no bulblets are present.

Habitat and Ecology: Common in moist meadows, along streams and in alpine tundra.

Comments: The bulblets are edible with a nutty flavor.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Rumex altissimus Alph. Wood

Pale dock

Polygonaceae

John Hilty



Synonyms: None

USDA PLANTS Symbol: RUAL4

ITIS TSN: 20949

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 1

Duration: Perennial

CO Elevation: 3,500–9,500 ft. (1,065–2,895 m)

Key Characteristics:

- ◆ Stems 5–9 (12) dm, producing axillary shoots, glabrous; rootstock vertical
- ◆ Leaf blades 10–15 cm x 3–5.5 cm, leathery; bases cuneate; margins entire, flat; apices acute
- ◆ Inflorescences terminal and axillary; pedicels (2) 3–7 (8) mm, nodes swollen; flowers 12–20
- ◆ Inner tepals (valves) broadly triangular, 4.5–6 mm long, bases truncate, apices acute
- ◆ Tubercles (2) 3, glabrous or minutely rugose; achenes brown or dark reddish-brown, 2.5–3 mm long

USDA-NRCS PLANTS Database Britton & Brown 1913



John Hilty



Similar Species: *R. salicifolius* var. *mexicanus* (= *R. triangulivalvis*) [FACW] has shorter inner tepals (2–3.5 mm long), linear leaves that rarely are ovate-lanceolate and achenes that are shorter (1.5–2.2 mm long). *R. crispus* [RUCR, FAC, ITIS 20937] is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

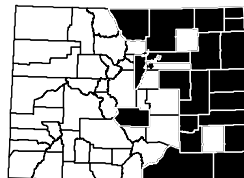
Habitat and Ecology: Found in ditches, creeks, and near pond margins.

Comments: Achenes are eaten by waterfowl and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012



Rumex aquaticus L. var. fenestratus (Greene) Dorn

Western dock

Polygonaceae

Neal Kramer



Synonyms: *Rumex aquaticus* L. ssp. *occidentalis* (S. Watson) Hultén, *Rumex occidentalis* S. Watson

USDA PLANTS Symbol: RUAQF

ITIS TSN: 530189

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 4,500–11,600 ft. (1,370–3,535 m)

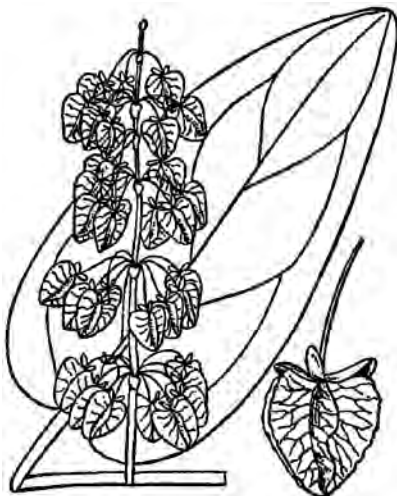
Key Characteristics:

- ◆ Stems 5–10 dm tall, erect, glabrous, lacking axillary shoots, often solitary; taproots, vertical
- ◆ Leaves 10–35 cm x 5–12 cm, bases truncate or rounded, margins entire, undulate, apices acute
- ◆ 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

Neal Kramer



USDA-NRCS PLANTS Database Britton & Brown 1913



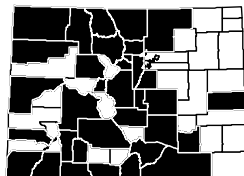
Similar Species: *R. densiflorus* [FACW] has creeping rhizomes and inner tepals or valves that are 4–7 mm long x 4–7 mm wide. *R. crispus* [RUCR, FAC, ITIS 20937] is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

Habitat and Ecology: Found in moist, meadows, along pond margins and in swampy areas.

Comments: Achenes are eaten by waterfowl and small mammals.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012, Western Wetland Flora 1992



Rumex densiflorus Osterh.

Denseflowered dock

Polygonaceae

Ernie Marx



Synonyms: None

USDA PLANTS Symbol: RUDE2

ITIS TSN: 20953

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4? S3?

C-Value: 5

Duration: Perennial

CO Elevation: 6,200–11,880 ft. (1,890–3,620 m)

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

Ernie Marx



Ernie Marx



Similar Species: *Rumex aquaticus* var. *fenestratus* (= *R. occidentalis*) [FACW] has vertical roots, not creeping rhizomes, and the inner tepals (valves) are larger, 5–10 mm long x 5–8 mm wide. *R. crispus* [RUCR, FAC, ITIS 20937] is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

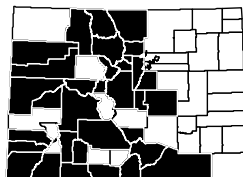
Habitat and Ecology: Found in moist meadows and along streams.

Comments: Considered state imperiled (S2) in Wyoming and state vulnerable (S3) in Colorado. Achenes are eaten by waterfowl and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012, Western Wetland Flora 1992



Rumex maritimus L.

Golden dock

Polygonaceae

Doreen L. Smith



Synonyms: *Rumex fueginus* Phil., *Rumex maritimus* L. ssp. *fueginus* (Phil.) Hultén

USDA PLANTS Symbol: RUMA4

ITIS TSN: 20965

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Biennial

CO Elevation: 3,920–9,000 ft. (1,195–2,745 m)

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
- ◆ Inner tepals (valves) with 2–3 bristle-like teeth along the margins and a tubercle on each valve
- ◆ Achenes light brown, 0.9–1.75 mm long x 0.6–1 mm wide

Doreen L. Smith



USDA-NRCS PLANTS Database Britton & Brown 1913

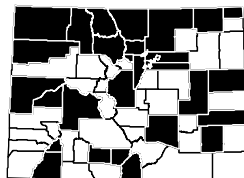
Similar Species: *R. maritimus* is distinctive with the golden yellow or greenish-yellow inflorescences and the smooth tubercles on the valves. *R. crispus* [RUCR, FAC, ITIS 20937] is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

Habitat and Ecology: Found along shores of lakes and marshes.

Comments: Achenes are eaten by waterfowl and small mammals.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012, Western Wetland Flora 1992



Rumex obtusifolius L.

Bitter dock

Polygonaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: RUOB

ITIS TSN: 20939

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 5,000–9,480 ft. (1,525–2,890 m)

Key Characteristics:

- ◆ Stems 6–12 (15) dm tall, erect, glabrous, often with few flowering stems from vertical rootstocks
- ◆ Leaves oblong to ovate to broadly ovate, 10–15 cm wide, largest leaf with cordate bases
- ◆ Inflorescences terminal, lax, interrupted, branches usually forming angles of 30–45° with 1st-order stem
- ◆ Inner tepals (valves) conspicuously coarsely toothed along margins; tubercle on one valve
- ◆ Achenes brown to reddish-brown, 2–2.7 mm long x 1.2–1.7 mm wide

Louis M. Landry



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *R. stenophyllus* [FACW] leaves are lanceolate, 2–7 cm wide, and each inner tepal has a tubercle. *R. crispus* [RUCR, FAC, ITIS 20937] is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

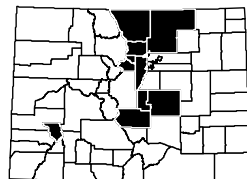
Habitat and Ecology: Uncommon along roadsides, meadows and along streams and ponds.

Comments: Achenes are eaten by waterfowl and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012, Western Wetland Flora 1992



Rumex salicifolius Weinm. var. denticulatus Torr.

Utah willow dock

Polygonaceae

Steve Matson



Synonyms: *Rumex californicus* Rech. f., *Rumex utahensis* Rech. f.

USDA PLANTS Symbol: RUSAD

ITIS TSN: 530195

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T3T5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,610–13,200 ft. (1,100–4,025 m)

Key Characteristics:

- ◆ Stems 1.5–4 (6) dm tall, erect, producing axillary shoots below 1st-order inflorescence, glabrous
- ◆ Leaves linear-lanceolate, 2–3 cm wide, basal leaves absent
- ◆ Inflorescences 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

Dicot Herbs

Steve Matson



Keir Morse



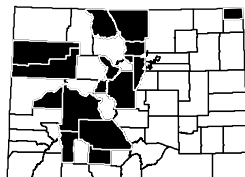
Similar Species: *R. salicifolius* var. *mexicanus* (= *R. triangulivalvis*) [FACW] is similar in many aspects except that there are 3 tubercles per valve. *R. crispus* [RUCR, FAC, ITIS 20937] is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

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 (2012) and Weber and Wittmann (2012) recognize *R. utahensis* as the accepted name.

Animal and Bird Use:  

References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012, Western Wetland Flora 1992



Rumex salicifolius Weinm. var. *mexicanus* (Meisn.) Hitchc.

Mexican dock

Polygonaceae

Barry Breckling



Synonyms: *Rumex mexicanus* Meisn., *Rumex salicifolius* Weinm. ssp. *triangulivalvis* Danser, *Rumex triangulivalvis* (Danser) Rech. f.

USDA PLANTS Symbol: RUSAM

ITIS TSN: 530197

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 3,470–12,800 ft. (1,060–3,900 m)

Key Characteristics:

- ◆ Stems (3) 4–10 dm tall, producing axillary shoots below 1st-order inflorescence; roots creeping
- ◆ Leaves linear-lanceolate to lanceolate, flat or indistinctly crisped margins
- ◆ Inflorescences terminal and axillary, dense or interrupted; flowers 10–25 in whorls
- ◆ 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

Barry Breckling



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *R. altissimus* [FACW] 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* [FACW] is very similar but there are no tubercles on the valves. *R. crispus* [RUCR, FAC, ITIS 20937] is commonly found in wetlands. It is distinct with leaves that are strongly undulate and curled margins.

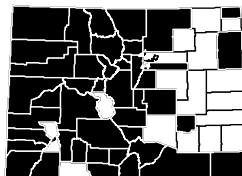
Habitat and Ecology: Common along streams, roadsides and in wet meadows.

Comments: FNA (2005) states that *Rumex salicifolius* ssp. *triangulivalvis* and *R. mexicanus* have been commonly applied to *R. salicifolius* var. *mexicanus*. Ackerfield (2012) and Weber and Wittmann (2012) recognize *R. triangulivalvis* as the accepted name.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012, Western Wetland Flora 1992



Rumex stenophyllus Ledeb.

Narrowleaf dock

Polygonaceae

Neal Kramer



Synonyms: None

USDA PLANTS Symbol: RUST4

ITIS TSN: 20977

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,500–5,460 ft. (1,065–1,665 m)

Key Characteristics:

- ◆ Stems 4–8 (13) dm tall, erect, branched; rootstocks vertical, spindle-shaped
- ◆ Leaves lanceolate to oblong-lanceolate, 2–7 cm wide with truncate bases
- ◆ Inflorescences terminal, flowers 20–25 in whorls
- ◆ Inner tepals (valves) 3.5–5 mm x 3–5 mm, margins denticulate, apices acute; tubercles normally 3
- ◆ Achenes usually reddish-brown or dark brown, 2–2.5 (3) mm long x 1–1.5 mm wide

Dicot Herbs

Neal Kramer



Neal Kramer



Similar Species: *R. obtusifolius* [FACW] leaves are oblong to broadly ovate, 10–15 cm wide, with cordate bases and there is only one inner tepal with a tubercle.

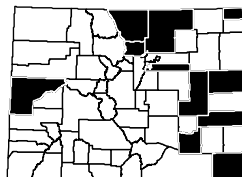
Habitat and Ecology: Uncommon along shores of lakes, creeks, in marshes and ephemeral ponds.

Comments: Achenes are eaten by waterfowl and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2005, Weber and Wittmann 2012, Western Wetland Flora 1992



Claytonia lanceolata Pall. ex Pursh

Lanceleaf springbeauty

Portulacaceae

Keir Morse



Synonyms: None

USDA PLANTS Symbol: CLLA2

ITIS TSN: 20390

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,500–12,560 ft. (1,675–3,830 m)

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 white to pink, 5–20 mm, with dark stripes
- ◆ Seeds 2–2.5 mm across, shiny, smooth

Janis Lindsey Huggins



Gary A. Monroe USDA-NRCS PLANTS Database



Similar Species: *C. rosea* [CLROS, NI, ITIS 501580] also has linear cauline leaves but grows in drier habitats, usually ponderosa pine forests. *C. perfoliata* [CLPE, FACW, ITIS 20395] has recently been reported for southwestern Colorado. It is distinctive with perfoliate leaves.

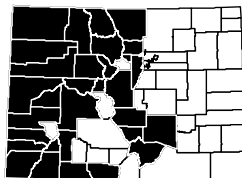
Habitat and Ecology: Common in melting snowbanks, subalpine meadows, moist meadows and montane forests.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2003, Huggins 2008, Weber and Wittmann 2012



Montia chamissoi (Ledeb. ex Spreng.) Greene

Water minerslettuce

Portulacaceae

Steve Matson



Synonyms: *Crunocallis chamissoi* (Ledeb. ex Spreng.) Rydb.

USDA PLANTS Symbol: MOCH

ITIS TSN: 20406

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 6,000–12,000 ft. (1,830–3,660 m)

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

Ker Morse



Barbara Alongi



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.

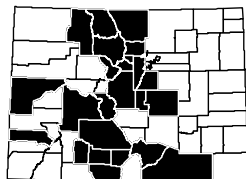
Habitat and Ecology: Common along streams, at the edges of lakes, often in shade or in shallow water left from spring runoff.

Comments: The Portulacaceae is distinct with 2 sepals and succulent stems. Leaves are edible are browsed by deer and elk as well as small mammals. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2003, Weber and Wittmann 2012



Portulaca halimoides L. Silk cotton purslane

Portulacaceae

James M. Andre



Synonyms: *Portulaca parvula* A. Gray

USDA PLANTS Symbol: POHAS

ITIS TSN: 20431

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S1

C-Value: Not Assigned

Duration: Annual

CO Elevation: 4,720–6,380 ft. (1,440–1,945 m)

Key Characteristics:

- Stems prostrate to sub-erect, often pinkish, succulent; roots fibrous
- Leaves scale-like, 4–8; blades terete, 2–14 mm long x 0.4–2 mm wide, apices obtuse to acute
- Inflorescence with conspicuous tufts of hair; flowers 3–8 mm across
- Petals yellow, obovate, 2–4 mm long x 1–2.5 mm wide; stamens 4–18; stigmas 3–4 (5)
- Capsules ovoid, 1.1–2 mm across; seeds gray, 0.3–0.5 mm across

James M. Andre



James M. Andre



Similar Species: *P. oleracea* [POOL, FAC, ITIS 20422], the common weedy purslane, differs with flat leaf blades, not rounded, and the inflorescence does not have hairs at nodes.

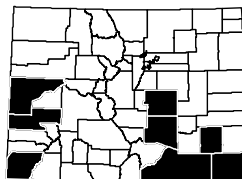
Habitat and Ecology: Uncommon in open, seasonally wet places in sandy soil. Known from southeastern Colorado, as well as Montezuma, Mesa and Montrose Counties.

Comments: The Portulacaceae is distinct with 2 sepals and succulent stems. Considered state critically imperiled (S1) in Utah and Colorado.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2003, Harrington 1964, Knight and Walter 2001, Weber and Wittmann 2012



Dicot Herbs

Androsace filiformis Retz.

Filiform rockjasmine

Primulaceae

Peter Koaschev



Synonyms: None

USDA PLANTS Symbol: ANFI

ITIS TSN: 23940

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G4 SNR

C-Value: 8

Duration: Annual

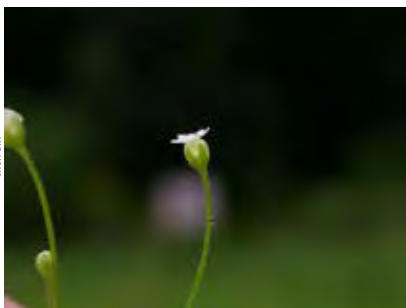
CO Elevation: 7,000–10,900 ft. (2,135–3,320 m)

Key Characteristics:

- ◆ Stems 5–25, 3–12 cm tall, slender, not mat-forming
- ◆ Leaves in a single rosette; blades 5–25 mm x 2–6 mm, surfaces glabrous or slightly glandular
- ◆ Inflorescences 5- to 20-flowered, involucre bracts lanceolate; pedicels 1–6 cm, glandular hairs
- ◆ Calyx not keeled, lobes erect, triangular, apices acute; corolla tubes shorter than calyx
- ◆ Capsules slightly shorter than calyx, 2–4 mm long

Dicot Herbs

Chen Bin



eFlora of China 2012

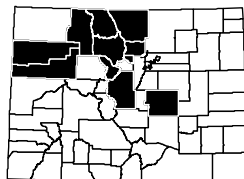
Similar Species: The most diagnostic characteristics for *A. filiformis* that distinguishes it from other *Androsace* spp. are the abruptly petiolate leaves on bow-shaped petioles and tiny flowers.

Habitat and Ecology: Locally common in moist meadows and along streams.

Comments: Key characters to look for in the Primulaceae are floral parts are in fives and stamens are aligned opposite the petals. Considered state critically imperiled (S1) in Utah and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Tass Kelso personal communication, Weber and Wittmann 2012



Dodecatheon pulchellum (Raf.) Merr.

Darkthroat shootingstar

Primulaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: DOPU

ITIS TSN: 23945

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 5,580–12,080 ft. (1,700–3,680 m)

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
- ◆ 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

Al Schneider



Steve Olson



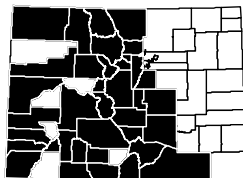
Similar Species: *D. pulchellum* var. *zionense* [DOPUZ] nfluorescence is minutely glandular and the leaves are longer, (8) 10–48 cm x 1.5–8.5 cm. It is only known from Moffat County.

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 are 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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Glaux maritima L.

Sea milkwort

Primulaceae (Myrsinaceae)

Steve Matson



Synonyms: *Glaux maritima* L. var. *angustifolia* B. Boivin, *Lysimachia maritima* (L.) Galasso

USDA PLANTS Symbol: GLMA

ITIS TSN: 23982

Wetland Status AW: FACW WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,900–9,900 ft. (1,495–3,020 m)

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

Dicot Herbs

Danise Culver



Jeanne R. Janish



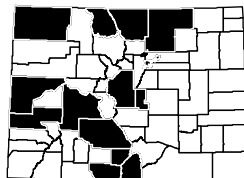
Similar Species: None.

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. Ackerfield (2012) places it in Myrsinaceae as *Glaux maritima*. FNA (2009) places it in Myrsinaceae but recognizes *Lysimachia maritima* as the accepted name. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Tass Kelso personal communication, Weber and Wittmann 2012



Lysimachia ciliata L. Fringed loosestrife

Primulaceae (Myrsinaceae)

Crystal Strouse



Synonyms: *Steironema ciliatum* (L.) Baudo

USDA PLANTS Symbol: LYCI

ITIS TSN: 23984

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

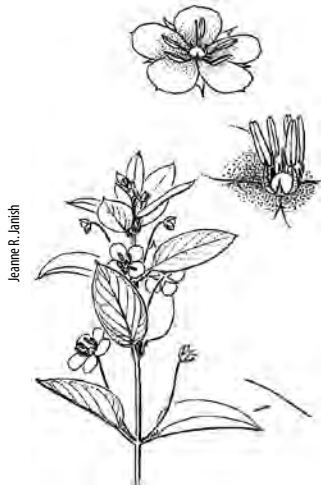
Duration: Perennial

CO Elevation: 5,000–8,700 ft. (1,525–2,650 m)

Key Characteristics:

- ◆ Stems 2–13 dm, erect, simple or sometimes branched, glabrous; rhizomes slender or thickened
- ◆ Leaves opposite, long-ciliate along entire length, cilia 0.6–2.1 mm; blades 4–15 (17) cm x 1.5–6.5 cm
- ◆ Flowers solitary or paired in leaf axils; pedicels 1.5–7 cm long, usually stipitate-glandular
- ◆ Calyx 5, 2.5–9 mm, stipitate-glandular; corolla 5, 7–12 mm long, yellow, divisions erose-denticulate
- ◆ Capsules 5–7 mm, glabrous

Uli Lormer



Jeanne R. Jarish

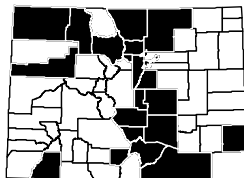
Similar Species: *L. thyrsoflora* [FACW] has flowers in axillary racemes, the petals are small (3–7 mm long) and the leaves are sessile not petiolate. *Lythrum salicaria* (purple loosestrife) [OBL] is a noxious, aggressive non-native plant that can form dense stands. *L. salicaria* has a square, wingless stem, narrow leaves, 3 or more flowers per axil and 12 stamens not 6.

Habitat and Ecology: Locally common in moist places, floodplains, along rivers and streams, roadsides and in shady aspen groves.

Comments: *L. ciliata* is a relictual eastern plains species. Considered state imperiled (S2) in Utah and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Lysimachia nummularia L.

Creeping jenny

Primulaceae (Myrsinaceae)

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: LYNU

ITIS TSN: 23993

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

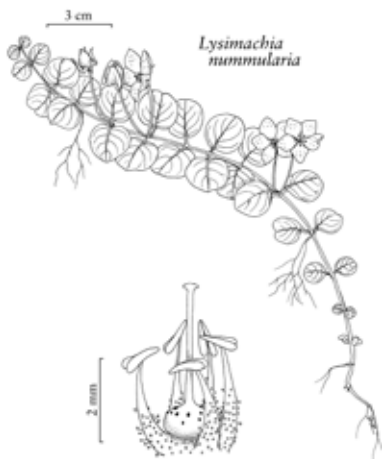
CO Elevation: 5,410 ft. (1,650 m)

Key Characteristics:

- ◆ Stems 1–5 dm tall, prostrate and rooting at nodes usually forming mats
- ◆ Leaves opposite, 1–3.5 cm x 0.5–3.5 cm, rounded apices, surfaces gland-dotted; petioles 0.1–0.5 cm
- ◆ Inflorescences axillary in leaves, flowers solitary
- ◆ Sepals 5, streaked with dark resin canals, 5–8 mm, glabrous, lobes ovate to deltate
- ◆ Petals yellow, streaked with black resin canals, 10–15 mm, margins ragged; capsules usually absent

Dicot Herbs

Yvonne Wilson-Ramsey



Louis M. Landry



Similar Species: None.

Habitat and Ecology: Uncommon along ditches and moist places, a commonly cultivated plant. Known only from 2 locations in Boulder County.

Comments: A cultivated plant that can escape into wetlands, especially disturbed areas.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Lysimachia thyrsiflora L. Tufted loosestrife

Primulaceae (Myrsinaceae)

Louis M. Landry



Synonyms: *Naumburgia thyrsiflora* (L.) Duby

USDA PLANTS Symbol: LYTH2

ITIS TSN: 24000

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S1

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,000–7,500 ft. (1,525–2,285 m)

Key Characteristics:

- ◆ Stems 3–8 dm tall; stems erect, simple, round, pubescent distally; rhizomes stout
- ◆ Leaves opposite or whorled; blades 5–16 cm x 0.5–6 cm, surfaces dotted; petioles 0–0.2 (0.4) cm
- ◆ Inflorescence an axillary raceme, 1–3 cm long
- ◆ Calyx 5–7 (9), streaked with dark resin canals; corolla 5–7, yellow, streaked with black resin canals
- ◆ Capsules 2–3 mm, dark-punctate, glabrous

Louis M. Landry



Jeanne R. Jamish

Similar Species: *L. ciliata* [FACW] flowers are solitary or paired in the leaf axils and the petals are larger, 7–12 mm, long and the petioles and leaf margins are ciliate. *Lythrum salicaria* (purple loosestrife) [OBL] is a noxious, aggressive non-native plant that can form dense stands. *L. salicaria* has a square, wingless stem, narrow leaves, 3 or more flowers per axil and 12 stamens not 6.

Habitat and Ecology: Uncommon in moist places along rivers and streams and in marshes.

Comments: Native to the boreal and temperate northern Northern Hemisphere, including Eurasia. Consider state critically imperiled (S1) in Colorado, Wyoming and Utah. Known from only two historical (1897, 1903) specimen records in Larimer County.

Animal and Bird Use: None known.

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Primula egaliksensis Wormsk. ex Hornem. Greenland primrose

Primulaceae

Tass Kelso



Synonyms: *Primula groenlandica* (Warming) W.W. Sm. & G. Forrest

USDA PLANTS Symbol: PREG

ITIS TSN: 24022

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G4 S2; USFS Sensitive

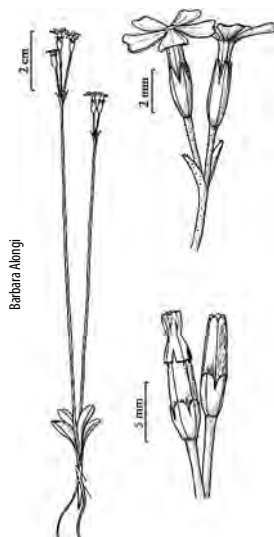
C-Value: 10

Duration: Perennial

CO Elevation: 9,290–9,900 ft. (2,830–3,020 m)

Key Characteristics:

- Stems 4–12.5 cm tall, glabrous, vegetative parts not farinose, slender; rhizomes thin, short
- Leaves in a basal rosette, spoon-shaped, light-green, 1.5–5.5 cm long x 0.5–0.9 cm wide
- Inflorescence an umbel of 1–3 flowers, involucre bracts swollen, not clasping; pedicels nodding, thin
- Calyx green (not farinose) with purple stripes, 4–6 mm; corolla white-lavender, tubes 6–8 mm
- Fruits capsules, erect, narrowly cylindric, opening at the top by tooth-like valves



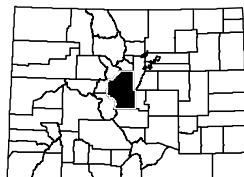
Similar Species: *P. incana* [FACW] has whitish-yellow, mealy coated leaves and stems. *Parnassia palustris* var. *montanensis* [FACW] has leafy stems, white flowers and broad, oval-shaped fruit. *Dodecatheon pulchellum* can be distinguished in fruit by the broader capsules.

Habitat and Ecology: Rare in calcareous fens, only known from Park County.

Comments: Key characters to look for in the Primulaceae are floral parts are in fives and stamens are aligned opposite the petals. *P. egaliksensis* global range extends from Greenland, northern Canada and northeastern Asia. The occurrences in Colorado (S2) and Wyoming (S1) are glacial, relictal populations.

Animal and Bird Use: None known.

References: Ackerfield 2012, Flora of North America 2009, Tass Kelso personal communication, Weber and Wittmann 2012



Primula incana M.E. Jones

Silvery primrose

Primulaceae

James Perdue



Synonyms: None

USDA PLANTS Symbol: PRIN

ITIS TSN: 24024

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 6,500–9,900 ft. (1,980–3,020 m)

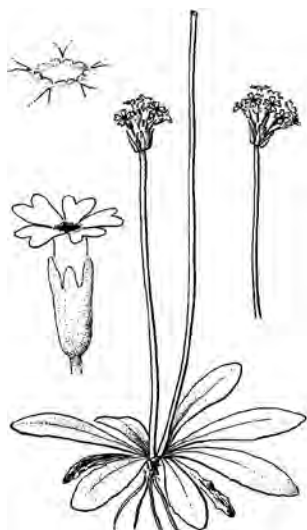
Key Characteristics:

- ◆ Stems 2–46 cm tall, vegetative parts with conspicuous whitish or yellowish farinose; rhizomes present
- ◆ Lower surface of leaves and sepals are densely white farinose, especially when young
- ◆ Inflorescence 4- to 19-flowered; involucre bracts saccate; pedicels erect, 3–9 mm
- ◆ Calyx green with farinose stripes, 4–10 mm; corolla lavender, tubes 4–10 mm, apices with notch
- ◆ Capsules cylindric to ellipsoid, length 1.5–2 times calyx

James Perdue



Jeanne R. Janish



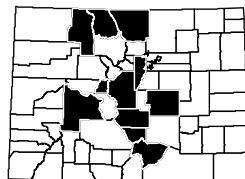
Similar Species: *P. egalikensis* [OBL] herbage is not white farinose and the pedicels are longer, 3–23 mm long.

Habitat and Ecology: Found in moist meadows and fens.

Comments: Key characters to look for in the Primulaceae are floral parts are in fives and stamens are aligned opposite the petals. In Colorado, *P. incana* is locally common. However, it is considered state critically imperiled (S1) in Utah and North Dakota and state imperiled (S2) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Tass Kelso personal communication, Weber and Wittmann 2012



Primula parryi A. Gray

Parry's primrose

Primulaceae

Karin Freeman



Synonyms: None

USDA PLANTS Symbol: PRPA

ITIS TSN: 24029

Wetland Status AW: FAC WM: FAC GP: FAC

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 8

Duration: Perennial

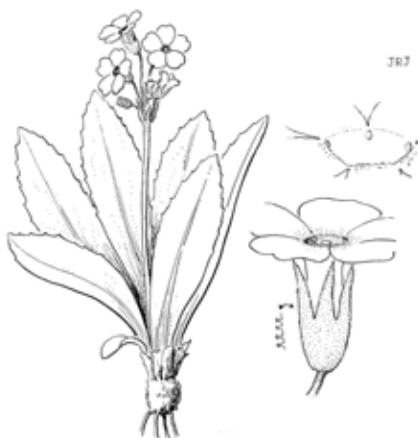
CO Elevation: 7,200–14,310 ft. (2,195–4,360 m)

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
- ◆ Calyx yellow, glandular; corolla magenta, tubes 5–20 mm, glands prominent
- ◆ Capsules ellipsoid to cylindric; seeds without flanged edges, reticulate

Dicot Herbs

Steve Olson



Jeanne R. Janish

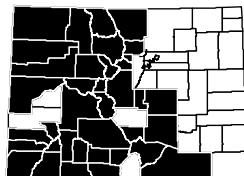
Similar Species: *P. parryi* is the largest and showiest of the Colorado's primroses. It is also one of the 'stinkiest' with herbage that has a very strong skunky odor.

Habitat and Ecology: Common along streams, in moist meadows and alpine tundra.

Comments: Key characters to look for in the Primulaceae are floral parts are in fives and stamens are aligned opposite the petals. The strong, noxious odor attracts flies as pollinators.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Aconitum columbianum Nutt.

Columbian monkshood

Ranunculaceae (Helleboraceae)

Denise Culver



Synonyms: None

USDA PLANTS Symbol: ACCO4

ITIS TSN: 18416

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

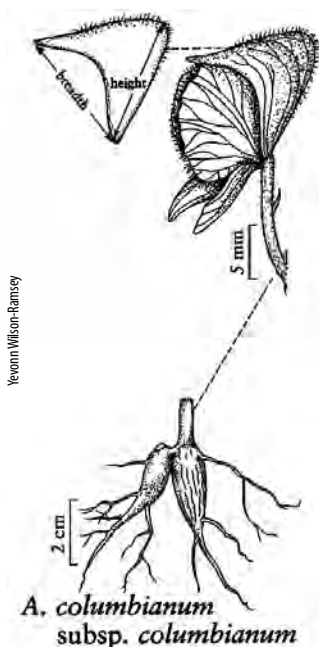
Duration: Perennial

CO Elevation: 6,700–14,310 ft. (2,040–4,360 m)

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

Steve Olson



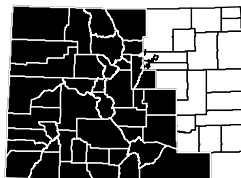
Similar Species: *Delphinium* spp. occur with *A. columbianum* in wetlands. The flowers are also blue, but *Delphinium* spp. have 4 petals, not 2, and the upper sepals are not hood-like, but spurred at base.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Anemone canadensis L.

Canadian anemone

Ranunculaceae

Louis M. Landry



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

Synonyms: *Anemonidium canadense* (L.) Á. Löve & D. Löve

USDA PLANTS Symbol: ANCA8

ITIS TSN: 18436

Wetland Status AW: FAC **WM:** FAC **GP:** FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

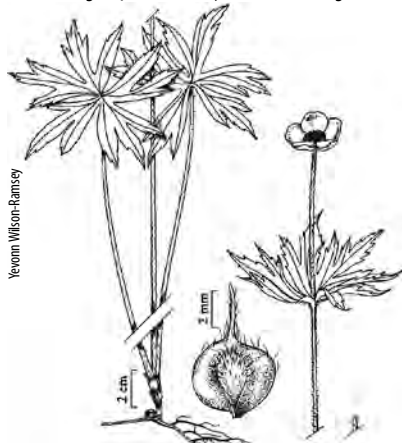
CO Elevation: 5,000–12,000 ft. (1,525–3,660 m)

◆ 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



Louis M. Landry



Yvonne Wilson-Ramsey

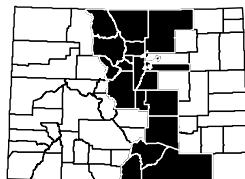
Similar Species: *A. narcissiflora* [ANNA, NI, ITIS 18427] has thicker stems and petioles with spreading hairs, 2–4 large flowers that are arranged in an umbel, the achenes are glabrous and the styles are short, 0.8–1.5 mm. *A. parviflora* [ANPA, FACU, FACW, ITIS 18433] has ternately compound basal leaves, 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. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Aquilegia barnebyi Munz

Oil shale columbine

Ranunculaceae (Helleboraceae)

Jerry Murray



Synonyms: None

USDA PLANTS Symbol: AQBA

ITIS TSN: 184173

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G4 S4

C-Value: 10

Duration: Perennial

CO Elevation: 5,600–9,700 ft. (1,705–2,955 m)

Key Characteristics:

- ◆ Stems 30–80 cm; rhizomes slender, woody
- ◆ Basal leaves 2–3 times ternately compound, 5–30 cm, much shorter than stems
- ◆ Leaflets 8–20 mm, glaucous on both sides, not viscid
- ◆ Sepals yellow, reflexed or horizontally spreading, pink to red below and yellowish above
- ◆ Spurs evenly tapered from the bases, pink to red; beaks of mature fruits 8–12 mm long

Jerry Murray



Jerry Murray



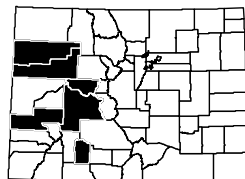
Similar Species: *A. micrantha* [NI] has sticky, glandular leaflets and the sepals and spurs are tinged with pink.

Habitat and Ecology: Found on moist shale or limestone cliffs and along streams.

Comments: *Aquilegia barnebyi* is an Uintah Basin endemic found only in Colorado (S4) and Utah (S3). Bees, hummingbirds and hawk moths are the major pollinators.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Aquilegia chrysantha A. Gray

Golden columbine

Ranunculaceae (Helleboraceae)

Jerry Lee Murray



Synonyms: *Aquilegia chrysantha* var. *rydbergii* Munz

USDA PLANTS Symbol: AQCH

ITIS TSN: 18732

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G4 S3

C-Value: 9

Duration: Perennial

CO Elevation: 5,400–9,600 ft. (1,645–2,925 m)

Key Characteristics:

- ◆ Stems 30–120 cm tall; rhizomes slender, woody
- ◆ Basal leaves 2–3 times ternately compound, 9–45 cm, much shorter than stems, leaflets green, 11–55 mm
- ◆ Sepals perpendicular to floral axis, yellow, lanceolate, 20–36 mm long x 5–10 mm wide, apices acute
- ◆ Spurs yellow, 42–65 mm, slender, evenly tapered from bases; petals 13–23 mm long, yellow
- ◆ Fruits 18–30 mm, beaks 10–18 mm

Dicot Herbs

Jerry Lee Murray



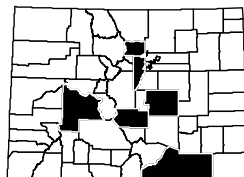
Similar Species: Colorado populations of *A. chrysantha* with spurs that are only 35–40 mm have been called *Aquilegia chrysantha* var. *rydbergii*. FNA (1997) states that these specimens fall within the normal range of variation of the species therefore the variety *rydbergii* is not required.

Habitat and Ecology: Rare. Found in moist gulches and ravines, cliffs, often near waterfalls.

Comments: *A. chrysantha*'s global range includes Utah to Colorado, south to Texas. It is considered state critically imperiled (S1) in Utah and Texas and state vulnerable (S3) in Colorado, New Mexico and Arizona.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Aquilegia micrantha Eastw.

Mancos columbine

Ranunculaceae (Helleboraceae)

Al Schneider



Synonyms: *Aquilegia micrantha* var. *mancosana* Eastwood

USDA PLANTS Symbol: AQMI

ITIS TSN: 18743

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G5 S5

C-Value: 10

Duration: Perennial

CO Elevation: 4,600–9,100 ft. (1,400–2,775 m)

Key Characteristics:

- ◆ Stems 30–60 cm tall
- ◆ Basal leaves 2–3 times ternately compound, 10–35 cm, much shorter than stems, leaflets 13–32 mm
- ◆ Leaflets viscid with sticky, glandular and pilose hairs, typically with dirt and sand stuck to leaves
- ◆ Sepals and spurs white or cream, sometimes tinged with pink or blue, petals white or cream
- ◆ Fruits 10–20 mm long, beaks 8–10 mm

Al Schneider



Al Schneider



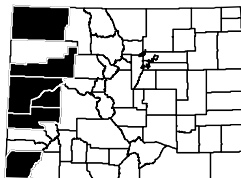
Similar Species: *A. barnebyi* [AQBA, NI, ITIS 184173] is also found in hanging gardens, but does not have sticky hairs and the sepals are distinctly reflexed.

Habitat and Ecology: Locally common on moist cliffs and hanging gardens on West Slope.

Comments: Global range includes Utah, Arizona and Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Caltha leptosepala DC.

White marsh marigold

Ranunculaceae (Helleboraceae)

Karin Freeman



Synonyms: *Psychrophila leptosepala* (De Candolle)

W. A. Weber

USDA PLANTS Symbol: CALE4

ITIS TSN: 18455

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,900–14,420 ft. (2,105–4,395 m)

Key Characteristics:

- ◆ Stems leafless or with 1 leaf, erect from thick caudices
- ◆ Leaves all basal; blades 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 white to yellow, 8.5–23 mm; 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

Dicot Herbs

Denise Culver



Yevonn Wilson-Ramsey

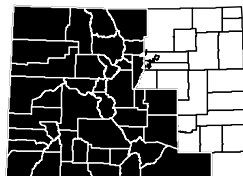
Similar Species: *Trollius laxus* ssp. *albiflorus* [OBL] also has solitary flowers. However, it has stem leaves that are palmately lobed.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Huggins 2008, Weber and Wittmann 2012



Delphinium glaucum S. Watson

Sierra larkspur

Ranunculaceae (Helleboraceae)

Keir Morse



Synonyms: None

USDA PLANTS Symbol: DEGL3

ITIS TSN: 18458

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 S3?

C-Value: 5

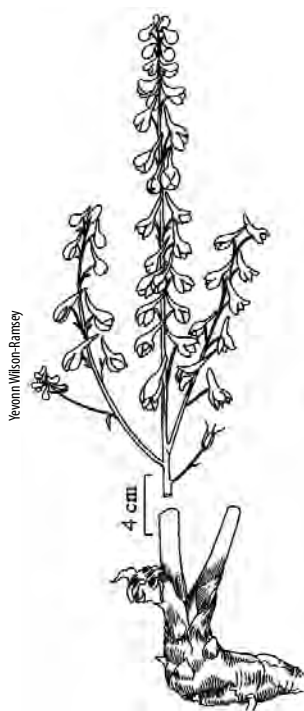
Duration: Perennial

CO Elevation: 7,000–10,280 ft. (2,135–3,135 m)

Key Characteristics:

- ◆ Stems (6)10–20 (30) dm tall, glabrous, glaucous
- ◆ Leaves 2–11 cm x 3–18 cm, glabrous, ultimate lobes 5–9 (15), width 5–24 (5) mm, tips tapered apices
- ◆ Sepals bluish-purple to lavender, usually bi-colored, puberulent, lateral sepals 8–14 (21) mm x 3–6 mm
- ◆ Spurs straight, 10–15 (9) mm, lower petal blades covering stamens, 4–6 mm
- ◆ Fruits 9–20 mm, 3.5–4.5 times longer than wide, glabrous to puberulent

Keir Morse



Yvonne Wilson-Ramsey

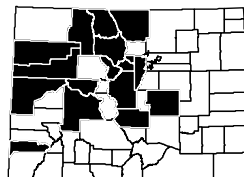
Similar Species: In Colorado, *D. glaucum* hybridizes extensively with *D. barbeyi* to the extent that the hybrid, *D. x occidentale* [DEOC, FACU, ITIS 18485], is more common than the parent species.

Habitat and Ecology: Common in wet meadows, thickets, bogs, streamsides and open woods.

Comments: Larkspurs cause more fatal poisoning of cattle in western United States than any other native plant species. Young larkspur plants are the most toxic, with the highest concentration of alkaloids in the leaves. *D. glaucum* is considered state critically imperiled (S1) in Montana and state vulnerable (S3) in Colorado and Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Myosurus apetalus Gay var. *montanus* (Campb.) Whitemore

Bristly mousetail Ranunculaceae

Steve Matson



Synonyms: *Myosurus minimus* L. ssp. *montanus* G.R. Campb.

USDA PLANTS Symbol: MYAPM

ITIS TSN: 531444

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5T3T5 SNR

C-Value: 5

Duration: Annual

CO Elevation: 5,400–10,260 ft. (1,645–3,125 m)

Key Characteristics:

- ◆ Stems 1.5–12.5 cm tall
- ◆ Leaves basal, simple, tapering to filiform bases; blades linear or very narrowly oblanceolate
- ◆ Inflorescence a scape, 0.9–10.5 cm long
- ◆ Sepals faintly 3-veined, margins scarious; petal claws 1–2 times as long as blades
- ◆ Achenes 11 x 26 mm, exserted beyond leaves; beaks 0.6–1.4 mm, divergent and spreading

Dicot Herbs

Sheri Hagwood



Sheri Hagwood



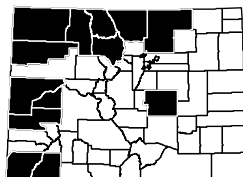
Similar Species: *M. minimus* [FACW, OBL] achene beaks are parallel and flat to the outer face of the achenes and the scapes are 1.8–12.8 cm long.

Habitat and Ecology: Found along margins of drying ponds, in dry ephemeral pools and moist meadows.

Comments: Native Americans applied poultices of *M. apetalus* to relieve ant bites. Considered state vulnerable (S3) in Montana.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Myosurus minimus L.

Tiny mouse-tail

Ranunculaceae

Carol Witham



Synonyms: None

USDA PLANTS Symbol: MYM12

ITIS TSN: 503898

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

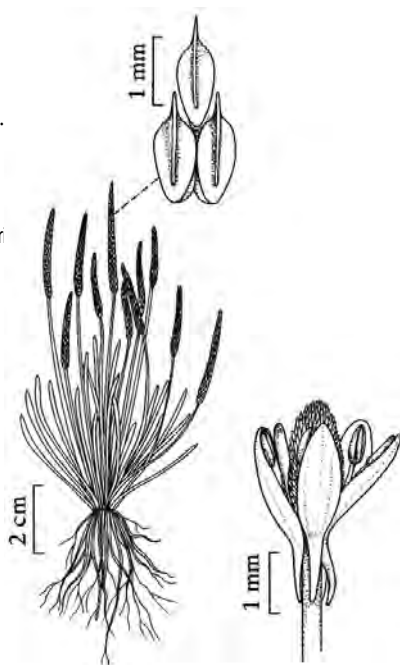
Duration: Annual

CO Elevation: 4,250–9,300 ft. (1,295–2,835 m)

Key Characteristics:

- ◆ Stems 4–16.5 cm tall
- ◆ Leaf blades narrowly oblanceolate or linear, 2.2–11. cm long
- ◆ Inflorescence a scape, 1.8–12.8 cm long; receptacle elongate
- ◆ 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

Andrew Borchert



Yevonn Wilson-Ramsey

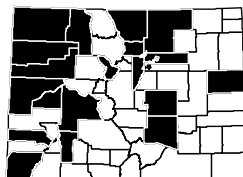
Similar Species: *M. apetalus* [FACW, OBL] achene beaks are divergent, not parallel and spreading from the outer face of achene.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Ranunculus abortivus L.

Littleleaf buttercup

Ranunculaceae

Louis M. Landry



Synonyms: *Ranunculus abortivus* L. ssp. *acrolasius* (Fernald) Kapoor & Á. Löve & D. Löve

USDA PLANTS Symbol: RAAB

ITIS TSN: 18559

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Biennial, Perennial

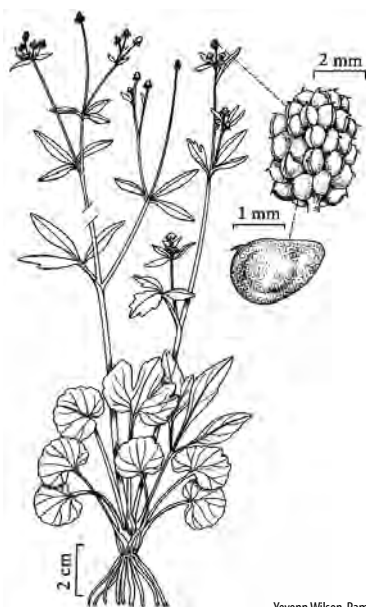
CO Elevation: 5,200–10,700 ft. (1,585–3,260 m)

Key Characteristics:

- ◆ Stems 10–60 cm tall, erect or nearly erect, glabrous
- ◆ Basal leaves undivided or shallowly 3-lobed at apices, oval to orbicular, crenate
- ◆ Cauline leaves deeply 3–7 parted into linear, lanceolate or narrowly elliptic segments
- ◆ Petals 1.5–3.5 mm long; sepals glabrous below
- ◆ Achenes 1.4–1.6 mm long; beaks 0.1–0.2 mm long, glabrous



Louis M. Landry



Yevonn Wilson-Ramsey

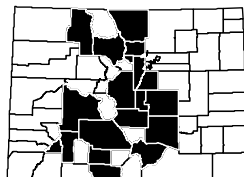
Similar Species: *R. cardiophyllus* [FACW] and *R. inamoenus* [FACW] can occur in similar habitats. Both have longer petals, 5–15 mm long, hairy sepals and achenes up to 3 mm long.

Habitat and Ecology: Uncommon along streams, in seepage areas and in shady forests.

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. *R. abortivus* is considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus acriformis A. Gray

Sharpleaf buttercup

Ranunculaceae

Marilyn Phillips



Synonyms: None

USDA PLANTS Symbol: RAAC2

ITIS TSN: 18582

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 5,280–11,300 ft. (1,610–3,445 m)

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-foliate, 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

Colorado State University Herbarium



Utah State Herbarium



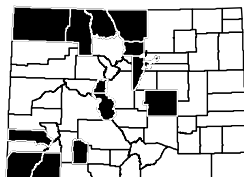
Similar Species: *R. acris* [FACW] achene beaks are shorter (0.2–1 mm long), straight, not strongly curved, and the ultimate leaf segments are lanceolate with toothed margins.

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. Considered state imperiled (S2) in Utah and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Dicot Herbs

Ranunculus acris L.

Tall buttercup

Ranunculaceae

Louis M. Landry



Synonyms: None

USDA PLANTS Symbol: RAAC3

ITIS TSN: 18583

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Non-native

Conservation Status: GR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 5,500–9,800 ft. (1,675–2,985 m)

Key Characteristics:

- ◆ Stems 2–5 dm tall, erect, glabrous or hairy with stiff, short hairs; short rhizomes
- ◆ Basal leaf blades deeply 3–5-parted, 1.8–5.2 cm x 2.7–9.8 cm, segments 1–2 times lobed
- ◆ Leaf segments narrowly elliptic or oblong to lanceolate, margins toothed or lobed, apices acute-rounded
- ◆ Receptacles glabrous; sepals spreading, 4–6 mm x 2–5 mm, hispid; petals 5, yellow, 8–11 mm x 7–13 mm
- ◆ Achenes 2–3 mm x 1.8–2.4 mm, glabrous; beaks persistent, deltate, tips subulate, 0.2–1 mm

Dicot Herbs

Louis M. Landry



Arnade/Tinkorcy



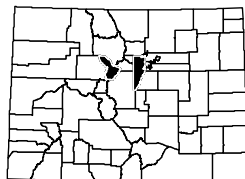
Similar Species: *R. acrifolius* [FACW] achene beaks are longer, 1–1.5 mm, strongly curved, not straight or subulate.

Habitat and Ecology: Uncommon in disturbed, moist areas. Adventive

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. Native Americans used *R. acris* as an analgesic, anti-diarrheal remedy and a sedative.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus adoneus A. Gray

Alpine buttercup

Ranunculaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: RAAD

ITIS TSN: 18584

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 8,700–13,900 ft. (2,650–4,235 m)

Key Characteristics:

- ◆ Stems 9–25 cm tall, glabrous; roots slender
- ◆ Leaves 3-parted, each division again deeply dissected, ultimate leaf segments filiform
- ◆ 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

Steve Olson



Steve Olson



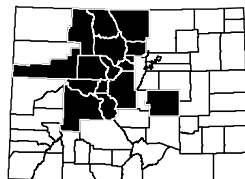
Similar Species: No other buttercups with such conspicuous flowers occur in the alpine.

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. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



***Ranunculus alismifolius* Geyer ex Benth. var. *montanus* S. Watson**
 Waterplantain buttercup Ranunculaceae

Al Schneider



Synonyms: None
USDA PLANTS Symbol: RAALM
ITIS TSN: 194936
Wetland Status AW: FACW WM: FACW GP: OBL
Native Status: Native
Conservation Status: G5T3T5 SNR
C-Value: 6
Duration: Perennial
CO Elevation: 7,500–13,170 ft. (2,285–4,015 m)

Key Characteristics:

- ◆ Stems 2–7 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
- ◆ Achene beaks lance to subulate, 0.4–1.2 mm long

Al Schneider



Al Schneider



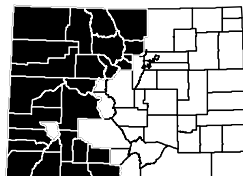
Similar Species: *R. glaberrimus* var. *ellipticus* [RAGLE, FACU, ITIS 529967] has pubescent achenes and is found in much lower elevations. *R. flammula* [FACW] also has entire leaves, but is stoloniferous.

Habitat and Ecology: Common in subalpine to alpine wet meadows, fens, shallow water of streams and ponds and along margins of melting snowbanks.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus cardiophyllus Hook.

Heartleaf buttercup

Ranunculaceae

Max Licher



Synonyms: None

USDA PLANTS Symbol: RACA4

ITIS TSN: 18597

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 8

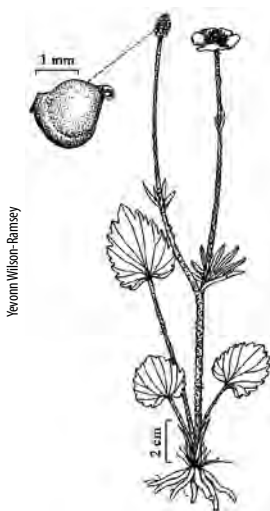
Duration: Perennial

CO Elevation: 6,000–12,480 ft. (1,830–3,805 m)

Key Characteristics:

- Stems erect, 11–53 cm tall, usually with long, spreading hairs, each with 1–5 flowers
- Basal leaves with cordate to broadly obtuse bases, usually densely hairy, 2.2–6.9 cm x 1.8–4.5 cm
- Pedicels with long, spreading hairs, receptacles with short, white hairs, sepals 5–8 mm x 3–7 mm
- Petals 5–10, 6–13 mm long x 4–13 mm wide; nectary scales ciliate or sometimes glabrous
- Heads of achenes ovoid or cylindric; achenes 1.8–2.2 mm, finely hairy; beaks awl-shaped, 0.6–1.2 mm

Max Licher



Yvonn Wilson-Ramsey

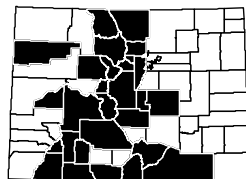
Similar Species: *R. inamoenus* [FACW] basal leaves have acute to rounded bases, not obtuse, the petals are 5–8 mm long and sepals are 2.5–5 mm long.

Habitat and Ecology: Common in meadows, along streams 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. Considered state critically imperiled (S1) in North Dakota and state imperiled (S2) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus cymbalaria Pursh

Alkali buttercup

Ranunculaceae

Steve Matson



Synonyms: *Halerpestes cymbalaria* (Pursh) Greene ssp. *saximontana* (Fernald) Moldenke

USDA PLANTS Symbol: RACY

ITIS TSN: 18600

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

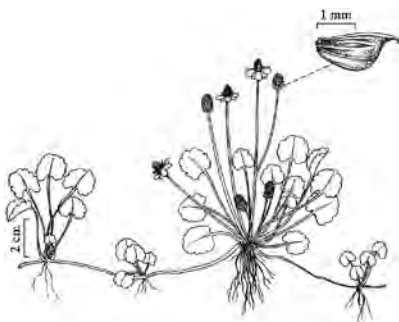
CO Elevation: 3,600–10,000 ft. (1,095–3,050 m)

Key Characteristics:

- ◆ Stems 0.2–3 dm tall, erect; stolons prostrate, rooting nodally, glabrous
- ◆ Basal leaves simple, undivided, oblong, 0.7–3.8 cm x 0.8–3.2 cm, bases rounded, margins crenate
- ◆ 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 cylindric, 6–12 mm long x 4–5 (9) mm wide, ribbed
- ◆ Achene beaks persistent, conic, straight, 0.1–0.2 mm long

Dicot Herbs

Steve Matson



Yevonn Wilson-Ramsey

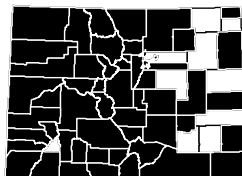
Similar Species: *R. flammula* [FACW] is also stoloniferous and rooting at nodes, but the leaves are linear, 1–8 mm wide, not oblong or rounded, and the sepals are 2–5 mm long.

Habitat and Ecology: Common along margins of streams, ponds and lakes, in seepage or swampy areas and in moist meadows.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus eschscholtzii Schtdl.

Eschscholtz's buttercup

Ranunculaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: RAES

ITIS TSN: 18601

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

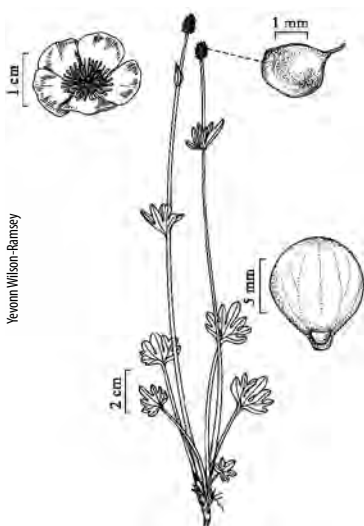
Duration: Perennial

CO Elevation: 8,000–13,280 ft. (2,440–4,050 m)

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
- ◆ Receptacles glabrous or sparsely pilose; sepals 4–8 mm x 2–6 mm, glabrous or pilose underneath
- ◆ Petals 5–8, 6–16 mm x 4–16 mm; nectary scales glabrous; pedicels glabrous
- ◆ Heads of achenes cylindric or ovoid; achenes 1.4–2 mm x 1–1.6 mm; beaks lanceolate, 0.6–1.8 mm

Al Schneider



Yvonne Wilson-Ramsey

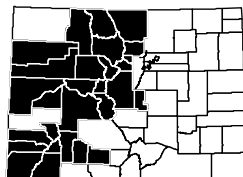
Similar Species: *R. pedatifidus* var. *affinis* [FACW] has pilose pedicels and 2–7 flowers per stem.

Habitat and Ecology: Found along streams, in moist subalpine forests, alpine tundra, or often along the margins of melting snowbanks.

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.

Animal and Bird Use: 🦋

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus flammula L.

Greater creeping spearwort

Ranunculaceae

Vernon Smith



Synonyms: *Ranunculus reptans* L. var. *ovalis* (Bigelow) Torr. & A. Gray

USDA PLANTS Symbol: RAFL2

ITIS TSN: 18604

Wetland Status AW: OBL WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 7,680–11,250 ft. (2,340–3,430 m)

Key Characteristics:

- ◆ Stems prostrate or ascending; stoloniferous or rooting at nodes
- ◆ Leaves lanceolate to oblanceolate, 1.8–4.5 cm x 0.3–1 cm, bases acute to filiform, apices acute
- ◆ Receptacles glabrous; sepals 3–4, 2–3 mm, spreading-weakly reflexed, 1–3 mm, glabrous or hispid
- ◆ Sepals 3–4 mm; petals 5–7 mm x 3–4 mm; nectary scales glabrous
- ◆ Heads of achenes globose; achenes 1.2–1.6 mm x 1–1.4 mm, glabrous; beaks lanceolate, 0.1–0.6 mm

Dicot Herbs

Russ Kleinman



Vernon Smith



Similar Species: *R. cymbalaria* [FACW] is also stoloniferous, but the leaves are ovate to rhombic with crenate margins and the achenes are in a cylindrical cluster not globose. *R. alismifolius* [FACW, OBL] is not stoloniferous or roots at the nodes, the leaves are lanceolate not ovate and the achenes are glabrous, 15–45 in a subglobose cluster.

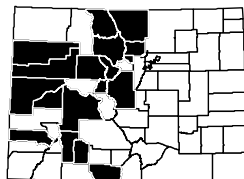
Habitat and Ecology: Found along the margins of lakes, ponds and in marshy or seepage areas.

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.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus inamoenus Greene

Graceful buttercup

Ranunculaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: RAIN

ITIS TSN: 18616

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,450–14,400 ft. (1,965–4,390 m)

Key Characteristics:

- Stems erect, 5–33 cm, pilose or glabrous, each with 3–7 flowers
- Basal leaf blades ovate, undivided, 1–3.7 cm long x 1.1–3.5 cm wide, apices with large teeth
- 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 cylindric; achenes 1.5–2 mm x 1.3–1.8 mm; beaks subulate, 0.4–0.9 mm long

Al Schneider



Al Schneider



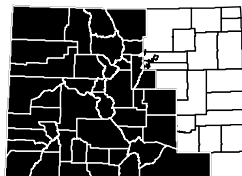
Similar Species: *R. cardiophyllus* [FACW] has basal leaves that are cordate to broadly obtuse, usually densely hairy, the petals are 6–15 mm long, the sepals are 5–8 mm long and the stems are covered with long, spreading hairs.

Habitat and Ecology: Common in meadows, spruce-fir forests, along streams and occasionally in alpine tundra.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Dicot Herbs

Ranunculus macauleyi A. Gray

Rocky Mountain buttercup

Ranunculaceae

Al Schröder



Synonyms: None

USDA PLANTS Symbol: RAMA

ITIS TSN: 18624

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 S3S4

C-Value: 10

Duration: Perennial

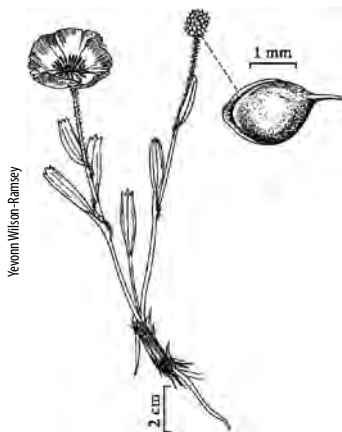
CO Elevation: 9,000–14,310 ft. (2,745–4,360 m)

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), 10–19 mm long x 6–17 mm wide; nectary scales glabrous
- ◆ Heads of achenes ovoid or cylindric; achenes 1.5–1.7 mm x 1.2–1.3 mm, glabrous; beaks 0.5–1.5 mm



Al Schröder



Jerom Wilson-Ramsey

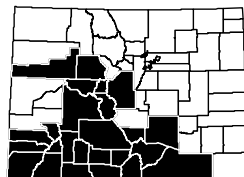
Similar Species: *R. adoneus* [FACW] is found in similar subalpine and alpine habitats. The basal leaves are distinctly 3-parted, with each division again deeply dissected with the ultimate leaf segments narrowly linear.

Habitat and Ecology: Found in alpine tundra, often along edges of melting snowbanks.

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. The global range for *R. macauleyi* extends from southwestern Colorado to northern New Mexico. It is considered state vulnerable (S3) in Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus macounii Britton

Macoun's buttercup

Ranunculaceae

Trent M. Draper



Synonyms: None

USDA PLANTS Symbol: RAMA2

ITIS TSN: 18625

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,000–9,600 ft. (1,525–2,925 m)

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 x 4.5–9.5 cm, 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 x 1.5–3 mm; petals 5, yellow, 4–6 mm x 3.5–5 mm
- ◆ Heads of achenes globose; achenes 2.4–3 mm x 2–2.4 mm, glabrous, narrow ribs; beaks 1–1.2 mm

Trent M. Draper



USDA-NRCS PLANTS Database Britton & Brown 1913

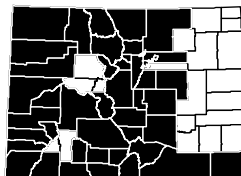
Similar Species: *R. pensylvanicus* [FACW] has shorter petals 2–4 mm long and stems are erect, not rooting at nodes.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus pedatifidus Sm. var. affinis (R. Br.) Benson

Surefoot or northern buttercup Ranunculaceae

Robert Bielech



Synonyms: None
USDA PLANTS Symbol: RAPEA
ITIS TSN: 529979
Wetland Status AW: FAC WM: FAC GP: OBL
Native Status: Native
Conservation Status: G5T5 SNR
C-Value: 7
Duration: Perennial
CO Elevation: 7,240–13,790 ft. (2,205–4,205 m)

Key Characteristics:

- ◆ Stems erect, 6–33 (46) cm tall, pilose or glabrous, each with 1–7 flowers
- ◆ Leaves cordate or reniform, palmately (5) 7 (9)-parted or divided, 0.8–3.8 cm x 1–4.8 cm
- ◆ Leaf segments undivided or again lobed or parted, bases truncate, margins never toothed, apices acute
- ◆ Receptacles hairy; sepals 4–6 mm x 3–5 mm, hairy; petals (0) 5–10, 7–10 mm long x 5–9 mm wide
- ◆ Heads of achenes cylindric; achenes 1.8–2.4 mm x 1.6–1.8 mm; beaks lanceolate, curved, 0.5–1 mm



Robert Bielech

USDA-NRCS PLANTS Database Britton & Brown 1913



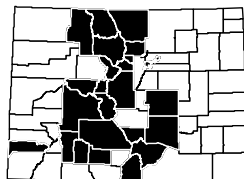
Similar Species: *R. eschscholtzii* [FACW] is found in similar habitats. The pedicels are glabrous, not hairy, and the flowers are usually solitary versus 1–7. *R. cardiophyllus* [FACW] resembles *R. pedatifidus* especially if basal leaves are absent. The basal leaves on *R. cardiophyllus* are cordate and usually densely hairy.

Habitat and Ecology: Found in wet meadows, pond margins, scree slopes and alpine tundra.

Comments: 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. Circumpolar. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming and Montana.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus pensylvanicus L. f.

Pennsylvania buttercup

Ranunculaceae

Katy Chayka



Synonyms: None

USDA PLANTS Symbol: RAPE2

ITIS TSN: 18637

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual, Perennial

CO Elevation: 5,600–9,680 ft. (1,705–2,950 m)

Key Characteristics:

- ◆ Stems (1) 2–10 dm tall, erect, never rooting nodally, hispid, bases not bulbous
- ◆ Basal leaf blades broadly cordate in outline, 3-foliate, 1.6–7 cm long x 3–9 cm wide
- ◆ Leaflets cleft, usually deeply so, ultimate segments narrowly elliptic, margins toothed, apices acute
- ◆ Receptacles hirsute; sepals reflexed, 3–5 mm x 1.5–2 mm; petals 5, yellow, 2–4 mm x 1–2.5 mm
- ◆ Heads of achenes cylindric; achenes 1.8–2.8 mm x 1.6–2 mm, glabrous; beaks persistent, 0.6–0.8 mm



Katy Chayka



USDA-NRCS Wetland Flora

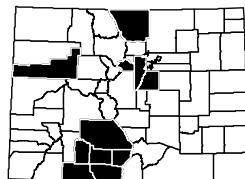
Similar Species: *R. macounii* [FACW] has longer petals, 4–6 mm long and 3.5–5 mm wide, and the achenes have longer beaks, up to 1.5 mm.

Habitat and Ecology: Uncommon in moist places, along streams and in moist meadows.

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. Considered state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus pygmaeus Wahlenb.

Pygmy buttercup

Ranunculaceae

Barbara Collins



Synonyms: None

USDA PLANTS Symbol: RAPH

ITIS TSN: 18575

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 10,200–13,630 ft. (3,110–4,155 m)

Key Characteristics:

- Stems 0.1–1.2 dm 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 cylindric; achenes 1–1.2 mm x 0.8–1.1 mm; beaks subulate



USDA-NRCS PLANTS Database Britton & Brown 1913

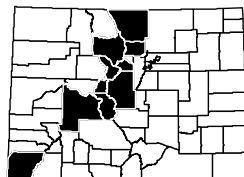
Similar Species: *R. macauleyi* [FACW] also commonly occurs in the alpine but has simple leaves, not divided. *R. cardiophyllus* [FACW] is a common alpine buttercup, distinguished by the densely hairy, cordate, basal leaves.

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. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Montana and Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus repens L.

Creeping buttercup

Ranunculaceae

Keir Morse



Synonyms: None

USDA PLANTS Symbol: RARE3

ITIS TSN: 18642

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 5,000–9,840 ft. (1,525–3,000 m)

Key Characteristics:

- ◆ Stems 1–8 dm tall, erect, glabrous, rooting at bases, only very rarely rooting at lower nodes
- ◆ Leaves deeply-parted, segments lobed or parted, margins deeply crenate, 1–5 cm x 1.6–6.8 cm
- ◆ Leaf bases truncate to cordate, segments again lobed or parted, apices rounded or obtuse
- ◆ Sepals 3–5, reflexed, 2–5 mm x 1–3 mm; petals 3–5, 2–5 mm x 1–3 mm; nectary scales crescent-shaped
- ◆ Heads of achenes ellipsoid or cylindric; achenes 1–1.2 mm x 0.8–1 mm; beaks curved, 0.1 mm

Keir Morse



USDA-NRCS PLANTS Database Britton & Brown 1913



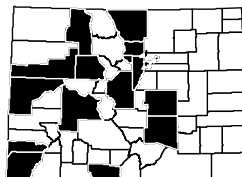
Similar Species: *R. macounii* [FACW] and *R. pensylvanicus* [FACW] occur in similar habitats. Both have stems with harshly spreading-hirsute, sometimes but not always rooting at the nodes.

Habitat and Ecology: Uncommon in disturbed, moist areas, along streams and in fields and pastures.

Comments: All *Ranunculus* spp. are poisonous when eaten fresh by cattle, horses and other livestock. They contain ranunculin that is converted to protoanemonin when chewed, causing mouth and intestinal irritation.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Ranunculus uncinatus D. Don ex G. Don

Woodland buttercup

Ranunculaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: RAUN

ITIS TSN: 18652

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Annual, Perennial

CO Elevation: 6,420–13,110 ft. (1,955–3,995 m)

Key Characteristics:

- Stems 1.5–6 dm tall, erect, never rooting nodally, bases not bulbous; roots never tuberous
- Basal leaf blades cordate to reniform in outline, 3-parted, 1.8–5.6 cm long x 2.8–8.3 cm wide
- Leaf segments lobed, ultimate segments elliptic to lanceolate, margins toothed, apices acute
- Sepals reflexed, 2–3.5 mm x 1–2 mm, pubescent; petals 5, yellow, 2–4 (6) mm x 1–2 (3) mm

- Heads of achenes globose; achenes 2–2.8 mm x 1.6–2 mm; beaks hooked, 1.2–2.5 mm.

Dicot Herbs

Al Schneider



Jean L. Pawek



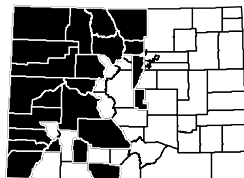
Similar Species: *R. acriformis* [FACW] leaves are cleft into more than 3 principal segments with narrow divisions.

Habitat and Ecology: Found in moist meadows, marshes 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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Knight and Walter 2001, Weber and Wittmann 2012



Thalictrum alpinum L.

Alpine meadow-rue

Ranunculaceae (Thalictraceae)

Al
Schneider



Synonyms: None

USDA PLANTS Symbol: THAL

ITIS TSN: 18661

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

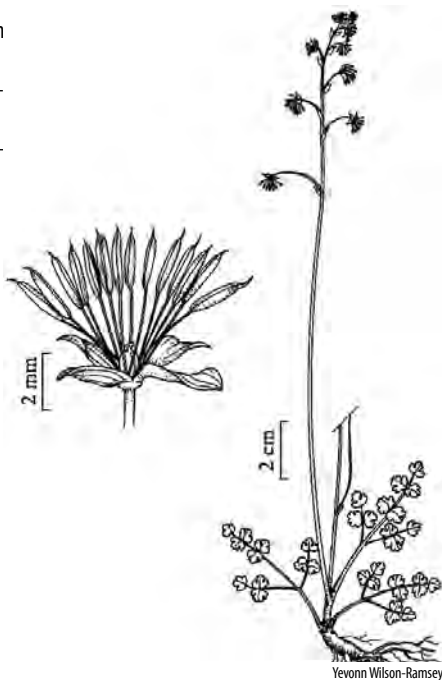
Duration: Perennial

CO Elevation: 7,700–14,000 ft. (2,345–4,265 m)

Key Characteristics:

- ◆ Stems scapose or nearly scapose, (3) 5–20 (30) cm glabrous; rhizomes slender
- ◆ Leaves basal or a single cauline leaf near bases, 2–cm, twice pinnately compound
- ◆ Leaflets cuneate-ovovate to orbiculate, apically 3-lobed, 2–10 mm, surfaces glabrous
- ◆ Pedicels recurved in fruit; sepals purplish tinged, 1–2.3 (2.7) mm
- ◆ Stamens 8–15; filaments purple; anthers bright yellow; achenes nearly sessile, 2–3.5 mm

Biopix



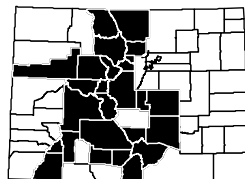
Similar Species: None.

Habitat and Ecology: Found in moist alpine meadows, in fens atop hummocks and along streams.

Comments: Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Montana and Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Thalictrum dasycarpum Fisch. & Avé-Lall.

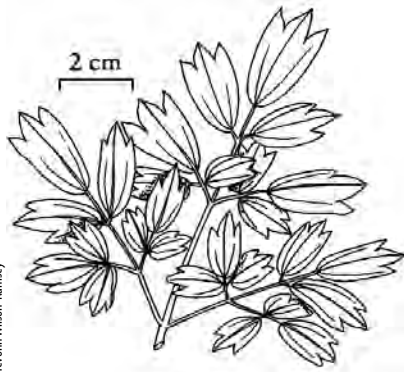
Purple meadow-rue

Ranunculaceae (Thalictraceae)

Matt Below

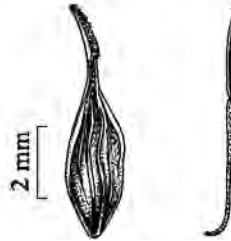
**Synonyms:** None**USDA PLANTS Symbol:** THDA**ITIS TSN:** 18667**Wetland Status** AW: FACW WM: FACW GP: FAC**Native Status:** Native**Conservation Status:** G5 S3?**C-Value:** 7**Duration:** Perennial**CO Elevation:** 4,920–9,700 ft. (1,500–2,955 m)**Key Characteristics:**

- ◆ Stems erect, stout, 4–15 (20) dm (sometimes over 2 m tall)
- ◆ Leaflets entire or shallowly 2–5 lobed, leathery, pubescent, margins often narrowly revolute
- ◆ Inflorescence a showy pyramidal panicle
- ◆ Staminate and pistillate flowers on different plants; sepals 4 (6), whitish, lanceolate
- ◆ Achenes numerous, sessile, 2–4.6 mm, prominently veined, pubescent; stipes 0–1.1 mm



Jerom Wilson-Ramsey

Peter Gorman



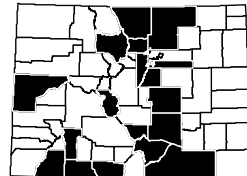
Similar Species: Other meadow-rues are glabrous, have leaflets that are 3 or more lobed, and leaflets without prominent veins underneath.

Habitat and Ecology: Found along irrigation ditches and gulches, streams, often in disturbed areas.

Comments: Considered state imperiled (S2) in Wyoming and state vulnerable (S3) in Colorado.

Animal and Bird Use:

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Trautvetteria caroliniensis (Walter) Vail

Carolina bugbane

Ranunculaceae

Karin Freeman



Synonyms: None

USDA PLANTS Symbol: TRCA

ITIS TSN: 18803

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 S1

C-Value: 9

Duration: Perennial

CO Elevation: 8,000–12,000 ft. (2,440–3,660 m)

Key Characteristics:

- ◆ Stems 1 to several, 0.5–1.5 m tall, erect, glabrous, usually unbranched below inflorescence
- ◆ Leaves palmately lobed, basal leaves with petioles to 4.5 dm; blades 1–3 dm wide, lobes apices acute
- ◆ Peduncles 1–8 dm; pedicels densely pubescent with minute, hooked trichomes
- ◆ Flowers perfect; sepals 3–7, greenish-white, concave-cupped; petals absent; stamens white, 5–10 mm
- ◆ Fruits are prominently veined, 4-angled achenes with curved to hooked, persistent styles

Karin Freeman



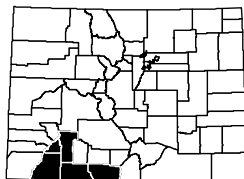
Similar Species: *Thalictrum* spp. have similar inflorescences, but the leaves are 2–3 times ternately compound. *Trollius albiiflorus* [OBL] has similar leaves but the inflorescence consists of a solitary flower and is smaller in stature. *Sanicula marilandica* [SAMA2, FACU, ITIS 29856] (in the Apiaceae) also looks like *T. caroliniensis*, except it has yellow flowers.

Habitat and Ecology: Uncommon in moist spruce forests and along streams in southwestern Colorado.

Comments: Considered state critically imperiled (S1) in Utah, Colorado, Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



***Trollius laxus* Salisb. ssp. *albiflorus* (Gray) Löve & Löve & Kapoor**
American globeflower **Ranunculaceae (Helleboraceae)**

Steve Olson



Synonyms: None

USDA PLANTS Symbol: TRLAA2

ITIS TSN: 524785

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4T4 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 3,770–13,690 ft. (1,150–4,175 m)

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; cauline leaves 1–3 (5), palmately lobed
- ◆ Flowers solitary, 2.5–5 cm across
- ◆ Sepals 5–9, spreading, white, ovate to obovate or nearly orbiculate, 10–20 mm
- ◆ Fruits usually 8–16 mm including beaks; beaks often somewhat recurved, sometimes straight

Dicot Herbs

Al Schneider



Al Schneider



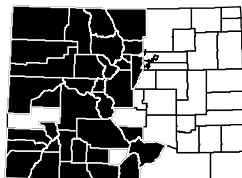
Similar Species: *Caltha leptosepala* [OBL] frequently occurs with *T. laxus* ssp. *albiflorus* and has white, solitary flowers, but the leaves are entire and all basal.

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

Comments: The mature sepals will become tinged brown to entirely brown. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Argentina anserina (L.) Rydb. Silverweed cinquefoil

Rosaceae

Anatolij Timoczy



Synonyms: *Potentilla anserina* L.

USDA PLANTS Symbol: ARAN7

ITIS TSN: 184598

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: GS SNR

C-Value: 3

Duration: Perennial

CO Elevation: 4,550–11,750 ft. (1,385–3,580 m)

Key Characteristics:

- ◆ Low-growing, stoloniferous with red stolons; herbage without glands
- ◆ Leaflets 7–25, green above, 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 5.5–11 mm long, yellow, rounded; stamens 20–25
- ◆ Achenes ovoid, about 2 mm long, light brown

Richard Scully



Jeanne R. Janish

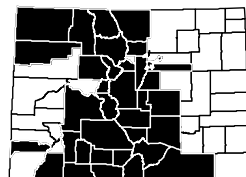
Similar Species: Easy to recognize with the distinctive silver, white undersides of leaves and stoloniferous habit.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Rich Scully personal communication, Weber and Wittmann 2012



Comarum palustre L.

Purple marshlocks

Rosaceae

Karin Freeman



Synonyms: *Potentilla palustris* (L.) Scop.

USDA PLANTS Symbol: COPA28

ITIS TSN: 501615

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S3

C-Value: 9

Duration: Perennial

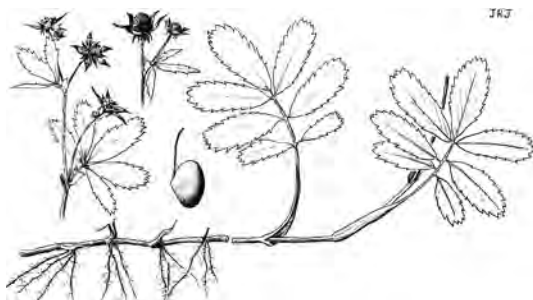
CO Elevation: 8,980–12,000 ft. (2,735–3,660 m)

Key Characteristics:

- ◆ Stems and petioles glandular-pubescent with red-tipped hairs, rooting at nodes, sometimes aquatic
- ◆ Leaves pinnately 5 (7) compound, leaflets 3–6 cm long, sharply serrate, glaucous-green above
- ◆ Cymes few-flowered, terminal or sometimes 1- or 2-flowered in axils of the upper leaves
- ◆ Pedicels 0.7–2.5 cm long
- ◆ Flowers and sepals reddish-purple; sepals longer than petals

Dicot Herbs

Karin Freeman



Jeanne R. Janish

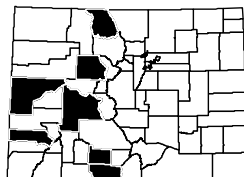
Similar Species: *Geum rivale* [OBL] also has reddish-purple herbage, nodding flowers, but the ovaries are pubescent with elongated and hooked styles.

Habitat and Ecology: Uncommon to locally abundant along montane and subalpine pond margins and within fens.

Comments: Globally common from Alaska, Canada, south to California, Utah, Colorado to the northeastern United States. Considered state critically imperiled (S1) in Utah and Wyoming, state imperiled (S2) in North Dakota and state vulnerable (S3) in Colorado.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Rich Scully personal communication, Weber and Wittmann 2012



Geum aleppicum Jacq.

Yellow avens

Rosaceae

Al Schneider



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
- ◆ Cymes of few to several flowers on long pedicels; inflorescence stiffly hirsute, hairs bulbous-based

Al Schneider



Synonyms: *Geum aleppicum* Jacq. ssp. *strictum* (Aiton) R.T. Clausen

USDA PLANTS Symbol: GEAL3

ITIS TSN: 24647

Wetland Status AW: FAC WM: FACW GP: FACU

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,000–13,000 ft. (1,525–3,960 m)

- ◆ Flowers yellow, sepals reflexed, hairy on inside; styles geniculate, non-glandular, hairy or glabrous

USDA-NRCS PLANTS Database Britton & Brown 1913



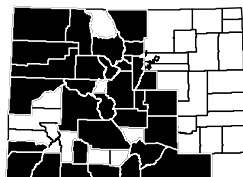
Similar Species: *G. macrophyllum* var. *perincisum* [FACW, FAC] also has yellow flowers. It has small glandular hairs on the lower part of the styles, the terminal leaflets of basal leaves are enlarged with cordate or rounded bases.

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. Considered state critically imperiled (S1) in Utah and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Rich Scully personal communication, Weber and Wittmann 2012



Geum macrophyllum Willd. var. *perincisum* (Rydb.) Raup

Largeleaf avens

Rosaceae

Steve Matson



Synonyms: None

USDA PLANTS Symbol: GEMAP

ITIS TSN: 528245

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,900–13,550 ft. (1,800–4,130 m)

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
- ◆ Inflorescence stiffly hirsute; sepals green, reflexed; petals 5, yellow
- ◆ Lower portion of styles glandular pubescent, strongly hooked with stalked glands below

Louis M. Landry



Jeanne R. Janish

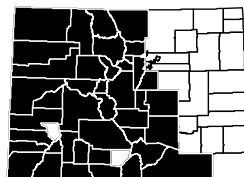
Similar Species: *G. aleppicum* [FACW, FAC, FACU] lower portion of the styles are glabrous or pubescent, but not glandular, and the terminal leaflets of basal leaves are not enlarged.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Rich Scully personal communication, Weber and Wittmann 2012



Geum rivale L.

Purple avens

Rosaceae

Amadej Tinkoczy



Synonyms: None

USDA PLANTS Symbol: GER12

ITIS TSN: 24659

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 7,600–10,500 ft. (2,315–3,200 m)

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

Amadej Tinkoczy



USDA-NRCS PLANTS Database Britton & Brown 1913



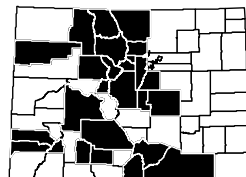
Similar Species: *Comarum palustre* (= *Potentilla palustre*) [OBL] also has reddish-purple flowers but the achenes and ovaries are glabrous and the styles do not elongate or become hooked in fruit.

Habitat and Ecology: Found in wet meadows, willow thickets and along streams.

Comments: Common throughout Canada and northern United States, south along the Rocky Mountains to New Mexico. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Hitchcock et al. 1973, Rich Scully personal communication, Weber and Wittmann 2012



Potentilla biennis Greene

Biennial cinquefoil

Rosaceae

Dean Wm. Taylor



Synonyms: None

USDA PLANTS Symbol: POBI7

ITIS TSN: 24695

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

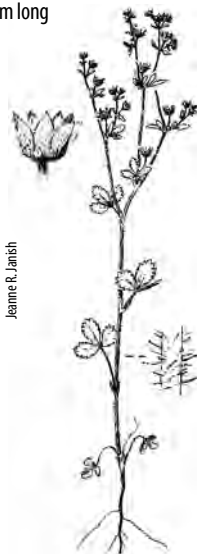
Duration: Annual, Biennial

CO Elevation: 5,850–10,000 ft. (1,785–3,050 m)

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



Jeannie R. Jamish

Dicot Herbs

Mary Winter



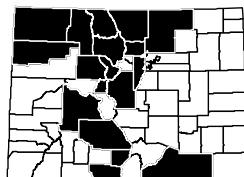
Similar Species: *P. norvegica* [PONO3, FAC, FACU, ITIS 24730] occurs in similar habitats. *P. norvegica* is non-glandular, the stems are covered in long, stiff, pustulate hairs and the achenes are brown. *P. rivalis* [FACW] leaves are 5-pinnate, stems are covered in long hairs that are flat against 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: Considered state vulnerable (S3) in Wyoming. The leaves of *Potentilla* spp. are eaten by the caterpillars of butterflies and moths (*Lepidoptera* spp.) and bumble bee (*Bombus* spp.).

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Rich Scully personal communication, Weber and Wittmann 2012



Potentilla diversifolia Lehm.

Varileaf cinquefoil

Rosaceae

Larry Blaney



Key Characteristics:

- ◆ Stems 0.5–2.5 (4) cm tall, decumbent to ascending from a branched caudex, not glandular-pubescent
- ◆ Leaves mostly basal, 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
- ◆ Cymes open, many-flowered; flowers yellow; sepals ovate to deltate-lanceolate, acute
- ◆ Styles 1.4–2.3 mm long, filiform, subterminally attached; achenes 1.2 mm–1.6 mm long

Larry Blaney



Synonyms: None

USDA PLANTS Symbol: PODI2

ITIS TSN: 24702

Wetland Status AW: FACU WM: FACU GP: FACW

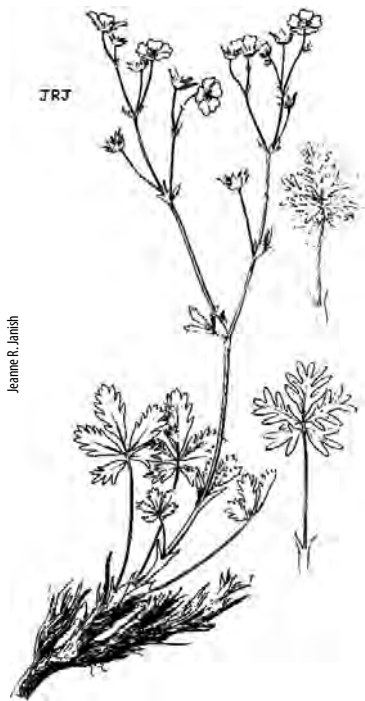
Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 7,200–14,430 ft. (2,195–4,400 m)



Dicot Herbs

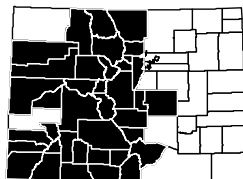
Similar Species: *P. gracilis* [POGR9, FAC, ITIS 24714] can occur in similar habitats but the leaflets are always regularly toothed, never glaucous and larger, (2) 2.5–5 (8) cm long. *P. gracilis* has longer anthers, greater than 0.7 mm, where *P. diversifolia* anthers are less than 0.7 mm.

Habitat and Ecology: Common in wet meadows and alpine tundra.

Comments: Considered state critically imperiled (S1) in North Dakota. The leaves of *Potentilla* spp. are eaten by bumble bees (*Bombus* spp.) and the caterpillars of butterflies and moths (*Lepidoptera* spp.).

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Rich Scully personal communication, Weber and Wittmann 2012



Potentilla paradoxa Nutt.

Paradox cinquefoil

Rosaceae

Richard Scully



Synonyms: *Potentilla supina* L. ssp. *paradoxa* (Nutt.)

Soják

USDA PLANTS Symbol: POPA15

ITIS TSN: 24733

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 1

Duration: Annual, Biennial, Perennial

CO Elevation: 3,920–8,300 ft. (1,195–2,530 m)

Key Characteristics:

- ◆ Stems 2–4 dm long, spreading to ascending, glabrous below to hirsute above
- ◆ Leaves all pinnately compound with 5–11 leaflets, several upper leaves 4-foliate
- ◆ Inflorescence a diffuse cymose, leafy bracts present
- ◆ Sepals 2.8–5 mm long, erect, hirsute; petals yellow, 2.5–3 mm long; stamens 10, 15, or 20
- ◆ Achenes brown, warted, with protuberances on outer sides, often as large as achenes



Jeanne R. Janish

Dicot Herbs

Richard Scully



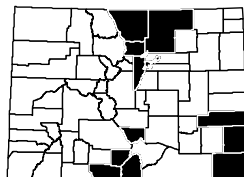
Similar Species: *P. rivalis* [FACW] lacks the protuberances on the achenes, the lower leaves are pinnately compound with 5 leaflets, the upper leaves are 4-foliate compound and there are 10 stamens, rarely 15.

Habitat and Ecology: Found along pond margins, in seepage areas, in floodplains and along streams.

Comments: Considered state imperiled (S2) in Wyoming. The leaves of *Potentilla* spp. are eaten by bumble bees (*Bombus* spp.) and the caterpillars of butterflies and moths (*Lepidoptera* spp.).

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Scully 2007, Weber and Wittmann 2012



Potentilla plattensis Nutt.

Platte River cinquefoil

Rosaceae

Richard Scully



Synonyms: None

USDA PLANTS Symbol: POPL

ITIS TSN: 24738

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,530–13,000 ft. (1,380–3,960 m)

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

Richard Scully



USDA-NRCS Wetland Flora

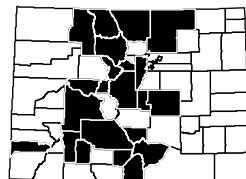
Similar Species: *Argentina anserina* [OBL, FACW] leaflets are densely tomentose and usually bi-colored. Other *Potentilla* spp. do not have deeply incised leaflets.

Habitat and Ecology: Found in wet meadows and along creeks.

Comments: Considered state critically imperiled (S1) in Utah, state imperiled (S2) in Montana and state vulnerable (S3) in Wyoming. The leaves of *Potentilla* spp. are eaten by bumble bees (*Bombus* spp.) and the caterpillars of butterflies and moths (*Lepidoptera* spp.).

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Rich Scully personal communication, Scully 2007, Weber and Wittmann 2012



Potentilla rivalis Nutt.

Brook cinquefoil

Rosaceae

Richard Scully



Synonyms: None

USDA PLANTS Symbol: POR13

ITIS TSN: 24744

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Annual, Biennial

CO Elevation: 4,530–9,200 ft. (1,380–2,805 m)

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
- ◆ 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

Dicot Herbs

Richard Scully



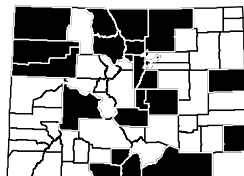
Similar Species: *P. rivalis* is often shorter and more branched than *P. norvegica* [PON03, FAC, ITIS 24730]. *P. rivalis* can also be confused with *P. paradoxa* [FACW], which has larger petals, pinnate leaves and a protuberance on the achene. *P. supina* [POSU25, NI, ITIS NA] has 7–11 pinnate leaves. *P. biennis* [FACW] herbage is glandular.

Habitat and Ecology: Found in along streams, pond margins and ephemeral pools.

Comments: Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming. The leaves of *Potentilla* spp. are eaten by bumblebee (*Bombus* spp.) and the caterpillars of butterflies and moths (*Lepidoptera* spp.).

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Scully 2007, Weber and Wittmann 2012



Rubus arcticus L. ssp. *acaulis* (Michx.) Focke

Dwarf raspberry

Rosaceae

Gerald and Buff Corsi



Synonyms: *Cylactis arctica* (L.) Raf. ex Jacks. ssp. *acaulis* (Michx.) Weber, *Rubus acaulis* Michx.

USDA PLANTS Symbol: RUARA2

ITIS TSN: 524632

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5T5 S1; USFS Sensitive

C-Value: 9

Duration: Perennial

CO Elevation: 8,580–9,600 ft. (2,620–2,925 m)

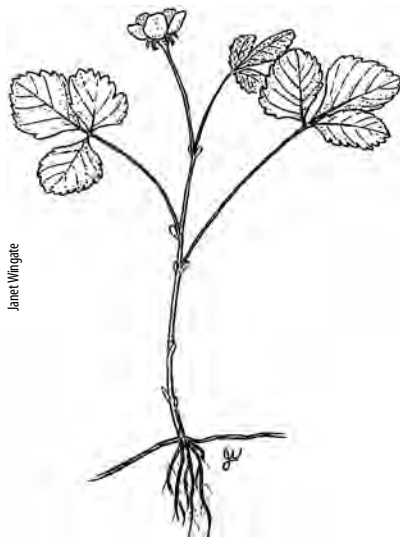
Key Characteristics:

- ◆ Stems 2–15 cm tall, no bristles, covered with long, soft, shaggy hairs; strongly rhizomatous
- ◆ Leaves 2 to 5 per stem, conspicuous stipules; blades trifoliate, leaflets 1–5 cm long, rounded tips
- ◆ Flowers single, terminal; sepals 5, covered with long, shaggy hairs, reflexed lobes, 8–11 mm long
- ◆ Petals erect, pink to crimson or rose, narrowly obovate, 8–16 mm long
- ◆ Fruits are an aggregate of red drupelets, about 1 cm broad

Michael Shepard



Janet Wingate



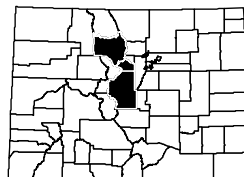
Similar Species: *R. pubescens* [FACW, FAC] has distinct trailing stems, flowers are white to pale pink, the leaflets have acute or acuminate tips. *Fragaria* spp. have white flowers, 5–10 sepals and fruits are an aggregate of achenes on a fleshy, red receptacles.

Habitat and Ecology: Rare. Grows in fens and along creeks with high groundwater table.

Comments: Considered state critically imperiled (S1) in Colorado and Wyoming. The populations in Colorado represent the southern extent of *R. arcticus* ssp. *acaulis*.

Animal and Bird Use: 

References: Ackerfield 2012, Hitchcock et al. 1973, Ladyman 2006, Rich Scully personal communication, Washington Natural Heritage Program 2003, Weber and Wittmann 2012



Rubus pubescens Raf.

Dwarf red blackberry

Rosaceae

Louis M. Landry



Synonyms: *Cylactis pubescens* (Rafinesque) Weber

USDA PLANTS Symbol: RUPU

ITIS TSN: 25028

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 7,000–8,750 ft. (2,135–2,665 m)

Key Characteristics:

- ◆ Stems 10–30 cm long, extensively trailing over the ground
- ◆ Leaves 2–5; stipules oblanceolate; blades divided into 3 leaflets, 2–7 cm long, acute or acuminate tips
- ◆ Flowers bisexual, 1–3, erect, terminal
- ◆ Calyx deeply 5-lobed, each lobe lanceolate, reflexed; petals 5, white to pale pink, clawed, 4–7 mm long
- ◆ Fruits are an aggregate of red drupelets, about 0.5–1 cm across

Dicot Herbs

Louis M. Landry



Louis M. Landry



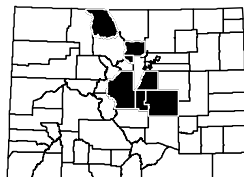
Similar Species: *R. pubescens* can be confused with *Fragaria* spp. which have stolons, rooting at the nodes, not trailing, woody stems. *R. arcticus* ssp. *acaulis* [FAC, FACW] has pink, not white petals and no trailing stems.

Habitat and Ecology: Uncommon in shady and moist places.

Comments: Relictual eastern woodland species. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Hitchcock et al. 1973, Weber and Wittmann 2012



Galium trifidum L. ssp. *subbiflorum* (Wiegand) Piper

Threepetal bedstraw

Rubiaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: GATRS2

ITIS TSN: 34809

Wetland Status AW: FACW WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,960–11,300 ft. (1,510–3,445 m)

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, 1–2 mm across, mature segments distinct at maturity

Steve Olson



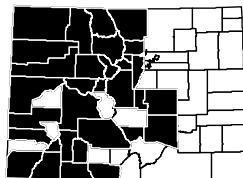
Similar Species: *G. bifolium* [GABI, NI, ITIS 34826] can also be found in wetlands. The fruits are pubescent and the leaves are strongly 3-nerved with short awn tips. *G. boreale* [GABO2, FACU, ITIS 565204] is a much more stout, erect plant that is common. It has solitary, unbranched stems with lanceolate, 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. belongs 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.

Animal and Bird Use: 

References: Ackerfield 2012, Hitchcock et al. 1973, Weber and Wittmann 2012



Anemopsis californica (Nutt.) Hook. & Arn.

Yerba mansa

Saururaceae

Neal Kramer



Synonyms: None

USDA PLANTS Symbol: ANCA10

ITIS TSN: 18223

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 3,600–5,500 ft. (1,095–1,675 m)

Key Characteristics:

- ◆ Stems 8–80 cm tall, densely pubescent to glabrous; stoloniferous
- ◆ Leaves mostly basal, simple, 5–60 cm; stipules present and fused to petioles
- ◆ Spikes conic, 1–4 cm, fragrant, subtended by white to reddish bracts, 5–35 mm long x 5–15 mm wide
- ◆ Floral bracts white, orbiculate, 3.5–6 mm; stamens 6
- ◆ Capsules brown, 5–7 mm; seeds brown, 1–1.5 mm x 0.8–1 mm, reticulate

Dicot Herbs

Neal Kramer



Yevonn Wilson-Ramsey

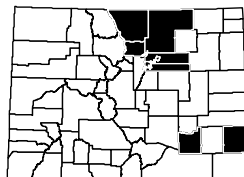
Similar Species: *A. californica* resembles members of the Asteraceae (sunflower family), but what appears to be a single bloom is a dense cluster of individual, small flowers subtended by large white bracts. It is a showy spring blooming plant.

Habitat and Ecology: Found in irrigation ditches and marshes along Front Range and southeastern Colorado.

Comments: Weber and Wittmann (2012) state that this plant was introduced to the Front Range by crop seeding. It has now become naturalized. The global range is from Oregon south and east to Kansas and Texas. Considered to be state imperiled (S2) in Utah.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 1997, Weber and Wittmann 2012



Chrysosplenium tetrandrum (Lund ex Malmgr.) Th. Fr.

Northern golden saxifrage

Saxifragaceae

www.alaskawildflowers.us



Synonyms: None

USDA PLANTS Symbol: CHTE3

ITIS TSN: 24189

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G5 S1?

C-Value: 10

Duration: Perennial

CO Elevation: 7,700–12,800 ft. (2,345–3,900 m)

Key Characteristics:

- ◆ Stems 2–30 cm; stoloniferous, stolons white, sparsely villous, hairs white, reddish-brown or purplish
- ◆ Leaves all cauline, reniform to orbicular with shallowly crenate margins
- ◆ Inflorescences terminal, (2) 3- to 15-flowered, compact cymes; bracts green, purple-spotted
- ◆ Flowers actinomorphic; sepals 4, green or greenish-yellow; petals absent; stamens usually 4 or 8
- ◆ Seeds (6) 15–40, reddish-brown, ovoid to ellipsoid, 0.5–0.8 mm, glabrous, smooth

www.alaskawildflowers.us



Dr. G. Dallas and Margaret Hanna



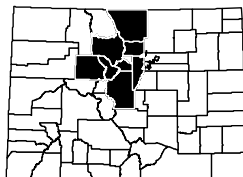
Similar Species: *Saxifraga hirculus* [OBL] has yellow flowers, but has 5 sepals and linear leaves.

Habitat and Ecology: Rare or overlooked in cold, mossy banks along subalpine and alpine snowmelt streams along the Continental Divide.

Comments: Circumpolar. The Colorado populations are disjunct from northern occurrences. Considered state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Mitella pentandra Hook.

Fivestamen miterwort

Saxifragaceae

Al Schröder



Synonyms: None

USDA PLANTS Symbol: MIPE

ITIS TSN: 24412

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5? SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,000–13,690 ft. (2,440–4,175 m)

Key Characteristics:

- ◆ Flowering stems ascending or erect, 8–48 (60) cm tall; rhizomatous
- ◆ Leaves in 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; stamens alternate with sepals; styles divergent

Dicot Herbs

Al Schröder



Jeanne R. Janish



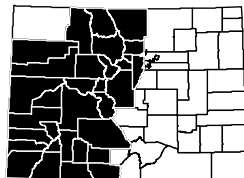
Similar Species: *M. stauropetala* [MIST3, FAC, ITIS 24414] has white petals with 3 ternate divisions and stamens opposite the sepals. Flowers are sessile or on short pedicels less than 1 mm long.

Habitat and Ecology: Commonly found along streams, in shady forests and in wet meadows.

Comments: Global range extends from Alaska south to New Mexico. Considered state critically imperiled (S1) in South Dakota and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Flora of North America 2009, Weber and Wittmann 2012



Parnassia fimbriata K.D. Koenig

Rocky Mountain or fringed grass of Parnassus

Saxifragaceae (Parnassiaceae)

Al Schneider



Synonyms: None

USDA PLANTS Symbol: PAF13

ITIS TSN: 24209

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

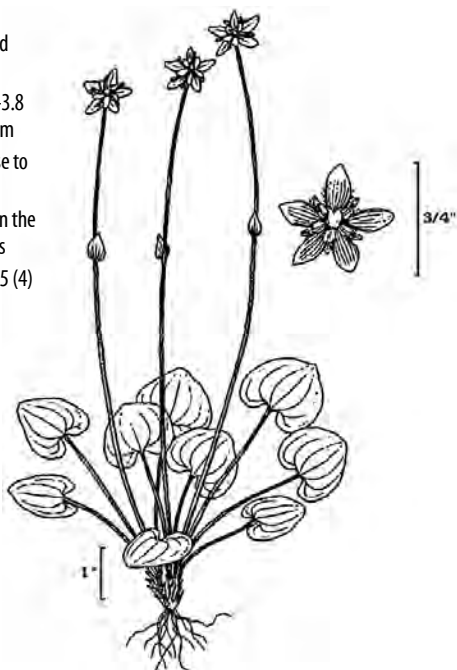
Duration: Perennial

CO Elevation: 5,800–13,010 ft. (1,770–3,965 m)

Key Characteristics:

- ◆ Flowering stems 1 to several; stout rootstock and elongate rhizomes
- ◆ Leaves mostly basal, 1.3–3.5 (4.7) cm long x 2–3.8 (6.3) cm wide, ovate to reniform; petioles 3–9 cm
- ◆ Sepals (2.5) 4–6 (7) mm long, lanceolate, obtuse to rounded, hyaline, erose
- ◆ Petals 6.5–12 (15) mm x 2.5–8.8 mm, fringed in the lower ½ above claws, twice as long as the sepals
- ◆ Fringe 1–3 (5) mm long; staminodes (2) 2.5–3.5 (4) mm long, divided into 5–8, marginal swellings

Al Schneider



USDA-NRCS Wetland Flora

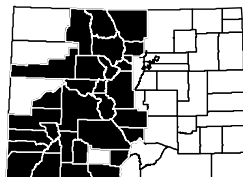
Similar Species: *P. palustris* var. *montanensis* [OBL] and *P. kotzebuei* [OBL] have petals that are entire and are usually shorter than the sepals.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Parnassia kotzebuei Cham. ex Spreng.

Kotzebue's grass of Parnassus

Saxifragaceae (Parnassiaceae)

Mary Ellen Hare



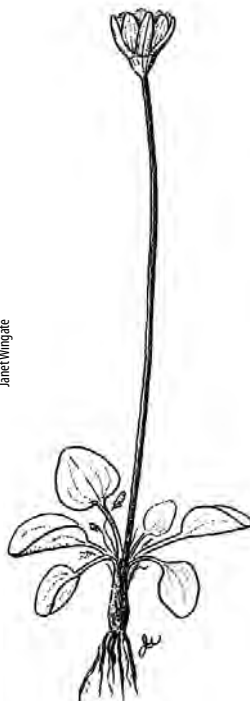
Key Characteristics:

- ◆ Stems usually single, to 12 cm tall; rootstocks short
- ◆ Flowering stem lacking a leaf, basal leaves pointed, ovate, 0.5–2.0 cm long
- ◆ Inflorescence a single, terminal flower with single bract close to the bases
- ◆ Petals 5, white, 1- to 3-nerved, 3.5–6.5 mm long; sepals up to 7 mm long with 3 nerves
- ◆ Staminodes divided into 2–6 filiform lobes

Mary Ellen Hare



Janet Wingate



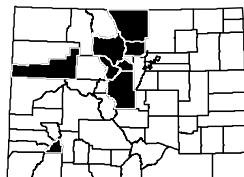
Similar Species: *P. fimbriata* [OBL] has petals that are fringed. *P. palustris* var. *montanensis* [OBL] has a single bract above the base, flowering stem with 1 leaf and petals with 5–13 nerves.

Habitat and Ecology: Uncommon in moist alpine tundra, on wet ledges and along streams.

Comments: A common and widespread plant found abundantly throughout the Yukon, into Alaska, Russia and Greenland. Considered state imperiled (S2) in Colorado, Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Handley 2001, Weber and Wittmann 2012



***Parnassia palustris* L. var. *montanensis* (Fernald & Rydb. ex Rydb.) C.L. Hitchc.**
Mountain grass of Parnassus **Saxifragaceae (Parnassiaceae)**

Al Schneider



Synonyms: *Parnassia montanensis* Fernald & Rydb. ex Rydb., *Parnassia parviflora* De Candolle

USDA PLANTS Symbol: PAPAM2

ITIS TSN: 529381

Wetland Status **AW:** OBL **WM:** OBL **GP:** OBL

Native Status: Native

Conservation Status: G4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,500–10,370 ft. (1,675–3,160 m)

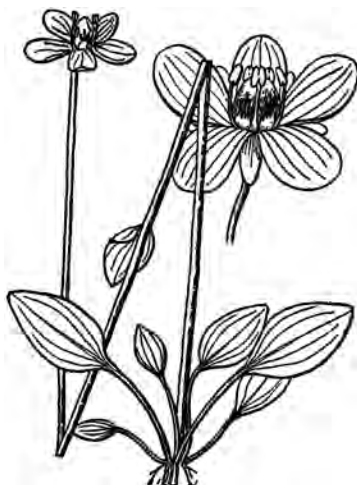
Key Characteristics:

- ◆ 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 7–12 (16) mm x 3.7–7.5 (12) mm wide, 5- to 13-nerved, longer than sepals
- ◆ Stamines divided into 6–20 filiform lobes, tipped with globose knobs

Al Schneider



USDA-NRCS PLANTS Database Britton & Brown 1913



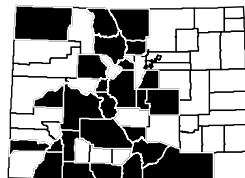
Similar Species: *P. kotzebuei* [OBL] flowering stems lacks a cauline leaf, the petals are shorter (3.5–6.5 mm long) and 1- to 3-nerved. *Moneses uniflora* [FAC, FACU] is another small plant with a solitary white flower, often nodding with thick, leathery, basal leaves, but it is in the heath family (Ericaceae).

Habitat and Ecology: Common and widespread, found along streams, lake margins, seepages, in fens and wet meadows.

Comments: Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Saxifraga adscendens L. ssp. *oregonensis* (Raf.) Bacig.

Small saxifrage

Saxifragaceae

Andy Fyon



Synonyms: *Muscaria adscendens* (L.) Small

USDA PLANTS Symbol: SAAD02

ITIS TSN: 524662

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T4T5 SNR

C-Value: 10

Duration: Perennial

CO Elevation: 10,000–13,680 ft. (3,050–4,170 m)

Key Characteristics:

- ◆ Stems 0.1–1 (1.4) dm tall, solitary or tufted, densely glandular-pubescent
- ◆ Leaf blades, toothed, tapering to winged, petiole-like bases, 2–8 (9.5) long x 0.8–2 (3.4) mm wide
- ◆ Inflorescence a 2- to 5 (15) -flowered, cymose; pedicels (0.5) 1.5–3 mm long, elongating in fruit
- ◆ Sepals 1–1.8 mm long, erect, deltate-ovate, obtuse to rounded, reddish-purple
- ◆ Petals 2–3.5 (4.5) mm long, white, obovate to oblanceolate, rounded, narrowed to short claws

Dicot Herbs

Andy Fyon



Kees Jan van Zuijlen



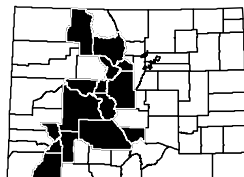
Similar Species: *S. caespitosa* [SACA50, FACU, ITIS 24219] is strongly mat-forming and has leaves that are deeply lobed into linear segments.

Habitat and Ecology: Uncommon along alpine streams, in wet meadows and on scree slopes.

Comments: Global range extends from Alaska south to Nevada, Utah and Colorado. Considered state critically imperiled (S1) in Utah and state vulnerable (S3) in Wyoming. *Saxifraga* species are used as food plants by the caterpillars of some butterflies and moths.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Flora of North America 2009, Weber and Wittmann 2012



Saxifraga cernua L.

Nodding saxifrage

Saxifragaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: SACE2

ITIS TSN: 24223

Wetland Status AW: FACW WM: FACW GP: FACU

Native Status: Native

Conservation Status: G4 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 9,800–14,400 ft. (2,985–4,390 m)

Key Characteristics:

- ◆ Plants solitary or in tufts, (0.2) 0.7–1.6 (3) dm tall, glandular-pubescent; roots fibrous
- ◆ Leaf blades round to reniform, 3–7 (9) lobed usually less than halfway to midvein, (3) 5–18 (20) mm
- ◆ Leaf margins entire, sometimes sparsely glandular-ciliate, apices rounded; petioles flattened 10–60 mm
- ◆ Inflorescences 2 (5)-flowered ovate panicle, bulbils often present in leaf axils
- ◆ Sepals erect, reddish, margins glandular-ciliate; petals white, not spotted, 5–12 mm long

Al Schneider



Al Schneider



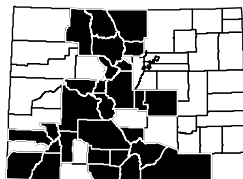
Similar Species: *S. rivularis* [FACW] is found in similar habitats but does not have bulbils in the leaf axils, and the petals are shorter (2–4.5 mm long).

Habitat and Ecology: Found in rocky alpine tundra, on fell fields and talus slopes as well as along alpine creeks. Usually reproduces by bulbils, rather than seeds.

Comments: Circumboreal. Considered state imperiled (S2) in Utah and state vulnerable (S3) in Wyoming and Montana. *Saxifraga* species are used as food plants by the caterpillars of some butterflies and moths.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Weber and Wittmann 2012



Saxifraga foliolosa R. Br.

Leafystem saxifrage

Saxifragaceae

Mary Ellen Harte



Synonyms: *Micranthes foliolosa* (R. Br.) Gornall, *Spatularia foliolosa* (R. Br.) Small

USDA PLANTS Symbol: SAFO4

ITIS TSN: 24226

Wetland Status AW: NI WM: OBL GP: NI

Native Status: Native

Conservation Status: G4 S1

C-Value: 10

Duration: Perennial

CO Elevation: 12,700–13,500 ft. (3,870–4,115 m)

Key Characteristics:

- ◆ Stems scapose; flowers or bulbils in a terminal cluster, most flowers replaced by bulbils
- ◆ Leaves oblanceolate 6–15 (30) cm, 3–5 toothed at the apices; margins ciliate; bases cuneate
- ◆ Inflorescence 2 (5)-flowered, narrow, branched, sometimes solitary flowers
- ◆ Sepals reflexed, lanceolate; petals white, each with 1–2 basal yellow spots, 3–8 mm long
- ◆ Capsules green to purplish

Dicot Herbs

Mary Ellen Harte



Mary Ellen Harte



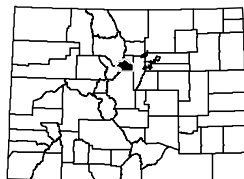
Similar Species: *S. foliolosa* is the only Colorado saxifrage where the flowers are replaced by bulbils.

Habitat and Ecology: Very rare, known from one occurrence in moist, mossy alpine tundra near Mount Evans.

Comments: The global range is in the extreme northern portion of North America. The only occurrences in the contiguous United States are in Colorado (S1) and Maine (S1). Colorado plants seldom have flowers, only bulbils.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Saxifraga hirculus L.

Yellow marsh saxifrage

Saxifragaceae

www.alaskawildflowers.us



Synonyms: *Hirculus prorepens* (Fischer ex Sternberg) Löve & Löve, *Saxifraga hirculus* L. var. *propinqua* (R. Brown) Simmons

USDA PLANTS Symbol: SAH3

ITIS TSN: 24228

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 9,080–13,280 ft. (2,770–4,050 m)

Key Characteristics:

- ◆ Flowering stems sparsely to densely reddish-brown villous below inflorescence; rhizomatous
- ◆ Leaf blades linear-oblanceolate, unlobed, (5) 10–30 mm, margins entire, no ciliate hairs, apices acute
- ◆ Inflorescences 2 (4)-flowered cymes, sometimes solitary flowers; bracts sessile
- ◆ Sepals glabrous or with reddish-brown ciliate margins, reflexed in fruit, purplish, triangular
- ◆ Petals yellow, often drying cream, orange-spotted at top, 6–18 mm long

www.alaskawildflowers.us



Jeanne R. Janish

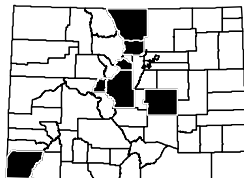
Similar Species: *S. chrysantha* [SACH4, FACU, ITIS 24263] flowering stem is hairy with purplish-tipped, glandular hairs and is found at higher elevations on drier substrates such as tundra or scree slopes.

Habitat and Ecology: Uncommon in wet meadows, fens, along creeks and lake shores.

Comments: Circumboreal. Only occurs in 3 states (CO, UT, MT) in the contiguous United States. Considered state critically imperiled (S1) in Utah and Montana. *Saxifraga* species are used as food plants by the caterpillars of some butterflies and moths.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Flora of North America 2009, Weber and Wittmann 2012



Saxifraga odontoloma Piper

Brook saxifrage

Saxifragaceae

Al Schneider



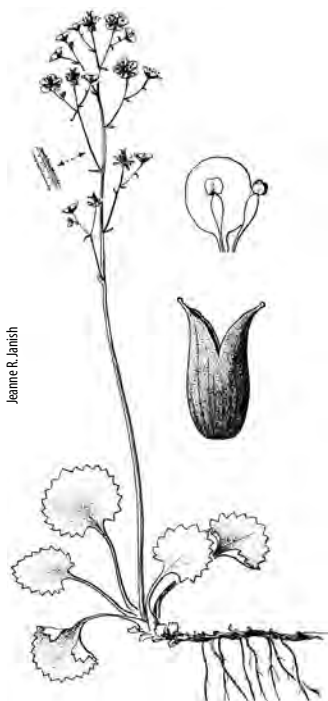
Key Characteristics:

- ◆ 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



Janis Lindsey Huggins

Synonyms: *Micranthes odontoloma* (Piper) W.A. Weber
USDA PLANTS Symbol: SAOD2
ITIS TSN: 505027
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 8
Duration: Perennial
CO Elevation: 7,200–13,360 ft. (2,195–4,070 m)



Jeanne R. Janisch

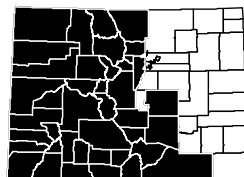
Similar Species: *S. rhomboidea* [FAC, FACW] has linear, not rounded leaves and the flowers are crowded into dense, terminal thyrses. *S. oregana* [FACW, OBL] also has linear to elliptic leaves with ciliate margins, and the leaves gradually taper into the petioles.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Flora of North America 2009, Weber and Wittmann 2012



Saxifraga oregana Howell

Oregon saxifrage

Saxifragaceae

Al Schneider



Synonyms: *Micranthes oregana* (Howell) Small

USDA PLANTS Symbol: SAOR2

ITIS TSN: 24290

Wetland Status AW: OBL WM: FACW GP: OBL

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 8,250–14,150 ft. (2,515–4,315 m)

Key Characteristics:

- ◆ Plants solitary or in clusters; rhizomes, fleshy
- ◆ Leaves elongate, narrowly oblanceolate, 6–20 cm long, gradually tapering to an indistinct petiole
- ◆ Flowers in a panicle, hairy at the bases, yellow to pink-tipped, stipitate-glandular
- ◆ Sepals reflexed; petals white, not spotted, 2 times as long as sepals
- ◆ Capsules green to reddish-purple

Janis Lindsey Huggins



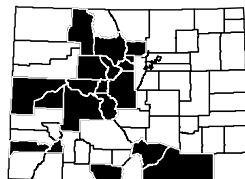
Similar Species: *S. rhomboidea* [FACW, FAC] flowers are crowded into a dense, terminal thyrse, not an open panicle. The leaves are 1–6 cm long and gradually tapering to a distinct petiole.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1997, Flora of North America 2009, Weber and Wittmann 2012



Saxifraga rhomboidea Greene

Diamondleaf saxifrage

Saxifragaceae

Al Schneider



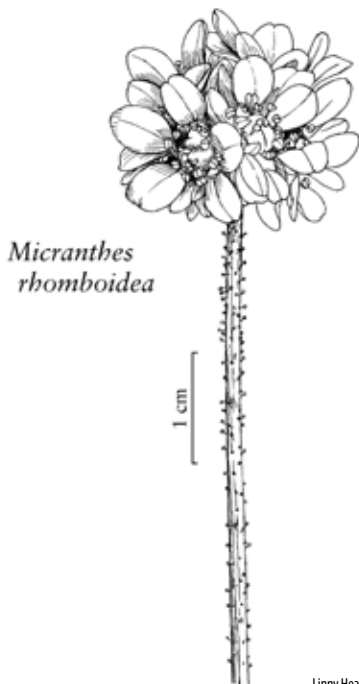
Key Characteristics:

- ◆ Plants solitary or tufted, with bulbils on caudices
- ◆ Leaves 1–6 cm long, gradually tapering to a distinct petiole
- ◆ 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



Al Schneider

Synonyms: *Micranthes rhomboidea* (Greene) Small
USDA PLANTS Symbol: SARH2
ITIS TSN: 24294
Wetland Status AW: FACW WM: FAC GP: FAC
Native Status: Native
Conservation Status: G4G5 SNR
C-Value: 8
Duration: Perennial
CO Elevation: 5,000–14,430 ft. (1,525–4,400 m)



*Micranthes
rhomboidea*

Linny Heagy

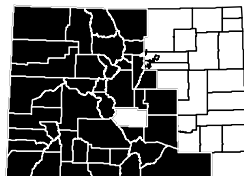
Similar Species: *S. oregana* [FACW, OBL] flowers are in a panicle and the leaves are 6–20 cm long, gradually tapering to an indistinct petiole.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Saxifraga rivularis L.

Weak saxifrage

Saxifragaceae

Al Schneider



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

ITIS TSN: 24264

Wetland Status AW: FACW **WM:** FACW **GP:** FACW

Native Status: Native

Conservation Status: G5? SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 8,370–14,270 ft. (2,550–4,350 m)

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 (6) mm long, white to pale purple, not spotted

Al Schneider



USDA-NRCS PLANTS Database Britton & Brown 1913



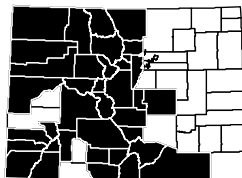
Similar Species: *S. cernua* [FACW, FACU] has large terminal flowers that are replaced by reddish bulblets.

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*. We are following nomenclature of USDA-NRCS PLANTS Database.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



***Sullivantia hapemanii* (J.M. Coul. & Fisher) J.M. Coul. var. *purpusii* (Brand) Soltis**
Purpus' sullivantia Saxifragaceae

Janis Lindsey Huggins



Synonyms: *Sullivantia purpusii* (Brand) Rosend.
USDA PLANTS Symbol: SUHAP
ITIS TSN: 530603
Wetland Status AW: FACW WM: OBL GP: FACW
Native Status: Native
Conservation Status: G3T3 S3
C-Value: 10
Duration: Perennial
CO Elevation: 5,630–12,000 ft. (1,715–3,660 m)

Key Characteristics:

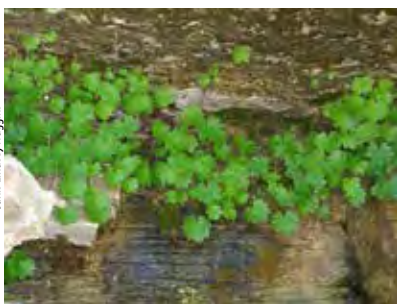
- ◆ Flowering stems erect, 5–60 cm, rhizomatous, clings to wet cliffs
- ◆ Leaves basal, palmately 5–11 lobed, 1–11 cm wide, 1–2 times dentate, margins entire or with bristles
- ◆ Inflorescences erect, primary and higher branches perpendicular to central axis
- ◆ Sepals triangular to triangular-ovate, 0.6–1.7 mm x 0.6–1.2 mm, not as broad as long at apices
- ◆ Petals white, 2.5–3.1 mm, ovate and abruptly clawed, gradually tapering to claw, 1–1.8 mm wide

Dicot Herbs

Janis Lindsey Huggins



Janis Lindsey Huggins



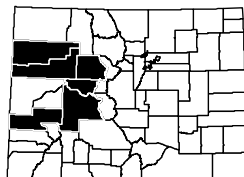
Similar Species: *Heuchera* spp. (alumroots) grow in rock crevices and have similar rounded basal leaves, but are never found in hanging gardens or seeps.

Habitat and Ecology: Uncommon in hanging gardens and on wet cliffs.

Comments: Endemic. Considered globally and state vulnerable (G3S3) in Colorado. The type specimen is from the Black Canyon of the Gunnison. It is also known from Piceance Basin, Hanging Lake in Glenwood Canyon and East Rifle Creek where it grows on travertine deposited by water dripping off limestone cliffs.

Animal and Bird Use: 

References: Ackerfield 2012, Colorado Native Plant Society 1997, Flora of North America 2009, Weber and Wittmann 2012



Agalinis tenuifolia (Vahl) Raf.

Slenderleaf false foxglove

Scrophulariaceae (Orobanchaceae)

John Hilty



Key Characteristics:

- ◆ Stems erect, up to 5 dm tall, usually 4-angled, much branched, often hemiparasitic
- ◆ Leaves opposite, linear, entire, acuminate, 3–7 cm long x 1–2 mm wide
- ◆ Pedicels widely divaricate, filiform, longer than calyx, 7–20 mm long
- ◆ Flowers large, bell-like, pink to purple, 2 yellow lines and reddish spots on inside of throat
- ◆ Capsules globose 4–6 mm long; seeds dark brown to blackish, 0.7–0.9 mm long

John Hilty



USDA-NRCS PLANTS Database Britton & Brown 1913

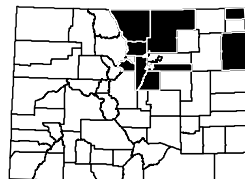
Similar Species: None. Only member of the snapdragon or broomrape family that has opposite leaves.

Habitat and Ecology: Infrequent in marshy ground along streambanks, pond and lake margins.

Comments: The nectar of the flowers attracts long-tongued bees (bumbees, honeybees and leaf-cutting bees) and butterflies.

Animal and Bird Use: 

References: Ackerfield 2012, Great Plains Flora Association 1986, Weber and Wittmann 2012, Welsh et al. 1993



Besseyia alpina (A. Gray) Rydb.

Alpine besseyia

Scrophulariaceae (Plantaginaceae)

R. T. Hawke



Synonyms: None

USDA PLANTS Symbol: BEAL

ITIS TSN: 33495

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,400–14,430 ft. (2,560–4,400 m)

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 with inconspicuously colored filaments

Dicot Herbs

Mary Ellen Harte



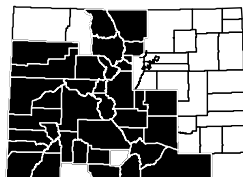
Similar Species: The range of *B. wyomingensis* [BEWY, NI, ITIS 33501] can overlap with *B. alpina*. The corolla of *B. wyomingensis* is not as evident or lacking and the filaments on the stamens are conspicuously purple-colored. *B. plantaginea* [FACW, FAC] is more robust and the flowers are white with margins that are purplish tinged. *Phacelia sericea* [PHSE, NI, ITIS 31592] has dense spikes of purple flowers and larger, pinnately-divided leaves.

Habitat and Ecology: Grows in moist rocky alpine meadows and montane rocky ridges.

Comments: *B. alpina* is a regional endemic. It is considered state critically imperiled (S1) in Wyoming and Utah and state vulnerable (S3) in New Mexico.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Besseyia plantaginea (James) Rydb.

White River coraldrops

Scrophulariaceae (Plantaginaceae)

Patrick Alexander USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: BEPL

ITIS TSN: 33498

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: GNR SNR

C-Value: 8

Duration: Perennial

CO Elevation: 5,670–13,200 ft. (1,730–4,025 m)

Key Characteristics:

- Stems to 3 dm tall, herbage tomentose at first, usually becoming glabrous
- Basal leaves 5–15 cm x 2.5–4 cm, elliptic to oval or oblong-ovate, crenate margins, pilose on veins
- Flowers in a dense spike; floral bracts rounded-ovate, 6 or more, leafy
- Corolla 5–8 mm long, white or purplish to pinkish tinged
- Capsules 5–6 mm long

Patrick Alexander USDA-NRCS PLANTS Database



Liz Makings



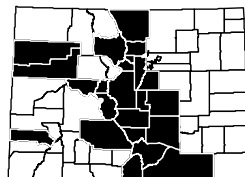
Similar Species: *B. plantaginea* commonly gets misidentified as a *Plantago patagonica* [PLPA2, UPL, ITIS 32907]. *P. patagonica* leaves are all basal, none on the stem, the leaves are narrowly linear with 1 to 3 parallel nerves and the corolla is radially symmetric, not 2-lipped as in *Besseyia*.

Habitat and Ecology: Found in forest openings, dry meadows, grassy slopes.

Comments: *B. plantaginea* is a regional endemic, known from southeast Wyoming, Colorado and northern New Mexico. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Martin and Hutchins 1981, Weber and Witmann 2012



Castilleja lineata Greene

Marshmeadow Indian paintbrush

Scrophulariaceae (Orobanchaceae)

Mark Egger



Synonyms: None

USDA PLANTS Symbol: CALI5

ITIS TSN: 33139

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4? S2

C-Value: 8

Duration: Perennial

CO Elevation: 7,150–11,120 ft. (2,180–3,390 m)

Key Characteristics:

- Stems erect, to 4 dm tall, conspicuously woolly, hemiparasitic (usually on *Artemisia* spp.)
- Leaves hairy, linear, to 6 cm long, entire or the upper leaves pinnatifid, strongly 3-nerved
- Inflorescence a narrow spike, floral bracts glandular-pubescent, yellowish-green, deeply lobed
- Galea not longer than the calyx, 20 mm long, deeply cleft, with linear lobes
- Seed coats dark, often pubescent



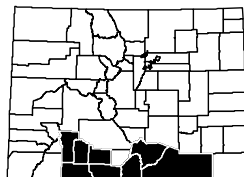
Similar Species: *C. sulphurea* [FACW, FAC, FACU] is the other yellow paintbrush that occurs occasionally in wetlands. It differs with a many-branched inflorescence and galeas 6–12 mm long.

Habitat and Ecology: Uncommon on moist hillsides and wet meadows.

Comments: *Castilleja* species are primarily pollinated by hummingbirds. 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.

Animal and Bird Use:  

References: Ackerfield 2012, Duffield 1971, Kearney and Peebles 1960, Weber and Wittmann 2012



Al Schneider

Castilleja miniata Douglas ex Hook.

Giant red Indian paintbrush

Scrophulariaceae (Orobanchaceae)

Al Schneider



Synonyms: None

USDA PLANTS Symbol: CAMI12

ITIS TSN: 33069

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,380–13,690 ft. (1,640–4,175 m)

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, galea 14–20 mm long, lower lip much reduced, tubes 14–26 mm long

Al Schneider



Al Schneider



Similar Species: *C. miniata* often hybridizes with *C. rhexiifolia* [FACU]. 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, purple, or sometimes crimson red.

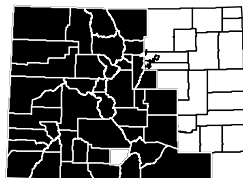
Habitat and Ecology: Common in forests, along streams and in wet mountain meadows.

Comments: *C. miniata* is one of the most widespread species of the genus. *Castilleja* species are primarily pollinated by hummingbirds. 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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Castilleja minor (A. Gray) A. Gray

Lesser Indian paintbrush

Scrophulariaceae (Orobanchaceae)

Mark Egger



Synonyms: None

USDA PLANTS Symbol: CAMI13

ITIS TSN: 33070

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Annual, Perennial

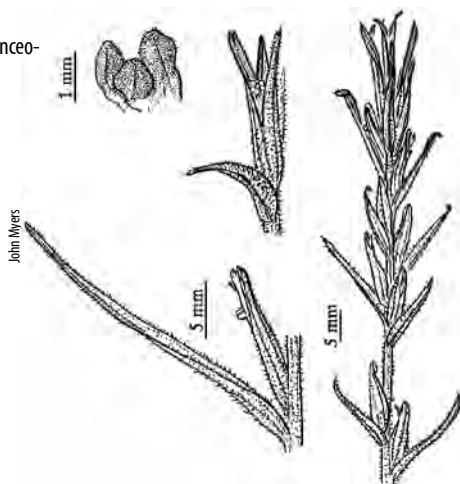
CO Elevation: 5,060–7,000 ft. (1,540–2,135 m)

Key Characteristics:

- ◆ Stems 1–7 dm tall, no branching, densely glandular pubescence; taproots slender
- ◆ Usually a single stem, no branching
- ◆ Inflorescence a dense spike; floral bracts longer than the flowers
- ◆ Leaves 3–8 (10) cm long, linear to narrowly lanceolate, attenuate, entire
- ◆ Bracts and calyx green with upper ¼ of bracts red-tipped

Dicot Herbs

Mark Egger



Similar Species: Only paintbrush that consistently occurs in wetlands.

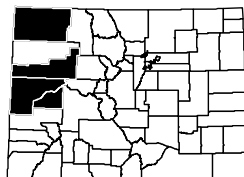
Habitat and Ecology: Uncommon in wet places, usually alkaline, marshes, streambanks and around hot springs.

Comments: *Castilleja* species are primarily pollinated by hummingbirds. 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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Castilleja sulphurea Rydb. Sulphur Indian paintbrush

Scrophulariaceae (Orobanchaceae)

Denise Culver



Synonyms: None

USDA PLANTS Symbol: CASU12

ITIS TSN: 33083

Wetland Status AW: FACU WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5? SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,400–13,200 ft. (1,950–4,025 m)

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

Al Schneider



Barry Breckling



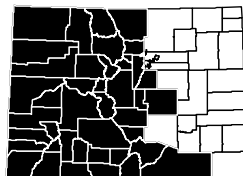
Similar Species: *C. lineata* [FACW] is another yellow paintbrush that occurs in wetlands. It is distinguished by the densely tomentose herbage that dries grayish.

Habitat and Ecology: Common in forests, along streams and in wet mountain meadows.

Comments: *Castilleja* species are primarily pollinated by hummingbirds. 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.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Cordylanthus ramosus Nutt. ex Benth.

Bushy bird's beak

Scrophulariaceae (Orobanchaceae)

Steve Matson



Synonyms: None

USDA PLANTS Symbol: CORA5

ITIS TSN: 33574

Wetland Status AW: FACU WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Annual

CO Elevation: 5,500–8,500 ft. (1,675–2,590 m)

Key Characteristics:

- ◆ Stems 1–3 dm tall, paniculately branched, herbage grayish, short hairs
- ◆ Leaves 1–5–3.5 cm long, entire or usually 3–5 parted, segments narrowly linear to filiform, reddish
- ◆ Inflorescence 3- to 5-flowered capitate, spike-like clusters, top flower blooms first
- ◆ Bracts and calyx green and round, calyx cleft to bases, prominently veined, forming 2 segments
- ◆ Corolla yellow with purple streaks, less than 2 cm long

Dicot Herbs

Matt Lavin



Jeanne R. Janish



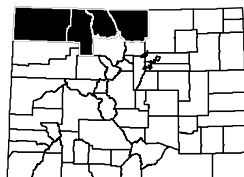
Similar Species: *Orthocarpus luteus* [ORLU2, FACU, ITIS 33437] calyx is split into 4 equal lobes, the leaves are entire or 3-cleft and the stem is single, not branched.

Habitat and Ecology: Locally common in sagebrush meadows, aspen woodlands and seasonally wet meadows.

Comments: In *C. ramosus*, what appears to be a calyx is a bract, opposite of the proper calyx, which also looks to be a bract, split down the inner side, lacking lobes. Considered state vulnerable (S3) in Wyoming and Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Gratiola neglecta Torr.

Clammy hedgehyssop

Scrophulariaceae (Plantaginaceae)

Corey Hammond



Synonyms: None

USDA PLANTS Symbol: GRNE

ITIS TSN: 33197

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Annual

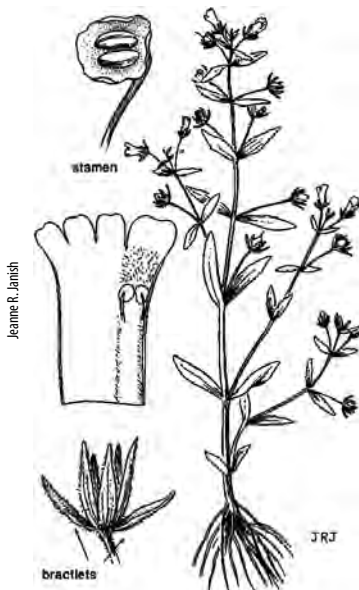
CO Elevation: 5,000–8,700 ft. (1,525–2,650 m)

Key Characteristics:

- ◆ Stems 0.5–2 (3) dm tall, ascending to decumbent, simple or branching, glandular-puberulent
- ◆ Leaves opposite, 1–3.5 (5) cm long, oblanceolate, toothed in upper half, slightly clasping at bases
- ◆ Flowers solitary from axils of one or both opposite leaves, glandular-pubescent; pedicels 8–22 mm long
- ◆ Bracts and calyx mostly green with upper 1/3 of bract red-tipped, calyx 3.2–5.5 mm long

- ◆ Capsules 3.5–5.5 (6.5) mm long, globose-ovoid, acuminate

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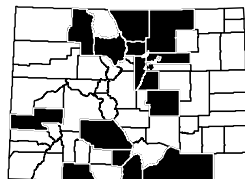
Similar Species: *Lindernia dubia* [OBL] is also an annual with flowers in leaf axils, but it is glabrous with blue to purple flowers.

Habitat and Ecology: Uncommon in moist soil, along ditches and pond margins.

Comments: Considered state critically imperiled (S1) in Utah, state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



***Lindernia dubia* (L.) Pennell var. *anagallidea* (Michx.) Cooperr.**
Yellowseed false pimpernel **Scrophulariaceae (Plantaginaceae)**

Anon Arthur



Synonyms: None

USDA PLANTS Symbol: LIDUA

ITIS TSN: 528804

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5T4 SNR

C-Value: Not Assigned

Duration: Annual, Biennial

CO Elevation: 5,000–7,500 ft. (1,525–2,285 m)

Key Characteristics:

- ◆ Stems 0.9–2 (3) dm tall, erect or ascending, glabrous
- ◆ Leaves opposite, 1–2 (3) cm long x 0.5–1 cm wide, lanceolate to obovate, 3- to 5-nerved, crenate
- ◆ Flowers solitary in leaf axils; calyx 2.8–4.5 (5.5) mm, 5 distinct linear segments
- ◆ Corolla 4–10 mm long, blue to lavender, tubular, bilabiate, throat with 2 yellow-hairy ridges
- ◆ Capsules 3.5–6 mm long, narrowly ovoid to ellipsoid, septums persistent as a thin plate, membranous



Jeanne R. Janish

Dean Wm. Taylor



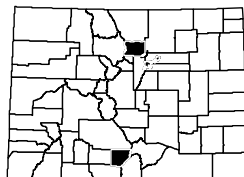
Similar Species: *Gratiola neglecta* [OBL] occurs in the same habitat, but has yellow to white flowers and the herbage is glandular-pubescent.

Habitat and Ecology: Uncommon in temporary pools and along pond margins.

Comments: Flora of North America places this genus in the Linderniaceae. Weber and Wittmann (2012) and Ackerfield (2012) place it in the Plantaginaceae. The global range includes the contiguous United States into British Columbia and Ontario.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mimulus eastwoodiae Rydb.

Eastwood's monkeyflower

Scrophulariaceae (Phrymaceae)

Al Schneider



Synonyms: *Mimulus cardinalis* Eastw., non Douglas ex Benth.

USDA PLANTS Symbol: MIEA

ITIS TSN: 33309

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G3G4 S2; BLM Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 5,100–5,500 ft. (1,555–1,675 m)

Key Characteristics:

- ◆ Stems 0.5–3 dm long, glandular-pubescent, climbing to pendulous
- ◆ Corolla 40 mm long, scarlet to orangish-red, bilabiate, upper lips erect or arched, with fused lobes
- ◆ Stolonerous, stolons producing new fertile plants
- ◆ Leaves sessile, lower fan-shaped, upper leaves ob-ovate to oblanceolate, toothed, palmately 3–5 veined
- ◆ Calyx 16–23 (27) mm long, lobes subequal, 4–7 mm long, lanceolate, acuminate, ciliate

Al Schneider



Anneta Duveen



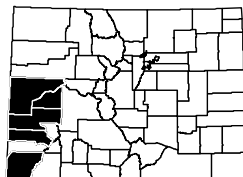
Similar Species: No other red-flowered monkeyflower occurs on seeps and cliff walls.

Habitat and Ecology: Found in cracks, overhanging cliff walls, moist shaded places in crevices of sandstone walls in southwestern Colorado.

Comments: *M. eastwoodiae* is an endemic to the canyonlands of southeastern Utah (S3), southwestern Colorado (S1) and Arizona (S1). It is pollinated primarily by hummingbirds due in part to the red flowers, a narrow tubular corolla and reflexed petals. Alice Eastwood was first to collect this plant, but called it *Mimulus cardinalis*. Rydberg collected it in 1913 and realized it was an undescribed species and named it after Eastwood (1859–1953).

Animal and Bird Use:  

References: Ackerfield 2012, Colorado Native Plant Society 1997, Cronquist et al. 1984, Schemske and Bradshaw 1999, Weber and Wittmann 2012



Mimulus floribundus Lindl. Manyflowered monkeyflower

Scrophulariaceae (Phrymaceae)

Gary A. Monroe USDA-NRCS PLANTS Database



Key Characteristics:

- ◆ Stems erect to decumbent, 0.3–2.2 (4) dm tall, glandular-pubescent, sometimes viscid and slimy
- ◆ Leaves distinctly petiolate with petioles 1–12 mm long; blades (0.3) 0.8–2(3) cm x (1) 5–13 mm
- ◆ Calyx cylindric, 3.5–7 (9) mm long, glandular-pubescent, lobes 0.8–1.6 (2) mm long, triangular, ciliate

Synonyms: None

USDA PLANTS Symbol: MIFL2

ITIS TSN: 33311

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S3?

C-Value: 10

Duration: Annual

CO Elevation: 4,400–10,600 ft. (1,340–3,230 m)

- ◆ Corolla soon dropping after flowering, 7–14 mm long, yellow often with red spots
- ◆ Capsules included, 3.5–5 mm long, obovoid to elliptic



J R3
Jeanne R. Janish

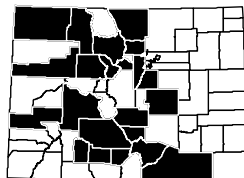
Similar Species: No other yellow monkeyflowers occur in seeps and rock crevices. The petiolate leaves are a distinctive identification character.

Habitat and Ecology: Found in moist places, cliff overhangs, along streams and in moist rock crevices.

Comments: Considered state imperiled (S2) in Wyoming, state vulnerable (S3) in Colorado and possibly extirpated (SH) in Montana.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mimulus glabratus Kunth

Roundleaf monkeyflower

Scrophulariaceae (Phrymaceae)

Crystal Strouse



Synonyms: None

USDA PLANTS Symbol: MIGL

ITIS TSN: 33316

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

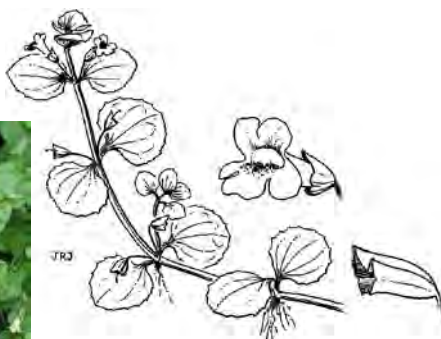
Duration: Perennial

CO Elevation: 3,510–13,060 ft. (1,070–3,980 m)

Key Characteristics:

- ◆ Stems 1–5 dm long, decumbent, rooting at lower nodes, glabrous to glandular-pubescent
- ◆ Leaves short-petiolate below, sessile above; blades usually broader than long, palmately 3–5 veined
- ◆ Calyx bell-shaped, 5–11 (16) mm long, glabrous, sometimes spotted with red
- ◆ Corolla throats open, not closed by palates, 10–20 mm long, yellow
- ◆ Capsules included, 5–9 mm long, broadly ovate, rounded

Ernie Marx



Jeanne R. Janish

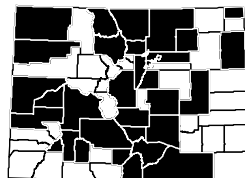
Similar Species: *M. guttatus* [OBL] is another yellow monkeyflower, but the corolla throats are closed at the palate and the calyx teeth are 1 mm or more in length.

Habitat and Ecology: Common along streams, especially around seeps and springs.

Comments: Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mimulus guttatus DC.

Seep monkeyflower

Scrophulariaceae (Phrymaceae)

Al. Schneider



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



Al. Schneider

Synonyms: None

USDA PLANTS Symbol: MIGU

ITIS TSN: 33236

Wetland Status AW: OBL WM: OBL GP: OBL

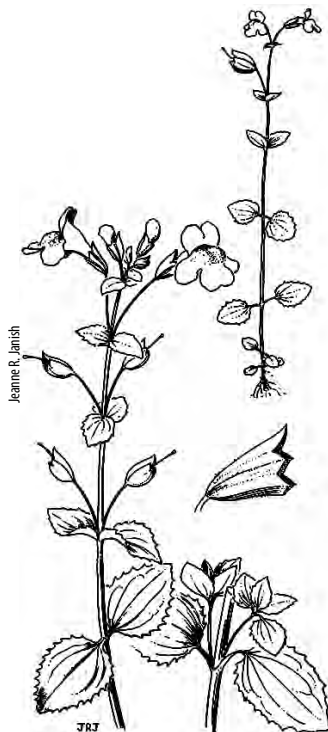
Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Annual, Perennial

CO Elevation: 5,000–14,310 ft. (1,525–4,360 m)



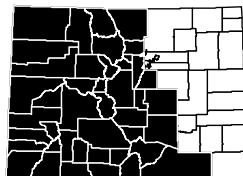
Similar Species: *M. tillingii* [OBL] has a yellow corolla that is closed at the throat but the plants usually have 1–3 flowers, not more than 5. It is stoloniferous/rhizomatous, growing at much higher elevations. *M. glabratus* [OBL] corolla is yellow, but the throat is mostly open, not closed at the 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. Considered state critically imperiled (S1) in North Dakota.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mimulus lewisii Pursh

Purple monkeyflower

Scrophulariaceae (Phrymaceae)

John Brew



Synonyms: None

USDA PLANTS Symbol: MILE2

ITIS TSN: 33260

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 S2

C-Value: 8

Duration: Perennial

CO Elevation: 8,400–11,000 ft. (2,560–RUARA2 m)

Key Characteristics:

- ◆ Stems 3–8 dm tall, stout, erect, herbage glandular-pubescent to viscid-villous
- ◆ Leaves sessile, (3) 4–7 (10) cm x (10) 15–24 (32) mm, lanceolate to ovate
- ◆ Calyx 18–28 mm long, glandular-pubescent, often reddish-tinged, 3–7 mm long, tips recurved
- ◆ Corolla soon dropping after flowering, 33–50 (57) mm long, pink or magenta to violet, slightly bilabiate
- ◆ Capsules included, 14–16 mm long, narrowly oblong, acuminate

Gary A. Monroe USDA-HRCS PLANTS Database



Jeanne R. Janish

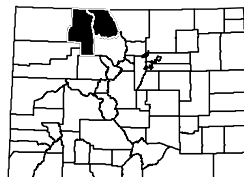
Similar Species: *M. lewisii* has distinctively large, purplish flowers.

Habitat and Ecology: Uncommon in moist meadows and along streams in upper montane to subalpine zones in Routt and Jackson Counties.

Comments: Global range extends from Alaska south to British Columbia, Alberta, south to California Utah and Colorado.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mimulus moschatus Douglas ex Lindl.

Muskflower

Scrophulariaceae (Phrymaceae)

Jason Hollinger



Synonyms: None

USDA PLANTS Symbol: MIM03

ITIS TSN: 33330

Wetland Status AW: FACW WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 8,000–9,200 ft. (2,440–2,805 m)

Key Characteristics:

- ◆ Stems 0.2–2 (3) dm long, rooting at lower nodes, slimy viscid-villous with whitish hairs, musk-scented
- ◆ Leaves petiolate; blades 1.2–5 cm x 5–25 mm, margins dentate, pinnately veined
- ◆ Calyx 6–11(13) mm long, viscid-villous, all lobes lanceolate, acute or acuminate, curved outward
- ◆ Corolla 13–24 mm long, yellow with red stripes in throat, tubular-funnelform, subequal lobes rounded
- ◆ Capsules included, 3.5–7 mm long, ovate, acuminate

Dicot Herbs

Ken Hickman



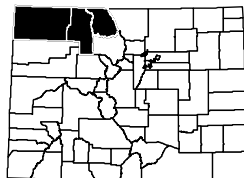
Similar Species: *M. moschatus* is easily identified by the pinnately, not palmately, veined leaves, mat-forming habit and a distinctive musky smell.

Habitat and Ecology: Uncommon in moist places around springs, seeps, along streambanks and on margins of lakes.

Comments: Considered state imperiled (S2) in Wyoming and state vulnerable (S3) in Montana.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mimulus rubellus A. Gray

Little redstem monkeyflower

Scrophulariaceae (Phrymaceae)

Steve Matson



Synonyms: None

USDA PLANTS Symbol: MIRU

ITIS TSN: 33270

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: GS SNR

C-Value: Not Assigned

Duration: Annual

CO Elevation: 4,820–8,590 ft. (1,470–2,620 m)

Key Characteristics:

- ◆ Stems 0.1–2.2 dm tall, simple or loosely branched, glandular-puberulent
- ◆ Leaves sessile, 0.3–1.5 (2.2) cm x 2–4 (7) mm, linear, connate at bases, 1–3 veined
- ◆ Flowers in leaf axils; pedicels 7–20 mm long
- ◆ Calyx tubular, 4–7 (9) mm long, ribs reddish, lobes rounded, teeth margins ciliate
- ◆ Corolla 6–8 (10) mm long, yellow with maroon dots, palates puberulent; capsules 4–6.5 mm long

Neal Kramer



James M. Andre



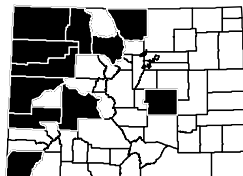
Similar Species: *M. rubellus* is easy to identify by the white hairs on the calyx teeth. Other monkeyflowers may be glandular-pubescent, but do not possess the white hairs.

Habitat and Ecology: Uncommon in sagebrush or oak shrublands, rocky crevices and along streams.

Comments: Global range is from southeast California, east to Wyoming (S1), south to Texas.

Animal and Bird Use:  

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Mimulus tilingii Regel

Tiling's monkeyflower

Scrophulariaceae (Phrymaceae)

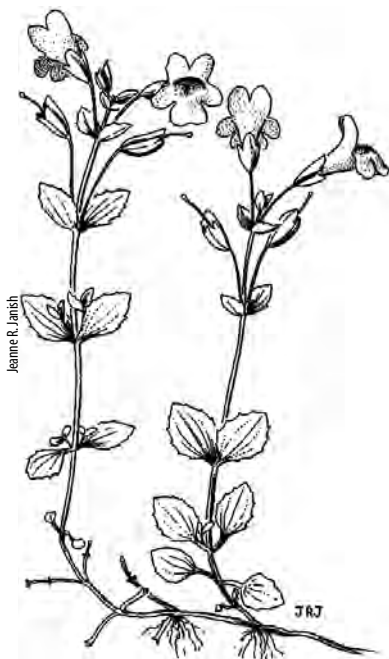
Al Schneider



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, funnelform, palate densely yellow-bearded

Al Schneider



Jeanie R. Jantich

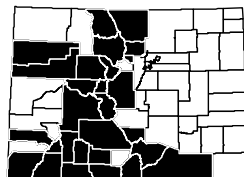
Similar Species: *M. tilingii* is difficult to distinguish from *M. guttatus* [OBL] and may be an alpine form of *M. guttatus*.

Habitat and Ecology: Common in alpine tundra, along streams and in wet meadows.

Comments: Widespread throughout western North America to the Rocky Mountains states. Considered state critically imperiled (S1) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Pedicularis crenulata Benth.

Meadow lousewort

Scrophulariaceae (Orobanchaceae)

Mel Harte



Synonyms: None

USDA PLANTS Symbol: PECR

ITIS TSN: 33372

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,400–10,400 ft. (1,645–3,170 m)

Key Characteristics:

- ◆ Stems pubescent in longitudinal lines, 1.5–3.5 (5) dm tall
- ◆ Leaves simple, not pinnately divided, linear to narrowly lanceolate
- ◆ Inflorescence a spicate-raceme, 2–10 cm long, densely-flowered, bracts leaf-like
- ◆ Calyx 8–12 mm long, villous, lobes 2; corolla 21–26 mm long, rose, red, or purplish,
- ◆ Galea 11–15 mm long, truncate and beakless at the apices, 2 lateral teeth, sometimes bristle-like

Mel Harte



Mel Harte



Similar Species: *P. racemosa* [PERA, NI, ITIS 33385] is the other lousewort with simple, not pinnatifid leaves, however the flowers are white, not rose-colored.

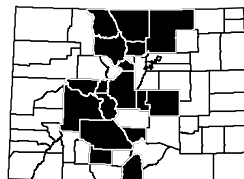
Habitat and Ecology: Locally common in wet meadows, marshes and streambanks in mountains. Louseworts are hemiparasitic with many grasses and members of the daisy family.

Comments: *Pedicularis* spp. are primarily pollinated by bumblebees.

Considered state critically imperiled (S1) in Montana and state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Macior 1970, Weber and Wittmann 2012



Pedicularis groenlandica Retz.

Elephanthead lousewort

Scrophulariaceae (Orobanchaceae)

Steve Olson



Synonyms: None

USDA PLANTS Symbol: PEGR2

ITIS TSN: 33377

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 7,450–14,420 ft. (2,270–4,395 m)

Key Characteristics:

- ◆ Stems often clustered, herbage glabrous, (1) 2–4.5 (7) dm tall
- ◆ Leaves mostly basal, 6–17 (25) cm long, pinnatifid, 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 elephant's head



Dennis Culver



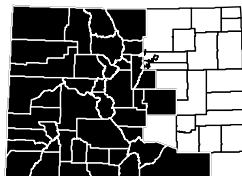
Similar Species: *P. groenlandica* is probably the most distinct wetland plant in Colorado, and it certainly is the most photographed.

Habitat and Ecology: Common in wet montane and alpine meadows, streambanks and woods. Louseworts are hemiparasitic with many grasses and members of the daisy family.

Comments: *Pedicularis* spp. are primarily pollinated by bumblebees.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Macior 1970, Weber and Wittmann 2012



Pedicularis sudetica Willd. ssp. *scopulorum* (A. Gray) Hultén

Sudetic lousewort Scrophulariaceae (Orobanchaceae)

Al Schneider



Synonyms: *Pedicularis scopulorum* (A. Gray) A. Gray

USDA PLANTS Symbol: PESUS2

ITIS TSN: 524427

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T3T4 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 9,090–14,420 ft. (2,770–4,395 m)

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
- ◆ Calyx 8–10 mm long, villous, shorter than the tubes; corolla purple or reddish-purple, 15–20 mm long
- ◆ Galea about 10 mm long, not beaked, obliquely truncate, sometimes bearing 2 teeth near the apices

Al Schneider



Al Schneider



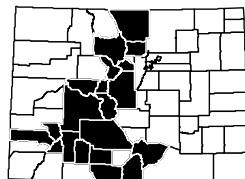
Similar Species: *P. groenlandica* [OBL] from a distance resembles *P. sudetica* ssp. *scopulorum*, but it is a stouter plant that occurs in wetter habitats. *P. crenulata* [FACW] has simple leaves.

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 daisy family.

Comments: *P. sudetica* ssp. *scopulorum* global range extends from the mountains of Colorado into New Mexico. *Pedicularis* spp. are primarily pollinated by bumblebees.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012



Veronica peregrina L. ssp. *xalapensis* (Kunth) Pennell

Hairy purslane speedwell Scrophulariaceae (Plantaginaceae)

Steve Matson



Synonyms: None
USDA PLANTS Symbol: VEPEX2
ITIS TSN: 524797
Wetland Status AW: OBL WM: OBL GP: FACW
Native Status: Native
Conservation Status: G5T5 SNR
C-Value: Not Assigned
Duration: Annual
CO Elevation: 4,380–12,000 ft. (1,335–3,660 m)

Key Characteristics:

- ◆ Stems erect 0.5–2 (3) dm tall, simple or branched at the bases, glandular-pubescent; taproots
- ◆ Leaves sessile or lowermost ones narrowed to petiolar bases; blades 0.5–2.2 mm x 0.5–5 mm
- ◆ 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

Dicot Herbs

Russ Kleinman



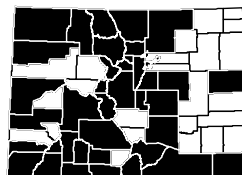
Similar Species: *V. wormskjoldii* [FACW] is a perennial from rhizomes. The stems are usually decumbent or prostrate at bases and pubescent with long, loose, spreading hairs. *V. serpyllifolia* var. *humifusa* [FAC, OBL] is also a perennial, but has pubescent stems and the calyx has a conspicuous notch.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Veronica serpyllifolia L. ssp. *humifusa* (Dicks.) Syme Brightblue speedwell Scrophulariaceae (Plantaginaceae)

Kerri Morse



Synonyms: *Veronicastrum serpyllifolium* (L.) Fourr. ssp. *humifusum* (Dicks.) W.A. Weber

USDA PLANTS Symbol: VESEH2

ITIS TSN: 33425

Wetland Status AW: FAC WM: FAC GP: OBL

Native Status: Native

Conservation Status: G5T5? SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,560–12,600 ft. (1,390–3,840 m)

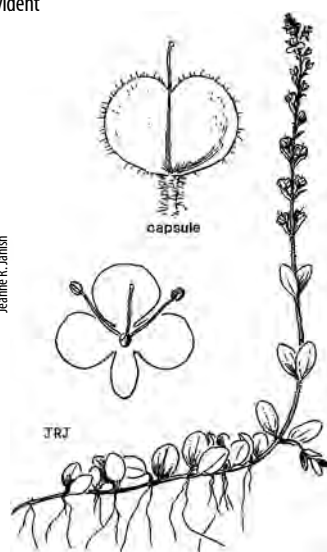
Key Characteristics:

- ◆ 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

Kerri Morse



Jeanne R. Janish



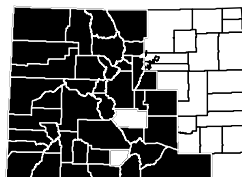
Similar Species: *V. wormsjordii* [FACW] stems are pilose with long spreading hairs, the flowers are 6–10 mm across and the capsules exceeds the calyx. The capsule notch is not as deep, 0.1–0.3 mm versus 0.3–0.8 mm in *V. serpyllifolia* var. *humifusa*.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Veronica wormskjoldii Roem. & Schult.

American alpine speedwell

Scrophulariaceae (Plantaginaceae)

Keir Morse



Synonyms: *Veronica nutans* Bongard

USDA PLANTS Symbol: VEW02

ITIS TSN: 33426

Wetland Status AW: FACW WM: FACW GP: FAC

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 5,200–14,420 ft. (1,585–4,395 m)

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

Steve Matson



Barry Beedling



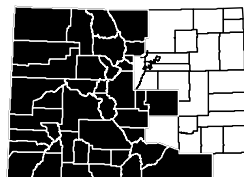
Similar Species: *V. serpyllifolia* ssp. *humifusa* [FAC, OBL] has finely puberulent stems, not long or loose hairs and the capsules are 2.8–3.7 mm long, not exceeding the calyx, with conspicuous notches (0.3–0.8 mm deep).

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.

Animal and Bird Use: 

References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Phyla lanceolata (Michx.) Greene

Lanceleaf fogfruit

Verbenaceae

www.nps.gov/samo



Synonyms: *Lippia lanceolata* Michx.

USDA PLANTS Symbol: PHLA3

ITIS TSN: 32196

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 1

Duration: Perennial

CO Elevation: 3,500–6,000 ft. (1,065–1,830 m)

Key Characteristics:

- ◆ Stems prostrate, trailing or ascending, sometimes rooting at nodes
- ◆ Leaves opposite, lanceolate to lance-elliptic, 5–30 mm wide, tapering to bases, apices, toothed
- ◆ Flowers in dense, head-like cylindric spikes, 5–7 mm across on long peduncles
- ◆ Petals white to pink with a yellow center; strongly zygomorphic
- ◆ Fruits 2 nutlets

Richard Old



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *P. cuneifolia* [PHLA3, FAC, ITIS 32196] has leaves that are very narrowly oblanceolate, tapering to the bases with only a few teeth and 1 prominent midvein.

Habitat and Ecology: Uncommon along margins of ponds and lakes on Eastern Slope.

Comments: Considered state critically imperiled (S1) in Utah.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012, Welsh et al. 1993



Verbena hastata L.

Swamp verbena

Verbenaceae

Louis M. Landry

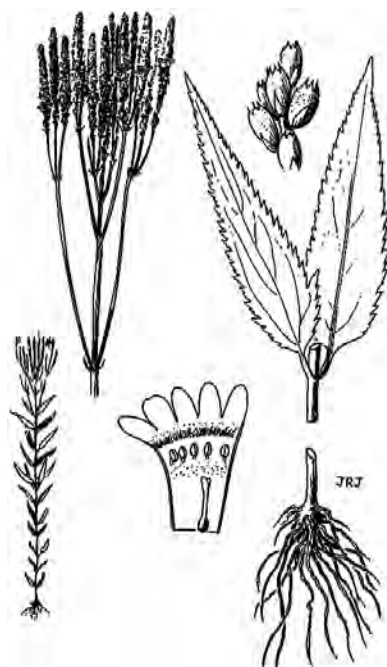


Key Characteristics:

- ◆ Stems 4–15 dm tall, square, branched above only, hairy
- ◆ Leaves opposite, lanceolate, 5–15 cm long, lower leaves hastate, distinctly petiolate, not veined
- ◆ Fruiting spikes narrow to 7 mm wide, usually numerous spikes in an upright panicle
- ◆ Sepals 2.5–3 mm long; petals blue to purplish or pink, tubes 3 mm long, limbs 2.5–4 mm wide
- ◆ Fruits dry, separating into 4 nutlets at maturity

Dicot Herbs

Patrick Alexander USDA-NRCS PLANTS Database



Jeanne R. Janish

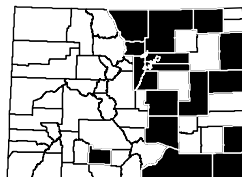
Similar Species: Other *Verbena* spp. sepals are either glandular or densely hairy.

Habitat and Ecology: Found along margins of ponds, lakes, streams and ditches.

Comments: Widespread throughout contiguous United States. Considered state imperiled (S2) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012, Welsh et al. 1993



Viola biflora L.

Arctic yellow violet

Violaceae

Steve Olson



Synonyms: None

USDA PLANTS Symbol: VIBI2

ITIS TSN: 22048

Wetland Status AW: NI WM: FACW GP: FAC

Native Status: Native

Conservation Status: G5 S3

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 6,000–12,580 ft. (1,830–3,835 m)

Key Characteristics:

- ◆ Stems slender, elongate, usually with 2–3 stem leaves
- ◆ Basal leaves 2–3, broadly reniform to orbiculate, cordate at bases, with short acute apices
- ◆ Leaf margins deeply crenate-serrate, glabrous or nearly so above, pubescent on veins beneath
- ◆ Sepals lanceolate; petals yellow to pale yellow, with brownish-violet stripes; spurs very short

Scott Smith



Scott Smith



Similar Species: *V. nuttallii* [VINU2, NI, ITIS 22120] leaves are narrowly lanceolate, usually 3 times as long as wide.

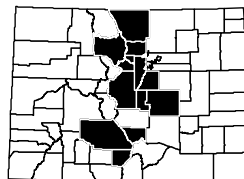
Habitat and Ecology: Found in shady, moist forests, rocky crevices and along streams.

Comments: Circumpolar. The Colorado populations are disjunct from the British Columbia, Yukon and Alaska populations. Violets are usually pollinated by bees but occasionally by butterflies or ants. Large and small mammals browse the leaves.

Animal and Bird Use:



References: Ackerfield 2012, Hultén 1968, Weber and Wittmann 2012



***Viola macloskeyi* Lloyd ssp. *pallens* (Banks ex Ging) M.S. Baker**
Smooth white violet Violaceae

Scott Smith



Synonyms: *Viola palustris* L.
USDA PLANTS Symbol: VIMAP3
ITIS TSN: 524820
Wetland Status AW: OBL WM: OBL GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: Not Assigned
Duration: Perennial
CO Elevation: 7,900–12,600 ft. (2,410–3,840 m)

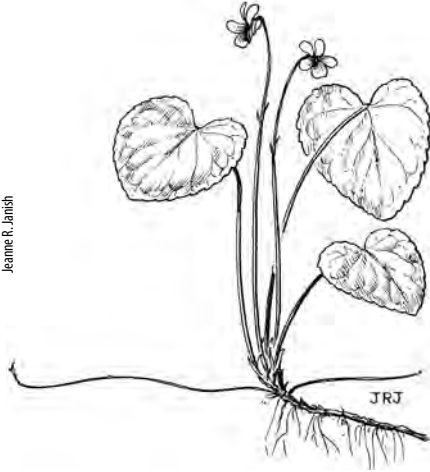
Key Characteristics:

- ◆ Stems 3–19 cm tall, glabrous, acaulescent or short-caulescent; stolons long, slender
- ◆ Leaf blades 0.5–3.5 cm x 0.5–4 cm, obtuse tips; peduncles 2–15 cm long, surpassing leaves
- ◆ Flowers 6–10 mm long; spurs 1–2 mm long
- ◆ Petals white or occasionally pale lilac with purple veins, lateral veins sparsely bearded to glabrous
- ◆ Capsules 5.7–8.5 mm long, green, glabrous

Scott Smith




Jeanne R. Janish



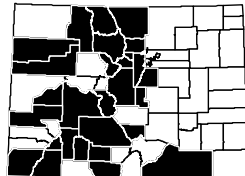
Similar Species: *V. canadensis* [VICA4, NI, ITIS 22053] has white flowers, but the stems, petioles, and veins of the underside of leaves have spreading hairs.

Habitat and Ecology: Found in moist moss along shady streams and in subalpine forests.

Comments: Ackerfield (2012) recognizes *V. palustris* and *V. macloskeyi* as synonyms. Weber and Wittmann (2012) recognize *V. macloskeyi* ssp. *pallens*. Considered state imperiled (S2) in Wyoming. Violets are usually pollinated by bees but occasionally by butterflies or ants. Large and small mammals browse the leaves.

Animal and Bird Use: 

References: Ackerfield 2012, Weber and Wittmann 2012



Viola nephrophylla Greene

Northern bog violet

Violaceae

Gary A. Monroe USDA-NRCS PLANTS Database



Synonyms: *Viola papilionacea* Pursh., *Viola sororia* Willd. ssp. *affinis* (LeConte) McKinney

USDA PLANTS Symbol: VINE

ITIS TSN: 22117

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

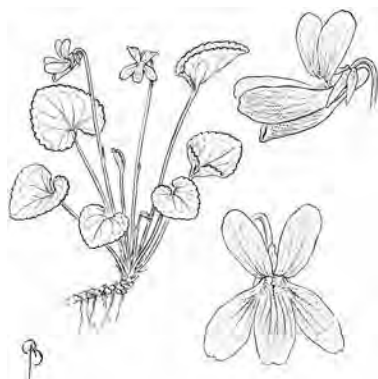
Duration: Annual, Perennial

CO Elevation: 4,800–11,000 ft. (1,465–3,355 m)

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
- 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

Gary A. Monroe USDA-NRCS PLANTS Database



Bobbi Angell

Similar Species: *V. adunca* [VIAD, FAC, ITIS 22032] 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.

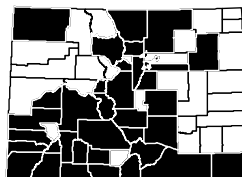
Habitat and Ecology: Common in bogs, along streams and creeks, in moist meadows, and on shady forest slopes.

Comments: Widespread through North America. Considered state vulnerable (S3) in Wyoming and Montana. Host plant to larvae of the Nokomis fritillary (*Speyeria nokomis*).

Animal and Bird Use:



References: Ackerfield 2012, Holmgren et al. 2005, Weber and Wittmann 2012



Viola renifolia A. Gray

White violet

Violaceae

Louis M. Landry



Synonyms: *Viola renifolia* A. Gray var. *brainerdii* (Greene) Fernald

USDA PLANTS Symbol: VIRE2

ITIS TSN: 22156

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

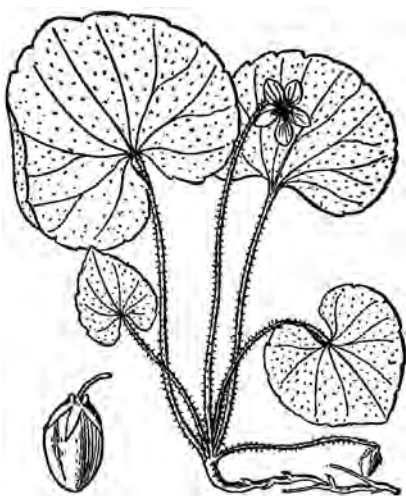
C-Value: 7

Duration: Perennial

CO Elevation: 6,500–12,360 ft. (1,980–3,765 m)

Key Characteristics:

- ◆ Plants 5–10 cm tall, acaulescent; stolons lacking
- ◆ Leaves 2–6 cm broad, reniform, often hairy beneath, blunt-pointed, margins crenate-serrate
- ◆ Petioles longer than blades; stipules linear
- ◆ Sepals half as long as petals; petals pure white with purple streaks, 10–15 mm long, beardless
- ◆ Spurs short; capsules 10–15 mm long, often purplish



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *V. macloskeyi* ssp. *pallens* [FACW] has long, slender stolons and flowers that are also white, but with a purple tinge.

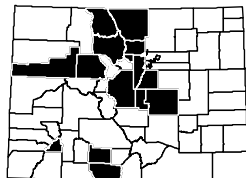
Habitat and Ecology: Uncommon. Found in subalpine forests and streamsides.

Comments: Considered state critically imperiled (S1) in Wyoming and state vulnerable (S3) in Montana. Violets are usually pollinated by bees but occasionally by butterflies or ants. Large and small mammals browse the leaves.

Animal and Bird Use:



References: Harrington 1964, Hitchcock and Cronquist 1973, Weber and Wittmann 2012



Louis M. Landry



Acer negundo L.

Boxelder

Aceraceae

Matt Lavin



Synonyms: *Negundo aceroides* (L.) Moench

USDA PLANTS Symbol: ACNE2

ITIS TSN: 28749

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,800–10,000 ft. (1,465–3,050 m)

Key Characteristics:

- ◆ Trees 4–20 m tall, 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'

Matt Lavin



Anthony Mendoza



Similar Species: There are two varieties of *A. negundo* that occur in Colorado: 1a. Young branches glaucous, smooth, pale.....var. *violaceum* [ACNEV, ITIS 182132]. 1b. Young branches with short hairs.....var. *interius* [ACNEI2, ITIS 526852].

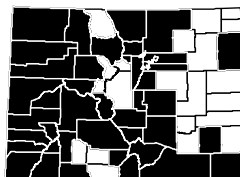
Habitat and Ecology: Common across the state along rivers, creeks and in canyon bottoms.

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. *violaceus* is introduced and *Negundo aceroides* (*A. negundo*) ssp. *interius* is native. Ackerfield (2012) states that both subspecies are non-native. The foliage and twigs are eaten by a variety of insects and the persistent fruits are eaten by a wide variety of birds and mammals, especially in winter when other food is in short supply.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Weber and Wittmann 2012, Welsh et al. 1993



Baccharis salicina Torr. & A. Gray

Willow baccharis

Asteraceae

Max Licher



Synonyms: None

USDA PLANTS Symbol: BASA

ITIS TSN: 35698

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 3,400–5,800 ft. (1,035–1,770 m)

Key Characteristics:

- ◆ Shrubs, 1–4 m tall; twigs of season green, rib-angled, dioecious
- ◆ Leaves alternate, linear-elliptic, with 1 main vein and 2 lateral veins, resinous-varnished
- ◆ Flowering heads numerous and crowded, sessile in large, leafy-bracteate terminal inflorescences
- ◆ Involucres narrow, up to 1 cm high and wide, bracts thick, dry with small greenish area near tips
- ◆ Achenes 1.2–1.8 mm long, 10-nerved; pappi whitish



Max Licher



USDA-NRCS PLANTS Database Britton & Brown 1913

Similar Species: *B. salicina* resembles willows from a distance because of the freely branching growth habit.

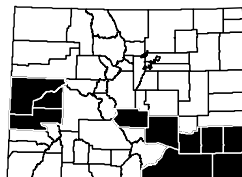
Habitat and Ecology: Found along streams, hanging gardens, alkaline meadows and occasionally along roadsides. Known from Arkansas River Valley and Western Slope.

Comments: Global range includes Utah to Kansas south to New Mexico and Texas. Provides cover for small mammals, amphibians, and songbirds. Also an excellent nectar source for butterflies, wasps and other insects.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist et al. 1984, Weber and Wittmann 2012



Chrysothamnus linifolius Greene

Spearleaf rabbitbrush

Asteraceae

Max Lidier



Synonyms: *Chrysothamnus viscidiflorus* (Hook.) Nutt. ssp. *linifolius* (Greene) H.M. Hall & Clem., *Lorandersonia linifolia* (Greene) Urbatsch, R. P. Roberts & Neubig

USDA PLANTS Symbol: CHLI3

ITIS TSN: 37054

Wetland Status AW: NI WM: NI GP: NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,550–11,900 ft. (1,385–3,625 m)

Key Characteristics:

- ◆ Shrubs, 5–35 dm tall, stems single, green becoming tan, relatively unbranched
- ◆ Leaves flat and not twisted, lanceolate and 20–75 mm long x 3–8 mm wide
- ◆ Heads in corymbiform arrays 3–12 cm wide; phyllaries in 3–4 series in 5 vertical ranks
- ◆ No ray flowers; disc flowers 5, corollas 4–5.5 mm, glabrous, yellow
- ◆ Achenes tan, 2.5–3.5 mm, 10–12 ribbed, densely hairy; pappi whitish-tan, 4.5–7 mm long

Dee Malone



Dee Malone



Similar Species: *C. viscidiflorus* [CHVI8, NI, ITIS 37090] and *C. greenei* [CHGR6, NI, ITIS 37052] are shorter, bushy-branched plants of much drier sites, with narrow leaves that are typically twisted.

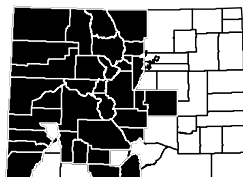
Habitat and Ecology: Common on floodplains, stream banks and terraces, irrigation canals, seeps and springs, especially in alkaline soils on the west slope.

Comments: Provides cover for small mammals, amphibians, and songbirds. Rabbitbrush is also an excellent nectar source for butterflies, wasps and other insects. Global range includes Montana (S3), Wyoming (S3), Utah, Colorado, New Mexico and Arizona (S1).

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2006, Weber and Wittmann 2012, Welsh et al. 1993



Woody Plants

Alnus incana (L.) Moench ssp. *tenuifolia* (Nutt.) Breitung

Thinleaf alder Betulaceae

Denise Culver



Synonyms: *Alnus tenuifolia* Nutt.

USDA PLANTS Symbol: ALINT

ITIS TSN: 181889

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5T5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 4,700–12,600 ft. (1,435–3,840 m)

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
- ◆ 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

Woody Plants

Br. Alfred Brousseau



Susan Mc Dougall USDA-NRCS Wetland Flora



Similar Species: *Betula occidentalis* [FACW] pistillate catkins are firm, but not woody, with deciduous scales and 3 flowers per bract scale instead of 2. *Corylus cornuta* [COC06, FACU, ITIS 19507] can occur with alder, it is dioecious, the fruit is a nut surrounded by a green papery husk and the leaves are rough to the touch.

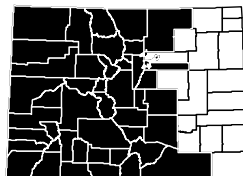
Habitat and Ecology: Occurring along streams, bordering lakes and wet meadows and in moist gulches in foothills and mountains.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 1997, Weber and Wittmann 2012



Betula glandulosa Michx.

Resin birch

Betulaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: BEGL

ITIS TSN: 19485

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

Duration: Perennial

CO Elevation: 7,200–12,700 ft. (2,195–3,870 m)

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

Denise Culver



Similar Species: *B. occidentalis* [FACW] 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.

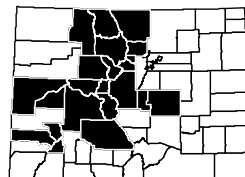
Habitat and Ecology: Occurring along streams, in fens and willow thickets in subalpine to alpine meadows. *B. glandulosa* is wind pollinated or can reproduce by vegetatively sprouting.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 1997, Weber and Wittmann 2012



Woody Plants

Betula occidentalis Hook.

Water birch

Betulaceae

Susan McDougall USDA-NRCS PLANTS Database



Synonyms: *Betula fontinalis* Sarg.

USDA PLANTS Symbol: BEOC2

ITIS TSN: 19488

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 5,000–12,680 ft. (1,525–3,865 m)

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



Denise Oliver



Similar Species: *Alnus incana* ssp. *tenuiflora* [FACW] typically occurs with *B. occidentalis* but can be distinguished by the persistent woody cones.

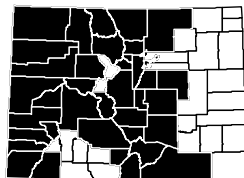
Habitat and Ecology: Occurs along streams, wet gulches and at springs and seeps.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 1997, Gullion 1964, Weber and Wittmann 2012



Viburnum edule (Michx.) Raf.

Squashberry

Caprifoliaceae (Adoxaceae)

Ernie Marx



Synonyms: *Viburnum pauciflorum* La Pylaie ex Torr. & A. Gray

USDA PLANTS Symbol: VIED

ITIS TSN: 35261

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 S3?

C-Value: 6

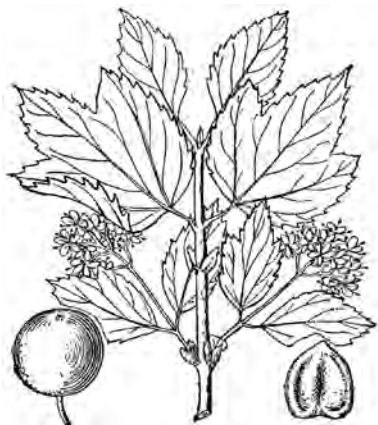
Duration: Perennial

CO Elevation: 5,940–10,690 ft. (1,810–3,260 m)

Key Characteristics:

- ◆ Shrubs, 1–2 m tall; bark gray to brown
- ◆ Leaves opposite, 3-lobed, palmately veined, margins toothed to finely serrate
- ◆ Inflorescence a compound, flat-topped cyme
- ◆ Sepals 5; petals white; styles 3-lobed
- ◆ Fruits 1-seeded drupes, becoming red at maturity

USDA-NRCS PLANTS Database Britton & Brown 1913



Louis M. Landry



Similar Species: *Jamesia americana* [JAAM, FACU, ITIS 24379] is a shrub that has white flowers in a cyme, but the leaves are simple, densely pubescent beneath and the fruit is a capsule not a drupe.

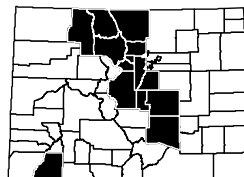
Habitat and Ecology: Locally common along streams and in moist, shaded places, especially common along the Front Range.

Comments: Bright red berries are tart, but are edible for small mammals, songbirds, and grouse. Foliage is browsed by deer, elk, moose, and bears. Considered state critically imperiled (S1) in Wyoming and state vulnerable (S3) in Colorado and South Dakota.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Weber and Wittmann 2012



Woody Plants

Sarcobatus vermiculatus (Hook.) Torr.

Greasewood

Chenopodiaceae (Sarcobataceae)

Melissa Landon



Synonyms: None

USDA PLANTS Symbol: SAVE4

ITIS TSN: 20707

Wetland Status AW: FAC WM: FACU GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 4,320–8,710 ft. (1,315–2,655 m)

Key Characteristics:

- ◆ Shrubs, 10–20 dm or more tall, deciduous, many branched, thorns at right angles from main stems
- ◆ Leaves mostly alternate or sub-opposite, linear, fleshy, sessile, roundish
- ◆ Inflorescence with pistillate flowers solitary or paired in leaf axils; staminate above pistillate
- ◆ Flowers numerous, small, greenish or yellowish, petals absent
- ◆ Fruits utricles, enclosed in fruiting bracts with circular winged margins

Woody Plants

Melissa Landon



Matt Lavin



Similar Species: *Atriplex confertifolia* [ATCO, NI, ITIS 20519] can occur in similar habitats, but usually occurs in much drier substrates and the leaves are flattened, alternate and orbicular-ovate, not linear and succulent.

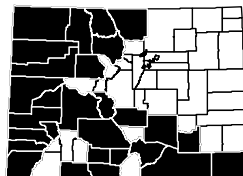
Habitat and Ecology: Common on alkaline flats, open slopes, playa margins and along roadsides.

Comments: The numerous seeds are wind-dispersed and help to re-establish the plants after fire, although greasewood is only slightly harmed, if at all, by fire. Greasewood is forage for many animals including jack rabbits (major food item), prairie dogs, quail, and pronghorn. The plants provide shade and protective cover for many small mammals. Greasewood does contain oxalates of potassium and sodium, especially later in the growing season, which are poisonous to cattle and sheep when eaten in large quantities.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 2003, Knight and Walter 2001, Weber and Wittmann 2012



Cornus sericea L.

Redosier dogwood

Cornaceae

Ernie Marx



Synonyms: *Cornus stolonifera* Michaux, *Swida sericea* (L.) Holub

USDA PLANTS Symbol: COSE16

ITIS TSN: 501637

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

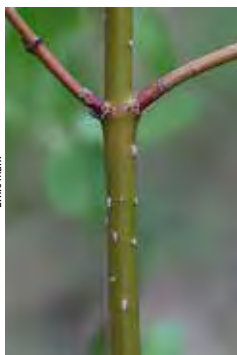
Duration: Perennial

CO Elevation: 5,000–11,480 ft. (1,525–3,500 m)

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

Ernie Marx



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. *Rhamnus cathartica* [RHCA3, FACU, ITIS 28573] leaves have similar venation and can be found in gulches and canyons. The berries are black and some of the branches have been modified into spines.

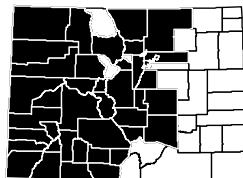
Habitat and Ecology: Locally common in moist gulches and cool ravines and along streams from foothills to subalpine zones. *C. sericea* is a dominant understory shrub along Colorado's riparian areas.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Cronquist et al. 1997, Stevens and Dozier 2002, Weber and Wittmann 2012



Elaeagnus angustifolia L.

Russian olive

Elaeagnaceae

A.J. Schneider



Synonyms: None

USDA PLANTS Symbol: ELAN

ITIS TSN: 27770

Wetland Status AW: FAC WM: FAC GP: FACU

Native Status: Non-native, CO Noxious Weed List B

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 3,700–7,950 ft. (1,130–2,425 m)

Key Characteristics:

- ◆ Trees or shrubs, 5–12 m tall, 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
- ◆ 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

Woody Plants

J.S. Peterson USDA-NRCS PLANTS Database



D. E. Herman USDA-NRCS Wetland Flora



Similar Species: From a distance, *Shepherdia argentea* [FACU, UPL] looks like *E. angustifolia*, but *S. argentea* has opposite leaves and red berries instead of cream colored fruits.

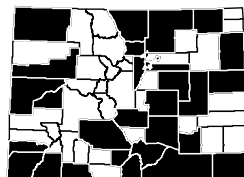
Habitat and Ecology: Common throughout Colorado. Initially planted for wind breaks and bank stabilization. Escaped from cultivation along roadsides, streams and floodplains.

Comments: *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. Russian olive is designated as a List B species in the Colorado Noxious Weed Act. It is required to be either eradicated, contained or suppressed; consult with the County Extension Agency for removal options.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Colorado Department of Agriculture 2008b, Weber and Wittmann 2012, Welsh et al. 1993



Shepherdia argentea (Pursh) Nutt.

Silver buffaloberry

Elaeagnaceae

Janis Lindsey Huggins



Synonyms: None

USDA PLANTS Symbol: SHAR

ITIS TSN: 27778

Wetland Status AW: FACU WM: FACU GP: UPL

Native Status: Native

Conservation Status: GS S2?

C-Value: 7

Duration: Perennial

CO Elevation: 4,500–7,710 ft. (1,370–2,350 m)

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

USDA-NRCS PLANTS Database Britton & Brown 1913



Karin Freeman



Similar Species: *Elaeagnus angustifolia* [FAC, FACU] has cream-colored fruits and alternate leaves.

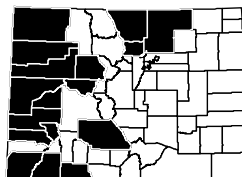
Habitat and Ecology: Common in moist places along rivers and in canyon bottoms, scattered on the Western Slope and also known from the East Slope at Boulder (CU campus), Larimer and Weld Counties. *S. argentea* can occur as the dominant shrub in riparian areas, especially in southwestern Colorado.

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. Considered state imperiled (S2) in Colorado and state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Knudson 2006, Weber and Witmann 2012, Welsh et al. 1993



Woody Plants

Gaultheria humifusa (Graham) Rydb.

Alpine spicewintergreen

Ericaceae

Barry Breckling



Synonyms: None

USDA PLANTS Symbol: GAHU

ITIS TSN: 23654

Wetland Status AW: FACW WM: FACW GP: FACU

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 9,020–12,500 ft. (2,750–3,810 m)

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

Woody Plants

Barry Breckling



Jean L. Pawek



Similar Species: *Kalmia microphylla* [OBL] also occurs in wetlands. It is distinguished by opposite leaves with entire, revolute margins and flowers on pedicels.

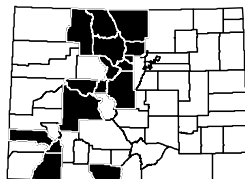
Habitat and Ecology: Found along moist streambanks, in wet meadows and moist spruce woods.

Comments: Most members of the heath family are poisonous to animals. Global range extends from British Columbia and Alberta, south to New Mexico. Considered state critically imperiled (S1) in Utah and state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Flora of North America 2009, Weber and Wittmann 2012



Kalmia microphylla (Hook.) A. Heller

Alpine or bog laurel

Ericaceae

Janis Lindsey Huggins



Synonyms: None

USDA PLANTS Symbol: KAMI

ITIS TSN: 23678

Wetland Status AW: OBL WM: OBL GP: NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: 9

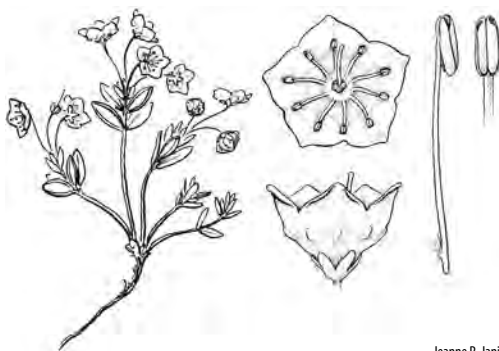
Duration: Perennial

CO Elevation: 9,100–12,560 ft. (2,775–3,830 m)

Key Characteristics:

- ◆ Shrubs, spreading to erect, 0.05–0.8 m 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

Matt Below



Jeanne R. Janish

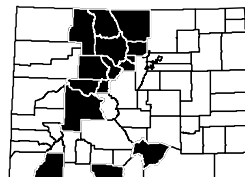
Similar Species: *Arctostaphylos uva-ursi* [ARUV, UPL, ITIS 23530] leaves are green on both sides, not revolute and the flowers are urn-shaped.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Knight and Walter 2001, Weber and Wittmann 2012



Rhododendron albiflorum Hook.

Cascade azalea

Ericaceae

Denise Culver



Synonyms: *Azaleastrum albiflorum* (Hook.) Rydb. ssp. *warrenii* (A. Nelson) W. A. Weber

USDA PLANTS Symbol: RHAL2

ITIS TSN: 23702

Wetland Status AW: FACU WM: FACU GP: FACW

Native Status: Native

Conservation Status: G4 S2

C-Value: 8

Duration: Perennial

CO Elevation: 8,300–12,000 ft. (2,530–3,660 m)

Key Characteristics:

- ◆ Shrubs, to 2.5 m tall, rhizomatous; bark smooth to furrowed
- ◆ Leaves deciduous; petioles glandular-hairy, narrowly elliptic, minutely serrate
- ◆ Inflorescence lateral, 1- to 2-flowered; pedicels 9–15 mm, glandular-hairy
- ◆ Flowers campanulate, glandular-hairy, corolla white, bowl-shaped, 9–22 mm long
- ◆ Capsules on erect pedicels; seeds with distinct tails

Woody Plants

Denise Culver



Denise Culver



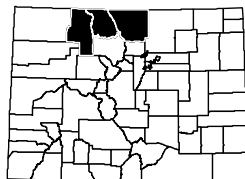
Similar Species: *R. albiflorum* is a very distinctive shrub that occurs in the understory of spruce-fir forests.

Habitat and Ecology: Uncommon in spruce-fir forests with acidic soils. Known from Jackson, Larimer, and Routt Counties.

Comments: Global range is from British Columbia, Alberta to Washington, Oregon, Idaho, Montana (S3) and disjunct populations in northcentral Colorado (S2). Most members of the heath family are poisonous to animals.

Animal and Bird Use: 

References: Ackerfield 2012, Flora of North America 2009, Knight and Walter 2001, Weber and Wittmann 2012



Amorpha fruticosa L.

Desert false indigo

Fabaceae



Key Characteristics:

- ◆ Shrubs, usually over 1 m tall, commonly 2 m tall
- ◆ Alternate, compound leaves, not gland-dotted, mostly 2–5 cm long
- ◆ Inflorescence a dense terminal, spike-like raceme, one to several spikes in a cluster
- ◆ Flowers dark blue or purple, composed of banner, wings and keels; stamens 10, united in twos
- ◆ Pods glabrous, 5–9 mm long x 1.5–4 mm wide



Similar Species: *A. nana* [AMNA, FACU, ITIS 25379] is usually 1 m or less tall, has conspicuously gland-dotted leaflets and is not usually found in wetlands.

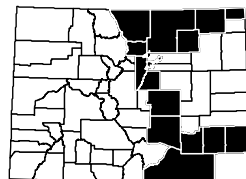
Habitat and Ecology: Found in thickets and open woods, especially along streams or roadsides on the Eastern Slope.

Comments: *A. fruticosa* is utilized extensively for establishing wildlife food and cover on upland sites. A primary use is for escape cover for Scaled Quail coveys in southeastern Colorado. Additionally, it attracts birds and butterflies that feed on flowers and seeds. Widespread throughout the contiguous United States, considered state imperiled (S2) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Cronquist et al. 1989, USDA NRCS 2011, Weber and Wittmann 2012



Ribes americanum Mill.

American black currant

Grossulariaceae



Crystal Strouse

Synonyms: None**USDA PLANTS Symbol:** RIAM2**ITIS TSN:** 24451**Wetland Status** AW: FACW WM: FAC GP: FACW**Native Status:** Native**Conservation Status:** G5 S2**C-Value:** 7**Duration:** Perennial**CO Elevation:** 4,920–7,500 ft. (1,500–2,285 m)

Key Characteristics:

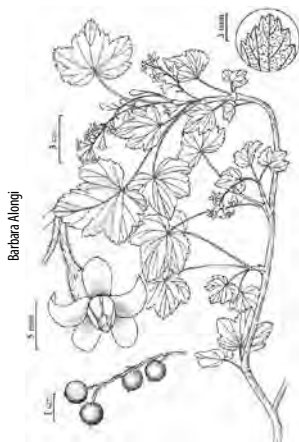
- ◆ Shrubs, 0.5–1.5 m tall, lacking spines or bristles, glandular with yellow, shiny, dots
- ◆ Leaves 3–8 cm wide, 3 to 5 lobes, acute, yellow glands beneath
- ◆ Racemes 6- to 15-flowered, nodding; bracts subtending flowers, 6–10 mm long

◆ Flowers greenish-yellow to white

◆ Berries black, glabrous, edible



Crystal Strouse



Barbara Along

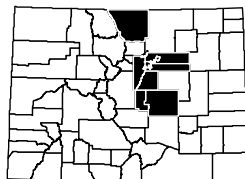
Similar Species: *R. inerme* [FAC, FACW] can be both armed and unarmed. It is distinguished by racemes consisting of only 1–4 flowers, glabrous fruits and flowers and the leaves do not have large, yellow glands on the lower surface.

Habitat and Ecology: Uncommon to rare in shady places along streams and in moist meadows along the Front Range.

Comments: *R. americanum* berries provide a food source for large and small mammals, songbirds and upland game birds. 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. Considered state imperiled (S2) in Colorado and Wyoming.

Animal and Bird Use:

References: Ackerfield 2012, Carter 2006, Cronquist et al. 1989, Weber and Wittmann 2012



Ribes inerme Rydb. Whitestem gooseberry

Grossulariaceae

Al Schneider



Synonyms: None

USDA PLANTS Symbol: RIIN2

ITIS TSN: 24473

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 4,500–13,200 ft. (1,370–4,025 m)

Key Characteristics:

- Shrubs, 1–3 m tall; stems with or without 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
- Hypanthiums glabrous, campanulate; styles pilose; filaments pubescent; sepals reflexed
- Berries palatable, greenish or reddish-purple to gray-black, glabrous

Al Schneider



Al Schneider



Similar Species: *R. americanum* [FACW, FAC] also has glabrous ovaries and berries, but has distinctive leaves with yellow gland-dots on lower surfaces.

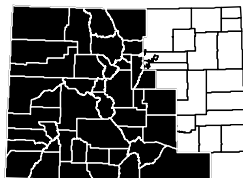
Habitat and Ecology: Common along streams, moist roadsides, in meadows and sometimes on dry slopes.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 2009, Weber and Wittmann 2012



Woody Plants

Ribes lacustre (Pers.) Poir.

Prickly currant

Grossulariaceae

Susan McDougall USDA-NRCS PLANTS Database



Synonyms: None

USDA PLANTS Symbol: RILA

ITIS TSN: 24476

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 7,000–11,750 ft. (2,135–3,580 m)

Key Characteristics:

- ◆ Shrubs, 1–2 m tall; stems ascending or drooping, armed with 1 (3) spines per node
- ◆ Leaf blades glabrous or sparsely pubescent, especially along the veins
- ◆ Inflorescence a spreading to drooping, 5- to 18-flowered raceme; pedicels slender
- ◆ Hypanthiums goblet-shaped, green; sepals overlapping, spreading, cream to pale yellow
- ◆ Berries blue or black; green when young, edible but flavorless

Lindsey Koepke USDA-NRCS PLANTS Database



Susan McDougall USDA-NRCS PLANTS Database



Similar Species: *R. montigenum* [RIM02, NI, ITIS 24486] has hairy, glandular leaves with 3 spines at nodes.

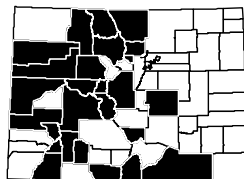
Habitat and Ecology: Locally common along streams, in fens and wet meadows, or occasionally found on open slopes in the montane to subalpine regions.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 2009, Weber and Wittmann 2012



Fraxinus pennsylvanica Marsh.

Green ash

Oleaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: FRPE

ITIS TSN: 32929

Wetland Status AW: FACW WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 3,470–6,700 ft. (1,060–2,040 m)

Key Characteristics:

- ◆ Trees 15–22 m tall; deciduous; male and female flowers on separate trees (dioecious)
- ◆ Leaves opposite, pinnately compound, leaflets 5–9, usually 7, pale green below, not white
- ◆ Leaf scars semicircular, truncate along upper edges
- ◆ Petals absent; flowers appearing before leaves
- ◆ Fruits samaras, linear to spatulate, borne in clusters

Matt Lavin



USDA-NRCS PLANTS Database Britton & Brown 1913



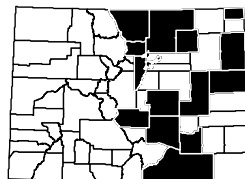
Similar Species: *F. americana* [FRAM2, FACU, ITIS 32931] looks very similar to *F. pennsylvanica*. It differs with crescent shaped leaf scars and the leaflets are white underneath.

Habitat and Ecology: Cultivated and escaping along Front Range or native on floodplains of rivers or along margins of lakes on the Eastern Slope.

Comments: Green ash is adapted to a range of soil moisture conditions. The species will tolerate seasonal flooding, but is intolerant of shading from surrounding trees. Tree-nesting birds e.g., Kingbirds, Orioles, American Robin, utilize green ash forests. Also cavity-nesters such as Red-headed Woodpecker, Downy Woodpecker and Northern Flicker are commonly associated with green ash.

Animal and Bird Use: 

References: Ackerfield 2012, Rumble and Gobeille 1998, USDA NRCS 2005, Weber and Wittmann 2012



Crataegus rivularis Nutt.

River hawthorn

Rosaceae

Mary Winter



Synonyms: *Crataegus douglasii* Lindl. var. *rivularis* (Nutt.) Sarg.

USDA PLANTS Symbol: CRRI

ITIS TSN: 501762

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,400–8,000 ft. (1,645–2,440 m)

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

Woody Plants

Trent M. Draper



Mary Winter



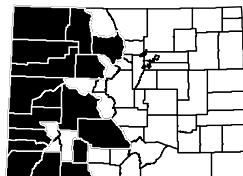
Similar Species: *C. saligna* [FAC, FACW] has petals that are 3–4 mm long, leaves are lanceolate to elliptical and berries are dark, blue-black.

Habitat and Ecology: Common on the Western Slope, along streams and in canyon bottoms.

Comments: Ackerfield (2012) 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.

Animal and Bird Use: 

References: Ackerfield 2012, Carter 2006, Phipps 1998, Weber and Witmann 2012



Crataegus saligna Greene

Willow hawthorn

Rosaceae

Denise Culver



Synonyms: *Crataegus douglasii* Lindl. var. *duchesnensis* S.L. Welsh

USDA PLANTS Symbol: CRS A2

ITIS TSN: 24601

Wetland Status AW: FAC WM: FACW GP: NI

Native Status: Native

Conservation Status: G3G4 S3

C-Value: 6

Duration: Perennial

CO Elevation: 5,230–9,000 ft. (1,595–2,745 m)

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
- ◆ 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

Denise Culver



Denise Culver



Similar Species: *C. rivularis* [FAC, FACW], the most common hawthorn on the Western Slope, has bigger leaves and fruit. *C. saligna* fruits are dark blue-black versus red.

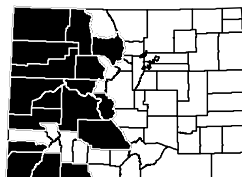
Habitat and Ecology: *C. saligna* is a Colorado endemic. It forms a dominant shrub layer along the White, Colorado, Gunnison, Roaring Fork and Eagle Rivers. It is also documented in Chaffee County near Poncha Springs along the Arkansas River.

Comments: Ackerfield (2012) 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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Phipps 1998, Weber and Witmann 2012



Woody Plants

***Dasiphora fruticosa* (L.) Rydb. ssp. *floribunda* (Pursh) Kartesz**
Shrubby cinquefoil **Rosaceae**

Patrick Alexander USDA-NRCS PLANTS Database



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

ITIS TSN: 837353

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 4

Duration: Perennial

CO Elevation: 5,400–14,270 ft. (1,645–4,350 m)

Key Characteristics:

- ◆ Shrubs, 1–10 (15) dm tall with reddish-brown shredding bark
- ◆ Leaves pinnately compound, but crowded, leaflets linear, usually 5, entire margins
- ◆ Inflorescence a corymb (flat-topped)
- ◆ Flowers perfect, sepals 5; petals 5, yellow; stamens 20–25
- ◆ Fruits achenes with white pubescence



Denise Culver



Jeanne R. Janish

Similar Species: None.

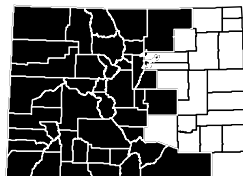
Habitat and Ecology: Common in moist mountain meadows, fens, open woods and along streams.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Weber and Wittmann 2012



Populus × acuminata Rydb. (pro sp.)

Lanceleaf cottonwood

Salicaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: POAC5

ITIS TSN: 22450

Wetland Status AW: FAC WM: FAC GP: FAC

Native Status: Native

Conservation Status: GNA SNR

C-Value: 5

Duration: Perennial

CO Elevation: 4,800–8,500 ft. (1,465–2,590 m)

Key Characteristics:

- ◆ Trees to 25 m tall; bark furrowed
- ◆ Terminal buds less than 15 mm long, slightly resinous, not aromatic
- ◆ Leaf blades 6.0–9.0 cm long x 5.0–6.0 cm wide, tapering to a point
- ◆ Leaf margins coarsely crenate, leaves equally green above and below, pinnate venation
- ◆ Petioles grooved on upper side, not twisted

Matt Lavin



USDA-NRCS PLANTS Database Britton & Brown 1913



Similar Species: *P. x acuminata* [FAC] is a hybrid between *P. angustifolia* [FACW] and *P. deltoides* [FAC] so it can resemble either one. *P. balsamifera* [FAC] leaves resemble *P. x acuminata*, but the terminal buds are very resinous.

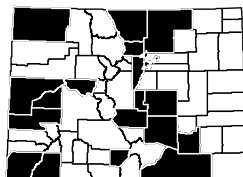
Habitat and Ecology: Found on floodplains, along creeks and streams.

Comments: Cottonwoods provides habitat, cover and food for a diversity of wildlife that includes squirrels, beavers, bears, white-tailed deer, and many bird species. Twigs and leaves are browsed by rabbits, deer, and moose and buds and catkins are eaten by quail and grouse. Beaver cut all sizes of cottonwoods to build and maintain lodges and dams and use the bark for immediate food or storage in winter caches.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Cronquist and Dorn 2005, Flora of North America 2010, Nesom 2000, Weber and Wittmann 2012



Populus angustifolia James Narrowleaf cottonwood

Salicaceae

Pam Smith



Synonyms: None

USDA PLANTS Symbol: POAN3

ITIS TSN: 22452

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

Duration: Perennial

CO Elevation: 4,920–10,400 ft. (1,500–3,170 m)

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
- ◆ Petioles usually less than 1/3 of the blade length, 0.2–0.8 cm long
- ◆ Winter buds reddish-brown, glabrous, resinous and fragrant

Woody Plants

Jeanne R. Janish



Matt Lavin



Similar Species: *P. x acuminata* [FAC] 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*. Saplings and trees that have not leafed out can be mistaken for willows. To differentiate, always look at the buds. If buds are 3 to many scaled, and usually sticky, it is a cottonwood; if it is 1-scaled, it is a willow. Also cottonwood catkins are drooping and the flowers are subtended at the base by a cup-shaped disk. Willow catkins are upright and flowers subtended by 1 or 2 enlarged glands.

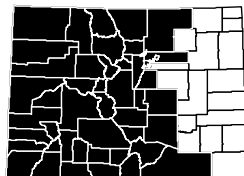
Habitat and Ecology: Common along streams, rivers and in floodplains above 5,000 ft.

Comments: Narrowleaf cottonwood provides habitat, cover, and food for a diversity of wildlife, including squirrels, beaver, bears, white-tailed deer, and many bird species.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Cronquist and Dorn 2005, Flora of North America 2010, Nesom 2000, Weber and Wittmann 2012



Populus balsamifera L. Balsam poplar

Salicaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: POBA2

ITIS TSN: 22453

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 6,000–11,800 ft. (1,830–3,595 m)

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

Matt Lavin



Matt Lavin



Similar Species: *P. x acuminata* [FAC] 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.

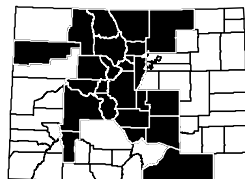
Habitat and Ecology: Uncommon along montane and subalpine streams and rivers. Often an indicator of a seep or spring or high water table.

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. Considered state vulnerable (S3) in Wyoming.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 2010, Nesom 2000, Weber and Wittmann 2012



Woody Plants

Populus deltoides Bartram ex Marsh.

Plains or Rio Grande cottonwood

Salicaceae



Synonyms: *Populus fremontii* S. Watson var. *wislizeni* S. Watson

USDA PLANTS Symbol: PODE3

ITIS TSN: 22445

Wetland Status AW: FAC WM: FAC GP: FAC

Native Status: Native

Conservation Status: G5 SNR

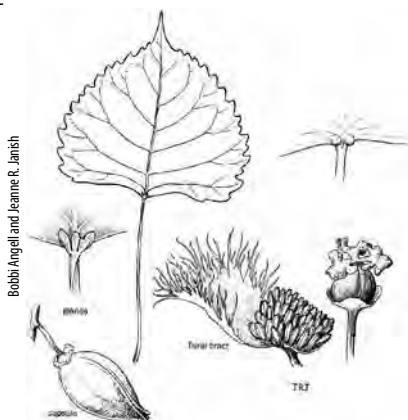
C-Value: 3

Duration: Perennial

CO Elevation: 3,500–9,500 ft. (1,065–2,895 m)

Key Characteristics:

- ◆ Trees to 55 m tall, 35 dm across; bark light brown, deeply furrowed; twigs with stellate pith
- ◆ 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* [PODEM, ITIS 22447] 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* [PODEW, ITIS 524563] Western Slope.

Habitat and Ecology: Common along streams and rivers and on floodplains on Eastern and Western Slopes.

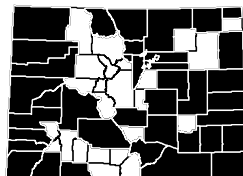
Comments: Both the plains and the Rio Grande cottonwood provide critical habitat for many wildlife species. They provide habitat for deer, elk, beaver, porcupines, rabbits, mice and rodents.

Note: there are no known native occurrences of Fremont cottonwood (*P. fremontii* ssp. *fremontii*) in Colorado.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Flora of North America 2010, Nesom 2000, Weber and Wittmann 2012



Salix amygdaloides Andersson

Peachleaf willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SAAM2

ITIS TSN: 22499

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 5

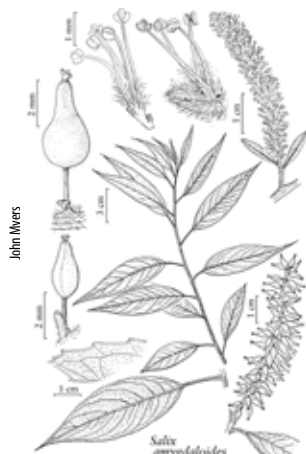
Duration: Perennial

CO Elevation: 3,470–8,600 ft. (1,060–2,620 m)

Key Characteristics:

- ◆ Trees 12–20 (30) m tall, crooked; bark shaggy; bud scales with free overlapping margins
- ◆ Leaves glaucous on underside, lanceolate to ovate, serrulate; petioles drooping, 5–21 mm long
- ◆ Catkins appear with leaves, 2.5–11 cm long; peduncles 0.4–6 cm long, leafy
- ◆ Capsules glabrous, 3–5.5 mm long; stipes 1.2–3.2 mm long
- ◆ Flower bracts pale, deciduous in fruit

Denise Culver



Similar Species: *S. fragilis* [FAC] has duck bill-shaped bud scales and yellow branchlets. *S. gooddingii* [FACW] has non-glaucous leaves.

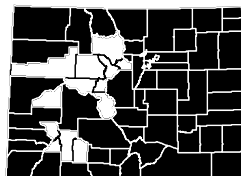
Habitat and Ecology: Common along streams, pond edges, marshes, seeps and floodplains. Grows from the foothills to lower montane.

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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix arizonica Dorn

Arizona willow

Salicaceae

New Mexico Rare Plant Technical Council



Synonyms: None

USDA PLANTS Symbol: SAAR14

ITIS TSN: 22501

Wetland Status AW: OBL WM: FACW GP: OBL

Native Status: Native

Conservation Status: G2G3 S1; USFS Sensitive

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 10,300 ft. (3,140 m)

Key Characteristics:

- ◆ Shrubs, short, 0.1–1.5 (2.5) m tall; year old twigs reddish or sometimes yellowish
- ◆ Leaf blades glandular-serrulate, rounded bases, largest blades 1.6–3 (3.6) times as long as wide
- ◆ Catkins 1–4 cm long, sessile or on leafy peduncles to 1.2 cm long
- ◆ Capsules 3–5 mm long, glabrous; stipes 0.2–1.5 mm long
- ◆ Flower bracts brown or black, persistent with long hairs



Laura Vogel



Similar Species: *S. arizonica* can hybridize with *S. brachycarpa* [FACW] and possibly *S. wolfii* [FACW, OBL]. *S. arizonica* can be distinguished from the two by its short stature and broad, non-glaucous leaves with cordate or subcordate bases.

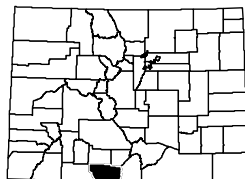
Habitat and Ecology: Rare in Colorado. Found in wet meadows and along low gradient streams. Currently only known from one occurrence in Conejos County.

Comments: Considered globally imperiled (G2G3), state critically imperiled (S1) in Colorado and New Mexico and state imperiled (S2) in Utah and Arizona. The Arizona willow was proposed for listing as an endangered species with critical habitat in 1992, known at that time only from Mount Baldy in East-central Arizona. New populations discovered in southern Utah in 1994 expanded the known range and the Arizona willow was withdrawn from listing in April 1995.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, New Mexico Rare Plant technical Council 1999



Salix bebbiana Sarg.

Bebb willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SABEZ

ITIS TSN: 22507

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,000–10,800 ft. (1,525–3,290 m)

Key Characteristics:

- ◆ Shrubs or small trees, (1) 2–7 (10) m tall, many-stemmed; bud scales with depressed margins
- ◆ First year branchlets reddish-purple, hairy, older branchlets white-streaked from cracked bark
- ◆ Leaves glaucous on underside, elliptic to obovate, crenate to entire; petioles 2–15 mm long
- ◆ Catkins appear with leaves, 0.6–6 cm long; peduncles 0.1–6 cm long, leafy
- ◆ Capsules 5–9 mm long, hairy; stipes 2–4 (5) mm long

Denise Culver



Similar Species: *S. ligulifolia* (= *S. eriocephala* var. *ligulifolia*) [FACW] has glabrous branches and capsules. *S. bebbiana* [FACW] is distinct with its white-streaked, cracked bark on older twigs and bark. It often takes on a “mushroom” shape when grazed.

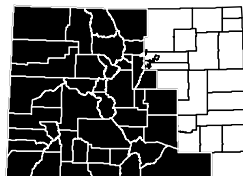
Habitat and Ecology: Common along streams, wet meadows, oxbow bends and abandoned sloughs throughout the mountains to the Western Slope.

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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Kittel 2003, Weber and Wittmann 2012



Woody Plants

Salix boothii Dorn

Booth's willow

Salicaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: SAB02

ITIS TSN: 22509

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,700–11,300 ft. (2,040–3,445 m)

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

Woody Plants

Matt Lavin



Jeanne R. Janish

Similar Species: *S. myrtillofolia* [FACW] has similar leaves, but is a decumbent shrub, not erect and is found only in calcareous fens. *S. monticola* [OBL] has yellow branches and leaves that are glaucous and squared off at the bases. *S. planifolia* [OBL] has red, shiny twigs with shiny, green leaves.

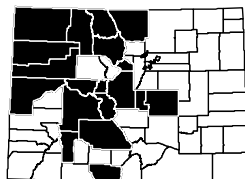
Habitat and Ecology: Common along streams, creeks, wet meadows, swamps, seeps and in floodplains, especially in northern and central Colorado.

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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix brachycarpa Nutt.

Shortfruit willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SABR

ITIS TSN: 22510

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 7,400–14,430 ft. (2,255–4,400 m)

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

Al Schneider



Jeanne R. Janish



Similar Species: *S. glauca* [FACW] 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* [OBL, FACW] has glabrous capsules and the leaves are not glaucous on underside.

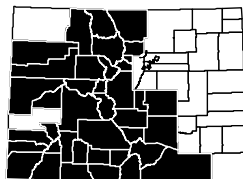
Habitat and Ecology: Common in a wide variety of habitats from montane to high elevations, along streams, creeks, wet meadows, fens, or wet alkaline flats.

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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix calcicola Fernald & Wiegand

Woolly willow

Salicaceae

Bob Travis



Synonyms: *Salix lanata* L. ssp. *calcicola* (Fernald & Wiegand) Hultén

USDA PLANTS Symbol: SACA37

ITIS TSN: 520772

Wetland Status AW: NI **WM:** NI **GP:** NI

Native Status: Native

Conservation Status: G4G5T4 S1

C-Value: 10

Duration: Perennial

CO Elevation: 11,500–13,000 ft. (3,505–3,960 m)

Key Characteristics:

- ◆ Shrubs, creeping, less than 0.5 m high, gnarled, forming clones by layering
- ◆ Leaves glaucous, entire, 2–4.5 cm long x 1.5–4 cm wide; petioles 2–9 mm long
- ◆ Catkins appear before leaves, (1.5) 3–6 (8) cm long; lacking peduncles
- ◆ Capsules glabrous, 7–9 mm long; stipes 0.2–1.2 mm long
- ◆ Flower bracts dark, persistent in fruit

Woody Plants

John Myers



Gerald and Buff Corsi



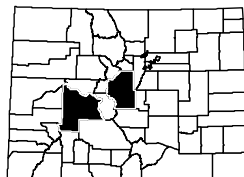
Similar Species: *S. brachycarpa* [FACW] and *S. glauca* [FACW] have hairy capsules and catkins with leafy peduncles. *S. nivalis* [FACW] has hairy capsules and pale flower bracts. *S. petrophila* [SAPE18, FAC, ITIS 520882] also has hairy capsules and acute leaf tips.

Habitat and Ecology: Rare on moist, calcareous soils. Gunnison and Park Counties are the only documented occurrences in the contiguous United States. *S. calcicola*'s global range includes eastern Canada, Alberta and Colorado.

Comments: Alpine willows are food plants and nectar sources for adult butterflies. The best known example is the Uncompahgre fritillary (*Boloria acrocneuma*) that utilizes *S. nivalis* patches for laying eggs and then for food.

Animal and Bird Use: 

References: Ackerfield 2012, Dorn 1997, Weber and Wittmann 2012



Salix candida Flueggé ex Willd.

Sageleaf willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SACA4

ITIS TSN: 22514

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2; USFS Sensitive

C-Value: 9

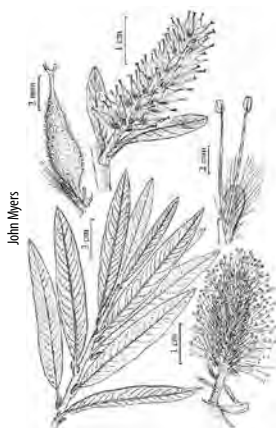
Duration: Perennial

CO Elevation: 8,920–9,900 ft. (2,720–3,020 m)

Key Characteristics:

- ◆ Shrubs, erect, low, to 1 m tall; twigs of current year's growth densely woolly or tomentose
- ◆ Leaves narrow, densely white-tomentose below, upper dark green and shiny, revolute margins
- ◆ Catkins appear with leaves, (0.5) 1–3 (6) cm long; peduncles 0.2–1 (3) cm long, leafy
- ◆ Capsules hairy, 5–10 mm long; stipes 0.1–1.2 mm long
- ◆ Flower bracts pale, persistent in fruit

Steve Olson



Similar Species: *S. drummondiana* [FACW] is a much taller shrub with silvery, appressed hairs on leaves with revolute margins and typically occurs along streams. *S. brachycarpa* [FACW] has small, elliptical leaves that are densely hairy and not as woolly on both sides.

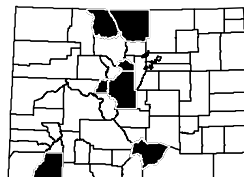
Habitat and Ecology: Uncommon in rich or extremely rich fens, but always on peaty soils. The global range includes Alaska, Canada, into northern United States. Colorado is the southern extension of its range.

Comments: Considered state critically imperiled (S1) in South Dakota, state imperiled (S2) in Colorado and Wyoming and state vulnerable (S3) in Montana. 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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Flora of North America 2010, Weber and Wittmann 2012



Salix drummondiana Barratt ex Hook.

Drummond's willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SADR

ITIS TSN: 22525

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 6,000–13,550 ft. (1,830–4,130 m)

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

Woody Plants

Denise Culver



Jeanne R. Janish

Similar Species: *S. geyeriana* [OBL, FACW] leaves are shorter (2–8 cm long), only slightly hairy underneath and the peduncles are long and leafy. *S. irrorata* [FACW] has glabrous capsules and the older branchlets are pruinose, not the first year's growth.

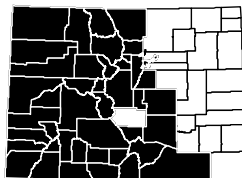
Habitat and Ecology: Common along streambanks, swamps and moist meadows. Widespread throughout Colorado.

Comments: Considered state vulnerable (S3) in Wyoming. *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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Crowder 2003, Dorn 1997, Weber and Wittmann 2012



Salix exigua Nutt.

Narrowleaf willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SAEX

ITIS TSN: 22529

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 3

Duration: Perennial

CO Elevation: 3,350–11,000 ft. (1,020–3,355 m)

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

Pam Smith



Jeanne R. Janish

Similar Species: *S. melanopsis* [FACW, OBL] 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, it is absent from the Eastern Slope. There are two sub-species of *S. exigua* that occur in Colorado: 1a. Older leaves hairy below. . . .ssp. *exigua* 1b. Older leaves usually glabrous or nearly so below, more veiny and more conspicuously toothed, capsules 5–8 mm long. . . .ssp. *interior* [SAEXI] Eastern Slope.

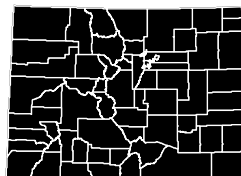
Habitat and Ecology: Abundant and common along streams and rivers, ditches and floodplains throughout Colorado.

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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Flora of North America 2010, Weber and Wittmann 2012



Woody Plants

Salix fragilis L.

Crack willow

Salicaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: SAFR

ITIS TSN: 22535

Wetland Status AW: FAC WM: FAC GP: FAC

Native Status: Non-native

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,700–9,000 ft. (1,435–2,745 m)

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
- ◆ 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

Woody Plants

Matt Lavin



Matt Lavin



Similar Species: *S. amygdaloides* [FACW] has bud scales with free overlapping margins, leaves that typically droop on each side of branchlets and does not have yellow branches. *S. alba* [FACW] is a cultivated willow that might be found near old homesteads. *S. alba* differs from *S. fragilis* with persistent sericeous or silky hairs on leaves and twigs, more finely toothed leaves and shorter (0.2–0.5 mm) styles. *Populus angustifolia* [FACW] saplings can be mistaken for *S. fragilis*. Look at bud scales and catkins if available.

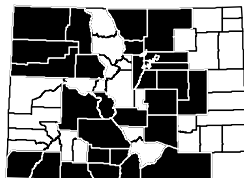
Habitat and Ecology: Naturalized trees, very common along streams and pond edges in plains, foothills and lower montane regions.

Comments: 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.

Animal and Bird Use:



References: Ackerfield 2012, Carter 2006, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix geyeriana Andersson

Geyer willow

Salicaceae

Liz Makings



Synonyms: None

USDA PLANTS Symbol: SAGE2

ITIS TSN: 504965

Wetland Status AW: OBL WM: FACW GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,580–13,550 ft. (1,700–4,130 m)

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

Steve Matson



Similar Species: *S. drummondiana* [FACW] leaves are densely hairy and the catkins lack leafy peduncles. *S. irrorata* [FACW] has glabrous or glabrate leaves, glabrous capsules and the previous year's branches are pruinose.

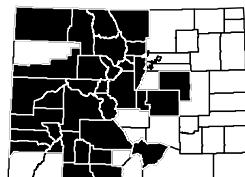
Habitat and Ecology: Common in fens, moist meadows, along streams, pond borders and irrigated pastures.

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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Denise Culver



Synonyms: *Salix glauca* L. var. *villosa* (D. Don ex Hook.) Andersson
USDA PLANTS Symbol: SAGL
ITIS TSN: 22482
Wetland Status AW: FACW WM: FACW GP: FACW
Native Status: Native
Conservation Status: G5 SNR
C-Value: 8
Duration: Perennial
CO Elevation: 7,500–14,420 ft. (2,285–4,395 m)

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
- ◆ Capsules hairy, 4–8 mm long; styles 0–2.5 mm long
- ◆ Flower bracts pale or sometimes dark, persistent in fruit



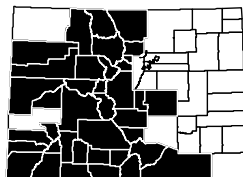
Similar Species: *S. brachycarpa* [FACW] has shorter petioles and catkins and leaves are generally hairier than *S. glauca*. Hybrids between *S. brachycarpa* and *S. glauca* are common.

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.

Animal and Bird Use: 

References: Ackerfield 2012, Dorn 1997, Weber and Wittmann 2012



Salix gooddingii C.R. Ball

Goodding's willow

Salicaceae

Gary Cox



Synonyms: None

USDA PLANTS Symbol: SAGO

ITIS TSN: 22539

Wetland Status AW: FACW WM: FACW GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 8

Duration: Perennial

CO Elevation: 4,600–8,480 ft. (1,400–2,585 m)

Key Characteristics:

- ◆ Trees or shrubs, (2) 3–12 (30) m tall, shaggy bark; bud scales with free overlapping margins
- ◆ Leaves not glaucous, 6–13 cm long x 0.8–1.6 cm wide, serrate; petioles 3–10 mm long
- ◆ Catkins appear with leaves, 2.2–8 cm long; peduncles 0.4–3 cm long, leafy
- ◆ Capsules glabrous or hairy, 3–7 mm long; stipes 1–3.2 mm long
- ◆ Flower bracts pale, deciduous in fruit

Laura Vogel



Patrick Alexander USDA-NRCS PLANTS Database



Similar Species: *S. amygdaloides* [FACW] also has glaucous leaves, but is much more common in Colorado and has the distinctive “shaggy” look with drooping leaves.

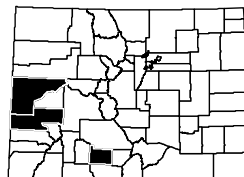
Habitat and Ecology: Uncommon in Colorado along lowland streams, washes and around springs and seeps. Known only from Mesa, Montrose, and Rio Grande Counties. Global range is from California, east to Colorado and south to Texas.

Comments: *S. gooddingii* is typically part of mature riparian gallery forests in the desert southwest, providing shade, cover and nesting habitat for raptors, songbirds, hummingbirds, and small mammals.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix irrorata Andersson

Bluestem or dewystem willow

Salicaceae

Allison Shaw

**Synonyms:** None**USDA PLANTS Symbol:** SAIR**ITIS TSN:** 22547**Wetland Status** AW: FACW WM: FACW GP: FACW**Native Status:** Native**Conservation Status:** G4G5 SNR**C-Value:** 7**Duration:** Perennial**CO Elevation:** 5,100–10,000 ft. (1,555–3,050 m)

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

John Myers



Allison Shaw



Similar Species: *S. drummondiana* [FACW] has hairy capsules and leaves with dense silver hairs on the underside. *S. geyeriana* [OBL, FACW] has hairy leaves and hairy capsules. The distinguishing character for *S. irrorata* is that the previous year's branchlets are distinctively pruinose, not the first year branchlets.

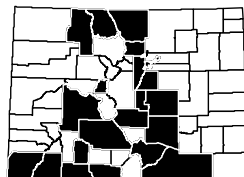
Habitat and Ecology: Grows along creeks and streams, canyon bottoms.

Comments: The global range includes Wyoming (S2), 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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Weber and Wittmann 2012



Salix ligulifolia (C.R. Ball) C.R. Ball ex C.K. Schneid.

Stapleleaf willow

Salicaceae

Denise Culver



Synonyms: *Salix eriocephala* Michx. var. *ligulifolia* (C.R. Ball) Dorn, *Salix lutea* Nutt. var. *ligulifolia* C.R. Ball

USDA PLANTS Symbol: SALI

ITIS TSN: 22553

Wetland Status AW: FACW WM: FAC GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,500–10,000 ft. (1,370–3,050 m)

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

Denise Culver



Denise Culver



Similar Species: *S. eriocephala* is a complex of six taxa that gradually intergrade where their ranges overlap. For Colorado, these include: *S. lutea* [OBL, FACW] 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.

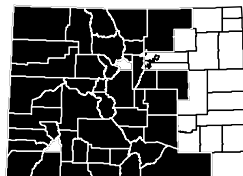
Habitat and Ecology: Common along floodplains, streams and next to springs.

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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix lucida Muhl.

Greenleaf, shining, or Pacific willow

Salicaceae

Denise Culver



Synonyms: *Salix lasiandra* Benth.

USDA PLANTS Symbol: SALU

ITIS TSN: 22554

Wetland Status AW: NI WM: NI GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 4,200–10,100 ft. (1,280–3,080 m)

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



Pam Smith

John Myers



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* [SALUC] (= *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* [SALUL] (= *S. lasiandra* var. *lasiandra*).

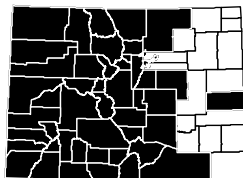
Habitat and Ecology: Common along rivers, creeks and streams, abandoned oxbow bends and sloughs. The bright yellow male catkins in May/June are a good diagnostic character.

Comments: Common from Alaska to the Midwestern United States. Considered critically state rare (S1) in South Dakota.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix lutea Nutt.

Yellow willow

Salicaceae

Denise Culver



Synonyms: *Salix eriocephala* Michx. var. *famelica* (C.R. Ball) Dorn, *Salix eriocephala* Michx. var. *watsonii* (Bebb) Dorn

USDA PLANTS Symbol: SALU2

ITIS TSN: 22555

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 3,690–8,900 ft. (1,125–2,715 m)

Key Characteristics:

- ◆ Shrubs, up to 8 m high; year old branchlets yellowish or greenish- or reddish-brown
- ◆ Leaves glaucous on underside, (3.5) 4–8 (11) cm x (0.8) 1–3 (4.5) cm; petioles 4–15 (25) mm long
- ◆ Catkins appear slightly before or with leaves, 1–6 cm long; peduncles 0–0.7 (1.7) cm long, leafy
- ◆ Capsules glabrous, 3–5.5 mm long; stipes (1) 1.5–4 (4.5) mm long
- ◆ Flower bracts dark, persistent in fruit

Denise Culver



Similar Species: *S. eriocephala* is a complex of six taxa that gradually intergrade where their ranges overlap. For Colorado, these include: *S. lutea* [OBL, FACW] and *S. ligulifolia*. *S. ligulifolia* (= *S. eriocephala* var. *ligulifolia*) [FAC, FACW] has leaves that are distinctly toothed and dull above and branches that are usually reddish above and yellow below.

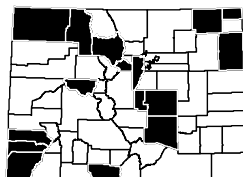
Habitat and Ecology: Uncommon willow that occurs along streams and floodplains.

Comments: Willows, especially those with early spring catkins, provide nectar to native bees and honey bees before other food sources are available. and contribute organic matter and food to adjacent waters.

Animal and Bird Use:



References: Ackerfield 2012, Bob Dorn personal communication, Dorn 1997, Weber and Wittmann 2012



Woody Plants

Salix melanopsis Nutt.

Dusky willow

Salicaceae

Kear Morse



Synonyms: *Salix exigua* Nutt. ssp. *melanopsis* (Nutt.)

Cronquist

USDA PLANTS Symbol: SAME2

ITIS TSN: 22556

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5 SNR

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 7,200–9,900 ft. (2,195–3,020 m)

Key Characteristics:

- ◆ Shrubs or small trees to 5 m high; stems deep purple
- ◆ Leaves bright green, 3–12 cm x 0.2–1.9 cm, glabrous, not glaucous; petioles broad, 0.5–6 mm long
- ◆ Catkins appear with or after leaves, 1.5–6.5 cm long; peduncles 0.3–7 cm long, leafy
- ◆ Capsules glabrous, 3–6 mm long; stipes 0–0.7 mm long
- ◆ Flower bracts with rounded or blunt tips, pale, deciduous in fruit

Woody Plants

Kear Morse



Kear Morse



Similar Species: *S. exigua* [FACW] has hairy leaves and the flower bracts are more pointed at the tips and hairy.

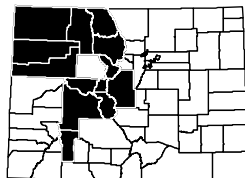
Habitat and Ecology: Uncommon along rocky streambanks, floodplains and in moist meadows. Considered state critically rare (S1) in Utah and state vulnerable (S3) in Wyoming.

Comments: 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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Flora of North America 2010, Weber and Wittmann 2012



Salix monticola Bebb

Rocky Mountain willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SAMO2

ITIS TSN: 22558

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4G5 SNR

C-Value: 6

Duration: Perennial

CO Elevation: 5,000–13,280 ft. (1,525–4,050 m)

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”
- 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

Jeanne R. Jaish



Pam Smith



Similar Species: *S. ligulifolia* [FACW, FAC] has thinner textured leaves which are often longer and narrower, with reddish-brown year old branchlets.

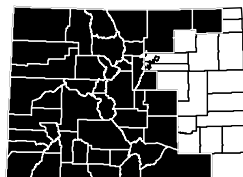
Habitat and Ecology: Common along streams, rivers, floodplains and in moist meadows. Likely Colorado's most common montane willow, found everywhere except on the Eastern Slope.

Comments: *S. monticola*'s global range includes Saskatchewan, Wyoming (S2), 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, and 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.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix myrtillofolia Andersson

Blueberry willow

Salicaceae

Janet Coles



Key Characteristics:

- ◆ Decumbent shrub up to 1 m tall
- ◆ Leaves not glaucous underneath, (1) 1.5–5 (6) cm x 0.5–3 cm, obtuse tips, glabrous, margins crenate
- ◆ Catkins appear with leaves, (1) 2–5 (8) cm long; peduncles 0.2–1 (2.8) cm long, leafy

Synonyms: None

USDA PLANTS Symbol: SAMY

ITIS TSN: 565482

Wetland Status AW: FACW WM: FACW GP: NI

Native Status: Native

Conservation Status: G5 S1; USFS Sensitive

C-Value: 10

Duration: Perennial

CO Elevation: 9,200–10,000 ft. (2,805–3,050 m)

Woody Plants

Jamie Fenneman



John Myers



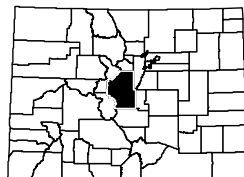
Similar Species: *S. boothii* [FACW] is taller and the leaves are pointed and often hairy. *S. wolfii* [FACW, OBL] is taller, up to 2 m tall, with hairy leaves and glabrous capsules.

Habitat and Ecology: Rare. Known only from Park County in rich and extreme rich fens.

Comments: *S. myrtillofolia* is a disjunct species from boreal regions of North America. It is a relictual species that has survived in Colorado's fens as the glaciers retreated. This species is considered state critically imperiled (S1) in Colorado and Wyoming.

Animal and Bird Use: None known.

References: Ackerfield 2012, Dorn 1997, Neid et al. 2006, Weber and Wittmann 2012



Salix nigra Marsh. Black willow

Salicaceae

Erica Asai Osceola National Forest Florida



Synonyms: None

USDA PLANTS Symbol: SANI

ITIS TSN: 22484

Wetland Status AW: NI WM: NI GP: FACW

Native Status: Native

Conservation Status: GS S1?

C-Value: 7

Duration: Perennial

CO Elevation: 4,300–4,300 ft. (1,310–1,310 m)

Key Characteristics:

- ◆ Trees to 20 m tall, usually with a single trunk; bud scales with free overlapping margins
- ◆ Leaves not glaucous, 5–19 cm x 0.6–2.3 cm, serrulate; petioles 2–15 mm long
- ◆ Catkins appear with leaves, 1.7–9 cm long; peduncles 0.4–4.5 cm long, leafy
- ◆ Capsules glabrous, 3–6 mm long; stipes 0.5–2 mm long
- ◆ Flower bracts pale, deciduous in fruit

Erica Asai Osceola National Forest Florida



Similar Species: *S. amygdaloides* [FACW] has glaucous, drooping leaves and yellowish year old branchlets. *S. nigra* has year old branchlets that are reddish-brown or dark yellowish-brown.

Habitat and Ecology: Occurs on floodplains, streambanks, meadows, lake shores on Eastern Slope; currently known only in Baca County. Commonly occurs in the Midwest and eastern portion of North America. The Colorado occurrence is the western extent of its range.

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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Great Plains Flora Association 1986, Weber and Wittmann 2012



Woody Plants

Salix nivalis Hook. Snow willow

Salicaceae

Steve Matson



Synonyms: *Salix reticulata* L. var. *nana* Andersson, *Salix reticulata* L. var. *nivalis* (Hook.) Andersson
USDA PLANTS Symbol: SANI8
ITIS TSN: 520861
Wetland Status AW: FACW WM: FACW GP: NI
Native Status: Native
Conservation Status: G5 SNR
C-Value: 9
Duration: Perennial
CO Elevation: 9,180–14,430 ft. (2,800–4,400 m)

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

Woody Plants

Steve Matson



Steve Matson



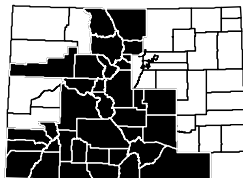
Similar Species: *S. calcicola* [NI] has entire leaves with white glands on margins and stipules with a long, acuminate tips. *S. petrophila* [SAPE18, FAC, ITIS 520882] leaf tips are acute versus rounded and catkins are longer, 1.5–6 cm long.

Habitat and Ecology: Common in moist to dry tundra. Global range extends from British Columbia, Alberta south to California and New Mexico.

Comments: Considered state vulnerable (S3) in Wyoming. *S. nivalis* provides food and rearing habitat (egg laying) for the Uncompahgre fritillary (*Boloria acrocema*).

Animal and Bird Use: 

References: Ackerfield 2012, Dorn 1997, Weber and Wittmann 2012



Salix petiolaris Sm.

Meadow willow

Salicaceae

kgNaturePhotography.com



Synonyms: *Salix gracilis* Andersson

USDA PLANTS Symbol: SAPE5

ITIS TSN: 22567

Wetland Status AW: NI WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 S2S3

C-Value: Not Assigned

Duration: Perennial

CO Elevation: 7,000–8,650 ft. (2,135–2,635 m)

Key Characteristics:

- Shrubs or trees to 7 m high; branchlets reddish-brown
- Leaves glaucous underneath, 2–15 cm x 0.8–2 (3) cm, sharply serrate, reddish hairs on young leaves
- Catkins appear with or slightly before leaves, 1–3.5 mm long; peduncles 0.2–2 cm long, leafy
- Capsules hairy, 6–8 mm long; stipes 1–5 mm
- Flower bracts pale, persistent in fruit



John Myers



Gary Fewless

Gary Fewless, 2000

Similar Species: *S. bebbiana* [FACW] has broader (1–3.3 cm) leaves, bud scales with depressed margins and catkins that are longer, up to 6 cm long. *S. geyeriana* [OBL, FACW] has pruinose branchlets and entire leaves.

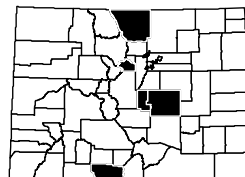
Habitat and Ecology: An uncommon willow in Colorado, occurs along streams and in moist meadows.

Comments: The global range is from British Columbia east to Quebec, south to Colorado, east to the midwestern and eastern states. Willows, especially those with early spring catkins, provide nectar to native 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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Weber and Wittmann 2012



Woody Plants

Salix planifolia Pursh

Diamondleaf willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SAPL2

ITIS TSN: 22569

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G5 SNR

C-Value: 7

Duration: Perennial

CO Elevation: 6,700–14,310 ft. (2,040–4,360 m)

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

Woody Plants

Pam Smith



Pam Smith



Similar Species: *S. discolor* [SADI, FACW, ITIS 22524] closely resembles *S. planifolia*, but has been collected only once in Colorado by Dr. Robert Dorn near the Wyoming/Colorado border. The distinguishing characters for *S. discolor* are that the stipes are longer, 1.6–2.7 mm, the capsules are longer, 6–11 mm and the leaves are longer 4–11 cm with a dull or slightly glossy upper leaf surface. In general, *S. planifolia* is one of Colorado's most distinct willows with wine red stems and green, shiny upper leaves.

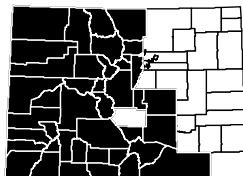
Habitat and Ecology: Likely the most common willow in the upper montane to subalpine in Colorado. Found along streams, lake margins, fens, moist meadows and wet alpine meadows.

Comments: Willows, especially those with early spring catkins, provide nectar to native bees and honey bees before other food sources are available.

Animal and Bird Use:



References: Ackerfield 2012, Cronquist and Dorn 2005, Dorn 1997, Weber and Wittmann 2012



Salix serissima (L.H. Bailey) Fernald

Autumn willow

Salicaceae

Denise Culver



Synonyms: None

USDA PLANTS Symbol: SASE2

ITIS TSN: 22581

Wetland Status AW: OBL WM: OBL GP: OBL

Native Status: Native

Conservation Status: G4 S1; USFS Sensitive

C-Value: 9

Duration: Perennial

CO Elevation: 7,800–9,820 ft. (2,375–2,995 m)

Key Characteristics:

- ◆ Shrubs, to 5 m tall; glands on petioles near bases of leaf blades
- ◆ Leaves glabrous, slightly glaucous, 4–10 cm x 1.5–3.5 cm, leaf tips acuminate; petioles 4–11 mm long
- ◆ Catkins appear after leaves usually in July or August, 1–5 cm long; peduncles 1–5 cm long, leafy
- ◆ Capsules glabrous, 6–12 mm long, maturing in late summer; stipes 0.8–2 mm long
- ◆ Flower bracts pale and deciduous in fruit

Al Schneider



Similar Species: *S. lucida* [FACW] generally has stipules (leafy bracts at petiole bases) and hairy young leaves, shorter capsules and petioles that are 13–30 mm long. In High Creek fen, both *S. serissima* and *S. myrtillofolia* occur. *S. myrtillofolia* [FACW] is a shorter stature willow with leaves that are shorter, green on both sides, and obtuse tipped.

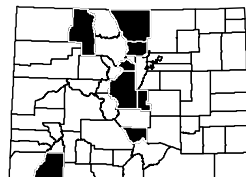
Habitat and Ecology: Uncommon willow, catkins appear in late summer. Occurs in fens, along streams, sloughs and abandoned oxbows. Global range from Canada, south to Colorado, east to Maine. Considered state critically imperiled (S1) in Colorado, Wyoming and South Dakota and state vulnerable (S3) in Montana.

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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Weber and Wittmann 2012



Woody Plants

Salix wolfii Bebb

Wolf's willow

Salicaceae

Matt Lavin



Synonyms: None

USDA PLANTS Symbol: SAWO

ITIS TSN: 22595

Wetland Status AW: OBL WM: OBL GP: FACW

Native Status: Native

Conservation Status: G5? SNR

C-Value: 8

Duration: Perennial

CO Elevation: 7,300–11,760 ft. (2,225–3,585 m)

Key Characteristics:

- ◆ Shrubs, to 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



Matt Lavin

Jeanne R. Janish and Laura Vogel



Similar Species: *S. brachycarpa* [FACW] has hairy capsules and is typically much larger in stature. *S. boothii* [FACW] is also taller, has large, often toothed leaves, and the catkins are longer, up to 5 cm.

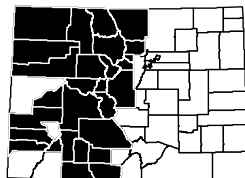
Habitat and Ecology: Locally common in fens, along streams, sloughs and abandoned oxbows in upper montane to subalpine.

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.

Animal and Bird Use:



References: Ackerfield 2012, Dorn 1997, Weber and Wittmann 2012



Michael H. Gota



Synonyms: *Tamarix pentandra* Pall., *Tamarix ramosissima* Ledebour

USDA PLANTS Symbol: TACH2

ITIS TSN: 22308

Wetland Status AW: FAC WM: FAC GP: FACW

Native Status: Non-native, CO Noxious Weed List B

Conservation Status: GNR SNR

C-Value: 0

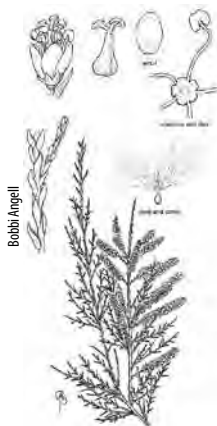
Duration: Perennial

CO Elevation: 3,390–8,000 ft. (1,035–2,440 m)

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 pink to white, 5 petals, 1.4–2.5 mm long, appearing with and after leaves
- ◆ Capsules lance-subulate, 3–4 mm long

Al Schneider



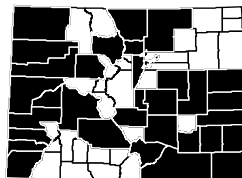
Similar Species: *T. parviflora* [FAC, FACW] is not as common and has 4-merous flowers appearing before the leaves and has dark brown branches.

Habitat and Ecology: Common along streams and lake margins and reservoirs on the Eastern and Western Slopes where it has escaped cultivation.

Comments: Tamarisk is an aggressive, non-native shrub that can thrive along low-order streams. 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.

Animal and Bird Use: 

References: Ackerfield 2012, Holmgren et al. 2005, Weber and Wittmann 2012



Tamarix parviflora DC.

Smallflower tamarisk

Tamaricaceae

Hazel Ilano



Synonyms: None

USDA PLANTS Symbol: TAPA4

ITIS TSN: 22309

Wetland Status AW: FAC WM: FACW GP: FACW

Native Status: Non-native, CO Noxious Weed List B

Conservation Status: GNR SNA

C-Value: 0

Duration: Perennial

CO Elevation: 4,300–7,000 ft. (1,310–2,135 m)

Key Characteristics:

- ◆ Shrubs 2–5 m tall, many-stemmed
- ◆ Bark on stems and branches brown to purple
- ◆ Leaves small, scale-like, 1.5–2.5 mm long
- ◆ Flowers pink to white, 4 petals, 1.8–2.5 mm long, appearing before leaves
- ◆ Capsules lance-subulate, 3–4.7 mm long



Woody Plants

Isidro Martinez



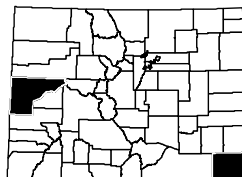
Similar Species: *T. chinensis* [FAC, FACW] has 5-merous flowers that appear with or after the leaves.

Habitat and Ecology: Escaped from cultivation, it is uncommon along streams and lake margins. Known from Baca and Mesa Counties, but expected elsewhere.

Comments: Tamarisk is an aggressive, non-native shrub that can thrive along low-order streams. It is a prolific seed producer becoming a monoculture throughout lower elevation rivers (e.g., Colorado, South Platte and Arkansas Rivers). However, the release of the tamarisk leaf beetle (*Diorhabda* spp.) has proven to be an effective biological control on the invasive shrub. The Southwestern Willow Flycatcher does nests in both tamarisk and willow riparian shrublands.

Animal and Bird Use: 

References: Ackerfield 2012, Holmgren et al. 2005, Weber and Wittmann 2012



Glossary

(Adapted from *Plant Identification Terminology: An Illustrated Glossary*. Second Edition. 2003. James G. Harris and Melinda Woolf Harris and *Colorado Flora, Eastern and Western Slopes*. Fourth Editions. 2012. William A. Weber and Ronald C. Wittmann)

Abaxial – The side away from the axis (e.g. backside of leaf).

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.

Acute – Tapering to a pointed apex with more or less straight sides.

Adaxial – The side toward the axis (e.g. upper side of leaf).

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.

Amplexicaul – Clasping the stem, as the base or stipules of some leaves.

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.

Anthesis – The flowering period, when the flower is fully expanded and functioning.

Aphyllopodic – Having the lowermost leaves reduced to small scales.

Apical – Located at the apex or tip.

Apices – At the tips.

Apiculate – Ending abruptly in a small, slender point.

Aristate – Bearing an awn or bristle at the tip.

Articulate – Jointed; separating at maturity along a well-defined line of dehiscence.

Attenuate – Tapering gradually to a narrow tip or base.

Auricle – A small, ear-shaped appendage.

Auriculate – With auricles.

Awn – A bristle-shaped appendage.

Barbellate – With short, stiff hairs or barbs.

Basal – Positioned at or arising from the base, as leaves arising from the base of the stem.

Basifixed – Attached by the base.

Beak – A narrow or prolonged tip, as on some fruits and seeds.

Biconvex – Convex on both sides.

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.

Bracteate – With bracts.

Bractlet – A small bract, often secondary in nature.

Bulbils – A small bulb arising from the base of a larger bulb.

Caducous – Falling off very early compared to similar structures in other plants.

Calciphile – an organism preferring calcareous substrates.

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.

Capitate – Flowers compacted in a head-shaped cluster, especially common in Asteraceae.

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).
- Caudate** – With a tail-like appendage.
- Caudex (caudices)** – The persistent and often woody base of an herbaceous perennial.
- Cauliscent** – With an obvious leafy stem rising above the ground.
- Cauline** – Of or on the stem.
- Cellular-reticulate** – Network of small cavities.
- Cespitose (Caespitose)** – Growing in dense tufts.
- Chartaceous** – With a papery texture, usually not green.
- Ciliate** – With a marginal fringe of minute hairs.
- Clavate** – Club-shaped, gradually widening toward the apex.
- Cleistogamous** – Flowers which self-fertilize without opening.
- Coetaneous** – With leaves and flowers appearing at same time.
- 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.
- Connivent** – Converging or touching but not actually fused or united.
- Convolute** – Rolled up longitudinally; with parts in an overlapping arrangement like shingles on a roof or as petals arranged as to be partially covered by one adjacent petal and partially overlapping the other adjacent petal.
- 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.
- Crenulate** – With very small rounded teeth along the margin.
- Crisped** – Curled, wavy or crinkled.
- Cross-fibrillose** – Shredding into fine cross fibers as in some grass and sedge leaf-sheaths.
- Cross-filamentose** – With soft tissues of a structure broken down, leaving a central longitudinal fiber and short, curving horizontal fibers connecting it with the edges.
- Cucullate** – Hooded or hood-shaped.
- Culm** – A hollow or pithy stalk or stem, as in the grasses, sedges, and rushes.
- Cuneate** – Wedge-shaped.
- Cuspidate** – Tipped with a short, sharp, abrupt point.
- 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.
- Deflexed** – Bent abruptly downward.
- Dehiscent (Dehiscence)** – Opening or splitting at maturity of fruits and anthers.
- Deltoid** – With the shape of the Greek letter delta; shaped like an equilateral triangle.
- Dentate** – Toothed along the margin, the teeth directed outward rather than forward.
- Denticulate** – Dentate with very small teeth.
- 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.
- Distal** – Toward the tip, or the end of the organ opposite the end of attachment.
- Divaricate** – Widely diverging or spreading apart.
- Dolabriform** – Ax-shaped or cleaver-shaped; pick-shaped; attached at some point other than the base, usually near the middle.
- Dorsal** – Pertaining to the back or outward surface of an organ in relation to the axis, as in the lower surface of a leaf; abaxial.
- Drupe** – A fleshy, indehiscent fruit with a stony endocarp usually surrounding a single seed, as in a peach or cherry.
- Ebracteate** – Without bracts.
- Echinate** – With prickles or spines.
- Elliptic** – In the shape of an ellipse, or a narrow oval; broadest at the middle and narrower at the two equal ends.
- Emarginate** – With a notch at the apex.

- 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.
- Epicalyx** – An involucre resembling the calyx but consisting of a whorl of bracts, exterior to the calyx.
- 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.
- Excurrent** – Extending beyond the apex, as the midrib in some leaves; extending beyond what is typical, as in a leaf base which extends down the stem; with a prolonged main axis from which lateral branches arise.
- 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.
- Falcate** – Sickle-shaped; hooked; shaped like the beak of a falcon.
- Farinose** – Mealy in texture.
- Fascicle** – A tight bundle or cluster.
- Fasciculate** – Arranged in fascicles (tight bundles or a clusters).
- Fibrillose** – Bearing fibrils.
- Filamentose** – Bearing or resembling filaments.
- Filiform** – Thread-like; filamentous.
- Fimbriate** – Fringed, usually with hairs or hair-like structures (fimbriae) along the margin.
- Floccose** – Bearing tufts of long, soft, tangled hairs.
- Foliaceous** – Leaf-like in color and texture; bearing leaves; of or pertaining to leaves.
- Foliate** – Having leaves; leaf-like.
- Follicle** – A dry, dehiscent fruit composed of a single carpel and opening along a single side, as a milkweed pod.
- Froned** – 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.
- Galea** – The upper lip of a two-lipped corolla that is shaped like a helmet or hood.
- 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** – Somewhat glaucous; becoming glaucous.
- Glaucous** – With a waxy bluish or whitish covering.
- Glomerule** – A dense cluster; a dense head-like cyme.
- Gynaecandrous** – With the pistillate flowers borne above the staminate.
- Gynoeceum** – A carpel or an aggregation of carpels, either separate or unite; collective name for all the carpels in a single flower.
- Gynophore** – An elongated stalk bearing the pistil in some flowers.
- 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.
- Hemiparasitic** – Plants often with pale green leaves that are photosynthetic but also have the ability to be parasitic often attaching to the roots of other plants and deriving nutrition from them.
- 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 androeceum, commonly surrounding or enclosing the pistils.
- Imbricate** – Overlapping like tiles or shingles on a roof.
- Indurate** – Hardened.
- Indusium (Indusia)** – A thin epidermal outgrowth from a fern leaf that covers the sorus.
- Inodorous** – Without an odor.
- 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.
- Lamina** – The extended portion, or blade, of a leaf or petal.
- Laminate** – Separating into plates or layers.
- Lateral** – Borne on or at the side.
- 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.
- 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.
- Lobulate** – With lobules.
- Lobules** – A small lobe; a lobe-like subdivision of a lobe.
- Loculicidal** – Dehiscing through the locules of a fruit rather than through the septa.
- Lunate** – Crescent-shaped.
- Megaspore** – A female spore which will give rise to a female gametophyte.
- Moniliform** – Resembling a string of beads.
- Monoecious** – Flowers imperfect, the staminate and pistillate flowers borne on the same plant.
- Monospecific** – A genus which contains only one known species.
- Mucro** – A short, sharp, abrupt point, usually at the tip of a leaf or other organ.
- 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.
- 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).
- Palmate** – Lobed, veined, or divided from a common point, like the fingers of a hand.
- Pandurate** – Fiddle-shaped.
- 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.
- Papillate** – Having papillae.
- Papillose** – Having minute papillae.
- Pappus** (Pappi) – The modified calyx of the Asteraceae, consisting of awns, scales, or bristles at the apex of the achene.
- Pectinate** – With close regularly spaced divisions, appendages or hairs that are often in a single row like the teeth of a comb.
- Pedicel** – The stalk of a single flower in an inflorescence, or of a grass spikelet.
- Peduncle** – The stalk of a solitary flower or of an inflorescence.
- Pedunculate** – With a peduncle.
- Peltate** – Shield-shaped; a flat structure borne on a stalk attached to the lower surface rather than to the base or margin.
- Perfect** – With both male and female reproductive organs (stamens and pistils); bisexual.
- Perfoliate** – A leaf with the margins entirely surrounding the stem, so that the stem appears to pass through the leaf.
- Perianth** – The calyx and corolla of a flower, collectively, especially when they are similar in appearance.

- Pericarp** – The wall of a fruit.
- Perigynium (Perigynia)** – An inflated sac-like structure enclosing the ovary (achene) in the genus *Carex*.
- Perisperm** – Food storage tissue in some seeds, arising from the nucellus.
- Petal** – An individual segment or member of the corolla, usually colored or white.
- Petaloid** – Petal-like in appearance.
- Petiolule** – The stalk of a leaflet of a compound leaf.
- Phyllary** – An involucre bract found in the Asteraceae.
- Phyllode** – An expanded, leaf-like petiole lacking a true leaf blade.
- Phyllopodic** – With lowest leaves well-developed, not reduced to scales.
- 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.
- Plicate** – Plaited or folded, as a folding fan.
- 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.
- Precocious** – Developing or appearing very early; with the flowers developing before the leaves.
- 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** – Towards the base, or the end of the organ by which it is attached.
- Pruinose** – With a waxy, powdery, usually whitish coating (bloom) on the surface; conspicuously glaucous, like a prune.
- Pseudobulb** – A bulbous thickening on the stems of many epiphytic orchids.
- Puberlent (Puberulous)** – Minutely pubescent; with fine, short hairs.
- Punctate** – Dotted with pits or with translucent, sunken glands or with colored dots.
- Puncticulate** – Minutely punctate.
- Pustulose** – With small blisters or pustules, often at the base of a hair.
- Pyriform** – Pear-shaped.
- Raceme** – An unbranched, elongated inflorescence with pedicellate.
- Racemiform** – An inflorescence with the general appearance, but not necessarily the structure, of a true raceme.
- 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 due to twisting of the pedicel, as the flowers of some orchids.
- 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.
- Revolute** – With the margins rolled backward toward the underside.
- Rostellum** – A small beak; an extension from the upper edge of the stigma in orchids.
- Rotate** – Disc-shaped; flat and circular, as a sympetalous corolla with widely spreading lobes and little or no tube.
- Rugose** – Wrinkled.
- Rugulose** – Slightly wrinkled.
- Saccate** – With a sac or in the shape of a bag; bag-shaped.
- Sagitate** – Arrowhead shaped with basal lobes downward.
- Salverform** – With a slender tube and an abruptly spreading, flattened limb.
- Samara** – A dry, indehiscent, winged fruit.
- 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.
- Scapose** – Flowers borne on a scape or scape-like.

- Scarios – Thin, dry, and membranous in texture, not green.
- Scrotiform – Scrotum-like in appearance.
- Scutellum – Small plate-like or shield-like structure.
- Secund – Arranged on one side of the axis only.
- Sepal – A segment of the calyx.
- Septa – A dividing wall or membrane.
- Septate – Divided by one or more partitions.
- Septate-nodulose – Divided by small transverse knobs or nodules.
- Septicidal – Dehiscing through the septa and between locules.
- Sericeous – Silky, with long, soft, slender, somewhat appressed hairs.
- Serotinous – Late in flowering or appearing to bloom later in the season than is customary with allied species or requiring heat of wildfire to open.
- Serrate – Saw-like; toothed along the margin, the sharp teeth pointing forward.
- Setaceous – Bristle-like; with bristles.
- 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 placentae and septum.
- Siliqua – A dry dehiscent fruit of the Brassicaceae, typically more than twice as long as wide, with two valves separating from the persistent placentae and septum.
- Sinus (es) – The cleft, depression, or recess between two lobes of an expanded organ such as a leaf or petal.
- Spadix (es) – Spike with small flowers crowded on a thick axis.
- 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 – An inflorescence with the general appearance, but not necessarily the structure, of a true spike.
- Spike – An unbranched, elongated inflorescence with sessile or subsessile flowers or spikelets.
- Spinulose – Bearing spinules (small spines).
- Sporangium (Sporangia) – A spore-bearing case or sac.
- Sporophore – The fertile, spore-bearing portion of the leaf in Botrychium.
- Squarrose – Abruptly recurved or spreading above the base; rough or scurfy due to the presence of recurved or spreading bracts.
- Staminode (Staminodia) – A modified stamen which is sterile, producing no pollen.
- Stellate – Star-shaped, as in hairs with several to many branches radiating from the base.
- 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.
- Striate – Marked with fine, usually parallel lines or grooves.
- Strigillose – Minutely strigose.
- Strigose – Bearing straight, stiff, sharp, appressed hairs.
- Stylar – Of or pertaining to a style.
- Style – The usually narrowed portion of the pistil connecting the stigma to the ovary.
- Stylodipodium – A disc-like expansion or enlargement at the base of the style in the Apiaceae family.
- Subcoriaceous – Almost leathery or leather-like.
- Submerge – To cover or put under water.
- 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.
- Testa – The seed coat, from the integuments of the ovule.
- Thallus – An expanded “stem” that functions as a leaf; as in Lemna spp.
- Thryse – 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.
- Triquetrous** – Three-edged, with three protruding angles.
- Trophophore** – The sterile, foliaceous portion of the leaf as in *Botrychium*.
- 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.
- Utricles** – A small, thin-walled, one-seeded, more or less bladdery-inflated fruit.
- Valvate** – Opening by valves; or a flower with the petals or sepals edge to edge along their entire length, not overlapping.
- Velum** – Membrane covering sporangium in *Isoetes*.
- Ventral** – Pertaining to the front or inward surface of an organ in relation to the axis, as in the upper surface of a leaf; adaxial.
- Verticillasters** – A pair of axillary cymes arising opposite leaves.
- 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.

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