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Plants

Ha‘iwale

Cyrtandra gracilis

SPECIES STATUS:
Genetic Safety Net Species
Hawai‘i Natural Heritage Ranking - Possibly Extinct (GH)
Endemism – O‘ahu

SPECIES INFORMATION: Leaves opposite, borne on upper 4 - 6 nodes, those of a pair unequal, symmetrical or nearly so, elliptic ovate, firm chartaceous, 11.5 - 22 cm long, 3.6 - 6.6 cm wide, both surfaces sparsely covered with white, hemispherical, subsessile glands, becoming glabrate, margins serrate, apex long acuminate, base attenuate, petioles 2.5 8.5 cm long. Flowers 1 - 7 in open to very open umbelliform cymes arising in the leaf axils, sparsely covered with subsessile glands to glabrate throughout, peduncles 8 - 22 mm long, pedicels 15 - 75 mm long, apparently sigmoid, bracts linear, 5 - 17 mm long; calyx nearly actinomorphic, 14 - 36 mm long, cleft to base, the lobes linear, somewhat unequal, sparsely covered with subsessile glands to glabrate; corolla white, slightly curved, tube cylindrical, ca. 22 - 24 mm long, ca. 3 - 5 mm in diameter, sparsely covered with subsessile glands, more densely so in bud, upper lobes suborbicular, ca. 2.5 - 5 mm long, ca. 4 - 6 mm wide, lower lobes broadly elliptic, ca. 5 - 8 mm long, ca. 4 - 6.5 mm wide; ovary covered with subsessile glands at apex, glabrous below; style ca. 5 - 6 mm long, covered with subsessile glands. Berries white, narrowly ovoid, ca. 2.3 - 2.5 cm long. Seeds unknown.

DISTRIBUTION: Endemic to Ko‘olau Mountains on O‘ahu. The type collection is from Palolo Valley, and a single collection is from Kōnāhuanui Gulch, Nu‘uanu, O‘ahu.

ABUNDANCE: Originally collected in the 1800’s, it has been rediscovered and observed as recently as 2005 in Pia Valley on O‘ahu.

LOCATION AND CONDITION OF KEY HABITAT: Both the Palolo Valley collection site and the Konahuanui area are highly disturbed *Metrosideros-Dicranopteris linearis* wet forest. Associated native species include *Cheirodendron, Cibotium, Scaevola, Broussaisia, Bobea, Zanthoxylum oahuense, Touchardia, Coprosma, Cyanea humboltiana, Machaerina, Wikstroemia,* and *Hedyotis terminalis*. Alien species that have invaded the habitat for this species include *Clidemia hirta*, among others.

THREATS:

- Competition with invasive alien plant species;
- Pigs;

- Seed predation by rats;
- Stochastic extinction and reduced reproductive vigor due to the small number of remaining individuals.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but also establish further populations to reduce the risk of extinction. 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:

- 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;
- 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 [August 2005].

NTBG. 2005. Perlman, Steve. Field Data Booklet #51, SP 19504. Unpublished data.

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