wide. The fragrant flowers are perfect and are borne singly along the branches. The five petals are purple, clawed, and somewhat unequal. The purple capsular fruit is 10 mm (0.4 in.) long. This species is distinguished from others in this endemic Hawaiian genus by the shape of its leaves (Wagner *et al.* 1990).

Historically Isodendrion longifolium was known from scattered locations on Kauai and the Waianae Mountains on Oahu (HHP 1994i1 to 1994i18; HPCC 1990a; Lorence and Flynn 1991, 1993). Currently Isodendrion longifolium is known from 18 populations on Kauai and Oahu. On Kauai, 15 populations totalling 500 to 800 individuals are scattered over ridges and valley slopes of northwestern Kauai. Eight populations occur on private land and seven are found on State land, which includes Hono O Na Pali NAR and the Na Pali Coast State Park (HHP 1994i3 to 1994i5, 1994i7 to 1994i13, 1994i15 to 1994i17; HPCC 1990a; Lorence and Flynn 1991, 1993). Three populations totalling 30 to 40 individuals are known from Oahu. Two populations are found within Mt. Kaala NÂR on State-owned land in the Waianae Mountains, and the third population is found in Makaua Gulch on private land in the Koolau Mountains (HHP 1994i2, 1994i14, 1994i18). The total current populations throughout the State consist of fewer than 1,000 individuals, with most of the populations and individuals occurring on Kauai. Isodendrion longifolium is found on steep slopes, gulches, and stream banks in mixed mesic or wet óhiá forest, usually between 410 and 760 m (1,345 and 2,500 ft) elevation. Associated plant taxa include áhakea, hame, Cyanea sp. (haha), Hedyotis sp., Perrottetia sandwicensis (olomea), and Pittosporum sp. (hoá'wa) (HHP 1994i2 to 1994i8, 1994i10 to 1994i18; HPCC 1990a; Lorence and Flynn 1991, 1993).

The major threats to *Isodendrion longifolium* are habitat degradation and/ or destruction by feral goats and pigs and competition with various alien plant taxa. On Oahu, the Palikea Gulch population is potentially threatened by overcollection and fire (HHP 1994i2, 1994i13, 1994i15 to 1994i17; HPCC 1990a; Lorence and Flynn 1993).

In 1912, J.F. Stokes collected a grass on Niihau that St. John later named *Panicum niihauense* (St. John 1931). This species has been maintained in the most recent treatment of Hawaiian members of the genus (Davidse 1990).

Panicum niihauense, a member of the grass family, is a perennial bunchgrass with unbranched culms 50 to 125 cm (20 to 49 in.) long. The leaf blades are flat, 15 to 35 cm (6 to 14 in.) long and 0.7 to 1.9 cm (0.3 to 0.7 in.) wide. The

panicles (loosely branched inflorescences) are 13 to 35 cm (5 to 14 in.) long. The panicle branches lie close to the main stem of the inflorescence (not spreading outward), and the spikelets are borne densely along the inflorescence branches. The spikelets, which contain two flowers, are 2.6 to 3.2 mm (0.1 in.) long. This species is distinguished from others in the genus by the shape of the inflorescence branches, which are erect and appressed, and the arrangement of the spikelets, which are densely clustered (Davidse 1990).

Panicum niihauense was known historically from Niihau and one location on Kauai (HHP 1994j1 to 1994j3). Currently this species is only known from State-owned land at Polihale State Park on Kauai. This single population of 23 individuals is found scattered in sand dunes in a coastal shrubland at between 9 and 15 m (30 and 50 ft) elevation. Associated plant taxa include áálií, *Cassytha filiformis* (kaunaóa pehu), *Prosopis pallida* (kiawe), *Scaevola sericea* (naupaka), *Sida fallax* (ílima), and *Vitex* sp. (kolokolo kahakai) (HHP 1993, 1994j3).

The primary threats to the single known population of *Panicum niihauense* are off-road vehicles, competition with alien plant taxa, and a risk of extinction from naturally occurring events and/or reduced reproductive vigor due to the small number of individuals in one remaining population (HHP 1993; HPCC 1992b; J. Lau and C. Russell, pers. comms. 1994).

Phyllostegia parviflora was first described by Gaudichaud-Beaupré as Prasium parviflorum based on a specimen collected on Oahu (Hillebrand 1888). Later, Bentham transferred the species to Phyllostegia and this is the name accepted in the current treatment of Hawaiian members of the genus (Wagner et al. 1990). Currently two varieties are recognized—var. parviflora and var. glabriuscula, described by Asa Gray in 1862 (Wagner et al. 1990). There is also a newly discovered variety that has not yet been formally named (Wagner et al. 1990). These recent collections of Phyllostegia parviflora from the Waianae Mountains differ from the other varieties by several characters and represent a new variety previously considered to be *Phyllostegia mollis* var. lydgatei (Wagner et al. 1990; Warren Wagner, Smithsonian Institution, in litt., 1994; W. Wagner, pers. comm. 1994). Published names that Wagner et al. (1990) consider to be synonymous with Phyllostegia parviflora var. parviflora include P. leptostachys, P. parviflora var. canescens, P. parviflora var.

gaudichaudii, and P. parviflora var. major (Wagner et al. 1990).

Phyllostegia parviflora, a member of the mint family (Lamiaceae), is a perennial herb. The egg-shaped to broadly egg-shaped, wrinkled leaves are usually 19 to 33 cm (7.5 to 13 in.) long and 7.5 to 15.3 cm (3 to 6 in.) wide. The leaf stalks are typically 6 to 13.5 cm (2.4 to 5.3 in.) long. Usually six flowers are arranged along a flowering stalk. The corolla is white, sometimes tinged with purple, and about 9 to 13 mm (0.4 to 0.5 in.) long. The upper corolla lip is about 3 mm ($\overline{0}$.1 in.) long while the lower lip is about 6 to 9 mm (0.2 to 0.4 in.) long. The fruits are nutlets. The species is distinguished from others of the genus by the leaf shape and length of the leaf stalk and lower corolla lip. Phyllostegia parviflora var. glabriuscula has fewer glandular hairs in the inflorescence, less pubescent leaves, and usually unbranched inflorescences, as compared to P. parviflora var. parviflora. The newly discovered variety of *Phyllostegia* parviflora has shorter leaf stalks, spreading hairs on the leaf stalks, and fewer gland-tipped hairs in the inflorescence (Wagner et al. 1990).

Historically Phyllostegia parviflora was known from three islands-Oahu, Hawaii, and Maui (HHP 1994x1 to 1994x3, 1994y1 to 1994y9, 1994z1, 1994z2; Sherff 1935; Wagner et al. 1990). This species is now known only from two populations on Oahu. Phyllostegia parviflora var. glabriuscula was only known from the island of Hawaii on private land and has not been observed since the 1800s (HHP 1994x1 to 1994x3). Phyllostegia parviflora var. parviflora was known from Oahu and Maui, but is now known from only four plants in North Kaukonahua Stream in the Koolau Mountains on Oahu, on State land leased by the DOD for the Kawailoa Training Area (HHP 1994y9). The new variety of Phyllostegia *parviflora* is known from only 19 plants in North Palawai Gulch within TNCH's Honouliuli Preserve (HHP 1994z1). Phyllostegia parviflora is typically found on moderate to steep slopes in diverse wet forest from 500 to 830 m (1,640 to 2,700 ft) elevation. Native taxa associated with *Phyllostegia parviflora* include óhiá, Broussaisia arguta (kanawao), Mysine sp. (kolea), Pipturus albidus (mamaki), and Cyrtandra sp. (haíwale) (HHP 1994y9, 1994z1; Wagner et al. 1990).

The major threats to *Phyllostegia parviflora* are habitat degradation and/ or destruction by feral pigs, competition with several alien plant taxa, and a risk of extinction from naturally occurring events and/or reduced reproductive vigor due to the small number of