

## GOOSE CREEK MILKVETCH

*Astragalus anserinus* N.D.  
Atwood, Goodrich and S.L.  
Welsh

Plant Symbol = ASAN7

Contributed by: USDA NRCS Idaho and Utah Plant Materials Program



Goose Creek milkvetch (*Astragalus anserinus*). Photo courtesy of Nevada Natural Heritage Program

### Alternate Names

None

### Uses

There are no known human uses of Goose Creek milkvetch. Grazing by rabbits has been observed.

### Status

The USDI Fish and Wildlife Service determined in 2007 that Goose Creek milkvetch might be warranted for listing as threatened or endangered and began a status review of the species. In 2009, following a thorough review, USDI-FWS found that listing was warranted, however listing was precluded by higher priority actions (USDI-FWS, 2009). In 2010 the species was officially added to the candidate species list and was assigned a Listing Priority Number (LPN) of 5 due to high magnitude, yet non-imminent threats (USDI-FWS, 2010).

Consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

### Description

**General:** Legume family (Fabaceae). Goose Creek milkvetch is a mat-forming perennial forb arising from a narrow taproot. The stems are 3 to 11 cm (1.2 to 4.3 in) long and lay prostrate on the ground. The leaves are pinnately compound with 5 to 15 woolly tomentose leaflets. Each leaflet is 3 to 7 mm (0.12 to 0.28 in) long and oval in shape. The flowers are 9 to 11 mm (0.35 to 0.43 in) long, pinkish purple and borne in clusters of 3 to 7 flowers per stem. The fruit is a claw shaped pod, 9 to 12 mm (0.35 to 0.47 in) long and 5 to 7 mm (0.20 to 0.28 in) wide, with 16 to 20 ovules (Welsh et al., 2003).

### Distribution:

Goose Creek milkvetch occupies an area approximately 32.5 km (20 mi) long and 6.4 km (4 mi) wide where the Idaho, Nevada, and Utah borders meet. Known populations occur in the Goose Creek drainage in Cassia County, Idaho; Elko County, Nevada; and Box Elder County, Utah (USDI-FWS, 2009). There were an estimated 60,000 plants prior to 2007 when wildfires burned much of the known habitat. Accurate counts of Goose Creek milkvetch are complicated due to variability in annual abundance.

For current distribution, consult the Plant Profile page for this species on the PLANTS Web site.

### Habitat:

Goose Creek milkvetch occurs from 1,500 to 1,790 m (4,920 to 5,870 ft) elevation in sagebrush steppe plant communities. It can be found growing in association with Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), Utah juniper (*Juniperus osteosperma*), green rabbitbrush (*Chrysothamnus viscidiflorus*), Sandberg bluegrass (*Poa secunda*), and needleandthread (*Heterostipa comata*).

### Adaptation

Goose Creek milkvetch grows primarily on tuffaceous (a rock composed of the finer kinds of volcanic detritus usually fused together by heat) outcrops of the Salt Lake Formation in silty to gravelly sandy loam soils. The region of the Goose Creek drainage receives 23 to 30 cm (9 to 12 in) of annual precipitation (USDI-FWS, 2010).

### Management

Management and protection of this species should be centered on habitat protection, especially against

invasion of cheatgrass (*Bromus tectorum*) and protection from wildfires.

The USDI-FWS has identified several threats to Goose Creek milkvetch. In 2007, wildfire severely impacted known populations of Goose Creek milkvetch. The threat of fire is increasing due to continued invasion of annual weeds including cheatgrass. Establishment of high densities of cheatgrass is known to increase the fire return interval, making more habitat loss from fire likely. Cheatgrass and other weeds such as leafy spurge (*Euphorbia esula*) are also known to compete directly with Goose Creek milkvetch; however, control efforts to date have been largely successful in keeping weed invasion limited (USDI-FWS, 2009). Much of the nearby habitat of Goose Creek milkvetch has been altered as a result of intentional seeding of crested wheatgrass (*Agropyron cristatum*); however Goose Creek milkvetch's primary habitat of steep slopes and rock composed of the finer kinds of volcanic detritus seems to preclude it from direct competition with crested wheatgrass. Habitat degradation from cattle grazing and development of livestock watering facilities also pose a threat to this species.

#### **Pests and Potential Problems**

There are no known potential problems from disease, insects or fungi associated with Goose Creek milkvetch.

#### **Environmental Concerns**

There are no known environmental concerns associated with Goose Creek milkvetch.

#### **Seed and Plant Production**

Goose Creek milkvetch plants flower from late May to early June with fruit set in early June. Pollination and seed dispersal mechanisms are unknown.

#### **References**

U.S. Fish and Wildlife Service. 2009. Endangered and threatened wildlife and plants; 12-month finding on a petition to list *Astragalus anserinus*

(Goose Creek milkvetch) as threatened or endangered. In: Federal Register. 74(174): 46521-46542.

U.S. Fish and Wildlife Service. 2010. Endangered and threatened wildlife and plants; review of native species that are candidates for listing as endangered or threatened; annual notice of findings on resubmitted petitions; annual description of progress on listing actions. In: Federal Register. 75(217): 69222-69294.  
Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins. 2003. A Utah Flora. Third Edition, revised. Brigham Young University, Provo, UT.

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#### **Citation**

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