



W.L.Wagner©Smithsonian Inst., 2005

## Plants

# kanaloa

*Kanaloa kahoowawensis*

### SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

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

Endemism – Kaho'olawe

Critical Habitat - Designated

**SPECIES INFORMATION:** *Kanaloa kahoowawensis* is a densely branched shrub 0.75 to 1 m (2.5 to 3.5 ft) tall. The leaves are divided into three pairs of leaflets, with a leaf nectary at the joint between each pair of leaflets. One to three inflorescences are found in the leaf axils, developing with the flush of new leaves. The inflorescence is a globose head with 20 to 54 white flowers. *Kanaloa kahoowawensis* was unknown to science until its discovery in 1992, on a steep rocky spire on the coast of Kaho'olawe. While there are no previous records of the plant, pollen core studies on O'ahu, Maui, and Kaua'i revealed a legume pollen that could not be identified but is most likely this species. The pollen cores indicate that this previously unidentified species was a codominant with *Dodonaea viscosa* and *Pritchardia* spp. from before 1210 B.C. to 1565 A.D., at which point *K. kahoowawensis* disappeared from the pollen record, and *D. viscosa* and *Pritchardia* spp. also declined dramatically.

**DISTRIBUTION:** Kaho'olawe. It possible that *K. kahoowawensis* could have had a much larger historic range since pollen has been found on the islands of O'ahu, Maui, and Kaua'i.

**ABUNDANCE:** Currently only one wild plant is known.

**LOCATION AND CONDITION OF KEY HABITAT:** Dry rocky slope with sparse native shrubland, on land owned by the State of Hawai'i.

### THREATS:

- 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. The USFWS has developed a recovery plan that details specific tasks needed to recover this species. 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:**

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

US Fish and Wildlife Service. 1999. Final Listing, Endangered ETWP; Final Endangered Status for 10 Plant Taxa From Maui Nui, HI, State of Hawaii, Vol. 64, No. 171 (3-9-1999), 64 FR 48307 48324, 21 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].