

# *Pinus strobus* 'Glauca': 'Glauca' Eastern White Pine<sup>1</sup>

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## Introduction

This variety of eastern white pine has light blue-green needles borne in groups of five. Unlike the species, needle color is fairly consistent from one tree to the next. The species is the state tree of Maine and Missouri. Although the species can grow more than 100 feet tall with a three- to five-foot-diameter trunk and spread of 50 to 60 feet, this cultivar usually grows somewhat shorter in landscapes. Growth is very rapid at first but slows down with age.

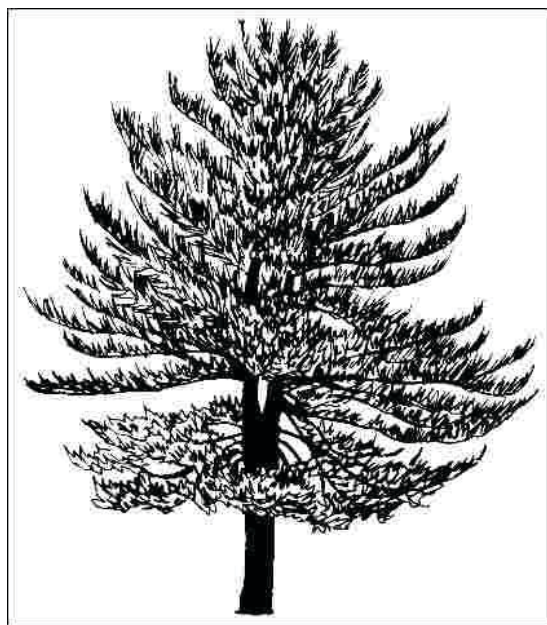


Figure 1. Middle-aged *Pinus strobus* 'Glauca': 'Glauca' eastern white pine.  
Credits: UF/IFAS

## General Information

**Scientific name:** *Pinus strobus*

**Pronunciation:** PIE-nus STROE-bus

**Common name(s):** 'Glauca' eastern white pine

**Family:** *Pinaceae*

**USDA hardiness zones:** 3A through 7B (Figure 2)

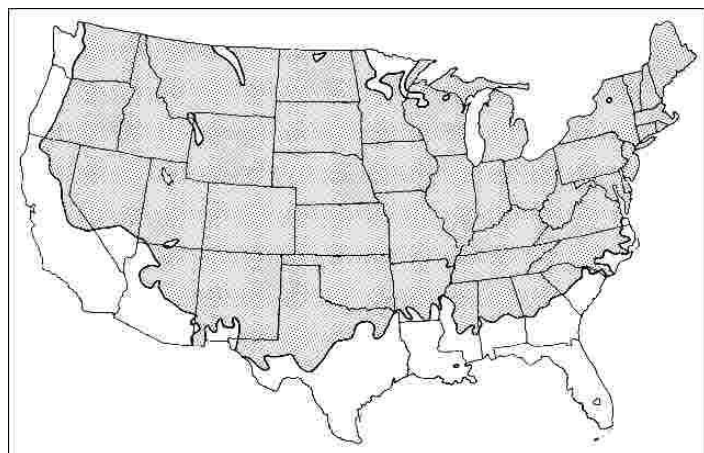


Figure 2. Range.  
Credits: UF/IFAS

**Origin:** native to North America

**Invasive potential:** not assessed/incomplete assessment

**Uses:** Bonsai; specimen; screen; hedge; shade; highway median; Christmas tree

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## Description

**Height:** 50 to 80 feet

**Spread:** 50 to 60 feet

**Crown uniformity:** symmetrical

**Crown shape:** pyramidal, oval

**Crown density:** moderate

**Growth rate:** moderate

**Texture:** fine

## Foliage

**Leaf arrangement:** alternate (Figure 3)

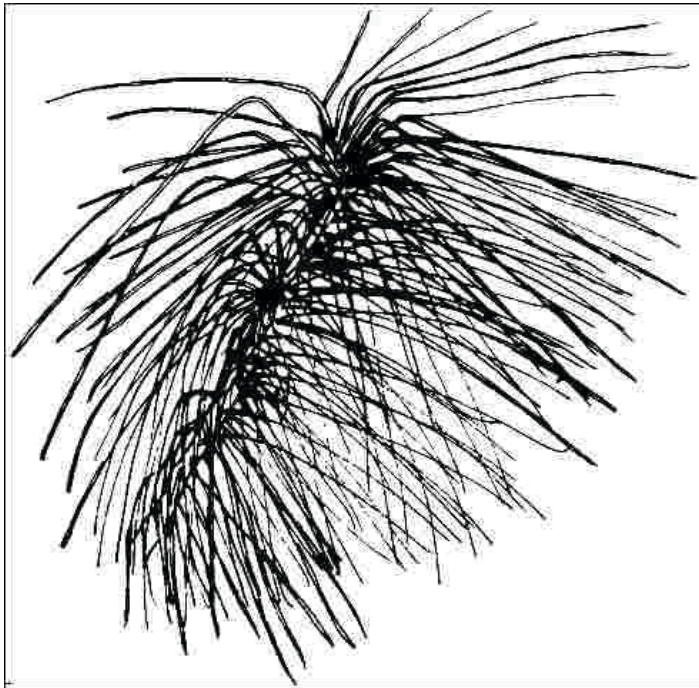


Figure 3. Foliage.  
Credits: UF/IFAS

**Leaf type:** simple

**Leaf margin:** entire

**Leaf shape:** needle-like (filiform)

**Leaf venation:** parallel

**Leaf type and persistence:** fragrant, evergreen, needled evergreen

**Leaf blade length:** 2 to 4 inches

**Leaf color:** blue or blue-green

**Fall color:** no color change

**Fall characteristic:** not showy

## Flower

**Flower color:** yellow, pink

**Flower characteristics:** not showy

## Fruit

**Fruit shape:** elongated, cone

**Fruit length:** 6 to 12 inches

**Fruit covering:** dry or hard

**Fruit color:** brown

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

## Trunk and Branches

**Trunk/bark/branches:** branches droop; showy; typically one trunk; thorns

**Pruning requirement:** little required

**Breakage:** susceptible to breakage

**Current year twig color:** green, brown

**Current year twig thickness:** thin

**Wood specific gravity:** 0.35

## Culture

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

**Soil tolerances:** sand; loam; acidic; well-drained

**Drought tolerance:** moderate

**Aerosol salt tolerance:** none

## Other

**Roots:** not a problem

**Winter interest:** no

**Outstanding tree:** no

**Ozone sensitivity:** unknown

**Verticillium wilt susceptibility:** resistant

**Pest resistance:** sensitive to pests/diseases

## Use and Management

Several branches on young trees normally originate from the same point on the trunk forming a tree appearing to be built of layers of foliage. Although young trees are pyramidal and usually grow with one central leader, the layers (or whorls) of horizontal branches give white pine a distinctive appearance in middle and old age. The gray bark on the trunk and large branches remains unusually smooth through middle age, breaking up into elongated blocks in old age. Be sure to purchase only certified rust-resistant plants.

The lower branches are retained, making white pine an excellent candidate for specimen use, although group plantings with trees spaced 15 to 25 feet apart add a soft accent to any landscape. Planted 8 to 15 feet apart they are one of only a few pines which makes a nice hedge or screen of soft foliage. They are also used as a Christmas tree. Pinch or clip the candles as the needles begin to emerge.

Root systems are usually shallow and highly branched with many fine roots close to the surface of the soil. Trees transplant well balled and burlapped or from containers. The wood is soft and is popular as a lumber tree in the northern part of the country.

Young white pines are quite tolerant of half-day shade while mature white pines prefer a sunny location and tolerate loamy, moist, well-drained soils. They do not grow well and often die on clay or on soil with a pH above 7. Trees appear to have little tolerance for drought, soil compaction and heat and should be used only in the cooler climates. Eastern white pine is susceptible to salt injury from roads or drain fields and is sensitive to air pollution (particularly ozone and sulfur dioxide).

There are a few other cultivars: 'Fastigiata'—nearly columnar habit; 'Nana'—a dwarf, compact with short needles; 'Pendula'—weeping; 'Prostrata'—absolutely prostrate.

## Pests

White pine weevil is probably the biggest problem. The larvae of white pine weevils feed on the sapwood of the leaders. The leader is killed and the multiple shoots replacing it form a bushy head of needles. First symptoms are

pearl white drops of resin on the leaders. The leaders die when the shoot is girdled as adults emerge in summer.

Some adelgids will appear as white cottony growths on the bark. All types produce honeydew which may support sooty mold. European pine shoot moth causes young shoots to fall over. Infested shoots may exude resin. The insects can be found in the shoots during May.

Bark beetles bore into trunks making small holes scattered up and down the trunk. The holes look like shotholes. Stressed trees are more susceptible to attack. Keep trees healthy.

Sawfly larvae caterpillars are variously colored but generally feed in groups on the needles. Some sawfly larvae will flex or rear back in unison when disturbed. Sawflies can cause rapid defoliation of branches if left unchecked.

Pine needle miner larvae feed inside needles causing them to turn yellow and dry up.

Pine needle scale is a white, elongated scale found on the needles. Pine tortoise scale is brown and found on twigs. Depending on the scale, horticultural oil may control overwintering stages.

Pine spittle bug lives and hides in a foamy mass.

Spruce mites cause damage to older needles, and are usually active in the spring and fall. Mites cause older needles to become yellowed or stippled.

Zimmerman pine moth larvae bore into the trunk. The only outward symptoms may be death of parts of the tree or masses of hardened pitch on the branches.

## Diseases

Procerva root rot kills most white pines planted off site. Avoid planting in dry sites and never plant in clay or alkaline soil.

White pine blister rust attacks white pine and uses currant as an alternate host. European black currant, the favored alternate host, may be banned from certain areas. Other currants, particularly red currant, should not be grown within 300 feet of pines. Infected branches may be pruned off. Be sure to select white pine trees certified to be rust-resistant.

Canker diseases may rarely cause dieback of landscape pines. Keep trees healthy and prune out the infected branches.

Needle cast is common on small trees and plantation or forest trees. Infected needles yellow and fall off.

White pine decline is used to describe the slow decline of trees planted in dry, clay soils low in organic matter. Plants with this disorder have only a small cluster of needles at the ends of the branches.