2017 Colorado Rare Plant Symposia USFS Sensitive Species of Colorado

Forest Service Status Species

- National Forest Management Act (NFMA) law that directs the management of NFS lands
 - NFMA is implemented in each National Forest's or National Grassland's Land Management Plan (LMP)
- The way we do Land Management Plans has changed, status species lists will change accordingly
 - NFS units that have revised their LMP will have Species of Conservation Concern
 - Those that have not will retain Sensitive Species until they revise
- Species protected under the Endangered Species Act are different

Sensitive Species

- What they are: Species with evidence of a current or predicted downward trend
- Threshold for management: No decision can be made that will put a Sensitive species on a <u>trend towards listing</u> as Threatened or Endangered or would lead to the <u>loss of viability</u> on the planning unit (the area that the LMP covers)

Will continue to be updated until LMP is revised

Species of Conservation Concern (SCC)

- What they are: substantial concern about the species' ability to persist over the long term in the plan area
- Threshold for management: Effects of a proposed project can not result in <u>ecological conditions</u> that will not support SCC persistence within the plan area
- Can be updated at any time after LMP revision

Species of Conservation Concern

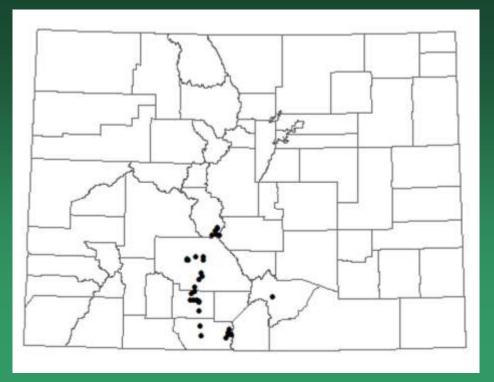
- Management Focus: Creating or maintaining ecological conditions that promote recovery, conservation, and viability. These conditions are spelled out in the revised Land Management Plan.
- Only NFS units that have revised their plans under the 2012 Rule will transition to SCC
 - Rio Grande NF about halfway through process
 - Grand Mesa, Uncompangre, and Gunnison NFs just starting
 - The rest of the NFS units in Colorado are TBD and will keep Sensitive Species until they revise, sensitive list will continue to be updated

Sensitive vs. SCC

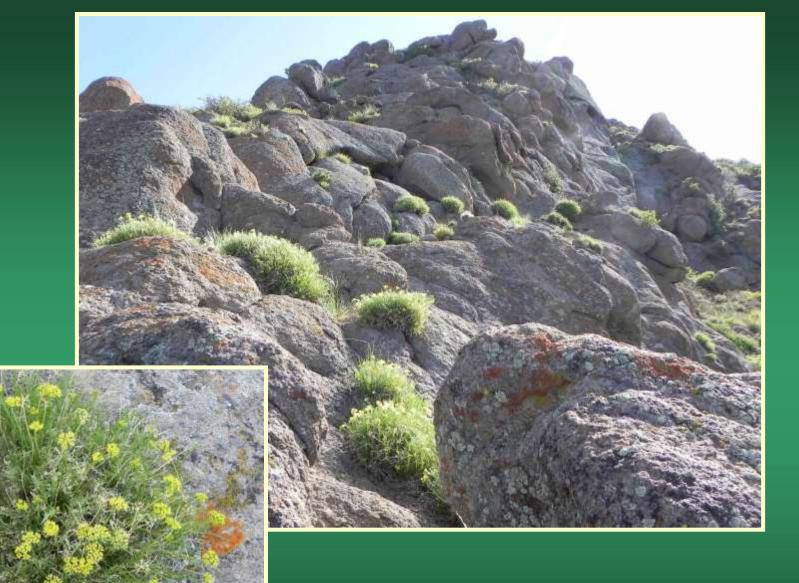
- Focus is on threats
- Have fairly general plan components
- Threshold is trend to listing or loss of viability on unit
- Management tends to be hands off
- Region-wide list, but requirement to maintain viability is at the unitscale

- Focus is on ecological conditions (EC)
- Have species- or ecosystem-specific plan components, specific to the unit
- Threshold is EC that won't support persistence
- Management focuses on ecosystems
- Each unit has it's own list tied to Land Management Plan

Aletes lithophilus (= Neoparrya lithophila) Rock-loving neoparrya

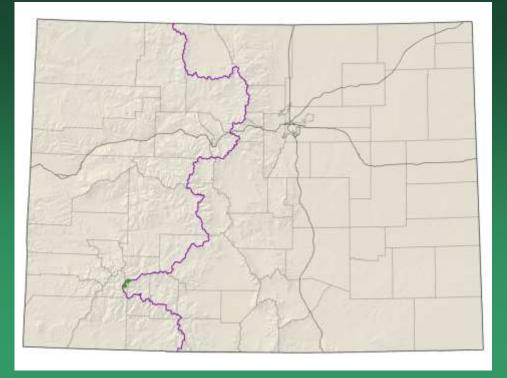


- <u>Federal status</u>: BLM/USFS sensitive
- <u>Heritage ranks</u>: G3/S3
- <u>Global distribution</u>: New Mexico and Colorado (Chaffee, Conejos, Fremont, Huerfano, Mineral, Rio Grande, and Saguache counties)
- <u>Elevation range</u>: 7,170 10,270 ft.
- <u>Colorado occurrences</u>: 30
- <u>Primary threats</u>: unregulated recreation, invasive species and treatment, grazing



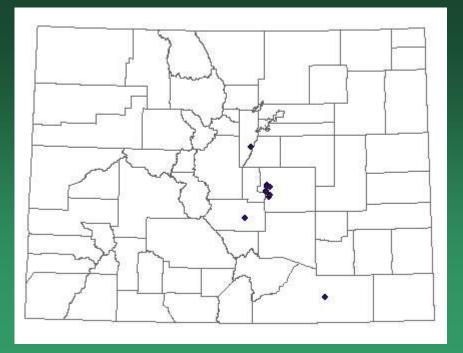
Aletes lithophilus

Aliciella sedifolia (= Gilia sedifolia) Stonecrop gilia



Reviewed under Colorado G1 Species

Aquilegia chrysantha var. rydbergii Golden columbine



- Federal status: BLM/USFS sensitive
- <u>Heritage ranks</u>: G4T1Q/S1
- <u>Global distribution</u>: Colorado endemic (Fremont, El Paso, Jefferson, and Las Animas)
- <u>Elevation range</u>: 5,000 8,200 ft.
- <u>Colorado occurrences</u>: 10 (2 historical)
- Primary threats: recreational activities, streambank scouring, collecting





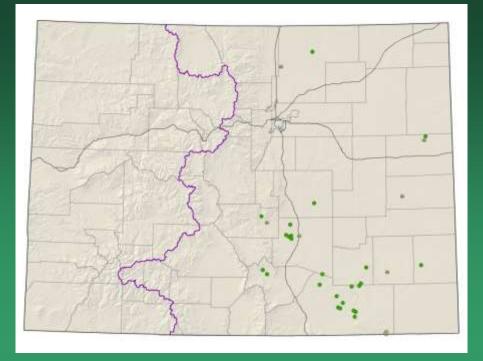
Aquilegia chrysantha var. rydbergii Armeria scabra ssp. sibirica (= Armeria maritima ssp. sibirica) Sea pink



- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G5T5/S1
- <u>Global distribution</u>: Coast of Alaska to California, Scandinavia, central to eastern Asia, also Ontario, New York, Colorado (Park and Summit counties)
- <u>Elevation range</u>: 11,900 13,000 ft.
- <u>Occurrences</u>: 2
- <u>Primary threats</u>: unregulated recreation, mining



Asclepias uncialis ssp. uncialis Dwarf milkweed



Reviewed under SE & Central Colorado G2G3 Species

Astragalus iodopetalus violet milkvetch



- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G2/S1
- <u>Global distribution</u>: New Mexico (historical) and Colorado (Archuleta, Gunnison, La Plata and Montrose counties).
- <u>Elevation range</u>: 6,500-7,260 ft.
- Last observed in Colorado: 2015
- <u>Colorado occurrences</u>: 5 (4 are historical)
- <u>Colorado individuals</u>: unknown
- Primary threats: unknown
- Land ownership/management: Tribal, USFS

Astragalus iodopetalus





Astragalus leptaleus Park milkvetch

- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G3G4/S2
- <u>Global distribution</u>: Idaho, Montana, Wyoming, and Colorado (Gunnison, Jackson, Park, and Summit counties)
- <u>Elevation range</u>: 8,000 13,000 ft.
- <u>Colorado occurrences</u>: 7
- Primary threats: habitat modification, invasive species, unregulated recreation

Astragalus leptaleus



Astragalus missouriensis var. humistratus Missouri milkvetch

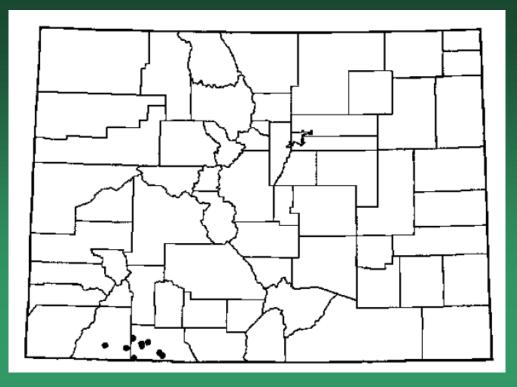


- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G5T1/S1
- <u>Global distribution</u>: New Mexico and Colorado (Archuleta, Hinsdale and La Plata counties)
- <u>Elevation range</u>: 6,950 8,320 ft.
- <u>Colorado occurrences</u>: 10 (2 historical)
- Primary threats: roads, housing and urban development





Astragalus missouriensis var. humistratus Astragalus proximus Aztec milkvetch



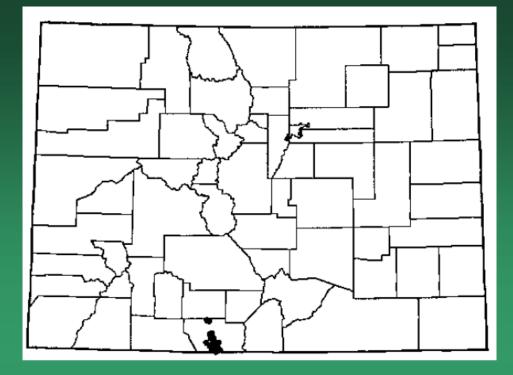
- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G4/S2
- <u>Global distribution</u>: New Mexico and Colorado (Archuleta and La Plata counties)
- <u>Elevation range</u>: 5,400 7,300 ft.
- <u>Colorado occurrences</u>: 13 (5 historical)
- <u>Primary threats</u>: unknown



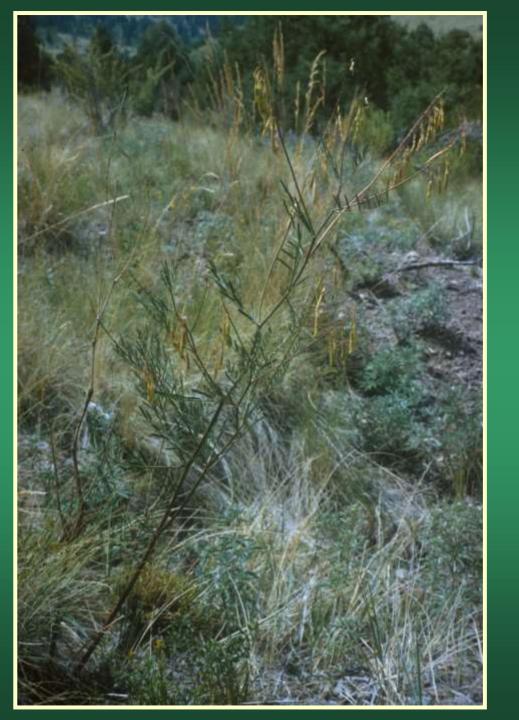
Astragalus proximus



Astragalus ripleyi Ripley milkvetch



- <u>Federal status</u>: BLM/USFS sensitive
- <u>Heritage ranks</u>: G3/S2
- Global distribution: New Mexico and Colorado (Conejos County)
- <u>Elevation range</u>: 8,200 9,300 ft.
- <u>Colorado occurrences</u>: 28 (6 historical)
- <u>Primary threats</u>: unknown



Astragalus ripleyi

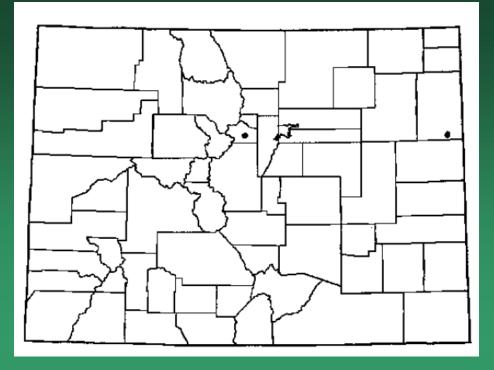
Botrychium ascendens Trianglelobe moonwort

- Federal status: USFS sensitive
- Heritage ranks: G3/S1
- <u>Global distribution</u>: Alaska to California, Nevada, NE to Montana, Wyoming, and Colorado (Clear Creek, Eagle, and Park counties)
- <u>Elevation range</u>: unknown
- <u>Colorado occurrences</u>: 3
- Primary threats: road maintenance, unregulated recreation, herbicide use

Botrychium ascendens

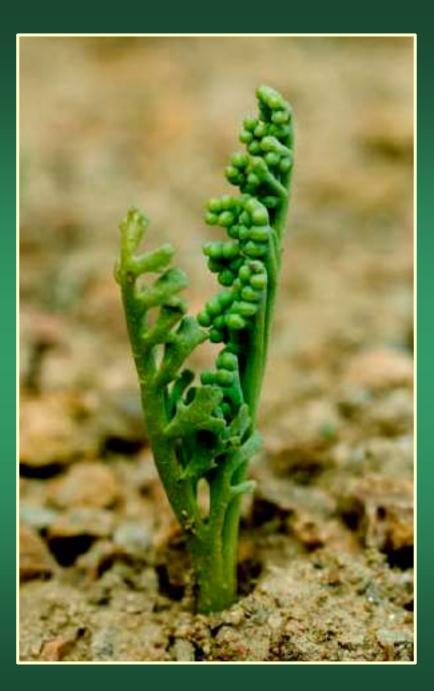


Botrychium campestre Prairie moonwort



- Federal status: USFS sensitive
- Heritage ranks: G3G4/S1
- <u>Global distribution</u>: Canada, Iowa, Michigan, Minnesota, Oregon, Montana, Nebraska, New York, North Dakota, Wisconsin, Wyoming, and Colorado (Clear Creek and Yuma counties.)
- <u>Elevation range</u>: 3,700 10,800 ft.
- <u>Colorado occurrences</u>: 2
- <u>Primary threats</u>: unknown

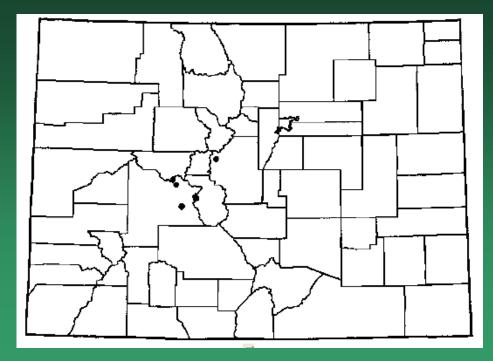
Botrychium campestre



Botrychium paradoxum Peculiar moonwort

- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G3G4/S1
- <u>Global distribution</u>: Utah, Montana, Washington, Canada, California, and Colorado (Gunnison)
- <u>Elevation range</u>: unknown
- <u>Colorado occurrences</u>: 1
- Primary threats: unknown

Braya glabella var. glabella (= Braya glabella ssp. glabella) Arctic braya



- Federal status: USFS sensitive
- Heritage ranks: G5T5?/S1
- <u>Global distribution</u>: Circumboreal; Alaska, Canada, and Colorado (Chaffee, Gunnison, Park, and Pitkin counties)
- <u>Elevation range</u>: 12,000 13,000 ft.
- <u>Colorado occurrences</u>: 7 (3 historical)
- <u>Primary threats</u>: unregulated recreation, mining, climate change

Braya glabella var. glabella



Calochortus flexuosus Winding mariposa lily

- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G4/S2
- <u>Global distribution</u>: Arizona, Utah, Nevada, California, New Mexico, and Colorado (Montrose, Montezuma, and San Miguel counteis)
- <u>Elevation range</u>: 4,500 6,000 ft.
- <u>Colorado occurrences</u>: 16 (6 historical)
- <u>Primary threats</u>: unknown



Carex diandra Lesser panicled sedge

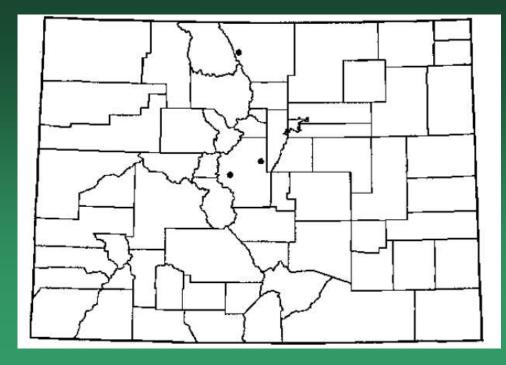
- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5/S1
- <u>Global distribution</u>: Circumboreal; Canada, New Jersey, Indiana, California, and Colorado (Boulder, Chaffee, Eagle, Garfield, Grand, Gunnison, Larimer, Rio Grand, Routt, Saguache, San Juan, and Weld counties)
- <u>Elevation range</u>: 8,000 11,000 ft.
- <u>Colorado occurrences</u>: 13
- <u>Primary threats</u>: altered hydrology, road construction, timber management



Carex diandra



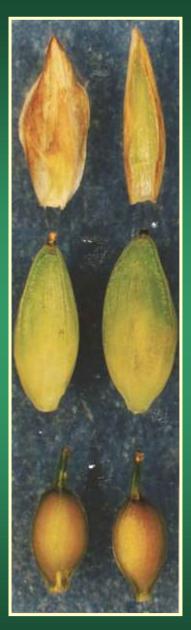
Carex livida Livid sedge



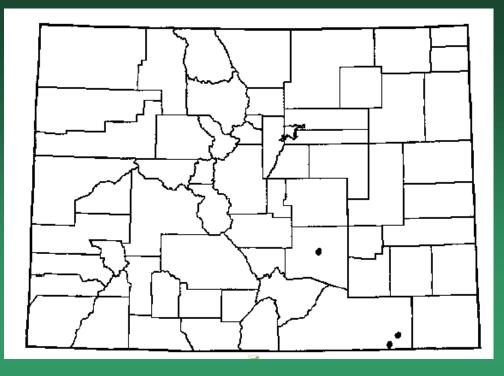
- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5/S1
- <u>Global distribution</u>: Canada, south to New Jersey, Michigan, Montana, California, and Colorado (Larimer and Park counties)
- <u>Elevation range</u>: 9,000 10,000 ft.
- <u>Colorado occurrences</u>: 8
- <u>Primary threats</u>: altered hydrology, mining, heavy grazing, road construction

Carex livida





Chenopodium cycloides Sandhill goosefoot



- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G3G4/S1
- <u>Global distribution</u>: Kansas south to Texas, west to New Mexico, and Colorado (Las Animas, Pueblo, and likely Baca county)
- <u>Elevation range</u>: 4,000 5,500 ft.
- <u>Colorado occurrences</u>: 17 (2 historical)
- <u>Primary threats</u>: invasive species, oil/gas development, OHVs

Chenopodium cycloides



Cylactis arctica ssp. acaulis (= Rubus arcticus ssp. acaulis) Nagoon berry

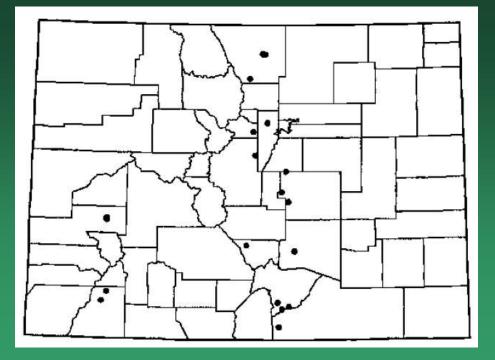


- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5T5/S1
- <u>Global distribution</u>: Northern Europe, Asia, Alaska Canada, south to Montana, Wyoming, and Colorado (Grand and Park counties)
- <u>Elevation range</u>: 8,600 9,700 ft.
- <u>Colorado occurrences</u>: 5
- <u>Primary threats</u>: altered hydrology, invasive species, unregulated recreation

Cylactis arctica ssp. acaulis



Cypripedium calceolus ssp. parviflorum (=Cypripedium parviflorum) American yellow lady'sslipper



- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5/S2
- <u>Global distribution</u>: Canada, Louisiana, Arizona, New Mexico, and Colorado (Clear Creek, Custer, Douglas, El Paso, Huerfano, Jefferson, La Plata, Larimer, Las Animas, Montrose, Park, and Pueblo counties)
- <u>Elevation range</u>: 7,400 8,500 ft.
- <u>Colorado occurrences</u>: 29
- <u>Primary threats</u>: collecting, unregulated recreation, invasive species

Cypripedium calceolus ssp. parviflorum

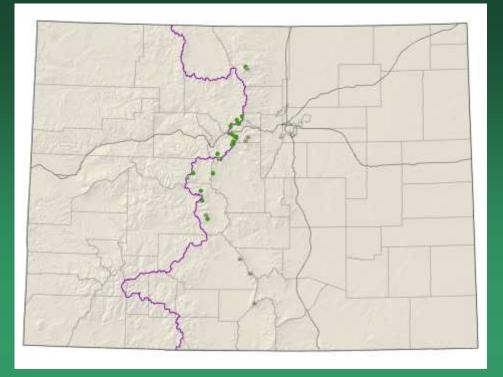


Draba exunguiculata Clawless draba



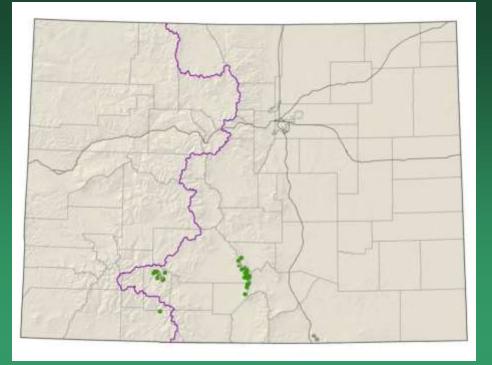
Reviewed under SE & Central Colorado G2G3 Species

Draba grayana Gray's Peak whitlowgrass



Reviewed under SE & Central Colorado G2G3 Species

Draba smithii Smith's whitlow-grass



Reviewed under SE & Central Colorado G2G3 Species

Draba weberi Weber's draba



Reviewed under Colorado T, E & C Plant Species

Drosera anglica English sundew

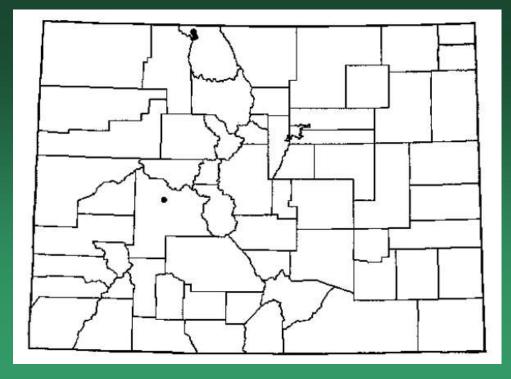
- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G5/S1
- <u>Global distribution</u>: Eurasia, Alaska, California, Idaho, Wyoming, the Great Lakes, and Colorado (La Plata County)
- <u>Elevation range</u>: 8,000 9,000 ft.
- Occurrences: 1
- <u>Primary threats</u>: unknown



Drosera anglica



Drosera rotundifolia Roundleaf sundew

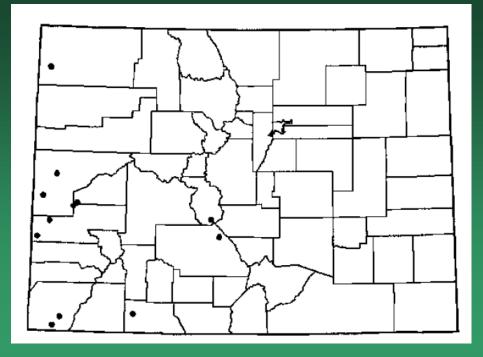


- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5/S2
- <u>Global distribution</u>: Eurasia, Canada, Idaho, Montana, California, Nevada, Florida, and Colorado (Grand, Gunnison, and Jackson counties)
- <u>Elevation range</u>: 9,100 9,800 ft.
- <u>Occurrences</u>: 8
- <u>Primary threats</u>: altered hydrology, mining, fire



Drosera rotundifolia

Epipactis gigantea Giant helleborine



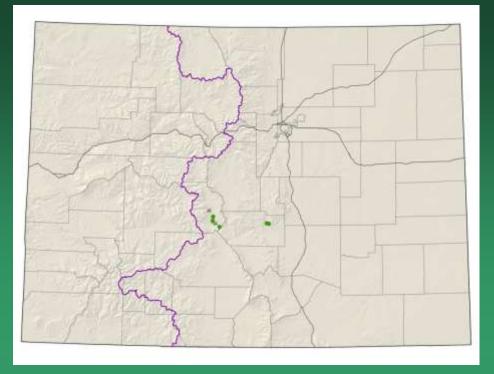
- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G4/S1S2
- <u>Global distribution</u>: Canada, Montana, Wyoming, South Dakota, Texas, Arizona, California, Mexico, and Colorado (Archuleta, Chaffee, Delta, Las Animas, Mesa, Moffat, Montezuma, Montrose, and Saguache counties)
- <u>Elevation range</u>: 4,800 8,000 ft.
- Occurrences: 27 (8 historical)
- <u>Primary threats</u>: Hydrologic alterations, unregulated recreation



Epipactis gigantea

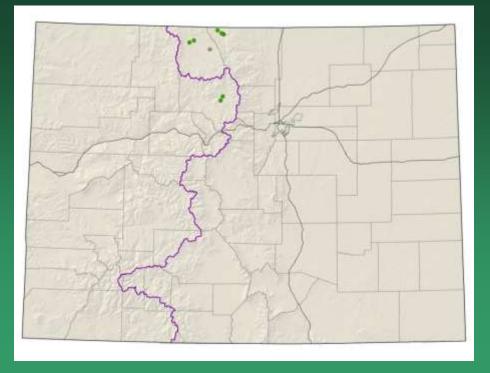


Eriogonum brandegeei Brandegee's buckwheat



Reviewed under Colorado T, E & C Plant Species

Eriogonum exilifolium Dropleaf wild buckwheat



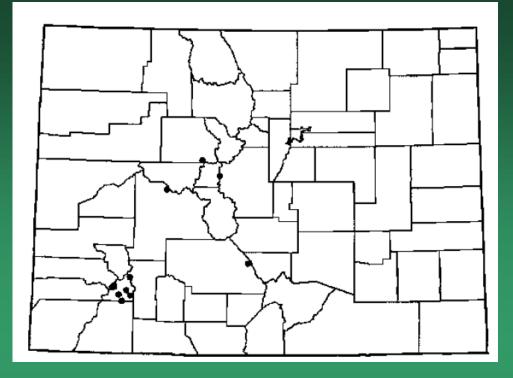
- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G3/S2
- <u>Global distribution</u>: Wyoming, Colorado (Grand, Jackson, and Larimer counties).
- <u>Elevation range</u>: 7,820-8,770 ft.
- Last observed in Colorado: 2015
- <u>Colorado occurrences</u>: 10 (2 are historical)
- <u>Colorado individuals</u>: greater than 1,000,000
- Primary threats: weeds, incompatible grazing, roads
- Land ownership/management: BLM, state, private, USFS

Eriogonum exilifolium





Eriophorum altaicum var. *neogaeum* Altai cottongrass



- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G4?T3T4/S3
- <u>Global distribution</u>: Alaska, Canada, Utah, and Colorado (Eagle, Park, San Juan, San Miguel, and Saguache counties)
- <u>Elevation range</u>: 9,500 14,000 ft.
- <u>Colorado occurrences</u>: 28 (4 historical)
- Primary threats: unknownaltered hydrology, unregulated recreation, mining

Eriophorum altaicum var. neogaeum





Eriophorum chamissonis Chamisso's cottongrass

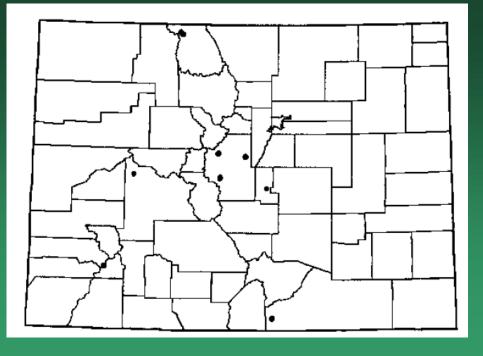
- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G5/S1
- <u>Global distribution</u>: Colorado (Eagle, Gunnison, La Plata, Pitkin, and San Juan counties)
- <u>Elevation range</u>: 10,000 12,000 ft.
- <u>Colorado occurrences</u>: 9
- <u>Primary threats</u>: unknown

Eriophorum chamissonis





Eriophorum gracile Slender cottongrass



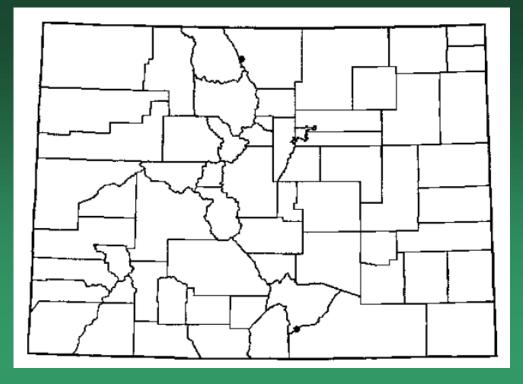
- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G5/S1S2
- <u>Global distribution</u>: Eurasia, Alaska, Canada, California, Nebraska, Illinois, Delaware, and Colorado (Gunnison, Huerfano, Jackson, Larimer, Las Animas, and Park counteis)
- <u>Elevation range</u>: 8,100 12,000 ft.
- <u>Colorado occurrences</u>: 23 (5 historical)
- Primary threats: altered hydrology, unregulated recreation, mining

Eriophorum gracile





Festuca hallii Hall fescue



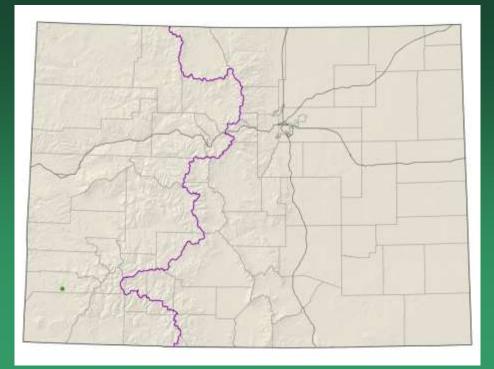
- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G4/S1
- <u>Global distribution</u>: Canada, North Dakota, Montana, Wyoming, and Colorado (Huerfano and Larimer counties)
- <u>Elevation range</u>: 11,000 12,000 ft.
- <u>Colorado occurrences</u>: 3
- <u>Primary threats</u>: unregulated recreation, invasive species and treatment



Festuca hallii

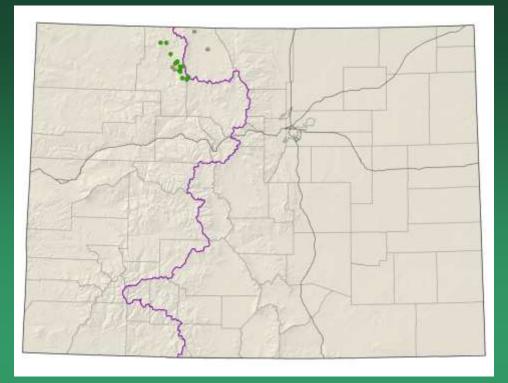


Gutierrezia elegans Lone Mesa snakeweed

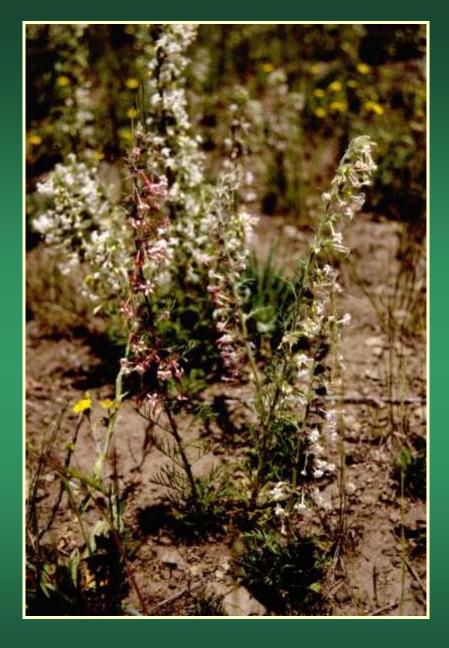


Reviewed under Colorado G1 Species

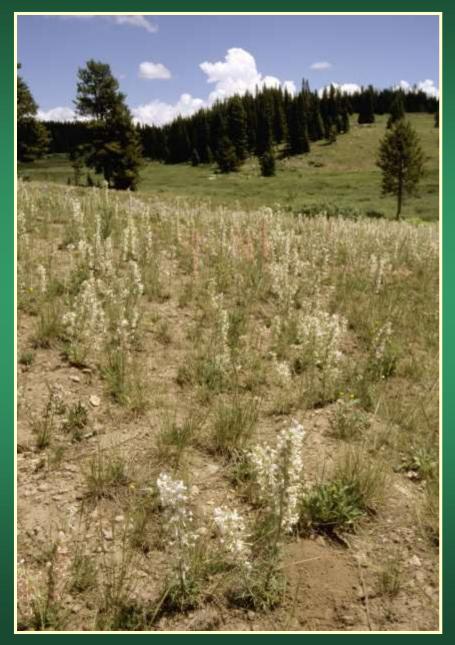
Ipomopsis aggregata ssp. weberi Weber's scarlet gilia



- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5T2/S2
- <u>Global distribution</u>: Regional endemic of northern Idaho, south-central Wyoming, and north-central Colorado (Grand, Routt and Jackson counties)
- <u>Elevation range</u>: 6,630-10,570 ft.
- Last observed in Colorado: 2009
- <u>Colorado occurrences</u>: 17 (5 are historical)
- <u>Colorado individuals</u>: >5300
- <u>Primary threats</u>: recreational use of habitat
- Land ownership/management: BLM, local government, private, state, USFS



Ipomopsis aggregata ssp. weberi



Kobresia simpliciuscula Simple bog sedge

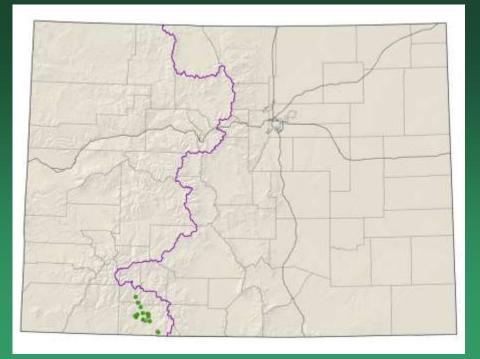
- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G5/S2
- <u>Global distribution</u>: Alaska, Greenland, Canada, Montana, Utah, Wyoming, and Colorado (Boulder, Clear Creek, Grand, and Park counties)
- <u>Elevation range</u>: 10,500 11,700 ft.
- <u>Colorado occurrences</u>: 13
- <u>Primary threats</u>: altered hydrology, unregulated recreation, climate change



Kobresia simpliciuscula



Physaria pruinosa (=Lesquerella pruinosa) Pagosa bladderpod

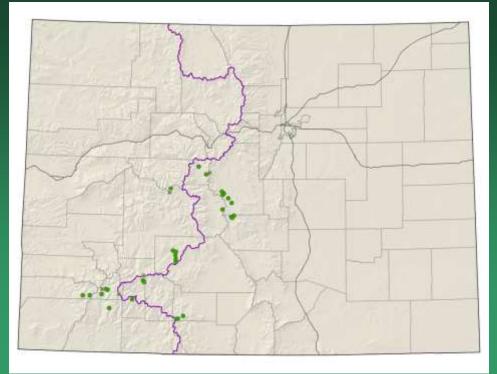


- Federal status: USFS and BLM sensitive
- <u>Heritage ranks</u>: G2/S2
- <u>Global distribution</u>: New Mexico and Colorado (Archuleta County, and the extreme southern portion of Hinsdale County)
- Elevation range: 6,820-8,500 ft.
- Last observed in Colorado: 2012
- <u>Colorado occurrences</u>: 19 (3 are historical)
- <u>Colorado individuals</u>: 5,000 to 20,000
- <u>Primary threats</u>: Residential and commercial development
- Land ownership/management: private, tribe, USFS

Physaria pruinosa



Machaeranthera coloradoensis (= Xanthisma coloradoense) Colorado tansy-aster

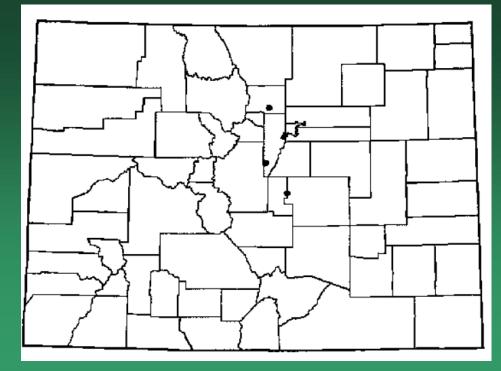


- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G3/S3
- <u>Global distribution</u>: Wyoming and Colorado (Chaffee, Dolores, Fremont, Gunnison, Hinsdale, La Plata, Lake, Park, Pitkin, Rio Grande, Saguache, San Juan counties)
- <u>Elevation range</u>: 9,000-13,430 ft.
- <u>Last observed in Colorado</u>: 2016
- <u>Colorado occurrences</u>: 35 (4 are historical)
- <u>Colorado individuals</u>: unknown
- <u>Primary threats</u>: unregulated recreation, mining, invasive species, climate change
- Land ownership/management: BLM, state, private, USFS

Machaeranthera coloradoensis



Malaxis monophyllos ssp. brachypoda (= Malaxis brachypoda) White adder's-mouth



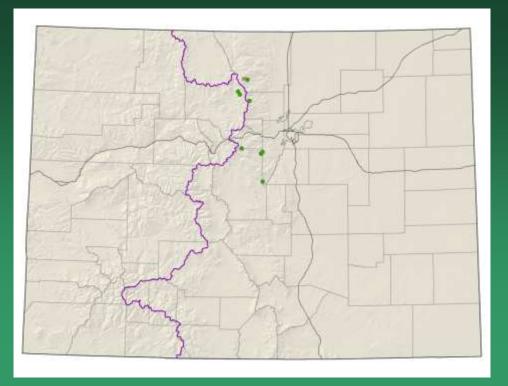
- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G4G5Q/S1
- <u>Global distribution</u>: Alaska, Canada, Great Lake States, New England, California, and Colorado (Boulder, El Paso, and Jefferson counties)
- <u>Elevation range</u>: 7,200 8,000 ft.
- <u>Colorado occurrences</u>: 4
- <u>Primary threats</u>: altered hydrology, timber harvest, fuels reduction, recreation



Malaxis monophyllos ssp. brachypoda

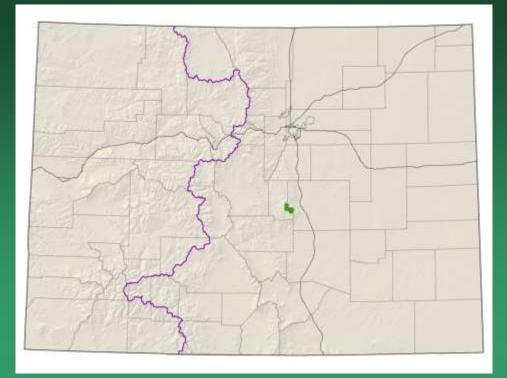


Mimulus gemmiparus Budding monkeyflower (Rocky Mtn. Monkeyflower)



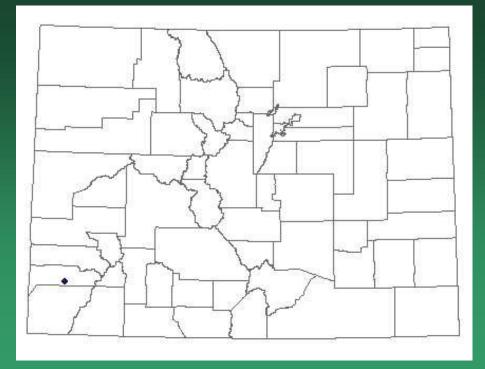
• Reviewed under Colorado T, E & C Plant Species

Oreoxis humilis (= Cymopterus humilis) Pikes Peak alpine parsley



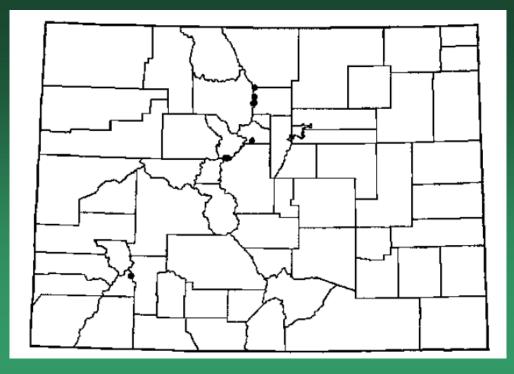
Reviewed under Colorado G1 Species

Packera mancosana Mancos shale packera



Reviewed under Colorado G1 Species

Parnassia kotzebuei Kotzebue's grass-ofparnassus

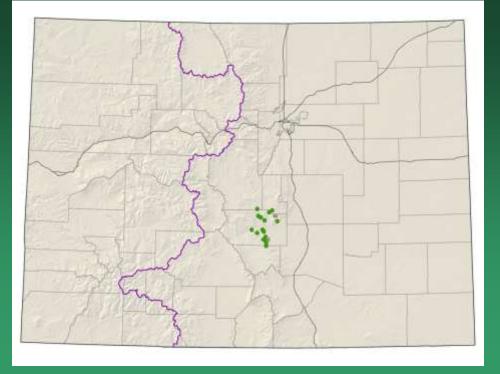


- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5/S2
- <u>Global distribution</u>: Asia, Alaska, Canada, Greenland, Washington, Nevada, Wyoming, and Colorado (Boulder, Clear Creek, Grand, Larimer, Park, San Juan, and Summit counties)
- <u>Elevation range</u>: 10,000 12,000 ft.
- Occurrences: 10
- Primary threats: altered hydrology, road/trail maintenance, climate change



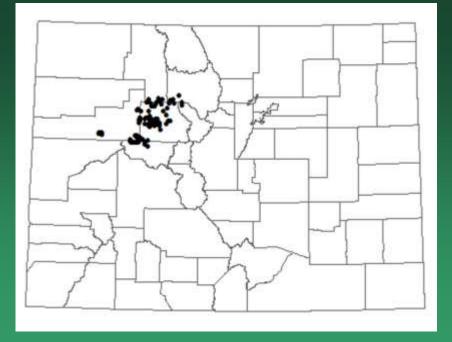
Parnassia kotzebuei

Penstemon degeneri Degener beardtongue



Reviewed under SE & Central Colorado G2G3 Species

Penstemon harringtonii Harrington beardtongue



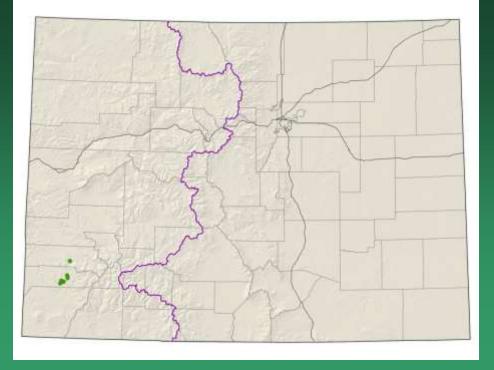
- <u>Federal status</u>: BLM/USFS sensitive
- <u>Heritage ranks</u>: G3/S3
- <u>Global distribution</u>: Colorado endemic (Grand, Eagle, Routt, Garfield, Pitkin, and Summit)
- <u>Elevation range</u>: 6,200 9,400 ft.
- <u>Colorado occurrences</u>: 73
- <u>Primary threats</u>: Residential/agricultural development, off-road vehicle use, exotic plant species invasion, over-grazing, oil/gas development, climate change





Penstemon harringtonii

Physaria pulvinata Cushion bladderpod



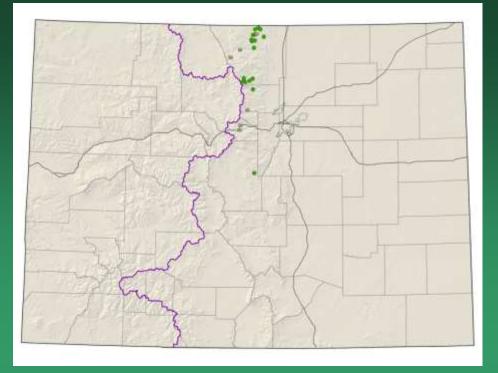
Reviewed under Colorado G1 Species

Physaria scrotiformis West Silver bladderpod



Reviewed under Colorado G1 Species

Potentilla rupincola Rocky Mountain cinquefoil



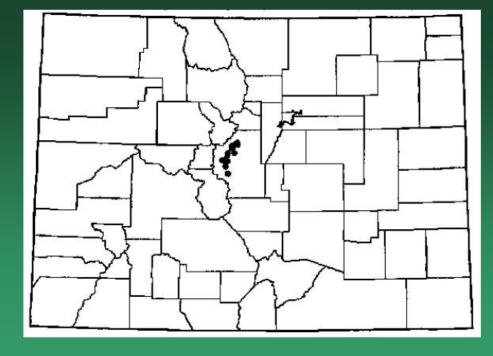
- Federal status: USFS Sensitive
- Heritage ranks: G2/S2
- <u>Global distribution</u>: Colorado endemic. Boulder, Clear Creek, Larimer, and Park counties. Historically from Gilpin county.
- <u>Elevation range</u>: 6,240-10,930 ft.
- Last observed in Colorado: 2013
- <u>Colorado occurrences</u>: 25 (8 are historical)
- <u>Colorado individuals</u>: 36,000+
- <u>Primary threats</u>: weeds, residential and commercial development, road work, recreation.
- <u>Land ownership/management</u>: local government, NGO/land trust, NPS, state, private, USFS

Potentilla rupincola





Primula egaliksensis Greenland primrose

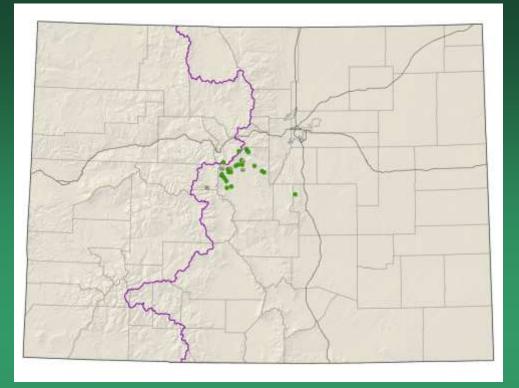


- Federal status: USFS Sensitive
- <u>Heritage ranks</u>: G4G5/S2
- Global distribution: circumboreal; Alaska, Canada, Wyoming, and Colorado (Park)
- <u>Elevation range</u>: 9,000 9,800 ft.
- <u>Colorado occurrences</u>: 20 (2 historical)
- <u>Primary threats</u>: altered hydrology, unregulated recreation, mining, grazing

Primula egaliksensis



Ptilagrostis porteri Porter feathergrass



Reviewed under SE & Central Colorado G2G3 Species

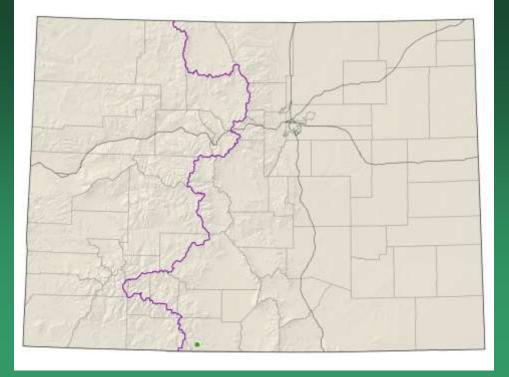
Ranunculus grayi (= R. gelidus) Ice cold buttercup

- <u>Federal status</u>: USFS sensitive
- <u>Heritage ranks</u>: G5/S1S2
- <u>Global distribution</u>: Alaska, Canada, Oregon, Idaho, Utah, Montana, and Colorado (Chaffee, Clear Creek, Gunnison, Hinsdale, Lake, Park, Pitkin, and Summit counties)
- <u>Elevation range</u>: 10,500 14,300 ft.
- <u>Colorado occurrences</u>: 17 (10 historical)
- <u>Primary threats</u>: unregulated recreation, mining, climate change



Ranunculus grayi

Salix arizonica Arizona willow

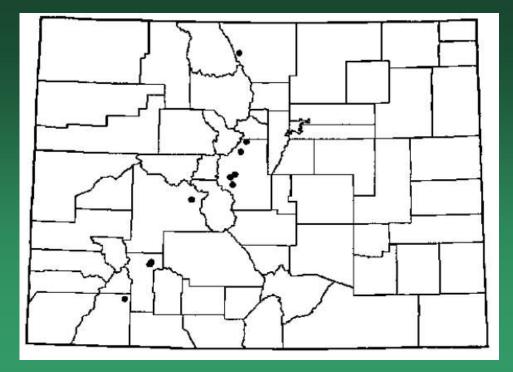


- Federal status: USFS sensitive
- Heritage ranks: G2G3/S1
- <u>Global distribution</u>: Arizona, New Mexico, Utah, and Colorado (Conejos Co.)
- <u>Elevation range</u>: 10,300-10,320 ft.
- Last observed in Colorado: 2016
- <u>Colorado occurrences</u>: 1
- <u>Colorado individuals</u>: unknown 32 dense clumps
- <u>Primary threats</u>: incompatible grazing, hydrologic alteration
- Land ownership/management: USFS

Salix arizonica



Salix candida Hoary or silver willow

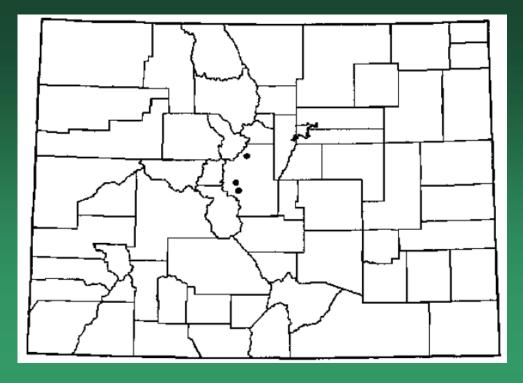


- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G5/S2
- <u>Global distribution</u>: Alaska, Canada, New Jersey, Minnesota, North Dakota, South Dakota, Washington, Idaho, Montana, Wyoming, and Colorado (Gunnison, Hinsdale, La Plata, Larimer, and Park counties)
- <u>Elevation range</u>: 8,800 10,600 ft.
- <u>Colorado occurrences</u>: 22
- Primary threats: altered hydrology, mining, unregulated recreation, grazing

Salix candida



Salix myrtillifolia Low blueberry willow

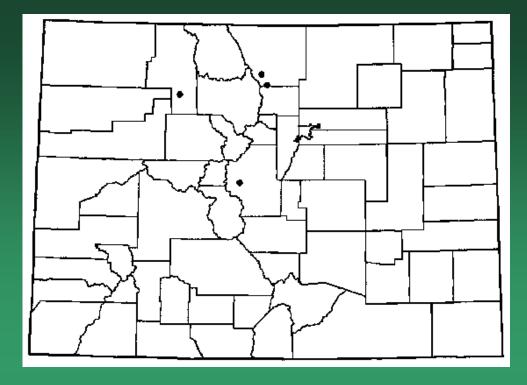


- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G5/S1
- <u>Global distribution</u>: Alaska, Canada, Montana, Wyoming and Colorado (Park County)
- <u>Elevation range</u>: 9,300 ft.
- <u>Colorado occurrences</u>: 6
- <u>Primary threats</u>: altered hydrology, mining, livestock grazing

Salix myrtillifolia



Salix serissima Autumn willow



- <u>Federal status</u>: UFSF sensitive
- Heritage ranks: G5/S1
- <u>Global distribution</u>: Canada, Massachusetts, New Jersey, Indiana, Montana, Wyoming, and Colorado (Larimer, Park, and Routt)
- <u>Elevation range</u>: 7,800 9,300 ft.
- <u>Colorado occurrences</u>: 12 (6 historical)
- Primary threats: unregulated recreation, altered hydrology, mining



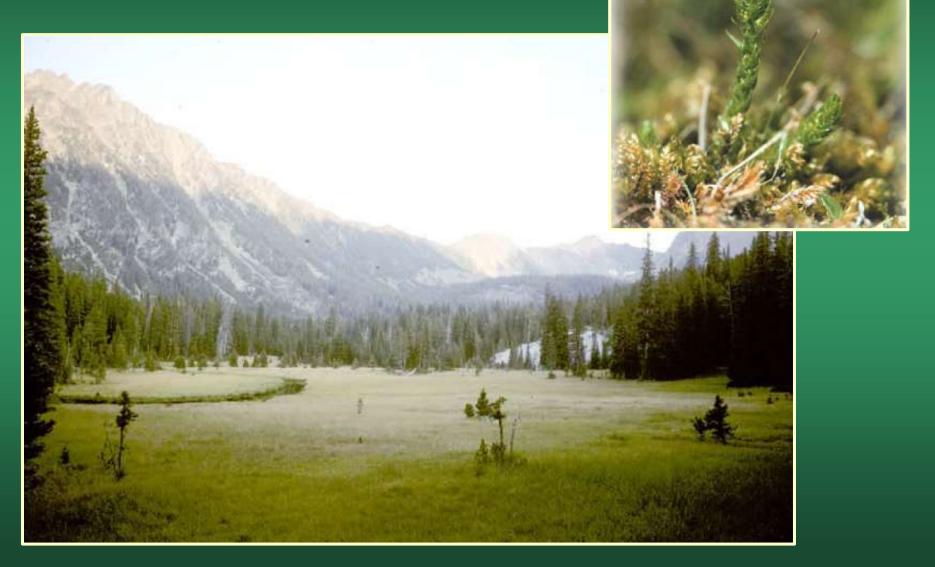
Salix serissima



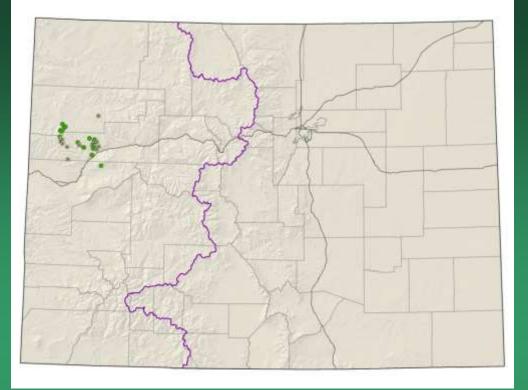
Selaginella selaginoides Club spikemoss

- <u>Federal status</u>: USFS sensitive
- Heritage ranks: G5/SNA
- Global distribution: Canada, Nevada, Wyoming, Michigan, and Colorado
- <u>Colorado occurrences</u>: one from Jackson Co 1978, falsely reported
- Primary threats: unknown

Selaginella selaginoides



Thalictrum heliophilum Sun-loving meadowrue



- <u>Federal status</u>: BLM & UFSF sensitive
- <u>Heritage ranks</u>: G2/S2
- Global distribution: Colorado endemic (Garfield, Mesa, and Rio Blanco counties)
- <u>Elevation range</u>: 5,950-8,900 ft.
- Last observed in Colorado: 2015
- <u>Colorado occurrences</u>: 33 (18 are historical)
- <u>Colorado individuals</u>: <200,000
- <u>Primary threats</u>: Oil and gas development, grazing, weeds
- Land ownership/management: BLM, state, private, USFS

Thalictrum heliophilum



Triteleia grandiflora Largeflower triteleia

- <u>Federal status</u>: UFSF sensitive
- Heritage ranks: G4G5/S1
- <u>Global distribution</u>: Canada, Oregon, California, Idaho, Montana, Wyoming, Utah, and Colorado (Montezuma County)
- <u>Elevation range</u>: 7,500 8,000 ft.
- <u>Colorado occurrences</u>: 1
- <u>Primary threats</u>: Habitat fragmentation from roads

Triteleia grandiflora







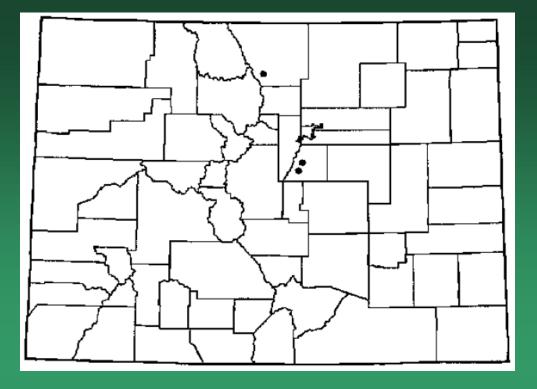
Utricularia minor Lesser bladderwort

- <u>Federal status</u>: UFSF sensitive
- <u>Heritage ranks</u>: G5/S2
- <u>Global distribution</u>: North America south to California, Arizona, Illinois, North Carolina; Colorado (Alamosa, Boulder, Delta, Jackson, Larimer, Montezuma, and Park counties)
- <u>Elevation range</u>: 7,100 11,000 ft.
- <u>Colorado occurrences</u>: 10
- <u>Primary threats</u>: altered hydrology

Utricularia minor



Viola selkirkii Selkirk violet



- Federal status: UFSF sensitive
- Heritage ranks: G5/S1
- <u>Global distribution</u>: Canada, Greenland, Washington, New Mexico, and Colorado (Douglas and Larimer counties)
- <u>Elevation range</u>: 8,500 9,100 ft.
- <u>Colorado occurrences</u>: 4 (3 historical)
- <u>Primary threats</u>: unregulated recreation, invasive species, streambank scouring

Viola selkirkii

