

Heritage Ranking Form - State Rank

Scientific Name: Astragalus mulfordiae

Common Name: Mulford's milk-vetch

Classification: Vascular Plant

Range Extent: C = 250-1,000 sq km (~100-400 sq mi)

About 550 km² in the Snake River Plain area in northeastern Malheur County, Oregon.

Population Size: DE = 1000 - 10,000 individuals

Comments: About 1500 counted in recent surveys, but often population numbers were not reported, or sites have not been recently revisited.

Number of

Occurrences: B = 6 - 20

Comments: About 8 extant occurrences using 1km separation distance.

Area of Occupancy: D = 6-25 4-km² grid cells

Comments: 22 4km² grid cells occupied by extant occurrences.

Good Viability: B = Very few (1-3) occurrences with excellent or good viability or ecological integrity

Comments: Most sites note threats of weeds, vehicles, or grazing.

Environmental

Specificity: Not Evaluated

Comments: None

Short Term Trends: E = Decline of 30 - 50%

Comments: All 6 sites in the Institute for Applied Ecology grazing study decreased from 2008 to 2012 by about 30-80%. These sites also saw a significant increase in *Bromus tectorum* cover. Idaho Conservation Data Center studies have shown annual population fluctuations.

Long Term Trends: U = Unknown

Comments: None

Threat Impact: B = High

Comments: Threats include non-native plants, OHV disturbance, grazing and trampling by cattle and sheep, insect herbivory, disturbance from trails, and fire. IAE grazing study (2012) concluded that *Bromus tectorum* was a significant threat while cattle grazing had a minimal effect on *Astragalus* success. Calculated as not vulnerable to climate change.

Intrinsic Vulnerability: Not Evaluated

Comments: None

Heritage Rank: S1

Comments: Few occurrences in a small range. Population probably a few thousand plants. No sites considered protected. Trends from grazing study 2008-2012 show a decline in plant numbers and an increase in *Bromus tectorum* cover.

Rank Notes: None

Reference: Mancuso, Michael. 1999. A REVIEW OF ASTRAGALUS MULFORDIAE (MULFORD'S MILKVETCH) IN IDAHO, AND RESULTS OF FIELD INVESTIGATIONS IN THE OWYHEE FRONT AND BOISE FOOTHILLS. Idaho Dept. of Fish and Game, Conservation Data Center. 32 pp. Colket, B.; Cooke, S.; Crymes, G.; and M. Mancuso. 2006. Element occurrence review and update for five rare plant species. Idaho Dept. of Fish and Game, Conservation Data Center. 23 pp. Newton, R.E., R.T. Massatti and A.S. Thorpe. 2010. *Astragalus mulfordiae*: Population dynamics and the effect of cattle grazing in the Vale District, BLM. Institute for Applied Ecology, Corvallis, Oregon and USDI Bureau of Land Management, Vale District. v + 37 pp Gray, E.C., and D. Giles-Johnson. 2012. *Astragalus mulfordiae*: Population dynamics and effects of cattle grazing in the Vale District BLM. Institute for Applied Ecology, Corvallis, Oregon and USDI Bureau of Land Management, Vale District. vii. + 54 pp

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