Bursera simaruba (L.) Sarg.

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BURSERACEAE (BURSERA FAMILY)

Bursera gummifera L., *B. ovalifolia,* (Schldl.) engl.,
Elaphrium ovalifolium, Schldl.,(L.) Rose, *Pistacia simaruba*

Almacigo, chacah, chacaj, chiboue, chinacahuite, chino, copon, ginicuite, gomye, gomye blan, gumbolimbo, indio desnudo, jiñocuavo, jiote, jobo, palo chino, palo de incienso, palo jiote, palo mulato, palo santo, turpentine tree
(Méndez and others 1994, Schubert 1985, Timyan 1996, Witsberger and others 1982)

Bursera simaruba is native from southern Mexico to northern South America and has been introduced to the West Indies and southern Florida. It is found from Cape Kennedy to the southern Florida Keys (Elias 1980). Although found in primary forests, the species is more abundant in secondary forests. Other species in the genus include *B. microphylla*, or the elephant tree, native to southwestern U.S. and Mexico and *B. fagaroides*, or fragrant bursera, native to Arizona in the United States and western Mexico (Elias 1980).

Bursera simaruba is a dioecious tree reaching 20 to 30 m in height and 1 m d.b.h. (Aguilar and Aguilar 1992). *Bursera simaruba* is a deciduous tree with straight trunk and succulent stems common in seasonal tropical dry forests (Holbrock and others 1995). It is easily recognized by its reddish-brown, smooth, oil-looking bark, which peels off like paper. The branches are robust but easily broken. The leaves are alternative and odd-pinnate compound with 5 to 13 leaflets. The tree grows well in poor or rich soils and tolerates saline soils. It thrives in areas with 500 to 1400 mm annual precipitation and adapts to long drought periods. Although the species grows at elevations from 0 m to 1800 m, it is most common at approximately 1000 m (Lagos 1977, Méndez and others 1994, Witsberger and others 1982).

Bursera simaruba wood is white, yellowish, or light brown and has a fine-to-medium texture, a specific gravity of 0.26 to 0.40, and poor durability. Several insects, such as beetles, wood borers, and termites, attack the wood (Timyan 1996). The wood is easy to work and is used to make coffins, canoes, agricultural tool handles; to build rural homes and living fences; and as firewood (Aguilar and Aguilar 1992, Budowski 1987, Witsberger and others 1982). The fruits and foliage can be used as forage for livestock (Alfaro and Rojas 1992). The fruits, seeds, leaves, and bark have popular medicinal value in treating wounds, gout, digestive ailments, toothache, fever, kidney stones, and lung infections (Elias 1980, Gonzalez Ayala 1994, Timyan 1996). The bark is also used as antidote for snakebites, and leaf cataplasms are used to stop gangrene infections. The resinous sap can be used to make wood varnishes or glue that may substitute for gum Arabic (Aguilar and Aguilar 1992, Méndez and others 1994). In Guatemala, after the resin is collected from the trunks, it is hardened in blocks and used as incense in churches. The tree is also planted for shade or as an ornamental (Elias 1980).

In El Salvador, *B. simaruba* is leafless April through December, flowers March through June, and fruits almost all year. In Florida, *B. simaruba* blooms in winter or spring and the fruits ripen in the summertime (Elias 1980). In Costa Rica, fruits ripen January through March (Stevens 1983). The flowers are yellowish-green, 4 to 6 mm long, and borne in clusters or spikes; the fruits are pinkish drupe-like capsules with one or two seeds 6 to 8 mm long. The seeds are dispersed by birds, spider monkeys, and squirrels (Aguilar and Aguilar 1992, Lagos 1977, Stevens 1983, Witsberger and others 1982). In Costa Rica the fruits are a major food source for white-faced monkeys.

Bursera simaruba is propagated by seeds or cuttings. Seed germination is fast, and percentage germination is

between 80 and 100. Seeds do not require scarification treatments. Cuttings 1.5 to 3 m long and 5 to 20 cm in diameter are planted in a permanent location during the rainy season and root easily without growth regulators (Alfaro and Rojas 1992). *Bursera simaruba* reaches maturity in approximately 15 years when propagated from seed (Schubert 1985).