Thespesia populnea (L.) Sol. ex Corrêa

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MALVACEAE (MALLOW FAMILY)

Hibiscus populneus Linn.

Álamo, álamo blanco, algodón de monte, beach maho, bosch-katoen, catalpa, clamor, clemón, cork-tree, cremón, emajagüilla, frescura, grós hahaut, haiti-haiti, jaqueca, John-Bull-tree, macoi, mahault de Londres, maho, mahot bord-de-mer, majagua de Florida, majagüilla, otaheita, palo de jaqueca, palu santu, portiatree, santa maría, seaside mahoe, Spanish cork, tuliptree (Little and Wadsworth 1964)

Fifteen species of *Thespesia* are scattered throughout the tropics (Whitmore 1972). Although the original native range of *Thespesia populnea* is not known precisely, it probably included the coastal tropics of the Old World from the East Coast of Africa through Polynesia (Parrotta 1994). Today, the species has naturalized throughout most of the world's tropical coastal areas.

Thespesia populnea is a small tree with a short crooked bole, furrowed gray bark, and a dense crown of yellow-green, heart-shaped leaves. On dry sandy or rocky coastal sites, it frequently forms shrubby thickets. A 0.6-m annual height growth of young stands on a moist site was reported by Whitesell and Walters (1976). Individual trees on fertile sites may reach 18 m in height and 50 cm d.b.h., but normally trees are much smaller. Although it may grow singly in mixed stands, *T. populnea* is more frequently found in pure patches or making up a high percentage of stems in small stands. Suitable natural habitat includes coastal sands through clays and rocky headlands in areas that receive from 500 to 1600 mm of mean annual precipitation. Dry seasons may last up to 8 months (Parrotta 1994). The species also colonizes salty soils just above mangrove forests. Light frosts are tolerated.

Thespesia populnea is a diploid species with 26 chromosomes (Krishnappa and Geetha 1977). Until recently, *T. populneoides* (Roxb.) Kosteletsky was considered to be a population of *T. populnea* (Fosberg and Sachet 1972); it is distinguished by its dehiscent fruits, long pedicels, a broad sinus at the leaf base, and coppery or bronzed leaves.

Thespesia populnea is an important ornamental tree in coastal areas throughout the tropics and it is planted in upland areas as well. A very hearty species that tolerates calcarious, salty, gravelly, and semicompacted soils and the pollution of metropolitan areas, this small tree is often planted in confined spaces and in groups in seminatural landscape designs. It is also used to reforest disturbed coastal areas and stabilize coastal dunes. The heartwood, which is dark reddish brown to chocolate brown (Record and Hess 1943), has a specific gravity of 0.55 to 0.89 (Chowdhury and Ghosh 1958, Skolmen 1974) and is easily dried, shaped, and finished. The wood sometimes is used to make fine furniture. Because the trees available for harvest are small and wood prices are high, the wood is usually reserved for carving and manufacturing small decorative items. Small stems are cut for fenceposts, and the tree is sometimes cultivated as a living fencepost. *Thespesia populnea* has many applications in herbal medicine. The fibrous bark is used for cordage and basketry in many underdeveloped areas (Parrotta 1994).

Trees as young as 1 or 2 years old may begin flowering. Flowering proceeds from spring through fall or throughout the year in the absence of dry or cool seasons. The pale yellow, 5-cm trumpet-shaped flowers are born laterally on twigs (Little and Wadsworth 1964). The fruits are flattened, five-celled capsules 2.5 to 5 cm in diameter. Within the capsules are several hairy brown seeds about 1 cm long and 0.6 cm broad. The seeds are dispersed by wind and water (Parrotta 1994). A collection of ovendried fruits from Puerto Rico averaged 3.3 g per fruit (Parrotta 1994). A sample of 50 fruits collected in Puerto Rico contained from 1 to 11 seeds per fruit with a mean of 5.7 ± 0.4 seeds per fruit (Parrotta 1994). The fruits turn black when ripe (Parrotta 1994).

Because the fruits remain on the tree for some time after ripening and often remain intact on the ground for weeks to months before disintegrating, seed may be collected almost

any time during the year. The fruits are picked from the ground or by hand from low trees. Fruits can be clipped from taller trees with pruning poles. If the fruits are not thoroughly dry, they should be placed in the sun for 1 or more days. Small samples may be easily shelled by hand. Larger samples can be threshed by placing the dry fruits in burlap bags, working them underfoot, and then separating by screening and blowing. Reported fresh (essentially air-dried) seed weights range from 3,500 to 6,700 seeds per kg (Francis and Rodríguez 1993, Parrotta 1994, Rashid 1975, von Carlowitz 1986). Data are lacking on seed storage; however, short-term storage in sealed containers has not been detrimental. Refrigeration in sealed containers is recommended for longer-term storage.

No pregermination treatment is needed (Parrotta 1994). The germination rate of fresh seed has been reported as 65 to 79 percent; it begins about 8 days after sowing (Francis and Rodríguez 1993, Parrotta 1994, Ricardi and others 1977). Germination is epigeal.

Seeds may be sowed and lightly covered in fine sand, well-drained soil, or potting mix. Seeds are normally germinated in germination trays or beds and transplanted into nursery bags or pots after the first true leaves develop. Seedlings develop a long, wiry taproot with numerous fine laterals. They may be outplanted after reaching 15 cm, about 3 months after sowing (Parrotta 1994). Seedlings intended for use as ornamentals are outplanted when 0.5 to 1.5 m in height. Bare-root seedlings are also planted. On fertile sites, continuous protection from weeds is necessary for 2 years or more; on very sandy or poor sites, little weeding may be necessary.


2cm
2cm