

Review of Previous Meetings

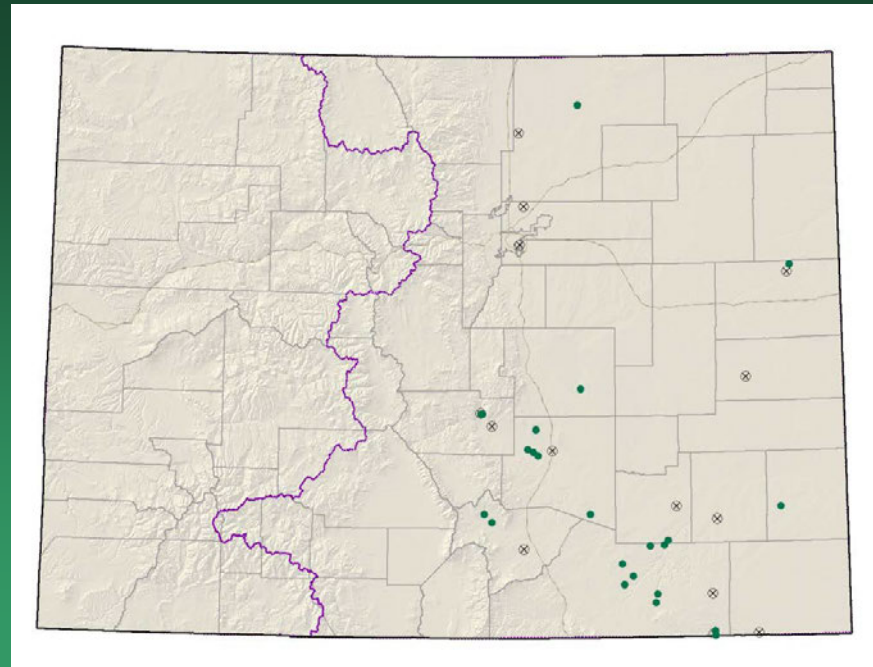
3rd Through 6th Annual Colorado Rare Plant Symposia 2006-2009



2006
Colorado Springs
SE Colorado
G2 species

Asclepias uncialis ssp.
uncialis
Dwarf milkweed

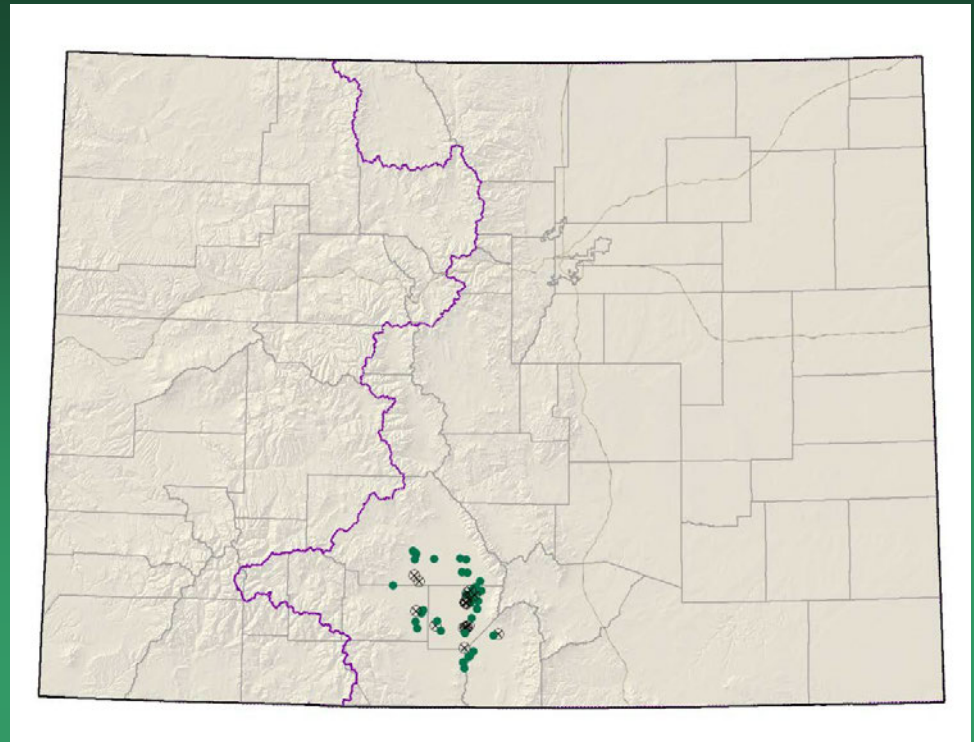
- Federal status: BLM/USFS sensitive
- Heritage ranks: G3G4T2T3/S2
- Global distribution: Arizona, Texas, New Mexico, Wyoming, Oklahoma, **Utah**, and Eastern Colorado (Las Animas, Weld, Kit Carson, Huerfano, Pueblo, Otero, Prowers, Fremont, and El Paso counties)
- Last observed in Colorado: 2009
- Colorado occurrences: 37 (11 are historical or extirpated)
- Colorado individuals: ~500
- Primary threats: Population limitation by unknown biological requirements, altered disturbance regime, habitat loss, spread of exotic species, global climate change
- Land ownership/management: BLM, Military, Forest Service, Private, and State lands





Asclepias uncialis ssp. *uncialis*

Cleome multicaulis
Many-stemmed
spider-flower

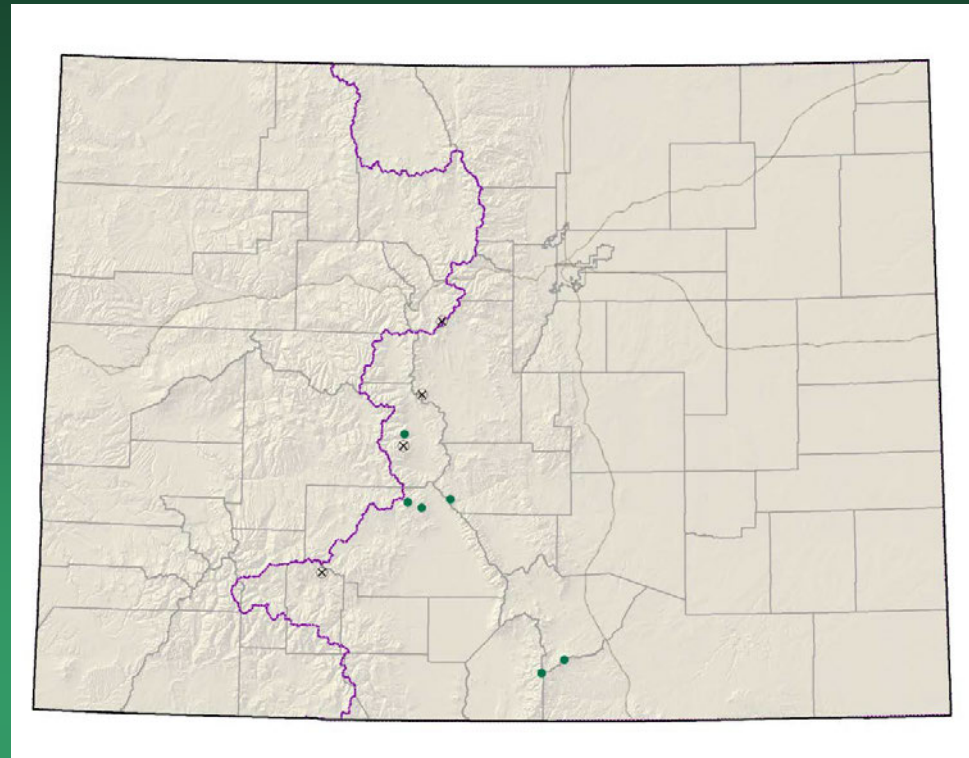


- Federal status: BLM sensitive
- Heritage ranks: G2G3/S2S3
- Global distribution: Mexico, Texas, Arizona, New Mexico, Wyoming and Colorado (Alamosa, Conejos, Costilla, Rio Grande, and Saguache counties)
- Last observed in Colorado: 2009
- Colorado occurrences: 39 (11 are historical)
- Colorado individuals: ~5,132,000
- Primary threats: draining of wetlands
- Land ownership/management: BLM, National Wildlife Refuge, Private, State, and Wilderness

Cleome multicaulis



Delphinium ramosum
var. alpestre
= *Delphinium alpestre*
Colorado larkspur



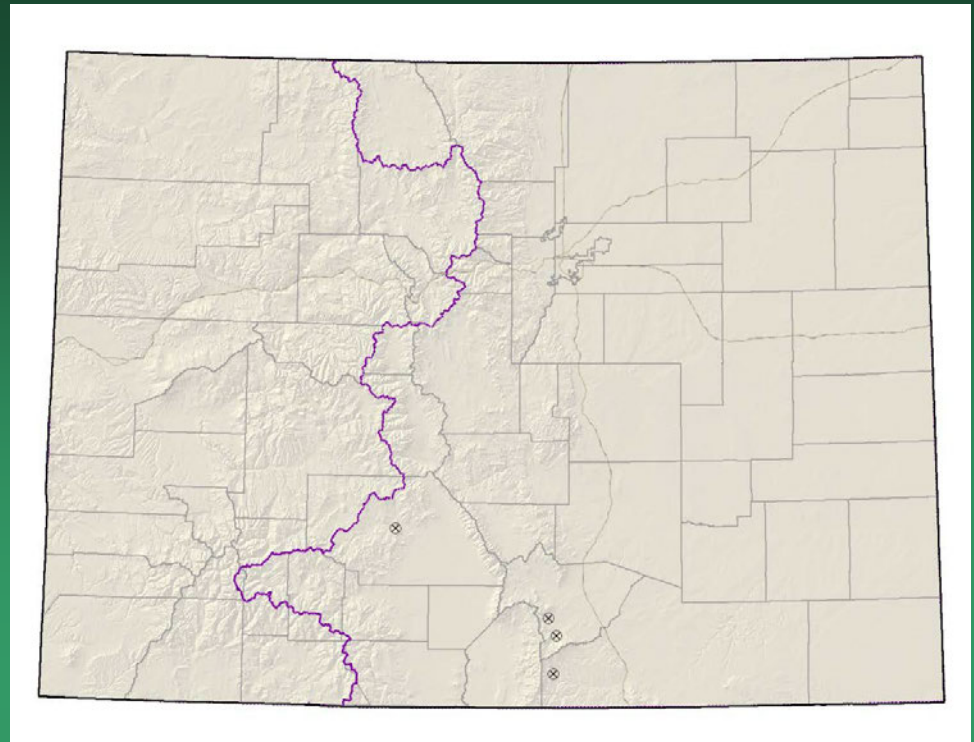
- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: New Mexico and Colorado (Costilla, Chaffee, Fremont, Huerfano, Las Animas, Mineral, Park, Saguache, and Summit counties)
- Last observed in Colorado: 2005
- Colorado occurrences: 10 (4 are historical)
- Colorado individuals: ~75
- Primary threats: Trampling from recreational activities
- Land ownership/management: Forest Service, Private and Wilderness Areas

Delphinium ramosum var. *alpestre*



T. Todsén

Delphinium robustum
Wahatoya Creek
larkspur



- Federal status: none
- Heritage ranks: G2?/S2?
- Global distribution: New Mexico and Colorado (Huerfano, El Paso, Las Animas, and Saguache counties)
- Last observed in Colorado: 1969
- Colorado occurrences: 4 – all historical
- Colorado individuals: unknown
- Primary threats: Some species of *Delphinium* are poisonous to cattle, so the genus as a whole is sometimes targeted for poisonous weed control
- Land ownership/management: BLM, Forest Service, Private and State

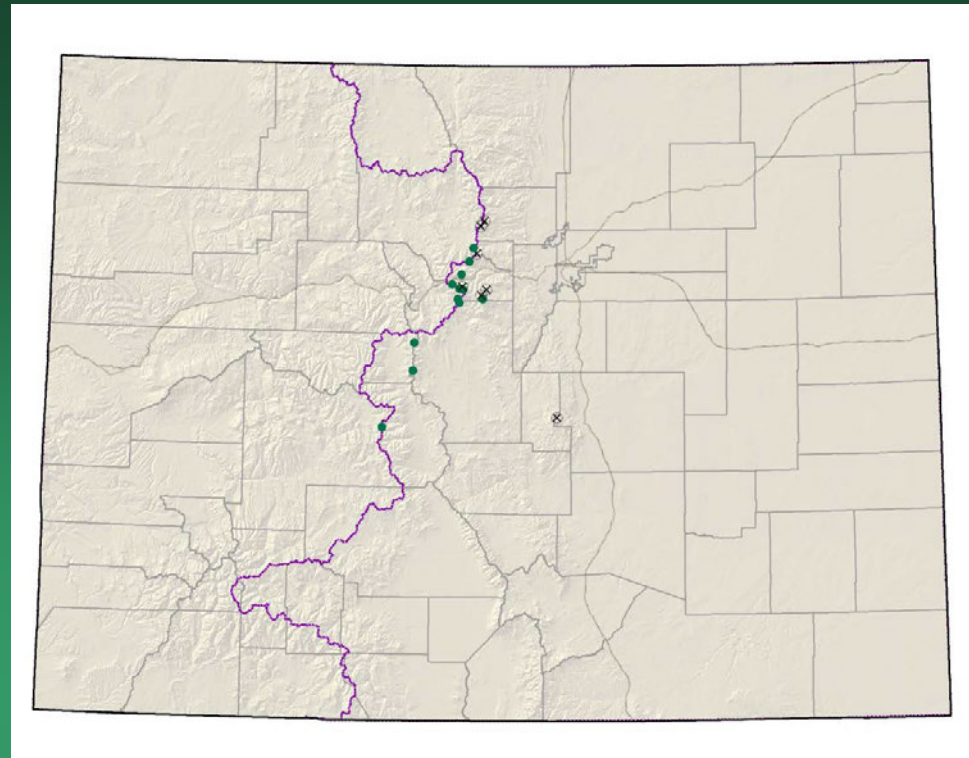
Delphinium robustum



J. Stewart

Draba exunguiculata

Clawless draba

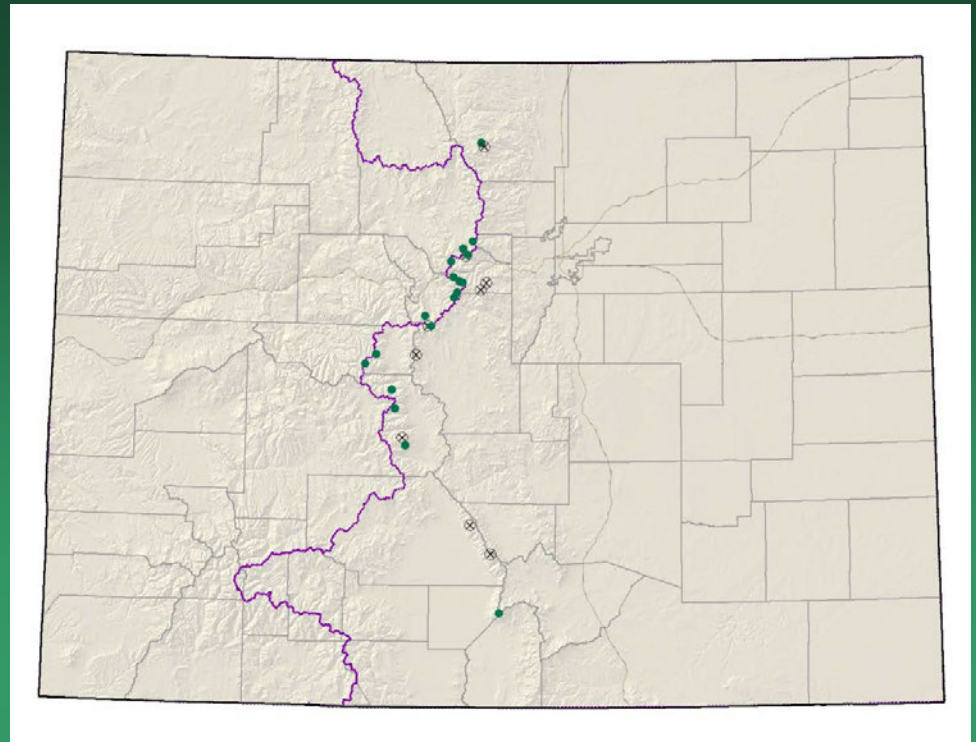


- Federal status: USFS sensitive
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (Boulder, Chaffee, Clear Creek, El Paso, Gilpin, Grand, Lake, Park and Summit counties)
- Last observed in Colorado: 2006
- Colorado occurrences: 19 (7 are historical)
- Colorado individuals: ~250
- Primary threats: Trampling from hikers and mountain goats, over-collection for gardens, acid rain, air pollution, and global warming
- Land ownership/management: BLM, Forest Service, Private, State and Wilderness Areas

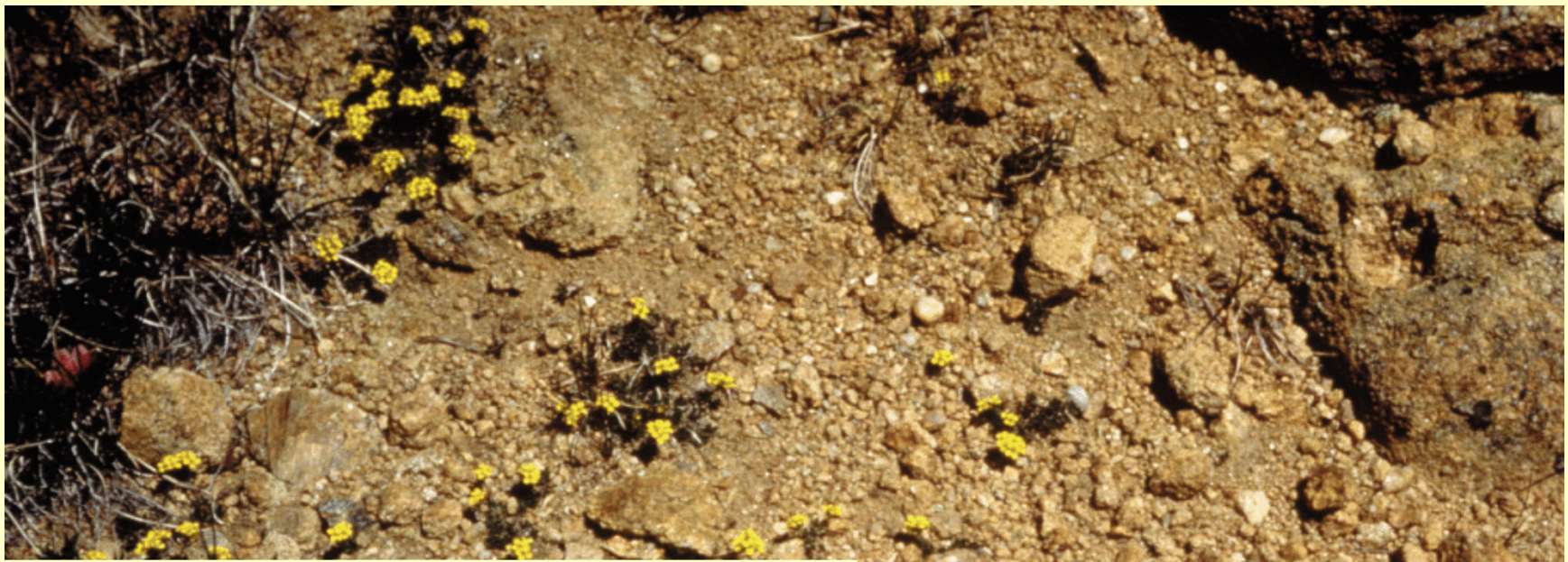


Draba exunguiculata

Draba grayana Gray's Peak whitlow- grass



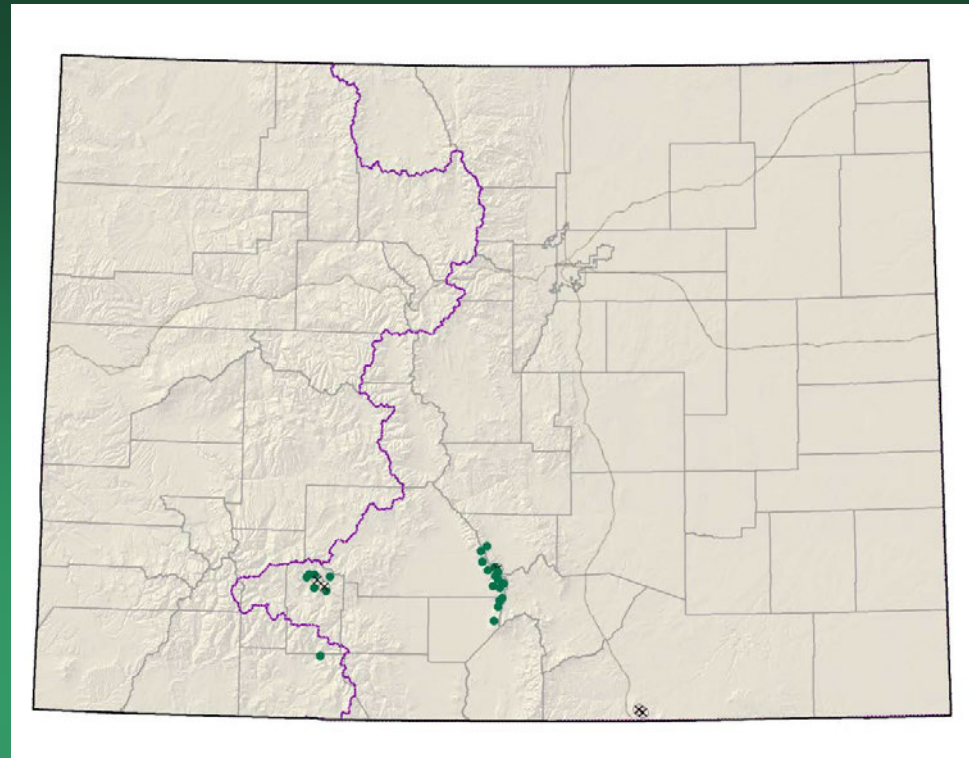
- Federal status: USFS sensitive
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (Chaffee, Clear Creek, Grand, Huerfano, Larimer, Park, Pitkin, Saguache, and Summit counties)
- Last observed in Colorado: 2006
- Colorado occurrences: 27 (9 are historical)
- Colorado individuals: ~200
- Primary threats: Trampling from hikers and mountain goats, over-collection for gardens and global warming
- Land ownership/management: Forest Service, National Parks and Monuments, Private and Wilderness Areas



Draba grayana

Draba smithii

Smith's whitlow-grass



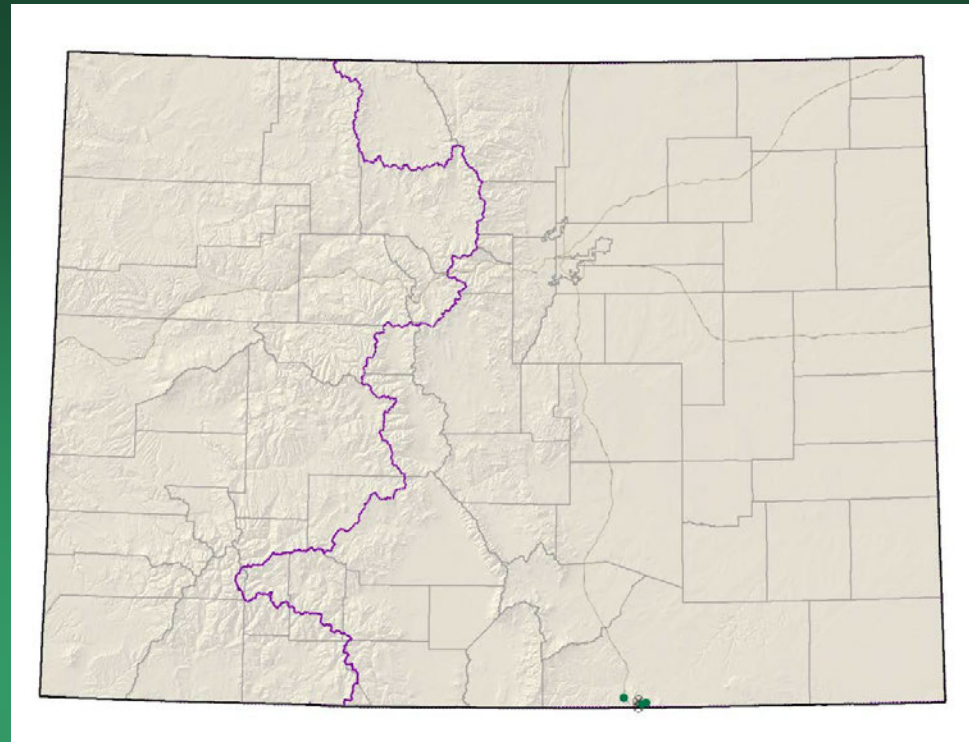
- Federal status: USFS sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado (Alamosa, Archuleta, Custer, Las Animas, Mineral, and Saguache counties), and **NM**
- Last observed in Colorado: 2009
- Colorado occurrences: 27 (5 are historical)
- Colorado individuals: ~3200
- Primary threats: Habitat modification from hiking and construction
- Land ownership/management: Forest Service, Private and State

Draba smithii



Herrickia horrida
= *Eurybia horrida*

Canadian River spiny aster or
Horrid herrickia

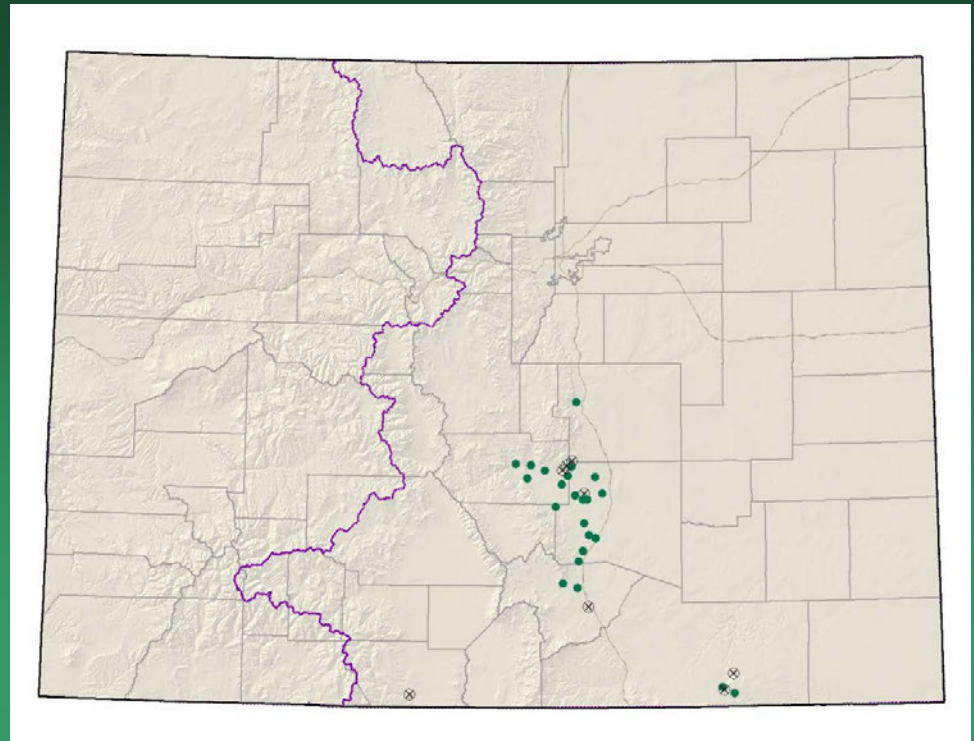


- Federal status: none
- Heritage ranks: G2?/S1
- Global distribution: New Mexico and Colorado (Las Animas County)
- Last observed in Colorado: 2010
- Colorado occurrences: 3
- Colorado individuals: 500+
- Primary threats: unknown
- Land ownership/management: Private, State



Herrickia horrida

Lesquerella calcicola Rocky Mountain bladderpod



- Federal status: none
- Heritage ranks: G3/S3
- Global distribution: New Mexico and Colorado (Conejos, El Paso, Fremont, Huerfano, Las Animas, and Pueblo counties)
- Last observed in Colorado: 2011
- Colorado occurrences: 36 (7 are historical)
- Colorado individuals: 24,000
- Primary threats: This species occurs in areas that are experiencing rapid development pressures
- Land ownership/management: BLM, Military, Private, and State

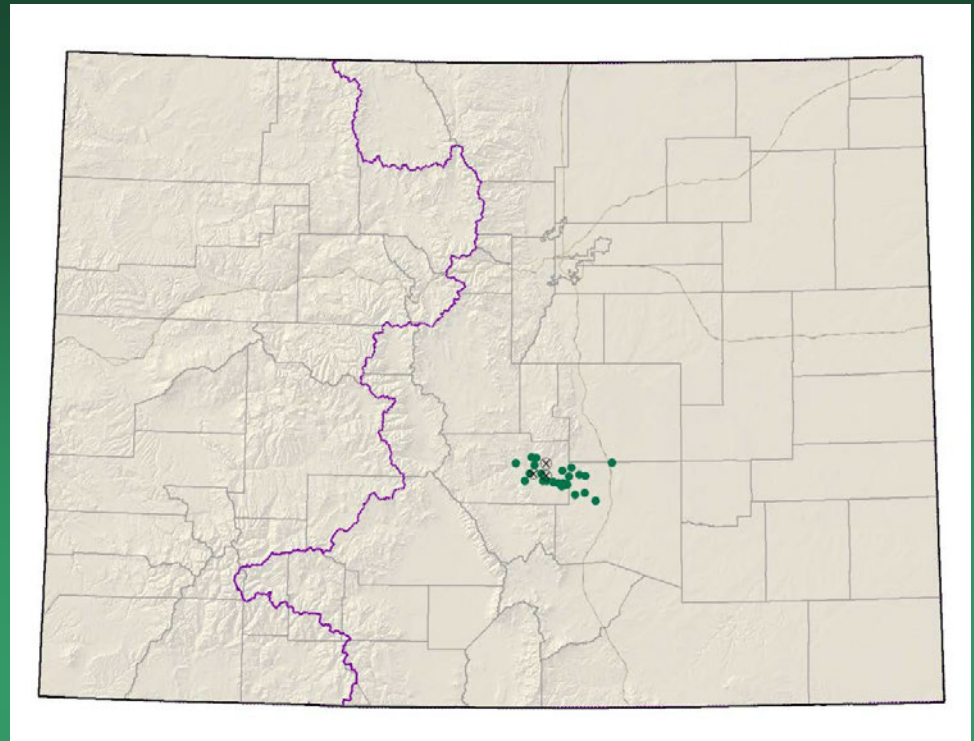


Lesquerella calcicola

Nuttallia chrysantha
= *Mentzelia chrysantha*
Golden blazing star

Conservation Action Plan

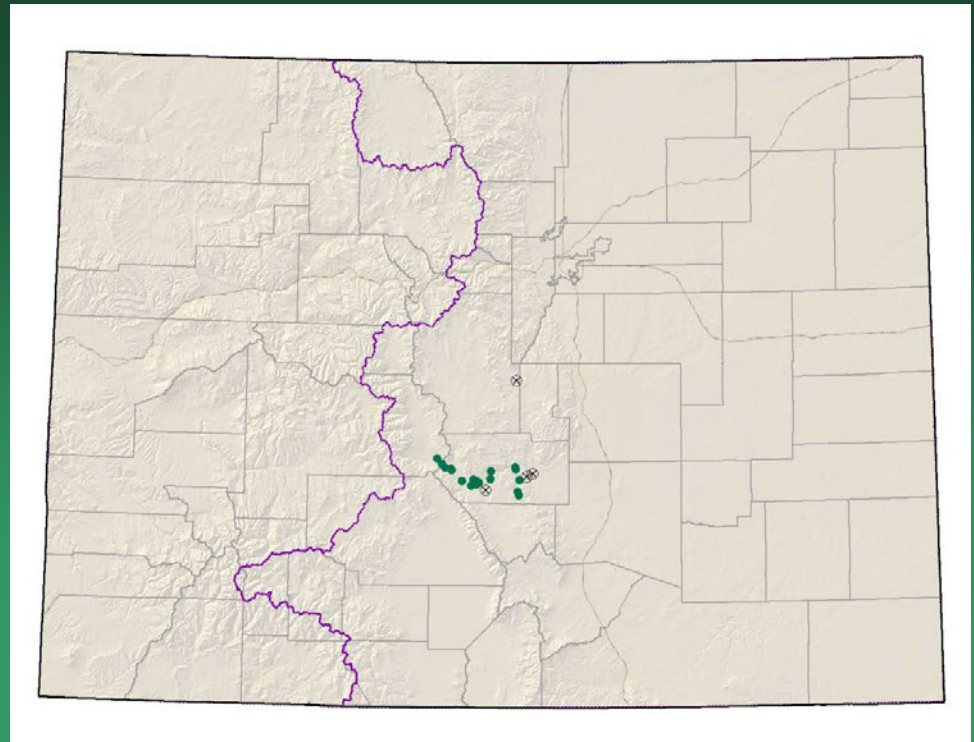
- Federal status: BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (Fremont, El Paso, and Pueblo counties)
- Last observed in Colorado: 2010
- Colorado occurrences: 27 (3 are historical)
- Colorado individuals: ~4100
- Primary threats: Grazing, quarry activities, and subdivision and road construction
- Land ownership/management: BLM, Military, Private and State





Nuttallia chrysantha

Nuttallia densa
= *Mentzelia densa*
Arkansas Canyon
stickleaf

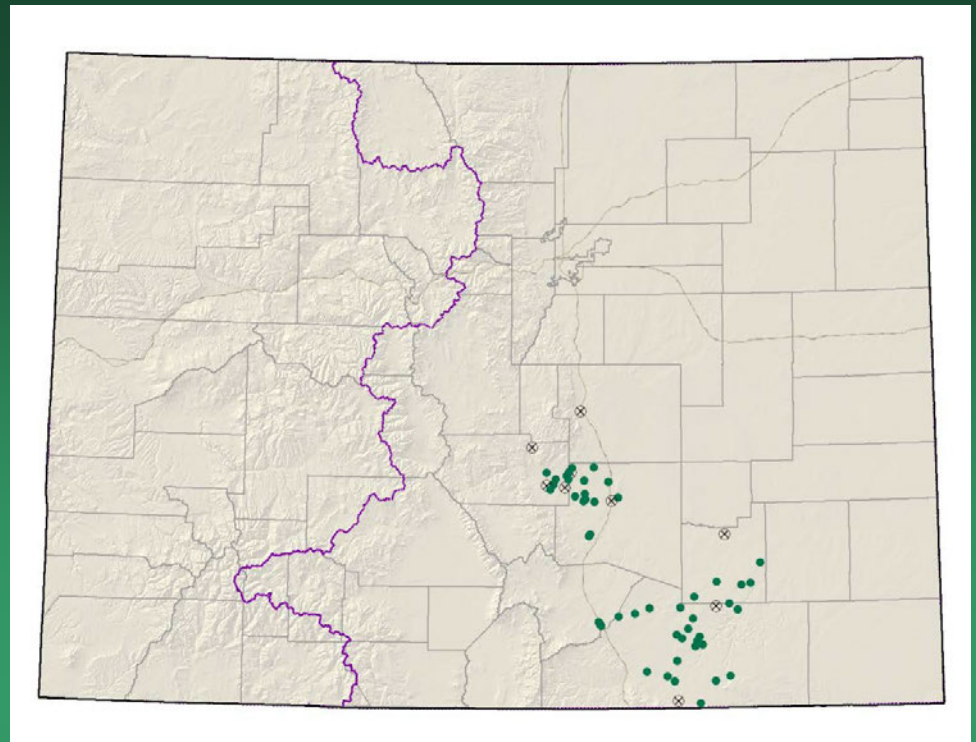


- Federal status: BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (Fremont County)
- Last observed in Colorado: 2009
- Colorado occurrences: 17 (3 are historical)
- Colorado individuals: ~13,500
- Primary threats: Recreational development and road construction
- Land ownership/management: BLM, Forest Service, Private and State



Nuttallia densa

Oenothera harringtonii
Arkansas Valley
evening primrose

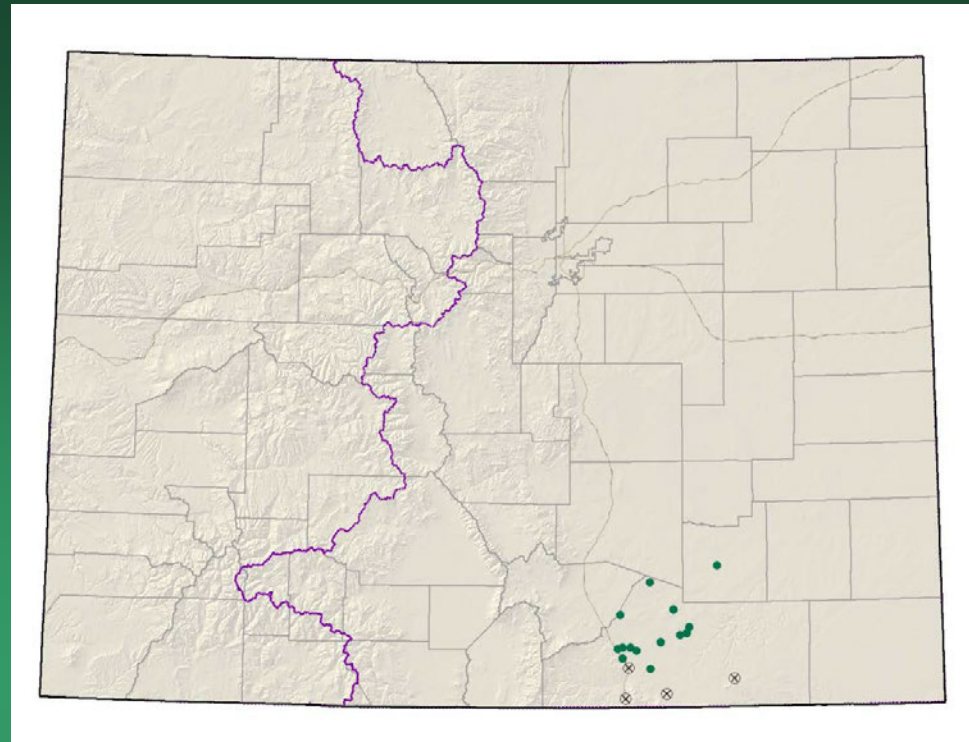


- Federal status: none
- Heritage ranks: G3/S3
- Global distribution: endemic to Colorado (El Paso, Fremont, Huerfano, Las Animas, Otero, and Pueblo counties)
- Last observed in Colorado: 2010
- Colorado occurrences: 62 (8 are historical)
- Colorado individuals: 12,000+
- Primary threats: Habitat loss due to urbanization, road development projects, and resource extraction activities, especially quarrying and surface mining
- Land ownership/management: BLM, Military, Forest Service, Private and State



Oenothera harringtonii

Oenopsis foliosa var.
monocephala
Rayless goldenweed



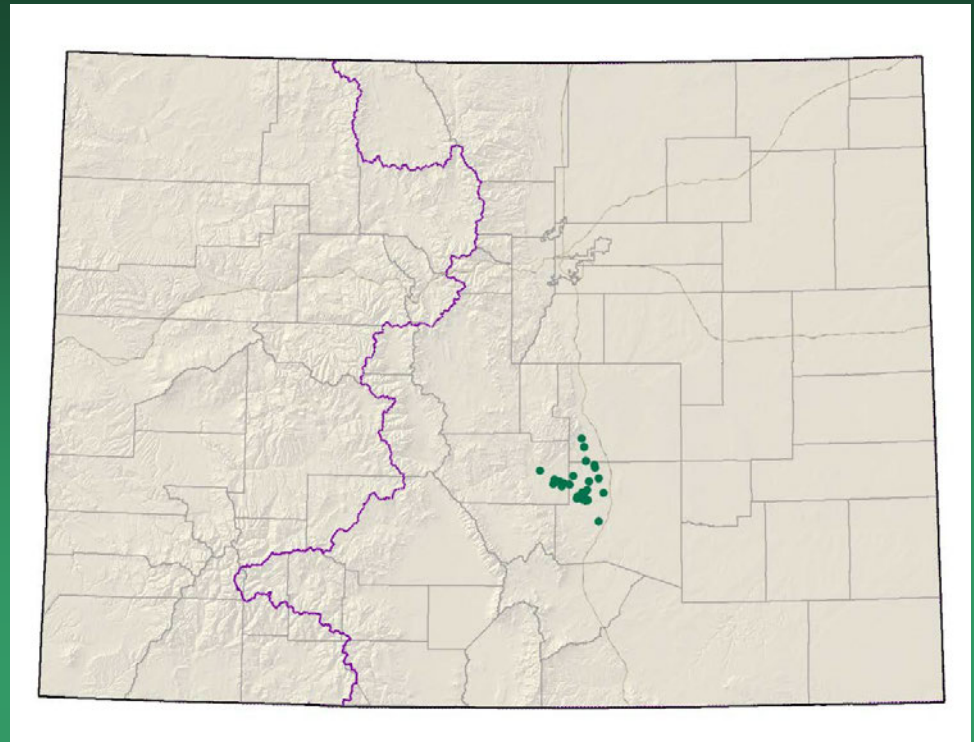
- Federal status: none
- Heritage ranks: G3G4T2/S2
- Global distribution: endemic to Colorado (Las Animas, Pueblo, and Fremont counties)
- Last observed in Colorado: 2009
- Colorado occurrences: 13 (4 are historical)
- Colorado individuals: 400,000+
- Primary threats: Maintenance on current roads or further developments may disturb or destroy individuals
- Land ownership/management: BLM, Military, Private and State



Oenopsis foliosa var. *monocephala*

Oenopsis “*puebloensis*”
= *Oenopsis* sp. 1
Pueblo goldenweed

Conservation Action Plan



- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (El Paso, Fremont and Pueblo counties)
- Last observed in Colorado: 2009
- Colorado occurrences: 28
- Colorado individuals: ~11,000 or more
- Primary threats: Shale extraction by cement plants
- Land ownership/management: Private, State and Military

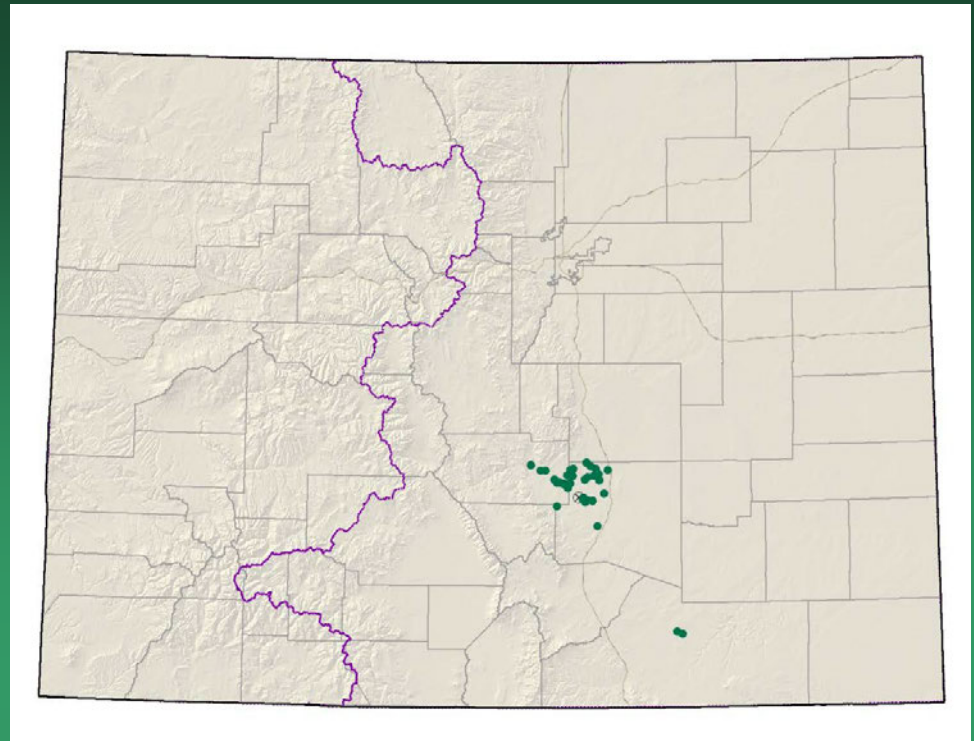


Oenopsis "puebloensis"

Oxybaphus rotundifolius
= *Mirabilis rotundifolia*
Round-leaf four-o'clock

Conservation Action Plan

- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (Fremont, Las Animas, El Paso and Pueblo counties)
- Last observed in Colorado: 2009
- Colorado occurrences: 37 (1 is historical)
- Colorado individuals: ~6200
- Primary threats: Highly threatened by residential and recreational development
- Land ownership/management: BLM, Military, Private and State



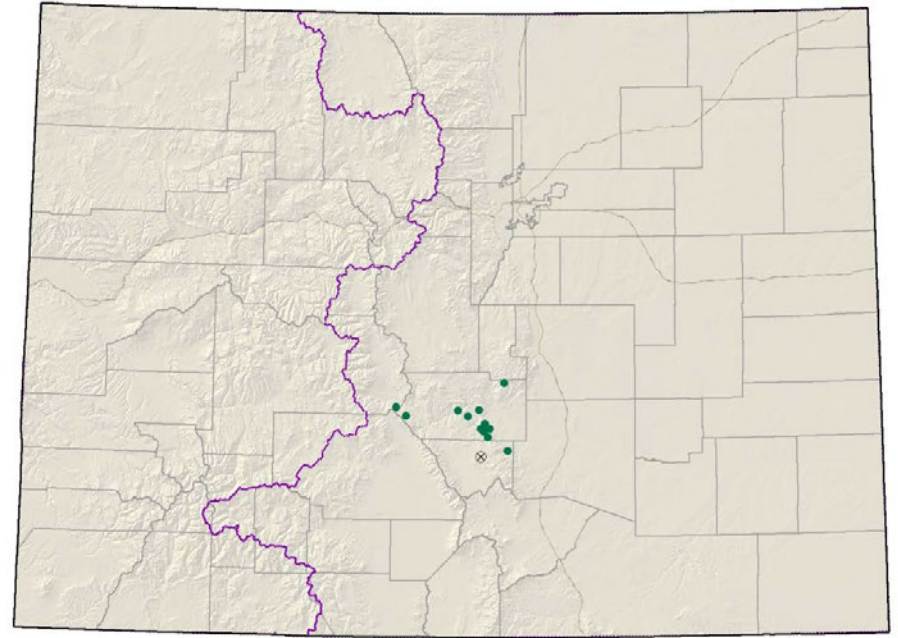


Oxybaphus rotundifolius

Penstemon degeneri

Degener beardtongue

- Federal status: USFS & BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: endemic to Colorado (Chaffee, Custer and Fremont counties)
- Last observed in Colorado: 2010
- Colorado occurrences: 16 (2 historical)
- Colorado individuals: ~1500
- Primary threats: Motorized and non-motorized recreation, non-native plant invasion, grazing and trampling, extensive herbivory, succession, and global environmental changes
- Land ownership/management: BLM, Forest Service, Private and State

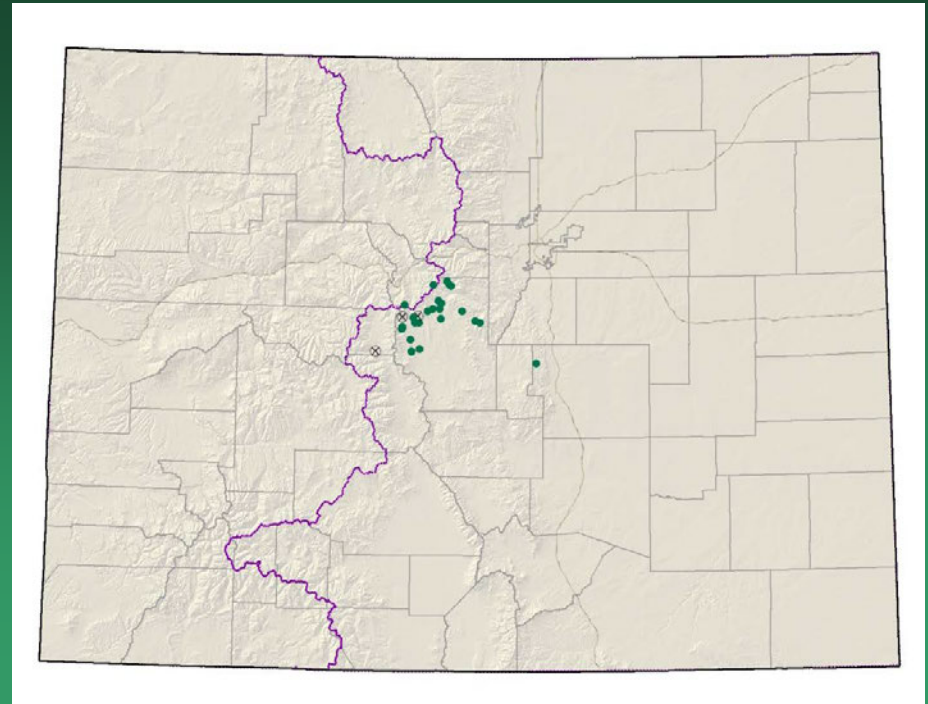




Penstemon degeneri

Ptilagrostis porteri

Porter feathergrass

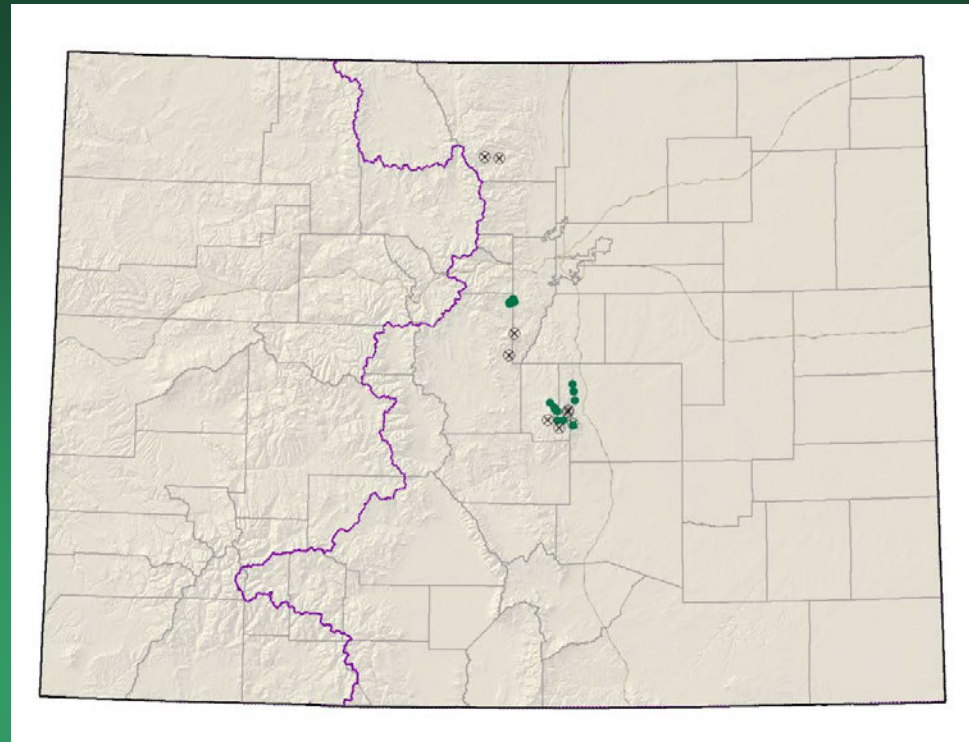


- Federal status: USFS sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado (El Paso, Lake, Park and Summit counties); northern NM
- Last observed in Colorado: 2011
- Colorado occurrences: 25 (3 are historical)
- Colorado individuals: ~408,000
- Primary threats: Alterations to the water table resulting from increased diversion and pumping for the metropolitan front range
- Land ownership/management: BLM, Forest Service, and Private

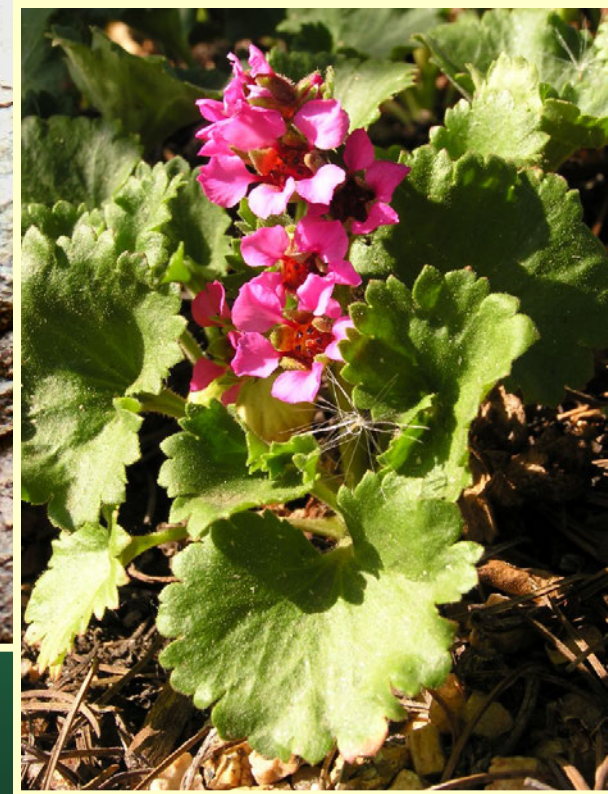


Ptilagrostis porteri

Telesonix jamesii James' telesonix



- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: New Mexico and Colorado (El Paso, Jefferson, Larimer, Park, and Teller counties)
- Last observed in Colorado: 2011
- Colorado occurrences: 31 (8 are historical)
- Colorado individuals: ~20,000
- Primary threats: Motorized and non-motorized recreation, trail or road construction and maintenance, invasive species introduction, and horticultural collection
- Land ownership/management: BLM, Military, Forest Service, Private and State

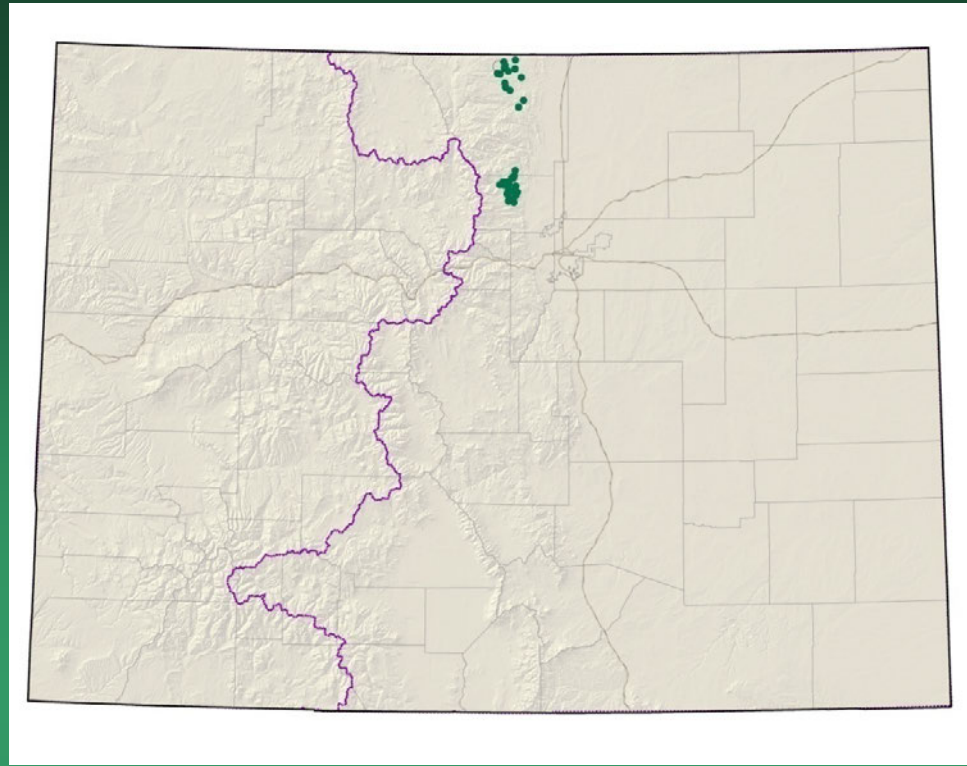


Telesonix jamesii

2007
Boulder
NE Colorado
G2G3 species

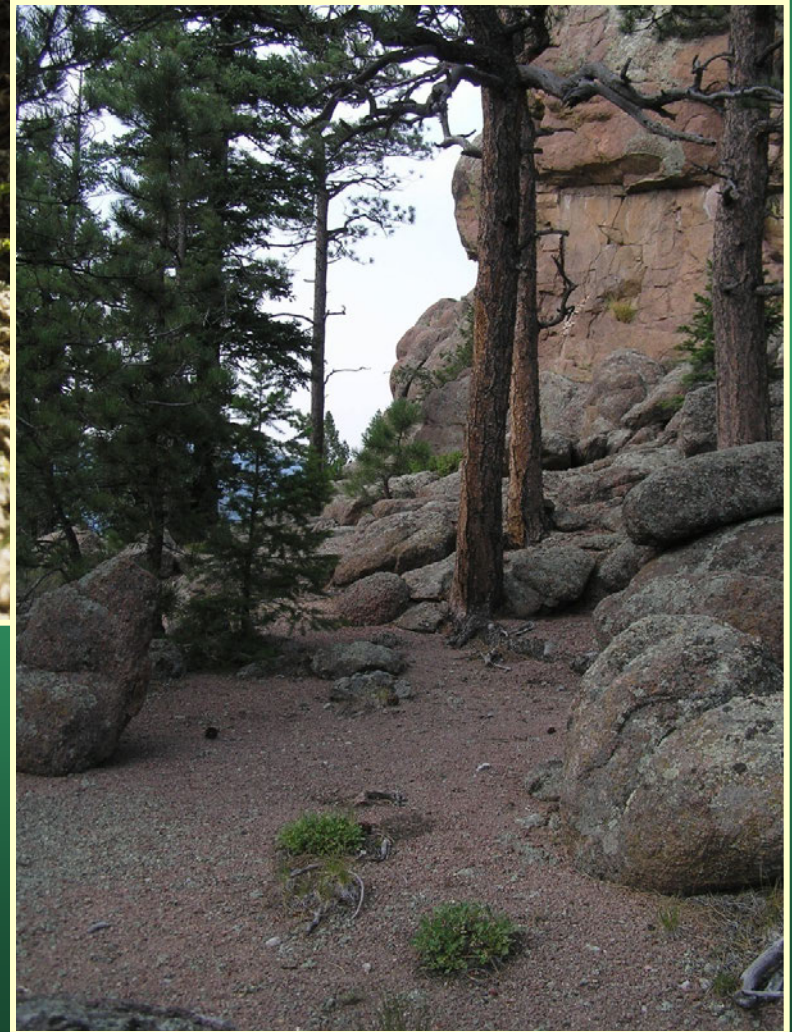
Aletes humilis

Larimer aletes



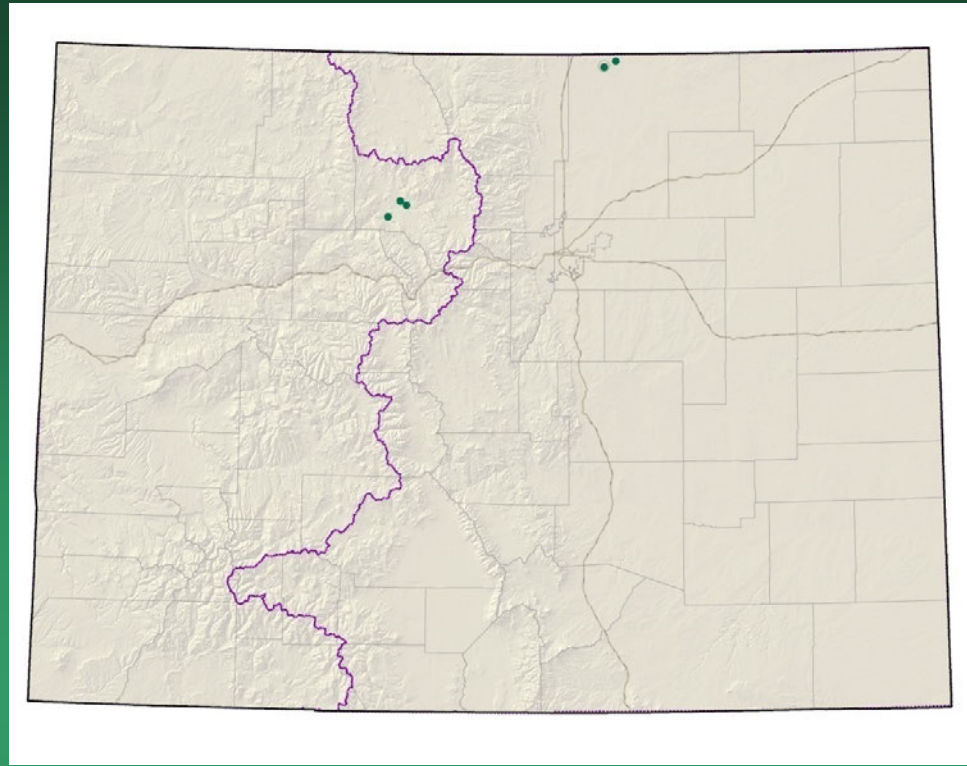
- Federal status: None
- Heritage ranks: G2G3/S2S3
- Global distribution: Colorado (Larimer and Boulder counties). Possibly extending into southern Wyoming.
- Last observed in Colorado: 2007
- Colorado occurrences: 27 (1 is historical)
- Colorado individuals: 15,000+
- Primary threats: Recreational uses are the primary threat.
- Land ownership/management: USFS, private, local government

Aletes humilis



Aletes nuttallii =
Lomatium nutallii

Nuttall's desert-parsley

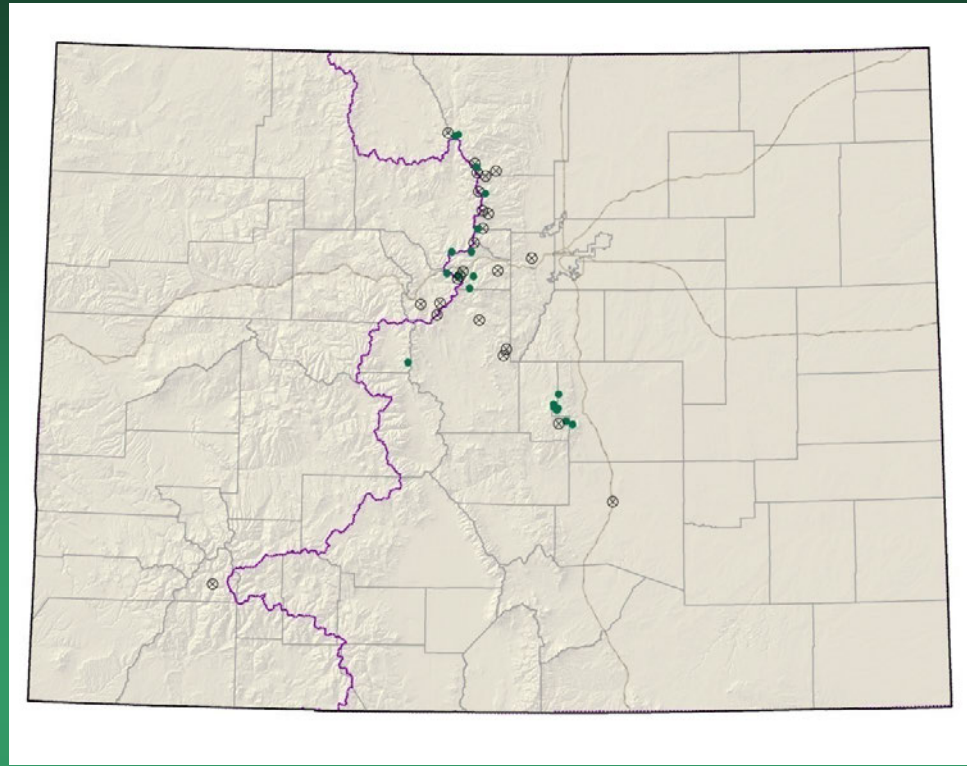


- Federal status: None
- Heritage ranks: G3/S1
- Global distribution: Montana, Wyoming, Nebraska, South Dakota (historical), Colorado (Grand and Weld counties).
- Last observed in Colorado: June 2005
- Colorado occurrences: 6 (1 is historical)
- Colorado individuals: 6,500
- Primary threats: ORV use, weeds, cattle trampling
- Land ownership/management: State 50%, Private 50%

Aletes nuttallii



Aquilegia saximontana
Rocky Mountain
columbine



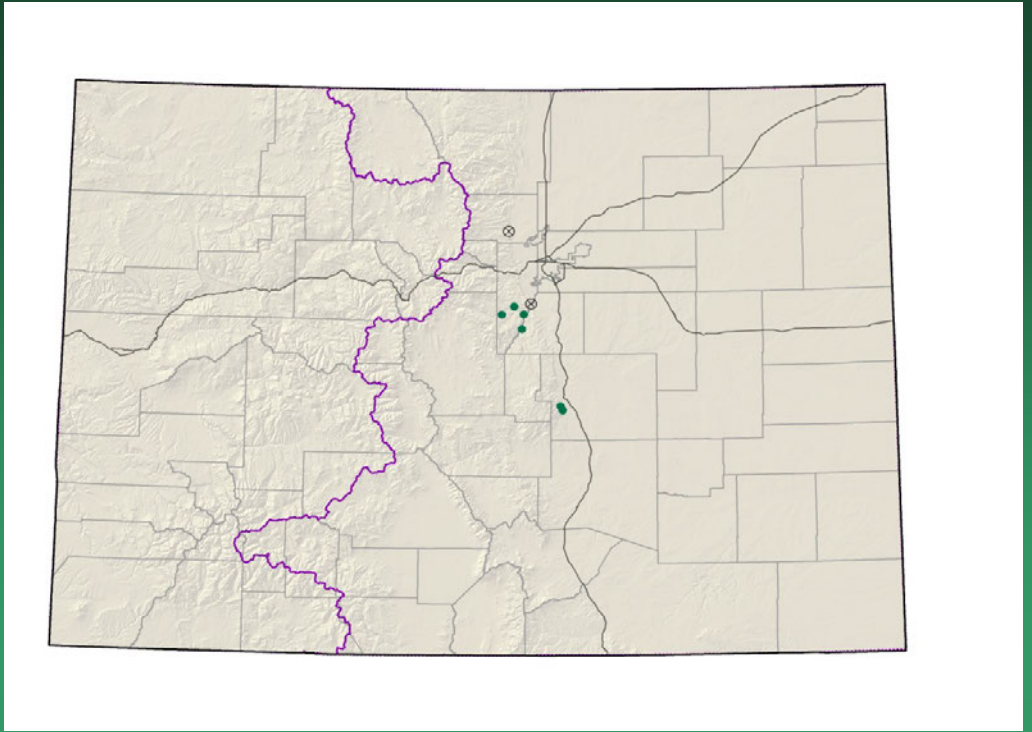
- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Colorado (Boulder, Clear Creek, El Paso, Gilpin, Jackson, Lake, Larimer, Park, Pueblo, San Juan, Summit, and Teller counties).
- Last observed in Colorado: 2011
- Colorado occurrences: 49 (23 are historical)
- Colorado individuals: 1,500
- Primary threats: recreational uses, road work pika grazing, rock garden collecting
- Land ownership/management: USFS 70%, NPS 15%, Private 12%, State 4%

Aquilegia saximontana



Astragalus sparsiflorus

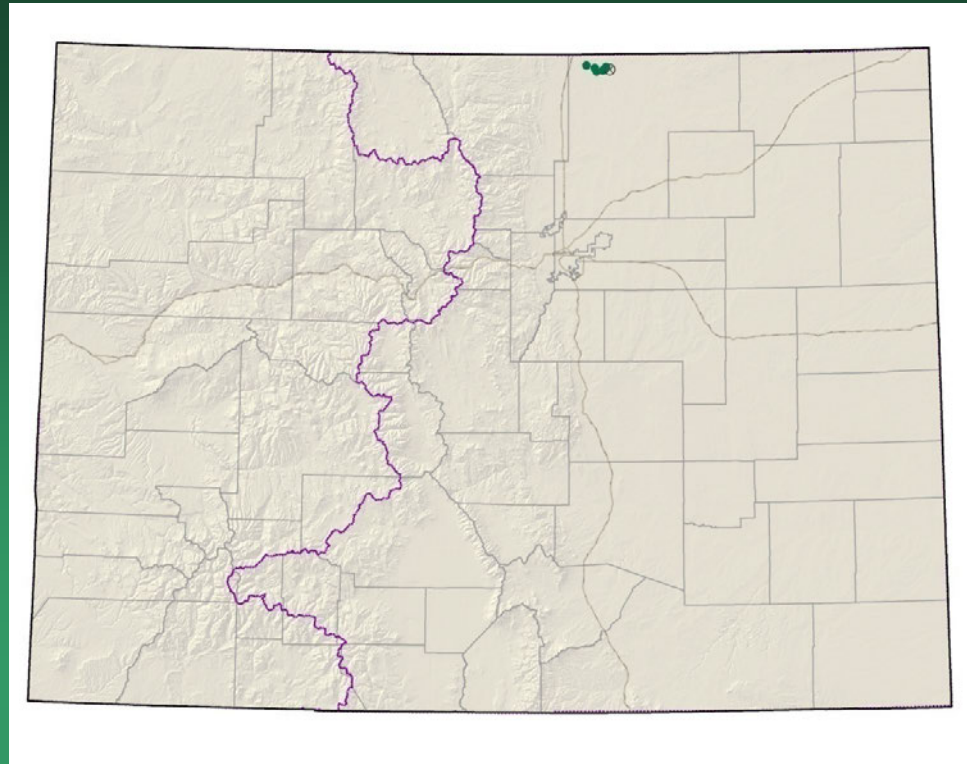
Front Range milk-vetch



- Federal status: None
- Heritage ranks: **G2/S2**
- Global distribution: Colorado endemic (Douglas, Denver, El Paso, Park, Fremont, Teller, Boulder, and Jefferson counties).
- Last observed in Colorado: **2010**
- Colorado occurrences: **8** (2 are historical)
- Colorado individuals: **330+**
- Primary threats: **recreation**
- Land ownership/management: Private, local gov., USFS



Bolophyta alpina =
Parthenium alpinum
Alpine fever-few



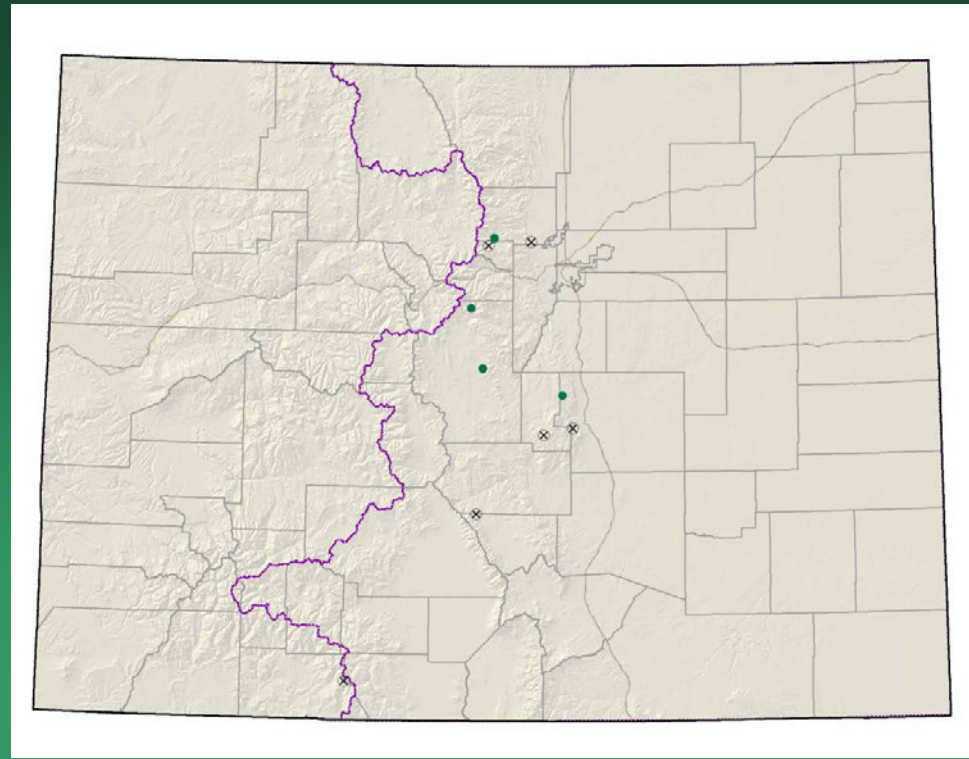
- Federal status: None
- Heritage ranks: G3/S1
- Global distribution: Wyoming, New Mexico, Colorado (Weld County)
- Last observed in Colorado: June 2007
- Colorado occurrences: 1 large metapopulation (numerous subpopulations, 1 historical)
- Colorado individuals: 100,000+
- Primary threats: Incidental grazing, hay dumping (State), pipelines
- Land ownership/management: State, Private, USFS/Pawnee NG

Bolophyta alpina



Carex oreocharis

Grassy slope sedge

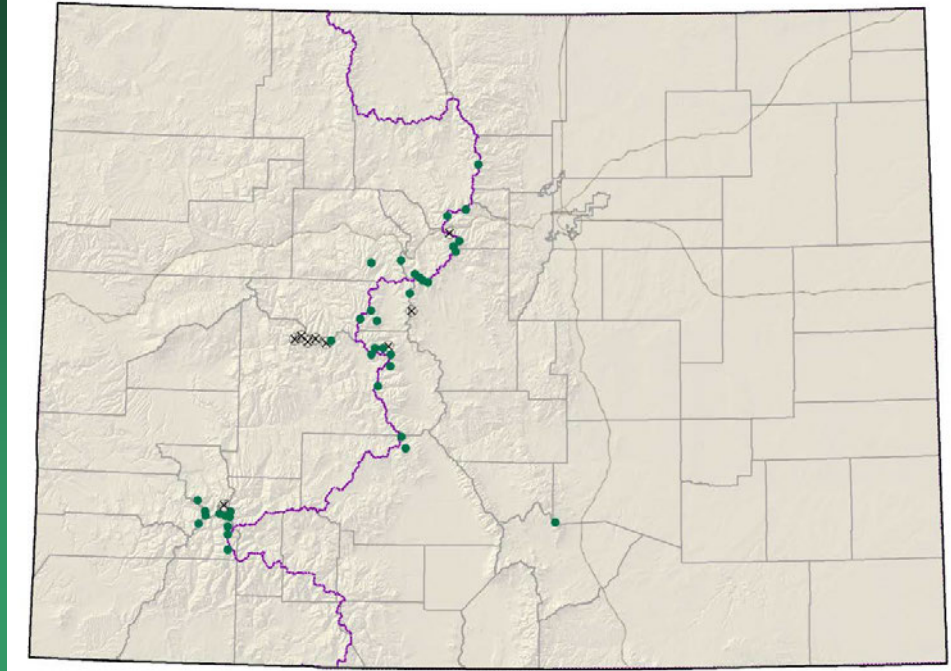


- Federal status: None
- Heritage ranks: G3/S1
- Global distribution: Arizona, New Mexico, Wyoming, Colorado (Boulder, Conejos, Custer, El Paso, Gilpin, Park, and Teller counties).
- Last observed in Colorado: August 2000
- Colorado occurrences: 10 (6 are historical)
- Colorado individuals: several thousand
- Primary threats: weeds, road construction, grazing
- Land ownership/management: USFS 80%, Private 20%



Draba crassa

Thick-leaf whitlow-grass

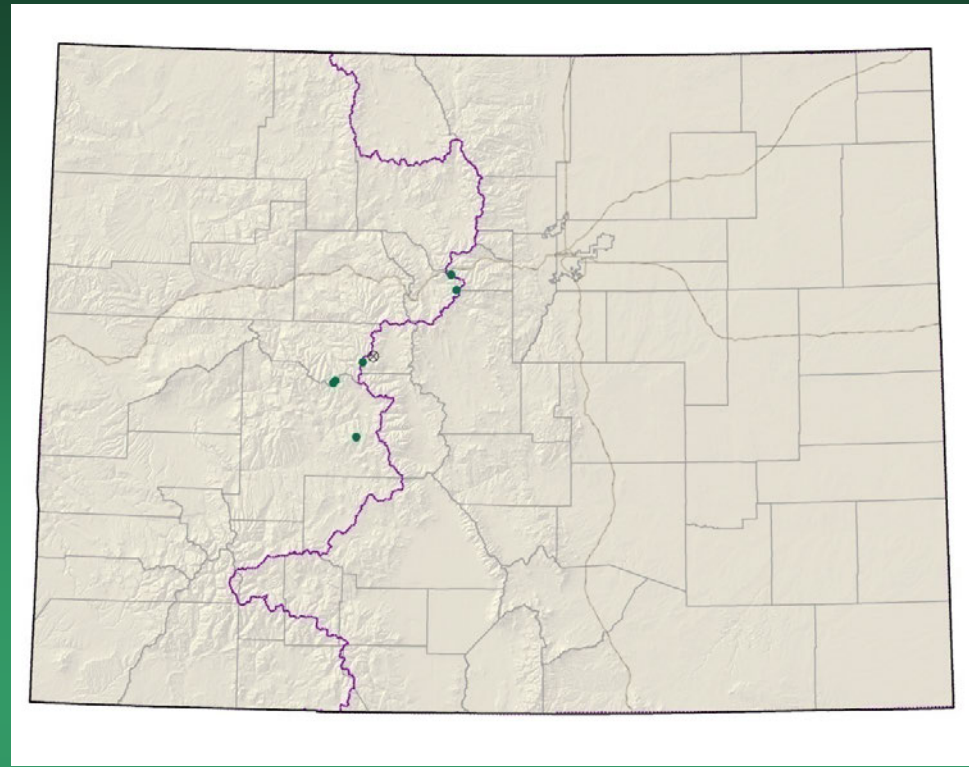


- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Montana, Wyoming, Utah, Colorado (Chaffee, Clear Creek, Eagle, Grand, Gunnison, Huerfano, Lake, Ouray, Park, Pitkin, Pueblo, Saguache, San Juan, San Miguel, Summit counties).
- Last observed in Colorado: 2007
- Colorado occurrences: 46 (9 are historical)
- Colorado individuals: 2,700 +
- Primary threats: recreational uses
- Land ownership/management: USFS 85%, Private 15%



Draba crassa

Draba globosa
Rockcress draba

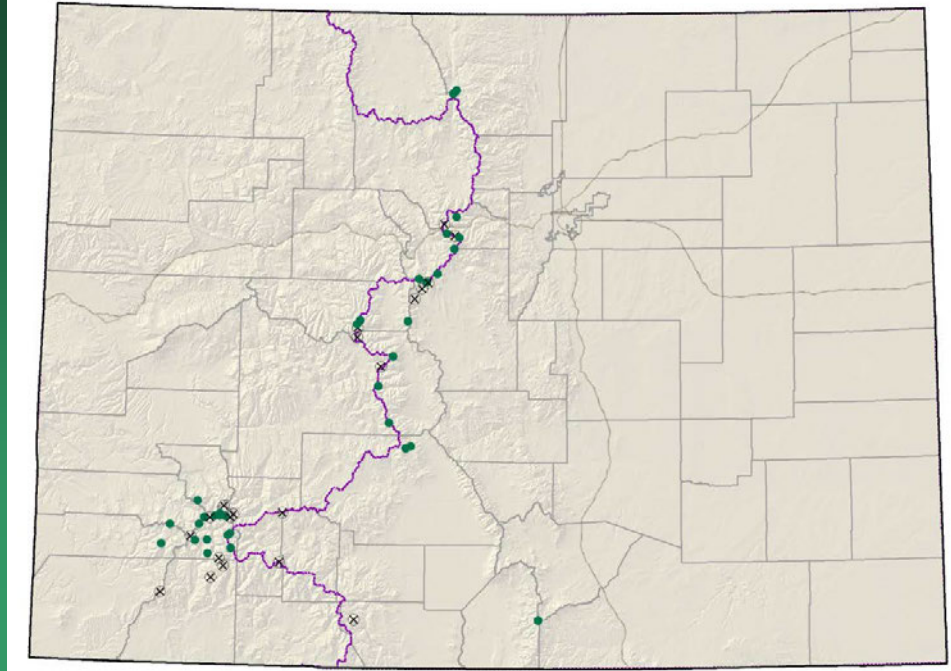


- Federal status: None
- Heritage ranks: G3/S1
- Global distribution: Idaho, Montana, Utah, Wyoming, Colorado (Clear Creek, Gunnison, Lake, and Pitkin counties).
- Last observed in Colorado: 2006
- Colorado occurrences: 7 (1 is historical)
- Colorado individuals: 150
- Primary threats: recreational use, potential mining
- Land ownership/management: USFS

Draba globosa



Draba streptobrachia
Colorado Divide
whitlow-grass

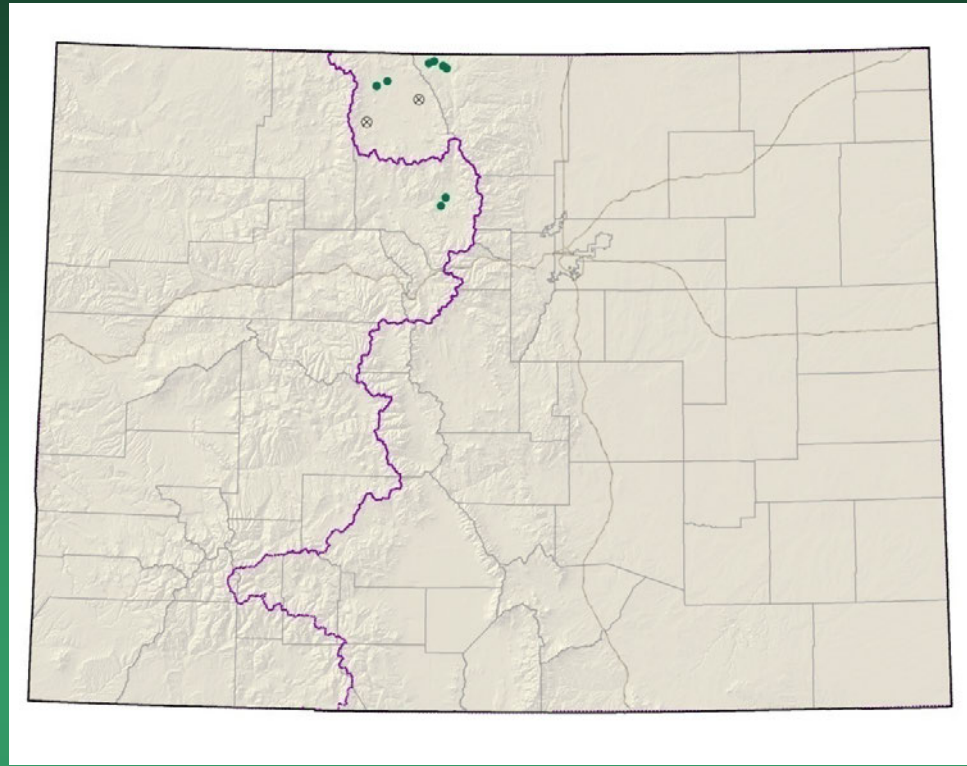


- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Colorado endemic (Chaffee, Clear Creek, Conejos, Costilla, Dolores, Gunnison, Hinsdale, Huerfano, La Plata, Lake, Larimer, Mineral, Ouray, Park, Pitkin, Saguache, San Juan, San Miguel, and Summit counties).
- Last observed in Colorado: 2006
- Colorado occurrences: 53 (20 are historical)
- Colorado individuals: unknown
- Primary threats: recreation
- Land ownership/management: USFS 63%, BLM 19%, Private 19%



Draba streptobrachia

Eriogonum exilifolium
Dropleaf wild buckwheat



- Federal status: USFS sensitive
- Heritage ranks: G3/S2
- Global distribution: Wyoming, Colorado (Grand, Jackson, and Larimer counties).
- Last observed in Colorado: September 2005
- Colorado occurrences: 10 (2 are historical)
- Colorado individuals: greater than 1,000,000
- Primary threats: weeds, incompatible grazing, roads
- Land ownership/management: BLM, state and private

Eriogonum exilifolium



Heuchera hallii

Front Range alum-root

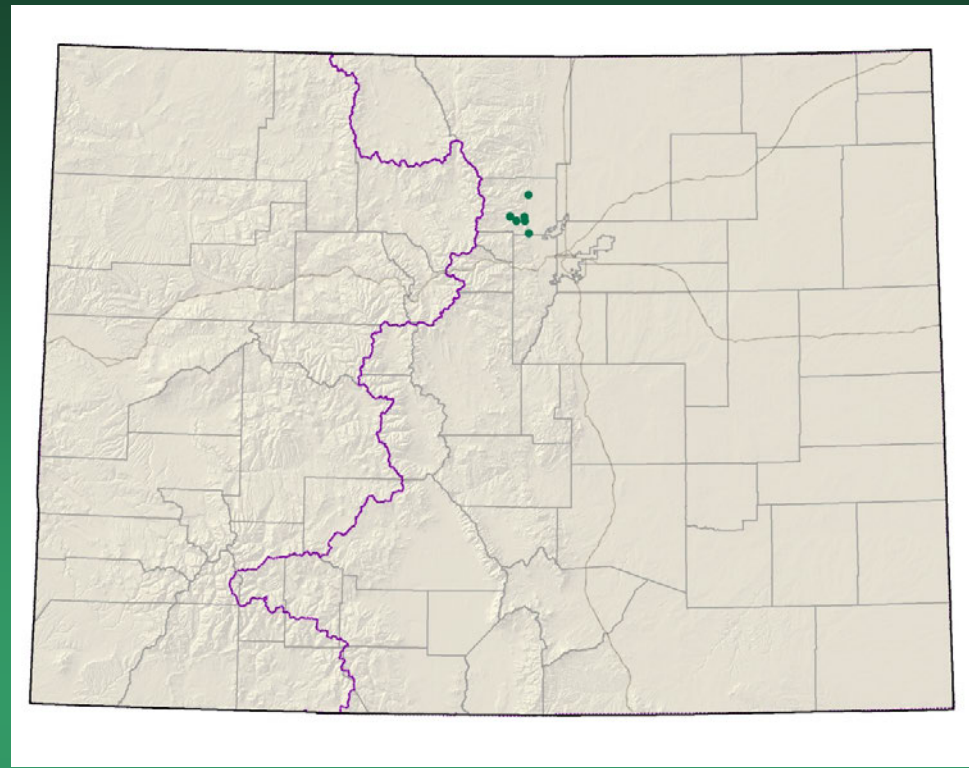
No longer tracked; found to be common

- Federal status: None
- Heritage ranks: G4/S4
- Global distribution: Colorado endemic (Chaffee, Custer, Douglas, El Paso, Huerfano, Jefferson, Lake, Park, and Teller counties).
- Last observed in Colorado: 2011
- Colorado occurrences: 67
- Colorado individuals: locally common
- Primary threats: recreation (hiking, rock climbing)
- Land ownership/management: Primarily USFS

Heuchera hallii



Nuttallia (Mentzelia)
sinuata
Wavy-leaf stickleaf

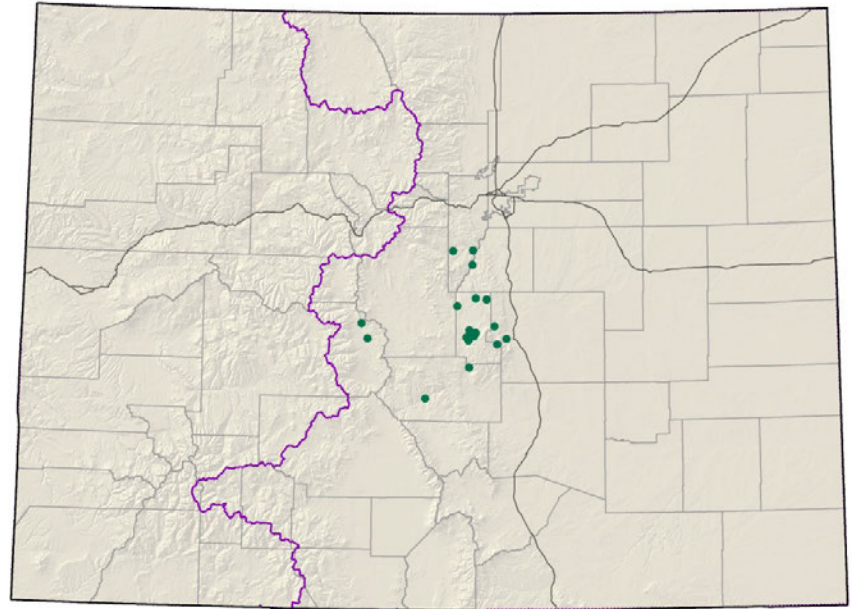


- Federal status: None
- Heritage ranks: G3/S2
- Global distribution: Wyoming and Colorado (Boulder and Larimer counties).
- Last observed in Colorado: 2007
- Colorado occurrences: 12 (4 are historical)
- Colorado individuals: hundreds+
- Primary threats: road work, misidentification as weeds
- Land ownership/management: USFS 67%, City 33%

Nuttallia sinuata



Nuttallia speciosa Jeweled blazingstar



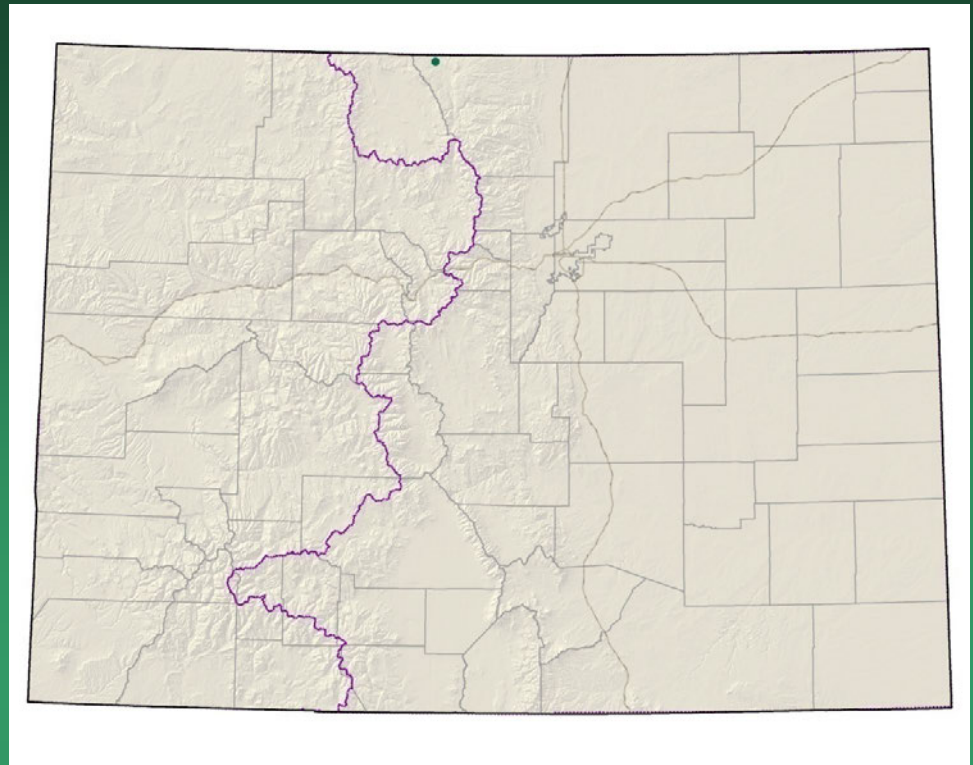
- Federal status: None
- Heritage ranks: G3?/S3?
- Global distribution: Wyoming and Colorado (Arapahoe, Chaffee, Clear Creek, Douglas, El Paso, Fremont, Gilpin, Jefferson, Mineral, Saguache, and Teller counties).
- Last observed in Colorado: 2011
- Colorado occurrences: 19
- Colorado individuals: ~10,000
- Primary threats: road work, recreation, weeds
- Land ownership/management: BLM, USFS, Private, State

Nuttallia speciosa



Oenopsis wardii

Ward's golden-weed



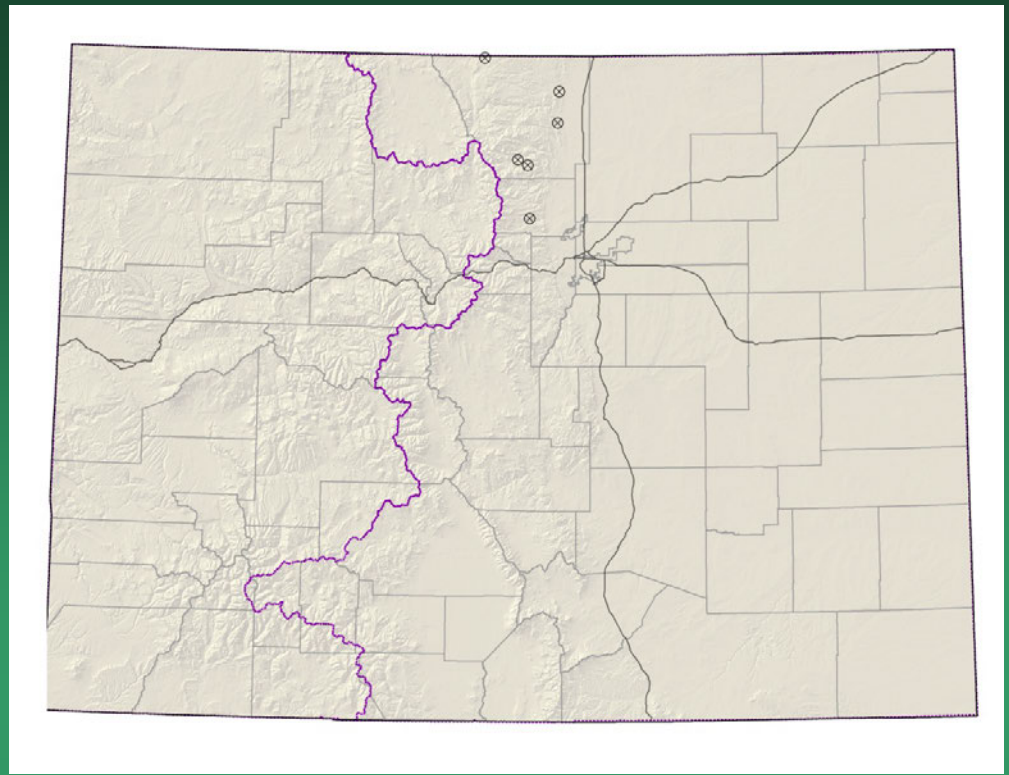
- Federal status: None
- Heritage ranks: G3/S1
- Global distribution: Wyoming and Colorado (Larimer County).
- Last observed in Colorado: August 2004
- Colorado occurrences: 1
- Colorado individuals: 300+
- Primary threats: incompatible grazing
- Land ownership/management: BLM

Oenopsis wardii



Phacelia denticulata

Rocky Mountain phacelia

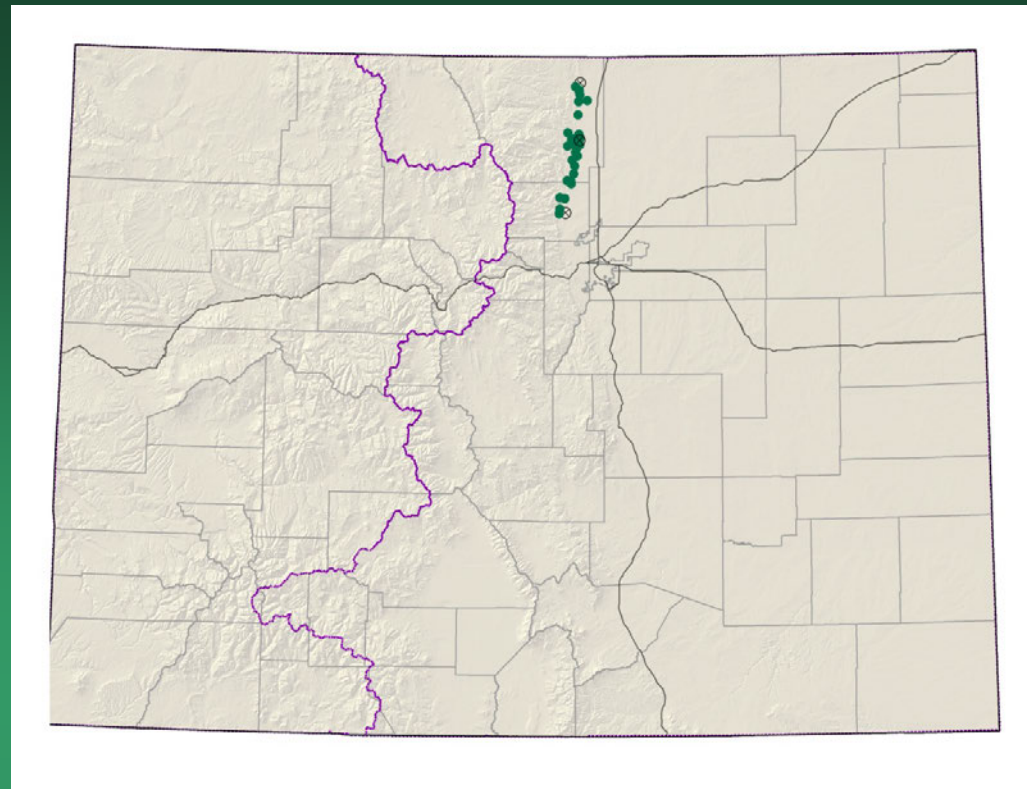


- Federal status: None
- Heritage ranks: G3/SU
- Global distribution: Wyoming, New Mexico, Colorado (Boulder, Clear Creek, Costilla, Douglas, El Paso, Larimer, Las Animas, and Park counties).
- Last observed in Colorado: 2009
- Colorado occurrences: 8+ (6 are historical)
- Colorado individuals: unknown
- Primary threats: unknown
- Land ownership/management: USFS, BLM, Private



Physaria bellii

Bell's twinpod



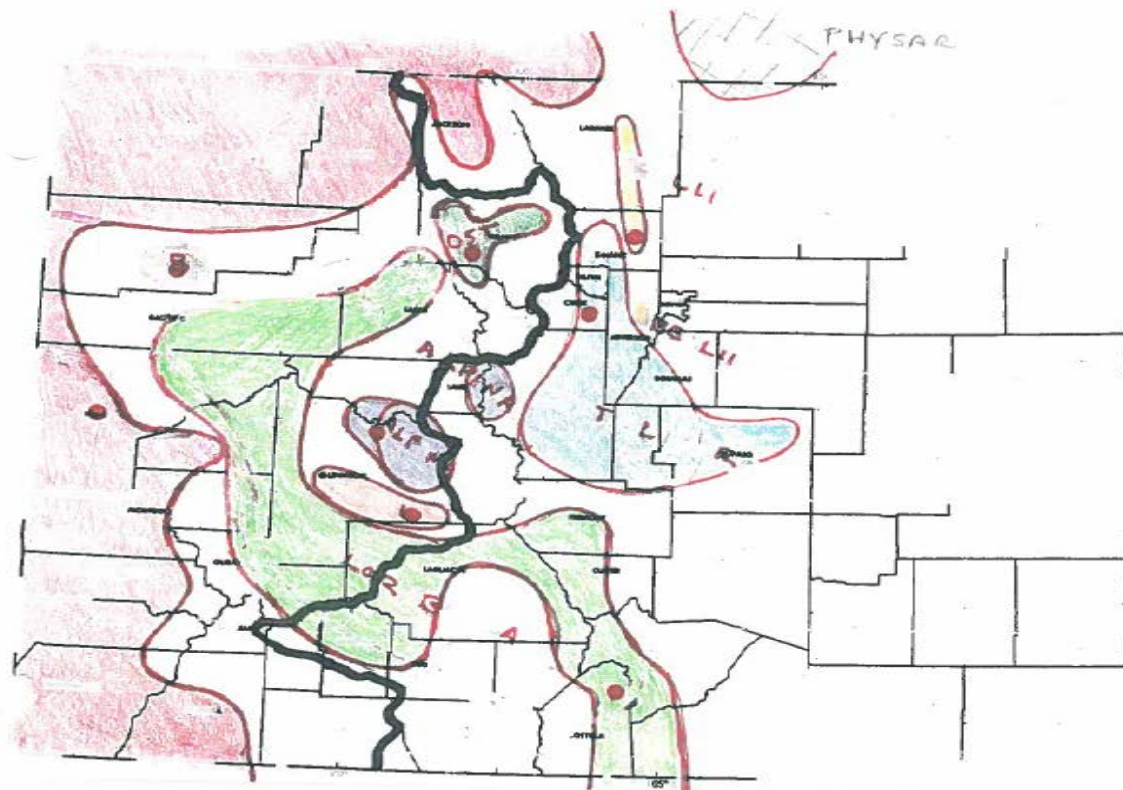
- Federal status: None
- Heritage ranks: G2G3/S2S3
- Global distribution: Colorado endemic (Boulder and Larimer counties). **Jefferson and El Paso County records annotated to a different species.**
- Last observed in Colorado: **2011**
- Colorado occurrences: 25 (3 are historical)
- Colorado individuals: Approximately 1 million
- Primary threats: Residential development, limestone mining, road work, weeds
- Land ownership/management: Private 67%, Local government 33%

Physaria bellii



Physaria of CO

William Jennings



Physaria

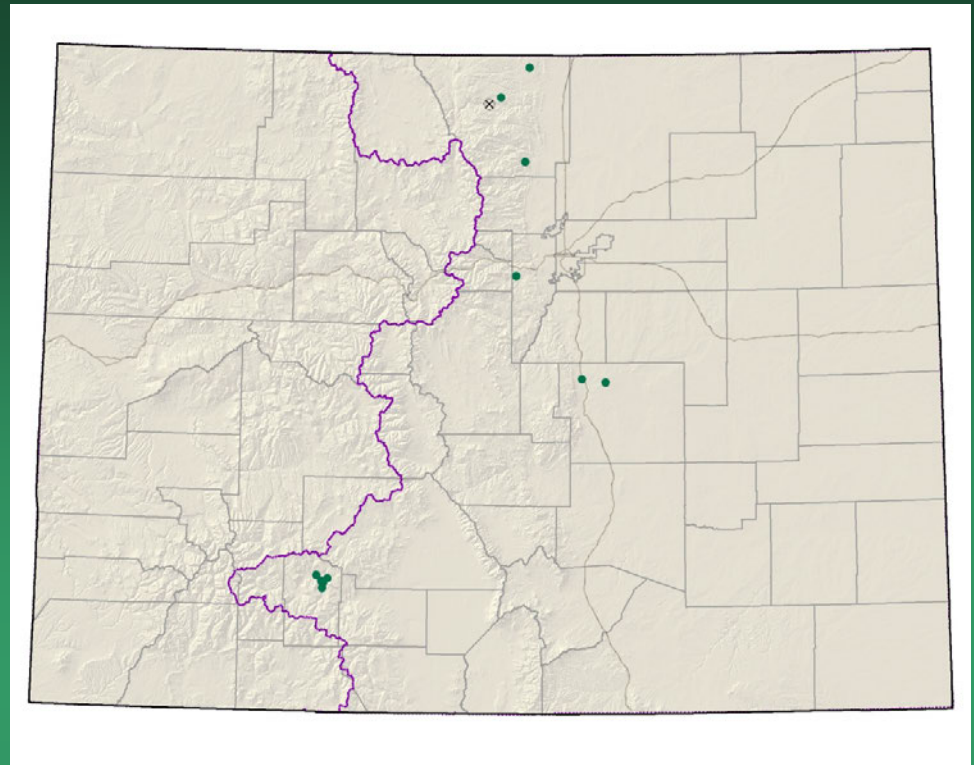
P. vitulifera



P. vitulifera x *P. bellii*



Potentilla ambigens
Southern Rocky
Mountain cinquefoil

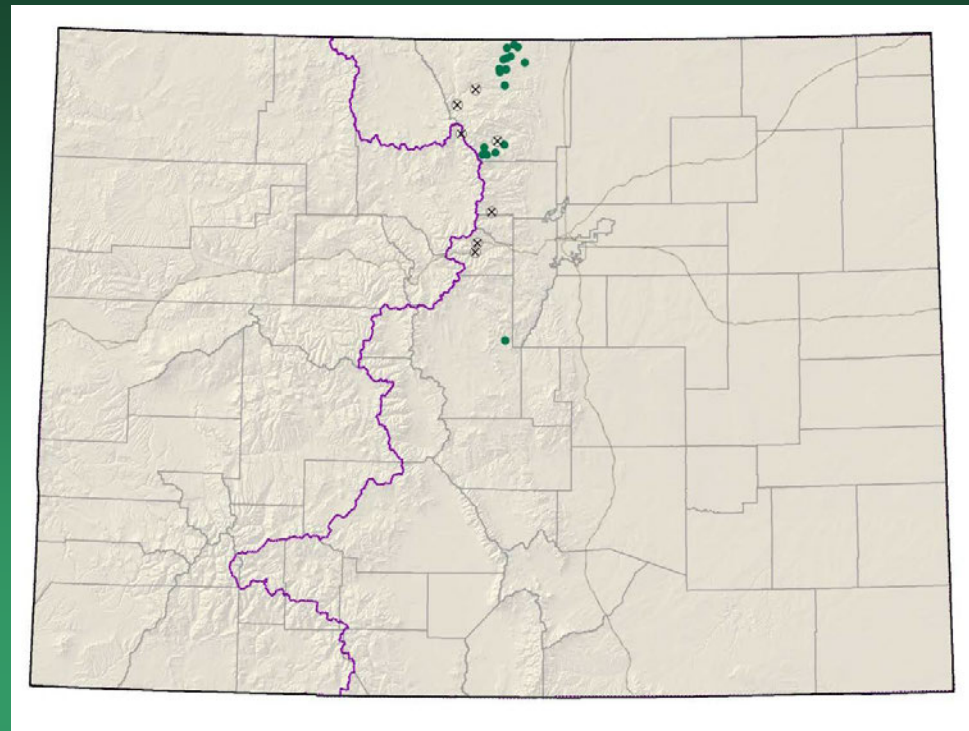


- Federal status: None
- Heritage ranks: G3/S1S2
- Global distribution: New Mexico, Wyoming (historical), and Colorado (El Paso, Jefferson, Larimer and Mineral counties).
- Last observed in Colorado: 2011
- Colorado occurrences: 11 (1 is historical)
- Colorado individuals: 5,000
- Primary threats: recreation, grazing, weeds
- Land ownership/management: USFS, DoD, local government, state, private

Potentilla ambigens



Potentilla rupincola Rocky Mountain cinquefoil



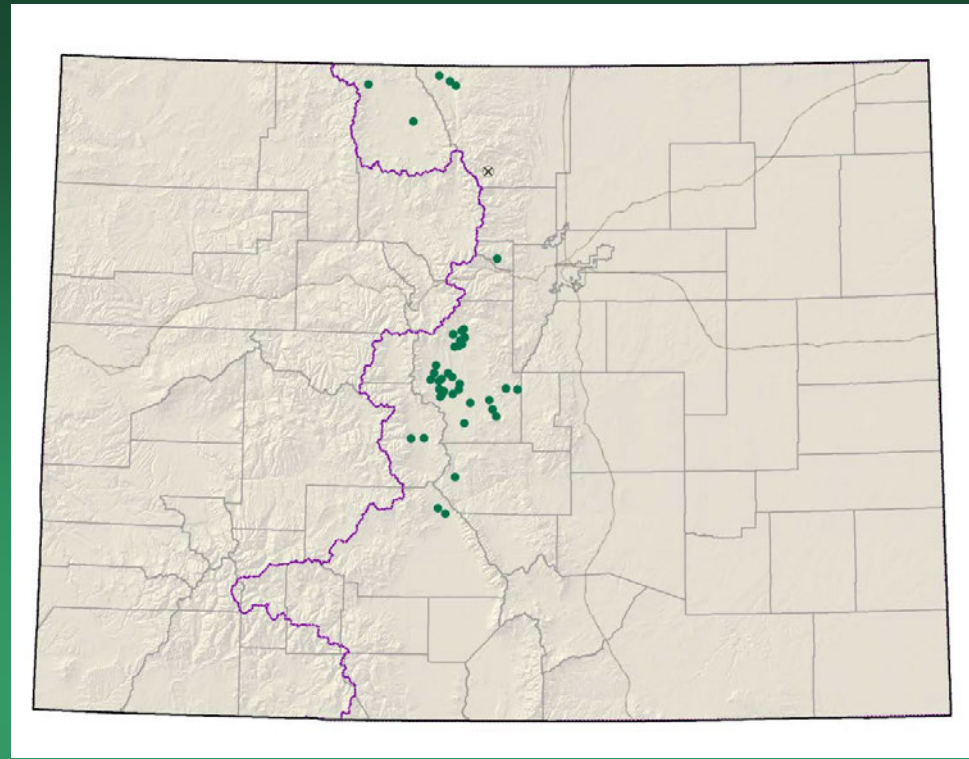
- Federal status: USFS Sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic. Boulder, Larimer, and Park counties. Historically from Gilpin county.
- Last observed in Colorado: 2009
- Colorado occurrences: 25 (7 are historical)
- Colorado individuals: 36,000+
- Primary threats: weeds, residential and commercial development, road work, recreation.
- Land ownership/management: Private, USFS, NPS, State, Local

Potentilla rupincola



Sisyrinchium pallidum

Pale blue-eyed grass



- Federal status: BLM Sensitive
- Heritage ranks: G2G3/S2
- Global distribution: Wyoming and Colorado (Chaffee, Gilpin, Fremont, Jackson, Larimer, Park, and Saguache counties).
- Last observed in Colorado: 2006
- Colorado occurrences: 41 (1 is historical)
- Colorado individuals: 11,000
- Primary threats: road work, residential development, grazing, peat mining, and recreational activities.
- Land ownership/management: Private 54%, BLM 23%, State 15%, NGO 8%

Sisyrinchium pallidum

