

Thunbergia fragrans

Sweet clock vine

Acanthaceae

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OVERVIEW

T. fragrans (sweet clock vine), native from India to Southeast Asia, is occasionally cultivated in warm regions of the world for its attractive white flowers. In Hawai'i, *T. fragrans* is a common roadside weed in moist disturbed lowland areas. Because of its widespread distribution on Maui and low level of threat potential to natural areas, no specific control is suggested at this time. Islands or areas currently free of *T. fragrans* should prevent its introduction to avoid naturalization.

TAXONOMY

Family: Acanthaceae (Acanthus family) (Wagner et al. 1999).

Latin name: *Thunbergia fragrans* Roxb. (Wagner et al. 1999).

Synonyms: *Thunbergia volubilis* Pers, *Flemingia grandiflora* Roxb. ex Rottler (GRIN 2003, PLANTS 2003).

Common names: Sweet clock vine, white thunbergia, fragrant thunbergia, white lady (Wagner et al. 1999, PIER 2003, Weeds Australia 2003).

Taxonomic notes: The genus *Thunbergia* is made up of about 200 species from warm areas of central and southern Africa, Madagascar, and Asia (Wagner et al. 1999).

Nomenclature: The genus is named after the Swedish botanist and explorer, Carl Peter Thunberg (1743-1822) (Turner and Wasson 1997).

Related species in Hawai'i: Numerous *Thunbergia* species are cultivated in Hawai'i and some are naturalized. Other naturalized species include *T. alata* (black-eye Susan vine), *T. grandiflora* (blue trumpet vine), and *T. laurifolia* (purple allamanda). A few *Thunbergia* species are cultivated but are not yet naturalized, including *T. erecta* (king's mantle) and *T. mysorensis* (mysore clock vine).

DESCRIPTION

"Vines. Leaves hastate-ovate, 4-10 cm long, 3-5 cm wide, margins subentire. Flowers subtended by 2 lanceolate to ovate bracts 13-15 mm long; calyx lobes 15-16; corolla white, 1.5-3 cm long." (Wagner et al. 1999).

BIOLOGY & ECOLOGY

Cultivation: *T. fragrans* is widely cultivated in the tropics and subtropics for its attractive white flowers (Whistler 2000). On Maui, *T. fragrans* is rarely cultivated, but widely naturalized.

Invasiveness: In Hawai'i, *T. fragrans* is considered a roadside weed of moist disturbed lowland areas. In other areas where it is cultivated, *T. fragrans* also has the tendency to go wild. In Fiji, *T. fragrans* is known from thickets, along roadsides, and in coconut plantations near sea level (Smith 1991).

Pollination: Unknown.

Propagation: *T. fragrans* is propagated from seeds, cuttings, and fragments of roots (Whistler 2000, PIER 2003).

Dispersal: *T. fragrans* is spread long distances by people who use the plant as an ornamental. *T. fragrans* readily spreads by seeds and cuttings to moist lowland disturbed areas in Hawai'i.

Pests and diseases: According to Brickell and Zuk (1997), *Thunbergia* species are susceptible to spider mites, whiteflies, and scale insects.

DISTRIBUTION

Native range: *T. fragrans* is native to India and Ceylon (Wagner et al. 1999). PIER (2003) reports the native range of *T. fragrans* as southeastern Asia and Melesia.

Global distribution: *T. fragrans* is naturalized in tropical and subtropicals regions of the world. According to PIER (2003), *T. fragrans* is present in the Cook Islands (Rarotonga, Mangaia), Federated States of Micronesia (Pohnpei), Fiji, Guam, Hawai'i, New Caledonia, Niue, Samoa (Upolu, Savai'i), Tonga (Tongatapu, 'Eua, Vava'u, Lifuka/Foa, Ha'ano), Vanuatu, China (native), and Indochina (native). In the United State, *T. fragrans* is known from Florida, Hawai'i, Puerto Rico and the Virgin Islands (PLANTS 2003).

State of Hawai'i distribution: In Hawai'i, *T. fragrans* was first collected on Kaua'i in 1916 (Wagner et al. 1999). It is now naturalized on probably all of the main islands (Wagner et al. 1999).

Island of Maui distribution: On Maui, *T. fragrans* is rarely cultivated and is considered a common roadside weed in moist lowland disturbed areas. Mostly naturalized plants occur from sea level to 1,700 ft (518 m) in areas that receive about 20-120 in (51-305 cm) average annual rainfall (Juvik and Juvik 1998). In these areas, *T. fragrans* is often observed along roadsides, ditches, and scrub vegetation.

CONTROL METHODS

Physical control: It may be possible to pull small seedlings.

Chemical control: In Hawai'i, *T. fragrans* is likely sprayed on roadsides during routine herbicide sweeps.

Biological control: None known.

Cultural control: *T. fragrans* can likely be shaded or planted out.

Noxious weed acts: *T. fragrans* is prohibited in Western Australia, meaning that it is not permitted entry into Western Australia under the Plant Diseases Act of 1974 (Weeds Australia 2003). In Queensland, Australia, *T. fragrans* is a category P1/2 noxious weed under the Agriculture and Related Resources Protection Act (Weeds Australia 2003). P1 means that it be prevented from trade, sale, or movement. P2 means that it be eradicated and is considered not yet widely established.

MANAGEMENT RECOMMENDATIONS

In Hawai'i, *T. fragrans* is a common roadside weed in disturbed moist lowland areas. On Maui, *T. fragrans* is fairly widespread. It is not likely a candidate for eradication or control work at this time. Other islands or areas free of *T. fragrans* may want to prevent its introduction. It could be controlled if found in areas where it is not wanted.

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