Bursera simaruba

(L.) Sarg.
Burseraceae

gumbo-limbo, almácigo

LOCAL NAMES
English (gum tree, turpentine tree, Mexican white beach, incense tree, West Indian birch); French (bois d'encens, chiboue, chique, gommier blanc); Spanish (gumo-limbo, almácigo, desnudo, indio desnudo, indio desnudo, chacaj, chac-jiote, jibouave, almácigo blanco); Trade name (almácigo, gumbo-limbo)

BOTANIC DESCRIPTION
Bursera simaruba is medium-sized, deciduous tree, 18-30 m tall, with a relatively thick trunk and a diameter at breast height of 60-80 cm. It has large, spreading, crooked branches and thin foliage. This aromatic tree is easily recognized by the smooth, reddish-brown or copper-coloured bark, which peels off in papery flakes and exposes the greenish-brown layer beneath.

Leaves compound, arranged in a spiral, 15-30 cm long, with 7-13 leaflets, each of which is 4.5-9 cm long and 2-4 cm wide. Leaflets are bright or dark green, ovate-lanceolate and oblong with an acuminate apex and an asymmetric base.

Flower clusters are terminal and lateral, branched and narrow; flowers are on slender, usually short stalks; male and female flowers are mostly on different trees, but some flowers are bisexual; 5 calyx -toothed; petals 5; stamens 10; pistils with a 3-celled ovary; short style; stigma 3-lobed.

The drupelike fruit is diamond shaped, slightly 3 angled, pointed at both ends, dark pink, splitting into 3 parts, with usually 1 whitish, 3-angled seed.

BIOLOGY
May be either dioecious or monoecious. In Mexico, insects, especially honeybees, pollinate it. Mammals and birds disperse the seeds.
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(gumbo-limbo, almácigo)  
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**ECOLOGY**  
Generally found in dry forests, but sometimes in wetter forests; common in advanced secondary growth.

**BIOPHYSICAL LIMITS**  
Altitude: 0-1000 m, Mean annual temperature: 18-25 deg. C, Mean annual rainfall: 800-3000 mm  
Soil type: Grows on diverse soils, for example Lithosols, Vertisols and Oxisols.

**DOCUMENTED SPECIES DISTRIBUTION**

**Native:** Belize, Colombia, Cuba, Dominican Republic, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Puerto Rico, United States of America  
**Exotic:** Costa Rica

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: Branches are cut for cattle fodder.

Fuel: When thoroughly dry, the wood is used as firewood or charcoal.

Timber: Used for veneer, as plywood for interior use, in rustic furniture, for rough boxes and crates, as handles for tools, as soles for sandals, for match sticks and toothpicks, to build cabinets, to make decorative articles.

Gum or resin: B. simaruba yields a balsam resin known as American elemi, cachibok or gomart. The resin is concentrated, dried and used in South America as incense in churches.

SERVICES
Shade or shelter: Planted as a shade tree on streets and beaches.

Ornamental: Because of the attractive coloured bark, the tree is planted as an ornamental in dry soils of southern Florida, where it is native.

Boundary or barrier or support: Used as living fence to delimit pastures, with stakes 1-3 m long and 10-15 cm thick, and spaced 3 m apart or more.
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**TREE MANAGEMENT**

There is not much literature available concerning forest management of *B. simaruba*. In Mexico, *B. simaruba* is not managed and is cut down when reaching a d.b.h. of 40 cm or bigger, if it has a straight stem.

As *B. simaruba* regenerates rapidly under natural conditions, plantations from seed are virtually unknown.

**GERmplasm MANAGEmENT**

Seed storage behaviour is orthodox. Seeds remain viable for 10 months.

**PESTS AND DISEASES**

The aromatic resin of *B. simaruba* is a natural insect repellent, and no pests or diseases are reported for this species (NAS, 1983). In Costa Rica, white-faced monkeys eat young branch tips in May when the leaves are starting to grow, which can cause extensive damage, although the tree contains volatile terpenes which could help to protect it against subsequent defoliation.
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FURTHER READING

SUGGESTED CITATION