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Plants

Schiedea obovata

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

IUCN Red List Ranking - Critically Endangered (CR D)

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

Endemism – O'ahu

Critical Habitat - Designated

SPECIES INFORMATION: *Schiedea obovata*, a member of the pink family (Caryophyllaceae), is a branching sub-shrub growing to 3 ft in height. The leaves are thick, somewhat fleshy, and elliptic shaped, from 1.8 to 4.3 in. long, and up to 4 in. wide, with three or five large veins. The inflorescence consists of 7 to 12 flowers arranged in a congested cluster. The flowers lack petals, but usually have five sepals which are white inside and green or green-veined on the outside. In fruit, the sepals become fleshy and purple and enclose the capsule, forming a structure similar to a berry in appearance perhaps attractive to birds, which would aid in dispersal.

DISTRIBUTION: *Schiedea obovata* was historically known from throughout the Wai'anae range on O'ahu, scattered on ridges and slopes in diverse mesic forest, at elevations from 1,800-2,600 ft. (550-800 m).

ABUNDANCE: Three sites where extant populations exist include: Pahole Gulch, a rim of Makua Gulch, and Keawapilau. The known populations contain about 30 individuals. The numbers in these populations may be much lower now; in 1999 2 plants at Pahole, 1 plant at Kahanahaiki; and in 2000, 3 plants at Makaleha were reported.

LOCATION AND CONDITION OF KEY HABITAT: *Schiedea obovata* typically grows on ridges and slopes in lowland diverse mesic forest dominated by *Acacia koa* (koa) and *Metrosideros polymorpha* ('ōhi'a) at an elevation of 1,850 to 2,500 ft. These habitats have been invaded by a number of alien plant species, including *Syzygium cumin*, *Erigeron karvinskianus*, and *Melinis minutiflora*.



THREATS:

- Competition from an aggressive alien plant species, including molasses grass;
- Habitat degradation by feral pigs;
- Fruit predation by rats;
- Collection or trampling by hikers;
- Small number of populations, further reduction of breeding population may have adverse effects on species' reproductive capacity.

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

- Establish secure *ex-situ* stocks with full founder representation;
- Reduce rat population densities during fruiting season;
- Augment wild population and establish new populations in safe harbors.

MONITORING:

- Survey for populations and distribution in known and likely habitats;
- Monitor plants for insect damage and plant diseases.

RESEARCH PRIORITIES:

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

References:

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

International Union for Conservation of Nature and Natural Resources, 2004, IUCN Red List of Threatened Species: Data Base Search, <http://www.redlist.org/search/search-basic.html>.

NTBG. 1999. Perlman, Steve. Field Data Booklet #35, SP 16471, 16510. Unpublished data.

NTBG. 2000. Perlman, Steve. Field Data Booklet #38, SP 17033. Unpublished data.

USFWS. 1991. Final Listing, Endangered ETWP; Determination of Endangered Status for 26 Plants from the Waianae Mountains, Island of Oahu, Hawaii; Federal Register, Vol. 56. No. 209, (29-OCT-91), 56 FR 55770-55786, 16 pp.

Wagner, W.L., Herbst, D.R., and 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.

Wagner, W. L., S. G. Weller, and A. K. Sakai. 2005. Monograph of *Schiedea* (Caryophyllaceae subfam. Alsinoideae). Syst. Bot. Monogr. 72: 1-169.