

## U.S. FISH AND WILDLIFE SERVICE - SPOTLIGHT SPECIES ACTION PLAN

**Common Name:** No common name

**Scientific Name:** *Silene alexandri*

**Lead Region:** Region 1

**Lead Field Office:** Pacific Islands Fish and Wildlife Office

### **Species Information:**

Status: Endangered

Recovery Priority Number or Listing Priority Number: 5

Recovery Plan or Candidate Assessment Form: U.S. Fish and Wildlife Service. Recovery plan for the Molokai plant cluster. 1996. U.S. Fish and Wildlife Service, Portland, Oregon. 143 pages.

Most Recent 5-year Review: January 18, 2008

Other: USFWS. 2003. Endangered and threatened wildlife and plants: final designation or nondesignation of critical habitat for 42 plant species from the island of Molokai, HI: final rule. Federal Register 68(52):12982-13141.

Threats: *Silene alexandri* is threatened by habitat degradation by feral goats, habitat degradation and competition with invasive introduced plant species (Factor E), and reduced reproductive vigor due to the small number of remaining individuals (Factor E).

**Target:** The target for this species is to improve the species' status from declining to stable. Currently, only one population is known with six individuals.

**Measure:** Maintain this species in the wild, collect material from all six individuals for storage and cultivation, and establish one additional population.

### **Actions:**

1. Collect material for propagation and maintain in genetic storage from all six remaining individuals. The parties responsible for this action are the Plant Extinction Prevention Program, University of Hawaii Harold L. Lyon Arboretum's Micropropagation Laboratory, University of Hawaii Center for Conservation and Research Training's Seed Storage Laboratory, and the Olinda Rare Plant Facility. This will address recovery action #111, collect, propagate and maintain *ex situ* genetic stock of taxa facing imminent extinction. This action will address all listing factors and threats impacting this species, and will continue over all five years.
2. Manage weeds surrounding the wild population. The population is within a large enclosure maintained by The Nature Conservancy, but occasionally goats still get in, and impacts to the population will be monitored. If damage is observed, The Nature Conservancy will be notified. The party responsible for this action is the Plant Extinction Prevention Program, working with the landowners. This will address recovery action

#112, protect remaining wild individuals of taxa facing imminent extinction from immediate threats; recovery action #151, control feral ungulates, and recovery action #152, conduct alien plant control. These actions partially address listing factor A, the threat from goats, and factor E, the threat from invasive introduced species, and will continue over all five years.

3. Select and prepare a reintroduction site for *Silene alexandri* within existing protected habitat. The party responsible for this action is the Plant Extinction Prevention Program, working with the landowners. This will begin addressing recovery action #21, select populations for expansion and recovery action #22, prepare site and plant. This action will partially address all listing factors and threats impacting this species and will be initiated in year 1 and completed by year 3.
4. Propagate seedlings from whatever seed is available over the next 5 years, with equal numbers of seed from each of the six lineages, over as many of the five years as necessary to reach 200 seedlings. The parties responsible for this action are Harold L. Lyon Arboretum's Micropropagation Laboratory, the University of Hawaii Center for Conservation and Research Training's Seed Storage Facility, and the Hawaii Division of Forestry and Wildlife's Olinda Rare Plant Facility. This will begin addressing recovery action #2, expand existing populations. This action will partially address all listing factors and threats impacting this species and will continue all 5 years.
5. Reintroduce available seedlings during the wet season starting in year 2 or 3 and continuing through year 5, depending on how long the plants take to reach a suitable size for reintroduction. The party responsible for this action is the Plant Extinction Prevention Program. This will begin addressing recovery action #2, expand existing populations. This will partially address all listing factors and threats impacting this species. This action will continue from year 2 through 5.
6. Monitor reintroduced seedlings for vigor, health, maturity, and reproduction through year 5, to maintain survival of 25 percent or more of the seedlings in a healthy condition over the 5 years. The party responsible for this action is the Plant Extinction Prevention Program. This will partially address recovery action #4, develop and implement detailed monitoring plans for all species. This action will address all listing factors and threats impacting this species and will continue over all 5 years.

*Estimated costs of the actions:*

<u>Action</u>	<u>Estimated cost (all figures approximate)</u>	
	<u>Ecological Services</u>	<u>Partners</u>
1. Collect and store genetic material	\$23,000	
2. Manage threats to wild population	\$5,000	
3. Select and prepare a reintroduction site	\$2,000	
4. Propagate seedlings		\$5,000
5. Reintroduce seedlings	\$25,000	
6. Monitor reintroduced seedlings	\$5,000	

**Role of other agencies:** The Plant Extinction Prevention Program, partially funded by USFWS, conducts the ongoing on-the-ground recovery actions for this species, and oversees the implementation of any *ex situ* actions. The cooperation of the Harold L. Lyon Arboretum's Micropropagation Laboratory and the University of Hawaii Center for Conservation and Research Training's Seed Storage Laboratory is critical for the preservation of the species. The Olinda Rare Plant Facility is also critical for propagating material from the Harold L. Lyon Arboretum's Micropropagation Laboratory to the size that it can be reintroduced into the wild. The continued cooperation of the landowners, allowing *in situ* the management and reintroduction, is also critical for the preservation of the species.

**Role of other ESA programs:** Section 6 grants contribute funds to implementing the actions necessary for the success of the species, including partial funding to the Olinda Rare Plant Facility.

**Role of other FWS programs:** The Partners program has provided funding in the past to one of the landowners to install fencing designed to exclude goats.

**Additional funding analysis:** The actions described above cannot be undertaken nor the stated target reached without the estimated funding from the Service and outside sources described above. If additional funding was approved, additional sites for reintroduction would be identified and protected (with fencing), and new reintroduced populations would be established, thereby increasing the total numbers of *Silene alexandri* individuals and populations. The additional actions would be implemented by the Olinda Rare Plant Facility, the Plant Extinction Prevention Program, the Harold L. Lyon Arboretum's Micropropagation Laboratory and the University of Hawaii Center for Conservation and Research Training's Seed Storage Laboratory. The estimated costs of fencing additional reintroduction sites and establishing additional reintroduced populations would be about \$50,000 to \$100,000 per year.