



Natalia Tangalin, NTBG

Plants

no common name

Cyanea munroi

SPECIES STATUS:

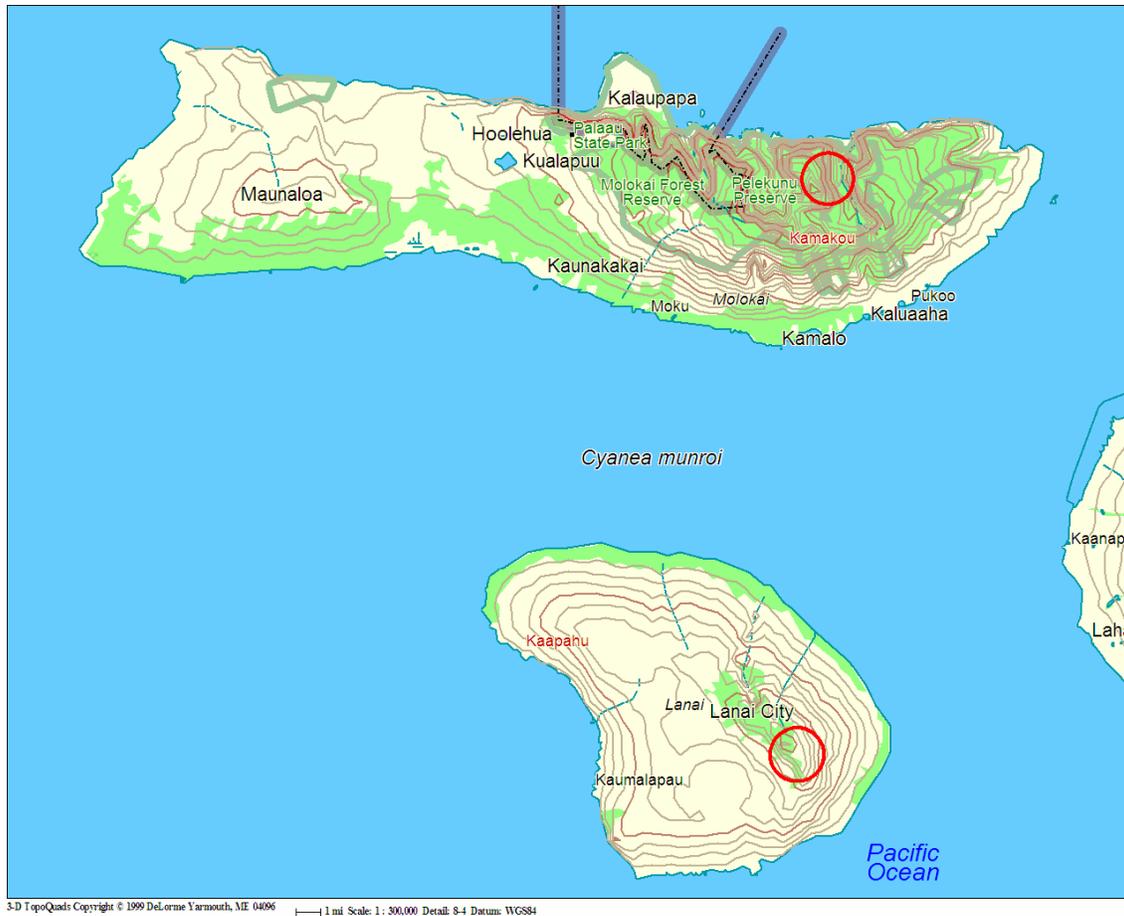
Genetic Safety Net Species
Hawai'i Natural Heritage Ranking-
Critically Imperiled (G1)
Endemism – Lana'i, Moloka'i

SPECIES INFORMATION: *Cyanea munroi*, a member of the bellflower family (Campanulaceae), is a large multibranched shrub from 4-8 ft in height. Leaves pinnatifid, lower pinnatisect, with purple-green armed petioles and stems. Apparently, little is known about this species. It was formerly included as part of *C. grimesiana* ssp. *grimesiana*, but recently elevated to species status as distinct from the O'ahu and Moloka'i *C. grimesiana* ssp. *grimesiana*.

DISTRIBUTION: Windward areas of Lāna'i and Moloka'i, from 2,000-3,200 ft elevation.

ABUNDANCE: Four plants are known from 2 populations. One population of 2 plants total, at Awehi Gulch, Lāna'i. One population of 2 plants at Wailau, Moloka'i, on the forested slopes above cliffs toward Olokui.

LOCATION AND CONDITION OF KEY HABITAT: Lāna'i, Awehi Gulch. Moloka'i, slopes and ridges above Wailau Valley, in *Metrosideros-Dicranopteris linearis* wet forest. Associated species include *Nestegis sandwicensis*, *Myrsine lanaiensis*, *Labordia tinifolia* var. *lanaiensis*, *Pouteria sandwicensis*, *Pisonia*, *Antidesma*, *Freycinetia*, and *Leptocophylla*. Alien species recorded in this species' habitat include *Cinnamomum* sp., *Rubus rosifolius*, and *Psidium cattleianum*.



THREATS:

- Browsing by deer and goats;
- Habitat degradation from feral pigs;
- Competition from alien plant species.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but to 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 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:

Lammers, T. G. 1998. New names and combinations in Campanulaceae. *Novon* 8: 31–35.

NTBG. 1991. Perlman, Steve. Field Data Booklet #9, SP 12284. Unpublished data.

NTBG. 2001. Wood, K. KW 8919. Unpublished data.

NTBG. 2004a. Herbarium database specimen. Tangalin 44. Collected on 4/16/2004.

NTBG. 2004b. Perlman, Steve. Field Data Booklet #50, SP 19402, 19403. Unpublished data.