



## *Thuja occidentalis* White-Cedar<sup>1</sup>

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### INTRODUCTION

This slow-growing tree reaches 25 to 40 feet in height and spreads to about 10 to 12 feet wide, preferring a wet or moist, rich soil (Fig. 1). Transplanting is moderately easy if plants are root-pruned and either balled and burlapped or potted. White-Cedar likes high humidity and tolerates wet soils and some drought. The foliage turns brownish in winter, especially on cultivars with colored foliage and on exposed sites open to the wind.

### GENERAL INFORMATION

**Scientific name:** *Thuja occidentalis*

**Pronunciation:** THOO-yuh ock-sih-den-TAY-liss

**Common name(s):** White-Cedar, Arborvitae, Northern White-Cedar

**Family:** Cupressaceae

**USDA hardiness zones:** 2 through 7 (Fig. 2)

**Origin:** native to North America

**Uses:** hedge; recommended for buffer strips around parking lots or for median strip plantings in the highway; reclamation plant; screen; specimen; no proven urban tolerance

**Availability:** somewhat available, may have to go out of the region to find the tree

### DESCRIPTION

**Height:** 25 to 40 feet

**Spread:** 10 to 12 feet

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

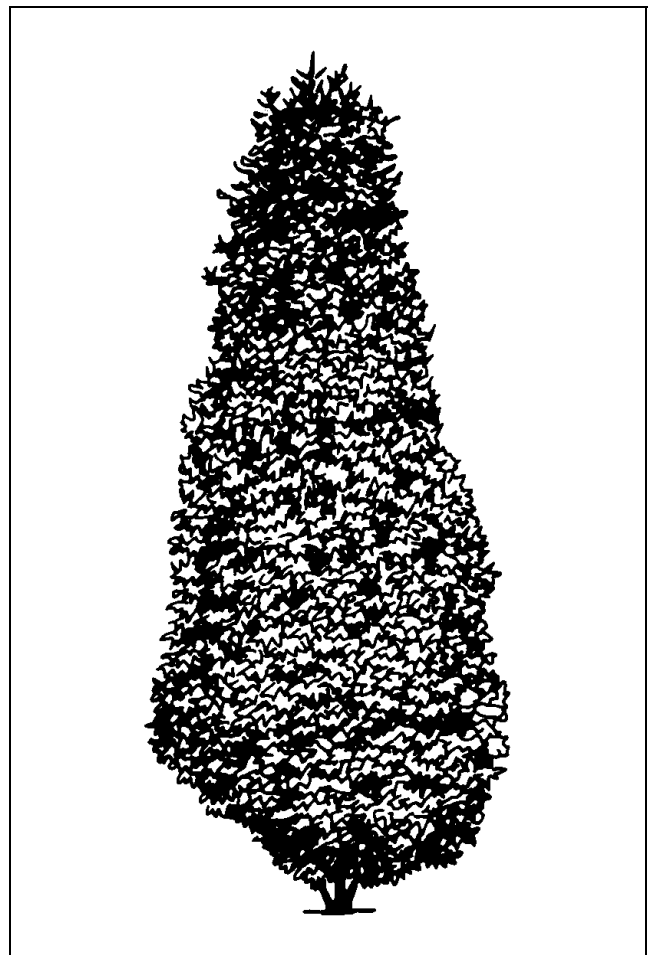


Figure 1. Middle-aged White-Cedar.

**Crown shape:** pyramidal

**Crown density:** dense

**Growth rate:** slow

**Texture:** fine

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Figure 2. Shaded area represents potential planting range.

### Foliage

- Leaf arrangement:** alternate (Fig. 3)
- Leaf type:** simple
- Leaf margin:** entire
- Leaf shape:** 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:** oval
- Fruit length:** < .5 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; not particularly showy; should be grown with a single leader; 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:** 0.31

### Culture

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

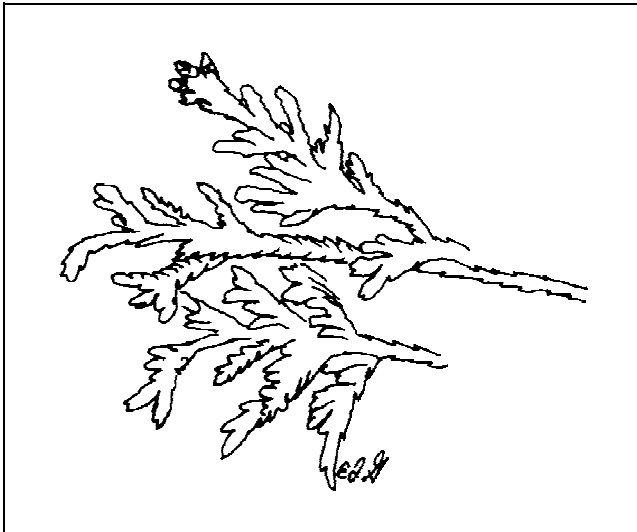


Figure 3. Foliage of White-Cedar.

### Other

**Roots:** surface roots are usually not a problem

**Winter interest:** no special winter interest

**Outstanding tree:** not particularly outstanding

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

**Ozone sensitivity:** tolerant

**Verticillium wilt susceptibility:** not known to be susceptible

**Pest resistance:** very sensitive to one or more pests or diseases which can affect tree health or aesthetics

### USE AND MANAGEMENT

Best used as a screen or hedge planted on 8 to 10-foot-centers. There are better specimen plants but it can be placed at the corner of a building or other area to soften a view. Many of the natural stands in the United States have been cut. Some remain in isolated areas along rivers throughout the East.

White-Cedar has given rise to many cultivars, many of which are shrubs. Cultivars include: 'Booth Globe' - low, rounded with a flat top; 'Compacta' - dense and compact; 'Compacta Erecta' - semi-dwarf, pyramidal; 'Douglasi Pyramidalis' - dense, columnar; 'Emerald Green' - good winter color; 'Ericoides' - dwarf, brownish foliage in winter; 'Fastigiata' - narrow, columnar; 'Globosa' - dense, rounded; 'Hetz Junior' - dwarf, wider than it is tall; 'Hetz Midget' - slow grower, quite dwarf, rounded; 'Hovey' - low and rounded; 'Little Champion' - globe shaped; 'Lutea' - yellow foliage; 'Nigra' - dark green foliage in winter, pyramidal; 'Pumila' (Little Gem) - rounded, dwarf; 'Pyramidalis' - narrow pyramidal form; 'Rheingold' - rounded form with yellow to bronze new growth;

'Rosenthalli' - dense, pyramidal; 'Techny' - pyramidal, dark green, hardy; 'Umbraculifera' - flat topped; 'Wareana' - low and dense, pyramidal; 'Woodwardii' - rounded and spreading.

### Pests

Arborvitae leaf miner mines out the leaf tips, causing them to turn brown. Translucent areas are seen where the miner has been active.

Scales of several types infest the stems and foliage. Sprays of horticultural oil control overwintering stages.

Mites cause yellowing and speckling of the foliage. The mites are seldom noticed because they are so small.

Bagworms can devour large quantities of foliage very quickly.

### Diseases

Leaf blight causes brown spots on the leaves in late spring. The affected foliage appears scorched, then drops.