Plants

Diellia erecta f. *alexandri*

SPECIES STATUS:
Federally Listed as Endangered
Genetic Safety Net Species
Hawai'i Natural Heritage Ranking – Critically Imperiled (G1)
Endemism – Kaua'i, Moloka'i, Maui
Critical Habitat - Designated

SPECIES INFORMATION: *Diellia erecta* f. *alexandri* (Aspleniaceae), is a terrestrial fern with fronds that extend to more than 20 cm at maturity. Blades are 1-pinnate-pinnatifid to occasionally 2-pinnate-pinnatifid. Pinnae from 20-26 pairs, and quite variable with respect to cutting from deeply lobed to dissected, lobes or segments wedge-shaped, bases narrow or broad, margins entire or dentate. Sori at tips of expanded lobes.

DISTRIBUTION: Known historically from Kaua'i, Moloka'i and Maui, 900-1700 m, from only a few scattered populations.

ABUNDANCE: One plant is known from Maui at Poli Poli State Park. Apparently now extinct on Kaua'i and Moloka'i.

LOCATION AND CONDITION OF KEY HABITAT: Found in small isolated populations in mesic forests, 900-1,700 m.

THREATS:

- Habitat degradation by feral ungulates;
- 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:

- 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;
- 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.

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