



Plants

Lysimachia filifolia

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

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

Endemism – O'ahu

Critical Habitat - Designated

SPECIES INFORMATION: *Lysimachia filifolia*, a short-lived perennial member of the primrose family (Primulaceae), is a small shrub 15 to 50 cm (0.5 to 1.6 ft) tall, leaves filiform. Flowers are solitary and reddish purple in color. This species is distinguished from other members of the genus by its leaf shape and width, calyx lobe shape, and corolla length.

DISTRIBUTION: Historically, *Lysimachia filifolia* was known only from Kaua'i. This species is now also known from O'ahu. On O'ahu, there is one occurrence containing a total of 50 individuals, on the slopes of Waiahole Valley in the Ko'olau Mountains on State land.

ABUNDANCE: Currently 170-275 plants known.

LOCATION AND CONDITION OF KEY HABITAT: Populations of this species are located on State land. This species typically grows on mossy banks at the base of cliff faces, within the spray zone of waterfalls, or along streams in lowland wet forests, at an elevation of 240 to 680 m (800 to 2,200 ft).

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 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:

- 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:

Carr, G. 2005. Hawaiian Native Plant Genera, University of Hawaii Botany Department, <http://www.botany.hawaii.edu/faculty/carr/images>.

Hawai'i Natural Heritage Program, 2005. Hawaii Natural Heritage Program Search, <http://www.hinhp.org/printpage.asp?spp=PDMALOH0A0>.

US Fish and Wildlife Service. 1994. Final Listing, Endangered ETWP; Determination of Endangered or Threatened Status for 24 Plants From the Island of Kauai, HI; Federal Register, Vol. 59, No. 38, (25-FEB-1994), 59 FR 9304 9329, 26 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.