



Guaiacum sanctum Lignumvitae¹

Edward F. Gilman and Dennis G. Watson²

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 (Fig. 1). 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*

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

Origin: not native to North America

Uses: Bonsai; container or above-ground planter; large parking lot islands (> 200 square feet in size); wide tree lawns (>6 feet wide); medium-sized parking lot islands (100-200 square feet in size); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; near a deck or patio; small parking lot islands (< 100 square feet in size); narrow tree lawns (3-4 feet wide); specimen; sidewalk cutout (tree pit);

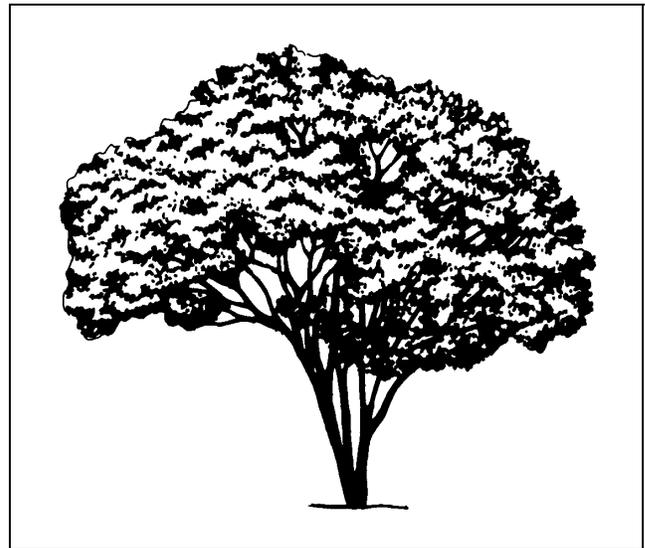


Figure 1. Mature Lignumvitae.

no proven urban tolerance

Availability: grown in small quantities by a small number of nurseries

DESCRIPTION

Height: 8 to 12 feet

Spread: 8 to 12 feet

Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms

Crown shape: round; vase shape

Crown density: dense

Growth rate: slow

Texture: fine

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Figure 2. Shaded area represents potential planting range.

Foliage

- Leaf arrangement:** opposite/subopposite (Fig. 3)
- Leaf type:** even pinnately compound
- Leaflet margin:** entire
- Leaflet shape:** elliptic (oval); obovate
- Leaflet venation:** pinnate
- Leaf type and persistence:** evergreen
- Leaflet blade length:** less than 2 inches
- Leaf color:** green
- Fall color:** no fall color change
- Fall characteristic:** not showy

Flower

- Flower color:** blue
- Flower characteristics:** very showy; year round flowering

Fruit

- Fruit shape:** round
- Fruit length:** < .5 inch
- Fruit covering:** fleshy
- Fruit color:** yellow

Fruit characteristics: does not attract wildlife; no significant litter problem; showy

Trunk and Branches

- Trunk/bark/branches:** droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; routinely grown with, or trainable to be grown with, multiple trunks; tree wants to grow with several trunks but can be trained to grow with a single trunk; very showy trunk; no thorns
- Pruning requirement:** requires pruning to develop strong structure
- Breakage:** resistant
- Current year twig color:** gray
- Current year twig thickness:** thin
- Wood specific gravity:** 1.09

Culture

- Light requirement:** tree grows in part shade/part sun; tree grows in full sun
- Soil tolerances:** clay; loam; sand; acidic; alkaline; extended flooding; well-drained
- Drought tolerance:** high
- Aerosol salt tolerance:** high

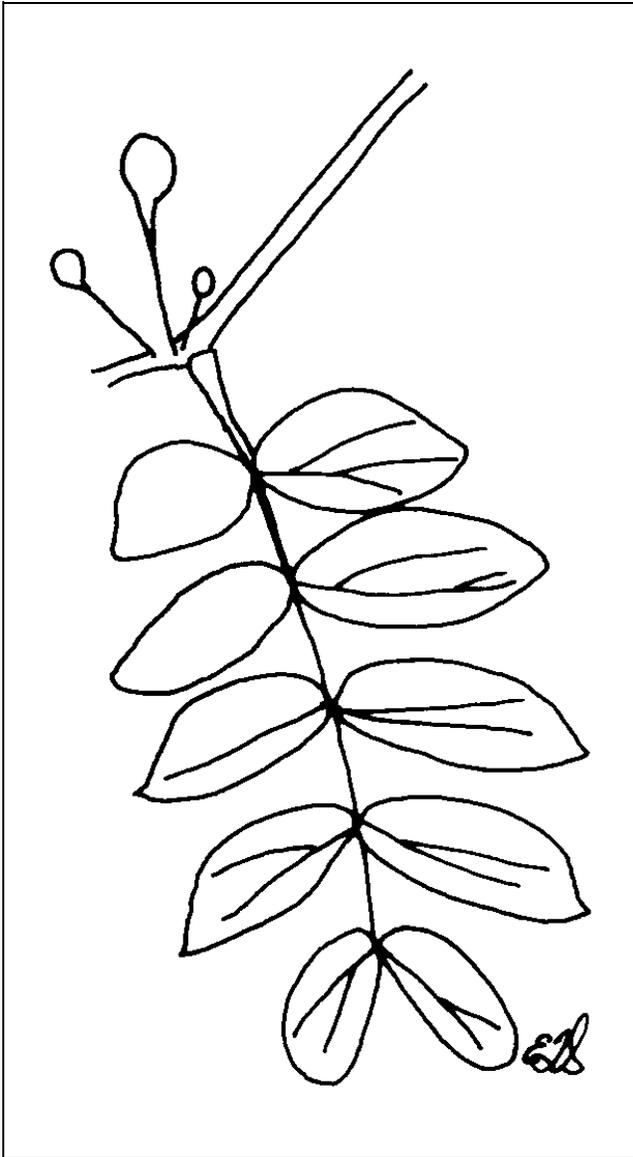


Figure 3. Foliage of Lignumvitae.

Soil salt tolerance: good

Other

Roots: surface roots are usually not a problem

Winter interest: tree has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers

Outstanding tree: tree has outstanding ornamental features and could be planted more

Invasive potential: little, if any, potential at this time

Pest resistance: no pests are normally seen on the tree

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.

Pests and Diseases

No pests or diseases of concern.