



Natalia Tangalin, NTBG

## Plants

### *Cyanea magnicalyx*

#### SPECIES STATUS:

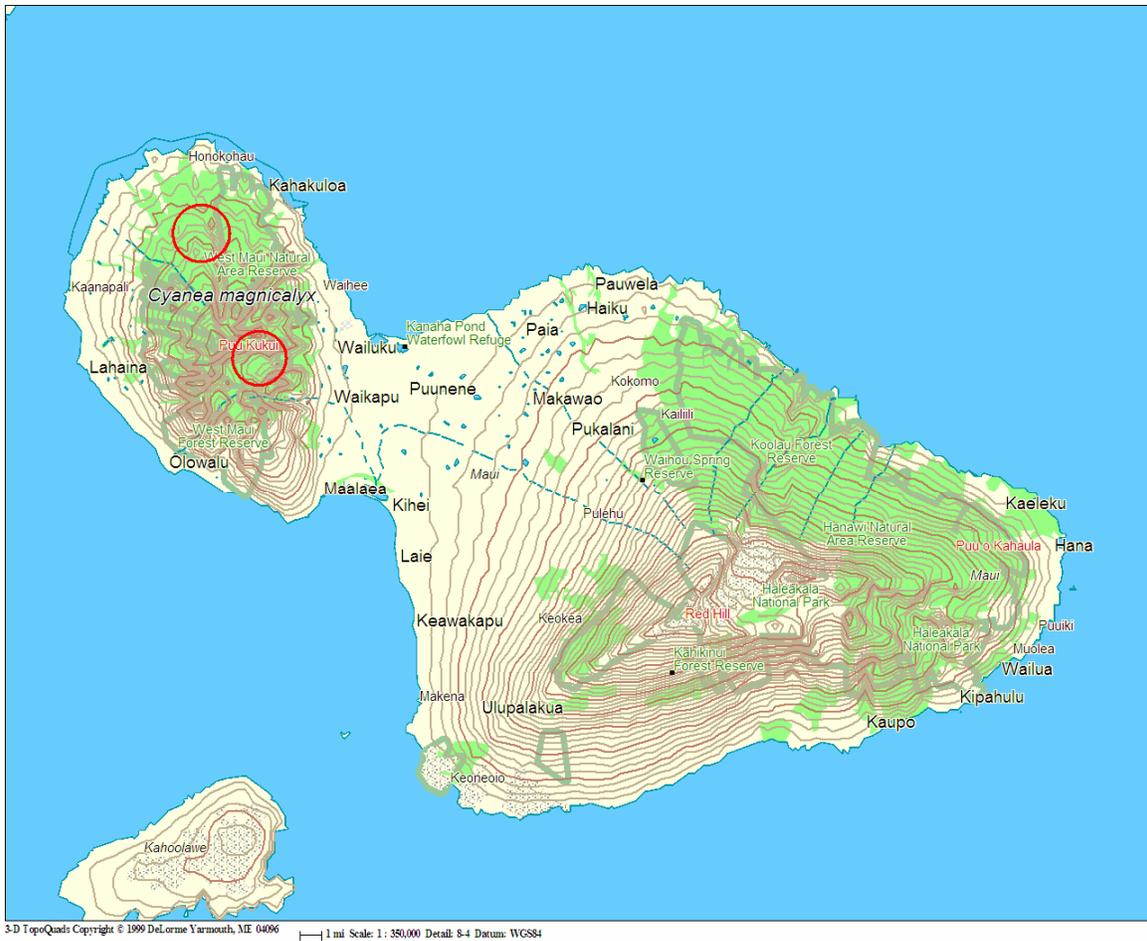
Genetic Safety Net Species  
Endemism - West Maui

**SPECIES INFORMATION:** *Cyanea magnicalyx*, a member of the bellflower family (Campanulaceae) is a shrub 1.5 - 3 m tall, with stems that branch from its base. Leaves are elliptic, upper surface green, glabrous; lower surface light green, glabrous; margin pinnately cleft or parted toward apex, and pinnately compound toward base. Flowers are borne on racemes, 6- to 15 per inflorescence. Corolla yellowish white, longitudinally striped with purple; all 5 anthers have tufts of hairs. Mature fruit is a yellow berry.

**DISTRIBUTION:** Endemic to West Maui, in mesic forest at 1,600 ft elevation.

**ABUNDANCE:** Two populations comprised of 1 adult in Kaluanui gulch and 2 adults and 3 juveniles in Iao Valley.

**LOCATION AND CONDITION OF KEY HABITAT:** In 'Iao Valley State Park, *Cyanea magnicalyx* occurs in *Pisonia-Metrosideros* mesic forest. Associated native species include *Pouteria sandwicensis*, *Cyrtandra grayii*, *Freycinetia arborea*, *Asplenium nidus*, *Charpentiera obovata*, *Pittosporum confertiflorum*, *Psychotria mauiensis*. Alien plant species that have invaded this habitat include *Psidium cattleianum*, *Rubus rosifolius*, *Blechnum*, *Oplismenus hirtellus*. In Kaluanui Gulch, on private land, it occurs in *Metrosideros- Dicranopteris linearis* wet forest, and associated native species include *Psychotria*, *Broussaisia*, *Cheirodendron*, *Antidesma*, *Sadleria*, *Cibotium*, *Clermontia kakeana*, *Cyrtandra*, and *Freycinetia arborea*. Alien plant species that have invaded this habitat include *Rubus argutus*, *Tibouchina herbacea*, *Spathodea campanulata*, and others.



### THREATS:

- Feral pigs;
- Competition from alien plant species;
- Floods;
- Landslides;
- Fruit predation by rats;
- Stochastic extinction;
- Reduced reproductive vigor due to the small number of existing populations and 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 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. 2004. Five New Species of the Endemic Hawaiian Genus *Cyanea* (Campanulaceae: Lobelioideae), *Novon* 14: 84-101.

NTBG. 2005. Perlman, Steve. Field Data Booklet #51, SP 19446, 19447, 19477. Unpublished data.