Thespesia populnea

(L.) Soland. ex Corrêa

Malvaceae

Seychelles rosewood, large-leaved tulip tree

LOCAL NAMES

Bengali (palaopipal,dumbla,poresh,gajashuni,parespipal); Creole (gros mahaut,mahot,gwo maho,grand mahaut,gran maho,fey dayiti); English (large-leaved tulip tree,John-Bull tree,false rosewood,milo,Pacific rosewood,cork tree,Indian tulip tree,umbrella tree,seaside mahoe,portia tree,thespesia); French (motel debou,feuilles d'Haiti); Gujarati (paarsapeepla); Hindi (paras-pipal,gajadanda,pahari pipal,parsipu,porush,bhendi); Indonesian (waru lot,waru laut,baru laut,salimuli); Javanese (waru lot,waru laut); Khmer (chréi sâmut(r),baëhs sâmut); Malay (bebaru,baru laut,baru baru,baru,buah keras laut); Sanskrit (gardha-bhanda); Sinhala (suriya); Spanish (carana,higuillo,alamo blanco,emajaguilla,palo de jaqueca,duartiana,alamo,clamour,jaqueca,majugua de la Florida,majaguilla); Swahili (mtakawa); Tamil (poovarasam kallal,cheelanthi,porsung); Thai (po kamat phrai,pho-thale); Trade name (Seychelles rosewood,large-leaved tulip tree); Zulu (iPhuphuma,iBhicongo)

Fruits and leaves at Kanaha beach, Maui, Hawaii (Forest and Kim Starr)

Flowers and leaves at Kanaha beach, Maui, Hawaii (Forest and Kim Starr)

Habit at Kahului, Maui, Hawaii (Forest and Kim Starr)

BOTANIC DESCRIPTION

Thespesia populnea is a shrub or medium-sized evergreen tree, up to 20 m tall with a dense crown. Bark greyish. Twigs densely covered with brown to silvery scales, glabrescent.

Leaves alternate, simple; petiole 5-8 (max. 16) cm long; stipule lanceolate to subulate, 3-10 mm long, scaly; blade orbicular, deltoid, ovate or oblong, 7-23 x 5-16 cm, apex acuminate, base generally cordate, sinus deep and narrow, rather fleshy and shiny, palmately 7-veined, in the axils of the basal veins beneath, mostly with saccate nectaries, main veins yellow.

Inflorescence a large solitary axillary flower; pedicel 2.5-8 cm long, erect or ascending, sometimes articulate with 2 scalelike bracts near the base. Calyx campanulate, subtruncate, 12-14 mm long, 18 mm in diameter, densely adpressed hirsute within, scaly, glabrescent outside; corolla broadly campanulate, up to 6 cm long and wide, pale yellow with dark purple centre; petals 5, obliquely obovate, 6-7 x 4.5-6 cm.

Fruit a globose capsule, 2-4.5 cm in diameter, faintly 5-angular, 5-celled, apex obtuse or slightly depressed, with disclike calyx at the base of the young fruit, usually indehiscent, exuding a bright yellow gum when cut. Seeds 4 per cell, obovoid, 8-15 x 6-9 mm, slightly angular, covered by closely matted silky hairs.

The generic name is based on the Greek word ‘thespesios'-divine, supposedly because T. populnea was frequently planted round temples. The specific name means looking like the popular tree.

BIOLOGY

Trees flower and fruit throughout the year. The yellow flowers open about mid-morning, turning reddish-orange in the afternoon, then fading to pink on the tree and not falling off for several days. Pollination is probably by birds. The seed floats in sea water, making natural distribution by sea currents possible.

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ECOLOGY

T. populnea is pantropic along sea coasts, often in locations where sandy beaches covered by Casuarina equestifolia give way to coral outcrops and in Barringtonia vegetation. The species can also be found on rocky coasts such as in Malaysia. T. populnea is only sparingly found on the inland edge of mangrove persisting from cultivation. It is a suitable tree for dry locations and is highly tolerant of saline conditions.

BIOPHYSICAL LIMITS

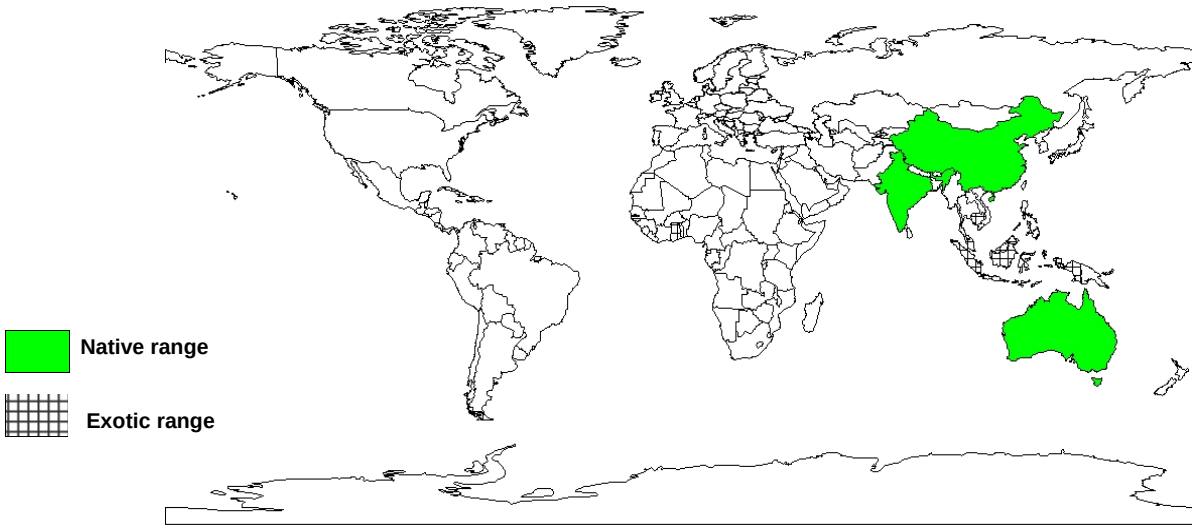
Mean annual temperature: Can withstand temperatures as low as 4 deg. C, Mean annual rainfall: 1 000-5 000 mm

Soil type: Soils are sandy, slightly alkaline and poor in nutrients.

DOCUMENTED SPECIES DISTRIBUTION

Native: Australia, China, India

Exotic: Bahamas, Cambodia, Cuba, Dominican Republic, Fiji, Ghana, Haiti, Indonesia, Jamaica, Malaysia, Mauritius, Mozambique, New Zealand, Philippines, Puerto Rico, Samoa, Solomon Islands, Sri Lanka, Thailand, Tonga, US, Venezuela, Zanzibar



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS
Food: Young flower buds and leaves are eaten raw or fried in butter.

Fodder: The leaves are a good source of protein, calcium and phosphorus for livestock.

Fibre: Bark yields a strong fibre used for cordage, fishing lines, coffee bags and for caulking boats.

Timber: The fine-grained, strong, hard and durable wood is used for light construction, flooring moulds, musical instruments, utensils and vehicle bodies. As it is very durable under water, it is popular for boat building. The wood of Thespesia is light to medium in weight with a density of 400-770 kg/m^3 at 15% mc. The heartwood is dark red and smooth. Its texture is medium to fine. Shrinkage upon seasoning is very low to low. The wood seasons well. It is easy to saw and work despite its wavy grain. Used for horse-drawn carts and wheelbarrows, to carve canoe paddles, bowls, plates and utensils. It is resistant to insect attack.

Tannin/dyestuff: The wood and the yellow gum from the fruit and flowers yield a dye, and the bark produces tannin.

Medicine: The heartwood has a healing property useful in treating pleurisy and cholera, colic and high fevers; it is carminative. The cooked fruit crushed in coconut oil provides a salve, which, if applied to the hair, will kill lice. The sap of the leaves and decoctions of most parts of the plant are used externally to treat various skin diseases. Juices from the pounded fruits mixed with pounded leaves are ingredients of a poultice to treat headaches and itches. A decoction of the astringent bark is used to treat dysentery and haemorrhoids, and a maceration of it is drunk for colds. The fruit contains an antibiotic and the juice is used to treat herpes. Other extracts of the plant have significant antimalarial activity. Leaf and bark decoctions are taken for high blood pressure. Leaf tea is taken for rheumatism and urinary retention. Seeds are purgative.

SERVICES
Erosion control: Because of its tolerance of saline conditions, T. populnea is suitable for coastal erosion control, and it is planted for this purpose in Karnataka, India.

Soil improver: Leaves are used for green manure. Wood chippings have also been tried as a green manure.

Ornamental: In many parts of the Pacific, T. populnea is a sacred tree, often planted near temples. Elsewhere, it has been planted as an ornamental and roadside tree.

Boundary or barrier or support: In mangrove areas, T. populnea is often planted to consolidate ridges and bunds in an aquasilvicultural system for prawn production.

TREE MANAGEMENT
In India, growth of T. populnea is reported as rapid. The leaves are lopped for fodder.

GERMPLASM MANAGEMENT
Seed storage behaviour is orthodox.

PESTS AND DISEASES
T. populnea is one of the alternative hosts of a number of serious cotton pests, such as the cotton stainer (Dysdercus sp.) and cotton-boll weevil (Anthonomus grandis). T. populnea is prone to fungal root and butt rot caused by Phellinus noxius. This is characterized by slowly enlarging diseased patches and a thick, dark, brown mycelial sheath around the base of infected trees.

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SUGGESTED CITATION

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