

Sideroxylon persimile

Bully tree
Sapotaceae

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

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OVERVIEW

Sideroxylon persimile is a large thorny tree native from Mexico through Central America to northern South America. Not much is known about this tree but it was recently published as a new naturalized plant record for the State of Hawai'i (Starr et al. 2002). *S. persimile* occurs on the island of Maui and is cultivated in the Mauna'olu area, about 800 ft (244 m) elevation, where it is locally common and spreading from initial plantings to nearby disturbed areas in open fields, along roads, scrub areas, and gulches from Hali'imaile, 1,100 ft (335 m) elevation, to Paia, 500 ft (152 m) elevation. Recently a second site was found on leeward Maui in Ulupalakua, 1,800 ft (549 m) elevation, where a single large tree and a few small saplings occur. The Ulupalakua site is small enough that it could be controlled to prevent further spread in this area. The Mauna'olu infestation is more established and may not be feasible to control at this time. Further refined mapping is suggested. This species is planted as a street tree on O'ahu and as a forestry tree on other Hawaiian Islands. Updated information on the distribution and status of this species for the rest of the State is needed.

TAXONOMY

Family: Sapotaceae (Sapodilla family) (Wagner et al. 1999).

Latin name: *Sideroxylon persimile* (Hemsl.) T.D. Penn (Starr et al. 2002).

Synonyms: Previously known under the misapplied name *Bumelia buxifolia* Wild. ex. Hbk. (*sensu* Neal 1965), *Bumelia persilis* Hemsl. (Anon 2003).

Common names: Bully tree (Starr et al. 2002).

Taxonomic notes: Sapotaceae is a family comprised of about 900 species and 60 genera from humid tropical regions of the world (Wagner et al. 1999).

Nomenclature: Not known.

Related species in Hawai'i: There are possibly a few other species cultivated in Hawai'i.

DESCRIPTION

"Large trees, round-tipped to 20 m tall, trunk vertically fluted, 1 m thick, bark rough, sometimes armed with painful and irritating thorns (1-3 cm long), with obvious sticky white sap, and stems occasionally bearing red hairs. Leaves dark green, glossy ovate, entire (3-4 cm long). Flowers are sweetly fragrant, greenish. Fruit is round to subglobose, about 1 cm, and green turning black or deep blue with maturity during June-July." (Starr et al. 2002).

BIOLOGY & ECOLOGY

Cultivation: *S. persimile* has been used as a street tree in Honolulu and has been planted on other islands for reforestation (Starr et al. 2002). In its native range, the tree is used for firewood and the fruits are eaten. The wood is also used for making handles of tools such as axes (Anon 2003).

Invasiveness: On Maui, this species is spreading from initial plantings. Specimens on Maui at the Mauna'olu Campus location were collected as early as 1967. Trees produce numerous seeds which are likely bird dispersed. Plants are now found in gulches, pastures, open fields, and scrub areas from Hali'imaile to near Paia. Trees are armed with painful and irritating thorns.

Pollination: Not known. Flowers are sweetly fragrant and likely attract a number of insects.

Propagation: Plants are currently reproducing from seeds on Maui.

Dispersal: *Sideroxylon persimile* [*Bumelia*] seeds are dispersed by fruit eating birds (Neal 1965).

Pests and diseases: Not known.

DISTRIBUTION

Native range: *Sideroxylon persimile* is native from Mexico through Central America to northern South America (Pennington 1990).

Global distribution: *S. persimile* is naturalized in at least Hawai'i (Starr et al. 2002). It does not seem to be widely cultivated. It is cultivated in Hawai'i as an ornamental street tree and as a forestry tree and may be cultivated elsewhere for similar purposes.

State of Hawai'i distribution: In Hawai'i, *Sideroxylon persimile* was recently reported as naturalized on the island of Maui (Starr et al. 2002). There are several records of *S. persimile* also being cultivated on other Hawaiian Islands. Bishop Museum herbarium records include the following collections from around the state of Hawai'i. O'ahu: Honolulu, Kilihi St., corner at Beckley St., collected in 1925; collected again at this location in 1941; Honolulu, Capitol grounds, near burial mound, collected in 1939; Makiki, at corner Makiki and Kina'u Sts., collected in 1946; Waiahole, Water Reserve, project for reforestation by O'ahu Sugar Co., collected 1962; Waimanalo, on private horse farm, collected 1990. Lana'i: north of Lana'i City, planted in forest reserve, collected in 1952. In addition, Skolmen (1960) lists 2,791 trees planted on the island of O'ahu for what is likely this tree under the misapplied name *Bumelia buxifolia*. There is also a record of 1 tree planted in South Kona, Hawai'i for *Sideroxylon norae*, possibly a related species. Neal (1965) reports that there are at least two species in Hawai'i.

Island of Maui distribution: Large trees of *Sideroxylon persimile* were apparently originally cultivated on Maui near the Mauna'olu Campus (old Baldwin estate) on

Baldwin Avenue, where it was collected as early as 1967. Now this thorny species occurs in gulches and along roadsides from Hali'imaile to near Pa'ia. This was the first naturalized record of this species in the state of Hawai'i. Recently, more trees were located in Ulupalakua near the ranch headquarters at about 1,800 ft (549 m) elevation. Upon brief investigation it is apparent that there is a single enormous tree that was likely planted some time ago. Nearby (within a 1/2 mile) a few small seedlings can be seen coming up along fences. No other locations are currently known on Maui. Places where it would likely be found in the future include older plantings around estates and gardens, forest reserves, and urban areas.

CONTROL METHODS

Physical control: *Sideroxylon persimile* has painful irritating thorns and a milky white sap. It should be handled with extreme care. Small trees could perhaps be dug out. Larger trees could be chain-sawed down to a stump then treated with an herbicide or dug up.

Chemical control: Uncertain, though herbicide methods such as frill and basal bark applications could be tested.

Biological control: None known.

Cultural control: The public could be discouraged from planting thorny plants that spread into the wild.

Noxious weed acts: None known.

MANAGEMENT RECOMMENDATIONS

Sideroxylon persimile was recently reported as a new naturalized species for the State of Hawai'i, where it has been planted on several islands as an ornamental street tree and as a forestry tree. On Maui, this thorny tree is spreading from initial plantings and is locally common in the Mauna'olu area. There is also a discrete population of a few trees located in Ulupalakua. While the Mauna'olu infestation is fairly well established and not likely to be easily controlled, the outlier Ulupalakua infestation on the leeward side of the island is restricted to just a few individuals and could potentially be controlled. Records show that it is likely planted on at least O'ahu, Lana'i, and possibly Hawai'i as well. The current status and distribution on other islands needs updating.

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