

Thuja occidentalis: White-Cedar¹

Edward F. Gilman and Dennis G. Watson²

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. 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: 2A through 7B (Fig. 2)

Origin: native to North America

Invasive potential: little invasive potential

Uses: screen; hedge; specimen; reclamation; highway median

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

Crown shape: pyramidal

Crown density: dense

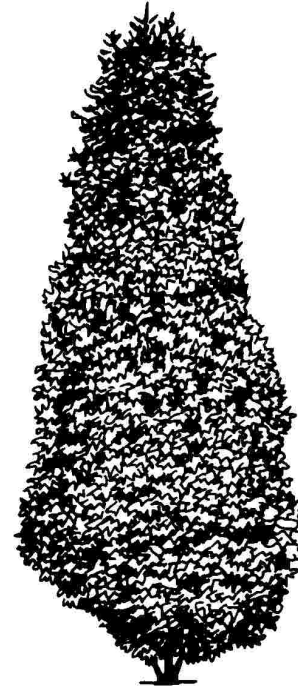


Figure 1. Middle-aged *Thuja occidentalis*: White-Cedar

Growth rate: slow

Texture: fine

Foliage

Leaf arrangement: alternate (Fig. 3)

Leaf type: simple

Leaf margin: entire

Leaf shape: scale-like

Leaf venation: none, or difficult to see

1. This document is ENH-787, one of a series of the Environmental Horticulture, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date November 1993. Revised December 2006. Reviewed May 2011. Visit the EDIS website at <http://edis.ifas.ufl.edu>.

2. Edward F. Gilman, professor, Environmental Horticulture Department; Dennis G. Watson, former associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

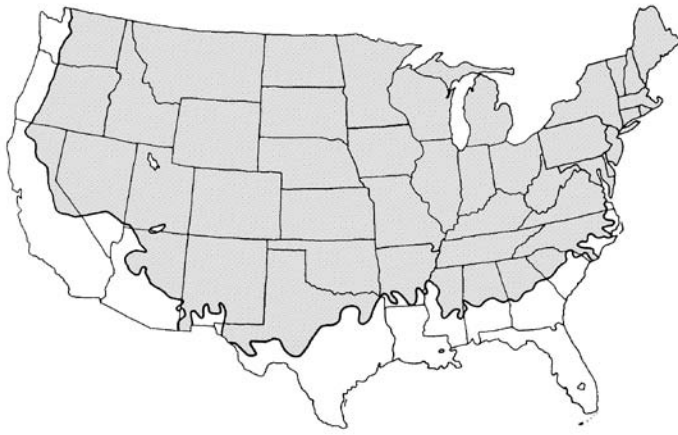


Figure 2. Range

Leaf type and persistence: evergreen, fragrant

Leaf blade length: less than 2 inches

Leaf color: green

Fall color: no color change

Fall characteristic: not showy

Flower

Flower color: yellow

Flower characteristics: not showy

Fruit

Fruit shape: cone, oval

Fruit length: less than .5 inch

Fruit covering: dry or hard

Fruit color: brown

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

Trunk and Branches

Trunk/bark/branches: branches don't droop; not showy; typically one trunk; thorns

Pruning requirement: little required

Breakage: resistant

Current year twig color: green, brown

Current year twig thickness: thin

Wood specific gravity: 0.31

Culture

Light requirement: full sun, partial sun or partial shade

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

Drought tolerance: moderate

Aerosol salt tolerance: low

Other

Roots: not a problem

Winter interest: no

Outstanding tree: no

Ozone sensitivity: tolerant

Verticillium wilt susceptibility: resistant

Pest resistance: sensitive to pests/diseases

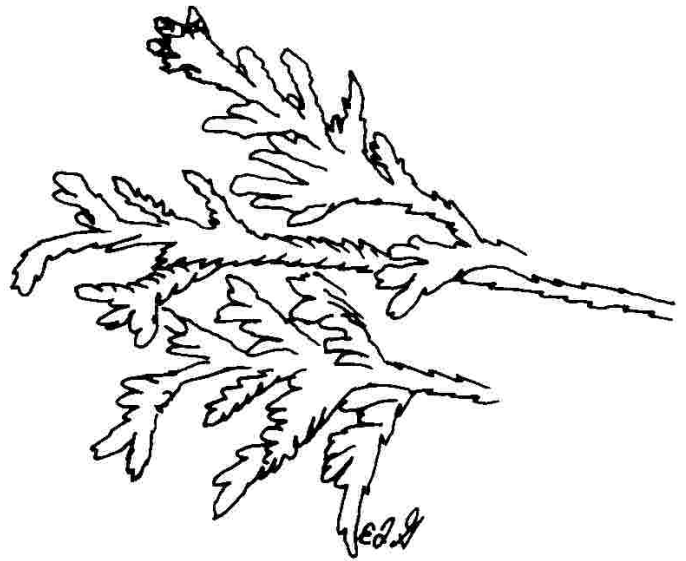


Figure 3. Foliage

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; 'Rosenthalii' - 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.