

Antennaria arcuata

MEADOW PUSSYTOES

Family: Asteraceae

Agency Status:

US Fish & Wildlife Service: None (former C2 candidate for listing under the Endangered Species Act).

US Forest Service: Region 4 Sensitive

WY Bureau of Land Management: Sensitive

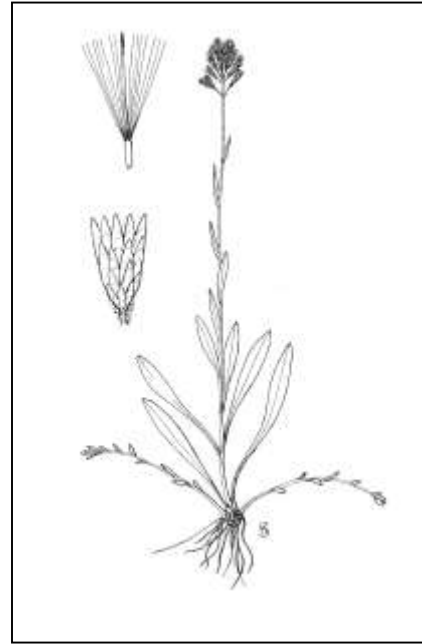
Heritage Rank:

Global: G3

State: S3

Range Context: Regional Endemic/Core

Wyoming Contribution Rank: Very High



Above: *Antennaria arcuata* by Bobbi Angell from Cronquist (1994)

Description: Meadow pussytoes is a white-woolly perennial herb that spreads by conspicuously arching woolly stolons up to 10 cm long. Flowering stems are 30-40 cm tall with relatively few oblanceolate leaves that are equally grayish-white hairy above and below. Flower heads are numerous, clustered at the tip of the stem, and have membranous, white-tipped bracts and white disk flowers (ray flowers are absent). Individual plants are unisexual. Pistillate plants have involucres 4-6 mm long, and staminate plants have involucres 5-7 mm long (Bayer 2006, Cronquist 1950, Dorn and Dorn 1980, Dorn 2001, Fertig et al. 1994, Fertig 1996, Heidel 2013).

Local field characters: Recognized by its long, arching, sparsely-leafy, densely white-woolly stolons that develop by flowering time.

Similar Species: *Antennaria microphylla*, *A. parvifolia*, and *A. rosea* have short, non-woolly stolons and densely crowded basal rosettes. *A. flagellaris* has slender, glabrous stolons and inflorescences composed of a single flower head. Other *Antennaria* species in Wyoming lack stolons, have glabrous upper leaf surfaces, or dark-tipped involucre bracts. *Gnaphalium chilense* is an annual or biennial herb with bisexual flower heads and yellowish, membranous involucre bracts (Dorn 2001; Fertig et al. 1994; Fertig 1996).

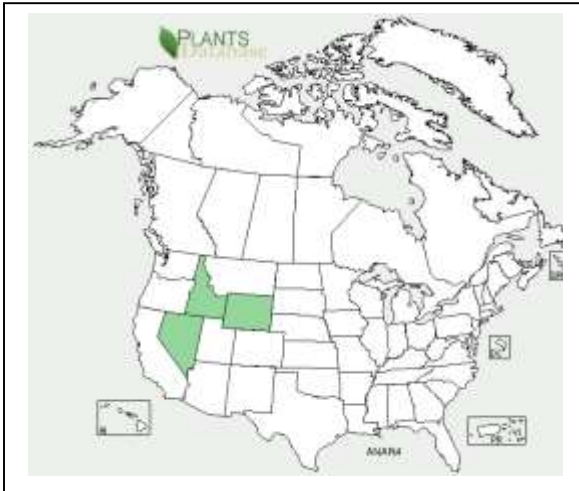


Above: *Antennaria arcuata* by Bonnie Heidel

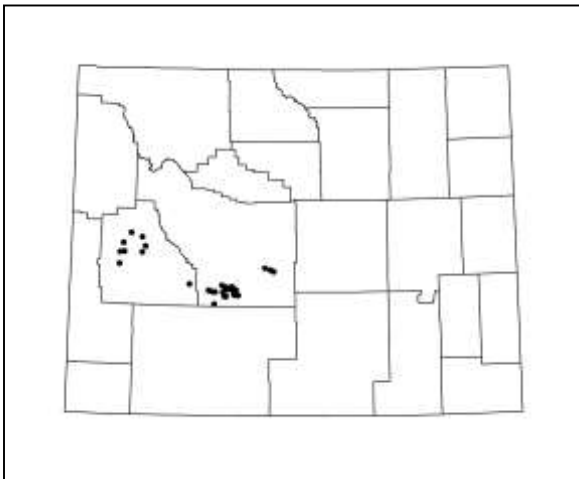
Phenology: Late June-August.

Distribution: Regional endemic of south-central Idaho, northeastern Nevada, and central and southwestern Wyoming. In Wyoming, known only from the upper

Green River Basin and the Sweetwater River area
(Fremont and Sublette counties).



Above: Rangewide distribution of *Antennaria arcuata*



Above: Wyoming distribution of *Antennaria arcuata*

Habitat: Alkaline, subirrigated meadows, seeps and springs along open drainages, often on hummocks and less often on level ground or shallow depressions. Soils are silty or clayey and high in organic matter, derived from Quaternary deposits. The broad valley settings are usually in sagebrush steppe, with *Carex praegracilis*, *C. nebraskensis*, *Deschampsia cespitosa*, and *Juncus balticus* (Fertig et al. 1994, Fertig 1996, Heidel 2013).

Abundance: Surveys in 1995 found an estimated 99,000-130,000 plants in 15 populations covering ca 500 total acres. Surveys in 2012 increased numbers by at least 50%, ca. 150,000-200,000 and more than doubled total area. However, flowering stems are usually



Above: *Antennaria arcuata* habitat by Walter Fertig

clustered, sometimes locally common, and may represent clones (ramets) rather than individuals (genets). The exceptionally low genetic diversity documented in the species (Bayer 1992) may reflect a preponderance of vegetative reproduction, breeding bottlenecks, or relict nature of the species, with population size having little or no bearing on genetic diversity. Thus, population size may have limited bearing on species' viability.

Trends: Trend data from surveys at 12 Wyoming occurrences show slight downward to slight upward increases between 1986-1995, and total population numbers reflected a slight downward trend (Fertig 1996). BLM monitoring at the Atlantic City and Giles pie exclosures documented downward trend inside the exclosures (1983/1988-2013) with the species disappearing inside the exclosures but persisting outside the exclosures.

Protection Status: One occurrence is protected on the Nature Conservancy's Sweetwater River Preserve. Part of another occurrence is within the Sweetwater Canyon Wilderness Study Area and at least one occurrence is found within the BLM South Pass Historic Site ACEC.

Threats: Potentially threatened by overgrazing, water development (stockpond construction), placer mining, and uranium mining in the first evaluation of threats (Marriott 1986). Exclosure studies by the BLM suggest that grazing is less of a threat than originally thought (Fertig 1996). Threats from off-road vehicles were also identified (Fertig 1996). Threats associated with oil and

gas development are low as projected for 2030 particularly in the Green River Basin (Heidel et al. 2014). Competition from exotic weeds has also been cited as a threat in Idaho (Lorrain 1990).

Managed Areas: Occurs on lands managed by the BLM Lander, Pinedale, and Rock Springs Field Offices.

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