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Plants

Doryopteris angelica

SPECIES STATUS:
Genetic Safety Net Species
Endemism – Kaua'i

SPECIES INFORMATION: Terrestrial fern.

Rhizome sub-erect, stipe black-brown with medium brown stipe with a prominent ridge, lamina dark green, young fronds light green, 5-7 fronds.

DISTRIBUTION: Koke'e, Kaua'i.

ABUNDANCE: Three populations are known. One in Kuia Valley with ca. 20 individuals, one in Makaha Valley with ca. 10 individuals, and one in Awaawapuhi with just a few individuals.

LOCATION AND CONDITION OF KEY HABITAT: *Metrosideros-Acacia* Montane Mesic Forest. Associated native species include *Alphitonia ponderosa*, *Cheirodendron* spp., *Psychotria* spp., *Melicope* spp., *Pouteria sandwicensis*, *Tetraplasandra kauaiensis*, *Dodonaea viscosa*, and *Wilkesia* sp. Alien species that have invaded this habitat include *Rubus rosifolius*, *Lantana camara*, *Erigeron karvinskianus*, *Psidium cattleianum*, and *Hedychium gardnerianum*.

THREATS:

- Habitat degradation by feral pigs;
- Browsing by deer;
- Fruit 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 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;
- Map genetic diversity in the surviving populations to guide future re-introduction and augmentation efforts.

References:

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].