

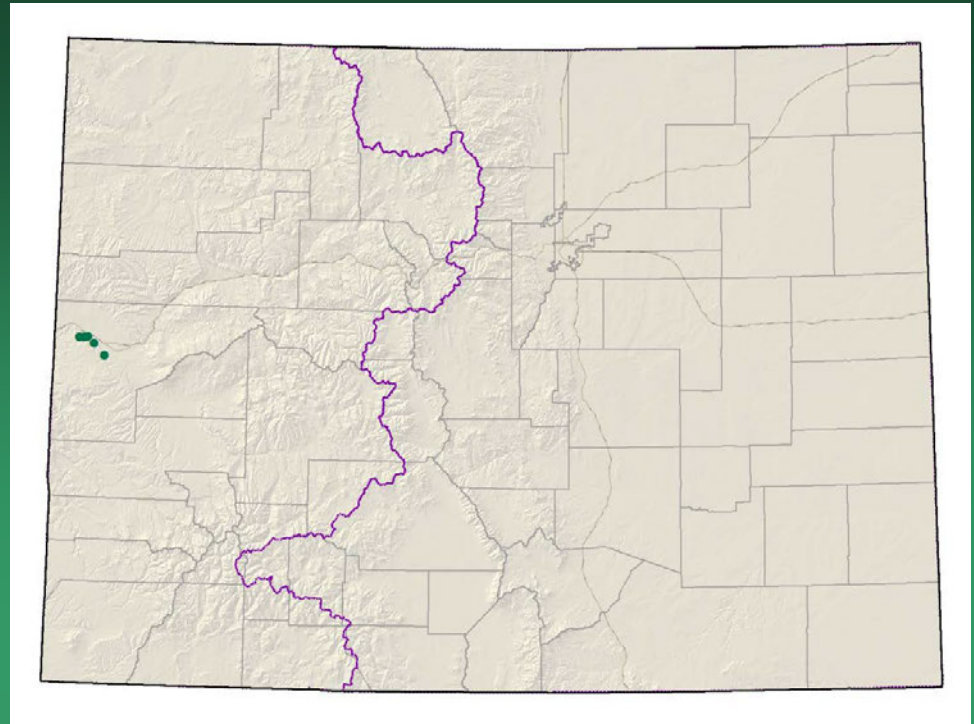
Review of Previous Meetings

2nd Through 6th Annual Colorado Rare Plant Symposia 2005-2009



2005/2010
Pagosa Springs/Denver
Statewide
G1 species
(excluding T,E&C species)

Aletes latilobus=
Lomatium latilobum
Canyonlands biscuitroot



- Federal status: BLM sensitive
- Heritage ranks: G1/S1
- Global distribution: Utah (Grand and San Juan counties) and Colorado (Mesa County-- Colorado National Monument and Rattlesnake Canyon)
- Last observed in Colorado: 2009
- Colorado occurrences: 5
- Colorado individuals: >5,000
- Primary threats: Habitat disturbance, Park developments, trampling by hikers
- Land ownership/management: Colorado National Monument, BLM, possibly on adjacent private

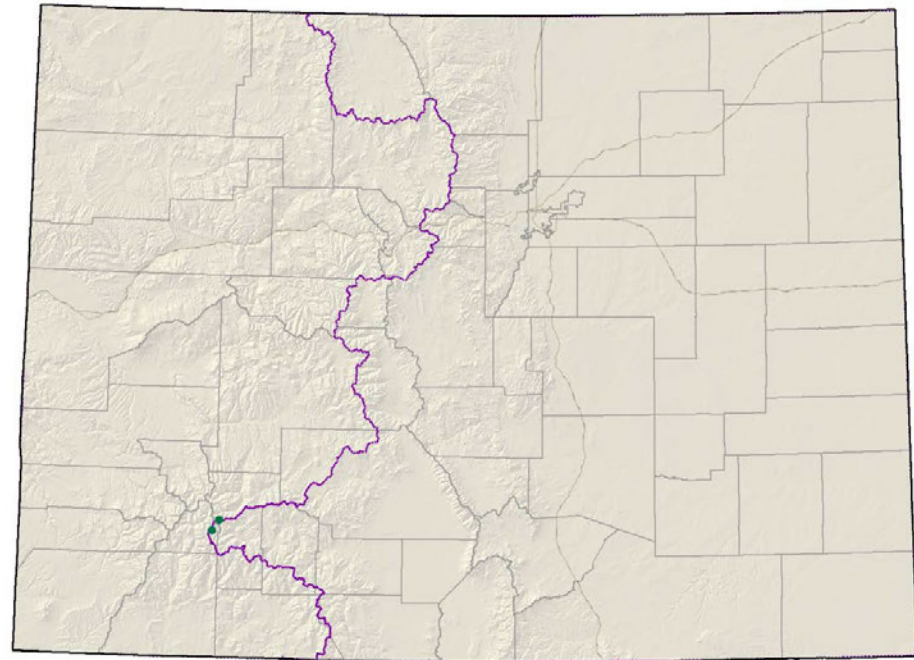
Aletes latilobus



Aliciella sedifolia

=*Gilia sedifolia*

Stonecrop gilia

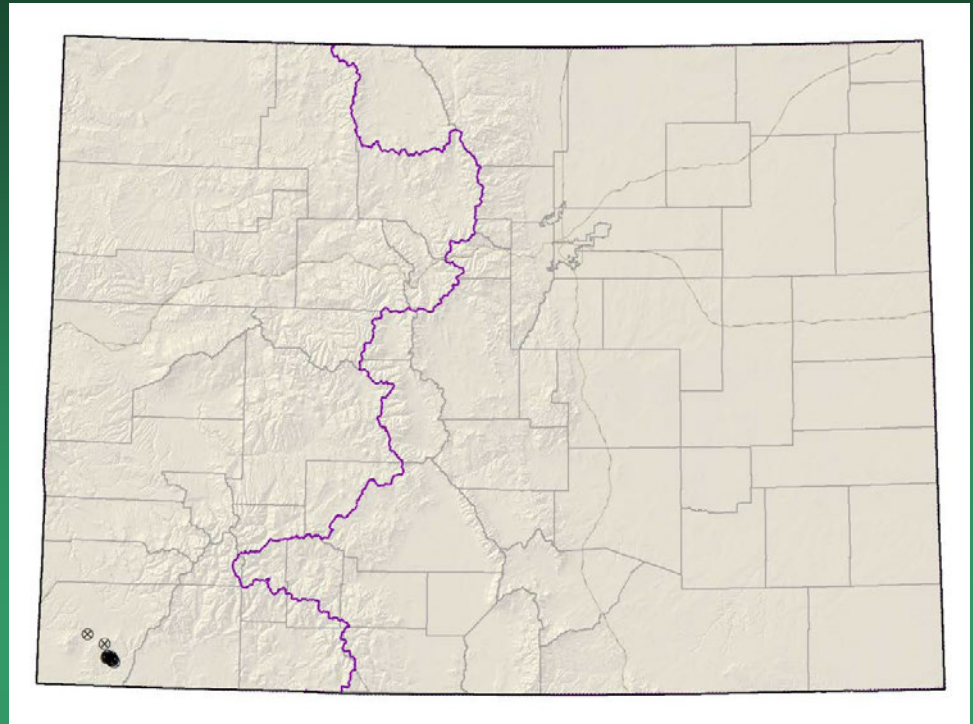


- Federal status: BLM & USFS
- sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, San Juan Mountains, Hinsdale County
- Last observed: 2007
- Occurrences: 2
- Individuals: 1,100
- Primary threats: non-motorized recreation
- Land ownership/management: Gunnison and Rio Grande National Forest

Aliciella sedifolia



Astragalus deterior Cliff Palace milkvetch



- Federal status: None
- Heritage ranks: G1G2/S1S2
- Global distribution: Colorado endemic (Montezuma County)
- Last observed in Colorado: 2012
- Colorado occurrences: 11 (6 historical)
- Colorado individuals: ~5000
- Primary threats: Non-motorized recreation, exotics
- Land ownership/management: BLM, Mesa Verde NP, tribal (Southern Ute and Ute Mountain Ute), and private lands

Astragalus deterior



Astragalus lonchocarpus var.
hamiltonii
=*A. hamiltonii*
Hamilton's milkvetch

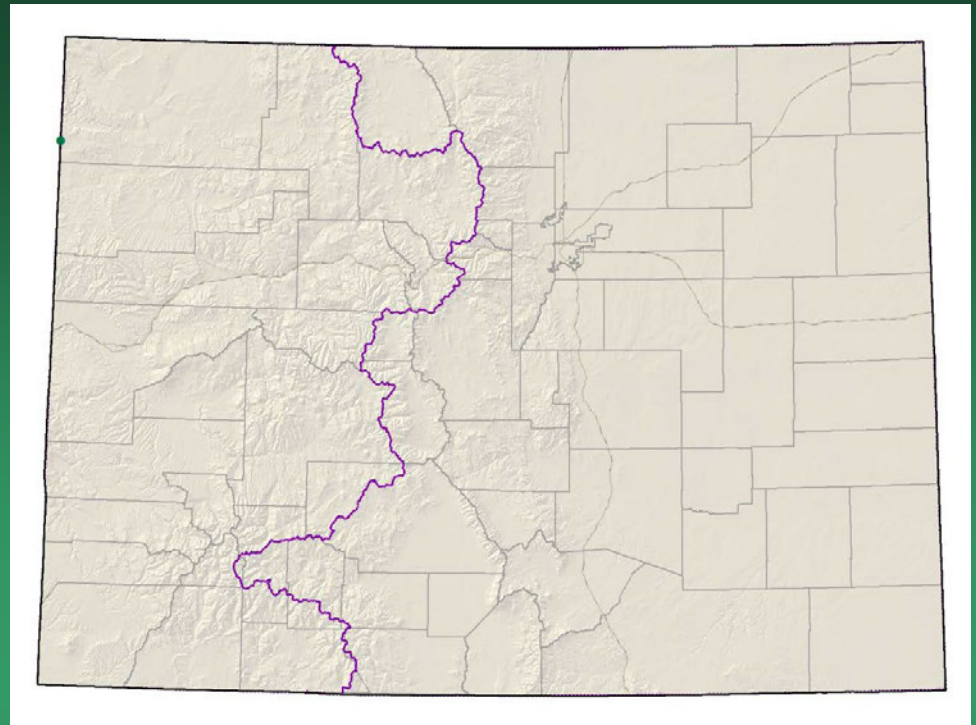
As a result of 2011
surveys the occurrence
in CO was determined to
be *A. lonchocarpus*

- Federal status: BLM sensitive
- Heritage ranks: G1/SNA
- Global distribution: Uintah County, Utah
- Last observed in Colorado: 1991
- Colorado occurrences: 0
- Colorado individuals:
- Primary threats: unknown, area heavily grazed in past, OHV and oil & gas development for UT occurrences.
- Land ownership/management: Dinosaur NM in UT; National Wildlife Refuge, Ute, BLM, State, and private in UT

Astragalus lonchocarpus
var. *hamiltonii*



Boechera glareosa snowbasin rockcress



- Federal status: none
- Heritage ranks: G1/S1
- Global distribution: Utah and Colorado (Moffat county)
- Last observed in Colorado: 2002
- Colorado occurrences: 1
- Colorado individuals: unknown
- Primary threats: unknown
- Land ownership/management: BLM

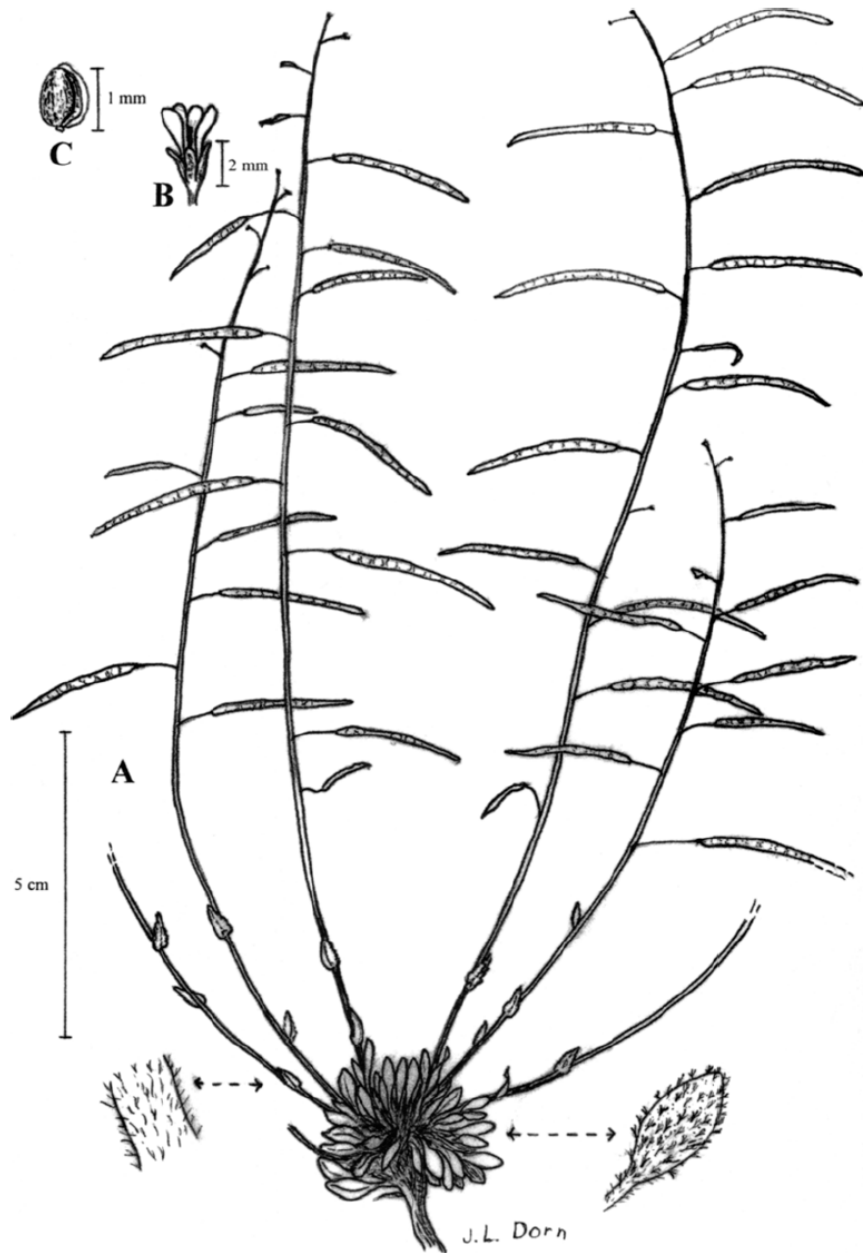
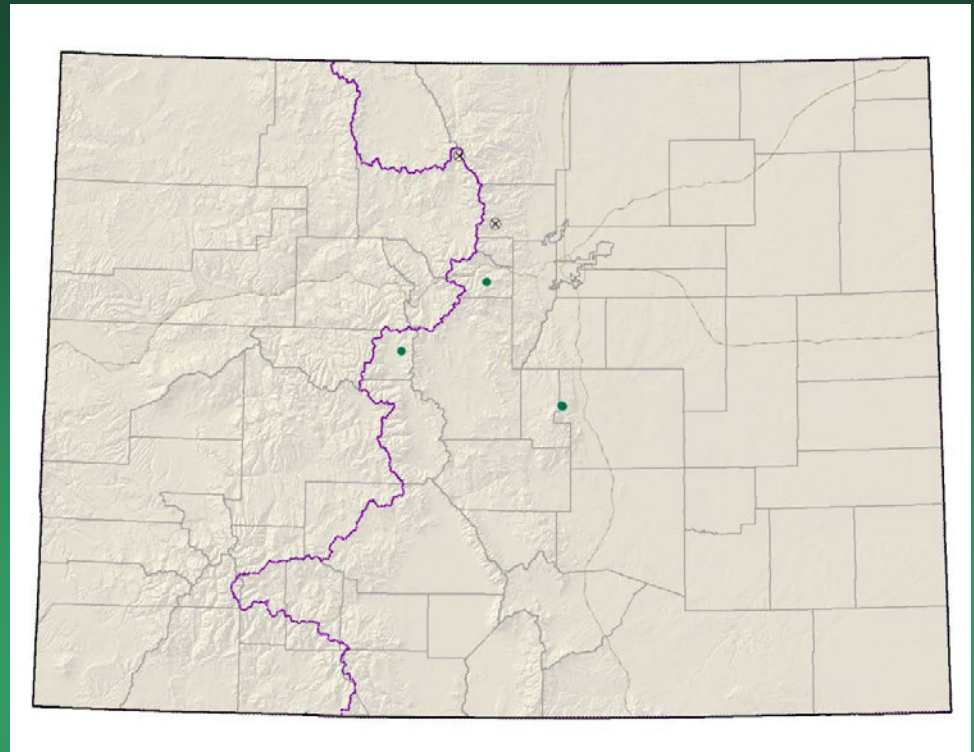


FIG. 1. *Boechera glareosa*. A. Fruiting plant. B. Flower. C. Seed. (From Dorn 8734 & 9106, RM.)

Boechera glareosa

Botrychium lineare? Narrowleaf grapefern



- Federal status: Removed;
USFS Sensitive
- Heritage ranks: G2? /S1
- Global distribution: New Brunswick, Quebec, Idaho, Montana, Oregon, California, Wyoming, and Colorado
- Last observed in Colorado: 2005+
- Colorado occurrences: 5 or more (2 are historical)
- Colorado individuals: 60
- Primary threats: road maintenance, weeds
- Land ownership/management: USFS, private, city of Denver

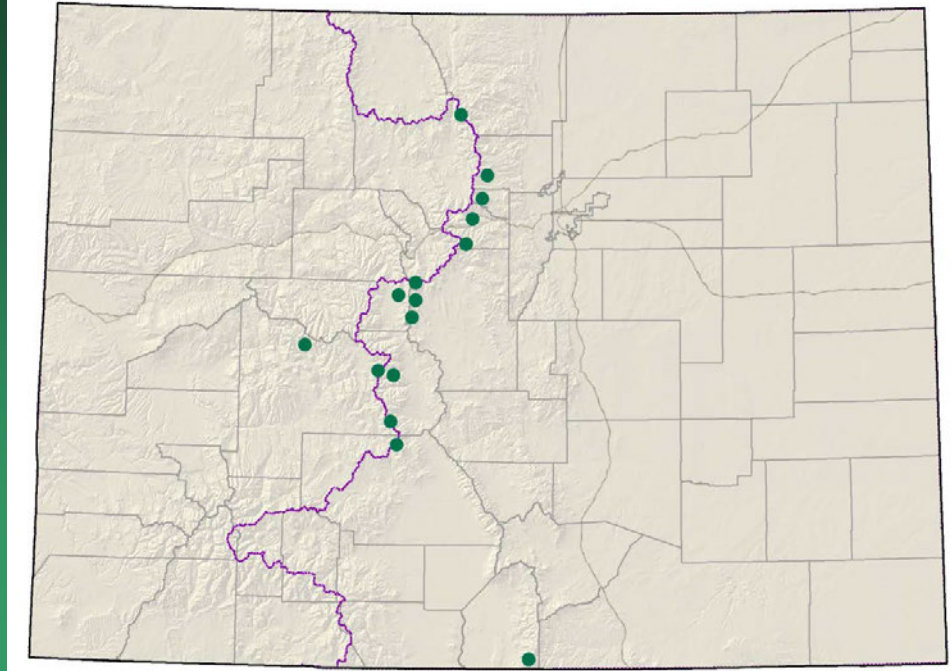
Botrychium lineare



Botrychium tax. nov.

“furcatum” ?

forkleaved moonwort

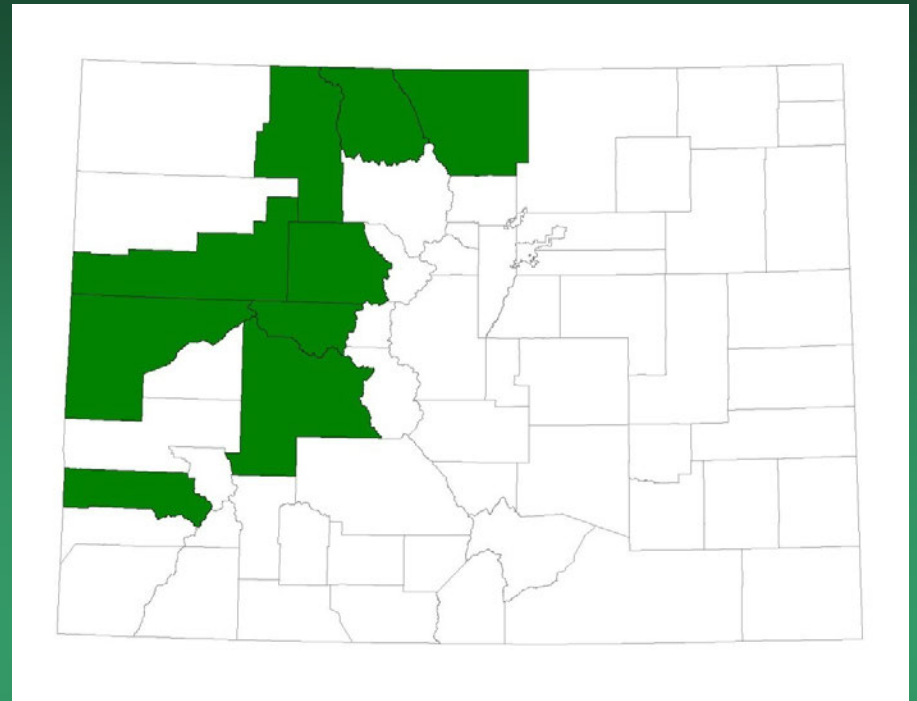


- Federal status: ?
- Heritage ranks: G1G2/S1S2
- Global distribution: Colorado (Boulder, Chaffee, Clear Creek, Costilla, Grand, Gunnison, Lake, Park, and Saguache counties), New Mexico (Wheeler Peak, Taos County, pending genetic verification)
- Last observed in Colorado: 2009
- Colorado occurrences: 18 sites totaling 47 populations or subpopulations
- Colorado individuals: ~1200
- Primary threats: maintenance and improvements of roads and earthen dams
- Land ownership/management: USFS, NPS, Private

Botrychium tax. nov. "furcatum"



Cirsium scapanolepis
Mountain slope thistle

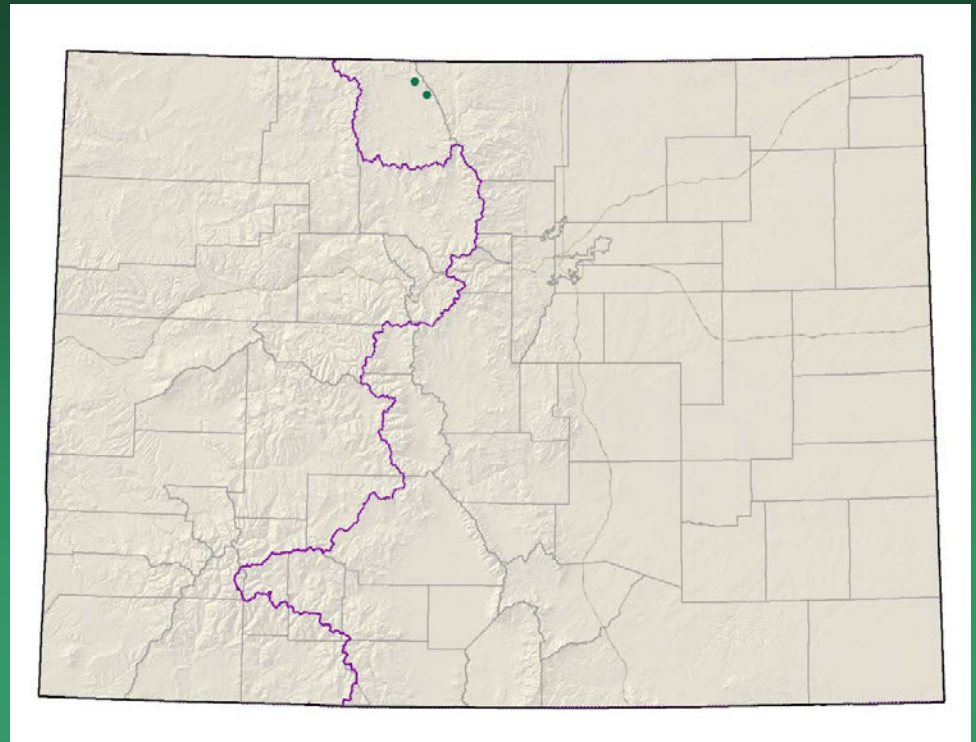


- Federal status: none
- Heritage ranks: G1G2Q/S1
- Global distribution: Colorado endemic
- Last observed in Colorado: 1900-1983?
- Colorado occurrences: unknown, obscure
- Colorado individuals: unknown
- Primary threats: weevils, unknown
- Land ownership/management: unknown

Cirsium scapanolepis



Corispermum navicula Crescent bugseed



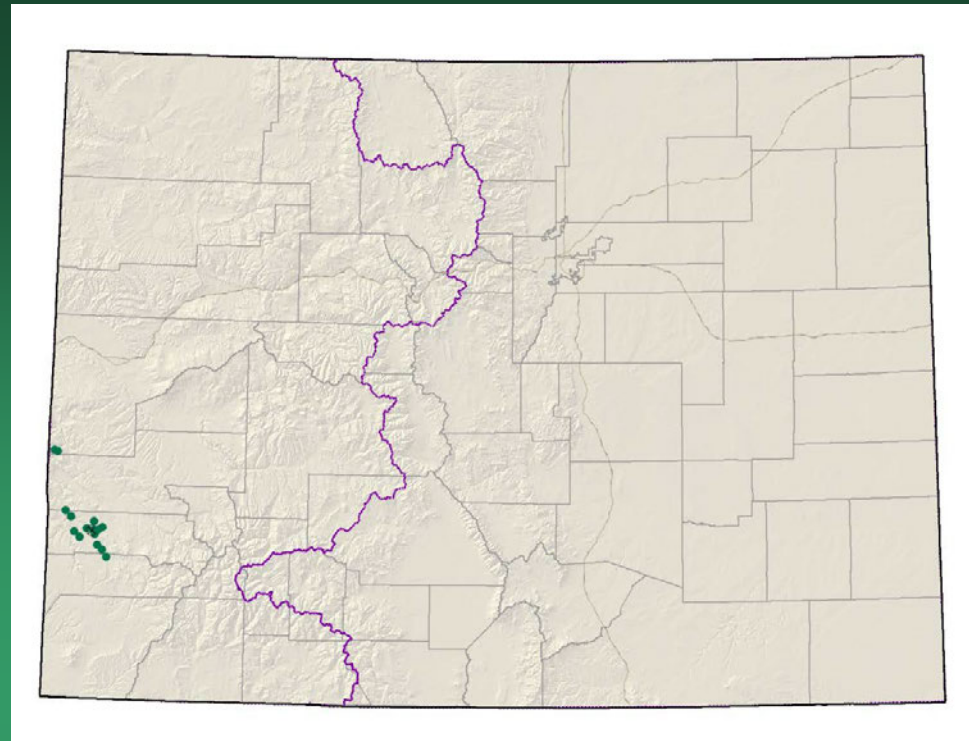
- Federal status: BLM sensitive
- Heritage ranks: G1?/S1
- Global distribution: Colorado endemic (Jackson County), possibly Oklahoma?
- Last observed: 2006
- Occurrences: 2 principal occurrences
- Individuals: common locally
- Primary threats: off-road vehicle use
- Land ownership/management: BLM, Kremmling Field Office

Corispermum navicula

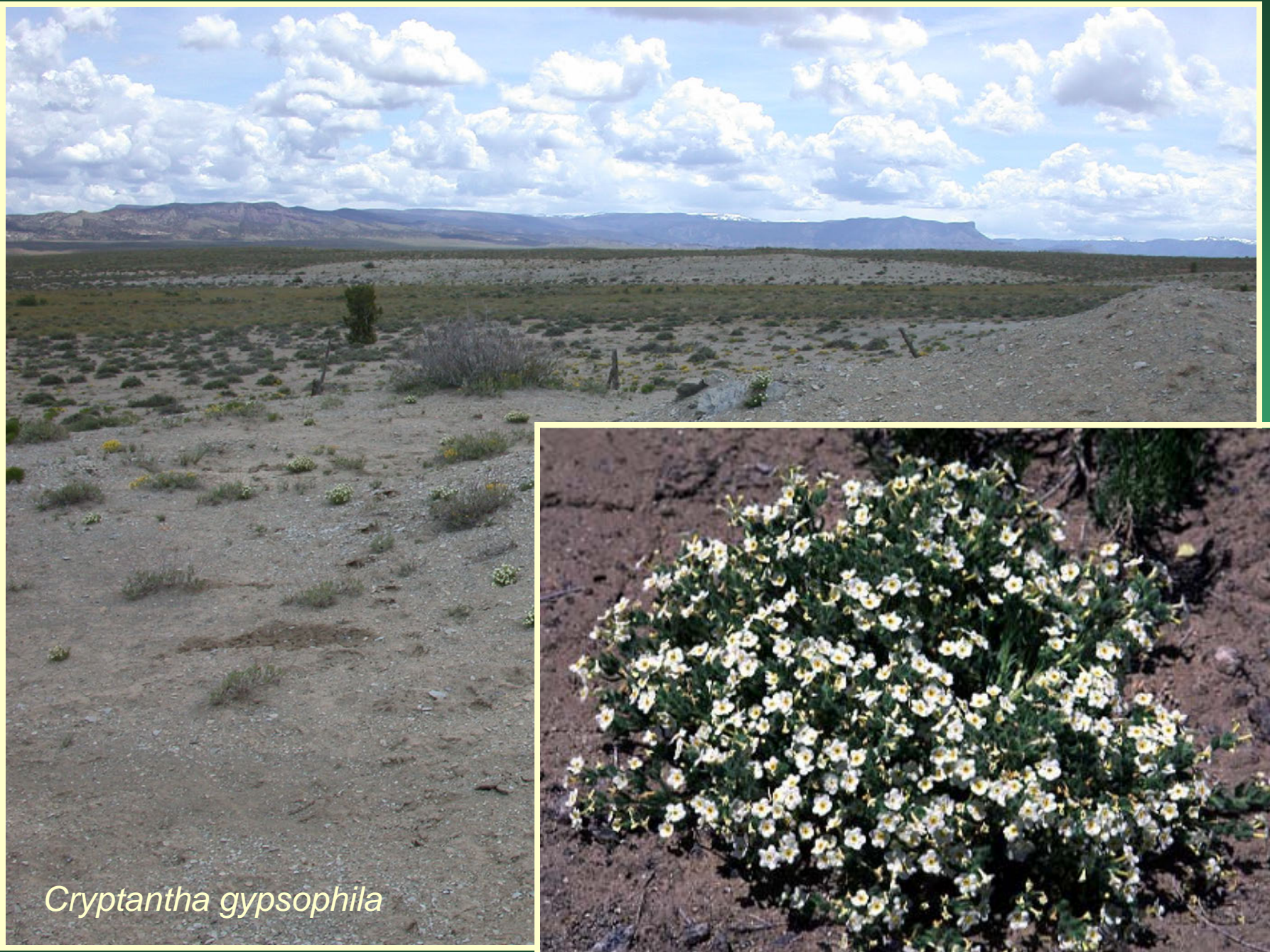


Cryptantha gypsophila=
Oreocarya revealii
Gypsum Valley Cat-eye

Conservation Action Plan



- Federal status: BLM Sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic, Mesa, Montrose & San Miguel Counties
- Last observed: 2012
- Occurrences: 16 (1 historical)
- Individuals: 25,100+
- Primary threats: oil and gas development, grazing, ATVs, recreation, roads
- Land ownership/management: BLM, Private, State (CDOW)



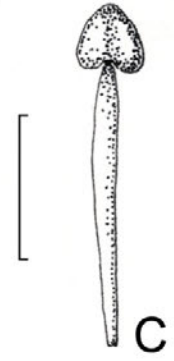
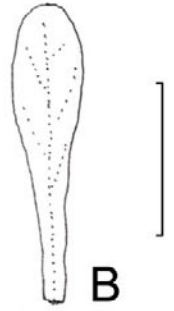
Cryptantha gypsophila

Descurainia kenheilii

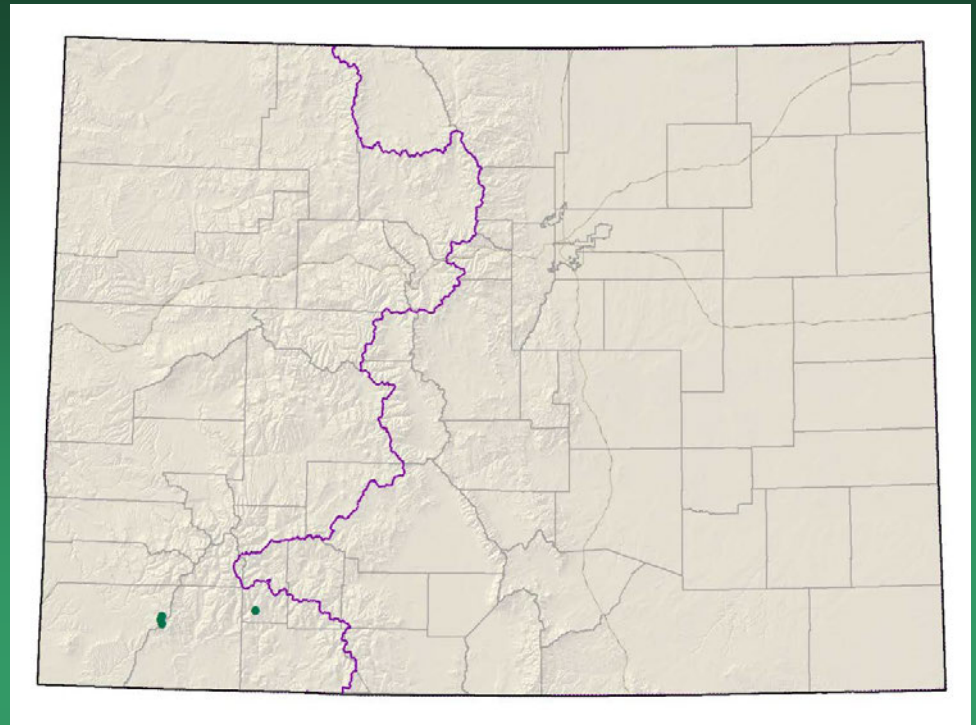
Heil's tansy mustard



- Federal status: none
- Heritage ranks: G1/S1
- Global distribution: Endemic to CO; San Juan County
- Last observed in Colorado: 1997
- Colorado occurrences: 1
- Colorado individuals: unknown
- Primary threats: unknown
- Land ownership/management: Rio Grande NF; BLM, private



Draba malphigiaceae whitlow- grass

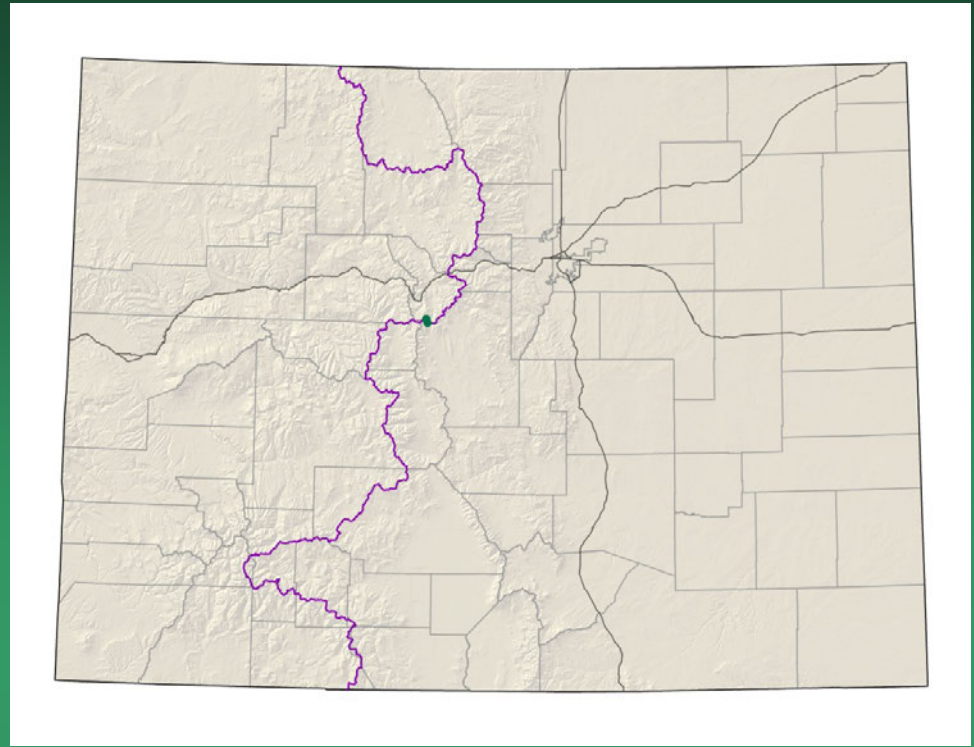


- Federal status: none
- Heritage ranks: G1?/S1S2
- Global distribution: Endemic to CO; Hinsdale, La Plata and Montezuma counties
- Last observed in Colorado: 2012
- Colorado occurrences: 4
- Colorado individuals: unknown
- Primary threats: unknown
- Land ownership/management: San Juan NF, private

Draba malphigiaceae



Draba weberi Weber's draba

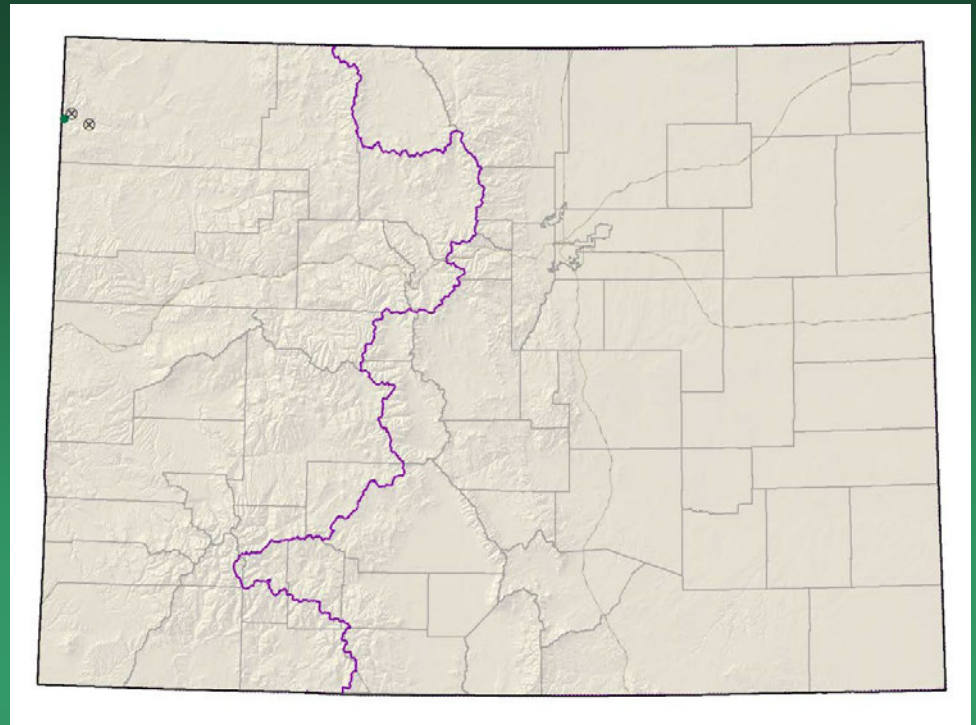


- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, Park and Summit counties
- Last observed: 2012
- Occurrences: 4
- Individuals: 20-100
- Primary threats: road and dam construction and maintenance, environmental stochasticity, recreation, mining, noxious weeds, climate change
- Land ownership/management: private (Colo. Spgs. Utilities), USFS

Draba weberi



Erigeron wilkenii Dieter's fleabane



- Federal status: none
- Heritage ranks: G1/S1
- Global distribution: endemic to Colorado (Dinosaur National Monument, Moffat County)
- Last observed: 2012
- Occurrences: 4
- Individuals: 1,000-3,000
- Primary threats: no specific threats known
- Land ownership: Dinosaur NM

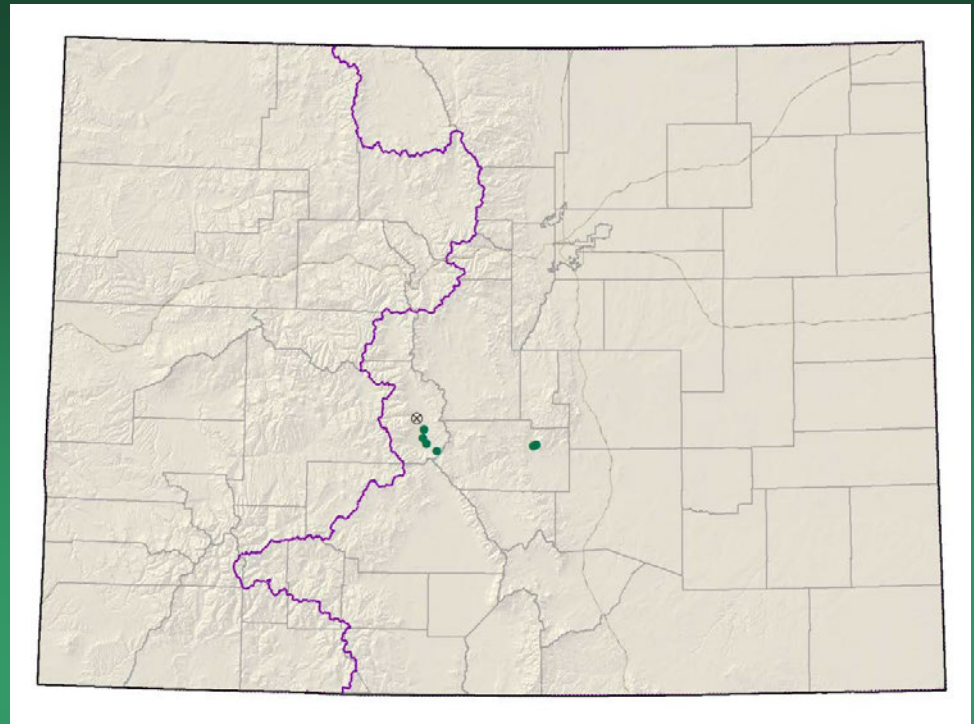
Erigeron wilkenii



Eriogonum brandegeei Brandegee's buckwheat

Conservation Action Plan

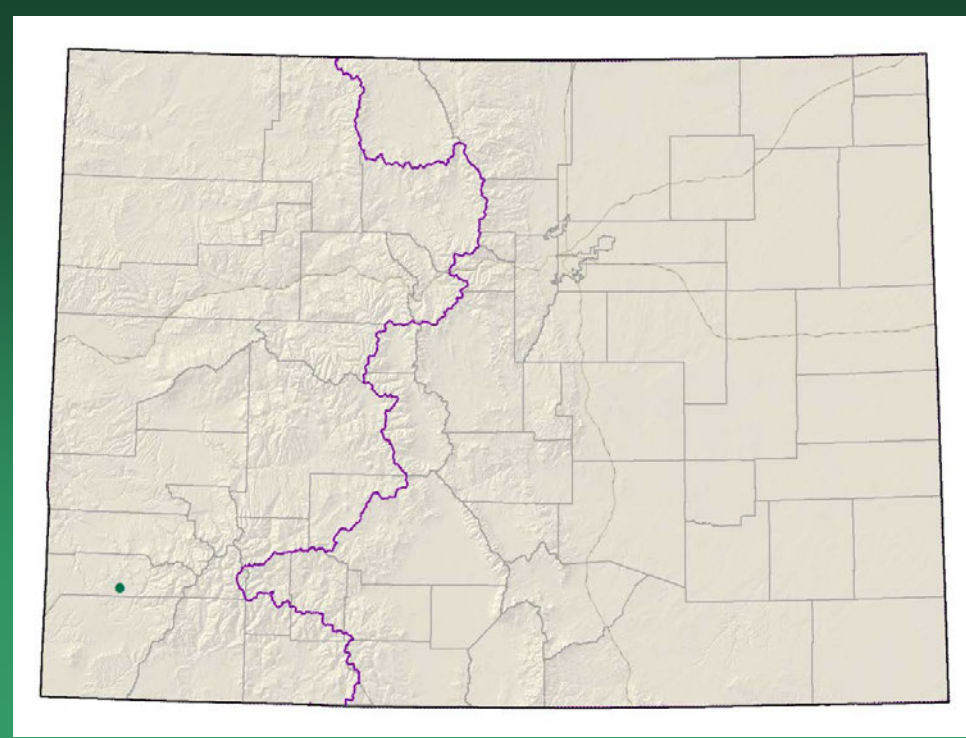
- Federal status: USFS & BLM
- sensitive
- Heritage ranks: G1G2/S1S2
- Global distribution: Colorado endemic, Chaffee and Fremont counties
- Last observed: 2012
- Individuals: 35,000-several million
- Occurrences: 8 (3 are historical)
- Primary threats: off-road vehicle use and other recreation, residential and commercial development, timbering, mining, highway maintenance, weeds, grazing
- Land ownership/management: BLM (some within ACECs), state, private, highway right of way





Eriogonum brandegeei

Gutierrezia elegans
Lone Mesa
snakeweed
Conservation Action Plan



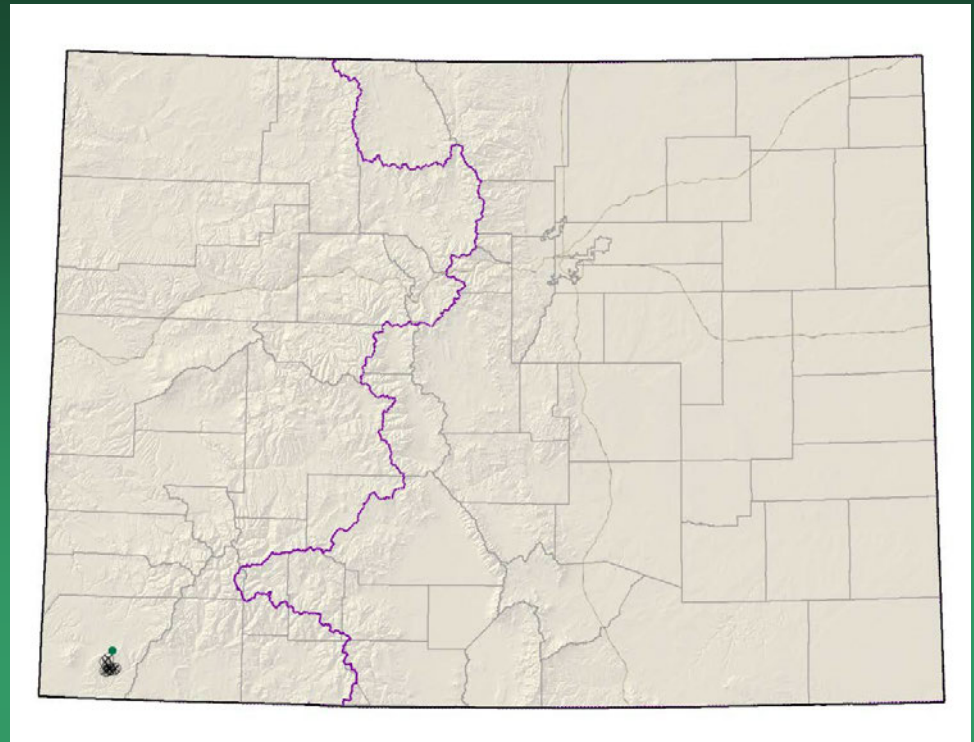
- Federal status: BLM & USFS
- sensitive
- Heritage ranks: G1/S1
- Global distribution: Endemic to Colorado; Dolores County
- Last observed in Colorado: 2012
- Colorado occurrences: 1
- Colorado individuals: 30,000
- Primary threats: grazing, recreation
- Land ownership/management: BLM, San Juan NF, State, private



Gutierrezia elegans

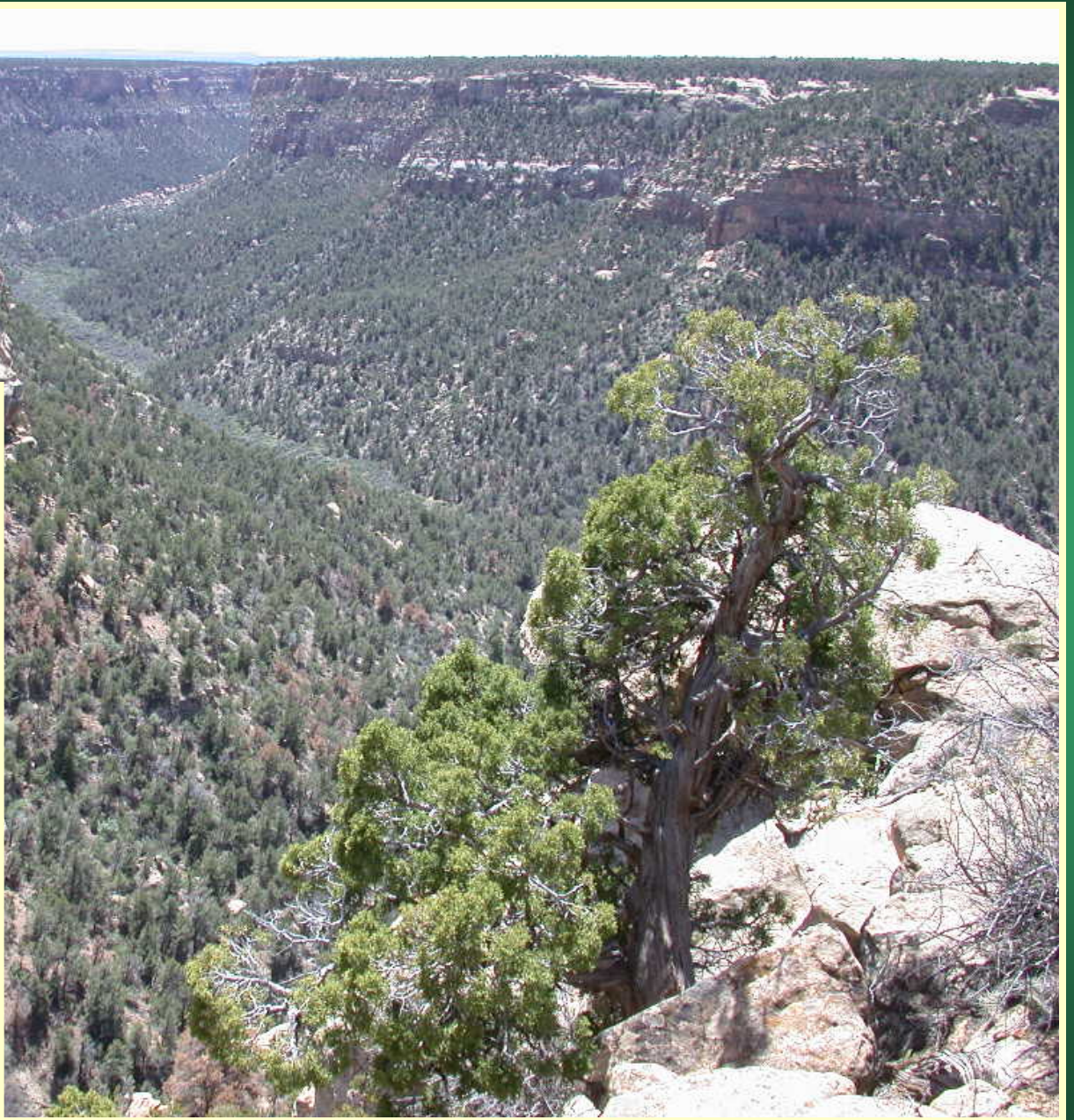
Hackelia gracilenta

Mesa Verde stickseed



- Federal status: none
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, Mesa Verde National Park, Montezuma County
- Last observed: 2012
- Occurrences: 12 (9 are historical)
- Individuals: unknown, may be <1000
- Primary threats: Unknown, possibly recreation, and/or developments in the Park, such as trails or roads. Fires may have had an impact on this species.
- Land ownership/management: Mesa Verde NP

Hackelia gracilenta



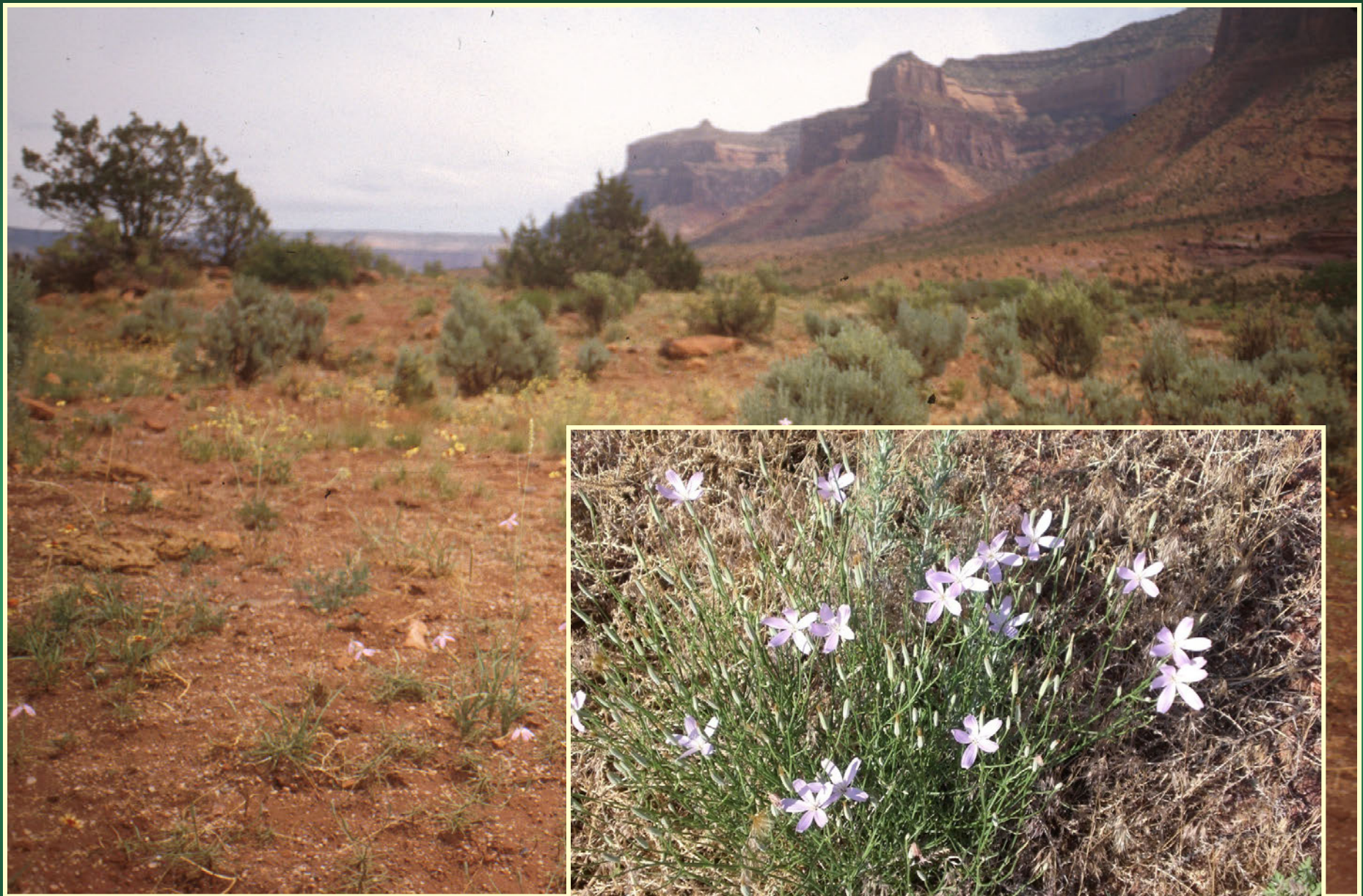
Lygodesmia doloresensis

Dolores River skeletonplant

Conservation Action Plan



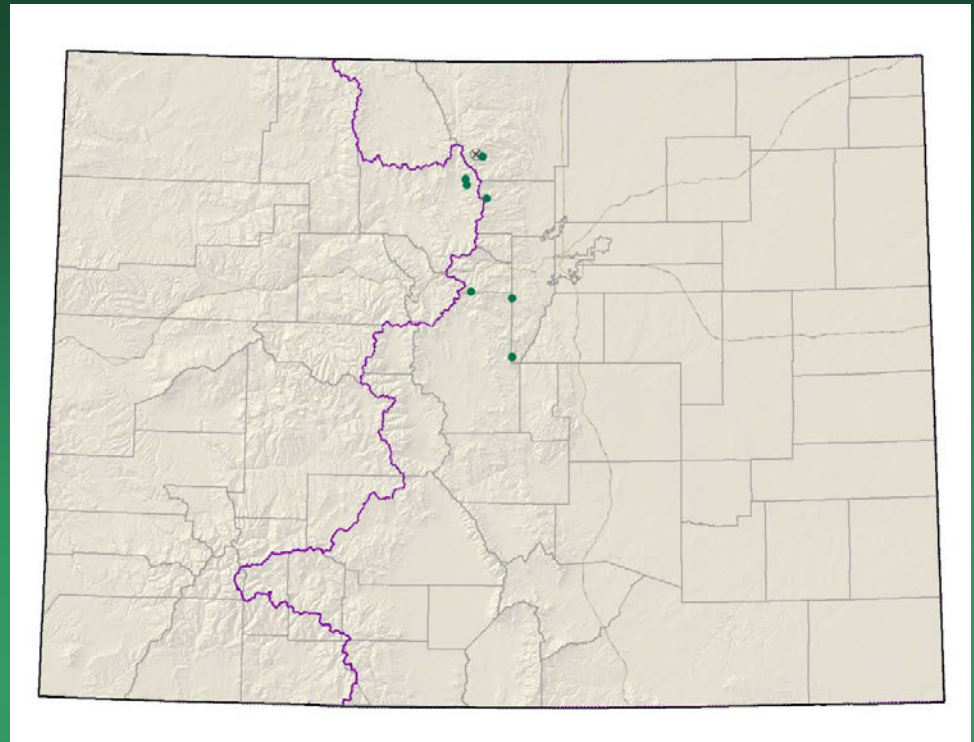
- Federal status: BLM sensitive in CO
- Heritage ranks: G1G2/S1
- Global distribution: Utah and Colorado (Mesa & San Miguel counties)
- Last observed in Colorado: 2012
- Colorado occurrences: 11 (4 are historical)
- Colorado individuals: 3700
- Primary threats: deer, rabbit, and cattle grazing, private land development, road maintenance, weeds
- Land ownership/management: private, BLM



Lygodesmia doloresensis

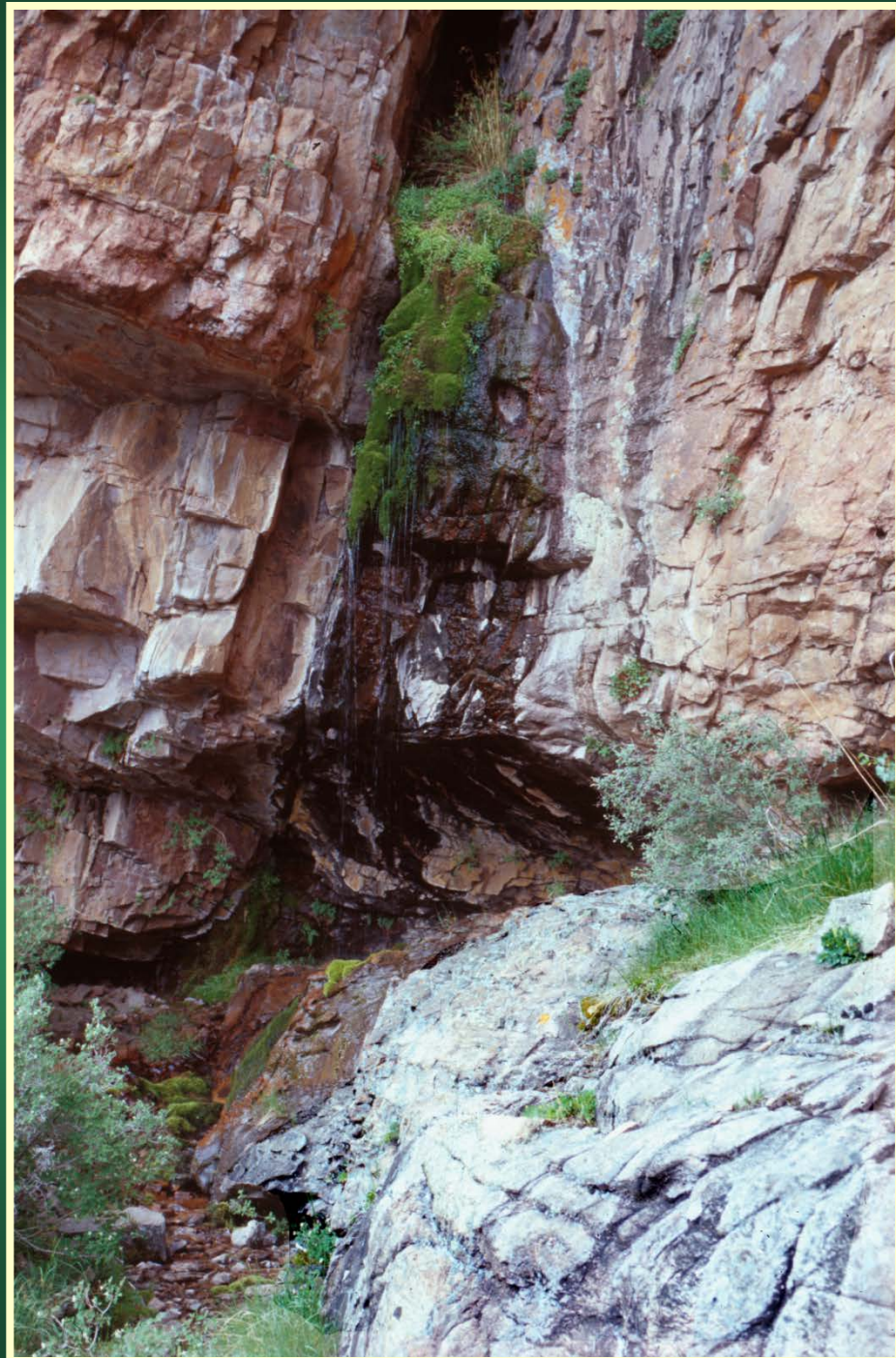
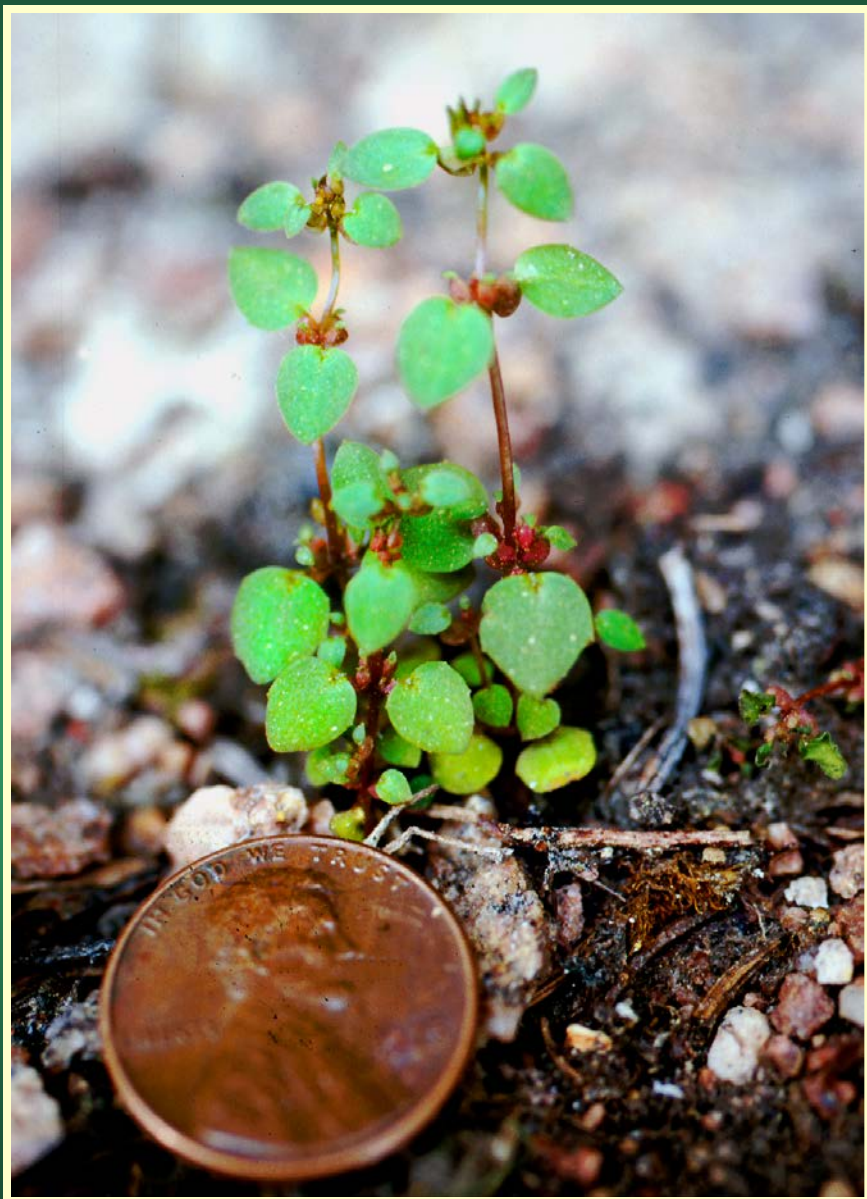
Mimulus gemmiparus

Budding monkeyflower

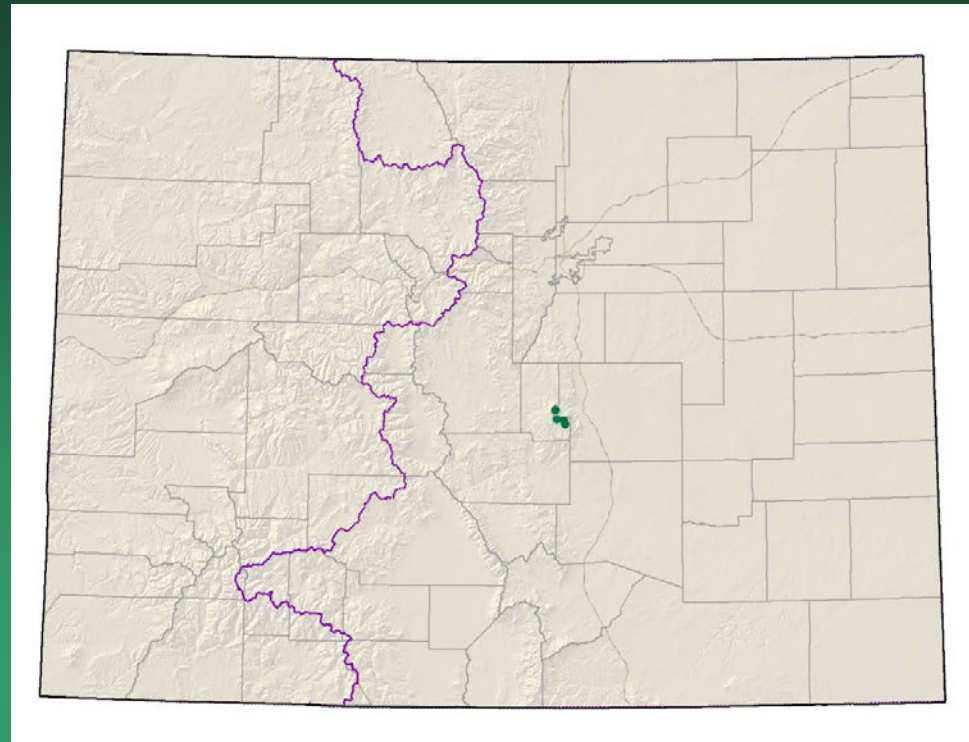


- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, Boulder, Clear Creek, Jefferson, Grand, and Larimer counties
- Last observed: 2012
- Occurrences: 9 (1 historical)
- Individuals: >125,000
- Primary threats: recreational activities, trampling, competition from other plants, interference with hydrology
- Land ownership/management: Rocky Mountain NP, Pike and Arapaho Roosevelt National Forests, State Parks

Mimulus gemmiparus



Oreoxis humilis
Pike's Peak alpine
parsley

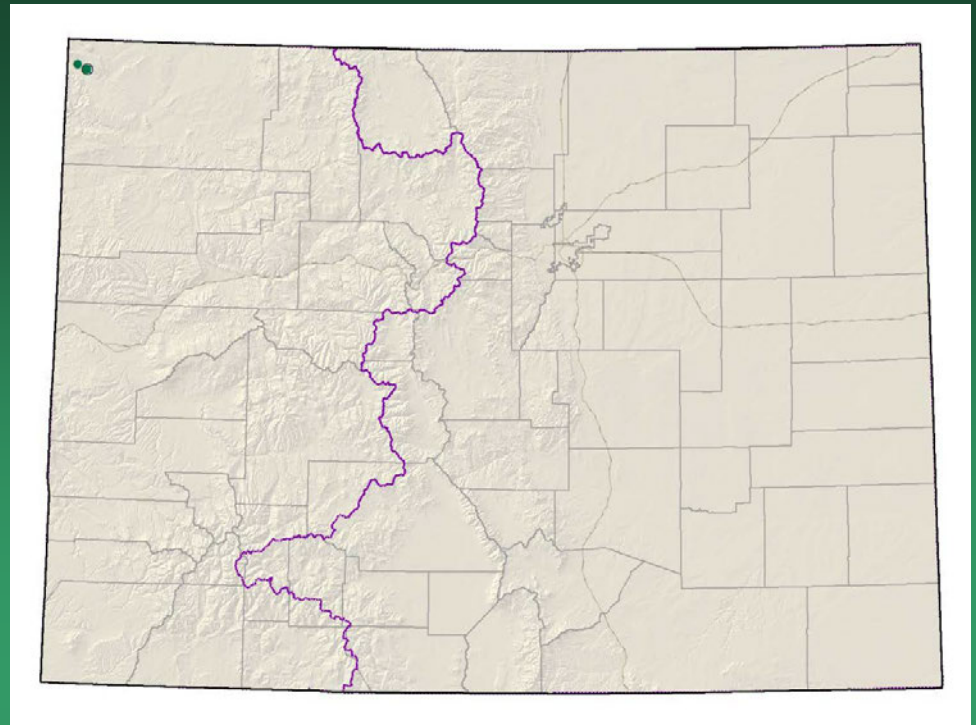


- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic (El Paso and Teller counties)
- Last observed: 2010
- Occurrences: 3 principal occurrences
- Individuals: 4,340 (tens of thousands estimated)
- Primary threats: road erosion and construction, structure maintenance, motorized and non-motorized recreation, herbivory, weeds
- Land ownership/management: Pike National Forest, private (Colorado Springs Utilities)

Oreoxis humilis



Penstemon gibbensii Gibbens' beardtongue



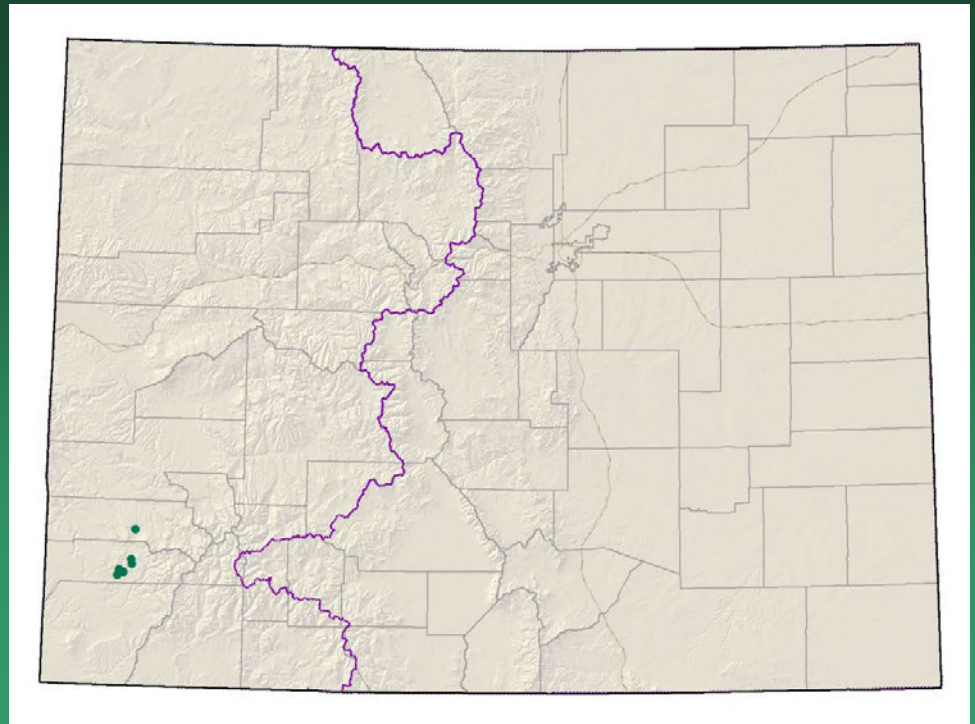
- Federal status: BLM sensitive
- Heritage ranks: G1G2/S1
- Global distribution: SC Wyoming, NE Utah, and NW Colorado (Moffat County)
- Last observed in Colorado: 2010
- Occurrences: 2 in CO; 7 total
- Individuals: 5200 in Colorado; 17,000 individuals total
- Primary threats in CO: noxious weeds, grazing, recreational activities, and uranium mining
- Land ownership in CO: BLM, National Wildlife Refuge

Penstemon gibbensii



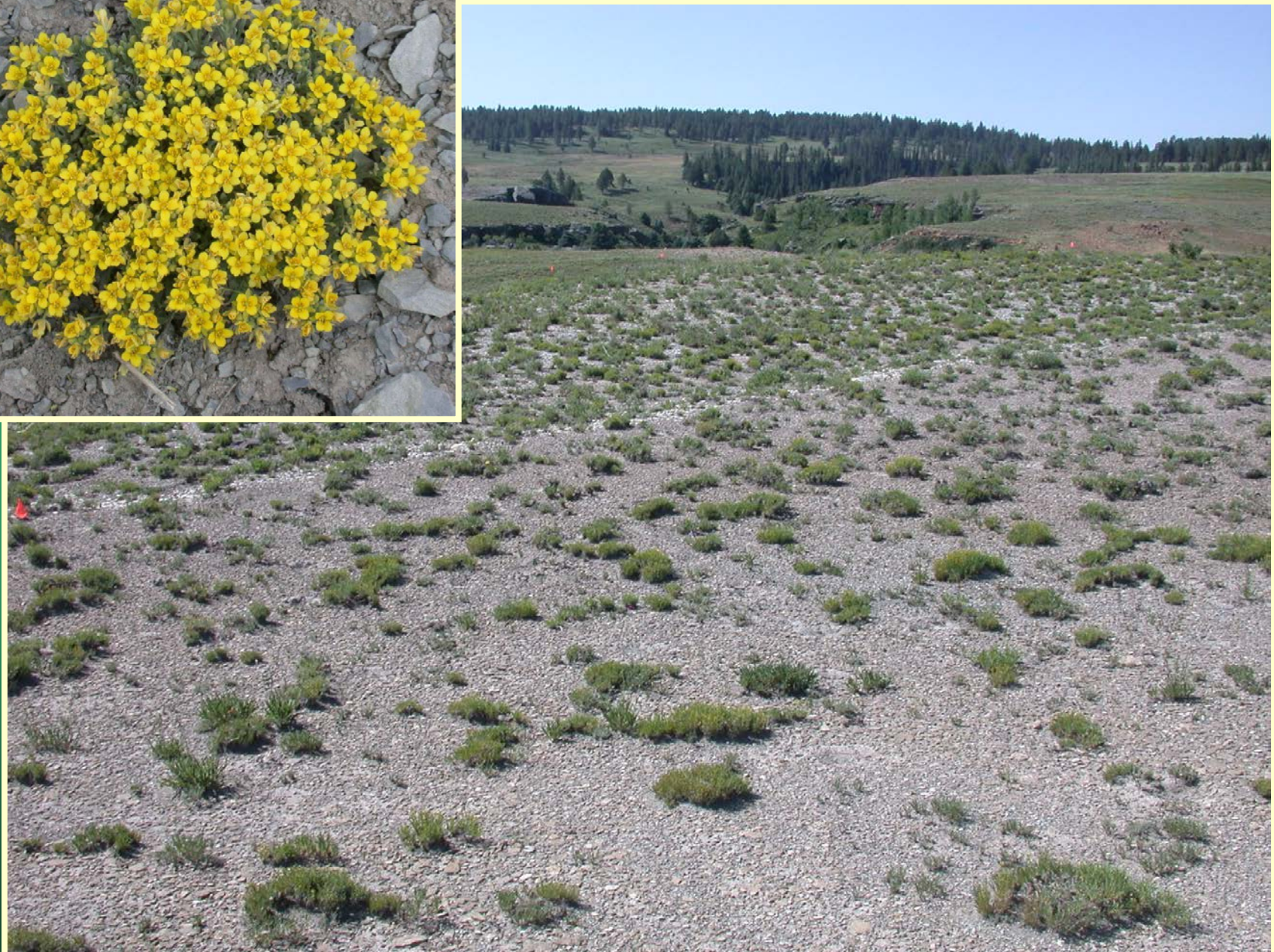
Physaria pulvinata Cushion bladderpod

Conservation Action Plan

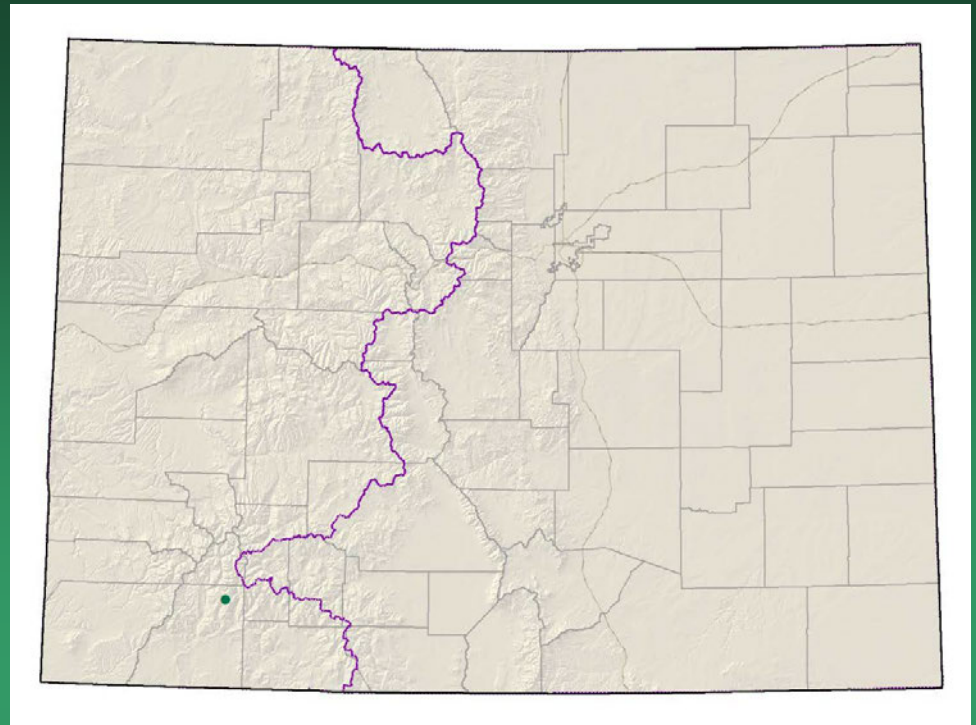


- Federal status: BLM & USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, San Miguel and Dolores counties
- Last observed: 2012
- Occurrences: 6
- Individuals: 22,000
- Primary threats: recreation, livestock trampling, weed control, habitat modification for sage grouse management, roads
- Land ownership/management: Colorado: Miramonte SWA and Lone Mesa State Park, San Juan NF; BLM, private

Physaria pulvinata



Physaria scrotiformis
West Silver
bladderpod



- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, La Plata County
- Last observed in Colorado: 2006
- Colorado occurrences: 1
- Colorado individuals: unknown
- Primary threats: unknown
- Land ownership/management: San Juan NF

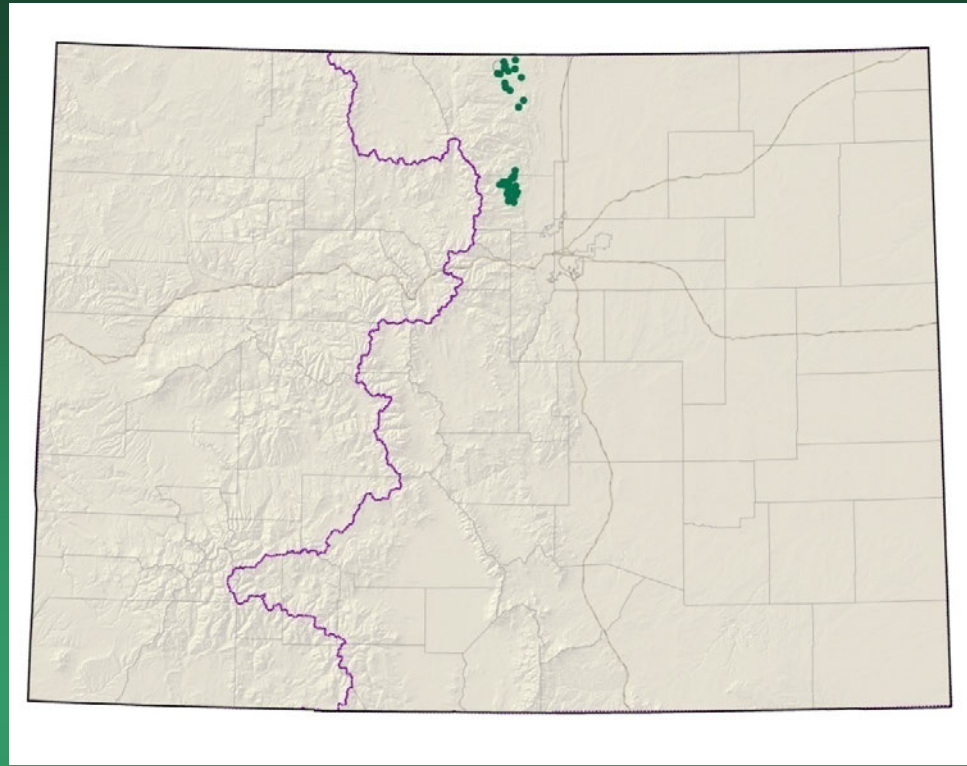
Physaria scrotiformis



2007
Boulder
NE Colorado
G2G3 species

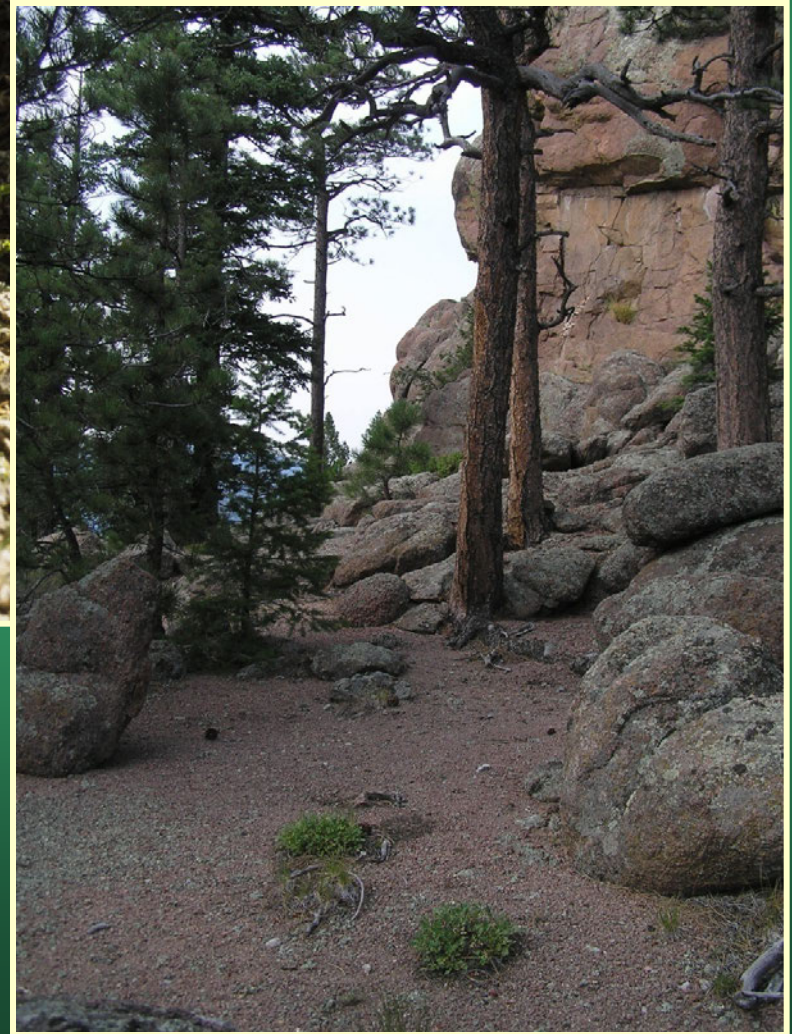
Aletes humilis

Larimer aletes



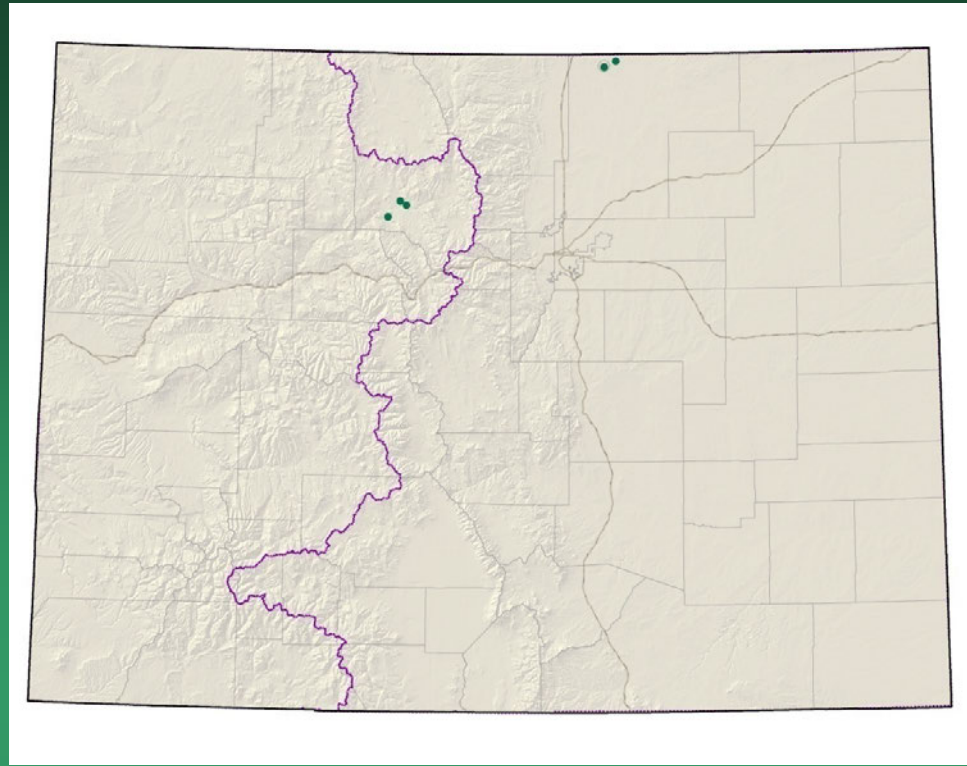
- Federal status: None
- Heritage ranks: G2G3/S2S3
- Global distribution: Colorado (Larimer and Boulder counties). Possibly extending into southern Wyoming.
- Last observed in Colorado: 2007
- Colorado occurrences: 27 (1 is historical)
- Colorado individuals: 15,000+
- Primary threats: Recreational uses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

Aletes humilis



Aletes nuttallii =
Lomatium nutallii

Nuttall's desert-parsley

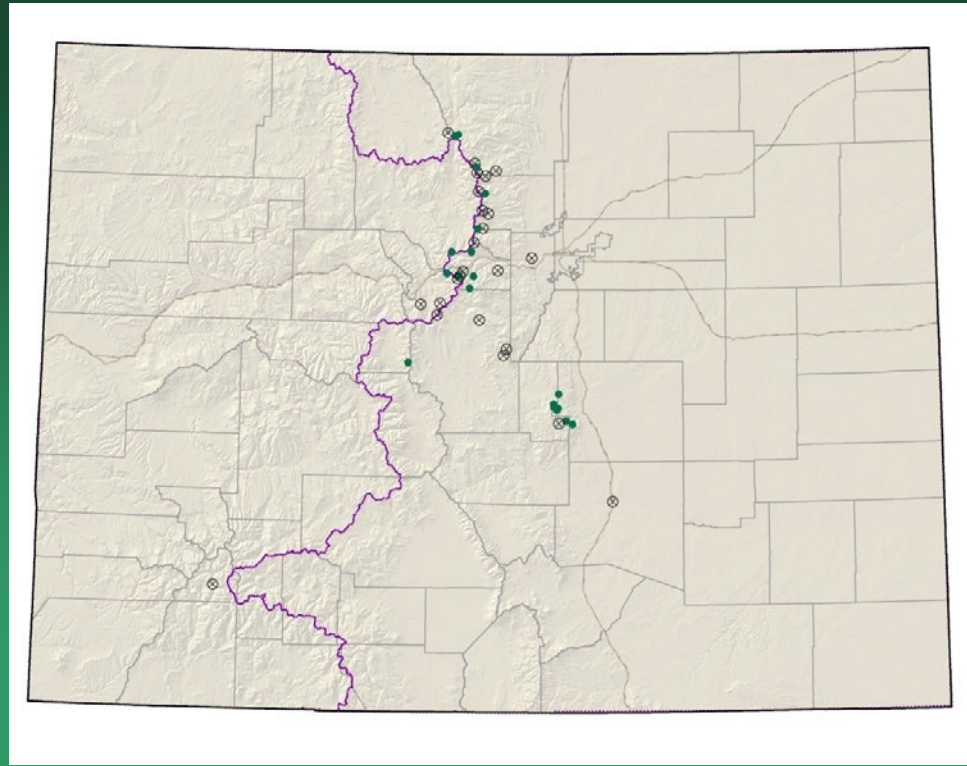


- Federal status: None
- Heritage ranks: G2G3/S2S3
- Global distribution: Montana, Wyoming, Nebraska, South Dakota (historical), Colorado (Grand and Weld counties).
- Last observed in Colorado: June 2005
- Colorado occurrences: 6 (1 is historical)
- Colorado individuals: 6,500
- Primary threats: ORV use, weeds, cattle trampling
- Land ownership/management: State 50%, Private 50%

Aletes nuttallii



Aquilegia saximontana
Rocky Mountain
columbine



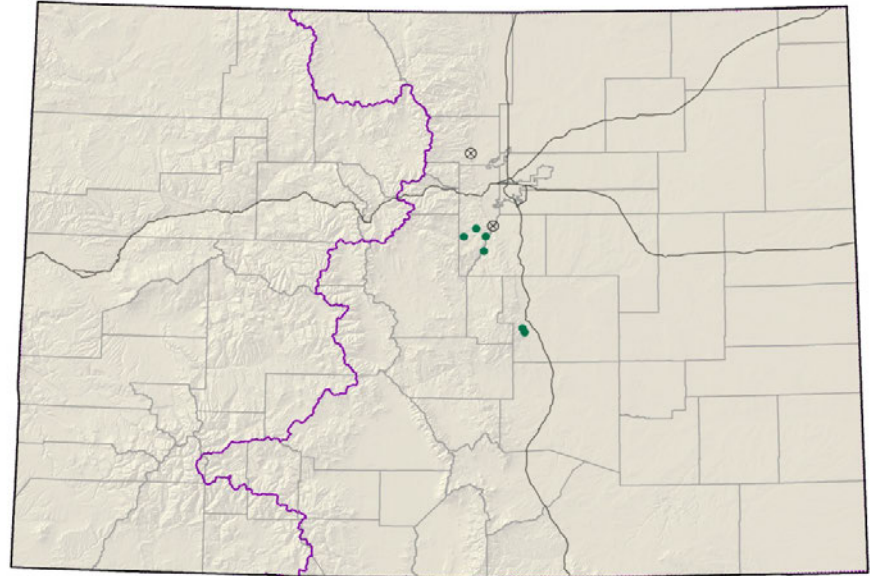
- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Colorado (Boulder, Clear Creek, El Paso, Gilpin, Jackson, Lake, Larimer, Park, Pueblo, San Juan, Summit, and Teller counties).
- Last observed in Colorado: 2011
- Colorado occurrences: 49 (23 are historical)
- Colorado individuals: 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

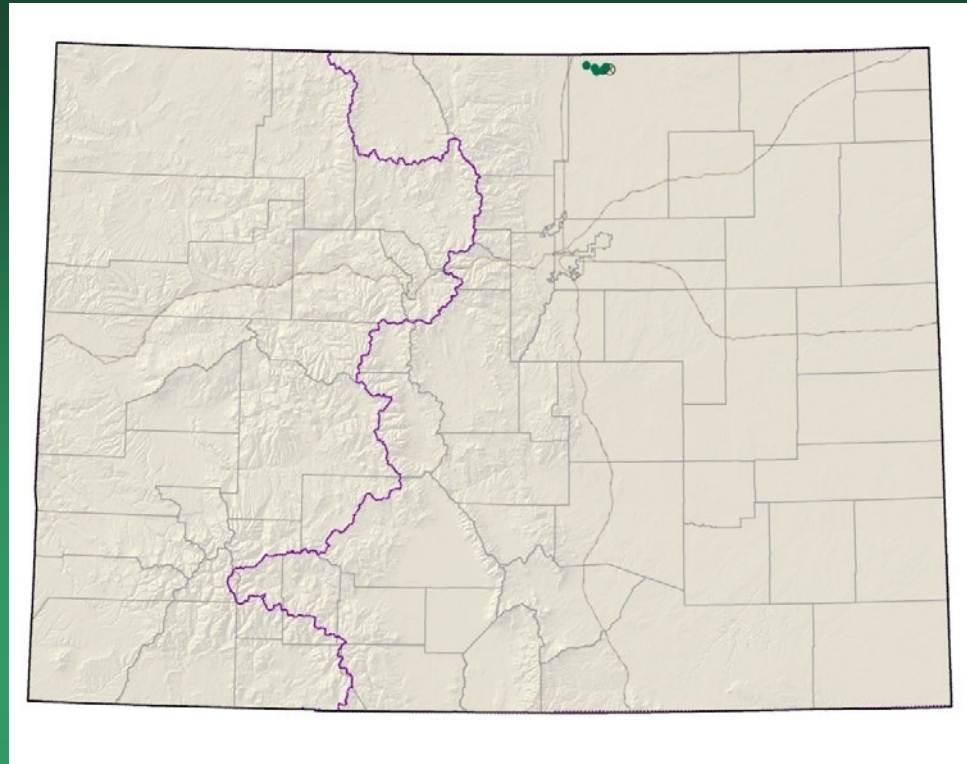
Front Range milk-vetch



- 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



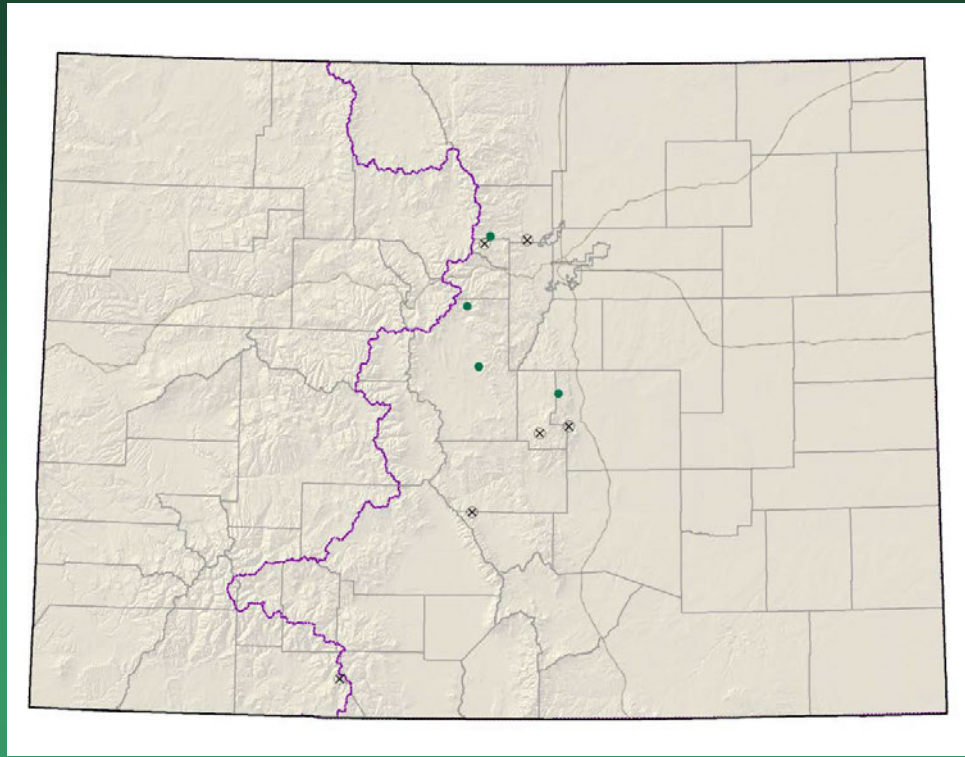
- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Wyoming, New Mexico, Colorado (Weld County)
- Last observed in Colorado: June 2007
- Colorado occurrences: 1 large metapopulation (numerous subpopulations, 1 historical)
- Colorado individuals: 100,000+
- Primary threats: Incidental grazing, hay dumping (State), pipelines
- Land ownership/management: State, Private, USFS/Pawnee NG

Bolophyta alpina



Carex oreocharis

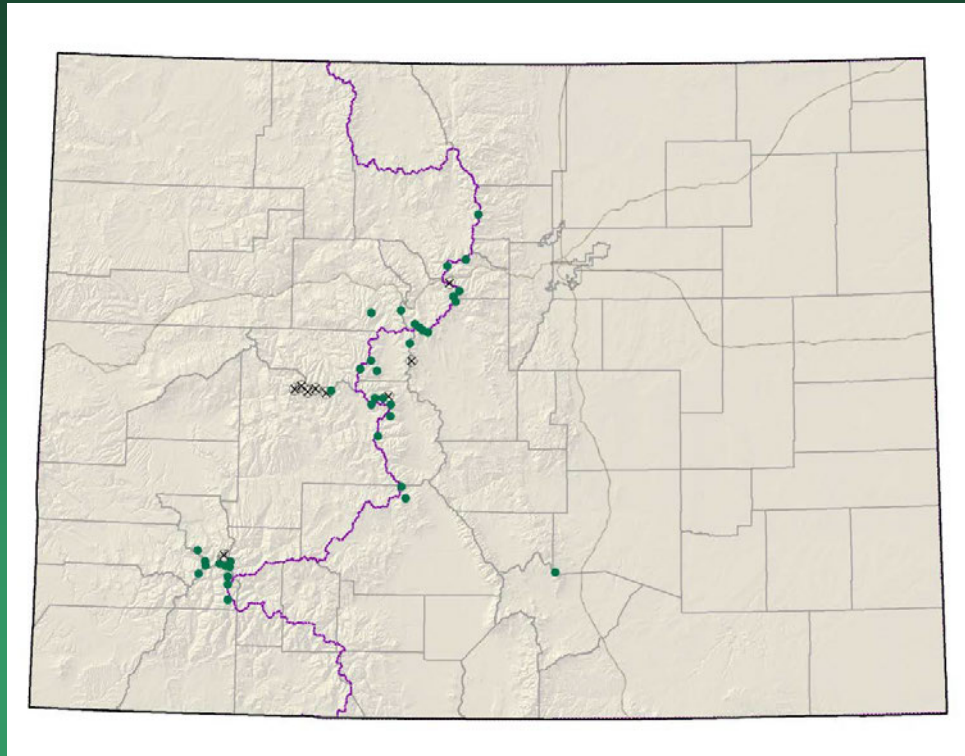
Grassy slope sedge



- Federal status: None
- Heritage ranks: G3/S2
- 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

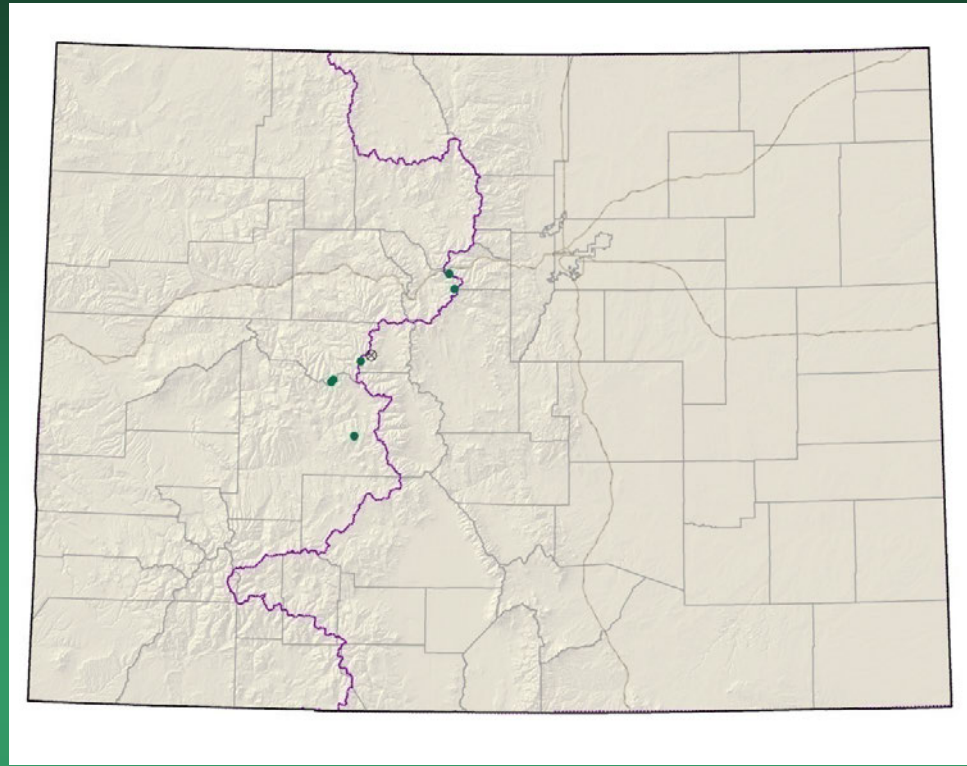


- Federal status: None
- Heritage ranks: G3G4/S3
- Global distribution: Montana, Wyoming, Utah, Colorado (Chaffee, Clear Creek, Eagle, Grand, Gunnison, Huerfano, Lake, Ouray, Park, Pitkin, Pueblo, Saguache, San Juan, San Miguel, Summit counties).
- Last observed in Colorado: 2007
- Colorado occurrences: 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

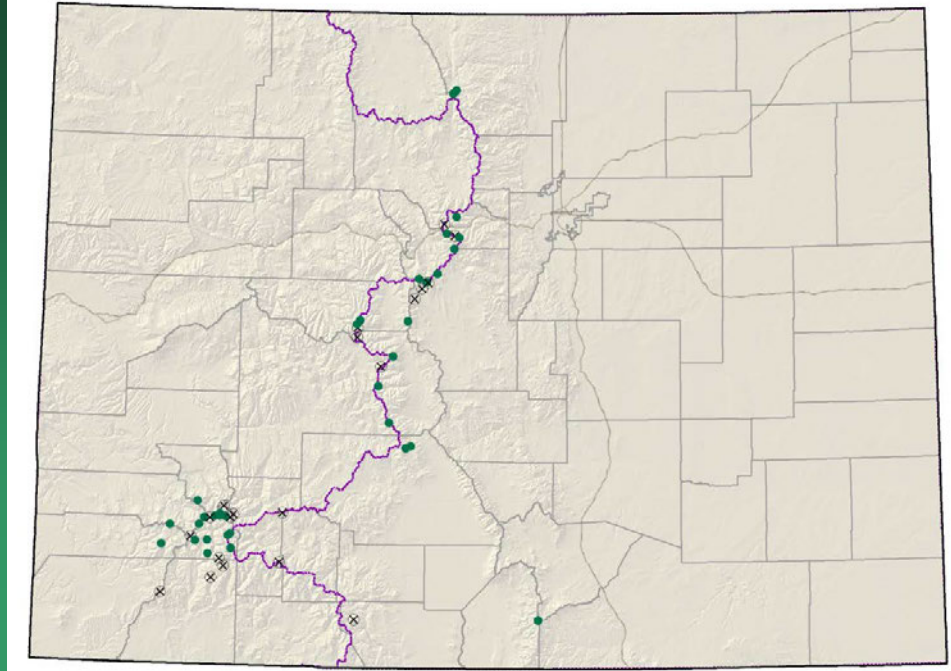


- Federal status: None
- Heritage ranks: G3/S1
- Global distribution: Idaho, Montana, Utah, Wyoming, Colorado (Clear Creek, Gunnison, Lake, and Pitkin counties).
- Last observed in Colorado: 2006
- Colorado occurrences: 7 (1 is historical)
- Colorado individuals: 150
- Primary threats: recreational use,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

Draba globosa



Draba streptobrachia
Colorado Divide
whitlow-grass

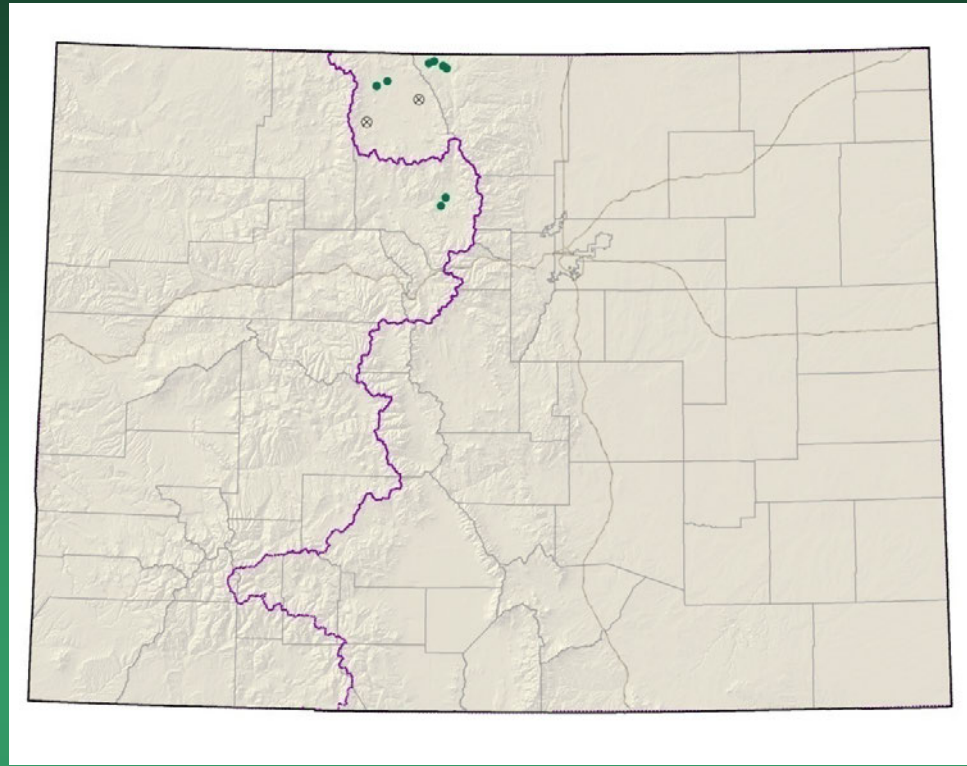


- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Colorado endemic (Chaffee, Clear Creek, Conejos, Costilla, Dolores, Gunnison, Hinsdale, Huerfano, La Plata, Lake, Larimer, Mineral, Ouray, Park, Pitkin, Saguache, San Juan, San Miguel, and Summit counties).
- Last observed in Colorado: 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

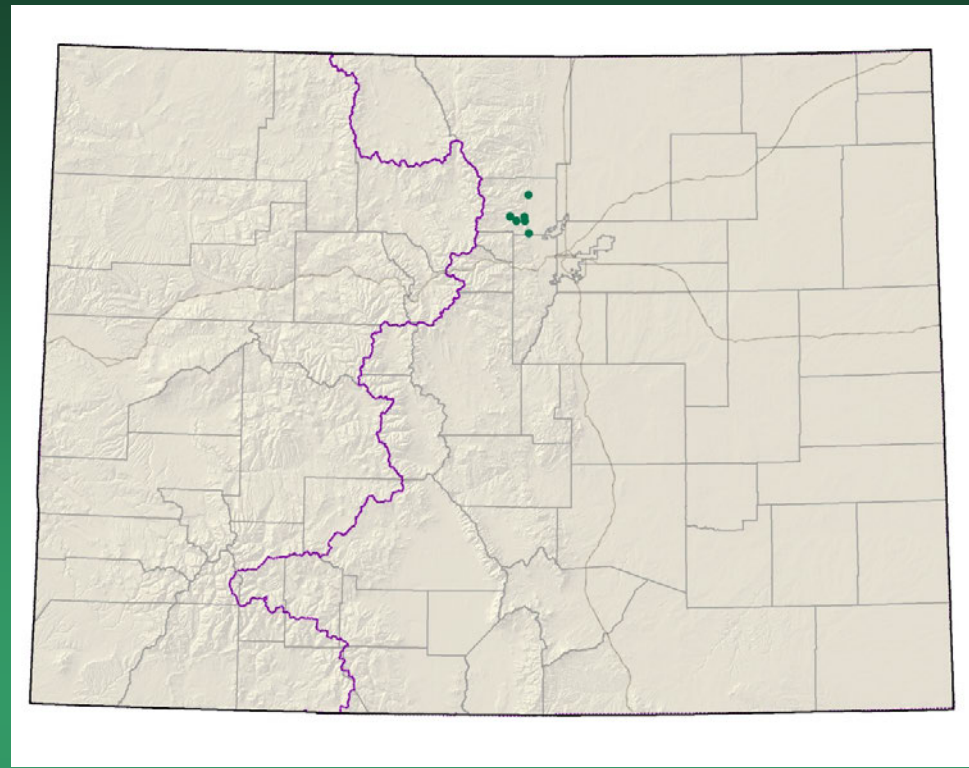


- Federal status: USFS sensitive
- Heritage ranks: G3/S2
- Global distribution: Wyoming, Colorado (Grand, Jackson, and Larimer counties).
- Last observed in Colorado: 2012
- Colorado occurrences: 10 (2 are historical)
- Colorado individuals: greater than 1,000,000
- Primary threats: weeds, incompatible grazing, roads
- Land ownership/management: BLM, state and private

Eriogonum exilifolium



Nuttallia (Mentzelia)
sinuata
Wavy-leaf stickleaf



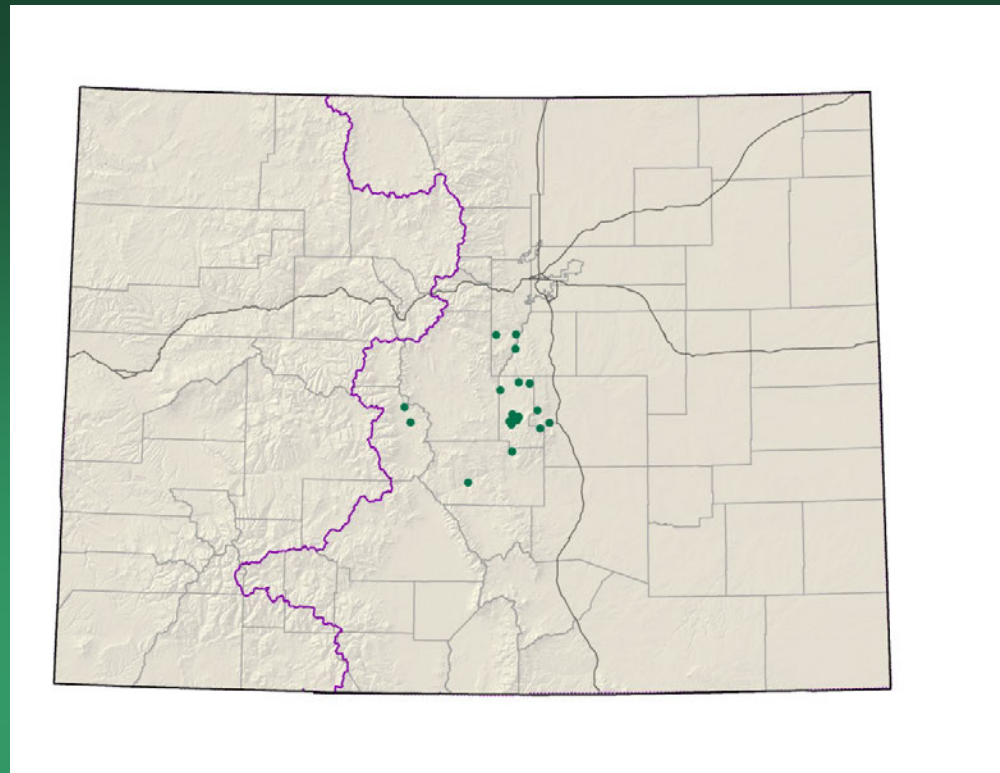
- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Wyoming and Colorado (Boulder and Larimer counties).
- Last observed in Colorado: 2007
- Colorado occurrences: 12 (4 are historical)
- Colorado individuals: hundreds+
- Primary threats: road work, misidentification as weeds
- Land ownership/management: USFS 67%, City 33%

Nuttallia sinuata



Nuttallia speciosa

Jeweled blazingstar



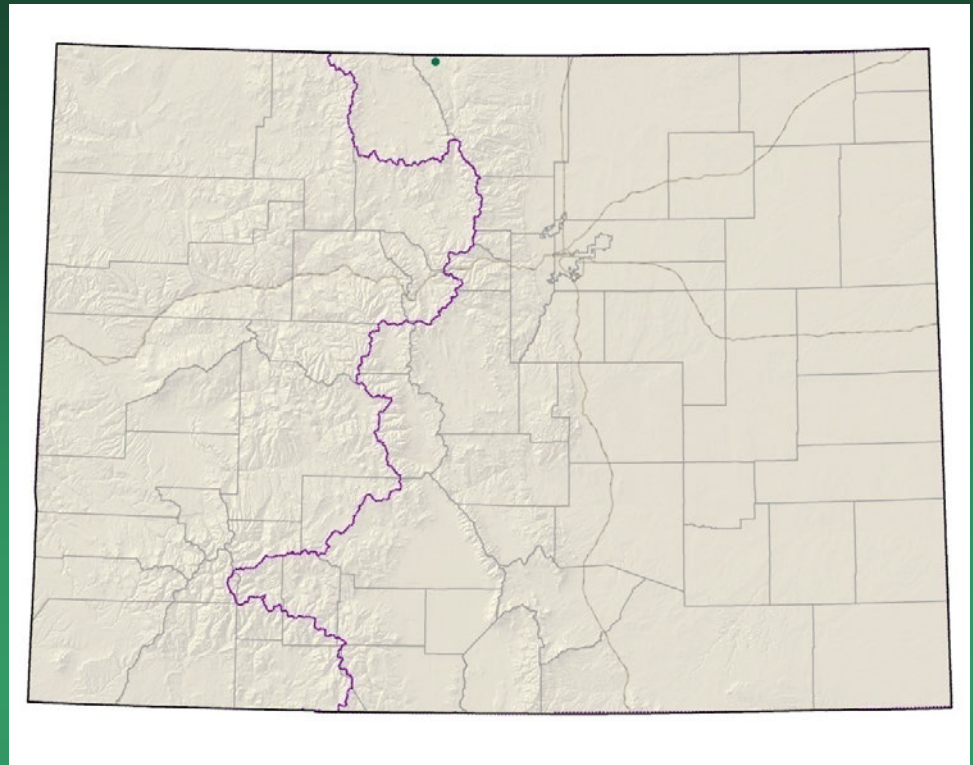
- Federal status: None
- Heritage ranks: G3/S3
- Global distribution: Wyoming and Colorado (Arapahoe, Chaffee, Clear Creek, Douglas, El Paso, Fremont, Gilpin, Jefferson, Mineral, Saguache, and Teller counties).
- Last observed in Colorado: 2011
- Colorado occurrences: 19
- Colorado individuals: ~10,000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

Nuttallia speciosa



Oenopsis wardii

Ward's golden-weed



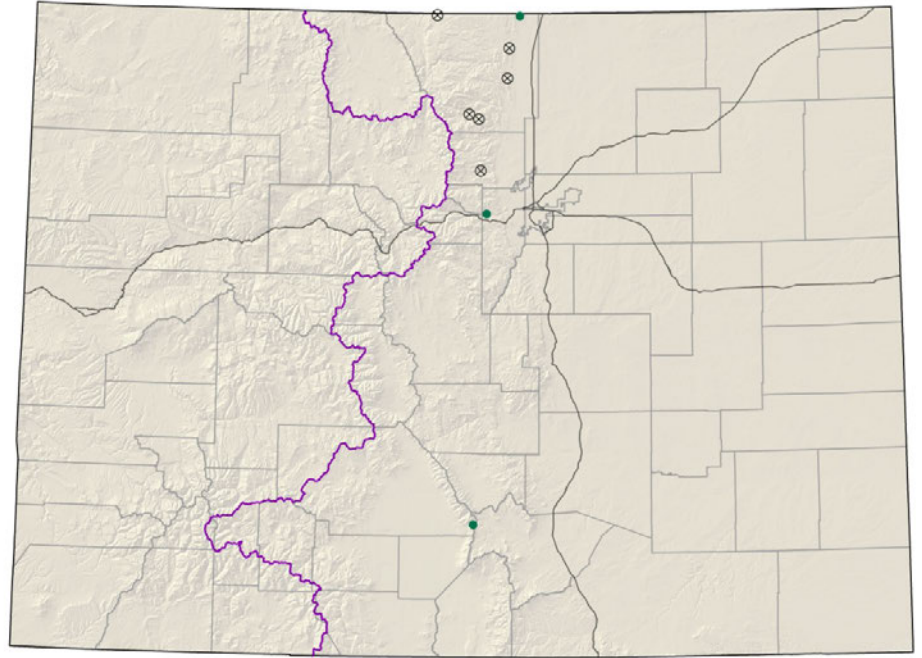
- Federal status: None
- Heritage ranks: G3/S1
- Global distribution: Wyoming and Colorado (Larimer County).
- Last observed in Colorado: August 2004
- Colorado occurrences: 1
- Colorado individuals: 300+
- Primary threats: incompatible grazing
- Land ownership/management: BLM

Oenopsis wardii



Phacelia denticulata

Rocky Mountain phacelia

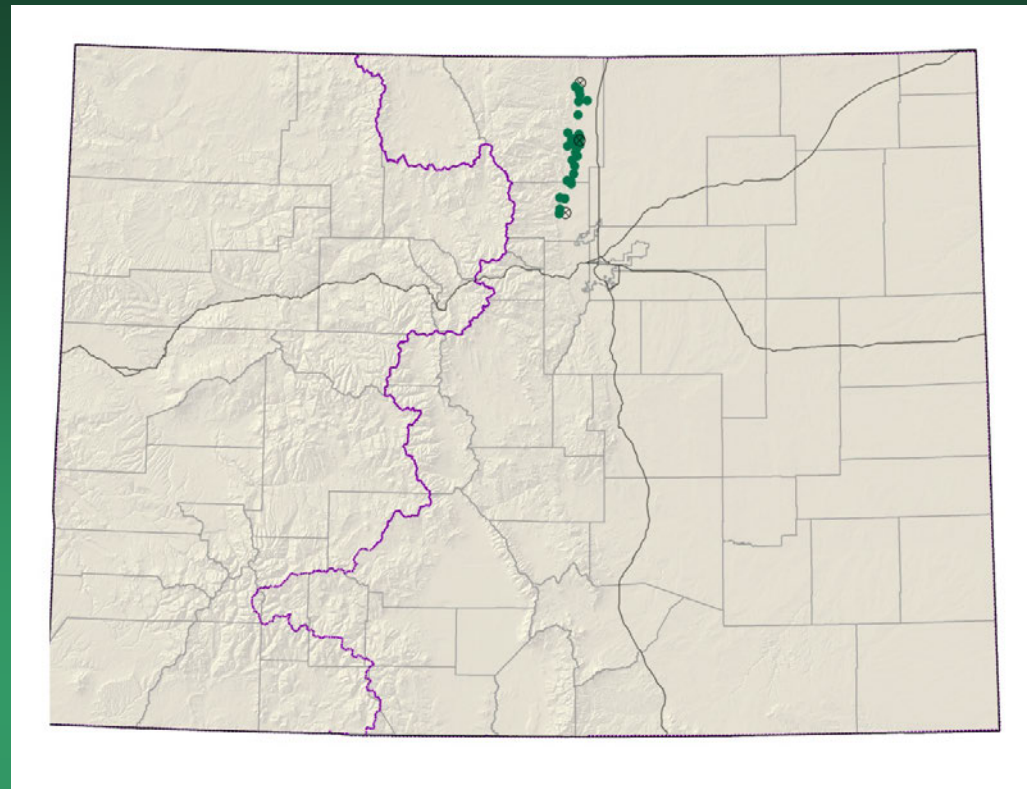


- Federal status: None
- Heritage ranks: G3/SU
- Global distribution: Wyoming, New Mexico, Colorado (Boulder, Clear Creek, Costilla, Douglas, El Paso, Larimer, Las Animas, and Park counties).
- Last observed in Colorado: 2009
- Colorado occurrences: 8+ (6 are historical)
- Colorado individuals: unknown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



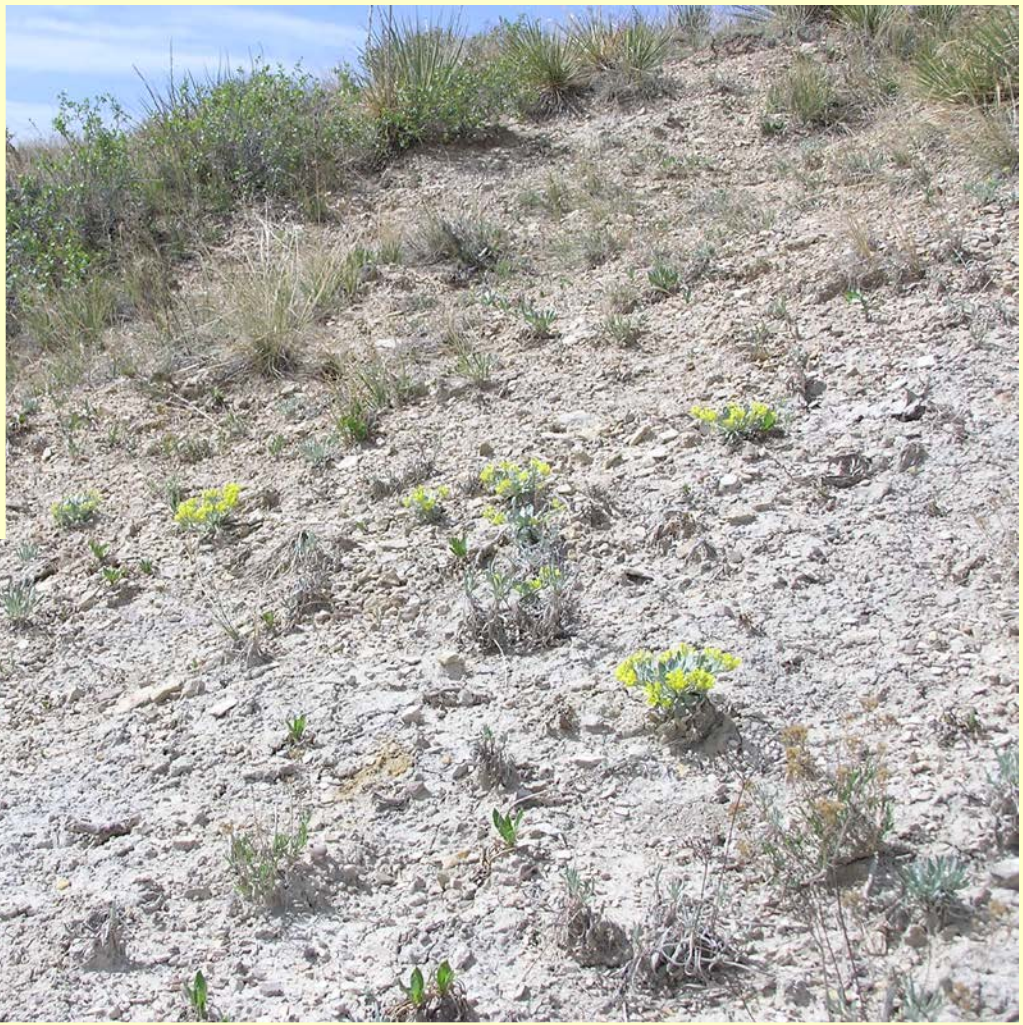
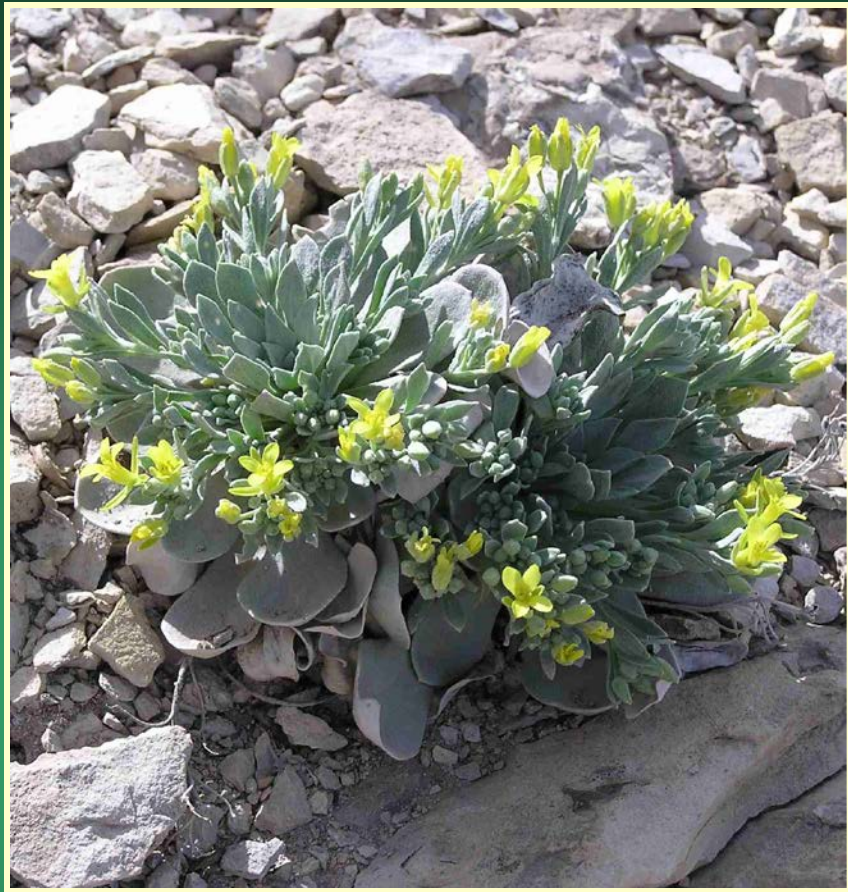
Physaria bellii

Bell's twinpod

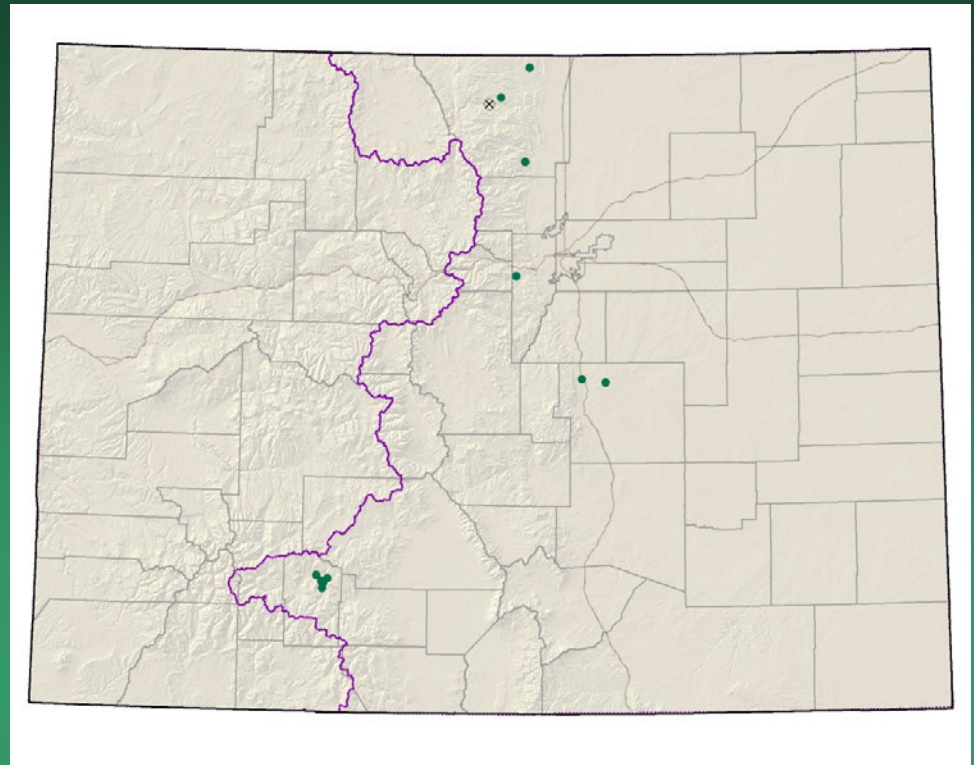


- Federal status: None
- Heritage ranks: G2G3/S2S3
- Global distribution: Colorado endemic (Boulder and Larimer counties). Jefferson and El Paso County records annotated to a different species.
- Last observed in Colorado: 2011
- Colorado occurrences: 25 (3 are historical)
- Colorado individuals: Approximately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

Physaria bellii



Potentilla ambigens
Southern Rocky
Mountain cinquefoil

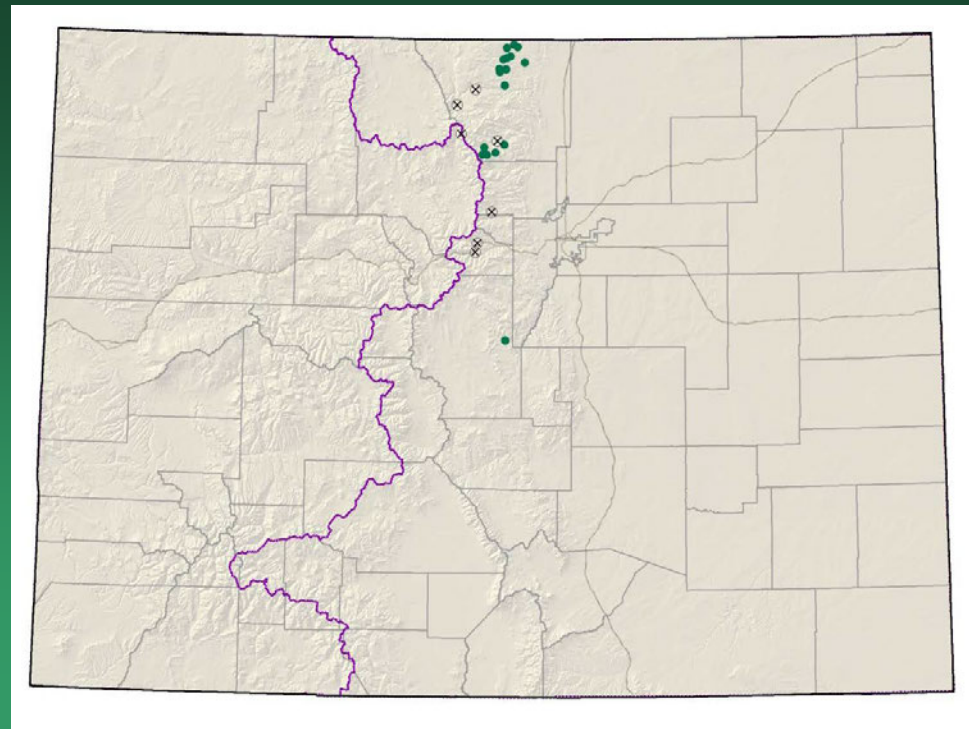


- Federal status: None
- Heritage ranks: G3/S1S2
- Global distribution: New Mexico, Wyoming (historical), and Colorado (El Paso, Jefferson, Larimer and Mineral counties).
- Last observed in Colorado: 2012
- Colorado occurrences: 11 (1 is historical)
- Colorado individuals: 5,000
- Primary threats: recreation, grazing, weeds
- Land ownership/management: USFS, DoD, local government, state, private

Potentilla ambigens



Potentilla rupincola Rocky Mountain cinquefoil



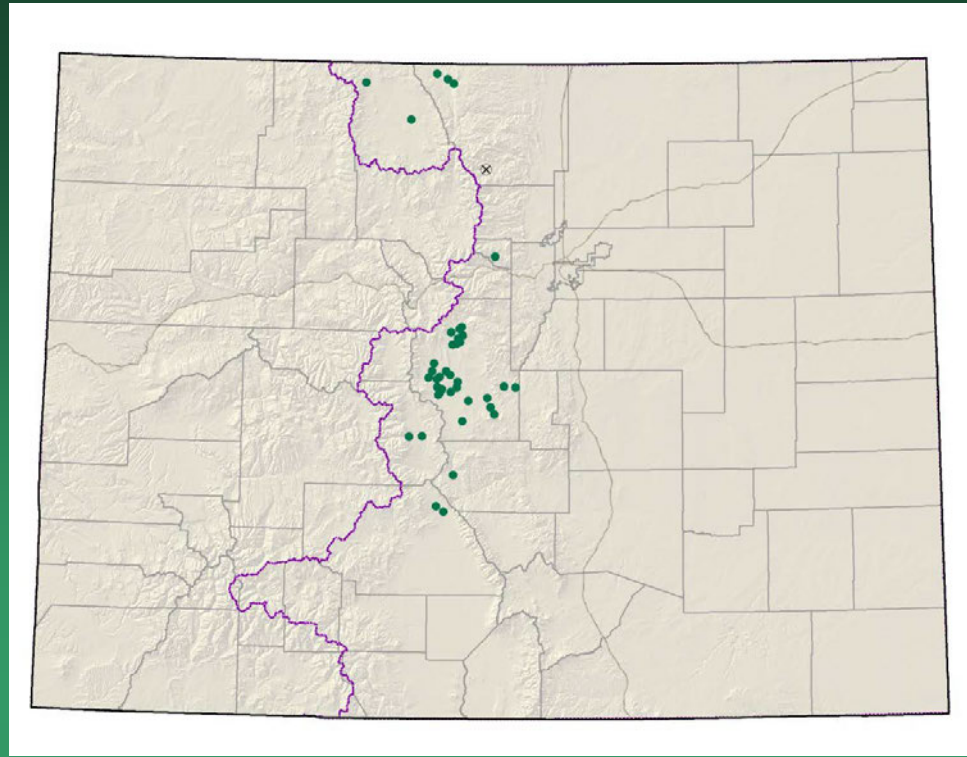
- Federal status: USFS Sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic. Boulder, Larimer, and Park counties. Historically from Gilpin county.
- Last observed in Colorado: 2009
- Colorado occurrences: 25 (7 are historical)
- Colorado individuals: 36,000+
- Primary threats: weeds, 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: 2009
- Colorado occurrences: 52 (10 are 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

