

# *Tibouchina longifolia*

Longleaf glorytree

Melastomataceae

Forest Starr, Kim Starr, and Lloyd Loope  
United States Geological Survey--Biological Resources Division  
Haleakala Field Station, Maui, Hawai'i

April, 2003

## OVERVIEW

*Tibouchina longifolia*, native to the Neotropics, is a white flowered shrub that is occasionally cultivated. *T. longifolia* is weedy and widespread from Mexico and the West Indies to Bolivia and Brazil (Wagner et al. 1999). In Hawai'i, *T. longifolia* is established in the wild from the island of Hawai'i, where it was first collected in 1983 from *Metrosideros* forest along the Stainback Highway, Puna District (Wagner et al. 1999). On Maui, *T. longifolia* is reported to be cultivated at a garden near the top of Olinda Rd., East Maui. Other *Tibouchina* species, such as *T. herbacea* and *T. urvilleana* are considered invasive in Hawai'i and all plants within the genus, *Tibouchina*, are listed as Hawai'i state noxious weeds. Early control of this plant may help prevent its naturalization on Maui.

## TAXONOMY

**Family:** Melastomataceae (Melastoma family) (Wagner et al. 1999).

**Latin name:** *Tibouchina longifolia* (Vahl) Baill. ex Cogn. (Wagner et al. 1999).

**Synonyms:** *Rhexia longifolia* Vahl (PLANTS 2003).

**Common names:** Longleaf glorytree (PLANTS 2003).

**Taxonomic notes:** The genus, *Tibouchina*, is made up of about 350 species, many native to Brazil, but also ranging from Mexico and the West Indies to northern Argentina (Wagner et al. 1999).

**Nomenclature:** The generic name is derived from a native name of the plants in Guiana (Wagner et al. 1999).

**Related species in Hawai'i:** Several other *Tibouchina* species are also cultivated in Hawai'i, including *T. granulosa*, *T. multiflora*, and *T. urvilleana*. *Tibouchina* species that have naturalized in Hawai'i include *T. herbacea*, *T. longifolia*, and *T. urvilleana*.

## DESCRIPTION

"Laxly branched subshrubs 0.5-2 m tall; young branches subquadrate, densely covered with appressed to antrorsely spreading, smooth hairs. Leaves narrowly elliptic to lanceolate, 3.5-11.5 cm long, 1-3 cm wide, (3-)5(-7)-nerved with the lateral primary veins confluent for 1-5 mm at base of blade, both surfaces strigose, the hairs on upper surface adnate part of their length to the leaf surface, margins subentire, apex acute to acuminate, base acute, petioles 3-13 mm long. Inflorescences 5-17 cm long (incl. peduncle), bracts and bracteoles linear-lanceolate, 1-5 mm long, 0.5-2 mm wide, bracteoles not enclosing nor concealing floral buds, deciduous; hypanthium strigose; calyx lobes spreading or recurved, linear-subulate, 2.5-3.5 mm long, 1 mm wide at base, persistent on fruiting

hypanthium, ciliate; petals 5, white, 5-7 mm long, 2.5-4 mm wide; stamens all nearly similar; anthers 1.5-2 mm long, with prolonged connective and appendage collectively ca. 0.25 mm long; filaments glabrous. Fruiting hypanthium 4-4.5 mm long, 3-4 mm wide. Seeds 0.25-0.5 mm long." (Wagner et al. 1999).

## **BIOLOGY & ECOLOGY**

**Cultivation:** *T. longifolia* does not seem to be widely cultivated.

**Invasiveness:** *T. longifolia* is established in the wild on the island of Hawai'i (Wagner et al. 1999). The authors have no first hand knowledge with this plant, though judging from photos and the description of it being naturalized in *Metrosideros* forest on the island of Hawai'i, this species seems to be more of a weedy *Tibouchina*, similar to *T. herbacea*.

**Pollination:** Not known.

**Propagation:** *Tibouchina* species are propagated from cuttings (Riffle 1998).

**Dispersal:** *Tibouchina* plants are spread long distances by humans who cultivate the plant.

**Pests and diseases:** Brickell and Zuk (1997) report that *Tibouchina* spp. are susceptible to gray mold, mushroom root rot, leaf spots, root rot of seedlings, and spider mites.

## **DISTRIBUTION**

**Native range:** *Tibouchina* species are evergreen plants from the rainforest areas of tropical America (Brickell and Zuk 1997). *T. longifolia* is native to the Neotropics, where it is weedy and widespread from Mexico and the West Indies to Bolivia and Brazil (Wagner et al. 1999).

**Global distribution:** *T. longifolia* is known from Hawai'i.

**State of Hawai'i distribution:** *T. longifolia* is known from the wild on the island of Hawai'i and may potentially be in cultivation on the island of Maui. On Hawai'i, *T. longifolia* was first collected in 1983 in tall *Metrosideros* forest along Stainback Highway, Puna District (Wagner et al. 1999).

**Island of Maui distribution:** *T. longifolia* was not observed during island wide surveys, but was reported during an expert interview as cultivated in a garden near the top of Olinda Rd., East Maui, elevation approximately 3,600 ft (1,097 m).

## **CONTROL METHODS**

**Physical control:** Not known. It is likely that plants could be dug up.

**Chemical control:** None known.

**Biological control:** None known.

**Cultural control:** The public could be discouraged from growing *T. longifolia* and other noxious weeds.

**Noxious weed acts:** Plants in the genus, *Tibouchina*, are listed as Hawai'i State noxious weeds (HDOA 1992).

### **MANAGEMENT RECOMMENDATIONS**

*T. longifolia* is known from the wild on the island of Hawai'i and may be sparingly cultivated in Olinda, Maui. Other related species, such as *T. herbacea* and *T. urvilleana* are considered pests in Hawai'i. All *Tibouchina* spp. are declared noxious in the state of Hawai'i. The suspected *T. longifolia* in Olinda needs to be confirmed. Control of this plant now may help prevent its naturalization on Maui.

### **REFERENCES**

Brickell, C. and J.D. Zuk. 1997. *The American Horticultural Society A-Z Encyclopedia of Garden Plants*. DK Publishing, Inc., NY.

HDOA (Hawai'i Department of Agriculture). 1992. *List of Plant Species Designated as Noxious Weeds for Eradication or Control Purposes* (June 18, 1992). Hawaii Department of Agriculture. Available: <http://www.botany.hawaii.edu/cpsu/-strawgua/other/noxious/noxious.html> (Accessed: July 25, 2001).

PLANTS (National Plants Database). 2001. Online database. United States Department of Agriculture, Natural Resources Conservation Services, National Plant Data Center, Baton Rouge, LA. Available: <http://plants.usda.gov> (Accessed: September 19, 2001).

Riffle, R.L. 1998. *The Tropical Look*. Timber Press, Portland, OR.

Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1999. *Manual of the Flowering Plants of Hawai'i*. 2 vols. Bishop Museum Special Publication 83, University of Hawai'i and Bishop Museum Press, Honolulu, HI.