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Plants

Schiedea helleri

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

Hawai'i Natural Heritage Ranking - Critically

Imperiled (G1)

Endemism – Kaua'i

Critical Habitat - Designated

SPECIES INFORMATION: Vines, probably woody at base, glabrous below, puberulent in the upper stems and inflorescence; stems probably prostrate, at least 1.5 dm long, internodes at least 4-15 cm long. Leaves opposite, somewhat thickened, broadly deltate ovate to deltate cordate, 10-14 cm long, 4.5-6 cm wide, conspicuously 3 nerved, glabrate to sparsely puberulent, especially along the margins, apex acute to mucronate, petioles 1.3-2 cm long. Flowers perfect, in open, lax, paniculate cymes, each branch 20-26 cm long, bracts of central axis leaf like, deltate, 40-80 mm long, those of branches and flowers lanceolate, 3-8 mm long, pedicels 13-25 mm long; sepals green, narrowly ovate, 1.5-2.5 mm long, puberulent and sometimes glandular puberulent, margins scarios; nectaries ca. 2 mm long, apex unknown; stamens probably 10; styles 3. Capsules ca. 3-3.4 mm long. Seeds apparently brownish black at maturity, orbicular, compressed, ca. 1 mm long, transversely rugose. *Schiedea helleri* is very closely related to *S. membranacea* but differs in having thicker, 3 nerved leaves that are broadest at the base.

DISTRIBUTION: One occurrence in Na Pali-Kona forest reserve.

ABUNDANCE: Currently, 33-43 plants known.

LOCATION AND CONDITION OF KEY HABITAT: Wet forests in gulch bottoms.

THREATS:

- Habitat degradation by feral pigs;
- Competition from alien plant species;
- Stochastic extinction;
- Reduced reproductive vigor due to the small number of remaining 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:

- 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;
- 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:

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>.

Hawai'i Natural Heritage Program, 2005. Hawaii Natural Heritage Program Search, <http://www.hinhp.org/trackedspecies.asp?taxa=P&usesa=>.

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., D. R. Herbst, and D. H. Lorence. 2005. Flora of the Hawaiian Islands website. <http://ravenel.si.edu/botany/pacificislandbiodiversity/hawaiianflora/index.htm> [August, 2005].