

Bucida buceras

L.

Combretaceae

LOCAL NAMES

English (black olive); French (bois margot, bois gris-gris); Spanish (ucar, oxhorn bucida, Júcaro, gregre)

BOTANIC DESCRIPTION

Bucida buceras is an erect tree, 8-27 m tall, with tiered and often thorny branches, initially horizontal, later drooping in habit. Wild trees are usually variable in form.

Flowers small, borne in spikes, greenish-white; may be staminate or perfect.

Fruit a one-seeded drupe.

An unidentified mite is responsible for the horn-shaped gal that inspired the Latin name *Bucida bucerus*, meaning ox-horn.

BIOLOGY

Flowering occurs throughout the year in Puerto Rico and in Florida it takes place in spring. Flowers may be staminate or perfect. Fruits mature in about 3 months, are light, easily blown away by strong winds and float on water.



Flowers at Keanae arboretum, Maui, Hawaii
(Forest and Kim Starr)



Habit at Keanae arboretum, Maui, Hawaii
(Forest and Kim Starr)

ECOLOGY

B. buceras is usually found along intermittent streams in dry foothills, coastal areas, at the margins and on hummocks of *Pterocarpus officinalis* and mangrove swamps. It is salt-tolerant and grows well in coastal swamps, wet inland woods and on riverbanks; it tolerates dry limestone areas. It is a component of the climax community of dry forest and grows as a sub climax tree in excessively drained areas of the moist forest. In the thorn forests of southern Mexico, it is associated with *Eugenia lundellii*, *Coccoloba cozumelensis* and *Croton reflexifolius*. The tree tolerates air pollution and salt spray, and grows well in various soils, including fill dirt.

BIOPHYSICAL LIMITS

Altitude: 0-450 m

Mean annual temperature: 24-28 deg C

Mean annual rainfall: 750-2 000 mm

Soil type: *B. buceras* grows best on deep, medium-textured; moist but well drained nutrient rich soils. It also tolerates saline soils, limestone outcrops and sand hills.

DOCUMENTED SPECIES DISTRIBUTION

Native: Bahamas, Cuba, Guadeloupe, Haiti, Jamaica, Puerto Rico

Exotic: Guinea, Mexico, United States of America



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

Apiculture: *B. buceras* is listed as a honey tree.

Fuel: It is a good fuelwood and makes excellent charcoal.

Timber: *B. buceras* wood is heavy (750-930 kg/m³ when oven dried) and seasons fairly well. However it is difficult to work due to a high silica content. It has an attractive dark yellow-brown to greenish-brown colour with mottled grain and finishes well. It is used for high quality flooring, furniture, interior trim, railroad sleepers, bridge and ship timbers, decking, pilings, posts and pallets. It is resistant to the West Indian dry wood termite, *Cryptotermes brevis* and subterranean termites.

Tannin or dyestuff: Bark, galls and leaves are high in tannin that stains pavements, vehicles, white roofs and other surfaces.

Medicine: In Haiti, bark and leaf decoction is taken for fever.

SERVICES

Erosion control: *B. buceras* develops an extensive fibrous root system which holds the soil and prevents erosion.

Shade or shelter: The tree is popular for shade in urban areas; it is ideal for planting as a windbreak.

Ornamental: Its small, round leaves and semi pendulous branches make it appealing for landscaping.

TREE MANAGEMENT

Spacing of 3 m x 3 m is recommended where the crown closes in 10-20 years. Thinning is necessary otherwise the larger trees suppress smaller ones. Ultimate spacing of 12-15 m between trees is desirable for timber production. The main branches bend down, making the tree top-heavy and there is a need for regular pruning to retain a compact habit and protect trees from storm damage. The tree coppices until it reaches saw log size (30 cm dbh). The tree is resistant to hurricane damage, a light demander and should be protected from fire. *B. buceras* should not be used for shade where cars will be parked regularly because the tree exudes a dark, sticky substance.

GERMPLASM MANAGEMENT

There are about 38 000 seeds/kg. Seeds are recalcitrant.

PESTS AND DISEASES

The species is susceptible to several pests and over 24 disease organisms. Scale insects (*Philaphedra* sp.) can cause complete defoliation and the mite *Eriophyes buceras* prevents normal fruit development by inducing long bean-like galls. Basal fire scars are the chief entry points for butt and heart rot. A white fly, *Aleurodicus dispersus* attacks ornamental trees. A buprestid, *Chrysobothris tranquebarica* has been recorded from the British Virgin Islands on *B. buceras*.

FURTHER READNG

Crane E, Walker P. 1984. Pollination directory for world crops. International Bee Research Association, London, UK.

Francis JK. 1989. *Bucida bucerus* L. SO-ITF-SM-18. Rio Piedras, Institute of Tropical Forestry.

Ivie MA and Miller RS. 1984. Buprestidae (Coleoptera) of the Virgin Islands. *Florida Entomologist*. 67(2): 288-300.

Morton JF. 1993. The black olive (*Bucida buceras* L.), a tropical timber tree, has many faults as an ornamental. *Proceedings of the Florida State Horticultural Society*. 106: 338-343.

Timyan J. 1996. *Bwa Yo: important trees of Haiti*. South-East Consortium for International Development. Washington D.C.

SUGGESTED CITATION

Orwa C, A Mutua, Kindt R, Jamnadass R, S Anthony. 2009 *Agroforestry Database: a tree reference and selection guide version 4.0* (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)