



N. Tangalin, NTBG

Plants

'Anunu

Sicyos alba

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

Hawai'i Natural Heritage Ranking - Critically Imperiled

(G1)

Endemism – Island of Hawai'i

Critical Habitat - Designated

SPECIES INFORMATION: *Sicyos alba*, of the gourd family (Cucurbitaceae), is an annual vine up to 20 m (65 ft) long, minutely hairy, and black-spotted. Leaves are pale, broadly heart-shaped, shallowly to deeply three to five-lobed, 7 to 11 cm (2.8 to 4.3 in) long, and 9 to 12 cm (3.5 to 4.7 in) wide. Male and female flowers are borne in separate flower clusters on the same plant. Male flower clusters have main stalks 2.5 to 3.7 cm (1 to 1.5 in) long and individual flower stalks 2 to 4 mm (0.08 to 0.1 in) long. The male flowers are white, five-lobed, dotted with glands, and 2 to 2.5 mm (0.08 to 0.09 in) long. The female flower clusters have two to eight flowers, a main stalk 1 to 3.5 cm (0.4 to 1.4 in) long, and no stalks on the individual flowers. The flowers are white and four-lobed, with the lobes 1.7 to 2 mm (0.07 to 0.08 in) long.

DISTRIBUTION: Windward slopes of Mauna Kea, Mauna Loa and Kilauea, Hawai'i. One occurrence in Ola'a forest reserve, and two occurrences in Pu'u Maka'ala Natural Area Reserve.

ABUNDANCE: Since this species is annual, location varies from year to year. There may not be more than a few dozen individuals at any given time.

LOCATION AND CONDITION OF KEY HABITAT: *Sicyos alba* typically grows in 'ōhi'a and hapu'u-dominated Montane Wet Forests, at elevations between 975 and 1,130 m (3,200 to 3,720 ft). The habitat for *S. alba* is being degraded by feral pigs and the invasion of alien plant species.

THREATS:

- Habitat damage by feral pigs;
- Trail clearing;
- Competition from alien plant taxa, including banana poka, palmgrass, strawberry guava, and yellow Himalayan raspberry;

- Habitat change due to volcanic activity;
- Risk of extinction from naturally occurring events and/or reduced reproductive vigor due to the small number of existing 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:

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

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.