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Plants

Alani

Melicope hiiakae

SPECIES STATUS:

Federally Listed as a Candidate Species

Genetic Safety Net Species

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

Endemism – O'ahu

SPECIES INFORMATION: *Melicope hiiakae* is a small tree, 2 to 7 m (6.6 to 23 ft) tall, with new growth densely covered with whitish to pale brown waxy pubescence. Leaves are opposite, elliptic, glossy and medium green on the upper surface while the lower surface is paler green. Yellowish green male or female flowers are born on axillary cymes, are puberulent, and occur in clusters of 5 to 21. Capsules are dark green with 1 to 2 seeds per carpel.

DISTRIBUTION: Historically known only from the island of O'ahu.

ABUNDANCE: Currently, *Melicope hiiakae* is known from four or five populations totaling about 20 individuals in the Ko'olau mountains.

LOCATION AND CONDITION OF KEY HABITAT: Mesic to wet forest and shrubland.

THREATS:

- Pigs;
- Black twig borer (*Xylosandrus compactus*), known to infest *Melicope* in the Ko'olau Mountains on O'ahu;
- Alien plant species that degrade and destroy habitat;
- Reduced reproductive vigor;
- Naturally occurring events such as hurricanes, landslides, and rockslides.

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 historic 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:

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