



Plants

Tetramolopium lepidotum subsp. *lepidotum*

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

Hawai'i Natural Heritage Ranking - Critically Imperiled;

Subspecies Critically Imperiled

Endemism – O'ahu, Lana'i

Critical Habitat - Designated

SPECIES INFORMATION: *T. lepidotum* subsp. *lepidotum*, a member of the sunflower family (Asteraceae) is an erect perennial shrub (12 to 36 cm tall). It has stems that are apically branched with filiform (threadlike) to linear, linear-oblong, or oblong leaves. The flowers of *T. lepidotum* subsp. *lepidotum* are perfect with maroon to pale salmon corollas that are narrow and funnel in form. *T. lepidotum* subsp. *lepidotum* is a short-lived perennial that is known to flower from April through July. There are seventeen *Tetramolopium* taxa endemic to Hawai'i, seven of which are threatened. *Tetramolopium lepidotum* has two recognized subspecies: subsp. *lepidotum*, discussed here, and subsp. *arbusculum*, which is known only from one specimen collected in 1844, and is now considered extinct.

DISTRIBUTION: *T. lepidotum* subsp. *lepidotum* is endemic to O'ahu and was historically found along nearly the entire length of the Wai'anae Mountains. Today it is distributed among the Wai'anae Mountains from Kuma Kaki'i, Wai'anae Kai, and Pu'u Kaua, with three populations.

ABUNDANCE: 15 plants found amongst 3 populations.

LOCATION AND CONDITION OF KEY HABITAT: *T. lepidotum* subsp. *lepidotum* is found on grassy ridgetops slopes, or west-facing cliffs, mesic forest, at 370 to 940 meters (1,200 to 3,000 feet) elevation. This species is found on federal, state and privately owned land. Degradation of the habitat has been caused by feral ungulates and invasion of alien plant taxa. Associated native species of *T. lepidotum* subsp. *lepidotum* include *Bidens* and *Metrosideros polymorpha* ('ōhi'a).

THREATS:

- Habitat degradation by feral pigs;
- Fire;

- 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. 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=PDMAL0H0A0>.

US Fish and Wildlife Service. 1991. Final Listing, Endangered ETWP; Determination of Endangered Status for 26 Plants from the Waianae Mountains, Island of Oahu, Hawaii; Federal Register, Vol. 56. Na. 209, (29-OCT-91), 56 FR 55770 55786, 17 pp.

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