



C.H. Lamoureux © Smithsonian Inst., 2005

## Plants

# Hawaiian vetch

*Vicia menziesii*

### SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

Hawai'i Natural Heritage Ranking -

Critically Imperiled (G1)

Endemism – Island of Hawai'i

Critical Habitat - Designated

**SPECIES INFORMATION:** *Vicia menziesii* is a vine that grows on the eastern slopes of Mauna Loa and Mauna Kea on the Island of Hawai'i. Its extensive branching system typically climbs into the subcanopy of the forest and can reach lengths of up to 60 feet. Each vine is known to produce more than 200 pinkish-rose flowers that gracefully hang from a thin, green stalk. *Vicia menziesii* is severely threatened by land development and aggressive exotic plants. It was the first Hawaiian plant to be listed as an endangered species.

**DISTRIBUTION:** Keauhou-Kilauea and Pu'uwa'awa'a, on the island of Hawai'i.

**ABUNDANCE:** One site with 2 populations comprising a total of 15-50 individuals.

**LOCATION AND CONDITION OF KEY HABITAT:** The Keauhou-Kilauea population occurs in wet to mesic forest, approximately 1,570 to 1,720 meters elevation. The Pu'uwa'awa'a population occurs in open, mesic forest with a fern understory, at approximately 1,600 meters elevation.

### THREATS:

- Habitat degradation by feral pigs;
- Predation by rats;
- 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 further 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:**

Hawai'i Natural Heritage Program. 2005. Hawaii Natural Heritage Program Search, <http://www.hinhp.org>.

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>.

US Fish and Wildlife Service. 1978. Final Listing, Endangered ETWP; Final Determination that Eleven Plant Taxa are Endangered and Two Plant Taxa are Threatened Species; Federal Register, Vol. 56 No. 183, (26-APR-78), 43 FR 17910 179??, 9 pp.

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].

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.