



Plants

Phyllostegia parviflora var. *lydgatei*

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

Hawai'i Natural Heritage Ranking - Subspecies

Critically Imperiled (G1T1)

Endemism – O'ahu

Critical Habitat - Designated

SPECIES INFORMATION: An herb with white flowers stems densely antrorsely strigose, becoming hirtellous and glandular hirtellous toward and throughout the inflorescence. Leaves rugose, ovate to broadly ovate, (15--19--33 cm long, (6--7.5--15.3 cm wide, margins crenate, apex acuminate. Flowers (4)6 (10) per verticillaster, inflorescences usually 10--20 cm long, pedicels 2--5(--6) mm long. Calyx campanulate, 3--6 mm long, nerves conspicuous, hirtellous and sparsely to moderately glandular hirtellous, and glandular-dotted, the teeth narrowly deltate to linear-deltate or linear-elliptic, 1.5--2 mm long, apex attenuate to acute. Corolla 10--13 mm long, white, purple-tinged at least on the upper lip, the tube curved, ca. 8--10 mm long, the upper lip ca. 2--3 mm long, the lower lip ca. 5--7 mm long. The Federal Register final rule included the Wai'anae Mountains populations here treated as *P. parviflora* var. *lydgatei* as well as those restricted to *P. parviflora* var. *parviflora* from the Ko'olau Mountains (O'ahu), West Maui, and Hawai'i. *Phyllostegia parviflora* var. *parviflora* from the Ko'olau Mountains, O'ahu and formerly Maui is apparently now restricted to one locality and four individuals, while *P. parviflora* var. from the island of Hawai'i has not been collected since the late 1800's and is also apparently extinct.

DISTRIBUTION: Occurring in diverse mesic forest, 730--825 m, from Napepeiaulelo Gulch and North Palawai Gulch, Wai'anae Mountains, O'ahu.

ABUNDANCE: One extant population in North Palawai Gulch with about 20 individuals in 1999.

LOCATION AND CONDITION OF KEY HABITAT: This taxon appears to be restricted to north-facing slopes and is quite rare with current estimate of *Phyllostegia parviflora* is U. S. federally listed as endangered. Mesic forests on gulch slopes. The current occurrence is in Honouliuli preserve. Grows in association with mostly alien vegetation and degraded native forest. *Acacia koa*, *Antidesma*, *Claoxylon sandwicense*, *Cyanea membranaceae*, *Melicope*, *Metrosideros polymorpha*, *Pittosporum*, *Pipturus*, *Pouteria*

sandwicensis, *Pteralyxia macrocarpa*, *Solanum sandwicense*, *Strebulus pendulinus*, *Urera glabra*, and *U. kaalae*.

THREATS:

- Feral pigs;
- Competition from alien plant species;
- Rockfall and landslides;
- Fire.

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. 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 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:

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