

Colorado Rare Plant Field Guide 2002 Update*

**Susan Spackman and David G. Anderson
Colorado Natural Heritage Program
Colorado State University
Fort Collins**

* Information is designed to be added to: Spackman, S., B. Jennings, J. Coles, C. Dawson, M. Minton, A. Kratz and C. Spurrier. 1997. Colorado Rare Plant Field Guide. Prepared for the Bureau of Land Management, the U.S. Forest Service, and the U.S. Fish and Wildlife Service by the Colorado Natural Heritage Program.

INTRODUCTION

This update is designed to be printed on 8.5 x 11 inch paper, cut into 5.5 x 8.5 pages, and hole punched to fit the purple binder provided with the Colorado Rare Plant Field Guide (Spackman *et al.* 1997). A Colorado county map, introduction to the guide, explanation for species descriptions, definition and code explanations, glossary, and complete reference list is provided in the original Colorado Rare Plant Field Guide. This update provides a list of species to be added to the original Master List, species descriptions for eleven BLM sensitive species, and a list of all new references that were used for the update.

ACKNOWLEDGEMENTS

The Bureau of Land Management, Grand Junction Field Office provided funds to product this update. We especially appreciate the insight and assistance provided by David Smith (BLM, Grand Junction).

One of the greatest strengths of the guide is the depth of information provided through the technical illustrations and photographs. Individual artists and photographers are acknowledged throughout the text.

Illustrations of *Amsonia jonesii* and *Frasera paniculata* were reprinted with permission from Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. by A. Cronquist, A.H. Holmgren, N.H. Holmgren, J.L. Reveal, and P.K. Holmgren; Vol. 4, copyright 1984, The New York Botanical Garden. Illustrations of *Astragalus jejunus* and *Pedimelum aromaticum* were reprinted with permission from Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. by A. Cronquist, A.H. Holmgren, N.H. Holmgren, J.L. Reveal, and P.K. Holmgren; Vol. 3b Fabales by R.C. Barneby, copyright 1989, The New York Botanical Garden.

We appreciate the input of our technical reviewers including Bill Jennings, Peggy Lyon, Tamara Naumann, James Reveal, and Rusty Roberts.

We are grateful for the many hours of hard work contributed by the Colorado Natural Heritage Program staff including Jill Handwerk, Alison Loar, and Amy Lavender.

Finally, we thank all of the members of the Colorado Rare Plant Technical Committee who have provided input and feedback throughout this project.

Colorado
Rare Plant Field Guide Master List *Additions*

Scientific Name Common Name	Heritage Rank	Federal Status
<i>Amsonia jonesii</i> Woodson Jones' blue star	G4/S1	S-BLM
<i>Astragalus jejunus</i> S. Wats. Starvling milkvetch	G3/S1	S-BLM
<i>Cirsium perplexans</i> (Rydb.) Petrak Adobe thistle	G2/S2	S-BLM
<i>Eriogonum acaule</i> Nutt. Stemless buckwheat	G3/S1	S-BLM
<i>Eriogonum ephedroides</i> Reveal Ephedra buckwheat	G3/S1	S-BLM
<i>Frasera paniculata</i> Torr. Tufted green gentian	G4/S1	S-BLM
<i>Lesquerella vicina</i> Anderson, Reveal, and Rollins Good-neighbor bladderpod	G2/S2	S-BLM
<i>Lygodesmia doloresensis</i> S. Tomb Dolores River skeletonplant	G1Q/S1	S-BLM
<i>Pediomelum aromaticum</i> (Payson) W.A. Weber Aromatic Indian breadroot	G3/S2	S-BLM
<i>Sphaeromeria capitata</i> Nuttall Rock tansy	G3/S1	S-BLM
<i>Townsendia strigosa</i> Nuttall Hairy Townsend daisy	G4/S1	S-BLM

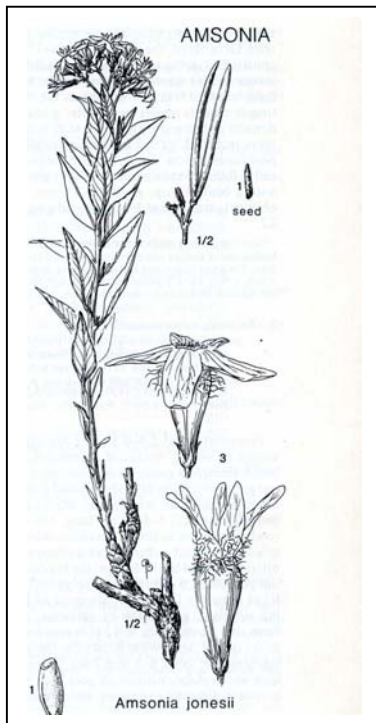


Illustration by
Bobbi Angell

Identifying characteristics: Flowers tubular, powder-blue; corolla with 5 lobes united at the base, and with stiff inpointing hairs; leaves alternate; stems 1.5-5 dm tall, usually much branched from the base; plants with milky juice; tap rooted perennial

Apocynaceae (Dogbane Family)

Look alike: Not likely to be confused with other species in this habitat in Colorado.

Flowering/Fruiting Period: April/May.

Distribution: NE Arizona, Utah, NW New Mexico, and SW Colorado (Mesa and Montezuma Cos.). To be sought in Moffat Co., Colorado.

Habitat: In dry, open areas with clay, sandy, or gravelly soils, in desert-steppe, rocky gorges and canyons. Elev. 4500-5000 ft.

References: CNHP 2002; Cronquist *et al.* 1984; Goodrich and Neese 1986; Weber and Wittmann 2001; Welsh *et al.* 1993; Woodson 1928; USDA, NRCS 2001.



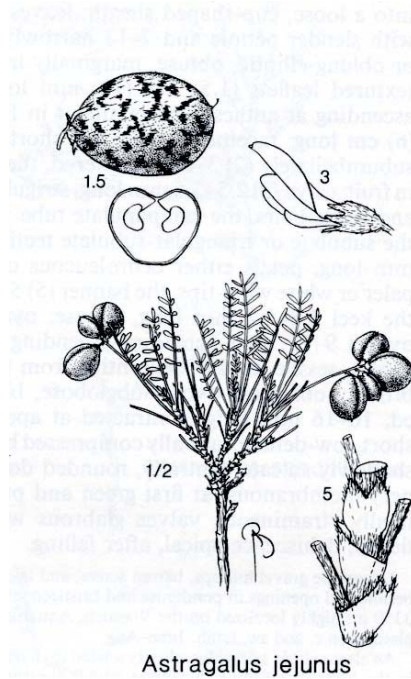
Close up of *Amsonia jonesii* by Tamara Naumann



Habitat of *Amsonia jonesii* by Tamara Naumann



Species distribution in Colorado



Astragalus jejunus

Illustration by Bobbi Angell

Identifying characteristics: Inflorescence a 3-7 flowered raceme; banner purple, wings white, keel lavender; pods red-mottled; leaf stalks rigid, persisting after leaflets are shed; low-growing, densely tufted, multi-stemmed perennial

Fabaceae (Pea Family)

Look alike: *A. wetherillii* has oval leaflets and does not have mottled pods.

Flowering/Fruiting Period: May-July.

Distribution: SW Wyoming, N Utah, SE Idaho, disjunct in Nevada, and peripheral in NW Colorado (Moffat Co.).

Habitat: Dry hilltops, gullied bluffs, and barren ridges or river-terraces; on tuff, shale, sandstone, or clays. Elev. 5500-7500 ft.

References: Barneby 1964; CNHP 2002; Cronquist *et al.* 1989; Dorn 1992; Fertig 1994; USDA, NRCS 2001; Weber and Wittmann 2001; Welsh *et al.* 1993.



Close up of *Astragalus jejunus* by Charmaine Refsdal



Habitat of *Astragalus jejunus* by Charmaine Refsdal



Species distribution in Colorado

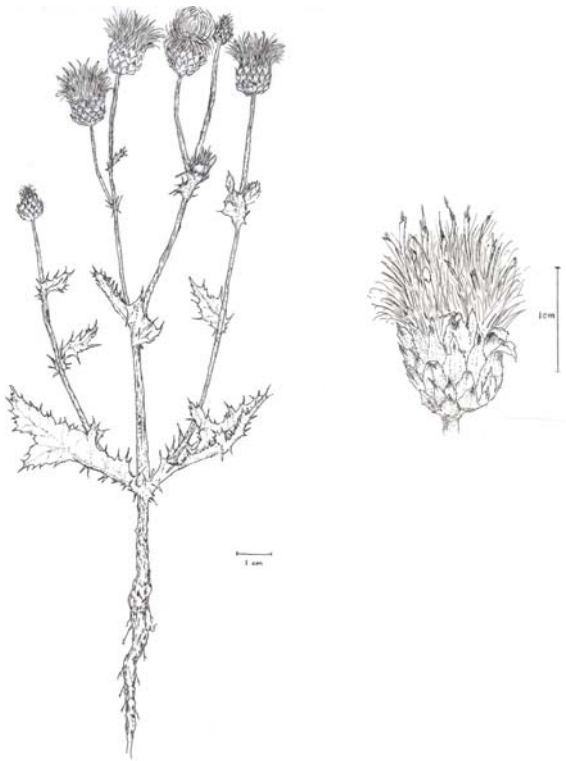


Illustration by Ann Fenwick

Identifying characteristics: Flowers pink or purplish; flower heads about 3 cm high and broad; phyllaries with erose tips or spines 1-2mm long; bracts with distinct glandular back; lower leaves oblanceolate, upper leaves lanceolate and clasping; leaves toothed with weak yellow spines; stems purplish striate; plants 2-6 dm tall, taprooted perennial

Asteraceae (Sunflower Family)

Look alike: *Cirsium centaureae* bracts are narrower and do not have the distinct glandular back, and flowers are ochroleucous to white.

Flowering/Fruiting Period: Late May-early July.

Distribution: Endemic to the Colorado and Gunnison river valleys in Colorado (Delta, Mesa, Montrose, and Ouray Cos.).

Habitat: Open areas and disturbed sites in mixed shrublands and pinyon juniper woodlands. Elev. 5000-8000 ft.

References: CNHP 2002; Weber and Wittmann 2001; USDA, NRCS 2001.

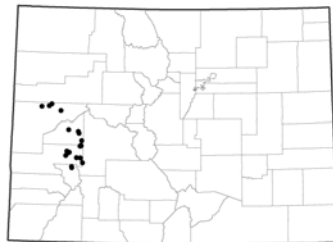


Close up of *Cirsium perplexans* by Peggy Lyon



Habitat of *Cirsium perplexans* by Peggy Lyon

Species distribution
in Colorado



Eriogonum acaule

**STEMLESS
WILD-BUCKWHEAT**

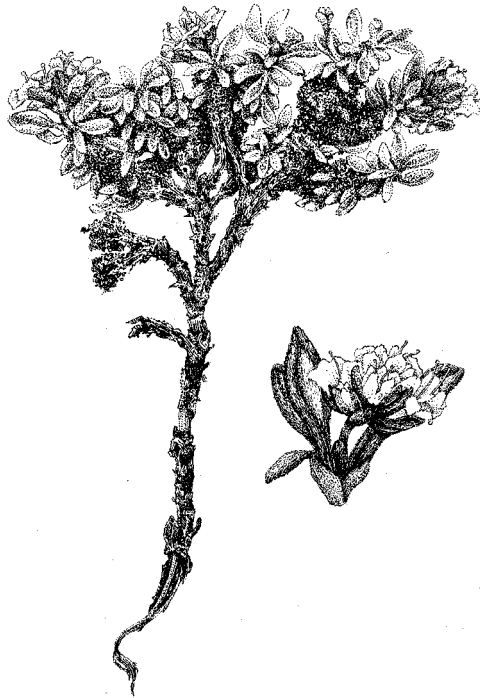


Illustration by Gail Jennings

Identifying characteristics: Flowers light yellow; stamens slightly exerted; flowers tucked in to tight/mat forming growth form; leaves linear to oblanceolate, tomentose; low with short or lacking flowering stems; plants 1.5-3 cm tall and 1-2 cm across; perennial

Polygonaceae (Buckwheat Family)

Synonym: *Eriogonum caespitosum* var. *acaule*

Look alike: *E. caespitosum* is not known to occur in Colorado.

Flowering/Fruiting Period: June-July

Distribution: Wyoming and Colorado (Moffat Co.)

Habitat: Barren hillsides in fine particle soils. Elev. 5680-6820 ft.

References: CNHP 2002; Dorn 1992; USDA, NRCS 2001; Weber and Wittmann 2001.



Close up of *Eriogonum acaule* courtesy of the Colorado Natural Heritage Program



Habitat of *Eriogonum acaule* courtesy of the Colorado Natural Areas Program

Species distribution
in Colorado





Illustration by Kaye Thorne

Identifying characteristics: perennial; leaves short, 2-3 cm long; green stems are noticeable; root system is stout and knotty; plants less than 20 cm tall; flowers yellow.

Polygonaceae (Buckwheat Family)

Look alike: *E. brevicaulis* has longer leaves (5 cm), a slender root system, and plants are taller (30 cm).

Flowering/Fruiting Period: July/late July-Sept.

Distribution: Utah and Colorado (Rio Blanco Co.)

Habitat: White shales of the Green River Formation and soils derived from them. Sparsely vegetated white shale slopes. Elev. 5600-6030 ft.

References: CNHP 2002; Reveal 1969; USDA, NRCS 2001; Weber and Wittmann 2001; Welsh and Thorne 1979; Welsh *et al.* 1987.



Close up of *Eriogonum ephedroides* courtesy of the Colorado Natural Areas Program



Habitat of *Eriogonum ephedroides* by Rusty Roberts

Species distribution
in Colorado



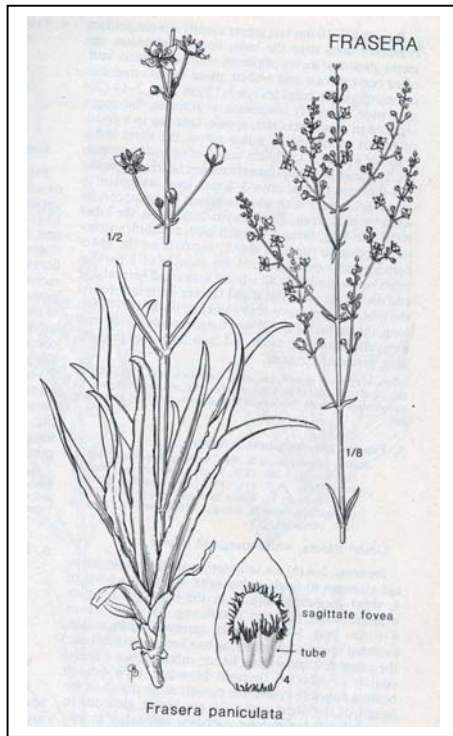


Illustration by
Bobbi Angell

Identifying characteristics: Flowers white or pale green, flecked with dark green; leaves opposite, broadly lanceolate, and white-margined; plants 7-10 dm tall, usually single stemmed; monocarpic perennial

Gentianaceae (Gentian Family)

Synonym: *Swertia utahensis*

Look alike: Not likely to be confused with other species in this area.

Flowering/Fruiting Period: June-early July.

Distribution: Southeast Utah, NE Arizona, NW New Mexico, and Colorado (Mesa Co.). To be sought in La Plata and Montezuma Cos.

Habitat: Dry, often sandy habitats, in desert shrub and pinyon-juniper communities. Elev. 4000-6500 ft.

References: CNHP 2002; Cronquist *et al.* 1984; USDA, NRCS 2001; Weber and Wittmann 2001; Welsh *et al.* 1993.



Close up of *Frasera paniculata* by Bill Jennings



Habitat of *Frasera paniculata*
by Bill Jennings



Species distribution
in Colorado

Lesquerella vicina GOOD-NEIGHBOR BLADDERPOD

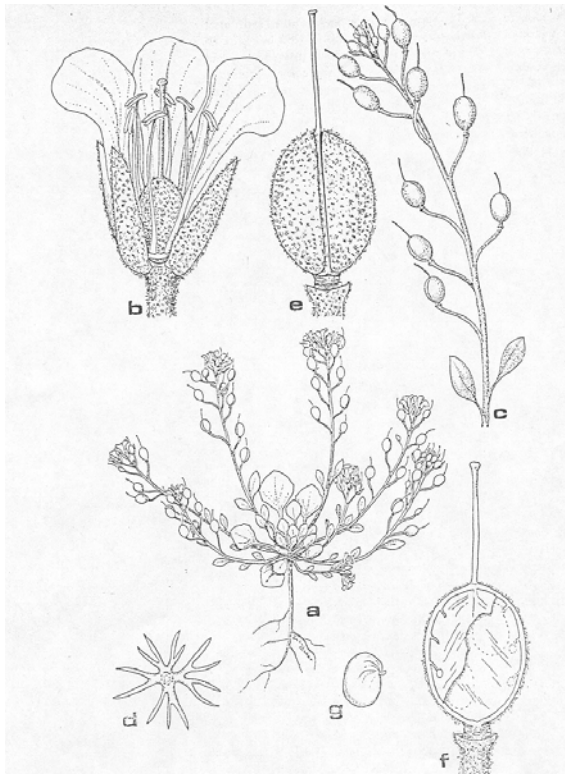


Illustration by Dolly Baker

Identifying characteristics: Flower petals 6-10 mm long, white with a yellow base; flower stalks may be sigmoid (S-shaped) or curved, sometimes straight. Siliques (fruit) are erect, and stellate-pubescent; stems 1-2.5 dm long, ascending (in flower) or nearly prostrate (in fruit); perennial

Brassicaceae (Mustard Family)

Look alikes: No other species of *Lesquerella* in this area have white flower petals.

Flowering/Fruiting Period: April-May

Distribution: Endemic to Colorado (Montrose and Ouray Cos.).

Habitat: Elev. 5800-7500 ft.

References: Anderson *et al.* 1997; CNHP 2002; USDA, NRCS 2001, Weber and Wittmann 2001.



Close up of *Lesquerella vicina* by James Reveal



Habitat of *Lesquerella vicina* by Peggy Lyon

Species distribution
in Colorado



Lygodesmia doloresensis

**DOLORES RIVER
SKELETONPLANT**

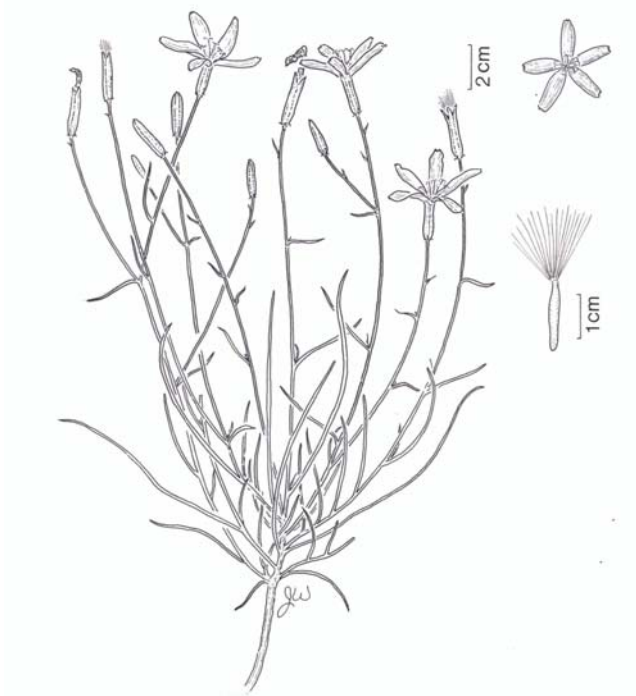


Illustration by Janet Wingate

Identifying characteristics: Large flower heads with 5 (rarely 7) ray flowers, each about 1.5-2.5 cm long, and with 5 or 6 principal phyllaries; disk flowers absent; flowers rose to lavender; pappus of capillary bristles; all leaves very narrow and filiform (1-3 mm wide); plants perennial, much branched from the base, 2-3 dm tall; plants with white latex sap

Asteraceae (Sunflower Family)

Look alikes: *L. grandiflora* occurs at slightly higher elevations, is not as tall, and has darker flowers, usually with 9 ray flowers.

Flowering/Fruiting Period: Late May-June.

Distribution: Endemic on benches of the Dolores River Valley, Mesa Co. Colorado; and in Grand Co., Utah.

Habitat: Reddish purple, sandy alluvium and colluvium of the Cutler Formation between the canyon walls and the river in juniper, shadscale, and sagebrush communities. Elev. 4000-5500 ft.

References: Atwood *et al.* 1991; CNHP 2002; O'Kane 1988; Tomb 1980; USDA, NRCS 2001; Weber and Wittmann 2001.



Close up of *Lygodesmia doloresensis* by Bill Jennings, inset by Julie Burt



Habitat of *Lygodesmia doloresensis* by Peggy Lyon



Species Distribution in Colorado

Pedimelum aromaticum

**AROMATIC INDIAN
BREADROOT**

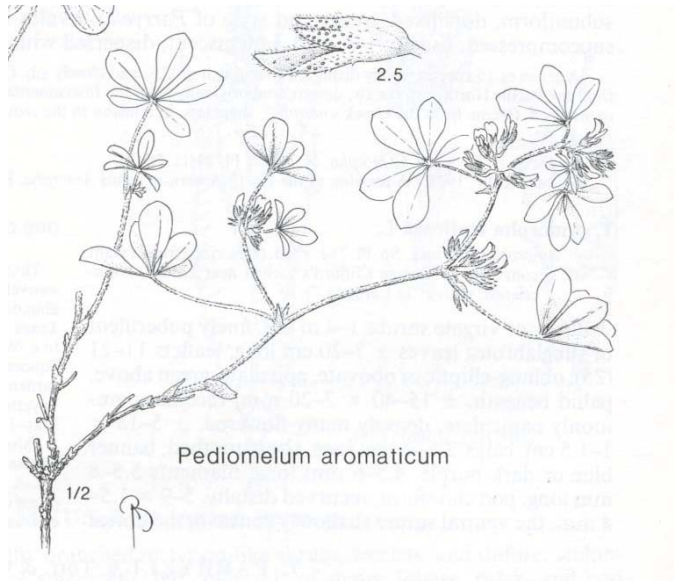


Illustration by Bobbi Angell

Identifying characteristics: Flowers 8-14 mm long; leaves green, palmate with (3) 5-7 leaflets; not forming a basal rosette; stems 15-30 cm tall; much-branched perennial herb

Fabaceae (Pea Family)

Synonym: *Psoralea aromatica*

Look alike: *Pedimelum megalanthum* has larger flowers (15-20 mm long), gray pubescent leaves forming a basal rosette, and very short stems.

Flowering/Fruiting Period: May-June/June

Distribution: Arizona, Utah, and Colorado (Mesa and Montrose Cos.)

Habitat: Open pinyon-juniper woodlands, in sandy soils or adobe hills. Elev. 4800-5700 ft.

References: CNHP 2002; Cronquist *et al.* 1989; USDA NRCS 2001; Weber and Wittmann 2001; Welsh *et al.* 1987.



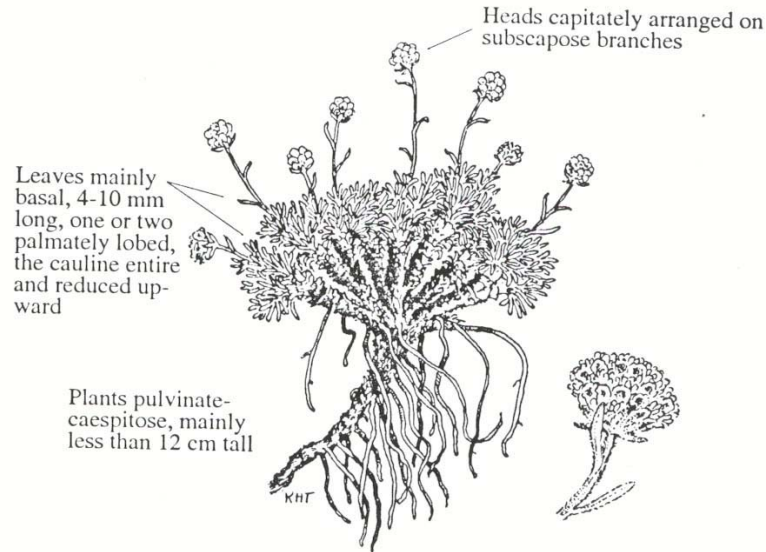
Close up of *Pediomelum aromaticum* by Dickson Pratt



Habitat of *Pediomelum aromaticum* by Peggy Lyon



Species Distribution in Colorado



SPHAEROMERIA CAPITATA

Illustration by Kaye Thorne

Additional identifying characteristics: Perennial; flowers yellow, heads solitary; leaves with narrow linear lobes; plants densely caespitose

Asteraceae (Sunflower Family)

Look alike: *Sphaeromeria argentea* has several flower heads, and wider and shorter leaf lobes.

Flowering/Fruiting Period: June-July

Distribution: Montana, Wyoming, Utah, and Colorado (Moffat Co.).

Habitat: Dry, rocky hills, and desert flats in silty soils.

Elev. 7500-7900 ft.

References: Atwood *et al.* 1991; CNHP 2002; Cronquist *et al.* 1994; USDA, NRCS 2001; Weber and Wittmann 2001.



Close up of *Sphaeromeria capitata* courtesy of the Colorado Natural Areas Program



Habitat of *Sphaeromeria capitata* courtesy of the Colorado Natural Areas Program



Species distribution in Colorado

REFERENCES (*Additions to 1997 guide*)

- Anderson, J.L., J.L. Reveal, and R.C. Rollins. 1997. *Lesquerella vicina* (Brassicaceae), a New Species for the Uncompahgre River Valley in Western Colorado. *Novon* 7:9-12.
- Beaman, J.H. 1957. Systematics and evolution of *Townsendia*. *Contrib. Gray Herbarium* 183:1-151.
- Colorado Native Plant Society. 1997. Rare plants of Colorado, second edition. Colorado Native Plant Society in cooperation with the Rocky Mountain Nature Association, Estes Park, CO. and Falcon Press, Helena MT.
- Colorado Natural Heritage Program (CNHP). 2002. Biological Conservation Data System. Colorado State University, Fort Collins.
- Reveal, J.L. 1969. New species of *Eriogonum* from Utah. *Madroño* 19: 289-300.
- Reveal, J.T. 1970. Utah species of *Townsendia*. *Great Basin Naturalist* Vol. XXX, No. 1.
- USDA, NRCS. 2001. The PLANTS Database, Version 3.1 (<http://plants.usda.gov>). [National Plant Data Center](http://plants.usda.gov), Baton Rouge, LA 70874-4490 USA.
- Weber, W.A. and R.C. Wittmann. 2001. Colorado Flora Western Slope, Third Edition. University Press of Colorado, Boulder, CO.
- Welsh, S.L., and K.H. Thorne. 1979. Illustrated Manual of Proposed Endangered and Threatened Plants of Utah. U.S. Fish and Wildlife Service Report, Denver Federal Center, Denver, CO. 318 p.
- Woodson, R. 1928. Monograph of the Genus *Amsonia*. *Annals of the Missouri Botanical Garden* 15:414-15.