

The Colorado Rare Plant Technical Committee presents:

16th Annual

Colorado Rare Plant Symposium

Sept. 27, 2019

Grand Junction, Colorado

Sponsored by:

Colorado Native Plant Society
Colorado Natural Heritage Program
University of Colorado Herbarium



Thanks to all who have contributed photos for the presentations

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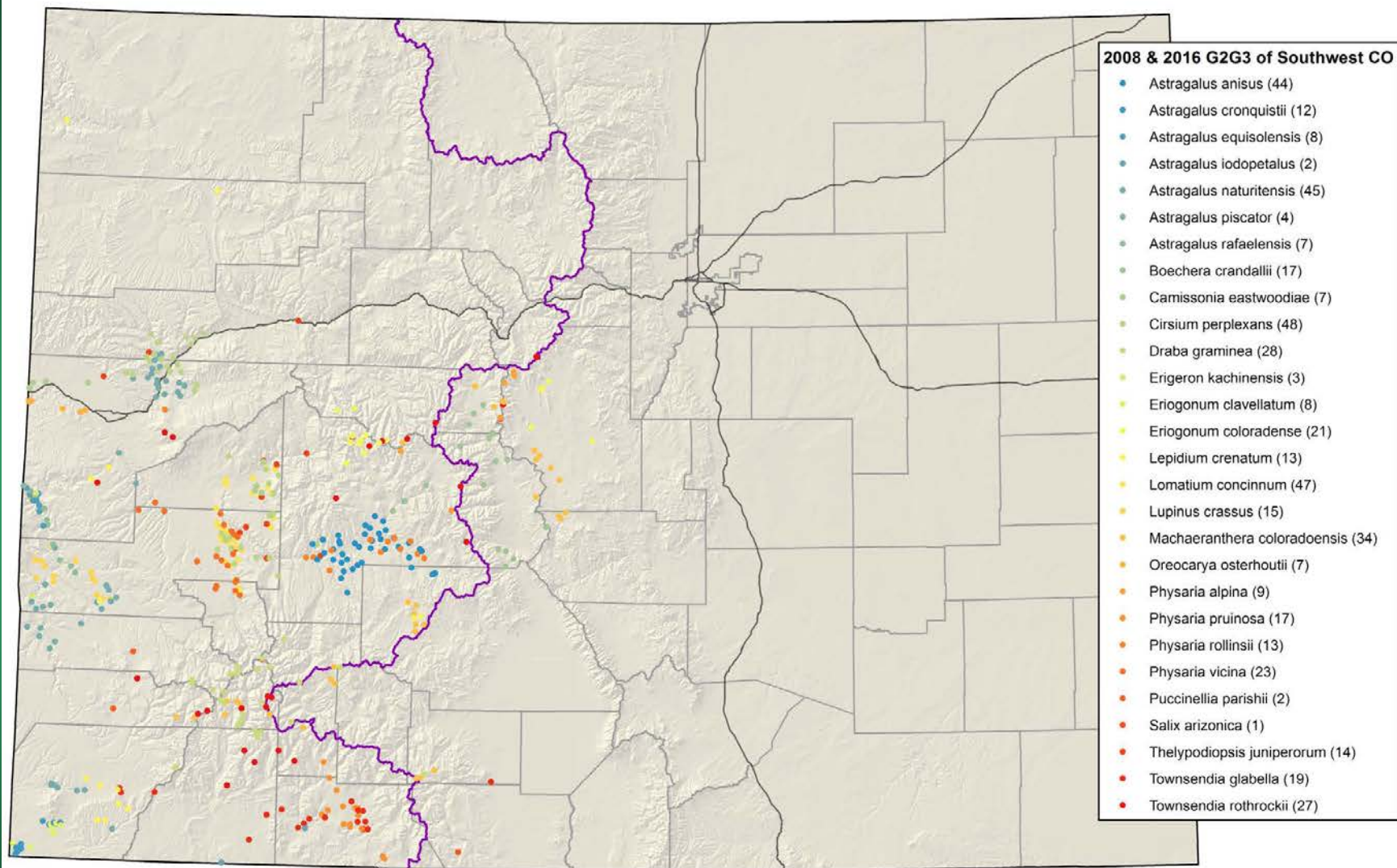
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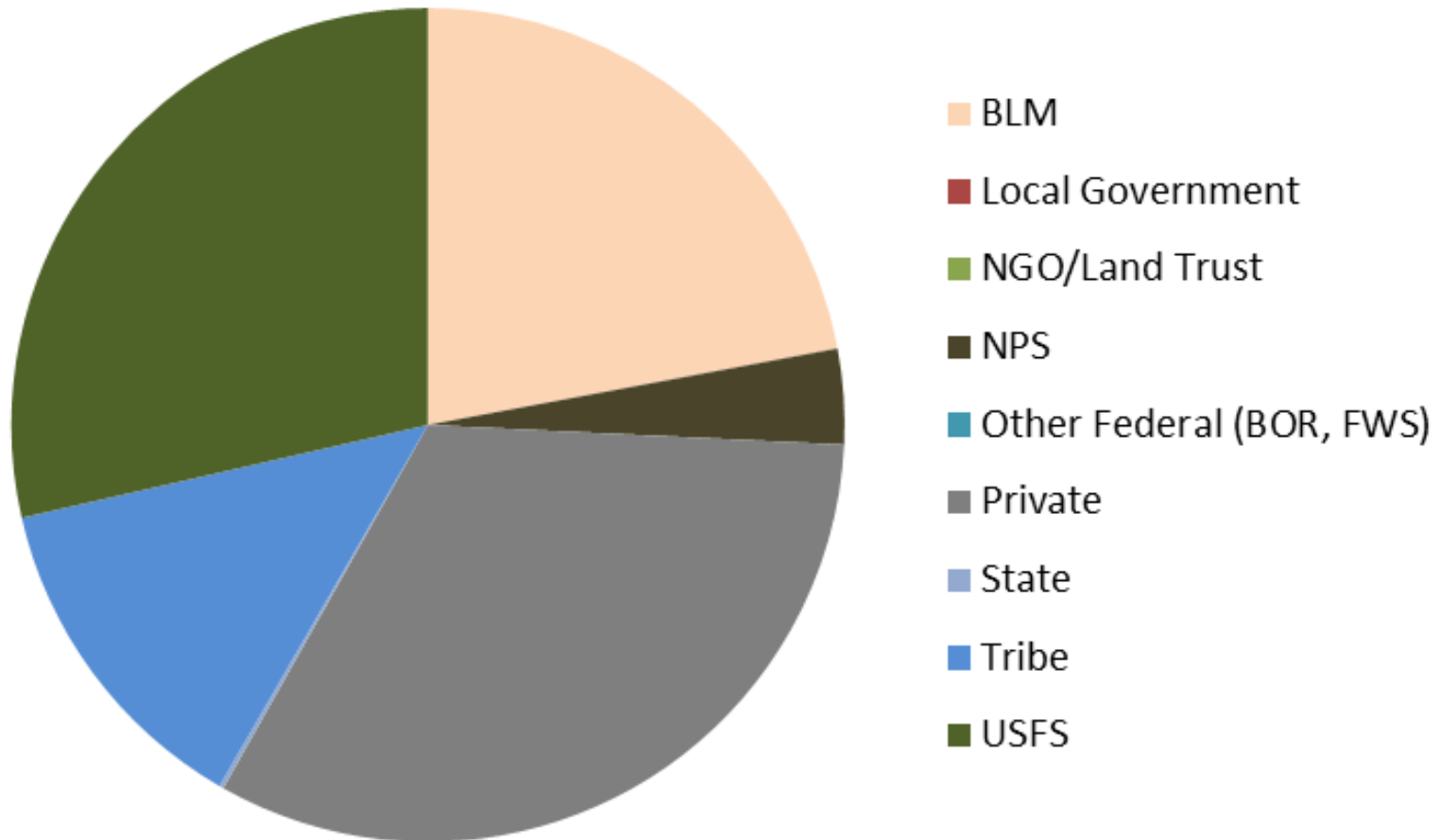
Lorraine Yeatts

Colorado Rare Plant Symposia
2019
G2 Species
of
SW Colorado

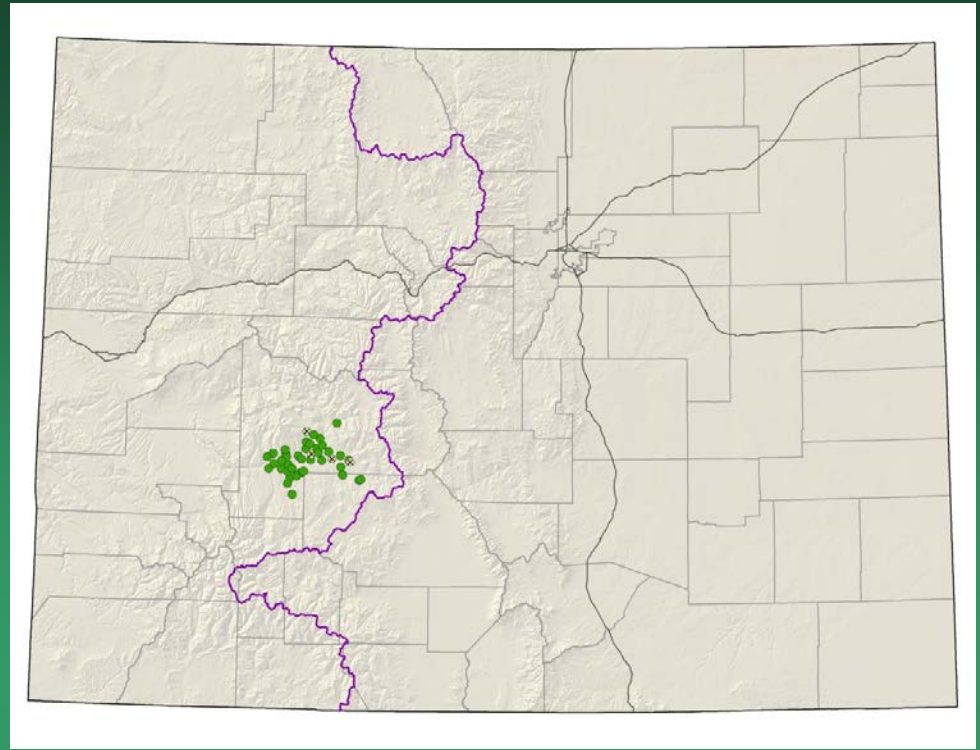


Location of SW Colorado G2G3 Plant Species

Land Ownership of G2G3 Plant Species of SW Colorado



Astragalus anisus Gunnison milkvetch



- Federal status: BLM sensitive
- Heritage ranks: G2G3/S2S3
- Global distribution: endemic to Colorado (Gunnison & Saguache counties)
- Elevation range: 7,520-9,740 ft.
- Last observed in Colorado: 2018
- Colorado occurrences: 45 (5 are historical)
- Colorado individuals: 10,000+
- Primary threats: road building, off-road vehicle use, non-motorized recreation, incompatible grazing, residential development, resource extraction
- Land ownership/management: BLM, NPS, federal, state, private, USFS

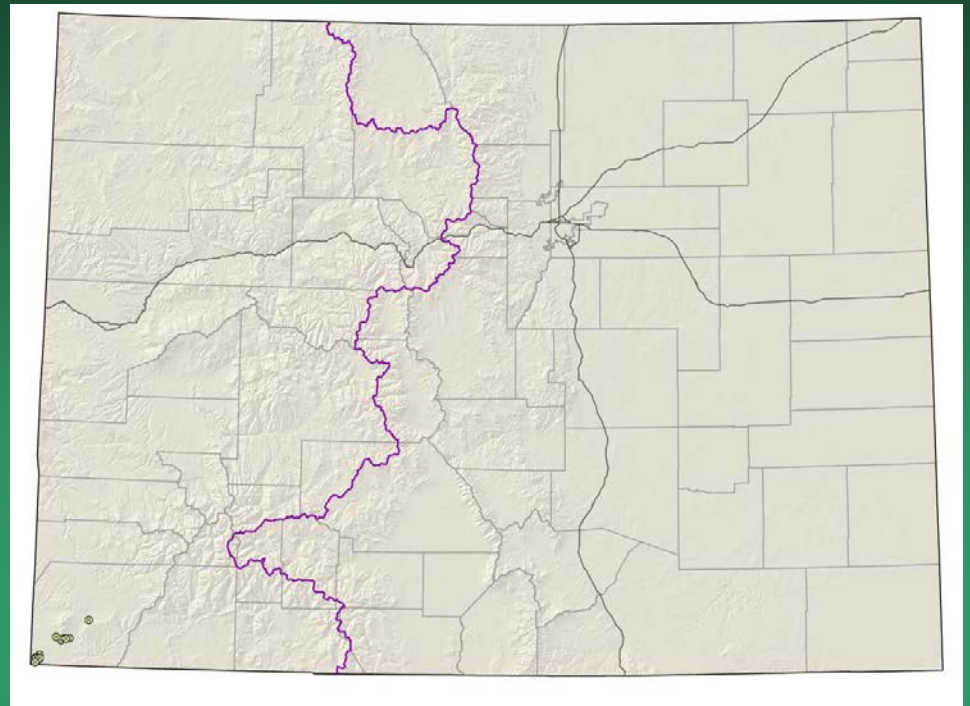


Astragalus anisus

Astragalus cronquistii

Cronquist's milkvetch

- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: Utah and Colorado (Montezuma County)
- Elevation range: 4,700-6,320 ft.
- Last observed in Colorado: 1993
- Colorado occurrences: 13 (all are historical)
- Colorado individuals: ~1500
- Primary threats: roads, unknown
- Land ownership/management: Tribal

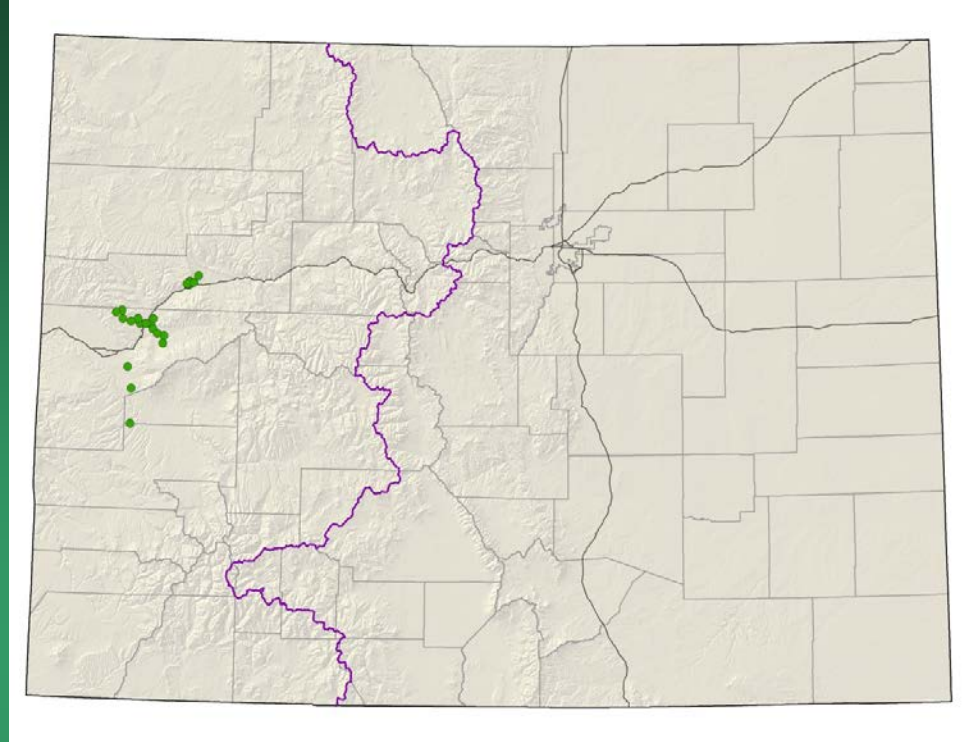




Astragalus cronquistii

Astragalus debequaeus

Debeque milkvetch

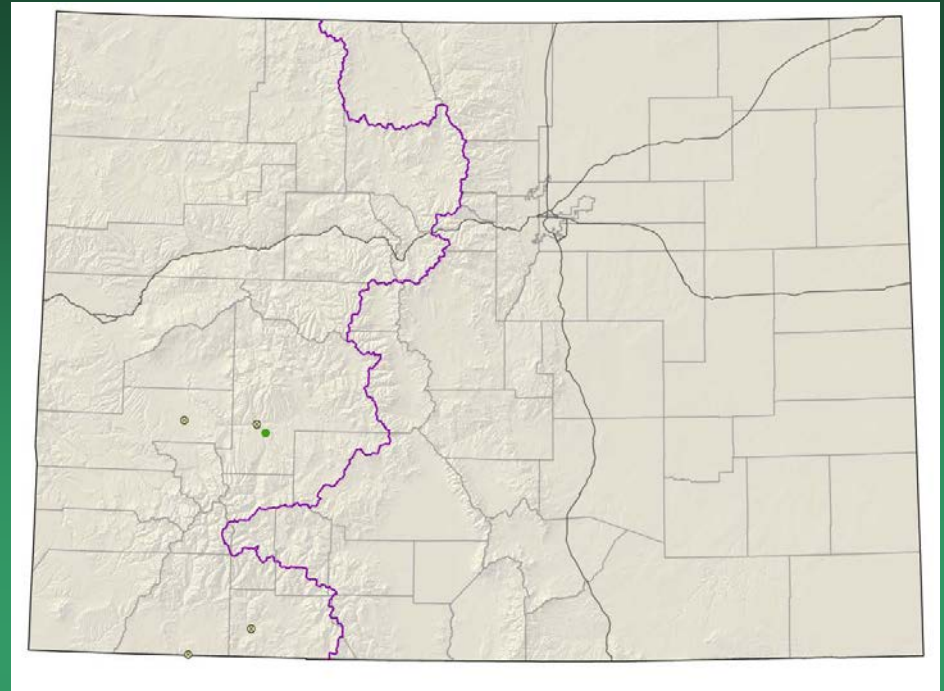


- Federal status: BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic (Delta, Garfield and Mesa counties)
- Elevation range: 4,950-6,680 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 22
- Colorado individuals: >62,000
- Primary threats: Disturbance by oil and gas development
- Land ownership/management: BLM, private



Astragalus debequaeus

Astragalus iodopetalus violet milkvetch



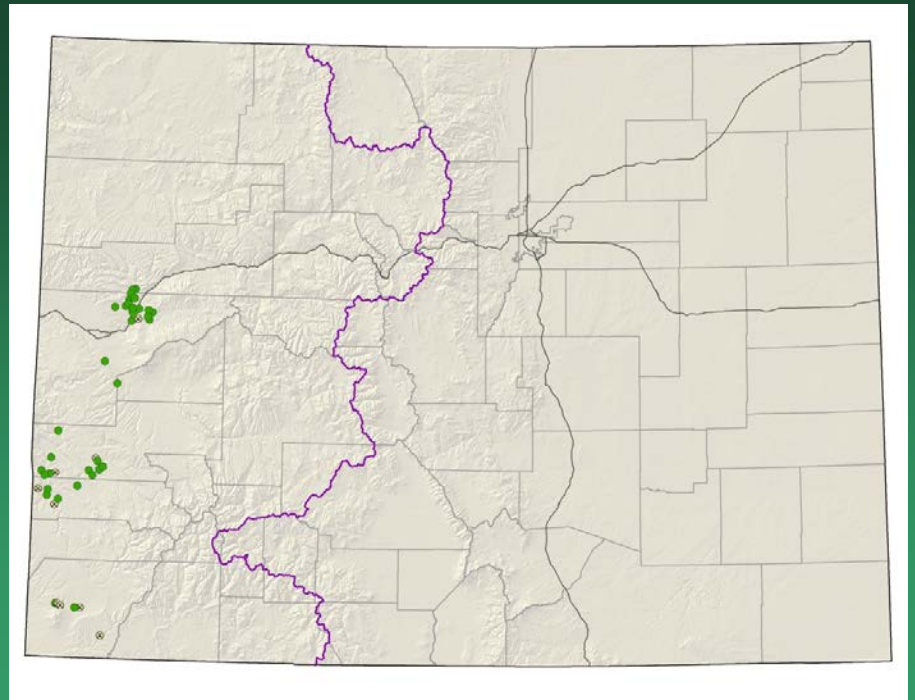
- Federal status: USFS sensitive
- Heritage ranks: G2/S1
- Global distribution: New Mexico (historical) and Colorado (Archuleta, Gunnison, La Plata and Montrose counties).
- Elevation range: 6,500-7,260 ft.
- Last observed in Colorado: 2015
- Colorado occurrences: 6 (4 are historical)
- Colorado individuals: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

Astragalus iodopetalus



Astragalus naturitensis

Naturita milkvetch



- Federal status: BLM sensitive
- Heritage ranks: G3?/S2S3
- Global distribution: New Mexico, Utah, the Navajo Nation and Colorado (Garfield, Mesa, Montezuma, Montrose and San Miguel counties)
- Elevation range: 4,830-7,030 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 49 (10 are historical)
- Colorado individuals: 10,400+
- Primary threats: Recreation, oil and gas development, uranium claims
- Land ownership/management: BLM, private, tribe, USFS

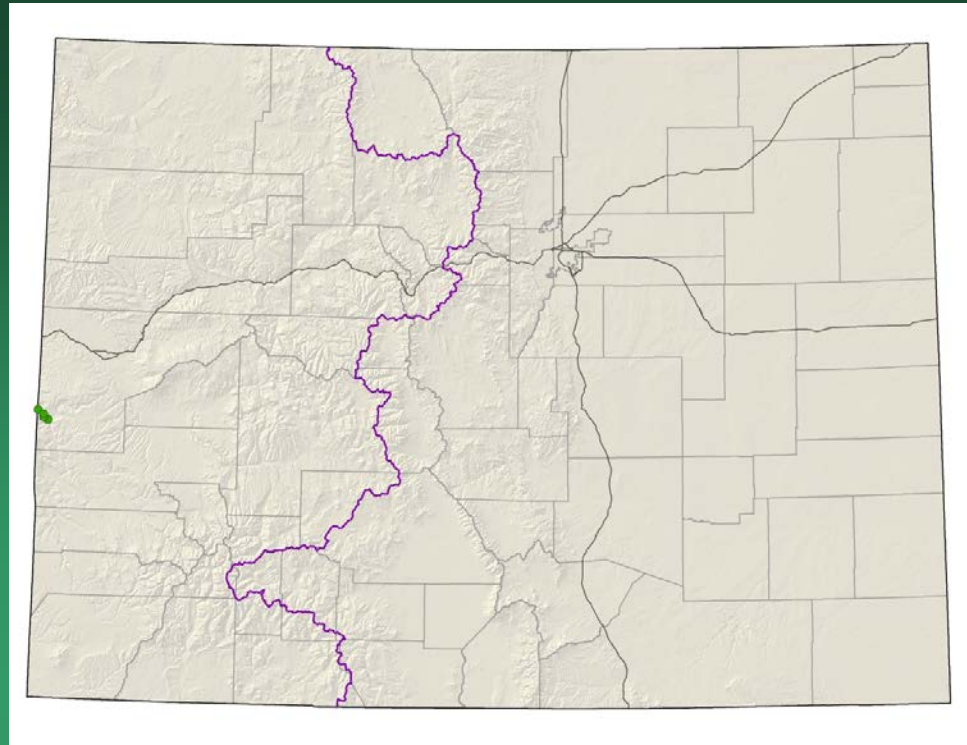
Astragalus naturitensis



Astragalus piscator Fisher Towers milkvetch

Conservation Action Plan

- Federal status: BLM sensitive
- Heritage ranks: G2G3/S1
- Global distribution: Utah and Colorado (Mesa County)
- Elevation range: 4,500-5,580 ft.
- Last observed in Colorado: 2016
- Colorado occurrences: 4
- Colorado individuals: 3000-5000
- Primary threats: recreation, roads
- Land ownership/management: BLM, private

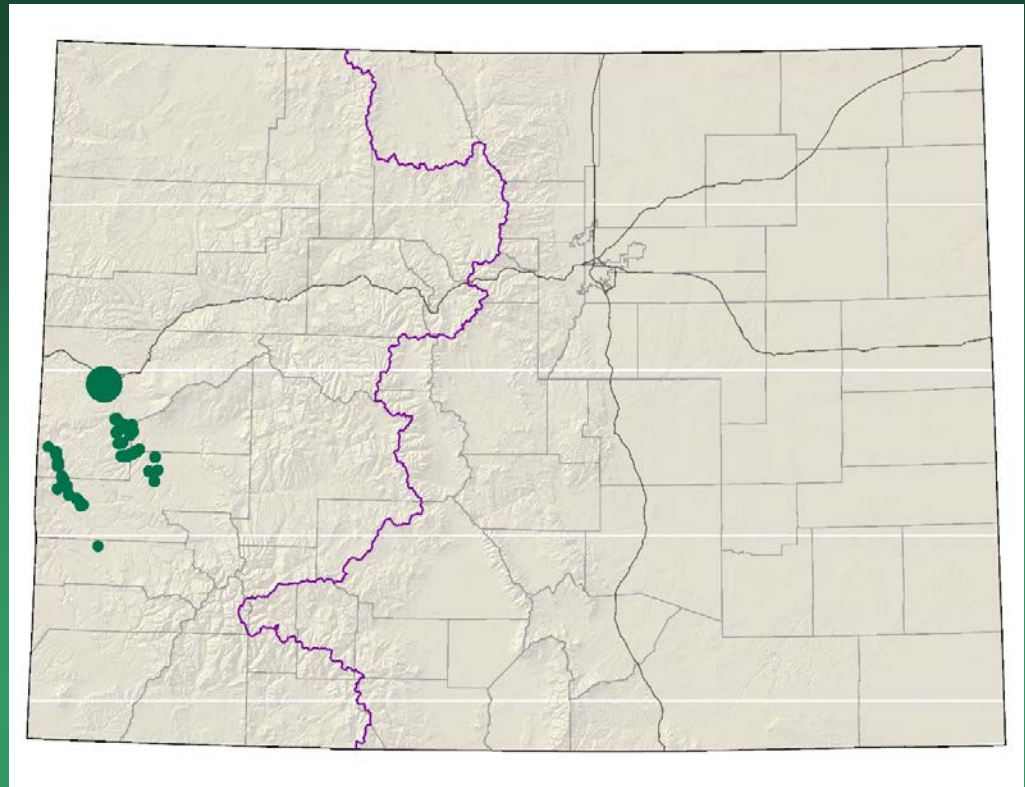


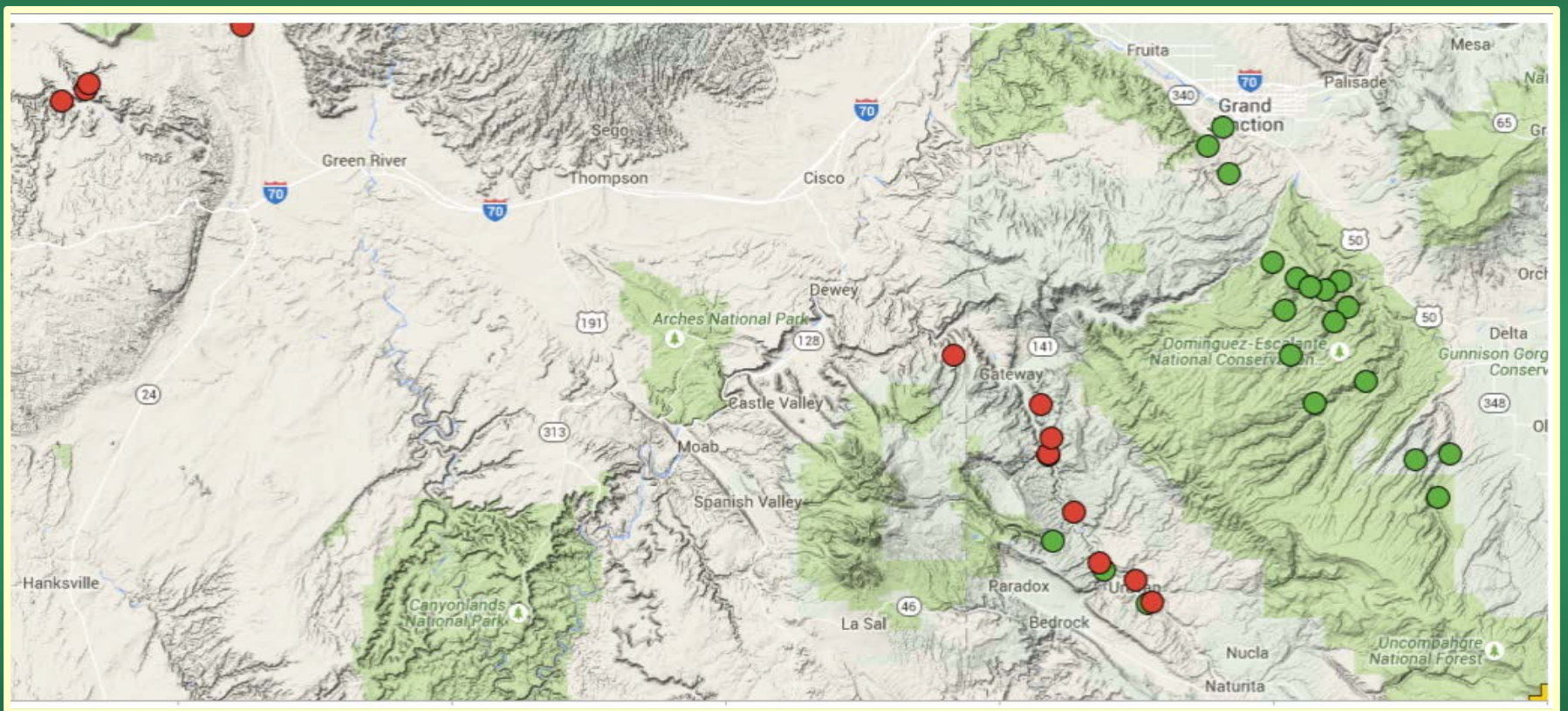


Astragalus rafaensis

San Rafael milkvetch

- Federal status: BLM sensitive
- Heritage ranks: G2G3/S2S3
- Global distribution: Utah and Colorado (Delta, Mesa and Montrose counties)
- Elevation range: 4,720-6,800 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 28
- Colorado individuals: unknown
- Primary threats: livestock grazing or motorized and non-motorized recreation occur at 25-50% of the occurrences.
- Land ownership/management: BLM, private



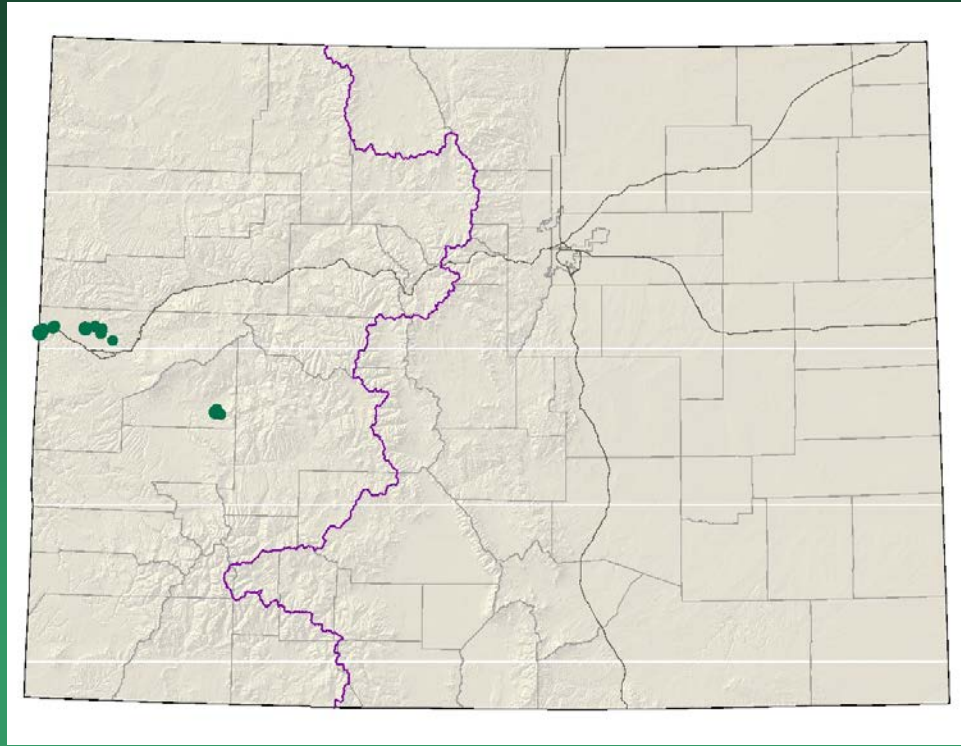


Astragalus raphaelensis



Camissonia eastwoodiae

Eastwood evening primrose

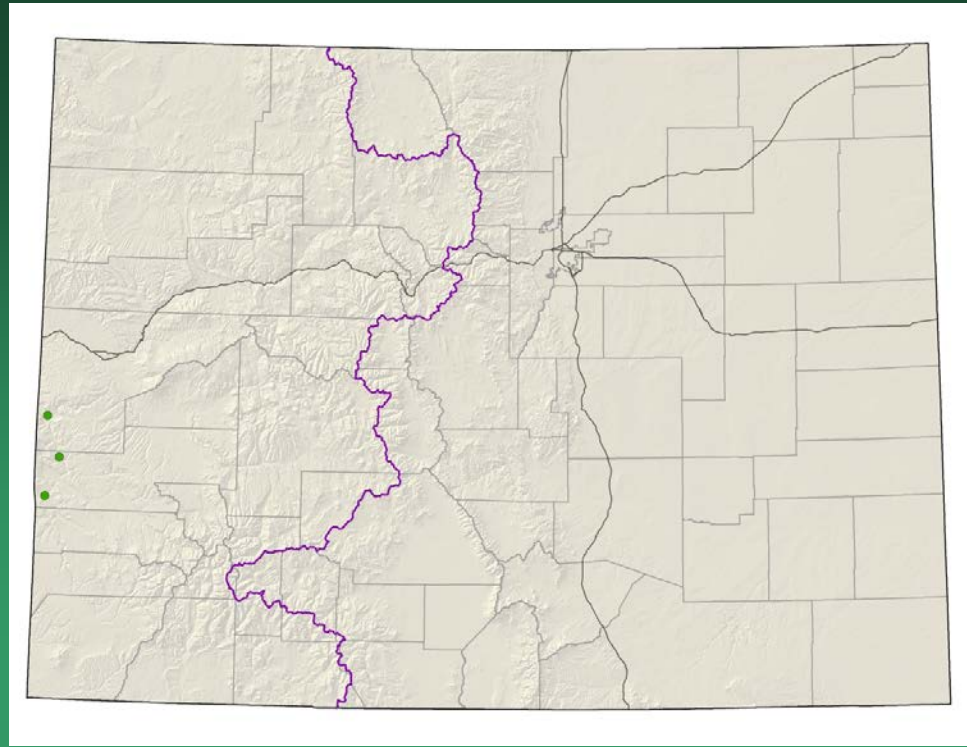


- Federal status: BLM sensitive
- Heritage ranks: G2/S1
- Global distribution: Utah and Colorado (Delta and Mesa counties)
- Elevation range: 4,560-6,050 ft.
- Last observed in Colorado: 2016
- Colorado occurrences: 10 (1 is historical)
- Colorado individuals: 12,000+
- Primary threats: surface disturbance from roads, motorized recreation, grazing
- Land ownership/management: BLM, private

Camissonia eastwoodiae



Erigeron kachinensis kachina daisy



- Federal status: BLM sensitive
- Heritage ranks: G3/S1
- Global distribution: Utah and Colorado (Montrose county)
- Elevation range: 4,700-6,650 ft.
- Last observed in Colorado: 2010
- Colorado occurrences: 3
- Colorado individuals: est. 7,600
- Primary threats: mining, energy development, or water projects could affect water supplies to habitat
- Land ownership/management: BLM

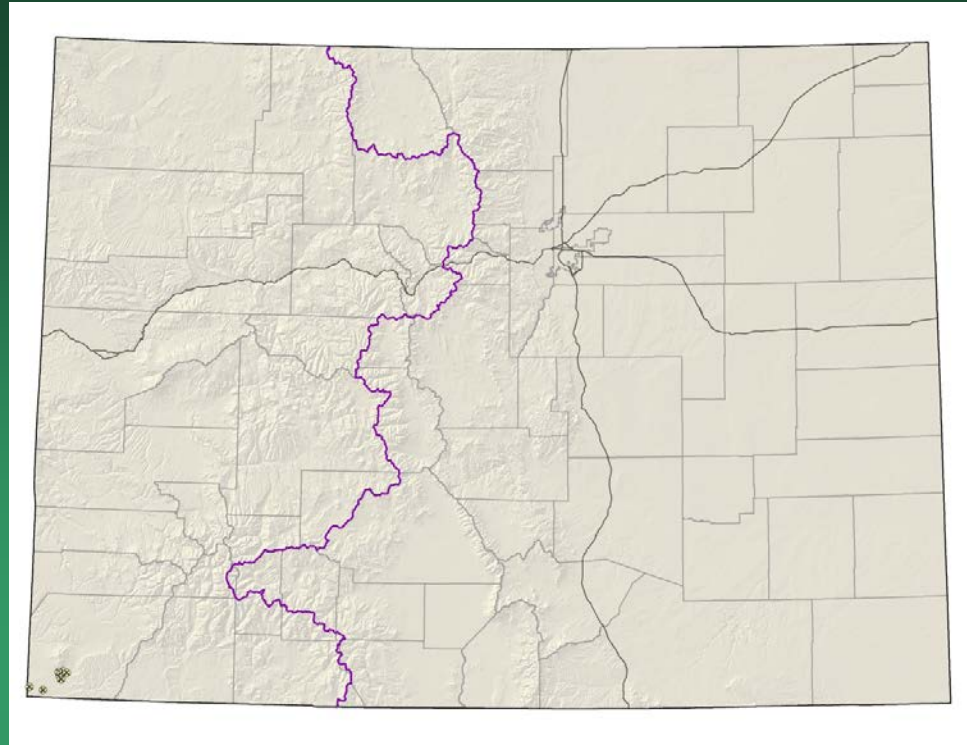


Erigeron kachinensis

Eriogonum clavellatum

Comb Wash buckwheat

- Federal status: BLM sensitive
- Heritage ranks: G2/S1
- Global distribution: Arizona, New Mexico, Utah and Colorado (Montezuma County)
- Elevation range: 4,800-6,030 ft.
- Last observed in Colorado: 1990
- Colorado occurrences: 8 (all are historical)
- Colorado individuals: unknown
- Primary threats: road construction, exploration for oil and gas, and a proposed system of irrigation canals on the Reservation
- Land ownership/management: Tribal

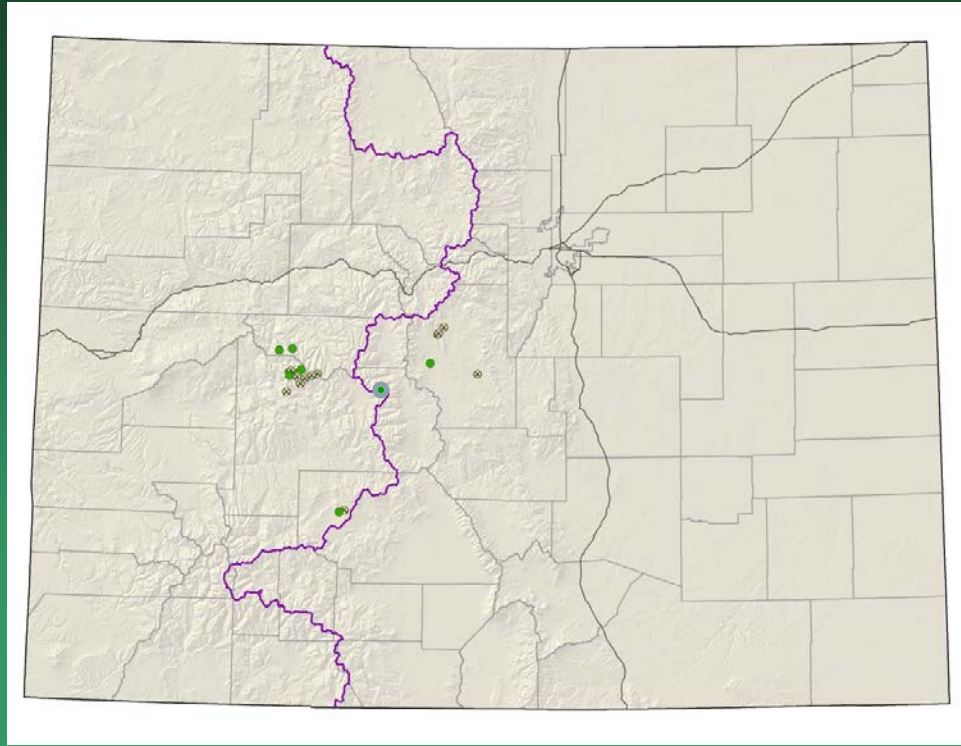


Eriogonum clavellatum



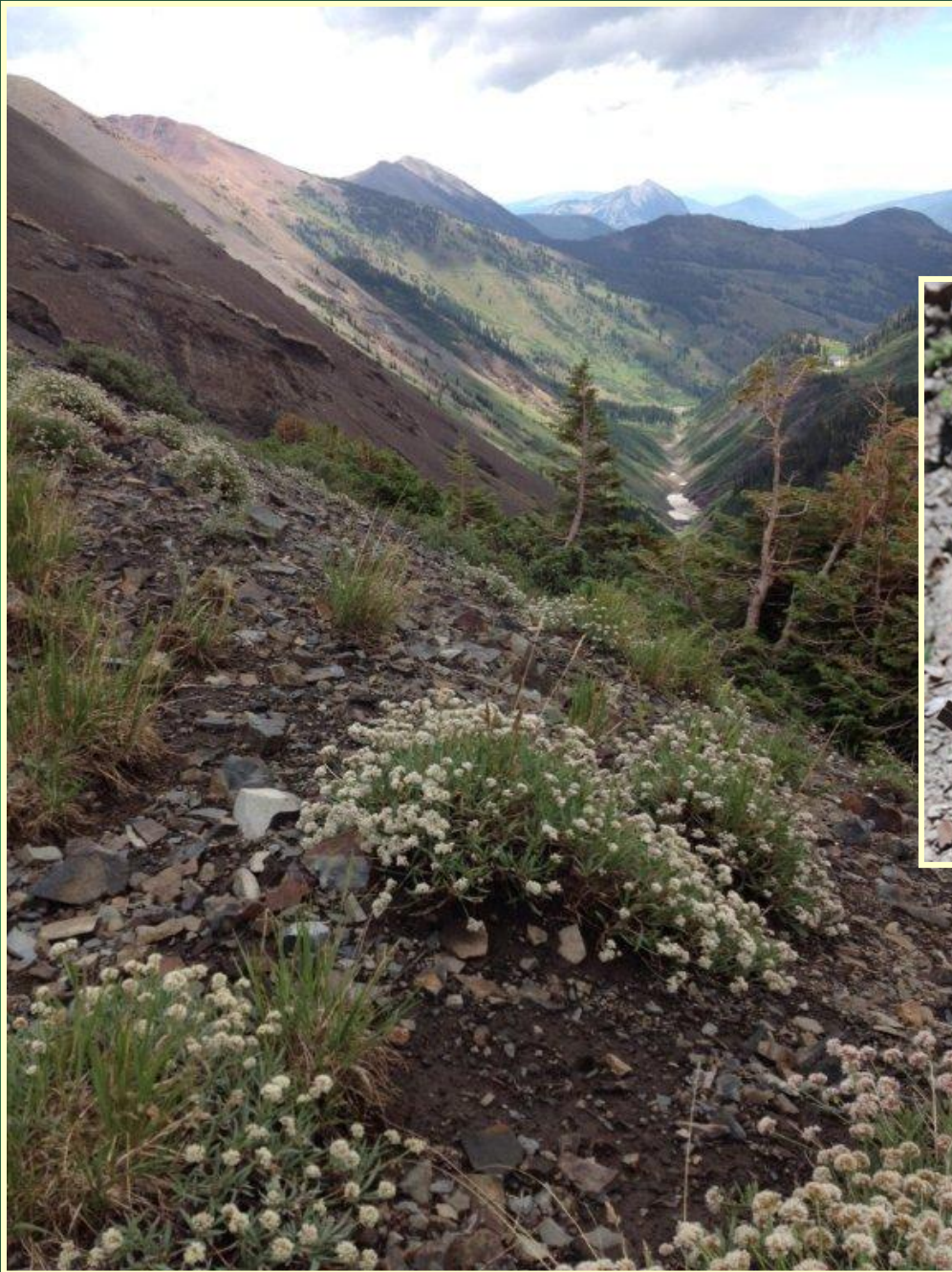
Eriogonum coloradense

Colorado wild buckwheat

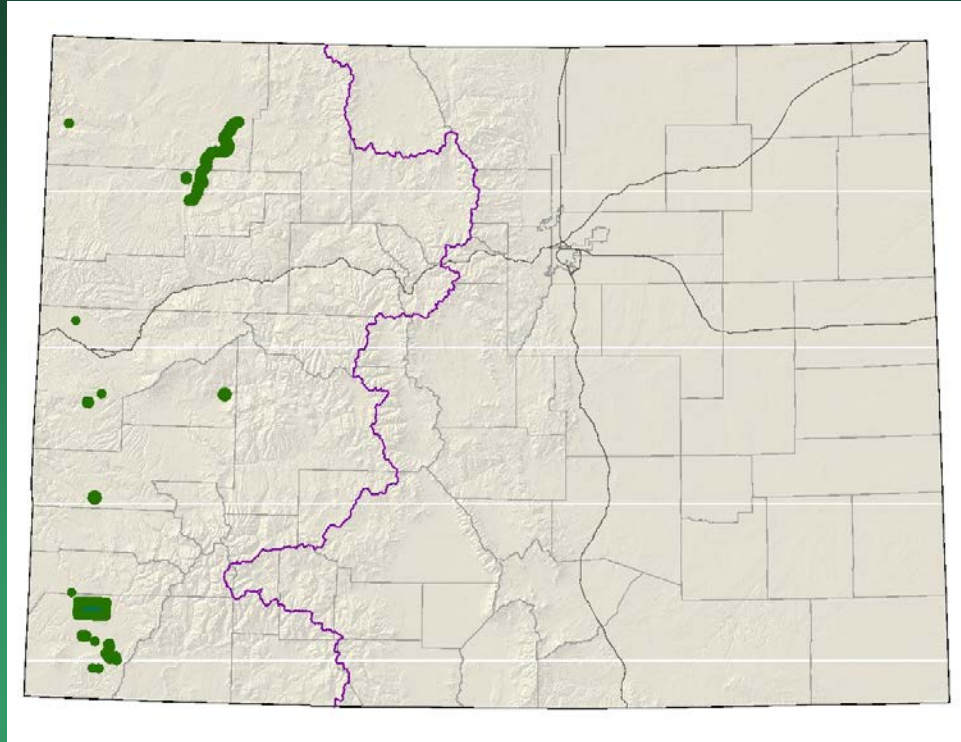


- Federal status: BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic (Chaffee, Gunnison, Park, Pitkin, and Saguache counties)
- Elevation range: 8,700-14,260 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 22 (12 are historical)
- Colorado individuals: 5000-10,000
- Primary threats: recreation
- Land ownership/management: BLM, local government, state, private, USFS

Eriogonum coloradense



Lepidium crenatum alkaline pepperwort



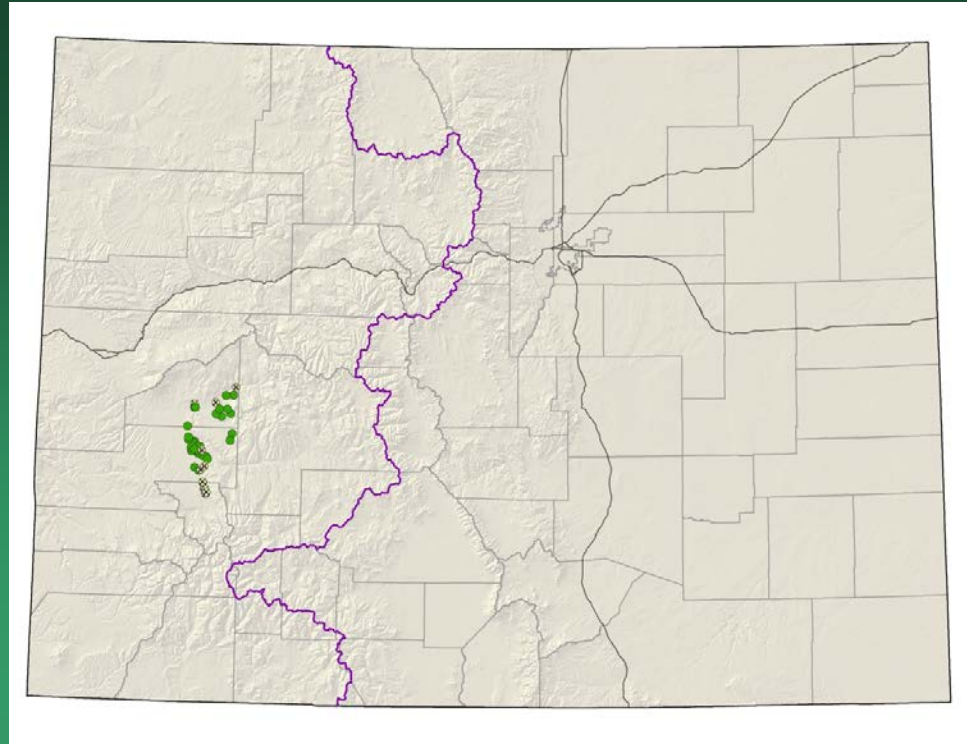
- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: Utah, New Mexico and Colorado (Delta, Mesa, Moffat, Montrose Montezuma, and Rio Blanco counties)
- Elevation range: 6,060-8,130 ft.
- Last observed in Colorado: 2018
- Colorado occurrences: 17 (11 are historical)
- Colorado individuals: thousands
- Primary threats: competition from invasive species
- Land ownership/management: BLM, NPS, private

Lepidium crenatum



Lomatium concinnum

Colorado desert-parsley



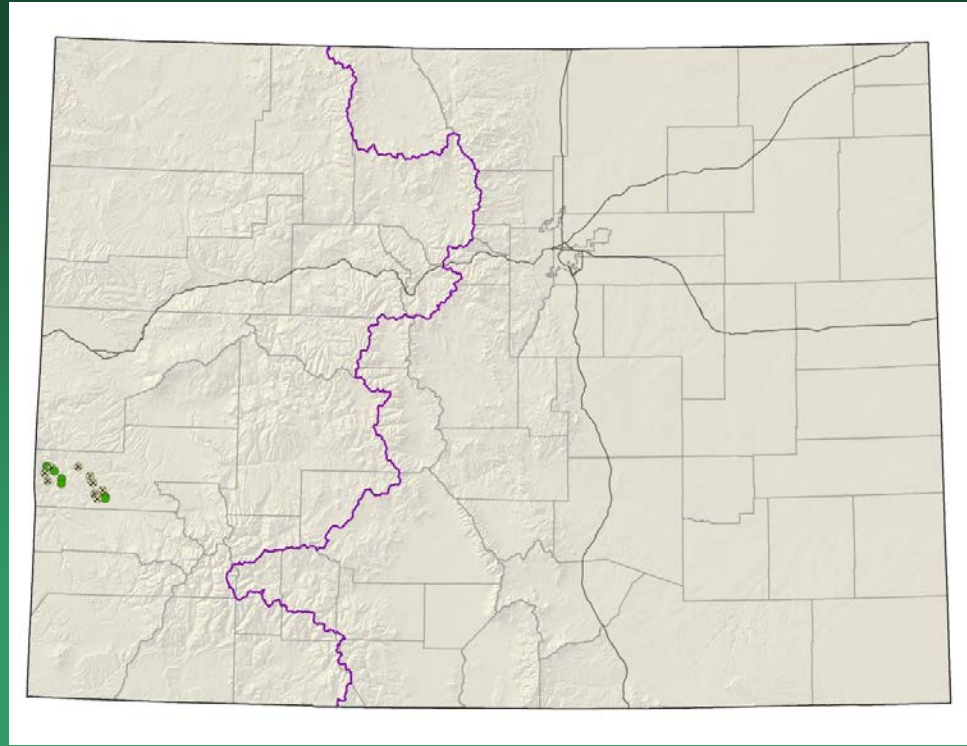
- Federal status: BLM sensitive
- Heritage ranks: G2G3/S2S3
- Global distribution: Colorado endemic (Delta, Montrose, and Ouray counties)
- Elevation range: 5,160-8,800 ft.
- Last observed in Colorado: 2016
- Colorado occurrences: 37 (8 are historical)
- Colorado individuals: ca. 100,000
- Primary threats: Motorized recreation
- Land ownership/management: BLM, state, private



Lomatium concinnum

Lupinus crassus

Payson lupine

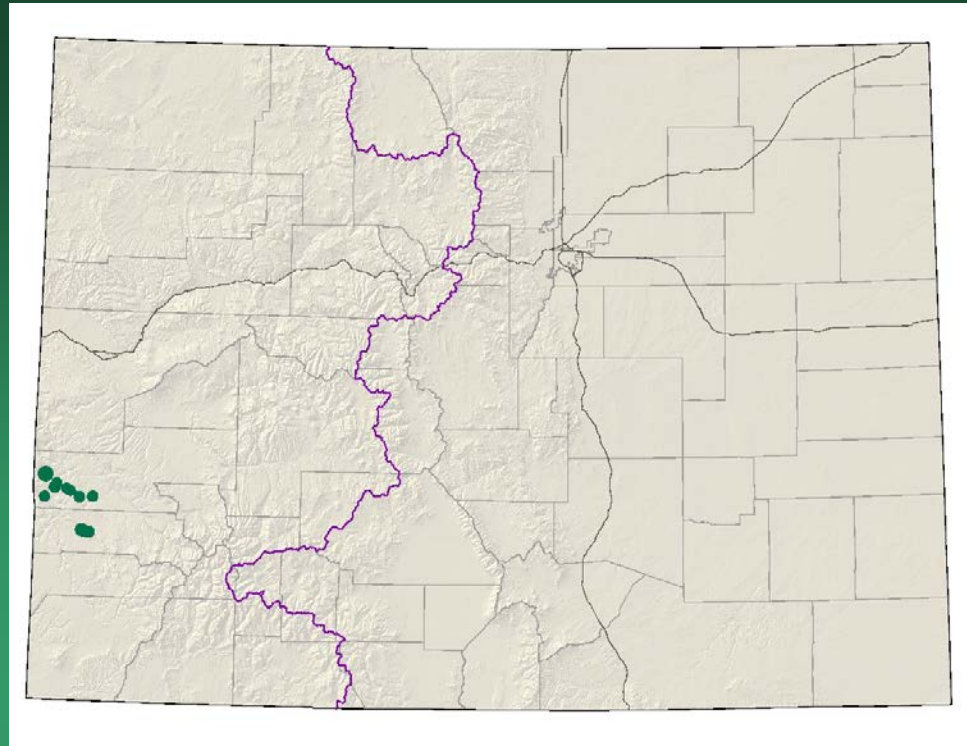


- Federal status: BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic (Montrose county)
- Elevation range: 5,070-6,260 ft.
- Last observed in Colorado: 2016
- Colorado occurrences: 17 (12 are historical)
- Colorado individuals: >100,000
- Primary threats: Incompatible grazing
- Land ownership/management: BLM, private

Lupinus crassus



*Mentzelia
paradoxensis*
Paradox stickleaf



- Federal status: None
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic(Montrose and San Miguel counties)
- Elevation range: 5000-6500 ft.
- Last observed in Colorado: 2002
- Colorado occurrences: 8 (4 are historical)
- Colorado individuals: unknown
- Primary threats: road maintenance
- Land ownership/management: BLM, private, right of way

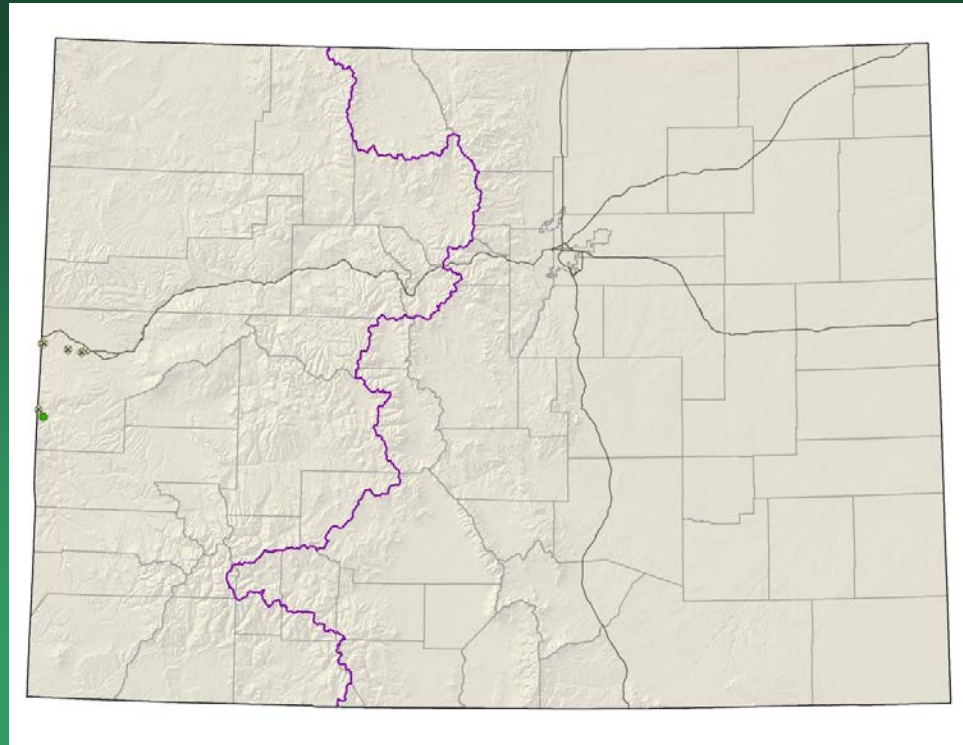
Mentzelia paradoxensis



Oreocarya osterhoutii=
Cryptantha osterhoutii
Osterhout cat's-eye

Conservation Action Plan

- Federal status: BLM sensitive
- Heritage ranks: G2G3/S2
- Global distribution: Utah and Colorado (Mesa and Montrose counties)
- Elevation range: 4,440-6,500 ft.
- Last observed in Colorado: 2018
- Colorado occurrences: 7 (3 are historical)
- Colorado individuals: ~1500?
- Primary threats: Recreation
- Land ownership/management: BLM, NPS, private

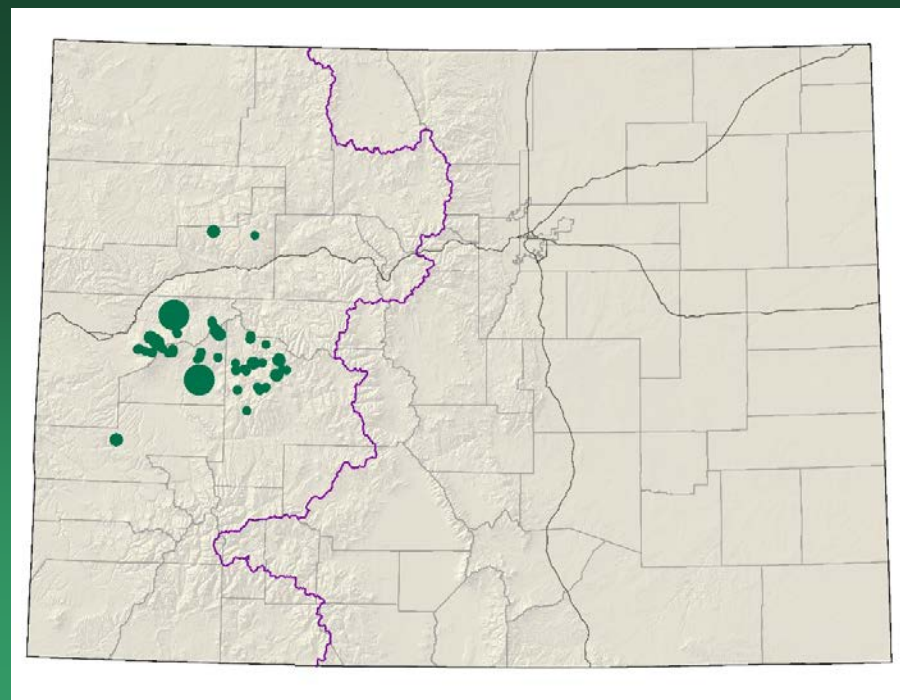


Oreocarya osterhoutii



Penstemon mensarum

Grand Mesa Penstemon

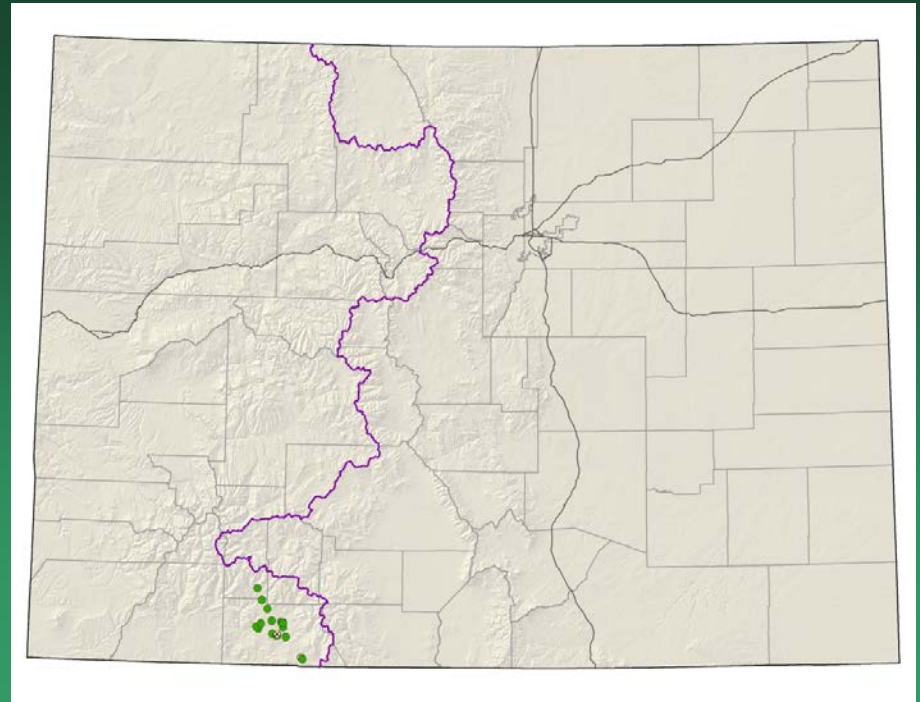


- Federal status: None
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic: Delta, Garfield, Gunnison, Mesa, Montrose, and Pitkin counties
- Elevation range: 5500-11,500 ft.
- Last observed in Colorado: 2019
- Colorado occurrences: 28 (18 are historical)
- Colorado individuals: >8,000
- Primary threats: road maintenance and construction, competition from noxious weeds, incompatible grazing, recreation.
- Land ownership/management: USFS, private, roadsides

Penstemon mensarum



Physaria pruinosa=
Lesquerella pruinosa
Pagosa bladderpod

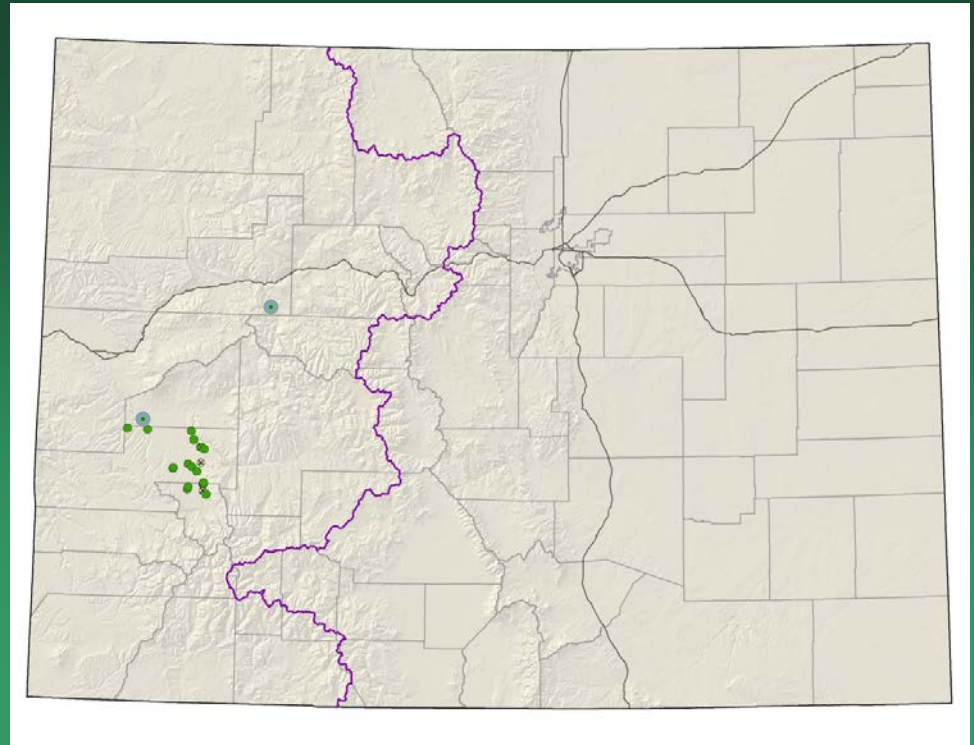


- Federal status: USFS and BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: New Mexico and Colorado (Archuleta County, and the extreme southern portion of Hinsdale County)
- Elevation range: 6,820-8,500 ft.
- Last observed in Colorado: 2012
- Colorado occurrences: 19 (3 are historical)
-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

Physaria pruinosa



Physaria vicina=
Lesquerella vicina
Montrose bladderpod



- Federal status: BLM sensitive
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic (Delta, Garfield, Montrose and Ouray counties)
- Elevation range: 5,700-7,540 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 24 (2 are historical)
- Colorado individuals: >9,000
- Primary threats: Roads and recreational uses
- Land ownership/management: BLM, NPS, state, private

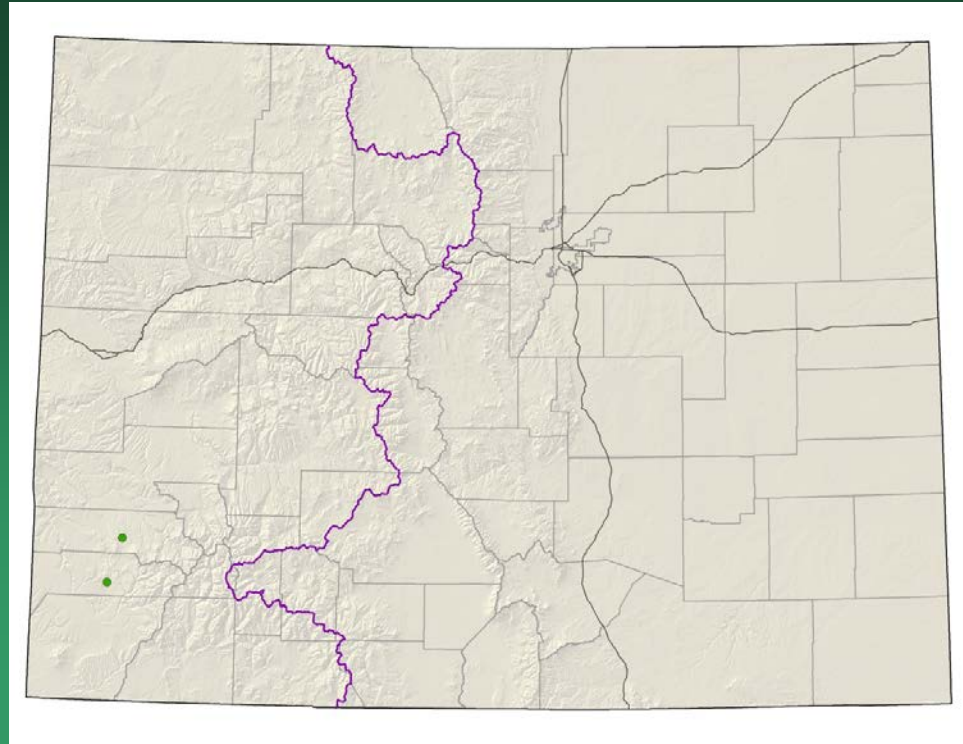


Physaria vicina

Puccinellia parishii

Parish's alkali grass

Conservation Action Plan



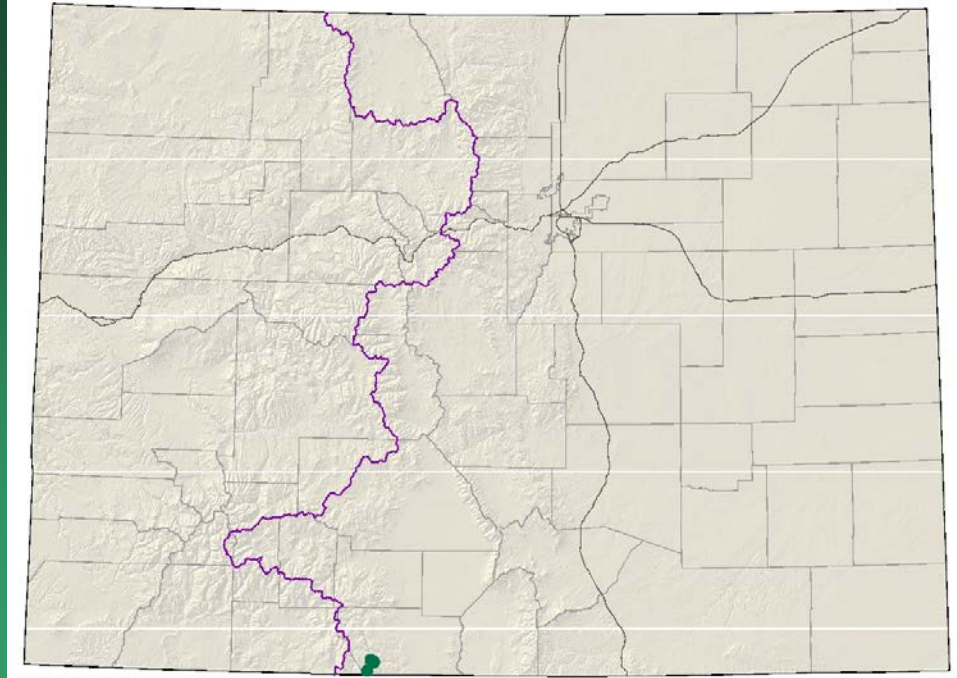
- Federal status: none
- Heritage ranks: G2G3/S1
- Global distribution: New Mexico, Arizona, California, Texas, and Colorado (Dolores and San Miguel counties)
- Elevation range: 7,620-7,950 ft.
- Last observed in Colorado: 2016
- Colorado occurrences: 2
- Colorado individuals: 20,000-35,000
- Primary threats: altered hydrology, habitat conversion
- Land ownership/management: BLM, state, private

Puccinellia parishii



Salix arizonica

Arizona willow

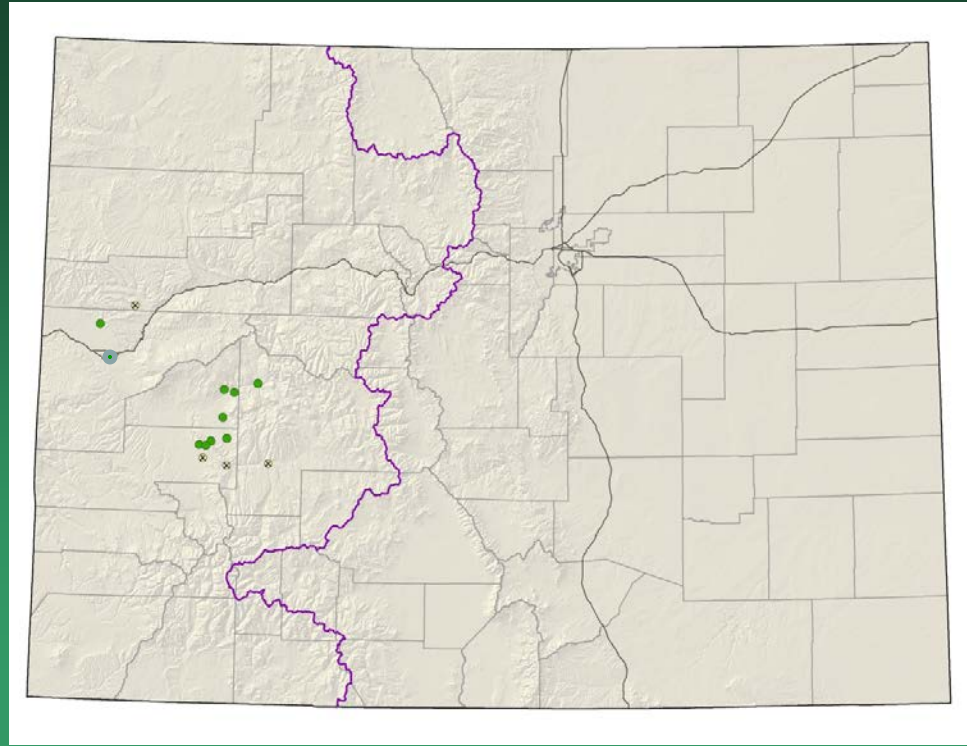


- Federal status: USFS sensitive
- Heritage ranks: G2G3/S1
- Global distribution: Arizona, New Mexico, Utah, and Colorado (Conejos Co.)
- Elevation range: 10,300-10,320 ft.
- Last observed in Colorado: 2019
- Colorado occurrences: 3
- Colorado individuals: 30-50 clumps
- Primary threats: incompatible grazing, hydrologic alteration
- Land ownership/management: USFS

Salix arizonica



Thelypodopsis juniperorum juniper tumble mustard



- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic (Delta, Garfield, Gunnison and Montrose counties)
- Elevation range: 5,790-9,530 ft.
- Last observed in Colorado: 2016
- Colorado occurrences: 17 (6 are historical)
- Colorado individuals: 100's
- Primary threats: grazing, off-road vehicle use, non-native species invasion
- Land ownership/management: BLM, NPS, private, USFS

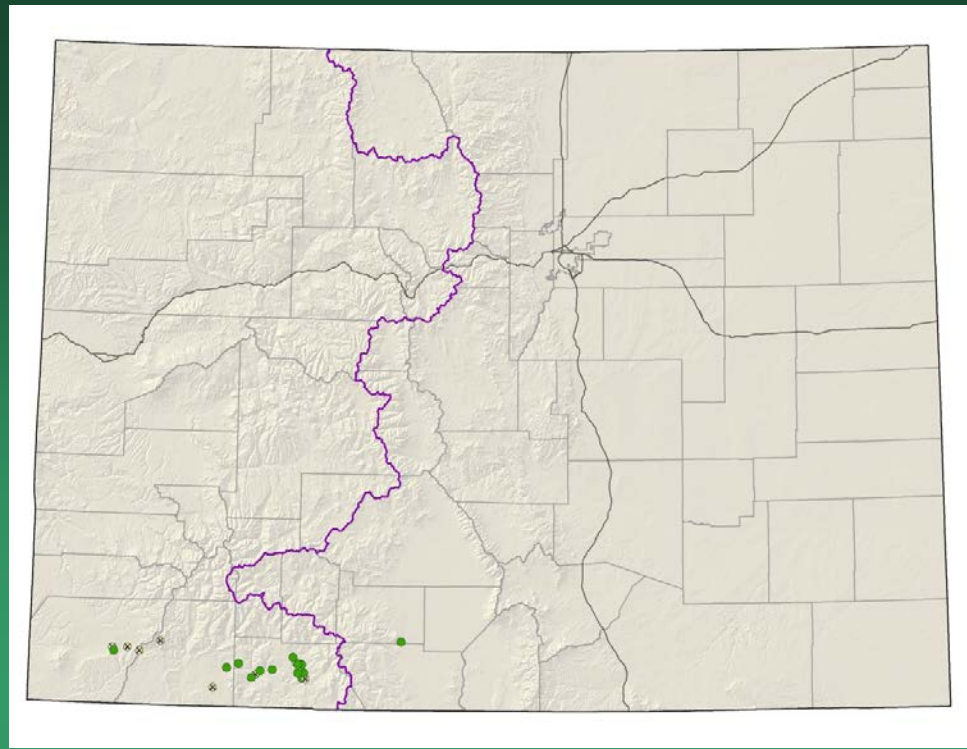
Thelypodopsis juniperorum



Townsendia glabella

Gray's townsend-daisy

- Federal status: none
- Heritage ranks: G2/S2
- Global distribution: Colorado endemic (Archuleta, La Plata, Montezuma and Rio Grande counties)
- Elevation range: 6,350-9,675 ft.
- Last observed in Colorado: 2019
- Colorado occurrences: 22 (8 are historical)
- Colorado individuals: >14,000
- Primary threats: Residential development
- Land ownership/management: BLM, NPS, state, private, tribal, USFS

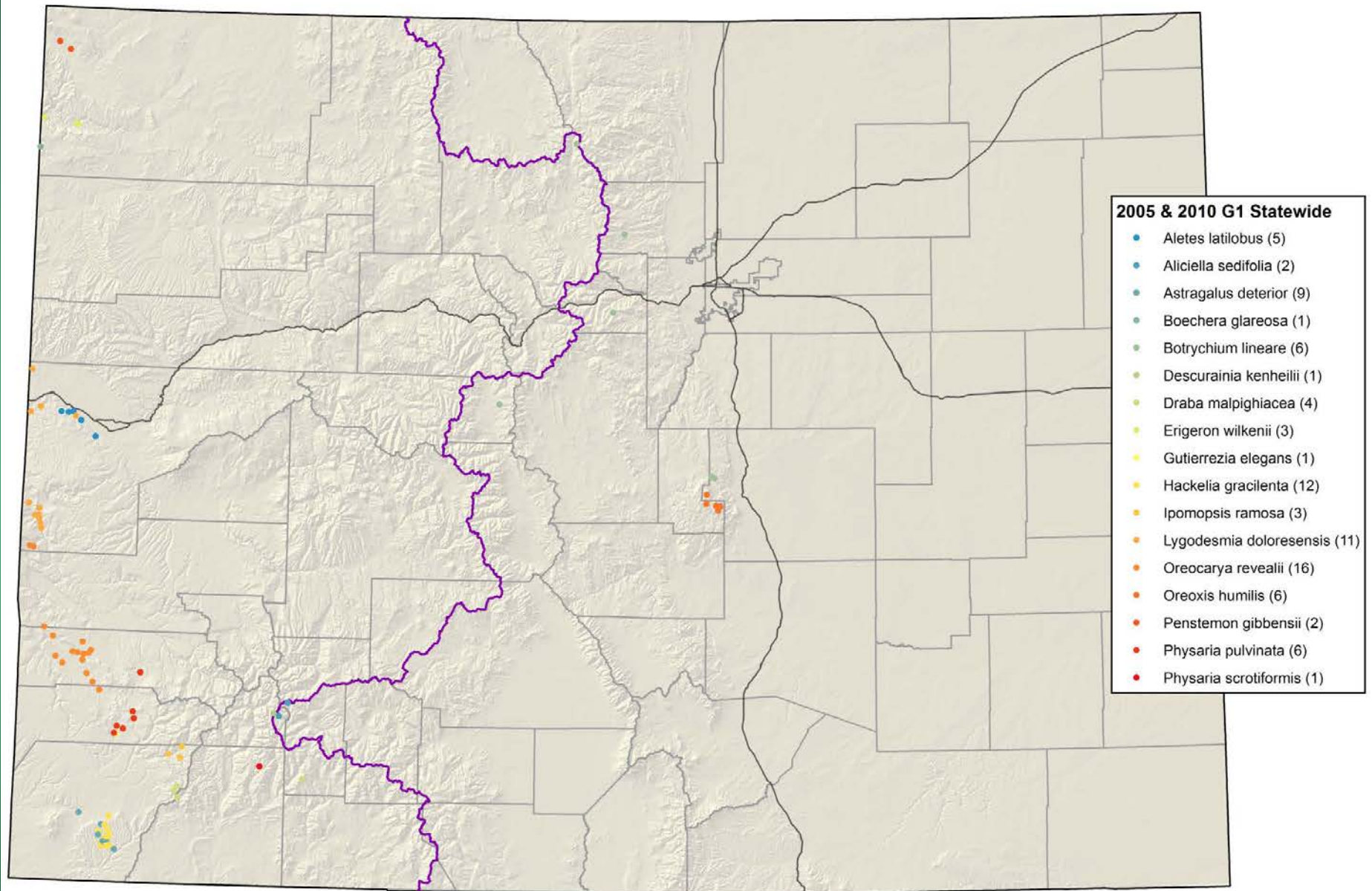


Townsendia glabella



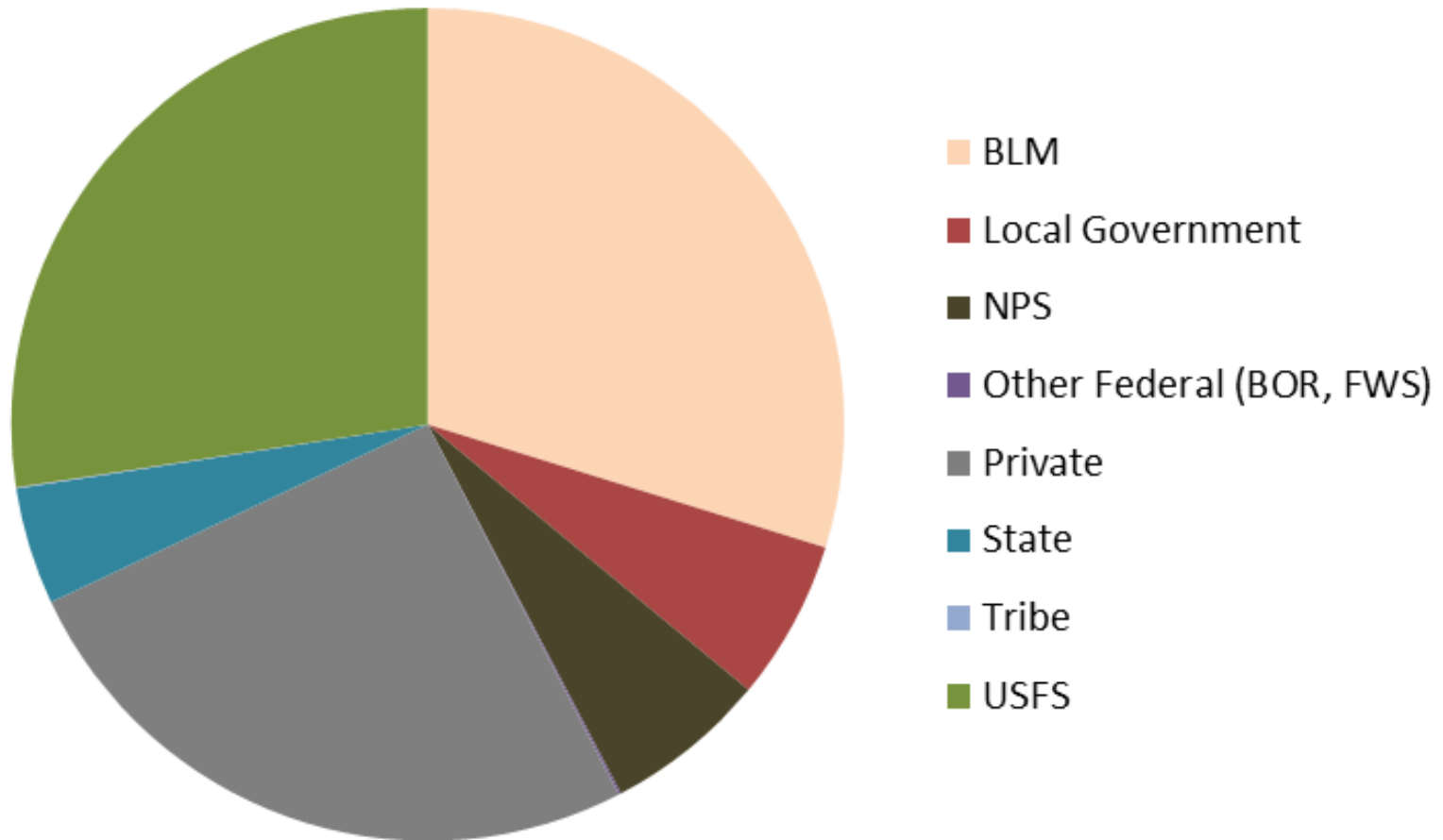
Colorado Rare Plant Symposia 2019

G1 Species
of
SW Colorado

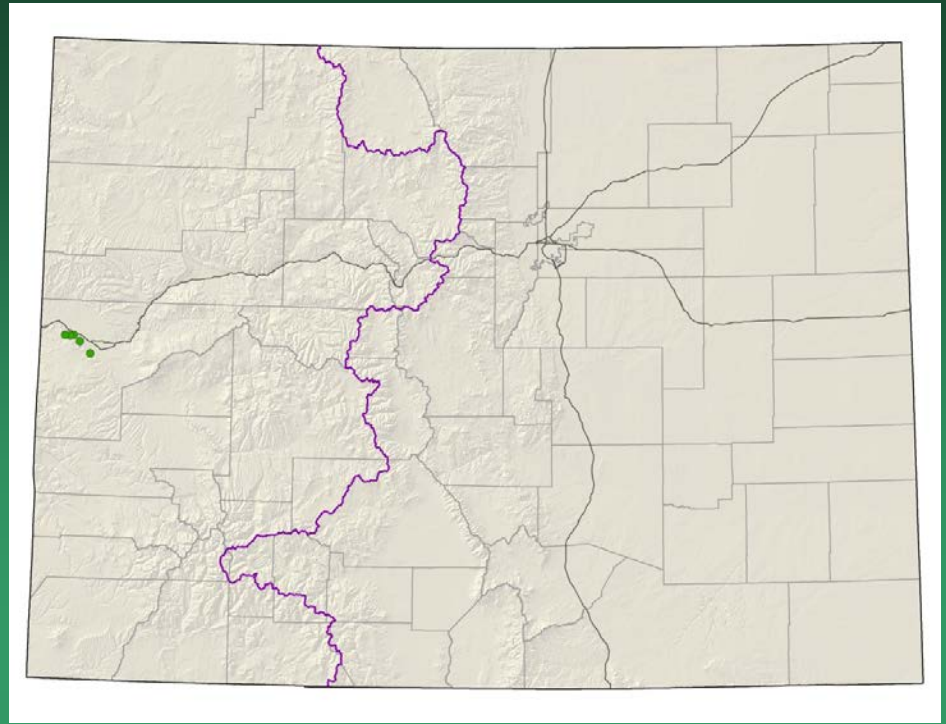


Location of Colorado G1 Plant Species

Land Ownership of G1 Plant Species of Colorado

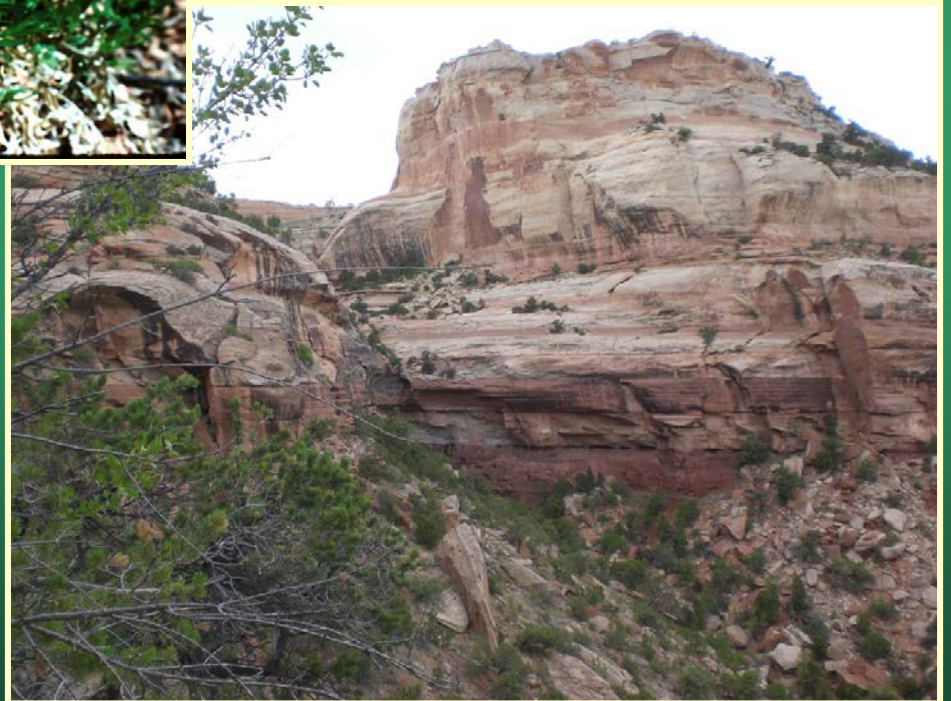


Aletes latilobus=
Lomatium latilobum
Canyonlands biscuitroot



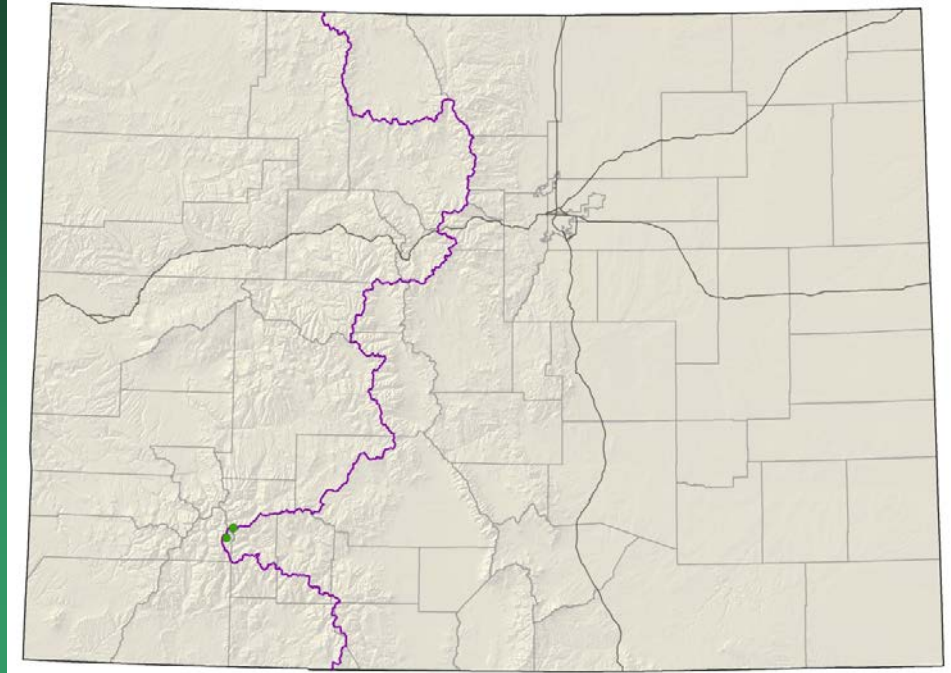
- Federal status: BLM sensitive
- Heritage ranks: G1G2/S1
- Global distribution: Utah (Grand and San Juan counties) and Colorado (Mesa County-- Colorado National Monument and Rattlesnake Canyon)
- Elevation range: 4,540-5,800 ft.
- Last observed in Colorado: 2009
- Colorado occurrences: 5
- Colorado individuals: >5,000
- Primary threats: Habitat disturbance, Park developments, trampling by hikers
- Land ownership/management: BLM, NPS

Aletes latilobus



Aliciella sedifolia
=*Gilia sedifolia*
Stonecrop gilia

- Federal status: USFS
- sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, San Juan Mountains, Hinsdale County
- Elevation range: 12,720-13,830 ft.
- Last observed: 2017-18
- Occurrences: 3
- Individuals: 1,100
- Primary threats: non-motorized recreation
- Land ownership/management: USFS



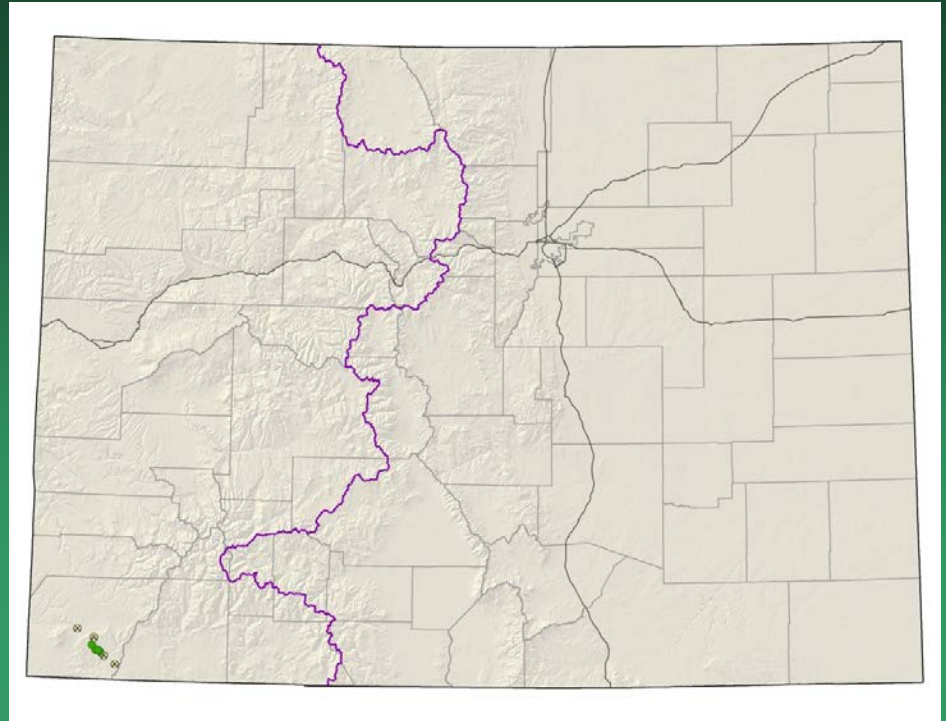
Aliciella sedifolia



Astragalus deterior

Cliff Palace milkvetch

- Federal status: None
- Heritage ranks: G1G2/S1S2
- Global distribution: Colorado endemic (Montezuma County)
- Elevation range: 5,740-8,130 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 10 (4 historical)
- Colorado individuals: ~5000
- Primary threats: Non-motorized recreation, exotics
- Land ownership/management: BLM, NPS, private, tribe



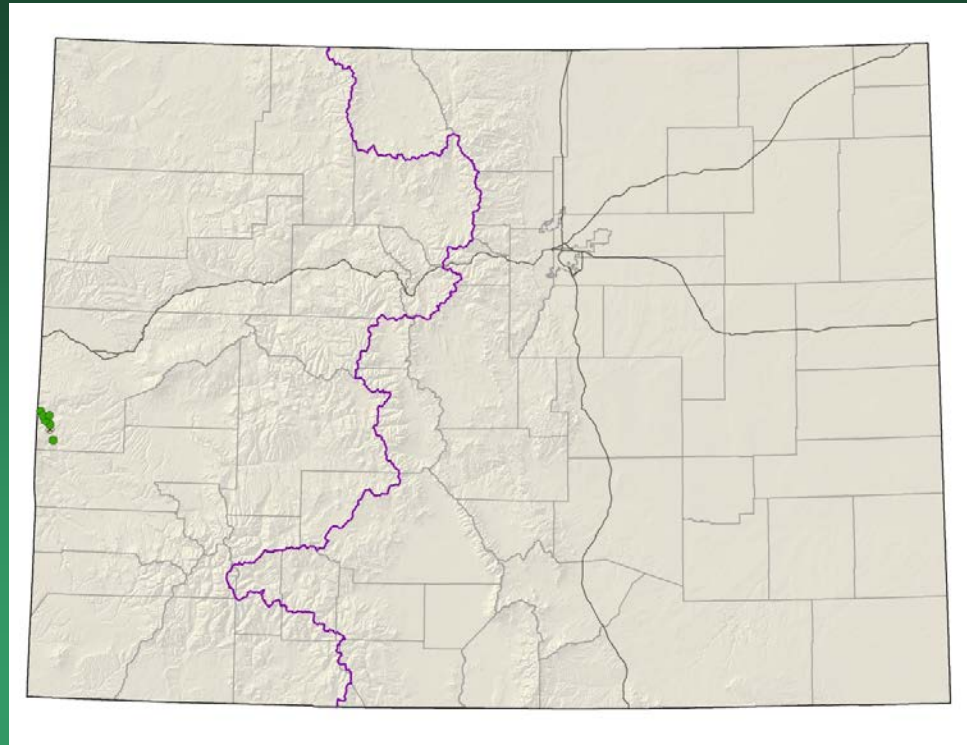


Astragalus deterior



Astragalus desperatus var.
neeseae (= *A. equisolensis*)
horseshoe milkvetch

Conservation Action Plan



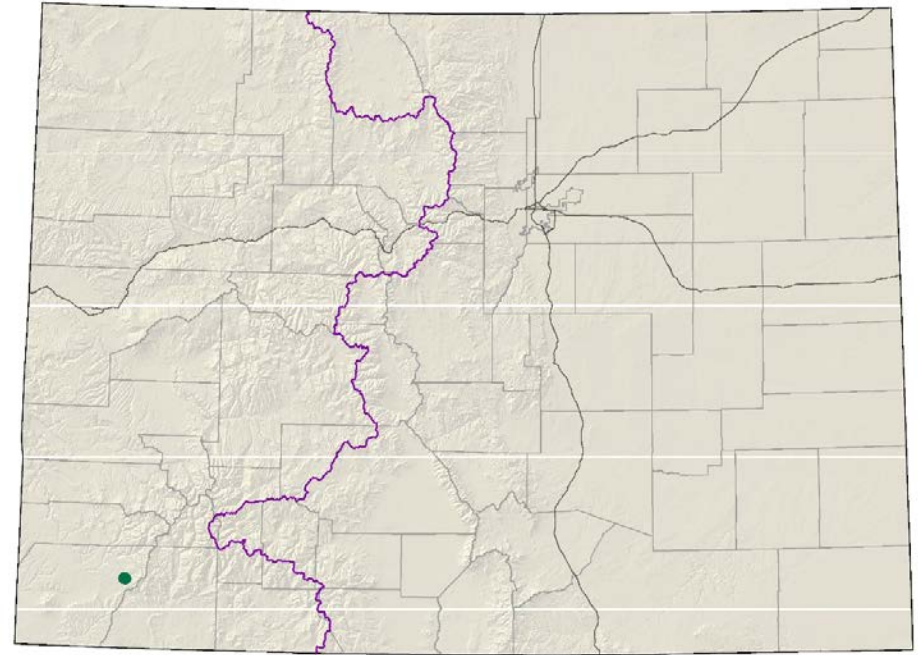
- Federal status: BLM sensitive
- Heritage ranks: G5T1/S1
- Global distribution: Utah and Colorado (Mesa County)
- Elevation range: 4,500-6,030 ft.
- Last observed in Colorado: 2016
- Colorado occurrences: 9 (1 is historical)
- Colorado individuals: 2670
- Primary threats: unknown
- Land ownership/management: BLM, private

Astragalus equisolensis



Erigeron abajoensis

Abajo daisy



- Federal status: none
- Heritage ranks: G1G2/S1
- Global distribution: Arizona, New Mexico, Utah and Colorado (Montezuma County)
- Elevation range: 6600-10,600 ft.
- Last observed in Colorado: 2003
- Colorado occurrences: 1
- Colorado individuals: unknown
- Primary threats: unknown in CO
- Land ownership/management: USFS



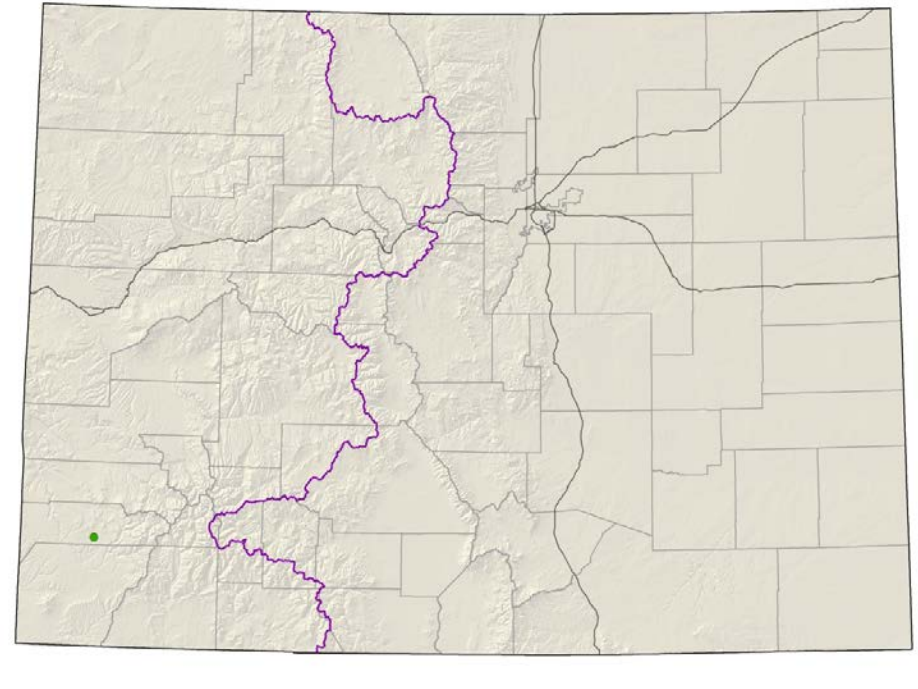
Erigeron abajoensis

Photo ©Al Schneider, www.coloradowildflowers.com

Gutierrezia elegans

Lone Mesa snakeweed

Conservation Action Plan



- Federal status: BLM & USFS
- sensitive
- Heritage ranks: G1/S1
- Global distribution: Endemic to Colorado; Dolores County
- Elevation range: 7,530-7,800 ft.
- Last observed in Colorado: 2019
- Colorado occurrences: 1
- Colorado individuals: 30,000
- Primary threats: grazing, recreation
- Land ownership/management: BLM, state, private, USFS

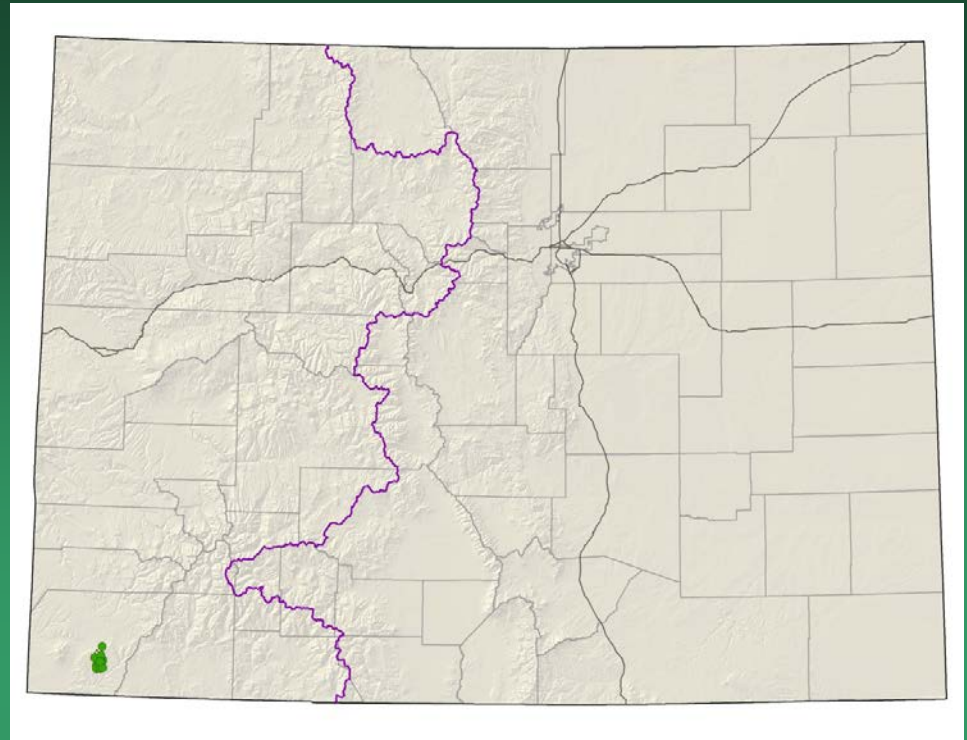


Gutierrezia elegans

Hackelia gracilenta

Mesa Verde stickseed

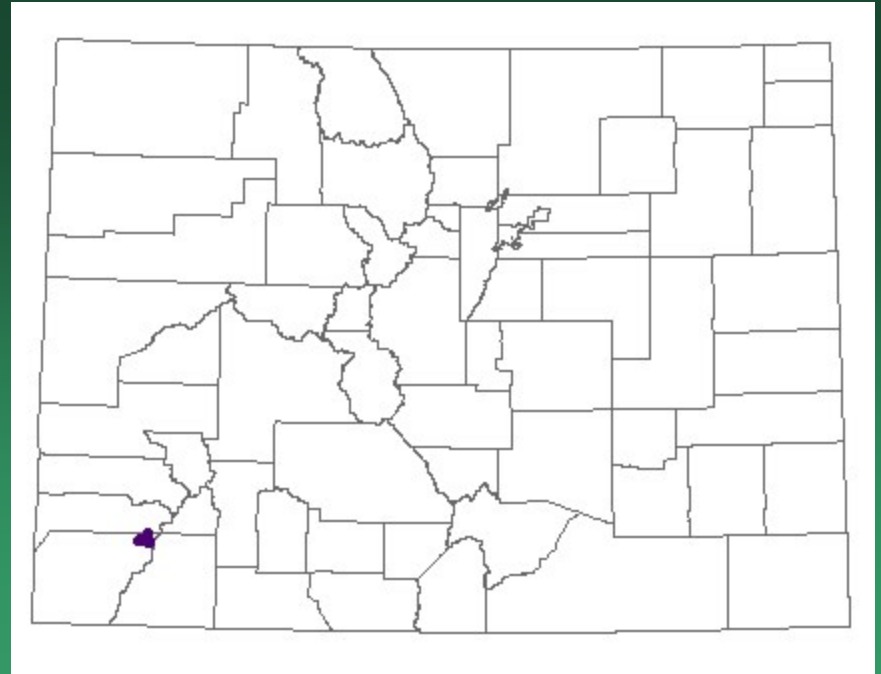
- Federal status: none
- Heritage ranks: G1G2/S1S2
- Global distribution: Colorado endemic, Mesa Verde National Park, Montezuma County
- Elevation range: 6,180-8,180 ft.
- Last observed: 2017
- Occurrences: 12 (1 is historical)
- Individuals: 20,000-25,000
- Primary threats: low level threats from recreation and grazing by feral horses
- Land ownership/management: BLM, NPS, private, tribe





Ipomopsis ramosa

Coral ipomopsis



- Federal status: none
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, Dolores River Canyon, Dolores and Montezuma Counties
- Elevation range: 8200-9200 ft.
- Last observed: 2019
- Occurrences: 4
- Individuals: ca 10,000
- Primary threats: low level threat from non-motorized recreation
- Land ownership/management: FS, private

Ipomopsis ramosa

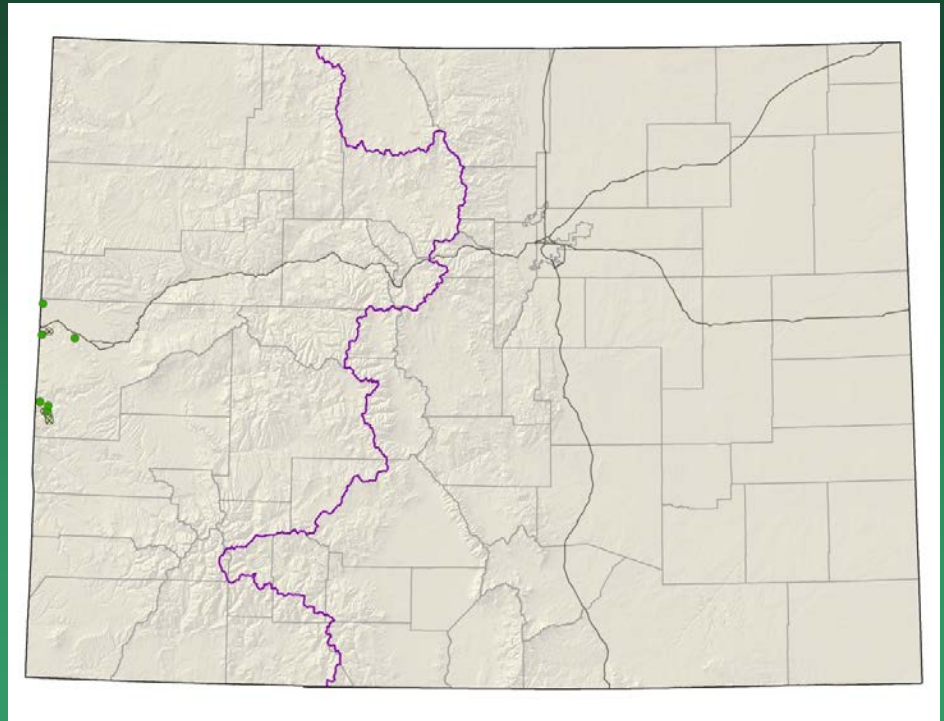


Lygodesmia doloresensis

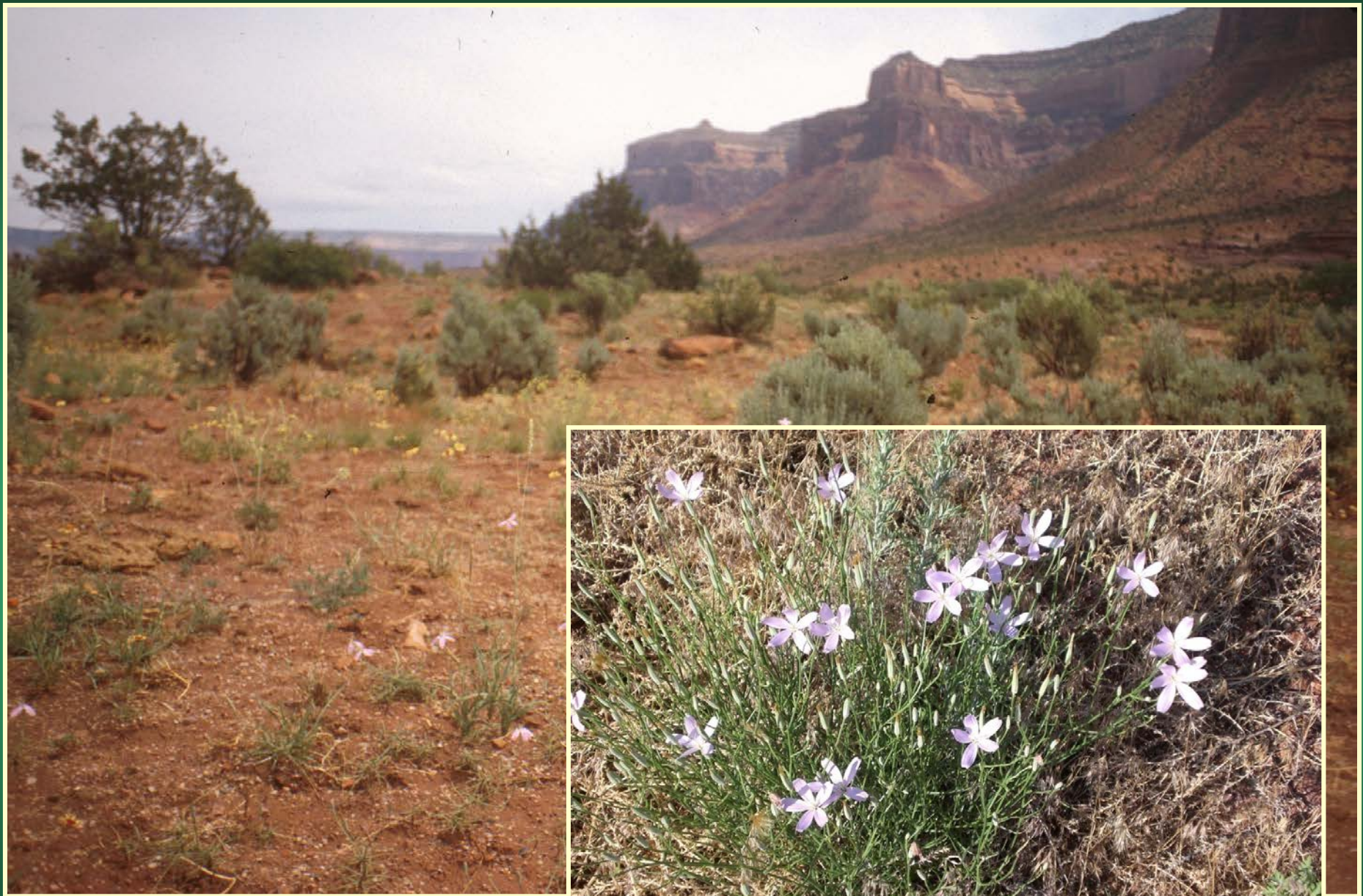
(= *L. grandiflora* var.
doloresensis)

Dolores River skeletonplant

Conservation Action Plan



- Federal status: BLM sensitive
- Heritage ranks: G1G2/S1S2
- Global distribution: Utah and Colorado (Mesa county)
- Elevation range: 4,475-6,125 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 12 (3 are historical)
- Colorado individuals: 5000
- Primary threats: deer, rabbit, and cattle grazing, private land development, road maintenance, weeds
- Land ownership/management: BLM, private, state



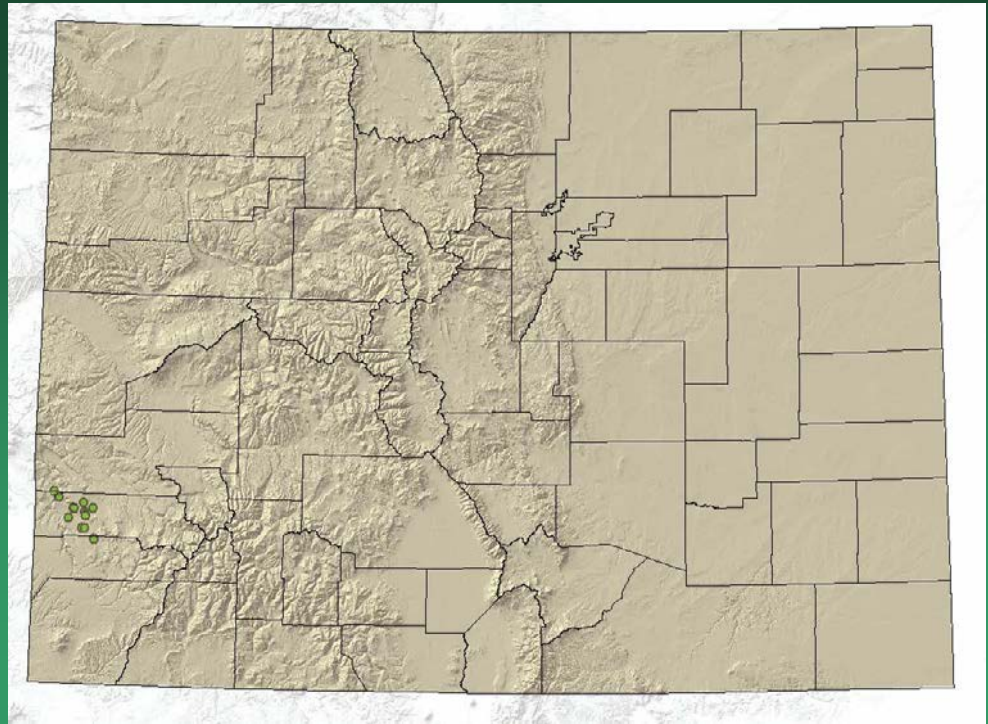
Lygodesmia doloresensis

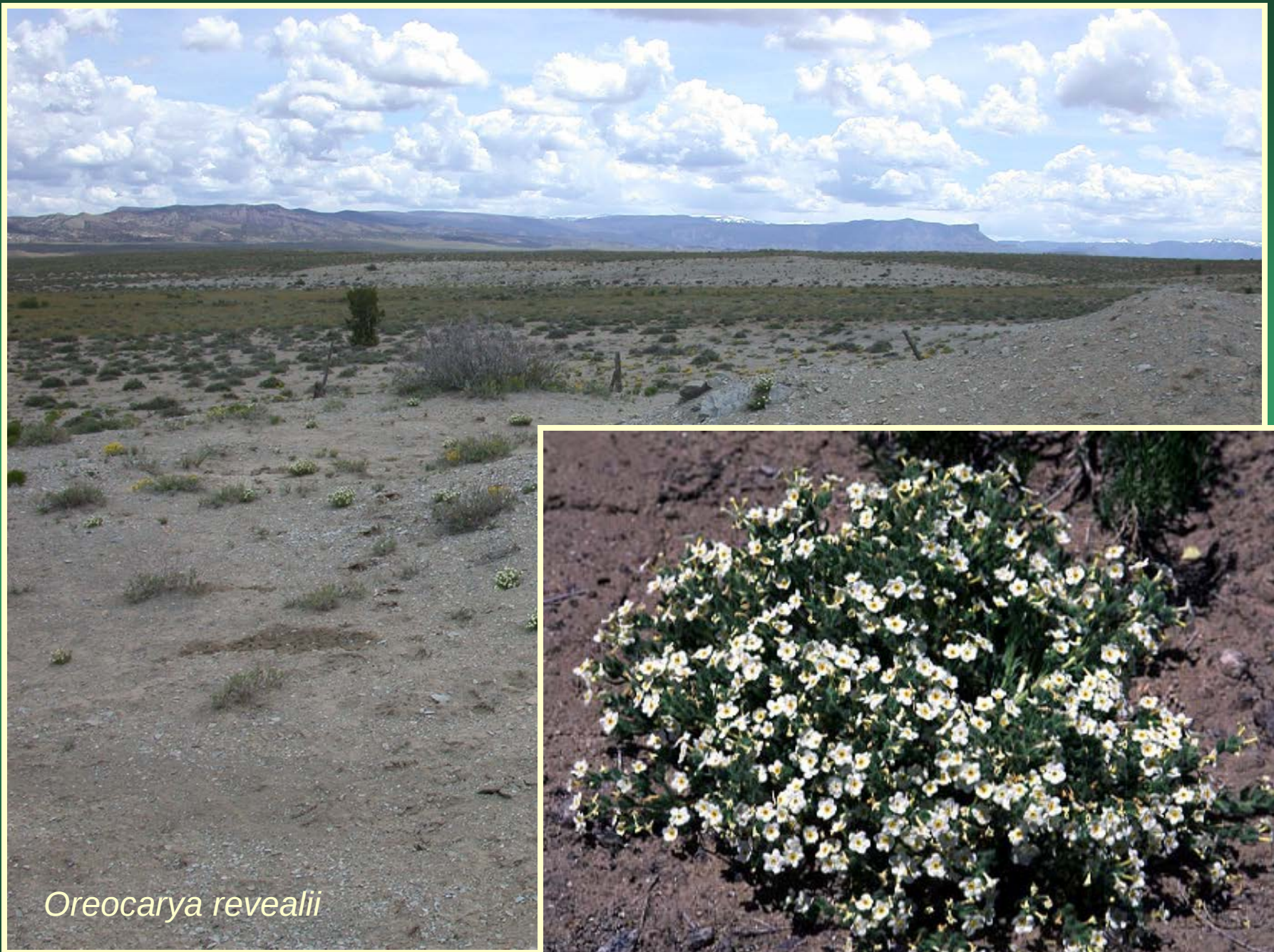
Oreocarya revealii

Gypsum Valley Cat-eye

Conservation Action Plan

- Federal status: BLM Sensitive
- Heritage ranks: G1G2/S1S2
- Global distribution: Colorado endemic; Montrose & San Miguel Counties
- Elevation range: 5,400-6,790 ft.
- Last observed: 2012
- Occurrences: 16 (1 historical)
- Individuals: 20,000+
- Primary threats: oil and gas development, grazing, ATVs, recreation, roads
- Land ownership/management: BLM, state, private



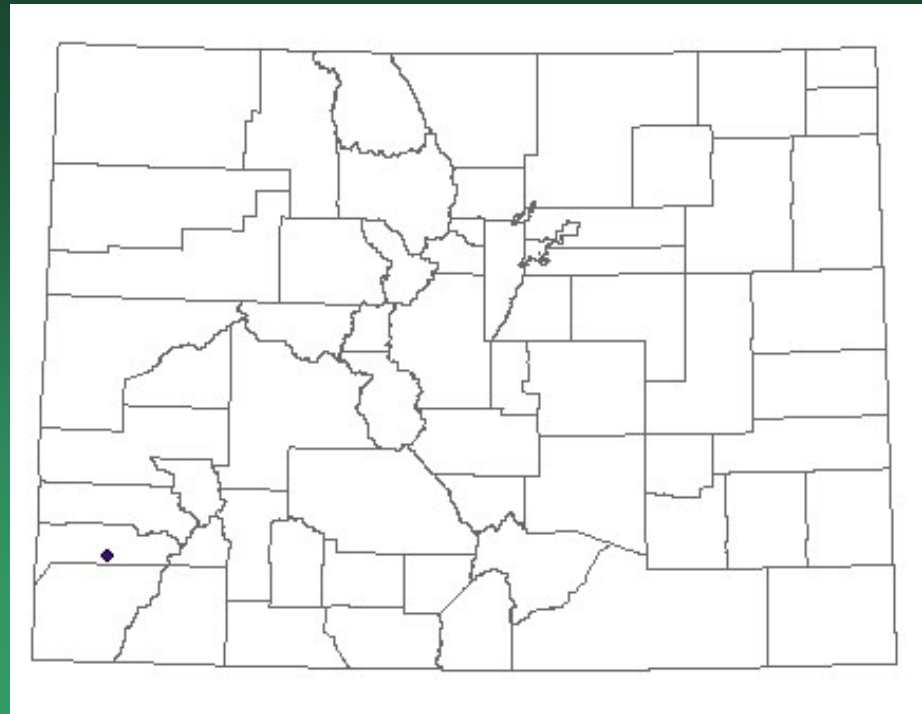


Oreocarya revealii



Packera mancosana

Mancos shale packera



- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic (Dolores County)
- Elevation range: 7,575 ft.
- Last observed: 2019
- Occurrences: 1
- Individuals: <5000
- Primary threats: grazing
- Land ownership/management: State, USFS

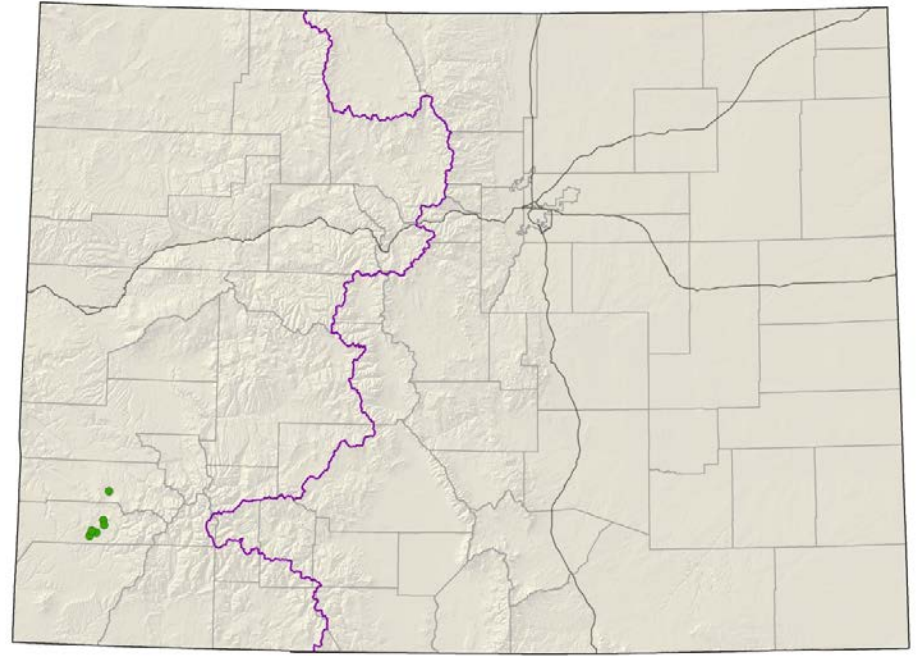
Packera mancosana



Physaria pulvinata

Cushion bladderpod

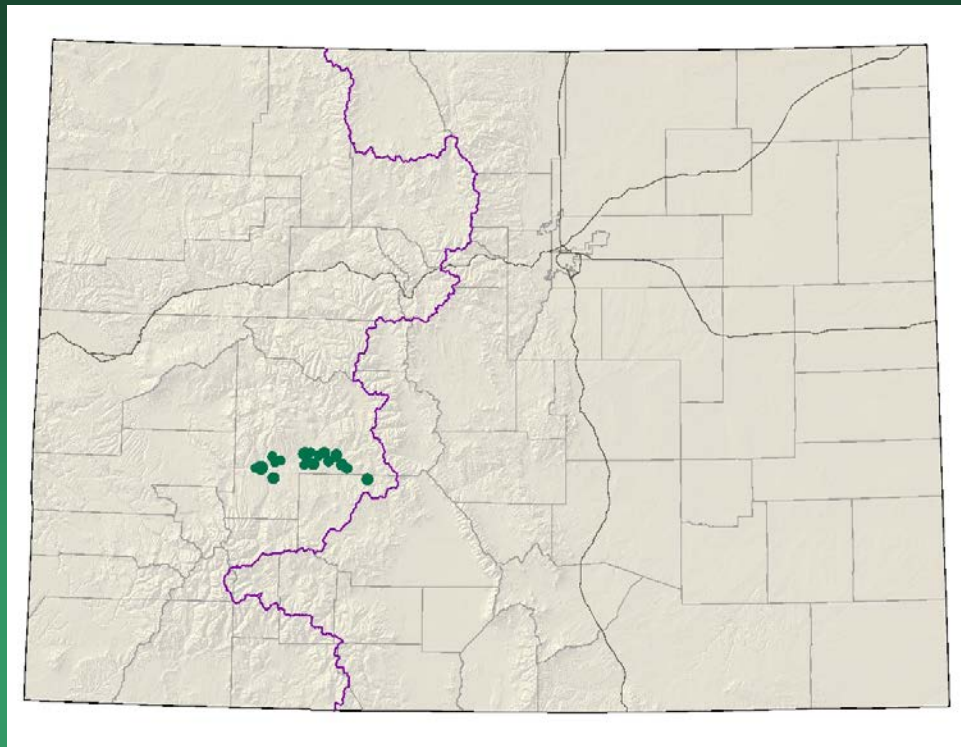
Conservation Action Plan



- Federal status: BLM & USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, Dolores and San Miguel counties
- Elevation range: 7,540-8,490 ft.
- Last observed: 2019
- Occurrences: 6
- Individuals: 22,000
- Primary threats: recreation, livestock trampling, weed control, habitat modification for sage grouse management, roads
- Land ownership/management: BLM, state, private, USFS

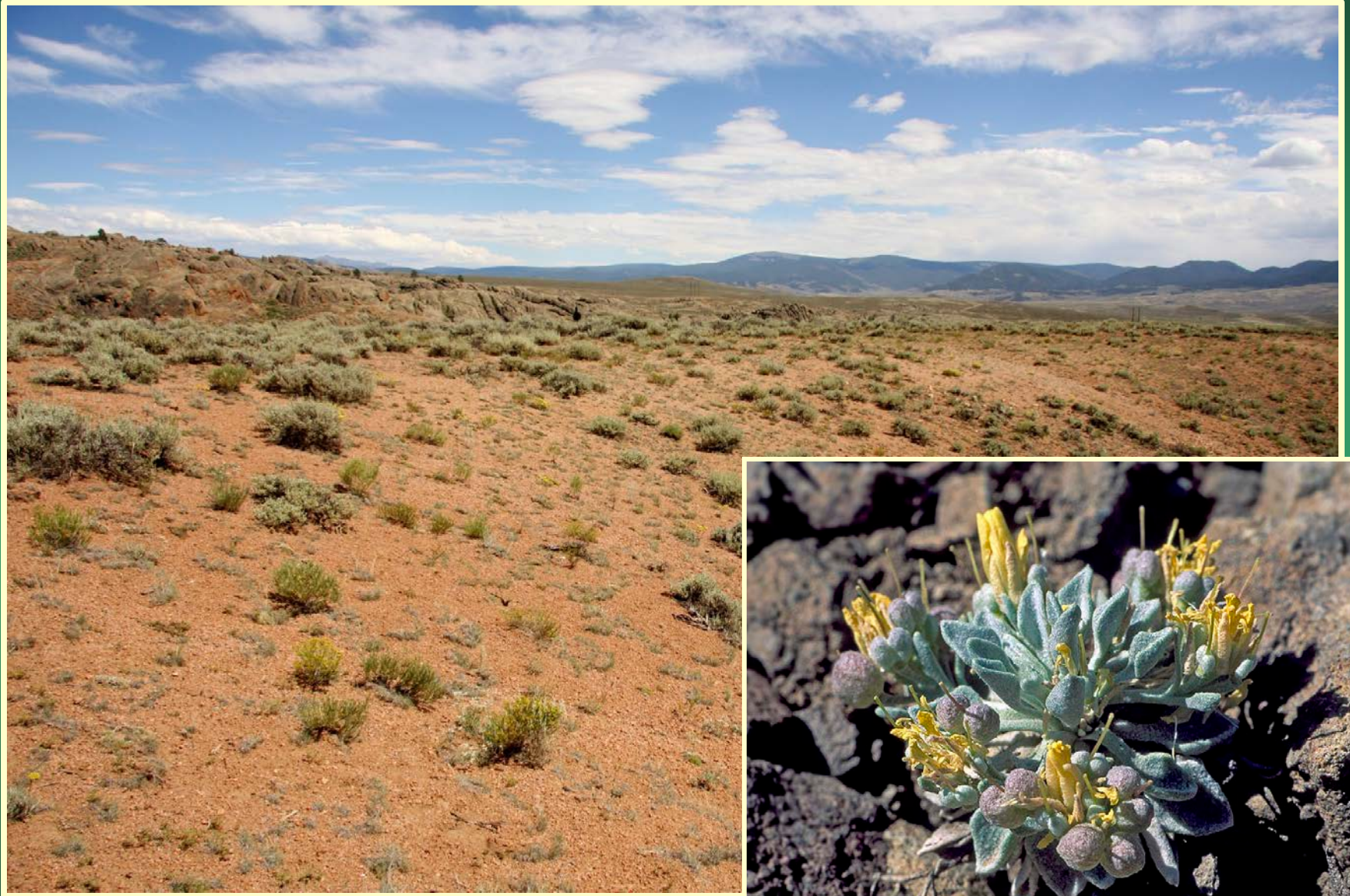


Physaria rollinsii Rollins' twinpod



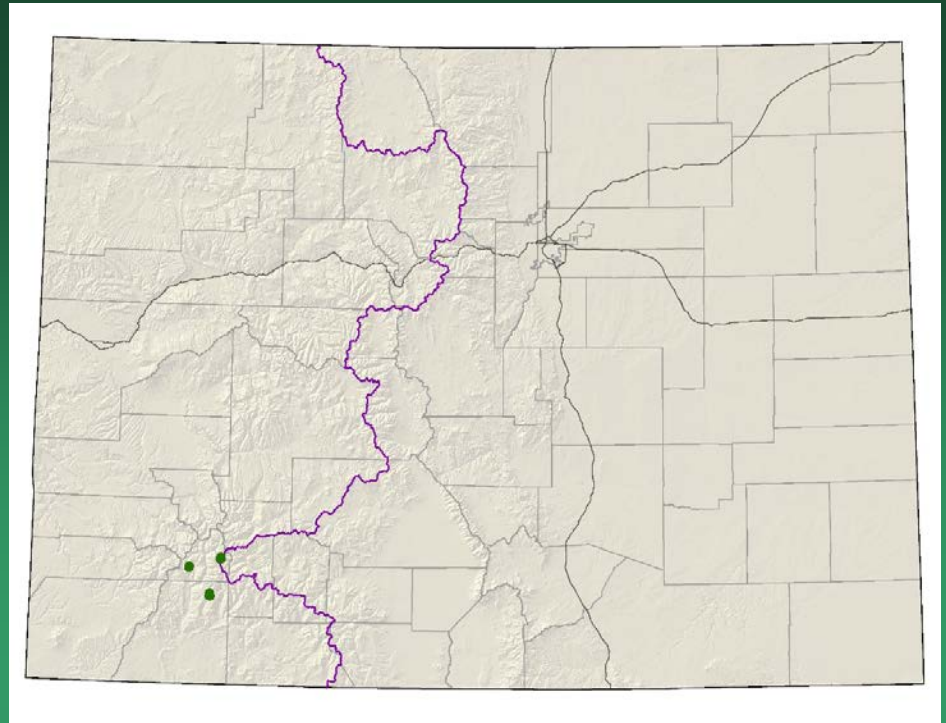
- Federal status: none
- Heritage ranks: G1G2/S1S2
- Global distribution: Colorado endemic (Gunnison and Saguache counties)
- Elevation range: 6,620-9,100 ft.
- Last observed in Colorado: 2018
- Colorado occurrences: 17 (11 are historical)
- Colorado individuals: 500+
- Primary threats: grazing and motorized recreation
- Land ownership/management: BLM, NPS, state, private

Physaria rollinsii



Physaria scrotiformis

West Silver bladderpod



- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, La Plata and San Juan Counties
- Elevation range: 11,555-11,830 ft.
- Last observed in Colorado: 2019
- Colorado occurrences: 4
- Colorado individuals: 1000+
- Primary threats: unknown
- Land ownership/management: USFS

Physaria scrotiformis



**To contribute data or photos
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