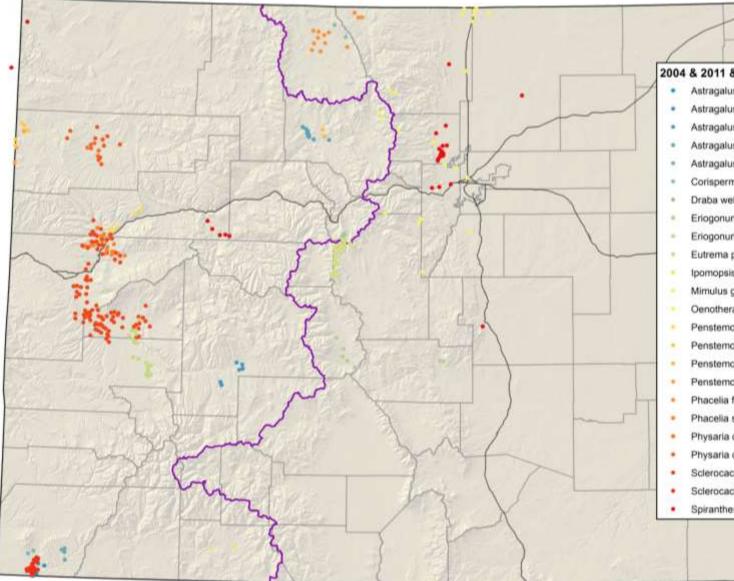
2017 Colorado Rare Plant Symposia Colorado T, E & C Plant Species

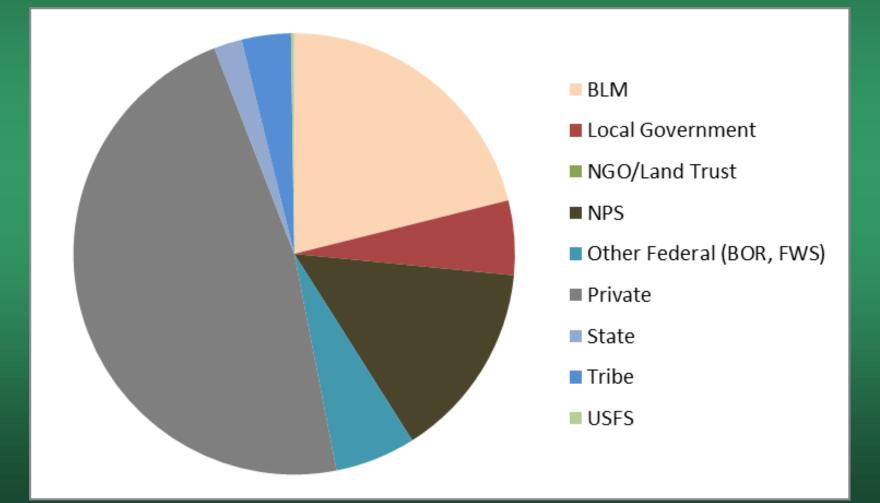


#### 2004 & 2011 & 2015 T&E of CO

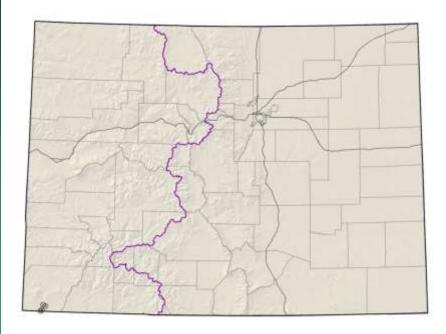
- Astragalus humillimus (4)
- Astragalus microcymbus (6)
- Astragalus osterhoutii (11)
- Astragalus schmolliae (4)
- Astragalus tortipes (2)
- Corispermum navicula (2)
- Draba weberi (4)
- Eriogonum brandegeei (7)
- Eriogonum pelinophilum (18)
- Eutrema penlandii (23)
- Ipomopsis polyantha (2)
- Mimulus gemmiparus (9)
- Oenothera coloradensis ssp. coloradensis (13)
- Penstemon debilis (6)
- Penstemon grahamii (6)
- Penstemon penlandii (2)
- Penstemon scariosus var. albifluvis (4)
- Phacelia formosula (13)
- Phacelia submutica (23)
- Physaria congesta (7)
- Physaria obcordata (11)
- Scierocactus glaucus (93)
- Sclerocactus mesae-verdae (22)
- Spiranthes diluvialis (36)

#### Location of Colorado T, E,C and Petitioned Plant Species

# Land Ownership of T&E Plant Species of Colorado



### Astragalus humillimus Mancos milkvetch



- <u>Federal status</u>: Endangered
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: New Mexico and Colorado (Montezuma County)
- <u>Elevation range</u>: 5,240-6160 ft.
- Last observed in Colorado: ??
- <u>Colorado occurrences</u>: 4 (all are historical)
- <u>Colorado individuals</u>: 25,000
- <u>Primary threats</u>: mineral, oil, and gas development, seismic exploration
- Land ownership/management: tribe

#### Astragalus humillimus





### Astragalus microcymbus Skiff milkvetch



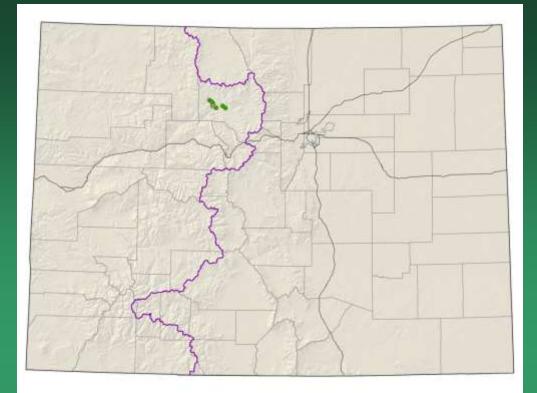
- <u>Federal status</u>: Candidate, BLM sensitive
- Heritage ranks: G1/S1
- <u>Global distribution</u>: Colorado endemic, South Beaver Creek, Gunnison and Saguache counties; 7600-8500 ft.
- <u>Elevation range</u>: 7,600-8,500 ft.
- Last observed: 2017
- <u>Occurrences</u>: 6 (1 is historical)
- <u>Individuals</u>: 17,800
- <u>Primary threats</u>: recreation, grazing by cattle and rabbits, mining, residential development
- Land ownership/management: BLM, private

#### Astragalus microcymbus



*Astragalus osterhoutii* Osterhout milkvetch

**Conservation Action Plan** 



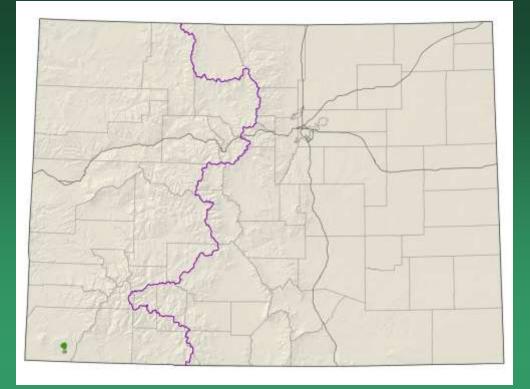
- <u>Federal status</u>: Endangered
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic (Grand County)
- <u>Elevation range</u>:7,370-8,000 ft.
- Last observed: 2017
- <u>Occurrences</u>: 6 (1 are historical)
- <u>Individuals</u>: 10,000-12,000
- <u>Primary threats</u>: recreation, mining, oil and gas development
- Land ownership/management: BLM, state, private



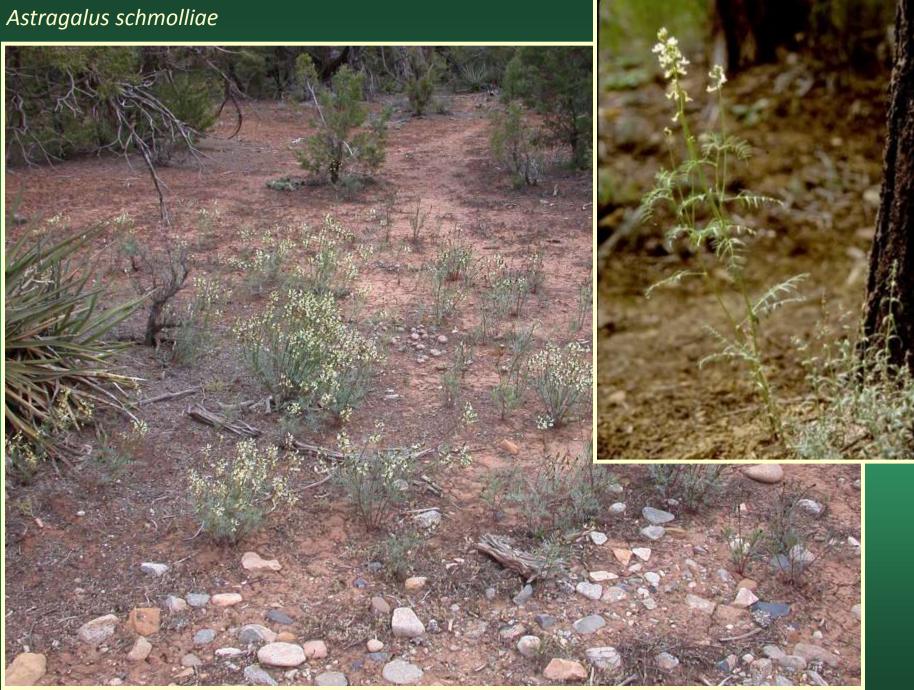
#### Astragalus osterhoutii



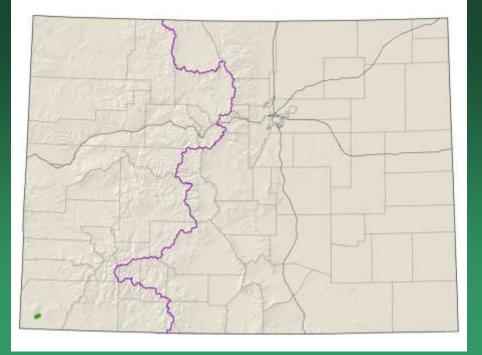
### *Astragalus schmolliae* Schmoll's milkvetch



- <u>Federal status</u>: Candidate
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic (Chapin Mesa Montezuma County)
- <u>Elevation range</u>: 5,760-7,430 ft.
- Last observed: 2017
- <u>Occurrences</u>: 4 (1 is historical)
- Individuals: 294,499 in Mesa Verde, Tribal lands unsurveyed
- <u>Primary threats</u>: Noxious weed invasions, Park developments, grazing and road construction outside NP
- Land ownership/management: NPS, tribe



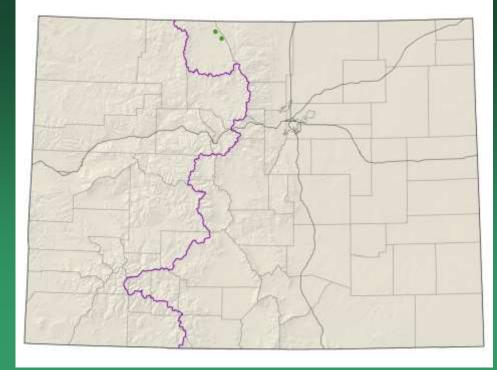
### Astragalus tortipes Sleeping Ute milkvetch



- <u>Federal status</u>: Former Candidate
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic (Montezuma County)
- <u>Elevation range</u>: 5,450-5,700 ft.
- Last observed: 2015
- <u>Occurrences</u>: 2
- <u>Individuals</u>: 2,000-3,000
- <u>Primary threats</u>: McPhee Reservoir canals, agricultural development
- Land ownership/management: tribe



### *Corispermum navicula* Crescent bugseed



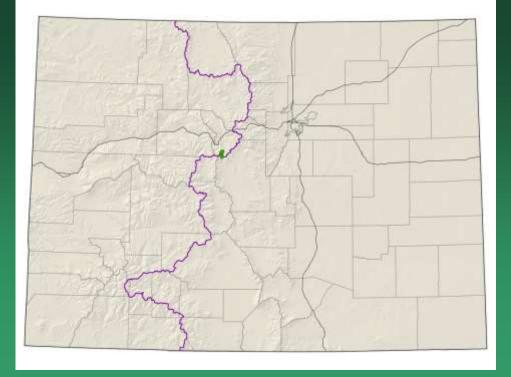
- <u>Federal status</u>: BLM sensitive, and petitioned for federal listing
- <u>Heritage ranks</u>: G1?/S1
- <u>Global distribution</u>: Colorado endemic (Jackson County), possibly Oklahoma?
- <u>Elevation range</u>: 8,230-8,730 ft.
- Last observed: 2017
- <u>Occurrences</u>: 2
- Individuals: common locally
- <u>Primary threats</u>: off-road vehicle use
- Land ownership/management: BLM, state



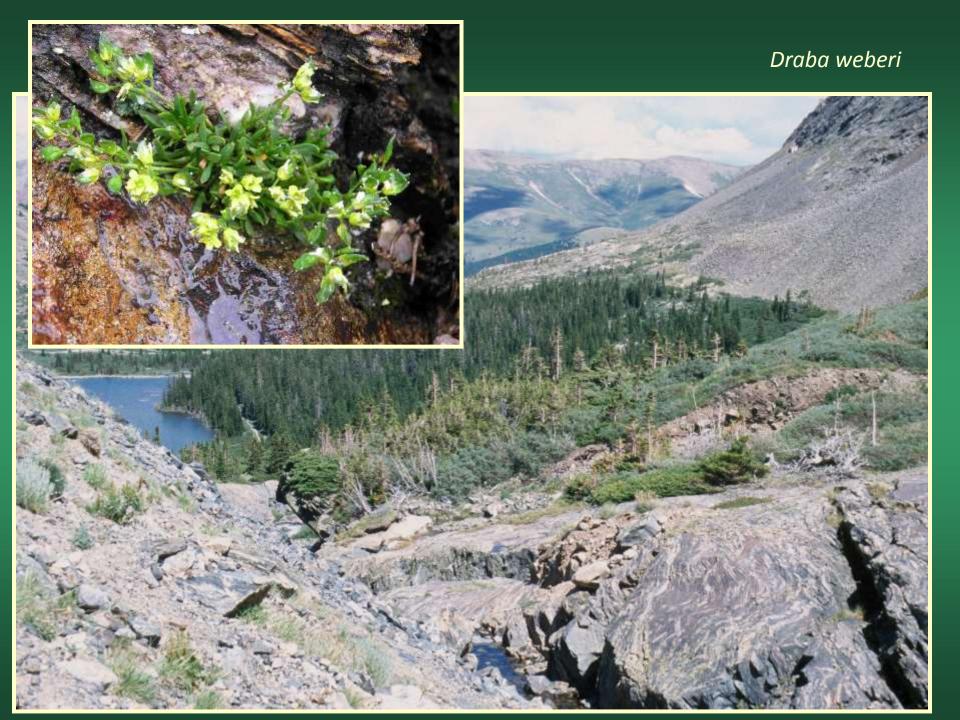
#### Corispermum navicula



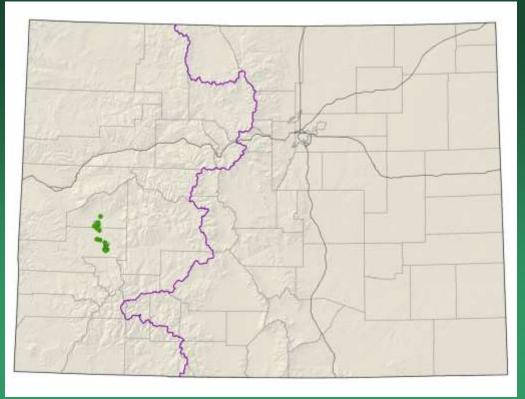
### *Draba weberi* Weber's draba



- <u>Federal status</u>: USFS sensitive, and petitioned for federal listing
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic, Park and Summit counties
- <u>Elevation range</u>: 11,120-11,160 ft.
- Last observed: 2017
- <u>Occurrences</u>: 4
- Individuals: 20-100
- <u>Primary threats</u>: road and dam construction and maintenance, environmental stochasticity, recreation, mining, noxious weeds, climate change
- <u>Land ownership/management</u>: private, USFS



### *Eriogonum pelinophilum* Clay-loving wild buckwheat



- <u>Federal status</u>: Endangered
- <u>Heritage ranks</u>: G2/S2
- <u>Global distribution</u>: Colorado endemic (Delta and Montrose counties)
- <u>Elevation range</u>: 5,220-6,400 ft.
- Last observed: 2017
- <u>Occurrences</u>: 19 (5 are historical)
- <u>Individuals</u>: 280,000
- <u>Primary threats</u>: residential and agricultural developments, ORV use, overgrazing, oil and gas exploration
- Land ownership/management: BLM, private

#### Eriogonum pelinophilum

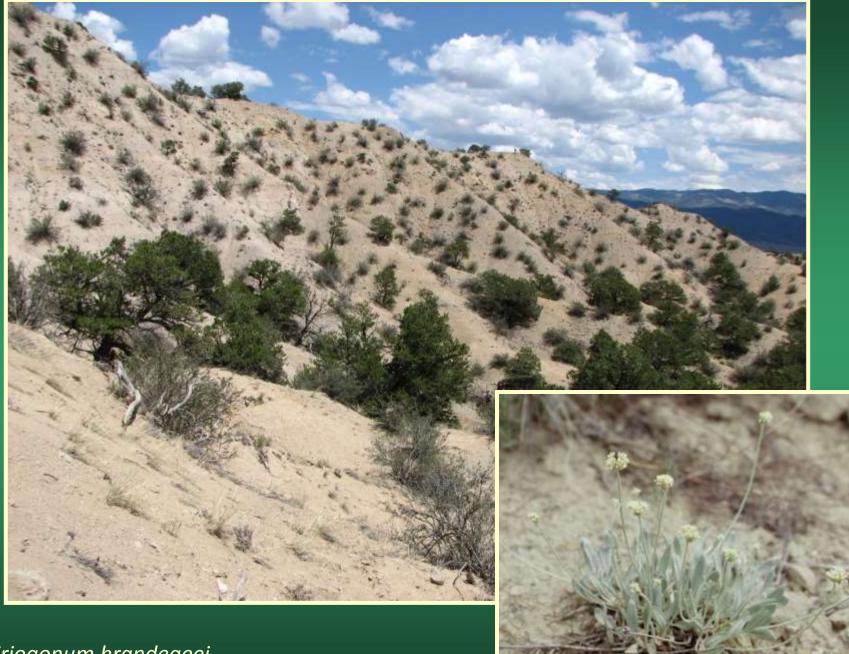


### *Eriogonum brandegeei* Brandegee's buckwheat

**Conservation Action Plan** 

- <u>Federal status</u>: USFS & BLM Sensitive, and petitioned for federal listing
- <u>Heritage ranks</u>: G1G2/S1S2
- <u>Global distribution</u>: Colorado endemic, Chaffee and Fremont counties
- <u>Elevation range</u>: 5,715-8,650 ft.
- Last observed: 2017
- <u>Individuals</u>: 35,000+
- <u>Occurrences</u>: 8 (3 are historical)
- <u>Primary threats</u>: off-road vehicle use and other recreation, residential and commercial development, timbering, mining, highway maintenance, weeds, grazing
- <u>Land ownership/management</u>: BLM, state, private, USFS

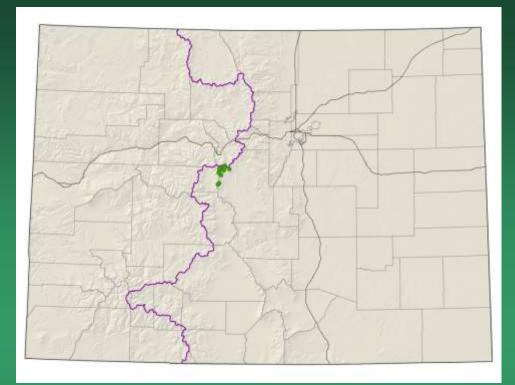




Eriogonum brandegeei

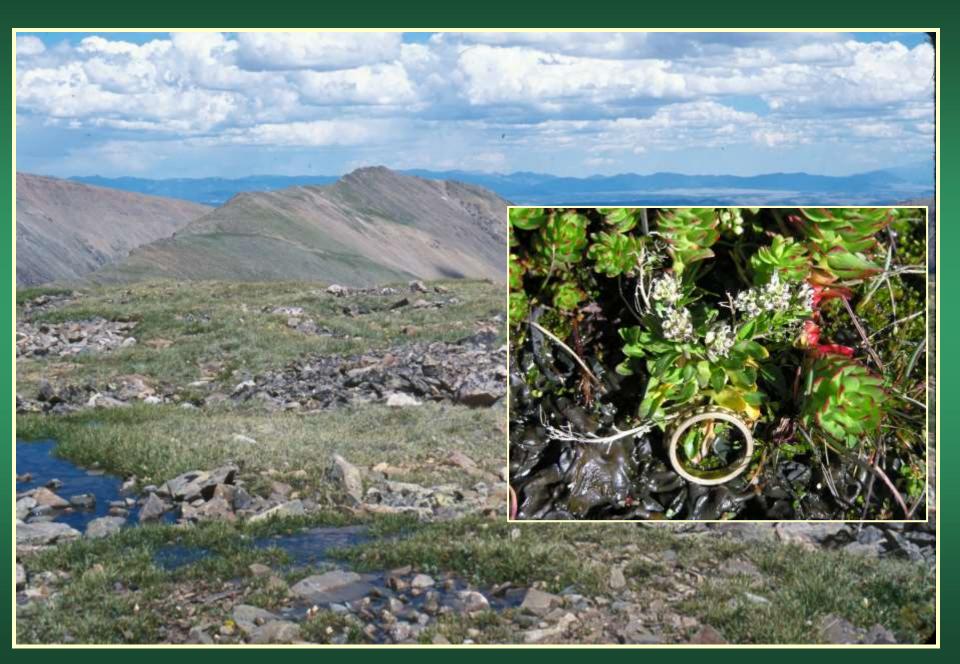
### Eutrema penlandii= E. edwardsii

### Penland alpine fen mustard



- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G1G2/S1S2
- <u>Global distribution</u>: Colorado endemic (Lake, Park, and Summit counties)
- <u>Elevation range</u>: 11,975-13,350 ft.
- Last observed: 2017
- <u>Occurrences</u>: 18
- <u>Individuals</u>: 20,000
- <u>Primary threats</u>: mining, recreation
- Land ownership/management: BLM, private, USFS

#### Eutrema penlandii

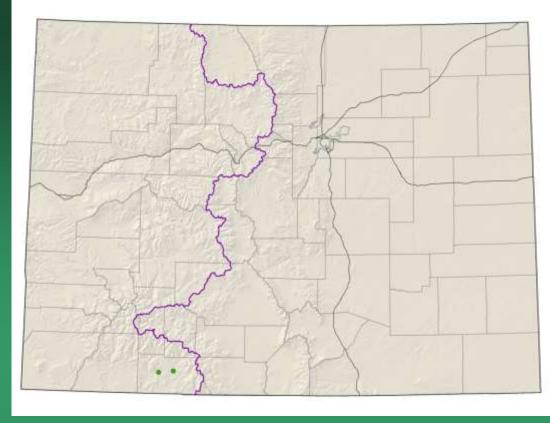


### *Ipomopsis polyantha* Pagosa gilia

**Conservation Action Plan** 



- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic (Archuleta County)
- <u>Elevation range</u>: 6,765-7,360 ft.
- Last observed: 2017
- <u>Individuals</u>: ~300,000
- <u>Occurrences</u>: 2
- <u>Primary threats</u>: residential development, road construction and maintenance, overgrazing
- Land ownership/management: private, state, BLM



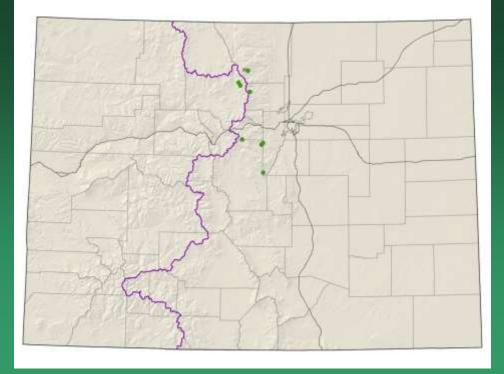






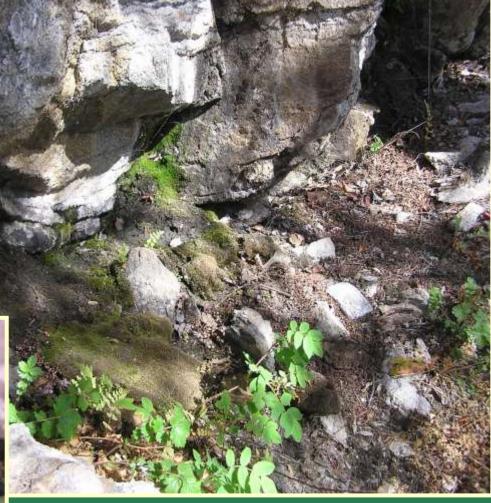
## *Mimulus gemmiparus* Budding monkeyflower

(Rocky Mnt. Monkeyflower)



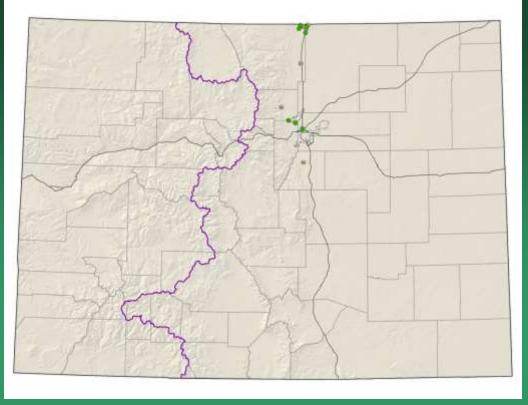
- <u>Federal status</u>: USFS sensitive, and petitioned for federal listing
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic, Boulder, Clear Creek, Jefferson, Grand, and Larimer counties
- <u>Elevation range</u>: 8,360-11,200 ft.
- <u>Last observed</u>: 2016-17
- <u>Occurrences</u>: 9 (1 historical)
- <u>Individuals</u>: >125,000
- <u>Primary threats</u>: recreational activities, trampling, competition from other plants, interference with hydrology
- Land ownership/management: NPS, state, USFS



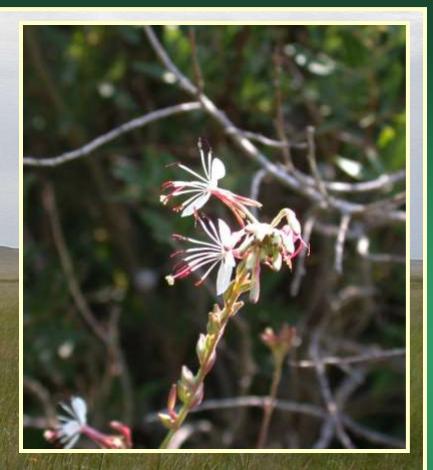


#### Mimulus gemmiparus

### Oenothera coloradensis ssp. coloradensis = Gaura neomexicana ssp. coloradensis Colorado butterfly plant



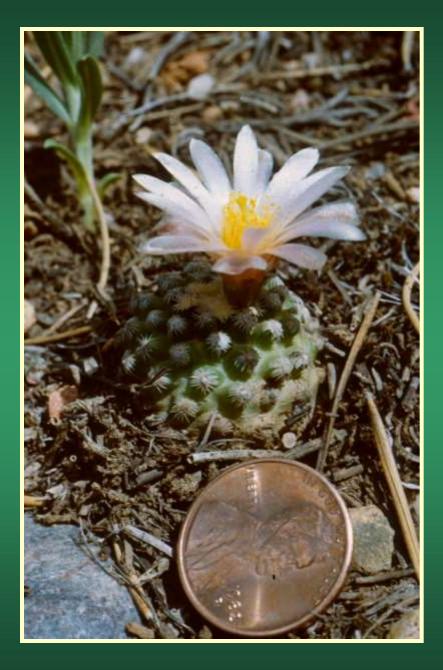
- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G3T2/S1
- <u>Global distribution</u>: Wyoming, Nebraska, and Colorado (Adams, Boulder, Douglas, Jefferson, Larimer and Weld counties)
- <u>Elevation range</u>: 4,860-6,380 ft.
- Last observed in Colorado: 2017
- Colorado occurrences: 14 (6 are historical)
- <u>Colorado individuals</u>: 18,000
- <u>Primary threats</u>: grazing, hydrological alterations, weeds, Interstate 25, oil & gas
- <u>Land ownership</u>: local government, NGO/land trust, federal, state, private

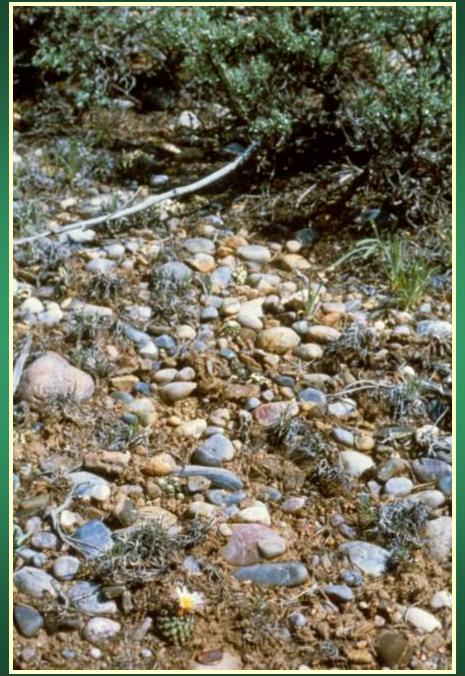


Oenothera coloradensis ssp. coloradensis

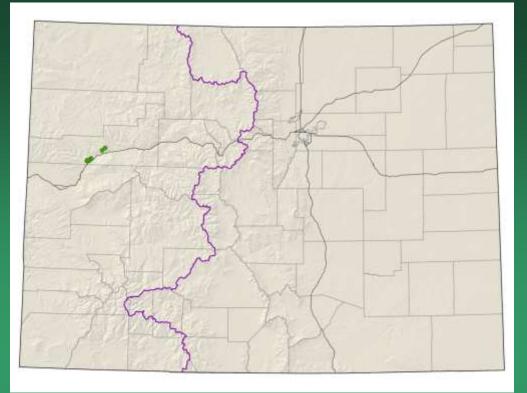
*Pediocactus knowltonii* Knowlton's cactus GIS analysis determined that the species does not actually occur in Colorado.

- <u>Federal status</u>: Endangered
- Heritage ranks: G1/SNA
- <u>Global distribution</u>: New Mexico
- Last observed in Colorado:
- <u>Colorado occurrences</u>: 0
- <u>Individuals</u>: 9,000 in NM
- <u>Primary threats</u>: cactus collection
- <u>Land ownership</u>: private, Ute





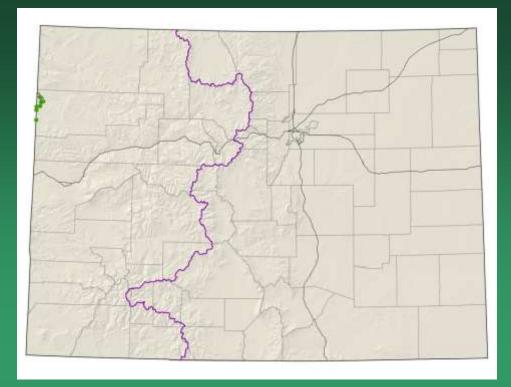
## Penstemon debilis Parachute penstemon



- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic (Garfield County)
- <u>Elevation range</u>: 5,600-9,170 ft.
- Last observed: 2017
- <u>Occurrences</u>: 6
- <u>Individuals</u>: 4000-6000
- <u>Primary threats</u>: oil and gas development, oil shale development, recreation
- <u>Land ownership/management</u>: BLM, private



### *Penstemon grahamii* Graham beardtongue



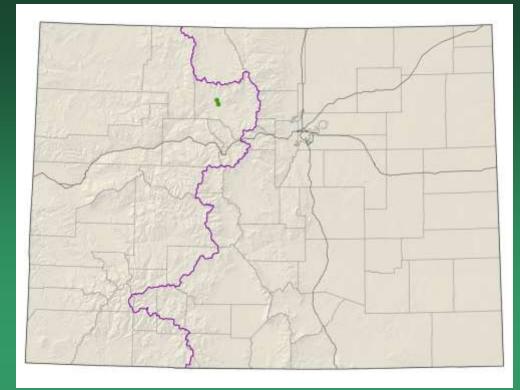
- <u>Federal status</u>: BLM sensitive, former candidate
- <u>Heritage ranks</u>: G2/S1
- <u>Global distribution</u>: Utah and Colorado (Rio Blanco County)
- <u>Elevation range</u>: 5,120-6,380ft.
- Last observed in Colorado: 2017
- <u>Colorado occurrences</u>: 8 (2 are historical)
- <u>Colorado individuals</u>: 5,000
- <u>Primary threats</u>: oil and gas development, overgrazing
- Land ownership/management: BLM, private

#### Penstemon grahamii



### Penstemon penlandii Penland beardtongue

**Conservation Action Plan** 



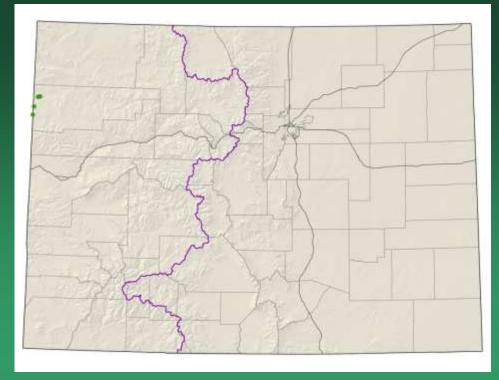
- <u>Federal status</u>: Endangered
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic (Grand County)
- <u>Elevation range</u>: 7400-7900 ft.
- Last observed: 2017
- <u>Occurrences</u>: 2
- <u>Individuals</u>: 12,800-1,400,000 (5000/acre)
- <u>Primary threats</u>: road maintenance (grading, spraying, snow plowing), ORV use
- Land ownership/management: BLM, private

#### Penstemon penlandii





Penstemon scariosus var. albifluvis White River penstemon



- <u>Federal status</u>: BLM sensitive, former candidate
- <u>Heritage ranks</u>: G4T1/S1
- <u>Global distribution</u>: Utah and Colorado (Rio Blanco County)
- <u>Elevation range</u>: 5700-6700 ft.
- Last observed in Colorado: 2017
- <u>Colorado occurrences</u>: 4
- <u>Colorado individuals</u>: 200+
- <u>Primary threats</u>: overgrazing, oil and gas development, ORV use
- Land ownership/management: BLM, private



Penstemon scariosus var. albifluvis

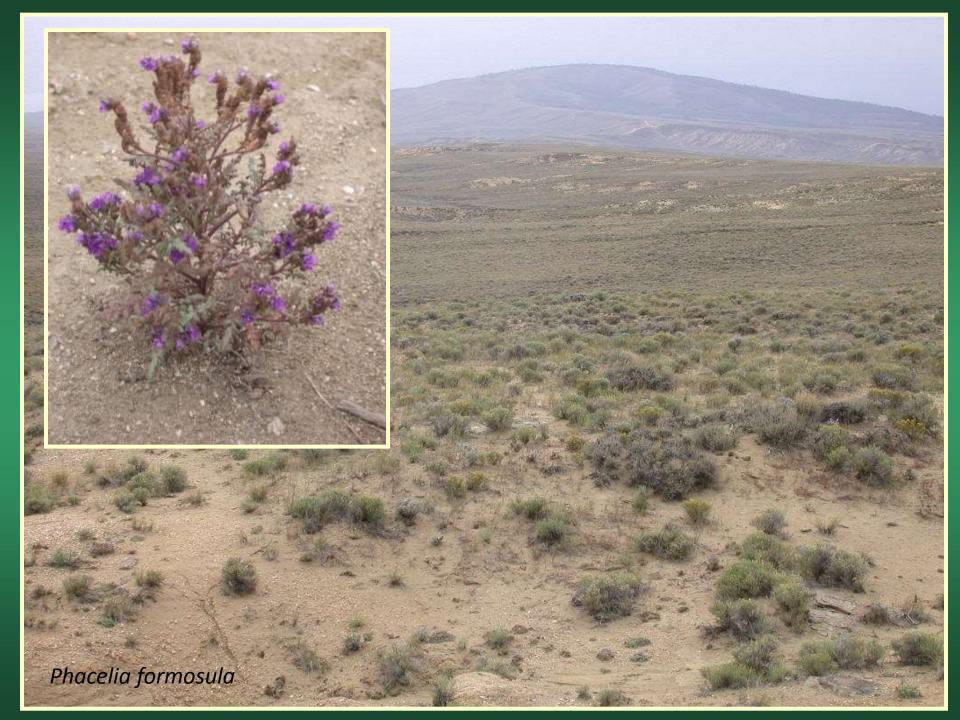
# *Phacelia formosula* North Park phacelia

**Conservation Action Plan** 

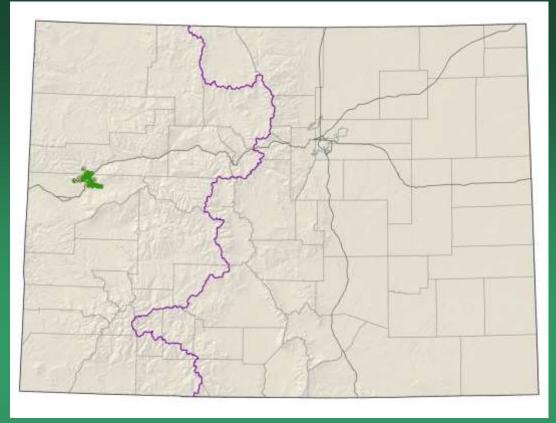


- <u>Heritage ranks</u>: G1/S1
- Global distribution: Colorado endemic (Jackson and Larimer counties)
- <u>Elevation range</u>: 7,900-8,300 ft.
- Last observed: 2017
- <u>Occurrences</u>: 13 (2 are historical)
- <u>Individuals</u>: 18,000-20,000
- <u>Primary threats</u>: ORV use, coal extraction, overgrazing, oil and gas development
- Land ownership/management: BLM, federal, state, private





# *Phacelia submutica* DeBeque phacelia



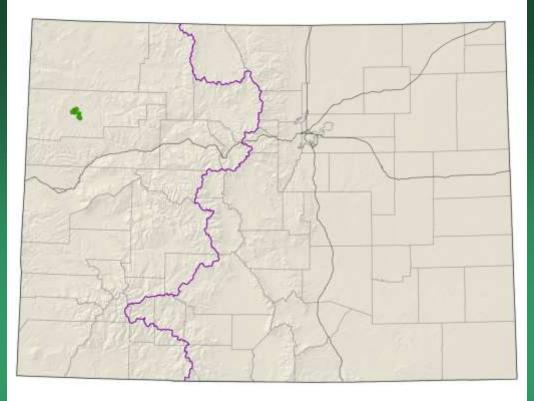
- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G2/S2
- <u>Global distribution</u>: Colorado endemic (Garfield and Mesa counties)
- <u>Elevation range</u>: 5,000-6,540ft.
- Last observed: 2016
- <u>Occurrences</u>: 23 (6 are historical)
- <u>Individuals</u>: 25,000-68,000
- <u>Primary threats</u>: oil and gas development, ORV use, overgrazing, oil shale mining
- Land ownership/management: BLM, private, USFS



Phacelia submutica

Physaria congesta = Lesquerella congesta Dudley Bluffs bladderpod

**Conservation Action Plan** 



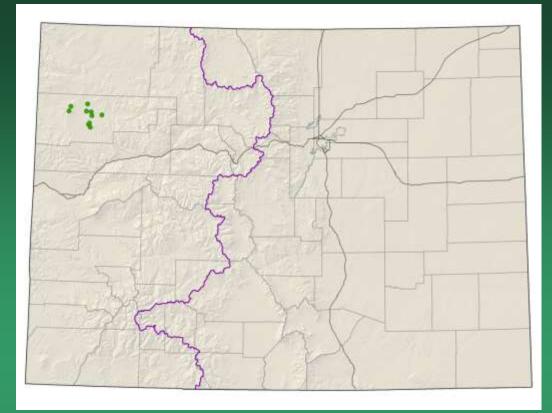
- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic (Rio Blanco County)
- <u>Elevation range</u>: 6,120-6,550 ft.
- Last observed: 2017
- <u>Occurrences</u>: 7
- <u>Individuals</u>: 650,000
- <u>Primary threats</u>: oil and gas development, oil shale and nahcolite mining, ORV use, overgrazing, trampling by wild horses
- Land ownership/management: BLM, state, private

#### Physaria (Lesquerella) congesta



# *Physaria obcordata* Piceance twinpod

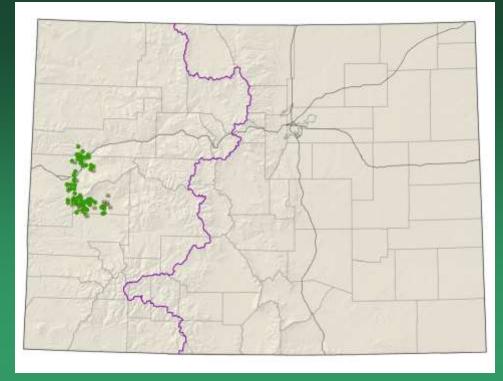
**Conservation Action Plan** 



- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G1G2/S1S2
- <u>Global distribution</u>: Colorado endemic (Rio Blanco County)
- <u>Elevation range</u>: 5,930-7,560 ft.
- Last observed: 2017
- <u>Occurrences</u>: 11
- <u>Individuals</u>: 30,000
- <u>Primary threats</u>: oil and gas development, oil shale mining, ORV use, trampling by wild horses
- Land ownership/management: BLM, state, private



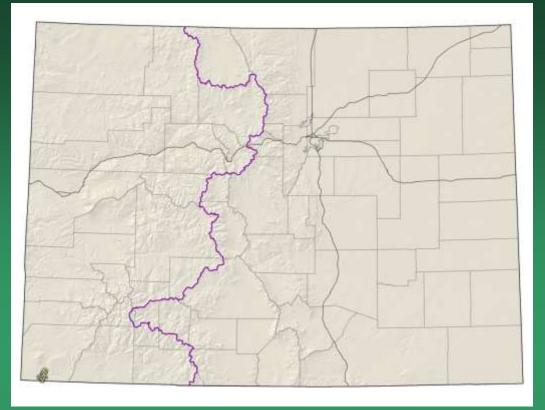
# *Sclerocactus glaucus* Colorado hookless cactus



- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G2G3/S2S3
- <u>Global distribution</u>: Colorado (Delta, Garfield, Mesa, and Montrose counties)
- <u>Elevation range</u>: 4,650-7,130 ft.
- Last observed in Colorado: 2017
- <u>Colorado occurrences</u>: 93 (17 are historical or unrankable)
- <u>Colorado individuals</u>: ~15,000
- <u>Primary threats</u>: oil and gas development, residential development, cactus collecting
- Land ownership/management: BLM, federal, state, private, USFS



*Sclerocactus mesae-verdae* Mesa Verde cactus

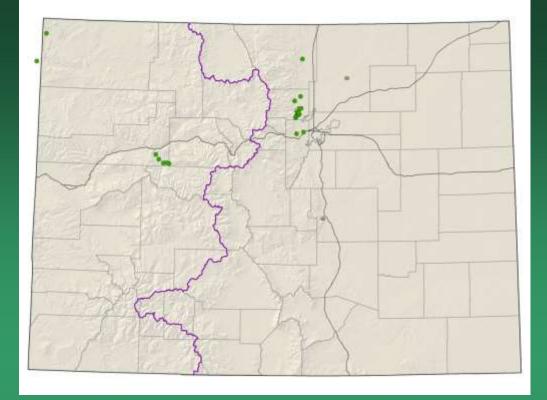


- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G2/S2
- <u>Global distribution</u>: New Mexico and Colorado (Montezuma County)
- <u>Elevation range</u>: 5,050-5,770 ft.
- Last observed in Colorado: 2013
- <u>Colorado occurrences</u>: 22 probably a single large occurrence
- <u>Colorado individuals</u>: 2,000-10,000
- <u>Primary threats</u>: weeds, feral horses, cactus collecting, ORV use
- Land ownership/management: tribe



Sclerocactus mesae-verdae

# *Spiranthes diluvialis* Ute ladies'-tresses

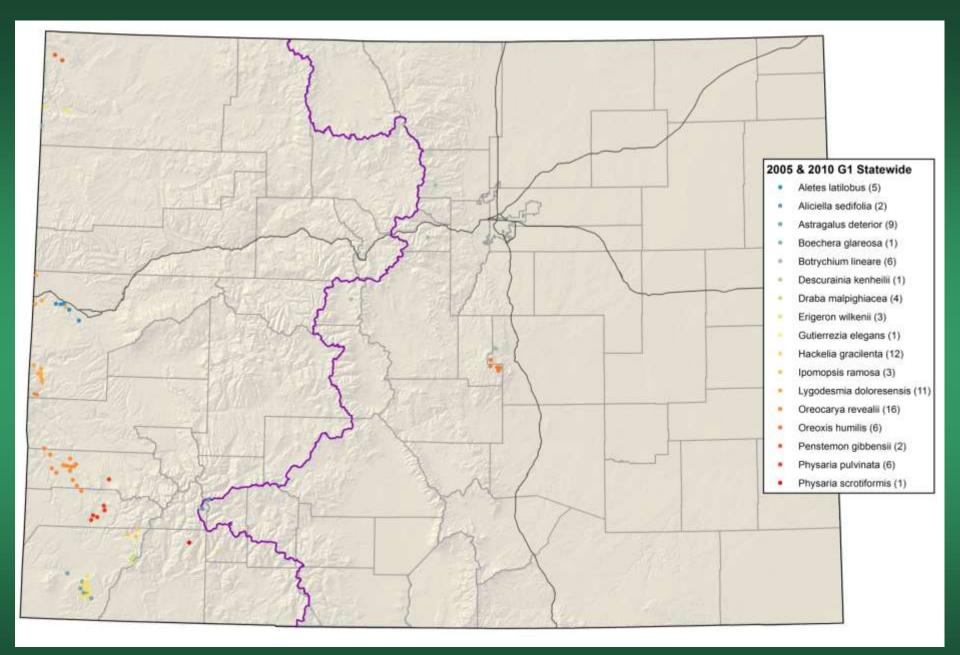


- <u>Federal status</u>: Threatened
- <u>Heritage ranks</u>: G2G3/S2
- <u>Global distribution</u>: Washington, Idaho, Montana, Wyoming, Nevada, Utah, Nebraska, and Colorado (Boulder, El Paso, Garfield, Jefferson, Larimer, Moffat, and Weld counties)
- <u>Elevation range</u>: 4,530-7,750 ft.
- Last observed in Colorado: 2017
- <u>Colorado occurrences</u>: 17 (3 are historical)
- Colorado individuals: 17,500
- <u>Primary threats</u>: weeds, residential development, hydrological alterations
- Land ownership/management: BLM, local government, NPS, USFS, state, private

#### Spiranthes diluvialis

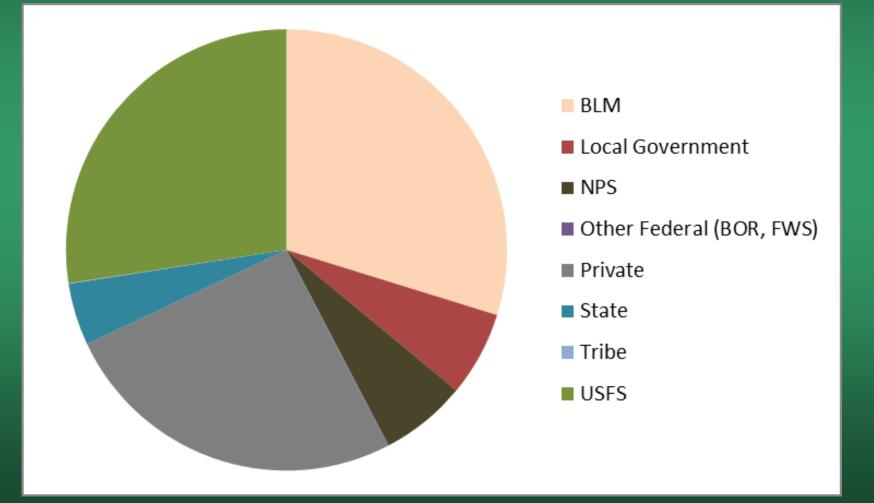


Colorado Rare Plant Symposia Colorado G1 species (excluding T,E&C species)



### Location of Colorado G1Plant Species

# Land Ownership of G1 Plant Species of Colorado



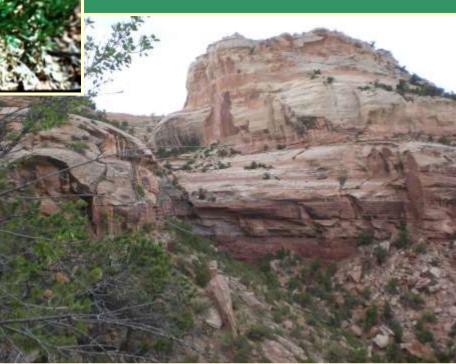
Aletes latilobus= Lomatium latilobum Canyonlands biscuitroot



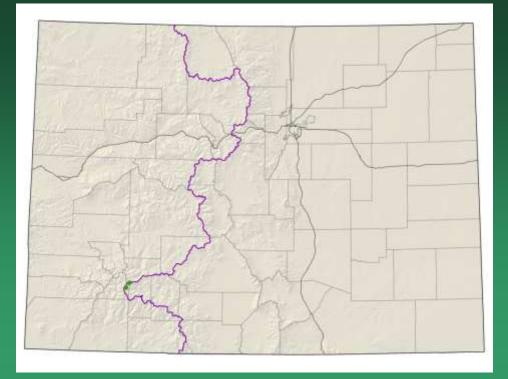
- Federal status: BLM sensitive
- <u>Heritage ranks</u>: G1G2/S1
- <u>Global distribution</u>: Utah (Grand and San Juan counties) and Colorado (Mesa County-- Colorado National Monument and Rattlesnake Canyon)
- <u>Elevation range</u>: 4,540-5,800 ft.
- Last observed in Colorado: 2009
- <u>Colorado occurrences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

#### Aletes latilobus





Aliciella sedifolia =Gilia sedifolia Stonecrop gilia



- Federal status: BLM & USFS
- sensitive
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic, San Juan Mountains, Hinsdale County
- <u>Elevation range</u>: 12,720-13,830 ft.
- Last observed: 2007
- <u>Occurrences</u>: 2
- <u>Individuals</u>: 1,100
- Primary threats: non-motorized recreation
- Land ownership/management: USFS

#### Aliciella sedifolia



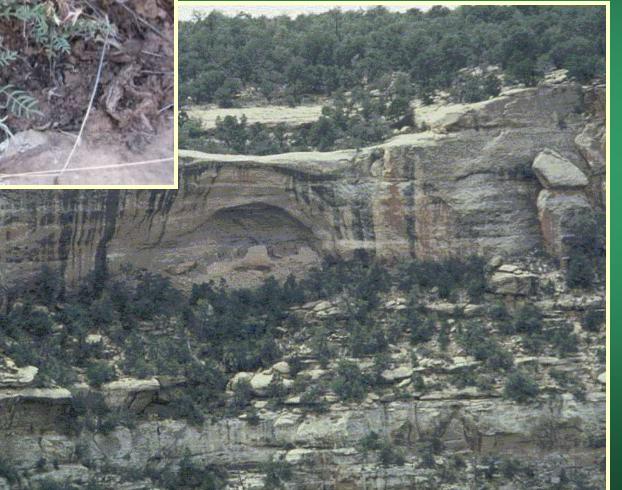
# Astragalus deterior Cliff Palace milkvetch



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



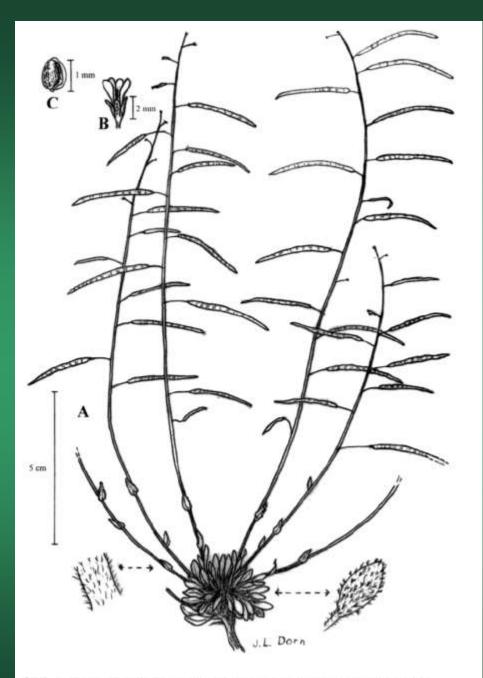
#### Astragalus deterior



# Boechera glareosa snowbasin rockcress

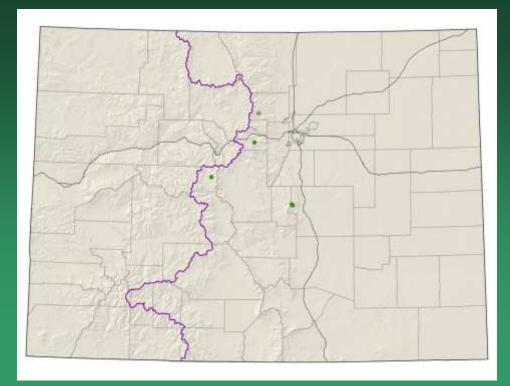


- <u>Federal status</u>: none
- Heritage ranks: G1/S1
- Global distribution: Utah and Colorado (Moffat county)
- <u>Elevation range</u>: 6,715-6,970 ft.
- Last observed in Colorado: 2002
- <u>Colorado occurrences</u>: 1
- <u>Colorado individuals</u>: unknown
- Primary threats: unknown
- Land ownership/management: BLM



# Botrychium lineare =

Botrychium campestre ssp. lineare



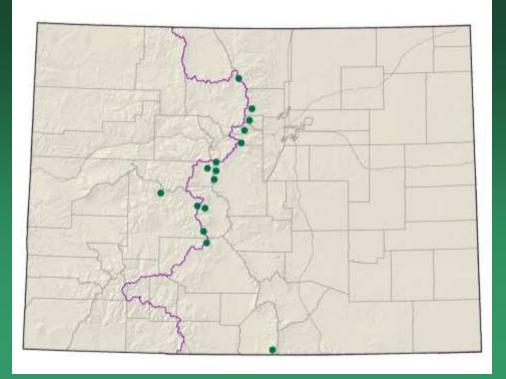
- <u>Federal status</u>: Removed; USFS Sensitive
- <u>Heritage ranks</u>: G2G3 / S2S3
- <u>Global distribution</u>: New Brunswick, Quebec, Alaska, Idaho, Montana, Oregon, California, South Dakota, Wyoming, and Colorado
- <u>Elevation range</u>: 8,540-11,900 ft.
- Last observed in Colorado: 2005+
- <u>Colorado occurrences</u>: 10+
- <u>Colorado individuals</u>: 500
- <u>Primary threats</u>: road maintenance, weeds
- <u>Land ownership/management</u>: BLM, local government, NPS, state, private, USFS

#### Botrychium lineare



Botrychium tax. nov.

*"furcatum" = Botrychium campestre* forkleaved moonwort



- <u>Federal status</u>: none
- <u>Heritage ranks</u>: GNR / SNR
- <u>Global distribution</u>: Colorado (Boulder, Chaffee, Clear Creek, Costilla, Grand, Gunnison, Lake, Park, and Saguache counties), New Mexico (Wheeler Peak, Taos County, pending genetic verification)
- <u>Last observed in Colorado</u>: 2009
- <u>Colorado occurrences</u>: to be subsumed under *B. campestre*
- <u>Colorado individuals</u>: >1200
- <u>Primary threats</u>: maintenance and improvements of roads and earthen dams
- Land ownership/management: USFS, NPS, Private

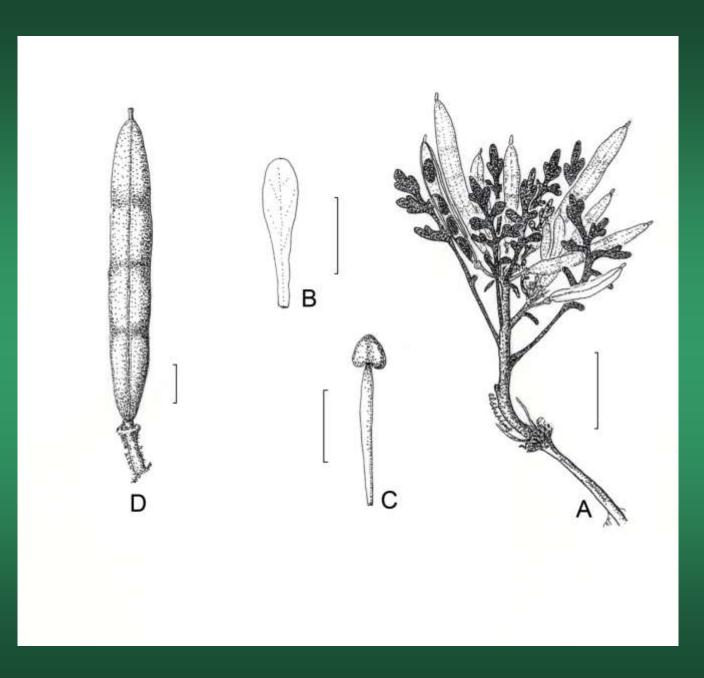
#### Botrychium tax. nov. "furcatum"



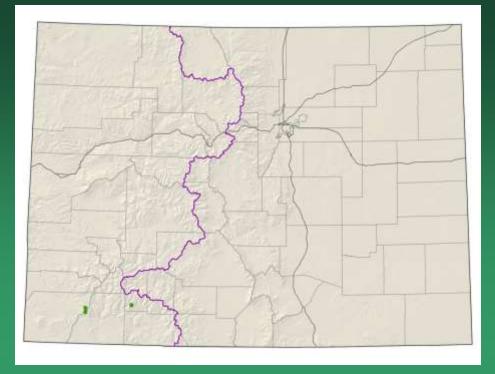
# *Descurainia kenheilii* Heil's tansy mustard



- <u>Federal status</u>: none
- Heritage ranks: G1/S1
- <u>Global distribution</u>: Endemic to CO; San Juan County
- <u>Elevation range</u>: 12,200-12,950 ft.
- Last observed in Colorado: 1997
- <u>Colorado occurrences</u>: 1
- <u>Colorado individuals</u>: unknown
- Primary threats: unknown
- Land ownership/management: BLM, private, USFS



# Draba malphigiaceae whitlow- grass

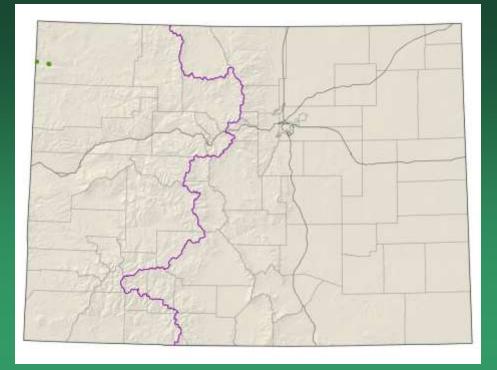


- <u>Federal status</u>: none
- <u>Heritage ranks</u>: G1?/S1?
- <u>Global distribution</u>: Endemic to CO; Hinsdale, La Plata and Montezuma counties
- <u>Elevation range</u>: 9,760-12,990 ft.
- Last observed in Colorado: 2012
- <u>Colorado occurrences</u>: 4
- <u>Colorado individuals</u>: unknown
- Primary threats: unknown
- Land ownership/management: private, USFS

#### Draba malphigiaceae



# *Erigeron wilkenii* Dieter's fleabane

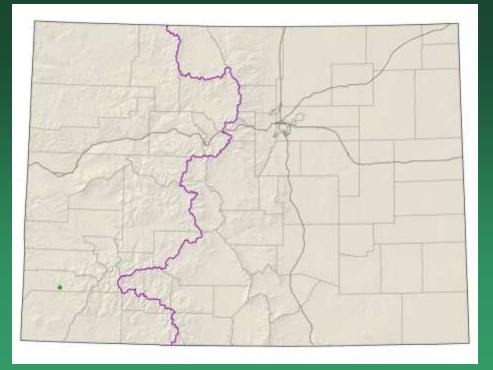


- <u>Federal status</u>: none
- Heritage ranks: G1/S1
- <u>Global distribution</u>: endemic to Colorado (Dinosaur National Monument, Moffat County)
- <u>Elevation range</u>: 5,160-6,030 ft.
- Last observed: 2012
- <u>Occurrences</u>: 3 (1 is historical)
- <u>Individuals</u>: 1,000-3,000
- Primary threats: no specific threats known
- Land ownership: NPS

### Erigeron wilkenii



*Gutierrezia elegans* Lone Mesa snakeweed Conservation Action Plan

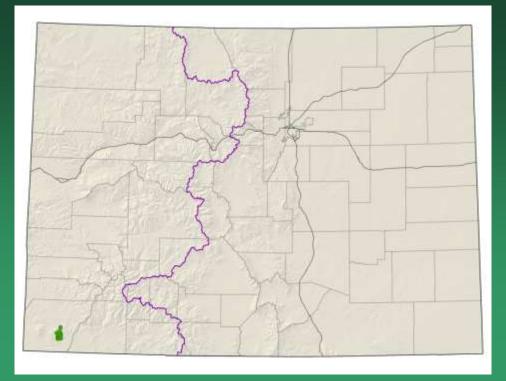


- Federal status: BLM & USFS
- sensitive
- Heritage ranks: G1/S1
- <u>Global distribution</u>: Endemic to Colorado; Dolores County
- <u>Elevation range</u>: 7,530-7,800 ft.
- Last observed in Colorado: 2016
- <u>Colorado occurrences</u>: 1
- Colorado individuals: 30,000
- Primary threats: grazing, recreation
- Land ownership/management: BLM, state, private, USFS



Gutierrezia elegans

# *Hackelia gracilenta* Mesa Verde stickseed

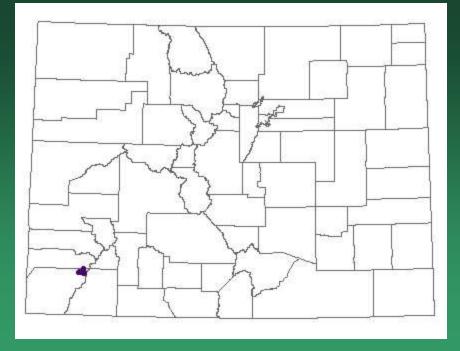


- <u>Federal status</u>: none
- <u>Heritage ranks</u>: G1G2/S1S2
- <u>Global distribution</u>: Colorado endemic, Mesa Verde National Park, Montezuma County
- <u>Elevation range</u>: 6,180-8,180 ft.
- Last observed: 2017
- <u>Occurrences</u>: 12 (1 is historical)
- <u>Individuals</u>: unknown, may be <1000
- <u>Primary threats</u>: 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: BLM, NPS, private, tribe

# Hackelia gracilenta



# *Ipomopsis ramosa* Coral ipomopsis



- <u>Federal status</u>: none
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic, Dolores River Canyon, Dolores and Montezuma Counties
- <u>Elevation range</u>: 8200-9200 ft.
- Last observed: 2014
- <u>Occurrences</u>: 3
- Individuals: 7400
- Primary threats: Unknown
- Land ownership/management: FS, private

### Ipomopsis ramosa

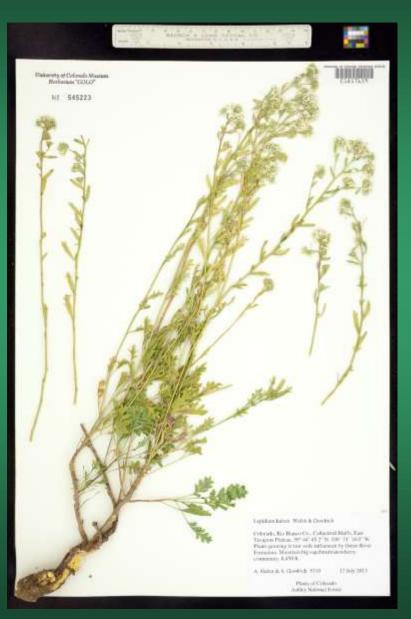


# *Lepidium huberi* Huber's pepperweed

- <u>Federal status</u>: none
- <u>Heritage ranks</u>: G1G2/S1S2
- <u>Global distribution</u>: Eastern Utah in the Uinta Mountains and the East Tavaputs Plateau and Garfield, Mesa and Rio Blanco counties, Colorado.
- <u>Elevation range</u>: 5100-7200 ft.
- Last observed: 2013
- Occurrences: 10+
- <u>Individuals</u>: unknown
- <u>Primary threats</u>: invasive species and oil and gas development
- Land ownership/management: BLM, private

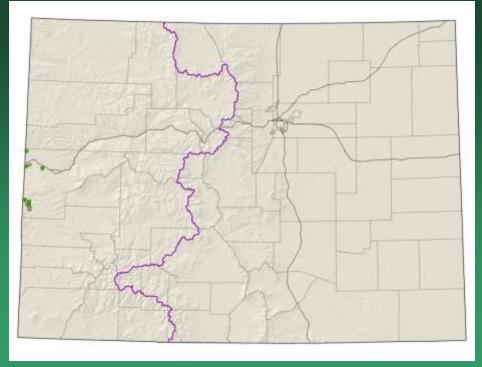


### Lepidium huberi



Lygodesmia doloresensis Dolores River skeletonplant

**Conservation Action Plan** 



- Federal status: BLM sensitive in CO
- <u>Heritage ranks</u>: G1G2/S1S2
- <u>Global distribution</u>: Utah and Colorado (Mesa county)
- <u>Elevation range</u>: 4,475-6,125 ft.
- Last observed in Colorado: 2017
- <u>Colorado occurrences</u>: 11 (4 are historical)
- <u>Colorado individuals</u>: 3700
- <u>Primary threats</u>: deer, rabbit, and cattle grazing, private land development, road maintenance, weeds
- Land ownership/management: BLM, private, state



Oreocarya revealii= Cryptantha gypsophila Gypsum Valley Cat-eye

**Conservation Action Plan** 



- Federal status: BLM Sensitive
- Heritage ranks: G1G2/S1S2
- <u>Global distribution</u>: Colorado endemic, Mesa, Montrose & San Miguel Counties
- <u>Elevation range</u>: 5,400-6,790 ft.
- Last observed: 2012
- <u>Occurrences</u>: 15
- <u>Individuals</u>: 20,000+
- <u>Primary threats</u>: oil and gas development, grazing, ATVs, recreation, roads
- Land ownership/management: BLM, state, private



Oreoxis humilis Pikes Peak alpine parsley

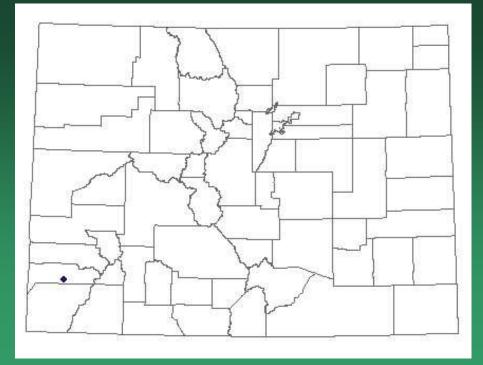


- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic (El Paso and Teller counties)
- <u>Elevation range</u>: 9,635-14,000 ft.
- Last observed: 2015
- <u>Occurrences</u>: 4 principal occurrences
- Individuals: 4,340 (tens of thousands estimated)
- <u>Primary threats</u>: road erosion and construction, structure maintenance, motorized and non-motorized recreation, herbivory, weeds
- Land ownership/management: private, USFS



### Oreoxis humilis

# Packera mancosana Mancos shale packera



- Federal status: USFS sensitive
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic (Dolores County)
- <u>Elevation range</u>: 7,575 ft.
- Last observed: 2017
- <u>Occurrences</u>: 1
- Individuals: 250
- <u>Primary threats</u>: grazing
- Land ownership/management: state

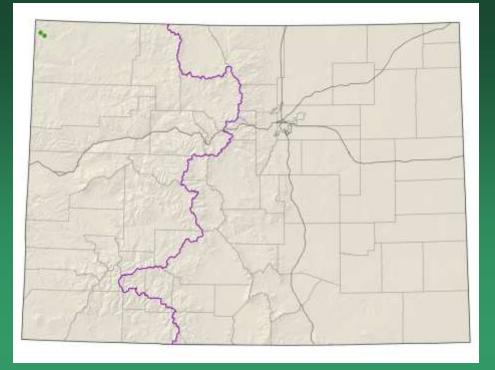
### Packera mancosana







# Penstemon gibbensii Gibbens' beardtongue

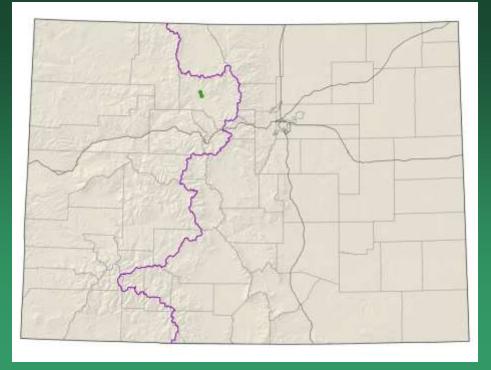


- Federal status: BLM sensitive
- Heritage ranks: G1G2/S1
- <u>Global distribution</u>: SC Wyoming, NE Utah, and NW Colorado (Moffat County)
- <u>Elevation range</u>: 5,400-5,730 ft.
- Last observed in Colorado: 2017
- Occurrences: 2 in CO; 7 total
- Individuals: 5200 in Colorado; 17,000 individuals total
- <u>Primary threats in CO</u>: noxious weeds, grazing, recreational activities, and uranium mining
- Land ownership in CO: BLM, federal

# Penstemon gibbensii



*Phacelia gina-glenneae* Troublesome phacelia



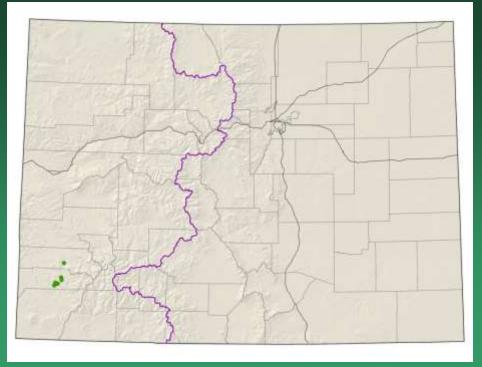
- Federal status:
- Heritage ranks: G1/S1
- Global distribution: Colorado endemic, Grand County
- <u>Elevation range</u>: 7600 ft.
- Last observed: 2016
- Occurrences: 1
- <u>Individuals</u>: 10,000-50,000
- <u>Primary threats</u>: livestock trampling, energy development
- Land ownership/management: BLM, private

# Phacelia gina-glenneae



# *Physaria pulvinata* Cushion bladderpod

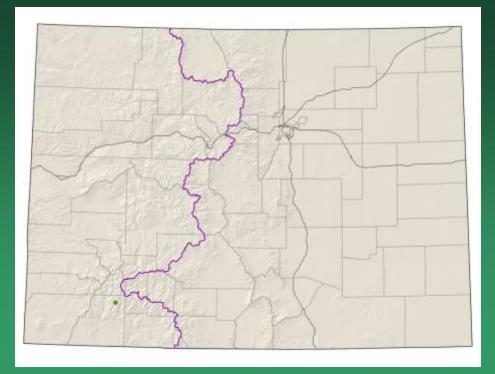
**Conservation Action Plan** 



- Federal status: BLM & USFS sensitive
- <u>Heritage ranks</u>: G1/S1
- Global distribution: Colorado endemic, San Miguel and Dolores counties
- <u>Elevation range</u>: 7,540-8,490 ft.
- Last observed: 2017
- <u>Occurrences</u>: 6
- <u>Individuals</u>: 22,000
- <u>Primary threats</u>: recreation, livestock trampling, weed control, habitat modification for sage grouse management, roads
- Land ownership/management: BLM, state, private, USFS

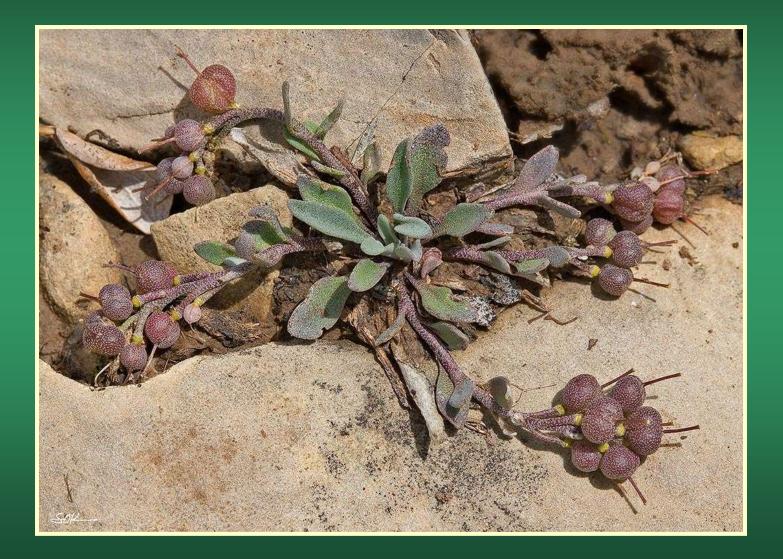
# Physaria pulvinata

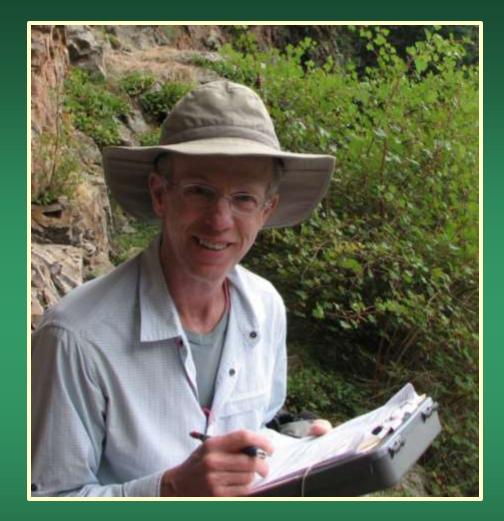
Physaria scrotiformis West Silver bladderpod



- Federal status: USFS sensitive
- <u>Heritage ranks</u>: G1/S1
- <u>Global distribution</u>: Colorado endemic, La Plata and San Juan Counties
- <u>Elevation range</u>: 11,555-11,830 ft.
- Last observed in Colorado: 2017
- <u>Colorado occurrences</u>: 2
- <u>Colorado individuals</u>: 1000+
- <u>Primary threats</u>: unknown
- Land ownership/management: USFS

### Physaria scrotiformis





In memory -

Richard (Rich) Scully 1951-2017

Native Plant Master and extraordinary volunteer-

- City of Boulder
  - Boulder County
    - Jefferson County
    - RMNP

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- CNHP
  - DBG
- CU Herbarium

Contributions in his honor can be made to the Colorado Native Plant Society



Rich Scully, and documented plant and plant community EORs