

5-YEAR REVIEW

Short Form Summary*

Species Reviewed: *Silene perlmanii* (No common name)

Current Classification: Endangered

FR Notice announcing initiation of this review:

U.S. Fish and Wildlife Service (USFWS). 2006. Endangered and threatened wildlife and plants; initiation of 5-year reviews of 70 species in Idaho, Oregon, Washington, Hawaii, and Guam. Federal Register 71(69):18345-18348.

Lead Region/Field Office:

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Name of Reviewer(s):

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Methodology used to complete this 5-year review:

This review was based on the final critical habitat designation for *Silene perlmanii* and other species from the island of Oahu. The Hawaii Biodiversity and Mapping Program provided the updated information on the current status of *Silene perlmanii* in cultivation.

Application of the 1996 Distinct Population Segment (DPS) Policy:

Not applicable.

Review Analysis:

Please refer to the final critical habitat designation for *Silene perlmanii* published in the Federal Register on June 17, 2003 (68 FR 35949) for a complete five factor analysis and a discussion on the species status (including biology and habitat), threats, and management efforts. No new threats and no significant new information regarding the species biological status have come to light since this listing to warrant a change in the Federal listing status of *Silene perlmanii*. The major threats to *Silene perlmanii* habitat are habitat degradation by feral pigs (*Sus scrofa*) (Factors A and D); habitat degradation by and competition from invasive introduced plant species *Ageratina adenophora*, *Erigeron karvinskianus*, *Melinis minutiflora*, *Morella faya*, *Passiflora suberosa*, and *Schinus terebinthifolius* (Factor E); and the risk of extinction from stochastic events and reduced reproductive vigor due to the small number of individuals only extant in cultivation (Factor E) (68 FR 35949).

This short form is to be used ONLY when there is no new information, or when the 5-year review is being done concurrent with another range-wide status review (such as a 12-month finding on a delisting petition) that completely addresses all the questions outlined in the standard 5-year review template. Attach a copy of the final 12-month finding or other status review to this form.

Cultivated *Silene perlmanii* plants and/or stored seeds are in existence at several locations, including botanic gardens, nurseries such as The Nature Conservancy's nursery at Kunia, and collections maintained by researchers. A number of cultivated plants have been outplanted in Honouliuli Preserve (Dan Sailer, U.S. Army, pers. comm. 2007). At the time critical habitat was designated, 12 individuals had been outplanted (68 FR 35949). As of November 2006 there were three outplanted *Silene perlmanii* plants surviving out of the 15 that had originally been planted at two nearby sites. Two of the surviving plants are inside a fenced enclosure at Palikea, and one is in the Central Kaluaa Gulch enclosure (D. Sailer, U.S. Army, pers. comm. 2007). This does not represent a significant change in the Federal listing status of the species, as there has been a decrease in the small number of outplanted individuals since the time of critical habitat designation.

Stabilizing, downlisting, and delisting objectives are provided in the recovery plan for Oahu plants (USFWS 1998), based on whether the species is an annual, a short-lived perennial (fewer than 10 years), or a long-lived perennial. *Silene perlmanii* is a short-lived perennial, and to be considered stable, the taxon must be managed to control threats (e.g., fenced) and be represented in an *ex situ* (at other than the plant's natural location, such as a nursery or arboretum) collection. In addition, a minimum of three populations should be documented on Oahu. Each of these populations must be naturally reproducing and increasing in number, with a minimum of 50 mature individuals per population.

The stabilization goals for this species have not been met (see Table 1). Therefore, *Silene perlmanii* meets the definition of endangered as it remains in danger of extinction throughout its range.

Recommendations for Future Actions:

- Search for new populations of *Silene perlmanii*, and regularly visit the sites where the species formerly grew to search for any seedlings that might germinate at the sites from a seedbank.
- Catalog the *Silene perlmanii* plants and propagules existing in botanic gardens, nursery collections, and outplantings.
- Through genetic analysis, identify the genetically important representatives of *Silene perlmanii*.
- Study new or reintroduced *Silene perlmanii* populations with regard to population size and structure, geographical distribution, flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, limiting factors, and threats.
- Develop a plan for conserving the species' genetic diversity in *ex situ* collections and in reintroduced populations.

References:

[68 FR 35949] U.S. Fish and Wildlife Service. 2003. Endangered and threatened wildlife and plants: final designation or nondesignation of critical habitat for 101 plant species from the island of Oahu, Hawaii: final rule. Federal Register 68(116):35949-36406.

[USFWS] U.S. Fish and Wildlife Service. 1998. Recovery plan for the Oahu plants, Portland, Oregon. 130+ pages.

[USFWS] U.S. Fish and Wildlife Service. 1991. Determination of endangered for 26 plants from the Waianae Mountains, island of Oahu, HI, final rule. Federal Register 56(209):55770-55786.

Personal Communication:

Dan Sailer. 2007. Biologist, U.S. Army Environmental Division. Memo to the U.S. Fish and Wildlife Service, April 3, 2007.

Table 1. Status of *Silene perlmanii* from listing through 5-year review.

Date	No. wild inds	No. outplanted	Stability Criteria	Stability Criteria Completed?
1991 – listing	few	0	All threats managed in all 3 populations	No
			Complete genetic storage	No
			3 populations with 50 mature individuals each	No
1998 – recovery plan	0	0	All threats managed in all 3 populations	No
			Complete genetic storage	Yes
			3 populations with 50 mature individuals each	No
2003 – critical habitat	0	12	All threats managed in all 3 populations	Partially
			Complete genetic storage	Yes
			3 populations with 50 mature individuals each	No
2007 – 5-yr review	0	3	All threats managed	Partially
			Complete genetic storage	Yes
			3 populations with 50 mature individuals each	No

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Pre-1996 DPS listing still considered a listable entity? N/A

Recommendation resulting from the 5-year review:

- Delisting
- Reclassify from Endangered to Threatened status
- Reclassify from Threatened to Endangered status
- No Change in listing status

Lead Field Supervisor, Fish and Wildlife Service

Approve

Patricia [Signature]

Date

1/18/08