Colubrina arborescens (P. Mill.) Sarg.

Rhamnaceae

LOCAL NAMES
English (wild coffee,snakebark,greenheart,coffee colubrine,blackbead tree); French (bois de fer); Spanish (sonzonate,corazón de paloma,cascalata,bijáguara,abeyelo)

BOTANIC DESCRIPTION
Colubrina arborescens is an evergreen or semi-deciduous tree to 25 m tall, 20-30 cm dbh, and sometimes a shrub with multiple stems. The bark on trunks is grey or brown, smoothish, fissured, or platy. Inner bark pink, brown, or reddish-brown. The roots are dark brown with reddish inner bark and are somewhat brittle.

Leaves ovate to elliptic, alternately in two rows on twigs, papery to leathery, 5-18 cm long by 5-12 cm wide, pointed at the tip and rounded at the base, and prominent, curved veins.

Flowers yellow or yellow-green, tiny, in short-stalked cymes in the leaf axils.

Fruit a globose capsule, 6-10 mm in diameter, split into three parts

Seeds globose, black, 3-3.5 mm, hard.

BIOLOGY
C. a arborescens blooms from spring to fall in Puerto Rico and throughout the year in Florida. In Hawaii, the principal fruiting season occurs from May through July, with a smaller harvest from November through January. Insect pollinates the flowers. Besides minor movement by gravity, wind, and water, the fruits pop open when dry to fling the seeds a short distance.

Foliage and fruit (David Lee, Professor and Chairperson, Department of Biological Sciences, Florida International Unive)

Flowers (David Lee, Professor and Chairperson, Department of Biological Sciences, Florida International Unive)

ECOLOGY
It is often found in moist sites and dry areas, especially in excessively drained sites, but defoliates during prolonged droughts. In the West Indies, the species grows on hammocks that have sandy soils, in beach strand vegetation, coastal sands and remnant of secondary forests. The species tolerates salt sprays and moderate amounts of salt in the soil. It also grows in full sun and partial shade of low forest or broken high forest.

BIOPHYSICAL LIMITS
Altitude: 0-600 m
Mean annual temperature: ºC
Mean annual rainfall: 750-2500 mm
Soil type: Coffee colubrina grows in a wide range of well-drained soils in its native range, including soils of all textures, pHs ranging from about 5.0 to 8.0, and soils derived from sedimentary (including limestone), igneous, and metamorphic (including ultramaphic) rocks.

DOCUMENTED SPECIES DISTRIBUTION

Native: Belize, Costa Rica, Dominica, Guatemala, Haiti, Honduras, Mexico, Panama, Puerto Rico
Exotic:

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
Fodder: Animals browse the leaves and usually the damage is extensive under free-grazing conditions.

Apiculture: The species is considered a honey plant, furnishing both nectar and pollen to honeybees (Apis mellifera L.)

Fuel: The pruned branches provide excellent firewood

Timber: The wood is hard and heavy with a specific gravity of 0.67-0.82. The sapwood is ivory or light brown, and the heartwood is yellowish brown. Because it is resistant to decay, it is used in building materials, constructions planks, fence posts, beams, ridge poles, furniture and was formerly used in marine pilings.

Tannin or dyestuff: The bark contains various tannins, alkaloids and saponins

Medicine: A tea made from the leaves and the wood is used as a remedy for rheumatism while the extract is used in antiseptic baths. Bark tea mixed with anise, nutmeg, mace and sugar is considered diuretic. The tea is also considered an aphrodisiac. A decoction from boiled wood, mixed with milk is used to build up blood, especially after childbirth.

Other products: The shiny black seeds are used in necklaces in Jamaica

SERVICES
Erosion control: Coffee colubrina helps protect the soil, contributes to the aesthetics of the forest, and furnishes food and cover for wildlife.

Shade or shelter: It is planted as a shade tree in Florida, Hawaii, Guatemala, Nicaragua, and El Salvador

Ornamental: It is planted in parking lots in large containers and small lawns. It is also used and for borders, screens, and hedges.

Intercropping: Coffee colubrine do not have deep shade, allowing for flexibility in the type of cash crop intercropped, particularly in association with coffee and cocoa groves. In field garden in Hawaii, crops are grown right up to the base of the tree.

Other services: The plant attracts abundant insects including bees, wasps, butterflies, and diurnal moths, which in turn provide food for warblers (Dendroica spp.), gnatchers (Polioptila spp.), kingbirds (Tyrannus spp.), and vireos (Vireo spp.).

TREE MANAGEMENT
Growth is slow in dry forest areas and generally moderate in moist, fertile soils. It sometimes does not establish well in poorer sites as the seedlings are usually overcome by faster-growing competition. To ensure quick establishment, planting of containerized plantings stock, protection from weeds, vines, and faster-growing trees for 2 or more years is imperative. Ornamental plants can be forced into tree shape by continual pruning of the lower branches.

GERMPLASM MANAGEMENT
There are 50000-65000 seeds/kg.

PESTS AND DISEASES
In the nursery, a virus transmitted by the citrus aphid (Taxoptera aurantii) causes leaves to exhibit mosaic-type symptoms, with a mottled appearance and curled, shriveled leaf margins.

FURTHER READNG

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SUGGESTED CITATION

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