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## Plants

### *Cyanea profuga*

#### SPECIES STATUS:

Genetic Safety Net Species  
Hawai'i Natural Heritage Ranking – Possibly Extinct (GH)  
Endemism – Moloka'i

**SPECIES INFORMATION:** Unbranched shrubs 1.8-2.4 m tall. Leaves elliptic, blades 18-24 cm long, 7-10 cm wide, glabrous, margins callose dentate, apex acuminate, base cuneate, petioles 8-12.5 cm long. Inflorescences 9-12 flowered, peduncles 25-40 mm long, pedicels 8-10 mm long; hypanthium oblong to obconical, 6-7 mm long, 3-4 mm wide; calyx lobes oblong, 3-5 mm long, 1-2 mm wide, apex rounded and apiculate; corolla white, 30-35 mm long, 2-3 mm wide, glabrous, the tube suberect, the lobes spreading, 3/4 as long to as long as the tube; staminal column glabrous; anthers glabrous, the lower 2 with apical tufts of white hairs. Berries unknown.

**DISTRIBUTION:** Eastern Moloka'i. Known only from the type and one other specimen collected in 1912 at Mapulehu and Pelekunu, until 2002, when plants found at Wai'awa Gulch, Moloka'i.

**ABUNDANCE:** One population remains, consisting of 6 plants, at Wai'awa Gulch.

**LOCATION AND CONDITION OF KEY HABITAT:** Metrosideros Riparian Mesic to Wet Forest. Associated native species include *Cyrtandra grayi*, *Hedyotis acuminata*, *Tetraplasandra hawaiiensis*, *Pipturus argutus*, *Boehmeria grandis*, *Urera glabra*, *Dubautia plantaginea*, *Cyanea mannii*, *Lobelia hypoleuca*, *Clermontia kakeana*, *Peperomia latifolia*, *Peperomia cookiana*, *Perrottetia sandwicensis*, *Eragrostis grandis*, *Lysimachia remyi*, *Sadleria pallida*, *Sadleria cyatheoides*, *Tectaria gaudichaudii*, *Diplazium sandwicensis*, *Selaginella arbuscula*, and *Odontosoria chinensis*.

#### THREATS:

- Habitat degradation by feral pigs;
- 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 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;
- If found, 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> [August 2005].

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Wagner, W.L., Herbst, D.R., and Sohmer, S.H., 1999. Manual of the flowering plants of Hawai'i-- Revised Edition. Honolulu, HI: University of Hawaii Press and Bishop Museum Press. 1853p