



Plants

'Akoko

Chamaesyce eleanoriae

SPECIES STATUS:

Federally Listed as Candidate

Genetic Safety Net Species

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

Endemism – Kaua'i

SPECIES INFORMATION: *Chamaesyce eleanoriae* is a shrub 20-40 cm tall, densely branched. Leaves opposite. Leaf blades 10-20 mm long and 6-14 mm wide. Cyathia solitary and terminal at branch tips, bearing 5 (rarely 4) white petal-like glandular appendages. Capsule broadly ovoid, 2.5-2.8 mm long and 2.3-3 mm in diameter.

DISTRIBUTION: Found only in and around Kalalau Valley rim, Kaua'i.

ABUNDANCE: This species is known from 10 populations totaling less than 500 individuals. Although it was only discovered in 1992, a decline in numbers has been observed over the last 10 years.

LOCATION AND CONDITION OF KEY HABITAT: Found on steep slopes and cliffs, in *Metrosideros- Diospyros* lowland mesic forest and *Eragrostis variabilis* coastal dry cliffs.

THREATS:

- Goats browse this species and generally degrade its habitat;
- Rats;
- Competition from alien plant species;
- Depressed reproductive vigor due to the small number of extant 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 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:

Carr, G., 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>.

US Fish and Wildlife Service. 2005, Endangered and Threatened Wildlife and Plants; Review of Native Species That Are Candidates or Proposed for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Federal Register Vol. 70, No. 90, (11-MAY-05), 70 FR 24869 24934, 66 pp.