

No Photo Available

Plants

Silene alexandri

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

Hawai'i Natural Heritage Ranking - Critically Imperiled (G1)

Endemism – Moloka'i

Critical Habitat - Designated

SPECIES INFORMATION: *Silene alexandri*, a member of the pink family (Caryophyllaceae), is an erect, short-lived perennial herb, 30 to 60 cm (1 to 2 ft) tall, and woody at the base. The narrow, elliptic leaves are hairless except for a fringe along the margins. Flowers are arranged in open clusters on stalks. The hairless stems, flowering stalks, and sepals and the larger flowers with white petals separate this species from other members of the genus. The 5-lobed, 10-veined, tubular calyx is 0.7 to 1 in (19 to 25 mm) long, and the 5 white, deeply-lobed, clawed petals extend about 0.2 in (4 to 6 mm) beyond the calyx. The capsule is about 0.6 in (14 to 16 mm) long, but seeds have never been seen. The hairless stems, flowering stalks, and sepals and the larger flowers with white petals separate this species from other members of the genus. Little is known about the life history of this species. Its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown.

DISTRIBUTION: Central Moloka'i.

ABUNDANCE: A total of fewer than ten plants.

LOCATION AND CONDITION OF KEY HABITAT: The only known population is found on a cattle trail in remnant dry forest and shrub land at an elevation between 2,000 and 2,500 ft (610 and 760 m). Feral goats continue to degrade this habitat and pose a serious threat to the last remaining individuals. Associated plant species include 'a'ali'i, 'ōhi'a, pukiawe, and uluhe.

THREATS:

- Fire;
- Competition with alien vegetation;
- Feral goats.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but to also establish new populations to reduce the risk of

extinction. The goals of conservation actions are not only to protect current populations, but also to establish new populations to reduce the risk of extinction. A USFWS recovery plan details specific tasks needed to recover this species. In addition to common statewide and island conservation actions, specific actions include:

- Survey historical range for surviving populations;
- Establish secure *ex-situ* stocks with complete representation of remaining individuals;
- Augment wild population and establish new populations in safe harbors.

MONITORING:

- Continue surveys of population and distribution in known and likely habitats;
- Monitor plants for insect damage and plant diseases.

RESEARCH PRIORITIES:

- Develop proper horticultural protocols and pest management;
- Survey *ex-situ* holdings and conduct molecular fingerprinting;
- Conduct pollination biology and seed dispersal studies;
- Map genetic diversity in the surviving populations to guide future re-introduction and augmentation efforts.

References:

Hawai'i Natural Heritage Program, 2005. Hawaii Natural Heritage Program Search, <http://www.hinhp.org/printpage.asp?spp=PDMAL0H0A0>.

USFWS. 1992. Endangered and Threatened Wildlife and Plants; Determination of Endangered or Threatened Status for 16 Plants from the Island of Molokai, Hawaii; Federal Register, (08-OCT-92), 57 FR 46325 46340, 16pp.

Wagner, W.L.; Herbst, D.R.; Sohmer, S.H., 1999. Manual of the Flowering Plants of Hawai'i-- Revised Edition. Honolulu, HI; University of Hawaii Press and Bishop Museum Press. 1853p.