

Cordia dodecandra A. DC.

ANÍBAL NIEMBRO ROCAS

Instituto de Ecología, A.C.

Xalapa, Veracruz, México

BORAGINACEAE (BORAGE FAMILY)

No synonyms

Anacahuite, chak'opté, ciricote, cópite, cupape, k'an-k'opte, kopté, siricote, trompillo

Cordia dodecandra is native to America. It is distributed naturally in Mexico, Guatemala, Belize, Honduras, and Cuba. The plant is an important component of dry tropical forests and thickets. It has been introduced in other tropical regions.

Cordia dodecandra is a deciduous tree of up to 30 m in height and 70 cm d.b.h. The trunk is straight and short, with a large, rounded or pyramidal, very dense crown, made up of rising branches. The leaves are simple, alternate, ovate, oblong to fully elliptic or suborbicular, 5.5 to 15 cm long, and 4 to 9 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 between 900 and 1800 mm. The tree grows wild from sea level up to 900 m.

The species has multiple uses. Its trunk is used as support beams and columns in rural houses. The bark and the wood have medicinal properties; the tea obtained from their infusion is used in traditional medicine to treat coughs, diarrhea, and dysentery. The hard and resistant wood is used for firewood. Due to its yellow color with dark red streaks, the wood is valued in the manufacture of furniture, handicrafts, veneer for plywood, and turned articles. The leaves are used as sandpaper and as soap to clean household utensils. The flowers are honey-bearing, and the fruits are edible; the latter are used to make preserves and jams. They are also used as food for pigs. The tree is frequently used in backyards and is valued as a shade and ornamental tree in streets, parks, and gardens (Aguilar 1966, Barrera 1981, Cabrera and others 1982, Chavelas and González 1985, Escalante 1986, Flores 1983, Rico-Gray and others 1991, Uacán 1983).

The tree begins to yield flowers and fruits between 4 and 5 years of age. Because its geographic distribution is extensive, *C. dodecandra* blooms at different times. In southeastern Mexico, it blooms March through May and fruits May through July or August (Juárez and others 1989). The deep orange flowers are infundibuliform and arranged in panicles. The fruits are drupaceous, conical, 3 to 4 cm long, and orange-yellow in color when ripe and have a fleshy, bittersweet, and fragrant pulp. Inside the hardened pyrene of each fruit are one or two seeds (Cabrera and others 1982, Nash and Moreno 1981, Pennington and Sarukhan 1968). *Cordia dodecandra* pyrenes are conical, lignified, indehiscent, rugose, light brown in color, elliptic or terete in cross section, 2.3 to 2.5 cm long, and 1.5 cm wide. The seeds range from obovoid to lanceolate and are laterally flattened, 1 to 1.5 cm long, 5 to 8 mm wide, and 3 to 4 mm thick.

The fruits are ripe in the month of May, and they remain on the tree until the month of July. The fruits are collected both from the ground or by climbing the tree and using poles with metal hooks to remove them. The pulp is removed from the ripe fruits by hand or with a knife inside a bucket of water. Impurities are removed by flotation and the good pyrenes sink. The pyrenes, free from pulp, are washed in cool water and dried where it is well ventilated. Pyrenes average 410 per kg (Patiño and Villagómez 1976). The seeds remain viable within the pyrene for approximately 13 months when stored under ambient conditions (24 to 30 °C). With longer storage, their viability diminishes quickly (Vega and others 1981).

The germination of the seeds is phanerocotylar. Under humid conditions, the fresh seeds germinate at 90 percent without pretreatment. A heterogeneous sample of seeds germinated approximately 15 days after sowing (Vega and others 1981). In a natural setting, the species propagates by the seeds it produces.

ADDITIONAL INFORMATION

The seed hilum and micropyle are indiscernible. The seedcoat is white, opaque, delicate, crustaceous, and firmly attached to the embryo. The embryo has a straight axis and is symmetrical and white. The two longitudinally pleated or corrugated cotyledons are much shorter than the radicle. The plumule is undifferentiated. The radicle is superior and directed toward the hilum (Johnston 1966, Nowicke 1969, Pennington and Sarukhan 1968, Sprague 1965).

