Plants

Schiedea nuttallii

SPECIES STATUS:
Federally Listed as Endangered
Genetic Safety Net Species
Hawai'i Natural Heritage Ranking - Critically Imperiled (G1)
Endemism status- O'ahu, Kaua'i
Critical Habitat - Designated

SPECIES INFORMATION: *Schiedea nuttallii*, a member of the pink family, is a generally hairless, erect subshrub, with stems normally 0.3 to 1.5 m (1 to 5 ft) long, and internodes usually 0.8 to 4 cm (0.3 to 1.6 in.) long. The green, sometimes purple-tinged leaves are opposite, narrowly eggshaped or lance-shaped to narrowly or broadly elliptic, 5 to 10 cm (2 to 4 in.) long, and 1.5 to 2 cm (0.6 to 0.8 in.) wide. The apetalous, perfect flowers are borne in open branched inflorescences, normally 20 to 25 cm (8 to 10 in.) long. The lance-shaped sepals, 2 to 3.8 mm (0.08 to 1.5 in.) long, are green or sometimes purple-tinged. The fruit is a capsule. The round to kidney-shaped seeds are about 1 mm (0.04 in.)

DISTRIBUTION: One population of *S. nuttallii* is found on Kaua'i east of Ha'upu Peak on private land. Five populations are found on O'ahu— Kahanahaiki Valley, on State land leased by the Department of Defense for Makua Military Reservation; two populations within the State owned Pahole NAR; and Ekahanui Gulch, on private land, Honouliuli Preserve.

ABUNDANCE: The statewide total of 6 populations harbors fewer than 75 individuals of this species, with between 10 and 50 individuals on Kaua'i and about 25 on O'ahu.

LOCATION AND CONDITION OF KEY HABITAT: *Schiedea nuttallii* typically grows in diverse lowland mesic forest, often with 'ōhi'a dominant, between 415 and 730 m (1,360 and 2,400 ft) elevation. The population on Kaua'i is found at 790 m (2,590 ft) elevation. Associated plant taxa include hame, kopiko, olomea, papala kepau, and *Kadua acuminata.*

THREATS:

- Habitat degradation by feral pigs and goats;
- Competition from alien plant species;
- Fire;
- Predation by slugs and snails;

- Small number of extant individuals.

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

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

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. 1853 pp.