

Haematoxylum campechianum L.

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FABACEAE (BEAN FAMILY)

No synonyms

Bois Campeche, Campeche, Campeche wood, ek, logwood, palo de Campeche, palo de tinta, palo de tinte, palo negro, tinto

Native to the tropical regions of America, *Haematoxylum campechianum* is naturally distributed on the Yucatan Peninsula in Mexico and in Guatemala and Belize. Within its area of natural distribution, the species forms dense groups called tintales, which grow in soils subject to periodic flooding with deficient drainage (Standley and Steyermark 1946b). The species has been introduced and naturalized across Central America, the Caribbean islands, and northern South America (Stoffers 1973).

Haematoxylum campechianum is an evergreen, thorny tree that can reach 15 m in height and 60 cm d.b.h. It grows at elevations from sea level to 50 m. The trunk has many shoots, branching off near the base. The sparse, spreading, and rounded crown is made up of many rising and twisted branches. The leaves are paripinnate, 3 to 10 cm long, with four to eight cuneate-obovate leaflets 1 to 3 cm long. In the Yucatan Peninsula, the tree grows primarily in flat terrain with clayey soils, deficient drainage, and periodic flooding—commonly known as low wooded. The regions where the tree grows have an average annual temperature of 26 °C with a maximum temperature of 36.7 °C and a minimum temperature of 14.9 °C. The maximum temperatures occur in April and May; the minimum temperatures in December and January. Average precipitation is approximately 1288 mm, ranging between 900 and 1800 mm.

The wood of this tree is used as a source of the coloring matter called hematoxylin. It is also used as firewood and for posts. The leaves and the young branches are used as forage. The flowers are honey bearing. Frequently, the tree is planted around houses as an ornamental because of its colorful flowers (Niembro 1986, Rico-Gray and others 1991). The wood also has medicinal properties. Because the infusion obtained when it is boiled in water has astringent properties, it is used in traditional medicine as a remedy for diarrhea and dysentery.

The light yellow flowers are arranged in racemes. *Haematoxylum campechianum* blooms September through April, and the fruits (legumes) ripen March through May. The legumes are oblong-lanceolate, 2 to 6 cm long, 6 to 15 mm wide, laterally flattened, rounded or obtuse at the apex, acute at the base, membranous, yellow-gray, and finely reticulate. The fruits are dehiscent, but the pericarps can be broken easily when they are ripe. Each fruit contains one to two seeds (Little and others 1988, Pennington and Sarukhan 1968, Standley and Steyermark 1946b). The seeds are transversally oblong, laterally flattened, 10 to 12 mm long, 3.8 to 3.9 mm wide, and 0.8 to 1 mm thick. The seedcoat is light brown, smooth, opaque, and coriaceous and marked on its lateral surfaces by a green-gray stripe or a longitudinal sinuous depression that is rather deep-set.

The fruits are gathered May through July when the pericarp changes from green to brown and the fruit changes in consistency. Unripe fruits are flexible, and ripe ones are fragile and brittle. Fruits are collected from the trees using poles with metal hooks. Seeds are extracted by breaking the fruits by hand. Small impurities are removed with sieves or using a vertical column blower. Clean seeds average 35,200 to 41,000 per kg (Patiño and Villagómez 1976, Vega and others 1981).

The seeds remain viable naturally for 8 months. They germinate 19 days after sowing at a rate of 48 percent (Vega and others 1981).

ADDITIONAL INFORMATION

The hilum is basal and sometimes covered by remnants of funicular tissue. The micropyle is indiscernible. The lens is prominent, raised, and located on the opposite side of the micropyle. The endosperm is scarce and limited to a very thin

layer located on the lateral surfaces of the embryo. The embryo has a straight axis, is almost bilaterally symmetrical, and is yellow to light coffee in color. The cotyledons, shaped like the seed, are whole, expanded, bilobed, flat, foliaceous, and independent of one another. The plumule is partially developed in pinnae. The radicle is prominent, oblong, and completely salient (Hutchinson 1964; Niembro 1982, 1983).

