

Astragalus anserinus Atwood, Goodrich & Welsh**GOOSE CREEK MILKVETCH**

FAMILY: *Fabaceae*, the legume family.

STATUS: **Heritage Program SENSITIVE LIST, ranks: G2 S1**

USFWS/ESA: species of concern. **STATE OF NEVADA:** none. **BLM:** Special Status Species in Nevada.

USFS: Humboldt-Toiyabe NF Sensitive Species. **NNNPS:** watch list.

POPULATION CENSUS (NEVADA): **4 occurrences mapped** at 1.0 km (0.6 mi) separation, **OR 5 occurrences mapped** at 0.16 km (0.1 mi) separation; total estimated **individuals 827**, total estimated **area 18.7 ha (46.2 ac)**.

TREND: unknown.

IMPACTS AND MAJOR THREATS (NEVADA): Road building and maintenance, livestock trampling, mineral exploration and development, competition with invasive weeds, impacts to insect pollinators, small population numbers and areas.

INVENTORY EFFORT (NEVADA): Surveys appeared substantially complete, but a recent disjunct discovery in the Owyhee Desert area of Nevada suggests that much potential habitat remains to be surveyed. Most recent entered survey 1999, average year of last survey 1993. **Years since last entered survey** (percent of mapped records at various survey ages): **0-5 yrs:** 20%; **6-10 yrs:** 80%.

LAND MANAGEMENT (NEVADA) in decreasing predominance: U. S. Bureau of Land Management, private lands.

RANGE: Elko County, Nevada; also in ID and UT. Known in Nevada from the Goose Creek drainage, Delano Mountains, and Owyhee Desert. Maximum Nevada **range dimension 35.8 km (22.3 mi)** excluding most disjunct record.

ELEVATIONS RECORDED (NEVADA): 4830-5880 feet (1472-1792 meters).

HABITAT (NEVADA): Dry, open, deeply weathered sandy rhyolitic ash of an overall grayish color derived from the Salt Lake Formation, consisting of white rhyolitic ash overlain by a thin veneer of black glassy gravel of apparent volcanic origin, mostly on south to west aspects, in sparse *Juniperus osteosperma* woodland.

PHENOLOGY: flowering late-spring, on average probably begins in early to mid May and continues through most of June; fruit begins to mature and disperse in early to mid June and continues through mid August. Range of most frequent **survey months:** June-July.

LIFE-FORM AND HABIT: small short-lived perennial herb.

DESCRIPTION: A tuft- or mat-forming perennial herb, the spreading stems 3-11 cm long. Herbage is covered with soft hairs, giving the plant an overall gray-green color. Plants bloom in June-July. The flowers are pink-purple, only 9-11 mm long, and are not elevated above the rest of the plant. The brownish-red fruit pods are soft-hairy, have a curved shape, and appear to be lying under the edge of the low-spreading stems. **Distinguishing features:** *Astragalus purshii* and *A. newberryi* are distinguished by their usually larger flowers and fruit with dense spreading hairs concealing the fruit surface. *A. calycosus* has mostly close, straight, silvery hairs, larger yellowish to purple flowers, and narrower fruit divided into 2 chambers.

PHOTOGRAPHS: Atwood et al. (1991), Atwood et al. (1990); Nevada Natural Heritage Program slide collection (1986-present).

ILLUSTRATIONS: Atwood et al. (1991), Atwood et al. (1990), Barneby (1989).

OTHER GENERAL REFERENCES (listed separately): Spahr et al. (1991).

SPECIFIC REFERENCES:

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Mancuso, M. and R. K. Moseley. 1991. Report on the conservation status of *Astragalus anserinus*, in Idaho and Utah. Boise: Idaho Department of Parks and Recreation, prepared for the U. S. Fish and Wildlife Service, Region 1, Portland, Oregon.

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