

Dendropanax arboreus (L.) Decne. & Planch.

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ARALIACEAE (GINSENG FAMILY)

No synonyms

Angélica, banco, bois négresse, galipee, lengua de vaca, mano de danta, mano de león, mano de oso, palo cucharo, palo de burro, palo de pollo, pingüico, quesito, ramón de costa, vaquero

Dendropanax arboreus is native to America. It is distributed naturally from Mexico, across Central America, to northern South America and in the West Indies. It forms part of hot-humid, subhumid, dry tropical forests and part of the secondary vegetation.

Dendropanax arboreus is a fast-growing evergreen tree of up to 30 m in height and 75 cm d.b.h. It has a straight, grooved trunk and an irregular, leafy crown made up of thick, rising branches. The leaves are simple and arranged in spirals. When young, they are trilobate or with a lobe on one side; when adult, they are ovate to fully ovate, oblong elliptic, elliptic or ovate-elliptic, 5 to 26 cm long, and 3 to 13 cm wide. In the Yucatan Peninsula, the tree grows in calcareous soils with outcropping rocks, forming part of the tropical forest. The regions where the tree is found have an average annual temperature of 26 °C, with a maximum temperature of 36.7 °C and a minimum of 14.9 °C. The maximum temperatures correspond to the months of April and May, the minimum temperatures to the months of December and January. Average annual precipitation is approximately 1288 mm, ranging from between 900 and 1800 mm. The tree grows naturally from sea level to 1700 m.

Because the wood is white or yellowish, strong, and flexible, it is used locally for firewood and in rural construction and carpentry. Specific gravity of the wood is 0.40. In recent years, the species has been in high demand for the manufacturing of veneer, particle boards, tongue depressors, toothpicks, matches, and pulp for paper. It is planted to provide shade in pastures and coffee plantations and to fulfill agroforestry needs. The flowers are honey bearing, and the tea obtained from the infusion of the leaves is used as a remedy in traditional medicine (Aguilar 1966, Cabrera and others 1982, Chudnoff 1979, Escalante 1986, Little and others 1967, Miranda 1976).

Because its geographic distribution is extensive, the *D. arboreus* blooms at different times but especially May through August (Sosa 1979). The tree begins to yield flowers and fruits between 4 and 5 years of age. In southeastern Mexico, the tree blooms precociously and abundantly during the months of July through September and the fruits ripen in the month of December (Juárez and others 1989). The flowers are cream or greenish yellow, fragrant, and arranged in umbel racemes. The abundant fruits are drupaceous, globose, 4 to 8 mm long, slightly depressed, pulpy, and resinous. They change from purple to reddish purple and black when ripe. Each fruit contains 5 to 7 monospermic pyrenes (Cabrera and others 1982, Holdridge and Poveda 1975, Little and others 1967, Pennington and Sarukhan 1968, Sosa 1979). The seeds are inside pyrenes, which constitute the unit of dispersion and sexual propagation of the plant. The pyrenes are plano-convex, laterally flattened, triangular in cross section, crustaceous, brown, indehiscent, smooth, and 5 to 6 mm long. The seeds are subovoid triangular and laterally flattened, similar to orange slices.

The ripe fruits are collected by climbing the trees and using poles with metal hooks to remove them. The pulp is removed from the pulpy fruits by hand inside a bucket of water. Resulting impurities float and are gathered with a strainer. Good pyrenes sink. Subsequently, pyrenes are dried in the sun in ventilated areas for 1 or 2 hours, depending on lighting conditions. Pyrenes average 25,682 per kg (Patiño and Villagómez 1976). The seeds within the pyrenes remain viable for approximately 15 months when stored under ambient conditions (24 to 30 °C). With longer storage their viability quickly diminishes (Vega and others 1981).

The germination of the seeds is phanerocotylar. Under humid conditions, the fresh seeds germinate at 70 percent without pretreatment. A heterogeneous sample of seeds ger-

minated approximately 18 days after sowing (Vega and others 1981). The plant is propagated through its seeds.

ADDITIONAL INFORMATION

The hilum is small and subbasal. The micropyle is indiscernible. The seedcoat is membranous and firmly attached to

the pyrene. The endosperm is abundant, pulpy, whole, and translucent. The embryo has a straight axis and is small, symmetrical, white, and near the hilum. There are two ovate or oblong cotyledons. The plumule is undifferentiated. The radicle is superior and directed toward the hilum (Marchal 1967, Smith 1944, Sosa 1979, Standley and Williams 1966).

