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## Rare Plant Status Review: Astragalus mohavensis var. hemigyrus List change from List 1A to List 1B.2.1

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Astragalus mohavensis var. hemigyrus is currently included on CNPS List 1A (plants presumed extinct in California) and is included on the Nevada Heritage Program's 2009 rare plant list. It was also state-listed as Critically Endangered in Nevada from 1992 to 2005, and is currently considered a sensitive species by Nevada BLM. Astragalus mohavensis var. hemigyrus is historically known from only one occurrence in California; from 1941 on limestone soils and outcrops in Darwin Mesa, Inyo County. Since 1941, A. mohavensis var. hemigyrus has been documented from fewer than 30 occurrences in California, however, it is unclear whether herbarium specimens collected after 1941 were truly var. hemigyrus or accidental misidentifications of A. mohavensis var. mohavensis (due to taxonomic differences from the type material in Nevada).

Two specimens of *A. mohavensis* var. *hemigyrus* were collected near Darwin, Inyo County, California, in 2001 2003 and 2003 2009 by Dana York and Dave Silverman respectively. The collection by Dave Silverman, from Talc City Hills, was verified by Marty Wojciechowski as correct identifications in late 2009 early 2010. This recently verified occurrence provides support that *A. mohavensis* var. *hemigyrus* should be changed from List 1A status. *Astragalus mohavensis* var. *hemigyrus* is currently on the Nevada Native Plant Society Watch List, with only 43 known occurrences. It was listed as a USFWS Species of Concern and Fully Protected species in Nevada in 2001. With its current status and low number of verified occurrences in Nevada, along with a very low number of occurrences in California, *A. mohavensis* var. *hemigyrus* is currently considered quite rare.

The population of *A. mohavensis* var. *hemigyrus* from Talc City Hills was likely greatly reduced in the past due to the result of talc mining, which may potentially threaten this species in the future if mining were to resume (Dave Silverman, pers. comm. 2006 and 2010). California occurrences of *Astragalus mohavensis* var. *hemigyrus* were likely extirpated in the Talc City Hills due to the result of talc mining (Dave Silverman, pers. comm. 2006). It is also potentially threatened by rust infections, which have been noted on *A. layneae*, a species with similar pod morphology to *A. mohavensis* var. *hemigyrus* (Dave Silverman, pers. comm. Nov. 1999), though research is most likely needed to support this information.

Although *A. mohavensis* var. *hemigyrus* will be included in the *Jepson Manual*, 2<sup>nd</sup> Edition (available online at

http://ucjeps.berkeley.edu/tjm2/review/treatments/fabaceae\_all.html#54853), it is thought that the California plants from Darwin Mesa could potentially be described as a unique variety, warranting more review of past and future collections (Dana York and Dave Silverman, pers. comm. 2010).

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Based on this information, CNPS and CNDDB conclude that *A. mohavensis* var. *hemigyrus* should be re-ranked to List 1B.2 1, with the understanding that the California plants potentially represent an undescribed variety.

## **Recommended Actions**

CNPS: Re-rank from CNPS List 1A to List 1B.2 1.

CNDDB: Re-rank from G3G4T2T3 / SH to G3G4T2T3 / S1

## Revised CNPS *Inventory* record:

Astragalus mohavensis var. hemigyrus
Curved-pod milk-vetch
Fabaceae
List 1B.2 1
Inyo; Nevada
Darwin (327D), 3611735; Talc City Hills (327C), 3611736
Joshua tree "woodland", Mojavean desert scrub/carbonate; elevation 1250-1620 meters.

Annual herb; blooms Apr-Jun.

Potentially threatened by mining. See *Madroño* 6(7):220 (1942) for original description, *Aliso* 2:207 (1950) for revised nomenclature, and *Memoirs of the New York Botanical Garden* 13:1025 (1964) for taxonomic treatment.