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Plants

Schiedea viscosa

SPECIES STATUS:
Federally Listed as Endangered
Genetic Safety Net Species
IUCN Red List Ranking – CR B2ac(iv)
Hawai'i Natural Heritage
Ranking – Critically Imperiled (G1)
Endemism – Kaua'i
Critical Habitat - Designated

SPECIES INFORMATION: *Schiedea viscosa*, a member of the pink family, is a weakly climbing or sprawling subshrub. The stems are 0.6 to 3 m (2.0 to 9.8 ft) long, and densely covered with fine glandular hairs throughout. The thin and membranous leaves are narrowly elliptic and are 2.5 to 5 cm (1.0 to 2.0 in) long and 0.8 to 1.8 cm (0.3 to 0.7 in) wide. Usually three to nine flowers are arranged in loose clusters with stalks ranging from 2 to 3.5 cm (0.8 to 1.4 in) long. The four sepals are white, thin, and membranous, and remain so at maturity. The outer two sepals greatly overlap the inner ones. The sepals are oblong in shape and 8 to 9 mm (0.3 in) long, but enlarge to approximately 12 mm (0.5 in) long in fruit, completely enclosing the fruit at maturity. The stamens are sparsely fused at the base and the basal outgrowths are about 3 mm (0.1 in) long, nearly as wide, and two-toothed. The fruits are egg-shaped capsules, 8 to 12 mm (0.3 to 0.5 in) long, and opening by five to seven valves. The seeds are dark reddish brown, and approximately 0.8 mm (0.03 in) long with a minutely hairy surface. This species is distinguished from others in this endemic Hawaiian genus by the weakly climbing or sprawling habit, color of the sepals, number of flowers per cluster, and size of the leaves. *Schiedea viscosa* is closely related to *Schiedea lychnoides*, which differs primarily in having wider leaves and more capsule valves and flowers per cluster.

DISTRIBUTION: Historically, *Schiedea viscosa* was known from the Kaholuamano, Kokee, Halemanu, Nawaimaka, and Waialae areas of northwestern Kaua'i. This species had not been seen since 1917 near Kauaikinana in Kokee when, in 1991, a population of 11 mature plants was discovered on the ridge between Waialae and Nawaimaka valleys. In 1993, another 20 to 30 plants were discovered in the same general area on a north-facing ridge in Nawaimaka Valley. In 1992, 10 plants along the Mohihi-Waialae Trail were also discovered.

ABUNDANCE: The two known populations (two subpopulations in Nawaimaka Valley and one population on Mohihi-Waialae Trail) total between 40 and 60 mature plants on State owned land. One population is within the Alakaʻi Wilderness Preserve.

LOCATION AND CONDITION OF KEY HABITAT: *Schiedea viscosa* is typically found at elevations between 820 and1,070 m (2,700 and 3,510 ft), on steep slopes in *Acacia koa* (koa)-ʻōhiʻa lowland mesic or wet forest. Associated plant species include *Alyxia oliviformis* (maile), *Bobea* sp. (ʻahakea), *Carex* sp., *Dodonaea viscosa* (ʻaʻaliʻi), *Ilex anomala* (ʻaiea), *Melicope* sp. (alani), *Pleomele* sp. (hala pepe), and *Psychotria* sp. (kopiko).

THREATS:

- Destruction of habitat by feral pigs and goats (Capra hircus);
- Competition with the alien plant species;
- Risk of extinction from naturally occurring events and/or reduced reproductive vigor, due to the small number of extant populations and individuals.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but to also establish new 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 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:

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