Thuja plicata
Giant Arborvitae

Edward F. Gilman and Dennis G. Watson

INTRODUCTION

A native western North American tree, Giant-Cedar can reach 180 to 200 feet in height in some areas of the Northwest but is more often seen at 50 to 70 feet in height with a spread of 15 to 25 feet (Fig. 1). Forming an upright pyramidal silhouette with strongly horizontal branches, Giant-Cedar is an evergreen with fragrant, dark green, delicate needles which generously clothe the branches, casting dense shade beneath the tree. The insignificant yellow flowers are followed by small, half-inch cones which seem a little out-of-place on such a large tree.

GENERAL INFORMATION

Scientific name: Thuja plicata
Pronunciation: THOO-yuh ply-KAY-tuh
Common name(s): Giant Arborvitae, Giant-Cedar, Western Redcedar
Family: Cupressaceae
USDA hardiness zones: 6 through 8A (Fig. 2)
Origin: native to North America
Uses: hedge; recommended for buffer strips around parking lots or for median strip plantings in the highway; screen; specimen; no proven urban tolerance
Availability: somewhat available, may have to go out of the region to find the tree

DESCRIPTION

Height: 50 to 70 feet
Spread: 15 to 25 feet
Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
Crown shape: columnar; pyramidal
Crown density: dense
Growth rate: medium

Figure 1. Mature Giant Arborvitae.

1. This document is adapted from Fact Sheet ST-630, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: October 1994.
2. Edward F. Gilman, associate professor, Environmental Horticulture Department; Dennis G. Watson, associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.
Texture: fine

Foliage

Leaf arrangement: unknown (Fig. 3)
Leaf type: simple
Leaf margin: entire
Leaf shape: ovate; scale-like
Leaf venation: none, or difficult to see
Leaf type and persistence: evergreen; fragrant
Leaf blade length: less than 2 inches
Leaf color: green
Fall color: no fall color change
Fall characteristic: not showy

Flower

Flower color: yellow
Flower characteristics: inconspicuous and not showy; spring flowering

Fruit

Fruit shape: elongated
Fruit length: .5 to 1 inch
Fruit covering: dry or hard
Fruit color: brown
Fruit characteristics: does not attract wildlife; inconspicuous and not showy; no significant litter problem; persistent on the tree

Trunk and Branches

Trunk/bark/branches: grow mostly upright and will not droop; should be grown with a single leader; very showy trunk; no thorns
Pruning requirement: needs little pruning to develop a strong structure
Breakage: resistant
Current year twig color: brown; green
Current year twig thickness: thin
Wood specific gravity: 0.32

Figure 2. Shaded area represents potential planting range.
Culture

**Light requirement:** tree grows in part shade/part sun; tree grows in the shade; tree grows in full sun  
**Soil tolerances:** clay; loam; sand; acidic; occasionally wet; alkaline; well-drained  
**Drought tolerance:** moderate  
**Aerosol salt tolerance:** moderate

Other

**Roots:** surface roots are usually not a problem  
**Winter interest:** no special winter interest  
**Outstanding tree:** tree has outstanding ornamental features and could be planted more  
**Invasive potential:** little, if any, potential at this time  
**Verticillium wilt susceptibility:** not known to be susceptible  
**Pest resistance:** long-term health usually not affected by pests

**USE AND MANAGEMENT**

Tolerating shearing quite well, Giant-Cedar is ideal for use as a hedge or screen, or a specimen for a large landscape. The wood of this tree is commercially used in North America for the manufacture of roof shingles, deck boards, and siding and the split trunks were often used by Indians for making totem poles or canoes. Due to its narrow crown, it works well close to buildings where soil is frequently alkaline and drainage is poor.

Giant-Cedar naturally occurs on river banks, swamps, and even bogs so should be grown in full sun or partial shade on moist, well-drained, fertile soil, and prefers a moist atmosphere. Apparently pH adaptable, growth is stunted on dry soils. Provide irrigation during the summer or locate in an area with moist soil.

A few of the many cultivars include: ‘Atrovirens’, excellent shining green foliage; ‘Canadian Gold’, golden foliage; and ‘Fastigiata’ (‘Hogan’), dense columnar silhouette, very resistant to bagworms - they do not appear to infest this cultivar as much as the species.

Propagation is by seed or cuttings.

**Pests and Diseases**

No pests or diseases are of major concern but may be occasionally bothered by bagworm.