



## Plants

### *Tetraplasandra bisattenuata*

#### SPECIES STATUS:

Genetic Safety Net Species

Endemism – Kaua'i

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**SPECIES INFORMATION:** *Tetraplasandra bisattenuata*, a member of the ginseng family (Araliaceae), is a multi-trunked tree 3 m tall, trunks often reclining below 'uluhe for some distance before ascending; leaves dark green above, paler below; petiolules quite long and flexible with the subsequent appearance of "quaking" leaves as in *Cheirodendron*; inflorescence 2-compound, racemose; fruit (4) 5-carpellate.

**DISTRIBUTION:** *Tetraplasandra bisattenuata* is currently known from southeastern Kaua'i in the Wahiawa Mountains between Pu'ukolo and Kahili peaks and possibly a new population from Ha'upu peak in the Hoary Head range.

**ABUNDANCE:** There are presently 2 plants known from the Wahiawa Mountains (a third plant was killed in the 1992 hurricane) and possibly 40-50 plants from the summit area of Ha'upu.

**LOCATION AND CONDITION OF KEY HABITAT:** *Dicranopteris*-covered slopes with patches of mesic forest between 1,800-2,100 ft. There is a severe threat to the habitat from alien species such as *Rhodomyrtus tomentosa*, *Melastoma candida* and *Heliocarpus popayanensis*.

#### THREATS:

- Competition from alien plant species;
- Habitat degradation by feral ungulates;
- Small population size;
- Stochastic events;
- Apparent lack of pollinators.

**CONSERVATION ACTIONS:** The goals of conservation actions are not only protect current populations, but also to establish new populations to reduce the risk of extinction. This species is currently being propagated successfully at National Tropical Botanical Garden and planted into restoration sites in Lawai Valley. 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:**

- 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:**

Hawai'i Natural Heritage Program. 2005. Hawaii Natural Heritage Program Search, <http://www.hinhp.org>.

Wagner, W. L., D. R. Herbst, and D. H. Lorence. 2005. Flora of the Hawaiian Islands website. <http://ravenel.si.edu/botany/pacificislandbiodiversity/hawaiianflora/index.htm> [August, 2005].

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.