

## ***Guaiacum sanctum*: Lignumvitae<sup>1</sup>**

Edward F. Gilman and Dennis G. Watson<sup>2</sup>

### **Introduction**

Lignumvitae is an extremely slow-growing broadleaf evergreen which ultimately reaches 30 to 40 feet in height and casts light shade, but few people have seen plants of this size because it is not grown in the trade. Most are seen 8 to 12 feet tall with a beautiful array of multiple trunks and a rounded canopy much like that of a mature Crape-Myrtle. The one to two-inch-long, leathery, dark green leaves are joined at many times throughout the year by the production of large clusters of deep blue flowers, the old flowers fading to a light silvery-blue and creating a shimmering haze over the rounded canopy. These flowers are followed by small, heart-shaped, yellow berries, appearing on the tree at the same time as the blue flowers and creating a lovely sight.

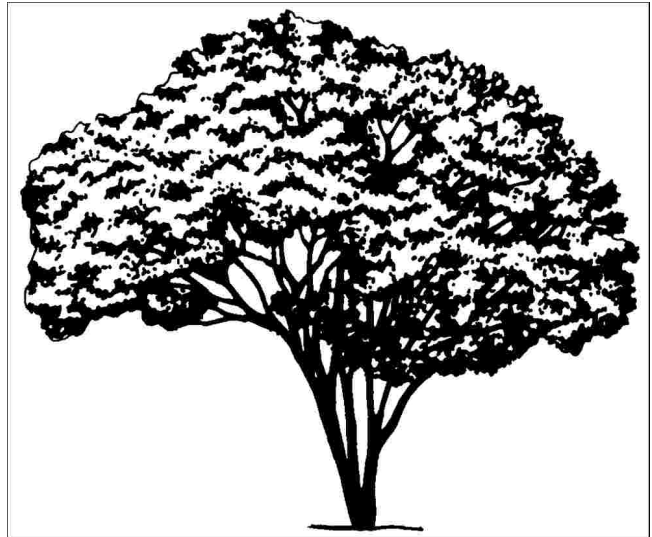
### **General Information**

**Scientific name:** *Guaiacum sanctum*

**Pronunciation:** GWY-uh-kum SANK-tum

**Common name(s):** Lignumvitae

**Family:** *Zygophyllaceae*



**Figure 1.** Mature *Guaiacum sanctum*: Lignumvitae

**USDA hardiness zones:** 10B through 11 (Fig. 2)

**Origin:** not native to North America

**Invasive potential:** little invasive potential

**Uses:** tree lawn 3-4 feet wide; tree lawn 4-6 feet wide; tree lawn > 6 ft wide; sidewalk cutout (tree pit); parking lot island < 100 sq ft; parking lot island 100-200 sq ft; parking lot island > 200 sq ft; container or planter; specimen; deck or patio; Bonsai; highway median

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**Availability:** not native to North America



**Figure 2.** Range

**Description**

**Height:** 8 to 12 feet

**Spread:** 8 to 12 feet

**Crown uniformity:** symmetrical

**Crown shape:** round, vase

**Crown density:** dense

**Growth rate:** slow

**Texture:** fine

**Leaf margin:** entire

**Leaf shape:** obovate, elliptic (oval)

**Leaf venation:** pinnate

**Leaf type and persistence:** evergreen

**Leaf blade length:** less than 2 inches

**Leaf color:** green

**Fall color:** no color change

**Fall characteristic:** not showy

**Foliage**

**Leaf arrangement:** opposite/subopposite (Fig. 3)

**Leaf type:** even-pinnately compound

**Flower**

**Flower color:** blue

**Flower characteristics:** very showy

### Fruit

**Fruit shape:** round

**Fruit length:** less than .5 inch

**Fruit covering:** fleshy

**Fruit color:** yellow

**Fruit characteristics:** does not attract wildlife; showy; fruit/leaves not a litter problem

### Trunk and Branches

**Trunk/bark/branches:** branches droop; very showy; typically multi-trunked; thorns

**Pruning requirement:** needed for strong structure

**Breakage:** resistant

**Current year twig color:** gray

**Current year twig thickness:** thin

**Wood specific gravity:** 1.09

### Culture

**Light requirement:** full sun, partial sun or partial shade

**Soil tolerances:** clay; sand; loam; alkaline; acidic; extended flooding; well-drained

**Drought tolerance:** high

**Aerosol salt tolerance:** high

### Other

**Roots:** not a problem

**Winter interest:** yes

**Outstanding tree:** yes

**Ozone sensitivity:** unknown

**Verticillium wilt susceptibility:** unknown

**Pest resistance:** free of serious pests and diseases

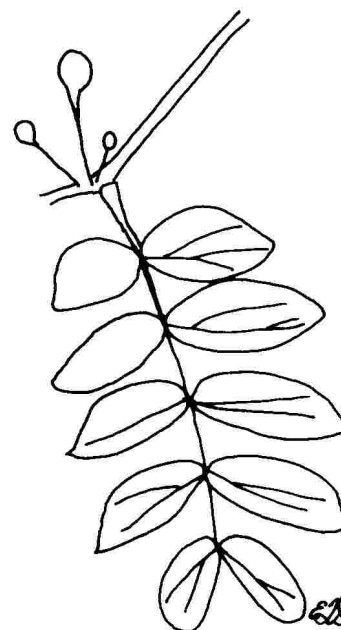


Figure 3. Foliage

## Use and Management

Underneath the smooth, beige/grey bark of Lignumvitae is some of the heaviest of all wood, sinking under its weight instead of floating in water. This dense wood was once popular for use in the manufacture of bowling balls and has also been used for propeller shafts on steamships, gears and for mallets. The picturesque crooked, typically multiple trunk, evergreen leaves, and beautiful flowers, and fruit would all combine to make Lignumvitae a popular choice for use as a container, patio, or specimen planting if it were widely available in a range of sizes. Unfortunately, like many other slow-growing trees, this one is not often grown in nurseries. One must travel to arboreta to view nice specimens of this tree.

Lignumvitae can be grown in full sun or partial shade on a wide variety of soils, including alkaline. Plants will easily tolerate wet or dry soil, wind, and salt, making it an ideal choice especially for seaside plantings.

*Guaiacum officinale* grows 10 to 30 feet tall, has blue or sometimes white flowers, and light to dark brown seeds.

Propagation is by seed.

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**Pests and Diseases**

No pests or diseases of concern.