



## Plants

# Hau kuahiwi

*Hibiscadelphus woodii*

### 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

Endemism – Kaua'i

Critical Habitat - Designated

**SPECIES INFORMATION:** *H. woodii*, a member of the hibiscus family (Malvaceae) is a small, branched 2.5 to 5 m tree with a rounded crown. The leaves have stalks 2.8 to 5.8 cm long with star-shaped hairs when young, which are lost when the leaves mature. Flowers are borne on individual stalks 1.4 to 2.1 cm with star shaped hairs. Below each flower are 4 to 6 bracts 11 to 15 mm long and 1.8 to 4 mm wide. The corolla is 4.5 to 4.7 cm long, yellow with a coppery tinge when fresh, which rapidly turns purplish-maroon.

**DISTRIBUTION:** Kalalau rim, Kaua'i.

**ABUNDANCE:** Known only from a population of four trees.

**LOCATION AND CONDITION OF KEY HABITAT:** *H. woodii* is found at elevations approximately 915 meters (3,000 ft) on basalt talus or cliff walls in *Metrosideros polymorpha* (ohia) montane mesic forest. The habitat is being degraded by feral goats and pigs, and invasion by the alien plant species *Erigeron karvinkianus* (daisy fleabane).

### THREATS:

- Competition from alien plant species, especially *Erigeron karvinskianus* (daisy fleabane);
- Habitat degradation by feral goats and pigs;
- Damage by falling rocks;
- Japanese white-eye (*Zosterops japonicus*) feed off the nectar in the flowers, and in the process they damage the flower and cause them to die before they can set seed.

**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 exclosure fences for damage and inside exclosures for signs of ungulate ingress;
- 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:**

Carr, G. 2005. Hawaiian Native Plant Genera, University of Hawaii Botany Department, <http://www.botany.hawaii.edu/faculty/carr/images>.

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. 1996. Final Listing, Endangered ETWP Determination of Endangered or Threatened status for Nineteen Plant Species From the Island of Kauai, Hawaii; Federal Register, Vol. 61, No. 198, (10-OCT-96), 61 FR 53070 53089, 20 pp.

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.