

## 5-Year Review

### Short Form Summary

**Species Reviewed:** *Astragalus magdalenae* var. *peirsonii*  
(Peirson's milk-vetch)

**Current Classification:** Threatened

**FR Notice announcing initiation of this review:** This 5-year review was initiated in 73 FR 11945 (March 5, 2008), Initiation of 5-Year Reviews of 58 Species in California and Nevada; Availability of Completed 5-Year Reviews in California, Nevada and Southern Oregon. Prior to this we announced initiation of a status review for this species in 70 FR 71795 (November 30, 2005), Endangered and Threatened Wildlife and Plants: 90-Day Finding on a Petition to Delist the *Astragalus magdalenae* var. *peirsonii* (Peirson's milk-vetch); Notice of 90-day petition finding and initiation of status review.

### Lead Region/Field Office:

Diane Elam, Recovery Coordinator, Region 8, 916-414-6464

Jim Bartel, Carlsbad Fish and Wildlife Office, 760-431-9440

**Methodology used to complete this review:** The 5-year review of *Astragalus magdalenae* var. *peirsonii* was accomplished through the status review conducted for the 12-month finding on an updated delisting petition submitted on the behalf of the American Sand Association, the Off-Road Business Association, the San Diego Off-Road Coalition, the California Off-Road Vehicle Association, and the American Motorcycle Association District 37 (ASA 2005). On November 30, 2005, we announced our 90-day finding that the updated petition presented substantial scientific or commercial information to indicate the petitioned action may be warranted, and we initiated a status review under section 4(b)(3)(A) of the Endangered Species Act (Act) (70 FR 71795). We published our 12-month finding on July 17, 2008 (73 FR 41007). Because this recent status review of *A. magdalenae* var. *peirsonii* considered the factors relevant to the review required under section 4(c)(2) of the Act, the U.S. Fish and Wildlife Service (Service) is using that status review as a 5-year review for this species. Included here is a brief summary of the information given in the 12-month finding; for the complete analysis, please see the 12-month finding (73 FR 41007).

Our status review included a detailed analysis of the information provided in the delisting petition as well as all other available information on the status of and threats to *Astragalus magdalenae* var. *peirsonii* since it was listed as threatened on October 6, 1998 (63 FR 53596). Information was obtained through a request for information in the November 30, 2005, 90-day finding Federal Register notice (70 FR 71795) and through contacting individuals who we believed could provide recent data relevant to the status of the species. In addition, the Service used survey data for *A. magdalenae* var. *peirsonii* reported by WESTEC in 1977, the U.S. Bureau of Land Management (BLM) from 1998 – 2002 and 2004 – 2007, and Dr. Arthur M. Phillips and colleagues in 2001, 2003, 2005, and 2006; as well as reviews of these studies provided by other researchers at the request of the Service. In addition, we received one general comment letter in response to our March 5, 2008, Federal Register notice (73 FR 11945) initiating 5-year reviews of

58 species in California and Nevada, including *A. magdalenae* var. *peirsonii*. The letter recommended that we evaluate the impact of global warming on each of the species under review, but did not provide any specific information or comment regarding *A. magdalenae* var. *peirsonii*. We considered available information on climate change effects to *A. magdalenae* var. *peirsonii* in our analysis for the 12-month finding.

### **Review Analysis:**

Our detailed analysis of the five listing factors and discussion of *Astragalus magdalenae* var. *peirsonii*'s status, including its biology and habitat, is found in our 12-month finding on the updated delisting petition published on July 17, 2008 (73 FR 41007), and is incorporated herein by reference.

In that finding and in this 5-year review, we continue to consider off-highway vehicle (OHV) activity the primary threat to *Astragalus magdalenae* var. *peirsonii*. Documentation available attests to historical and ongoing OHV impacts to the species (WESTEC 1977, pp. 1–135; ECOS 1990, pp. 1–85; Willoughby 2000, pp. 1–37, 2001, pp. 1–31, 2004, pp. 1–20, 2005, pp. 1–; Phillips *et al.* 2001, pp. 1–13; Phillips and Kennedy 2003, pp. 1–21; Groom *et al.* 2007, pp. 119–134; USFWS 2006b, pp. 1–9, and 2007, pp. 1–36). Areas within the dunes subject to intensive OHV use (e.g., staging areas) have a lower abundance of *A. magdalenae* var. *peirsonii*. Longer-term monitoring indicates that plants exposed to OHV activity have a reduced likelihood of survival (e.g., Groom *et al.* 2007, pp. 128–130). Available information suggests that within the foreseeable future OHV use will continue to increase and pose a threat to the survival of *A. magdalenae* var. *peirsonii*, and we can reliably predict that the impacts of continued and increasing levels of OHV use anticipated to occur would likely result in a downward trend in the population until *A. magdalenae* var. *peirsonii* is in danger of extinction. Secondary threats to *A. magdalenae* var. *peirsonii* include rodent and insect herbivory, seed predation, and effects of fragmentation and environmental stochasticity/catastrophes, all which may be exacerbated by the low reproduction of *A. magdalenae* var. *peirsonii*.

The BLM's 2003 Recreation Area Management Plan (RAMP) proposed allowing OHV use in the majority of dune areas within the Imperial Sand Dunes Recreation Area (ISDRA). However, although the 2003 RAMP provides the most recent articulation of BLM's planned management in the ISDRA, BLM is not fully implementing the 2003 RAMP at this time. The BLM's Final Environmental Impact Statement for its 2003 RAMP is the subject of recent litigation, and a court order requires BLM to maintain existing temporary vehicle closures, as identified in the "Temporary Closure of Approximately 49,300 Acres to Motorized Vehicle Use of Five Selected Areas in the ISDRA," 66 Fed. Reg. 53,431 (October 22, 2001), while it completes appropriate levels of land-use planning, environmental analysis, and section 7 consultation, and issues a new Record of Decision. Due to its wilderness designation, the North Algodones Dunes Wilderness (Wilderness) Area also remains closed to OHV use. While the Wilderness will continue to be closed to OHV use, this area alone is not sufficient to ensure the long-term survival of *Astragalus magdalenae* var. *peirsonii* because it provides only a small

percentage of the entire habitat for this species within the Algodones Dunes and the area provides less available habitat for this plant relative to the areas south of State Route 78 that have in the past or may in the future be open to OHV use. Based on the 2005 population estimates derived by the BLM, less than 9 percent of the *A. magdalenae* var. *peirsonii* population in the United States occurs within the Wilderness. The distribution of *A. magdalenae* var. *peirsonii* from pre-2003 surveys indicates a higher relative abundance of plants in the central dunes south of State Route 78 and more recent surveys confirm this observation. Thus, the Wilderness alone is not sufficient to sustain this species because it does not provide sufficient habitat and habitat quality to ensure the long-term survival of this species, and the long-term viability of the species within the Wilderness is dependent upon the remainder of the range remaining viable. Thus, although direct impacts from OHV use are minimal within the Wilderness, the overall impacts to *A. magdalenae* var. *peirsonii* within the Wilderness that may result from the combined threats discussed above (including indirect effects of OHV use) are essentially equal to those present throughout the rest of the species' range.

Therefore, in our 12-month finding (73 FR 41007), we found that *Astragalus magdalenae* var. *peirsonii* remains likely to become an endangered species within the foreseeable future throughout its range and should remain classified as a threatened species. Similarly, in this 5-year review we recommend no status change for *A. magdalenae* var. *peirsonii*.

#### **Recommendations for Actions over the Next 5 Years:**

The following recommendations would provide information that would allow us to consider the potential delisting of this species:

1. Continue to coordinate with the BLM as they complete the revised RAMP for the ISDRA, to help ensure that future management actions minimize further destruction and fragmentation of *Astragalus magdalenae* var. *peirsonii* habitat and individuals by OHV activities. During the revised RAMP process, assess and prioritize areas for BLM to consider for OHV restrictions or seasonal usage closures to maximize conservation of the species.
2. Continue monitoring *Astragalus magdalenae* var. *peirsonii*. Use monitoring efforts to continue to assess recreational (OHV) impacts and species' responses to restrictions and seasonal closures through multiple-year research in OHV-open versus OHV-closed areas and relative to different OHV-impact densities. Use monitoring also to detect species' responses to changes in seasonal rainfall patterns.
3. During the process of revising the RAMP, delineate and determine travel corridors between campgrounds and other access points to popular recreational areas that minimize impacts to areas prioritized for additional protections.
4. Determine *Astragalus magdalenae* var. *peirsonii* breeding system and analyze seed fates. Investigate seed/fruit predation, dispersal, identification of pollinators,

pollination/pollinator interactions, self-incompatibility, and seedling establishment requirements.

5. Determine the phylogenetic relationship of *Astragalus magdalenae* var. *peirsonii* populations on the Algodones Dunes, California, and those in the Gran Desierto, Sonora, Mexico, to clarify its taxonomic status.

**U.S. FISH AND WILDLIFE SERVICE  
5-YEAR REVIEW**

*Astragalus magdalenae* var. *peirsonii* (Peirson's milk-vetch)

**Current Classification:** Threatened

**Recommendation Resulting from the 5-Year Review:**

- Downlist to Threatened
- Uplist to Endangered
- Delist
- No change needed

**Review Conducted By:** Ayoola Folarin, Carlsbad Fish and Wildlife Office, Carlsbad, California.

**FIELD OFFICE APPROVAL:**

**Lead Field Supervisor, U.S. Fish and Wildlife Service**

Approve  Date 9-25-08

**REGIONAL OFFICE APPROVAL:**

**Lead Assistant Regional Director, U.S. Fish and Wildlife Service, Region 8**

Approve  Date 9-30-08