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## Plants

### *Lysimachia maxima*

#### SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

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

Endemism – Moloka'i

Critical Habitat - Designated

**SPECIES INFORMATION:** A sprawling shrub. Leaves are in groups of three along the stem. The leaves, which measure 1.8 to 5 cm, are oval with the broadest portion at the tip of the leaves. When young, the upper surface of the leaves is sparsely scattered with hairs, and the underside of the leaves is sparsely covered with long, soft, rusty hairs. Flowers are purple and solitary.

**DISTRIBUTION:** Windward Moloka'i.

**ABUNDANCE:** Currently one occurrence with fewer than 50 plants. The single known population is located within Pelekunu Preserve, immediately adjacent to State owned land.

**LOCATION AND CONDITION OF KEY HABITAT:** This species is found in *Metrosideros* dominated wet forests on ridge slopes.

#### THREATS:

- Habitat degradation by feral pigs;
- Landslides;
- 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 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 historical 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:**

Hawai'i Natural Heritage Program, 2005. Hawaii Natural Heritage Program Search, <http://www.hinhp.org/printpage.asp?spp=PDMAL0H0A0>.

US Fish and Wildlife Service. 1996. Final Listing, Endangered ETWP; Determination of Endangered Status for Three Plant Species (*Cyanea dunbarii*, *Lysimachia maxima*, and *Schiedea sarmentosa*) from the Island of Molokai, Hawaii, State of Hawaii, Vol. 61, No. 198, (10-Oct-1996), 61 FR 53130 53137, 8 pp.

Wagner, W.L.; Herbst, D.R.; 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.