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Plants

Platanthera holochila

SPECIES STATUS:

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

SPECIES INFORMATION: *Platanthera holochila* is one of only three species of orchids endemic to Hawai'i. It is an erect herb whose long stems arise from underground tubers. Its pale green leaves are egg-shaped and greenish-yellow flowers occur on open spikes. Historically, it was known from the Alaka'i Swamp and Kaholuamano area and the Waihiawa Mountains on Kaua'i, the Ko'olau Mountains on O'ahu, scattered locations on Moloka'i, and various locations on Maui. In 1992, Hurricane 'Iniki devastated the Kaua'i populations and today, only one remaining individual survives in the Alaka'i Swamp. *Platanthera holochila* is facing rapid decline and is currently known from only 5 locations on Kaua'i, Moloka'i and Maui and presumed extinct on O'ahu.

DISTRIBUTION: Found in Alaka'i Swamp, Kaua'i; Kamakou Preserve, Moloka'i; and Hanaula, Waikamoi and Kapunakea Preserves, Maui. Extinct on O'ahu.

ABUNDANCE: Five populations (3 Maui, 1 Moloka'i, 1 Kaua'i) with less than 40 individuals (15-20 Maui, 20 Moloka'i, 1 Kaua'i).

LOCATION AND CONDITION OF KEY HABITAT: Mesic and wet habitats, in the forest understory or in montane bogs. In mesic shrublands and forests on ridgetops and sides of ridges. On east Maui, the species has been found in subalpine shrubland on an old lava flow. The habitat for this species is threatened by the invasion of alien plant taxa.

THREATS:

- Feral pigs and alien plants;
- Competition with invasive alien plant taxa;
- Loss of natural habitat limits the reproductive capacity of this species.

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:

- 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;
- 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>.

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