

## Lignumvitae, *Guaiacum sanctum*

### Introduction

Lignumvitae trees, *Guaiacum sanctum*, are found naturally in rockland and hardwood hammocks of the Florida Keys. It is a highly attractive plant that puts on a spectacular show when the tree is in full bloom. The common name, Lignumvitae, is latin for “wood of life” and comes from its historic use as a medicinal plant used to remedy arthritis, colds and coughs, and even syphilis. This caused overharvesting and it is now listed as endangered by The World Conservation Union (IUCN) and the State of Florida. The wood is extremely dense and will sink in water. It is highly sought by woodworkers and was even used to make bowling balls. It also has a rich resin which has been used in marine industries to make shaft bearings for boat propellers.

Lignumvitae grows extremely slow, though requires little maintenance once it is established. It can be used in container planting, on a patio, or as a specimen plant in the landscape. It can even be found growing in road medians as a street tree. There are two different species that might be encountered in south Florida. Common lignumvitae, *Guaiacum officinale*, is native to tropical America and has escaped cultivation. *G. officinale* can be distinguished from *G. sanctum*, by the fine hairs covering the petals and the number of leaflets per leaf. *G. officinale* typically has four leaflets while *G. sanctum* has six to ten. Also, *G. sanctum* fruit capsules are egg-shaped with 5 winged angles while *G. officinale* fruit capsules are heart-shaped with 2 winged angles.

### General Information

**Family:** Zygophyllaceae

**Origin:** South Florida, historically the Florida Keys; West Indies, Mexico, and Central America.

**U.S.D.A. Zone:** 10-11

**Status:** Endangered

### Description

**Plant Type:** Small, multi-trunk tree to large woody shrub.



*Guaiacum sanctum* flowering in Key Largo in March. Credit: M. Leonard-Mularz, UF/IFAS

**Typical Dimensions:** 8 to 20 feet tall with an 8 to 12 feet spread at maturity.

**Growth Rate:** Very slow

**Trunk/Bark:** The bark is smooth, gray-brown when young. As the plant matures, bark becomes rough and scaly with patches of grey where the scales have peeled off. Typically, multi-trunked.

**Leaf Characteristics:** Dark green, opposite to sub-opposite, pinnately compound leaves. Each leaf has 3 to 5 pairs of leaflets, about 1 inch long and ½ inch wide. Leaflets sessile, obovate, with entire margins and pinnate veins, and have a small sharp point at the apex.

**Flowering Months in Monroe County:** Blooms sporadically all year with peak flowering in spring to early summer.

**Flower Color:** Purplish-blue. Flowers are solitary or in small terminal clusters; star shaped with 5 petals.

**Fruit/Seed Availability in Monroe County:** The fruit are a yellow to orange 5 lobed capsule, dehiscent, which open to expose black seeds enclosed in red arils. The fruit ripens summer to fall.



Left: Lignumvitae leaves with 8 leaflets. Right: Unfurled flower petals.  
Credit: M. Leonard-Mularz, UF/IFAS

## Cultural Requirements

**Light Requirements:** Full sun to partial shade.

**Salt Tolerance:** Moderate tolerance to windborne salt with protection from direct salt spray. Will tolerate brief inundation of salt water but will not tolerate long-term flooding.

**Drought Tolerance:** High once established

**Wind Tolerance:** High, considered highly resistant to hurricane damage from strong winds.

**Soil Requirements:** Tolerant of most soil types. Grows naturally on calcareous limestone soil.

**Nutritional Requirements:** Moderate to low; does not require supplemental fertilization. However, plants will thrive in soils with some organic content.

**Propagation:** Grown from seed. Remove the black seed from the red fleshy pulp and lightly scrape (scarify) the seed with a knife to reveal some white streaks. Plant seeds directly in plant media or in moist paper towels and allow seeds to germinate. Plant seeds soon after collection. Volunteer saplings can sometimes be found under the plant.

**Human Hazards:** None known.

**Wildlife:** Highly attractive to many pollinators such as bees and butterflies. It's the larval host plant for the lyside sulphur butterfly, *Kricogonia lyside*. Birds, such as Catbirds and Mockingbirds, eat the fruit. Not preferred by iguanas.



*Guaicum sanctum* fruit in Key West in August. Credit: M. Leonard-Mularz, UF/IFAS

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