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Plants

Diellia mannii

SPECIES STATUS:

Genetic Safety Net Species
Hawai'i Natural Heritage Ranking - Critically
Imperiled (G1)
Endemism – Kaua'i

SPECIES INFORMATION: A fern with a slightly curved creeping rhizome. Fronds are erect, very finely dissected, and 15-85 cm long, with 15-35 pairs of pinnae. Genus endemic to Hawaiian Islands. Species endemic to Kaua'i. It has not been seen in the wild since around 1900, with one exception.

DISTRIBUTION: Halemau, Koke'e, Kaua'i.

ABUNDANCE: As of 2004, one plant is known, located at Halemau, Kaua'i.

LOCATION AND CONDITION OF KEY HABITAT: Restricted to steep, dry, upland forest slopes, 500-1000 m.

THREATS:

- Habitat degradation by feral pigs;
- Browsing by goats;
- 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 enclosure fences for damage and inside enclosures 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=PDMALOH0A0>.

Palmer, Daniel D., 2003, Hawaii's Ferns and Fern Allies, Honolulu, HI: University of Hawaii Press, 324p.

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].