naming it for Mt. Kaala where it was first collected. Publishing deadlines did not allow the authors of the current treatment of the family to review the more than 70 new species of *Phyllostegia* published by St. John in 1987 (Wagner *et al.* 1990). Warren Wagner, however, concurs that *Phyllostegia kaalaensis* is a valid, taxonomically distinct species (Warren Wagner, Smithsonian Institution, pers. comm. 1994).

*Phyllostegia kaalaensis*, a member of the mint family (Lamiaceae), is an herb. The egg-shaped leaves are 5 to 13 cm (2 to 5 in) long. Usually six flowers are arranged along a flowering stalk. The calyx is glabrous and 5 mm (0.2 in) long. The hairless corolla tube is 11 mm (0.4 in) long and the lower lip is 7 mm (0.3 in) long (St. John 1987a). The species is distinguished from others of the genus by the spreading, pointed teeth on the leaf edges and by the hairs along the margins of the calyx and bracts (Wagner *et al.* 1990).

Phyllostegia kaalaensis has been known from only five scattered populations in the Waianae Mountains of Oahu (HHP 1994w1 to 1994w6). Fewer than 50 plants are known from 5 populations in Waianae Kai, Pahole Gulch, Ekahanui Gulch, and Palikea Gulch. These populations occur on State land, including Pahole and Mt. Kaala NARs and private land, including TNCH's Honouliuli Preserve (HHP 1994w1 to 1994w6). This species is found in mesic mixed (native/alien) forest or papala kepau-Sapindus oahuensis (aulu) forest from 490 to 760 m (1,610 to 2,500 ft) in elevation. Associated plant taxa include huehue haole, 'ie'ie, opuhe, Claoxylon sandwicense (po'ola), and Hibiscus sp. (koki'o) (HHP 1994w2 to 1994w4, 1994w6).

Habitat degradation and/or destruction by feral pigs; potential fire; competition with the alien plants Christmas berry, huehue haole, Koster's curse, and strawberry guava; and a risk of extinction from naturally occurring events and/or reduced reproductive vigor, due to the small number of populations and individuals, are the major threats to *Phyllostegia kaalaensis* (HHP 1994w3 to 1994w5; C. Russell, pers. comm. 1994).

More than 75 years ago, Rock collected a specimen from a palm on Mt. Kaala that he later named *Pritchardia kaalae* (Beccari and Rock 1921). Edward Caum (1930) later described *Pritchardia kaalae* var. *minima,* which is not recognized in the current treatment of Hawaiian members of the family (Read and Hodel 1990). *Pritchardia kaalae*, a member of the palm family (Arecaceae), is a singlestemmed palm up to 5 m (16 ft) tall. The waxy, hairless leaves are thin and papery or thick and leathery. Sometimes small points, dots, or linear, rusty scales are scattered on the lower leaf surface. The flowering stalks are composed of one or more branches. The round fruits are approximately 2 cm (0.8 in) in diameter. *Pritchardia kaalae* is distinguished from other members of the genus by the hairless or scaly leaves (Read and Hodel 1990).

Historically Pritchardia kaalae was known from scattered populations in the central and north-central Waianae Mountains of Oahu (Beccari and Rock 1921, HHP 1994aa1 to 1994aa5) Currently 5 populations are known between the Waianae Kai-Haleauau summit divide and the Makua-Keaau Ridge, totalling about 130 individuals. These populations are located on State land, including Mt. Kaala NAR and land leased to DOD for Makua Military Reservation, and on Federal land on Schofield Barracks Military Reservation (HHP 1994aa1 to 1994aa5). Pritchardia *kaalae* is typically found on steep slopes and gulches in mesic forest or shrubland between elevations of 460 and 945 m (1,500 and 3,100 ft). Associated plant taxa include 'a'ali'i, kolea, ko'oko'olau, mamaki, na'ena'e, 'ohi'a, Eragrostis sp. (kawelu), and Tetraplasandra sp. ('ohe) (HHP 1994aa1, 1994aa2, 1994aa4, 1994aa5; Read and Hodel 1990).

Habitat degradation by feral pigs and goats; fruit predation by rats; potential impacts from military activities; the alien plants Christmas berry, Maui pamakani, and prickly Florida blackberry; potential fire; and a risk of extinction from naturally occurring events and/or reduced reproductive vigor due to the small number of populations are major threats to *Pritchardia kaalae* (HHP 1994aa1, 1994aa4, 1994aa5; C. Russell, pers. comm. 1994).

In 1936, Hosaka collected a specimen of *Schiedea kealiae* on Oahu that he named for Kealia where it was collected (Caum and Hosaka 1936). *Schiedea gregoriana* is considered synonymous with *S. kealiae* by the authors of the current treatment of the family (Degener 1936, Sherff 1945, Wagner *et al.* 1990).

Schiedea kealiae, a member of the pink family (Caryophyllaceae), is a subshrub with weakly ascending to sprawling stems 0.2 to 0.5 m (0.7 to 1.6 ft) long that form loose clumps. The lower stems are smooth while the upper stems and flowering stalk bear glands. The opposite leaves, 3 to 10 cm (1.2 to 4 in) long and 0.3 to 1.5 cm (0.1 to 0.6 in) wide, are lance-shaped to elliptic

lance-shaped and conspicuously threeveined with a prominent midrib. The flowering stalk is 3 to 11 cm (1.2 to 4.3 in) long, with numerous unisexual flowers in crowded clusters. The green sepals of the male flowers are approximately 2.5 mm (0.1 in) long. The sepals of the female flowers, 1.5 to 2.2 mm (0.06 to 0.09 in) long, are slightly shorter. The nectaries, about 0.5 to 1 mm (0.02 to 0.04 in) long, are inconspicuous. The capsular fruit is 2 to 2.5 mm (0.08 to 0.1 in) long. The species is distinguished from others of this endemic Hawaiian genus by the length of the sepals and nectaries and the flowering stalk exclusively with stalkless glands (Wagner et al. 1990).

Historically Schiedea kealiae was known from the northern Waianae Mountains and one collection from the Palikea area, near the southern end of the same mountain range (HHP 1994bb1 to 1994bb6). Currently 3 populations totalling between 300 and 500 plants are located on the cliffs above Dillingham Airfield and Camp Erdman and at Kaena Point at the northern end of the Waianae Mountains. These populations occur on private land; State land, including land leased by DOD (Kaena Military Reservation); and Federal land on Dillingham Military Reservation (HHP 1994bb1, 1994bb2, 1994bb4, 1994bb6; J. Lau, pers. comm. 1994). Schiedea *kealiae* is usually found on steep slopes and cliff faces at elevations from 60 to 305 m (200 to 1,000 ft), in dry remnant Erythrina sandwicensis (wiliwili) or aulu forest. Associated plant taxa include alahe'e, ko'oko'olau, Leucaena leucocephala (koa haole), Myoporum sandwicense (naio), and Sida fallax ('ilima) (HHP 1994bb1, 1994bb2, 1994bb4, 1994bb6; Wagner et al. 1990).

The major threats to *Schiedea kealiae* are competition with alien plants (Christmas berry and koa haole) and a risk of extinction from naturally occurring events and/or reduced reproductive vigor due to the small number of existing populations. The Kaena Point population is additionally threatened by naturally occurring rock slides and fire (HHP 1994bb1, 1994bb2, 1994bb4, 1994bb6; C. Russell, pers. comm. 1994).

St. John (1982) described *Trematolobelia singularis* based on a specimen collected by John Obata in 1974. This species has been maintained in the most recent treatment of this endemic Hawaiian genus (Lammers 1990). The specific epithet refers to the solitary flowering stalk.

*Trematolobelia singularis,* a member of the bellflower family, is an unbranched shrub with stems 0.6 to 1.5 m (2 to 5 ft) long. The long and narrow