

Botanical Name: *Bursera simaruba*

Family: Burseraceae



Ft Myers Beach, Florida, late July



Ft Myers, Florida

Common Names: Gumbo limbo, tourist tree, turpentine tree, almacigo

Synonyms (Discarded names): *Bursera elaphrium*, *B. pistacia*

Origin: South Florida, Bahamas, Caribbean, Yucatan peninsula, Central America, Northern and Western South America

U.S.D.A. Zone: 9B-11 (25°F minimum)

Plant Type: Medium to large-sized tree

Leaf Type: Pinnately compound

Growth Rate: Fast

Typical Dimensions: 25'-50' x 25'-50'

Leaf Persistence: Briefly deciduous

Flowering Season: Winter, spring

Light Requirements: High

Salt Tolerance: High

Drought Tolerance: High

Wind Tolerance: High

Soil Requirements: Well-drained; wide variety of soil types including alkaline

Nutritional Requirements: Low

Environmental Problems: Weak branches

Major Potential Pests: Croton scale, rugose spiraling whitefly

Propagation: Seeds, cuttings

Human Hazards: None

Uses: Shade, parking lot island, specimen, streetscape, wildlife

Natural Geographic Distribution

Bursera is a genus of about 100 species in tropical America with gumbo limbo, *B. simaruba*, being one of the most widespread species. It is native along both coasts of Florida southwards from Pinellas County on the west and Brevard County on the east. The species is widespread throughout the Caribbean and the Bahamas. Its continental range extends from the Yucatan Peninsula in Mexico to Panama, Columbia, Venezuela, Guyana, and northern Brazil.

Growth and Wood Characteristics

Gumbo limbo is one of the fastest growing native trees. The growth is so rapid that a six- to eight-foot tree can be produced from seed in 18 months. The trunk is sometimes short, 1 to 3 feet in diameter. The tree typically develops from two to four large-diameter limbs, originating close to the ground. The branches are spreading and often contorted. The crown is open and asymmetrical. Typically, gumbo limbo grows from 25 to 50 feet tall. It can be as broad as it is tall or broader than tall. Unattended older and lower branches droop very close to the ground.

Both sapwood and heartwood are a uniform cream to light brown color, turning bluish gray because of sap-staining. The wood is light-weight (specific gravity 0.29), fine-textured, soft, and weak. Growth rings in the wood are absent or indistinct but seem to occur annually.

A grayish resin with the taste of turpentine exudes from cuts into the wood of gumbo limbo trees. The crushed twigs, leaves, fruit and bark also have an odor reminiscent of turpentine.



Mature specimen with multiple branching trunks, Florida



R. Charles O'Connor

Pine Island, Florida, early September



R. Charles O'Connor

Pine Island, Florida, early October

Bark Characteristics

The species is easily recognized by the unusually showy bark on its trunks and branches. There are perhaps two such types. Commonly described are trees with a thin, reddish-brown to coppery colored peeling bark. However, another variation has a thin gray to silvery bark that also exfoliates. Both color types expose a smooth dark green or greenish-brown, sometime coppery under-bark that is thick and resinous. Trees of all bark colors are often found together in the same location. It is also not unusual to see gumbo limbo trees with little or no bark exfoliation having either a smooth coppery or silvery bark.



Sanibel, Florida



Treasure Beach, Jamaica



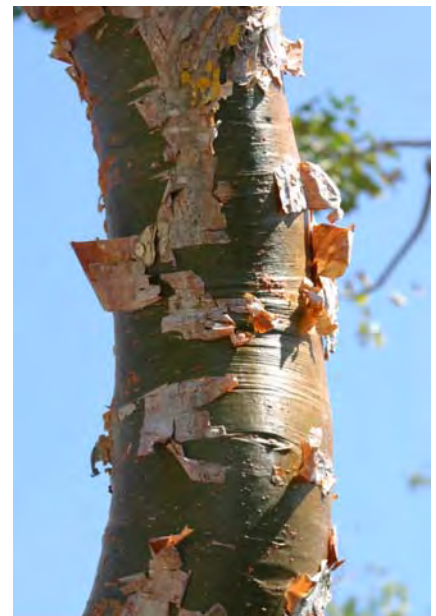
Montego Bay, Jamaica



Grenada, Eastern Caribbean



St. Kitts, Eastern Caribbean



Sanibel, Florida

Leaf

The leaves are alternate, odd-pinnate, 6 to 14 inches long with 3 to 9 leaflets, but mostly with 7 or 9 leaflets. The petioles commonly measure 2 to 3 inches long. Each leaflet measures 2 to 4.5 inches long and 1 to 2 inches wide. They have short petiolulus of about 0.3 inches long. The leaflets mature to a dark green with a paler underside. The blade is asymmetrically oblong to ovate with a smooth and sometimes slightly wavy margin. It is abruptly short-pointed at the apex and broad and oblique at the base.

In South Florida, in late winter or spring, the tree is briefly, but usually not obviously, deciduous. It begins refoliating while old leaves are falling and inflorescence is emerging. In the tropics, during the dry season, it can become totally and obviously deciduous.



Odd-pinnate leaf, Fort Myers, early October



Captiva, Florida, early October



New leaves, Sanibel, Florida, mid May



Leafless tree in the dry season, Grenada, Eastern Caribbean, late May

Flowering and Fruiting

The flowers emerge slightly before or with the first leaves from late winter to late spring but sometimes in summer. Flowers and fruits usually appear together.

The flowers are borne on compound clusters known as panicles. They are inconspicuous with creamy white or greenish petals. The species is not strictly dioecious; male and female flowers on different trees. Instead, floral structure is very diverse. Male and female flowers, together with what appear to be perfect flowers, can occur on a single tree. Perfect flowers have both male and female reproductive organs (stamens and pistils) on the same flower.

Male flowers have 10 fertile stamens and a rudimentary ovary enclosed by the disc. Perfect flowers are similar, but with the addition of a well-developed ovary. Female flowers have reduced and nonfunctional stamens.

All individual trees seem capable of producing some fruit. The fruit are drupes held in clusters of many fruits. They take about a year to fully mature although they reach full size early. They are particularly conspicuous in late winter, as the leaves fall, in stalked clusters. Individual fruits are 1-seeded, 3-lobed, and greenish-brown. The outer parts split off as 3 valves to reveal a 3-angled seed which remains attached to the fruit stalk. Trees yield fruit in abundance.



Flower panicle, Sanibel, Florida, mid May



Flowers, Sanibel, Florida, mid May



Flower panicles and emerging leaves at the end of a branch tip, Sanibel, Florida, mid May



Immature fruit, Sanibel, Florida, mid August



Bottom three pictures: Young fruit, Sanibel, Florida, early April

Wildlife Attractant

Gumbo limbo leaves are food for the larval form of the dingy purplewing (*Eunica monima*) butterflies. Its flowers are rich in pollen and are sought after by bees. Its fruit provides a moderate amount of food for kingbirds, parrots, and other fruit-eating birds and its canopy provides shelter for wildlife of all sorts.

Planting and Maintenance

Gumbo limbo varies in bark color and should be selected carefully for forms that offer the most picturesque bark. It grows in full sun or light shade. Tolerant of moderate amounts of salt spray, gumbo limbo adapts to alkaline or poor, deep white sands or limestone soils, but will also grow quickly on more fertile soil.

Branches of all sizes will grow into trees if planted in the ground or even potted with no preparation. The soil should be packed down and the branches watered frequently until established. Once established, gumbo limbo requires little attention other than the occasional pruning to remove lower branches which may droop close to the ground. The tree is used as a living fence post in many tropical countries.

Gumbo limbo is ideal for a freestanding specimen on a large property or as a street tree but does need room to grow. Lower branches will grow close to the ground, so street trees will have to be trained early for proper development. Locate the lowest permanent branch about 15 feet off the ground to provide enough clearance for a street tree planting. Specimen trees are often grown with branches much closer to the ground, providing a beautiful specimen plant with wonderful bark.



Street tree in training,
Fort Myers, Florida



Low branching mature specimen, Fort Myers, Florida, late May

Wind Tolerance

Small branches of the tree are very brittle. However, most gumbo limbo do well in hurricanes. They will lose their leaves and smaller branches but the structure of the tree will remain standing if well rooted. Even when larger limbs are lost, the tree usually will refoliate in weeks. Despite the obvious intolerance of its smaller limbs to strong winds, the tree is considered highly wind resistant.

Insect Pests

Croton Scale: The gumbo limbo has a long history of not being susceptible to any major pests. However, in 2008, the **croton scale** (*Phalacroccoccus howertoni*) was discovered on Marathon Key in Monroe County. It has since become a major pest of gumbo limbo. It feeds by sucking the sap from plants and causing them to be weakened if not controlled. Symptoms of croton scale infestation include plant decline and defoliation as well as heavy sooty mold accumulation. Sooty mold is produced when the sugary secretion of the scales is used as food by the fungus. The croton scale may be seen in mass along twigs, stems and leaf petioles of affected trees. Croton scale affects over 50 plants ranging from native and exotic plants, fruit trees, ornamental plants, and weeds.

There are male and female croton scales. The females are greenish yellow with dark striations. The males are small orange-bodied gnat like insects. Application of various insecticides will help severe infestation of the croton scale. Insecticides recommended for the rugose spiraling whitefly can also be used to control the croton scale. See the next page for detail.



Croton scales on leaf petioles
Sanibel, Florida, mid October



Sooty mold caused by the feeding of croton scales. Sanibel, Florida, mid October



Tree covered with sooty mold caused by croton scale feeding
Sanibel, Florida, mid October

Rugose Spiraling Whitefly: Another major pest of the gumbo is the [rugose spiraling whitefly](#) (*Aleurodicus rugioperculatus*). It was first discovered in Miami-Dade County in 2009. It also feeds by sucking the sap from plants. The female deposits her eggs in a spiral pattern on the underside of leaves and amass a white waxy substance on the eggs. Symptoms of spiraling whitefly feeding include overall plant decline, defoliation, branch dieback and heavy sooty mold accumulation on and below the tree.

If the tree is small and reachable then consider washing it off with a strong spray of water or using an insecticidal oil or soap. However, these approaches necessitate frequent applications and the control is usually limited. To reduce killing predatory insects and mites that feed on the rugose spiraling whitefly, consider using a systemic insecticide on infested trees. Systemic insecticides are absorbed by the plant's roots and trunk and move upward to the area of feeding. Since the predators do not feed on the toxic plant tissue they are not noticeably affected by systemic insecticides.

Systemic insecticides usually recommended are Imidacloprid (Merit, Bayer's Advanced....) or Dinotefuran (Safari). A soil drench of either product is the usual method of application. Gardeners can purchase these products at most garden centers and apply the drench themselves.

Dinotefuran gives quicker control than Imidacloprid. The latter takes 3 to 4 weeks to work. Imidacloprid is longer lasting than Dinotefuran. Imidacloprid gives 10 to 12 months of control in South Florida. Dinotefuran is applied 3 to 4 times a year for effective control. Dinotefuran can also be applied to the



From green to silver colored leaves when heavily rugose whitefly infested, Fort Lauderdale, Florida, early July



The rugose spiraling whitefly affected underside of leaves, Key West, Florida



Defoliation caused by rugose spiraling whitefly, Pine Island, Florida, mid October

trunk or bark of trees for whitefly control. Another form of Imidacloprid can be injected into the trunks of taller and larger trees by a licensed pesticide applicator. Whitefly control begins 24 to 72 hours after trunk injection. Dinotefuran is not used as a trunk injection.

It is not uncommon that the impact of pests like the rugose spiraling whitefly and the croton scales are significantly reduced over time. Local predatory insects and mites soon begin feeding on these new pests helping to reduce their numbers and keeping them under control thus negating the use of pesticides. Read and follow all label directions for pesticide applications. Never reapply a pesticide without checking first to see if it is necessary.

Disease

Ganoderma: Ganoderma is a wood decaying fungus that feeds on the live wood of many hard and soft-wood species. Different types of ganoderma affect different species of plants. The disease is characterized by large woody brackets, also called “conks” appearing on the trunks of trees. Occasionally ganoderma infects gumbo limbo trees. The “conks” appears on the lower most portion of the trunk accompanied by rotted wood. The disease is incurable and the affected tree slowly dies.



Trunk deterioration caused by the Ganoderma fungus
Sanibel, Florida, early June



The ganoderma affected tree still appears healthy, Sanibel, Florida, early June



Ganoderma “conks” on the affected tree

References

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Useful Links

[South Florida Native Plants Fact Sheets](#)
[Green buttonwood Fact Sheet](#)
[Insecticides and Acaricides List](#)
[Jamaican Caper Fact Sheet](#)
[Rugose Spiraling Whitefly Video Clip](#)
[Sea Grape Fact Sheet](#)
[Southern Red Cedar Fact Sheet](#)

All pictures taken by Stephen H. Brown except where indicated.

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