

Plant Profiles: HORT 2242 Landscape Plants II

Botanical Name: *Pinus strobus*

Common Name: eastern white pine, white pine

Family Name: Pinaceae- pine family

General Description: *Pinus strobus* is native across much of eastern Canada, eastern United States and the upper Midwest where it is among the tallest conifers in the forest reaching over 100 feet. In the Chicago area it is native in only a few counties around Lake Michigan. White pine is a fast growing, soft textured evergreen tree often used in the landscape. However, due to its large size and broad spreading branches it is best suited for large commercial or public sites. It is not tolerant of most urban conditions especially high pH soils and salt spray. When under environmental stress, *Pinus strobus* will often become chlorotic producing yellow-green needles. This should not be confused with the naturally occurring yellow-green fall/winter foliage that occurs on some white pines. There are many landscape worthy cultivars of white pine selected for a wide variety of size, shape, form and color.

Zone: 3-7

Resources Consulted:

Davis, Becke. "ILCA Presents-Pines: A Perpetual Favorite." *Landscape Contractor* May 2003: 29-33. Print.

Dirr, Michael A. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Champaign: Stipes, 2009. Print.

"The PLANTS Database." *USDA, NRCS*. National Plant Data Team, Greensboro, NC 27401-4901 USA, 2014. Web. 17 Mar. 2014.

Swink, Floyd, and Gerould Wilhelm. *Plants of the Chicago Region*. Indianapolis: Indiana Academy of Science, 1994. Print.

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Creation Date: 2014

Keywords/Tags: Pinaceae, tree, conifer, cone, needle, evergreen, *Pinus strobus*, eastern white pine



Whole plant/Habit:

- **Description:** *Pinus strobus* is a fast growing tree with strong apical dominance in youth. It is easy to identify from a distance due to its soft texture, light green color, and space between the branch whorls. When young the branches are somewhat ascending.
- **Image Source:** Karren Wcisel, TreeTopics.com
- **Image Date:** December 28, 2010
- **Image File Name:** white_pine_1240158.png



Whole plant/Habit:

- Description: As *Pinus strobus* matures the branches become horizontal and broad spreading.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: December 28, 2010
- Image File Name: white_pine_1240490.png



Whole plant/Habit:

- Description: The branching pattern is irregular creating a picturesque pagoda shape.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: November 28, 2008
- Image File Name: white_pine_1080879.png



Bark:

- Description: The bark of white pine is gray, thin and smooth when young becoming darker and deeply fissured with age.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: October 1, 2008
- Image File Name: white_pine_1050150.png



Branch/Twig:

- Description: The stems are slender with thin smooth gray or gray/green bark.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 10, 2008
- Image File Name: white_pine_2613.png



Branch/Twig:

- Description: The needles only remain on the stem for two (sometimes three) years. The inner needles turn yellow and drop in late fall. Delicate bundles of needles at the tip of slender branches are a useful identification feature.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: October 1, 2008
- Image File Name: white_pine_1050151.png



Bud:

- Description: Buds are not an important identification feature.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: January 19, 2014
- Image File Name: white_pine_4286.png



Flower:

- Description: Though not true flowers the reproductive structures on pines are often referred to as such. Pines are monoecious; producing male pollen cones (on left) and separate female seed cones (on right) all on the same plant. Male pollen cones are clustered at the base of new growth. Female cones form near the tip of new growth. The color phases can vary according to species. Note: This photo is meant to show general images for “flowers”. The images are not from the same pine species and may not be of the same species referenced in this Plant Profile.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: Early June
- Image File Name: pinus_flower-00.png



Cone:

- Description: The cones of white pine are long (4-7 inches) and narrow (about 1 inch wide).
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 10, 2008
- Image File Name: white_pine_2612.png



Cone:

- Description: The cones are brown at maturity and generally fall off at the end of the second season. As with all conifers, cones are an excellent identification tool.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: January 29, 2011
- Image File Name: white_pine_1240910.png



Leaf Number/Attachment:

- Description: *Pinus strobus* is a 5-needle pine. The fascicle sheath is deciduous, falling off soon after needles emerge. This is typical of all 5-needle pines.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 10, 2008
- Image File Name: white_pine_2611.png



Leaf Number/Attachment:

- Description: The needles are thin, fine, soft to the touch and flexible. The white stomatal lines give the needles a bluish-green appearance. The needle characteristics provide good identification features from a distance as well as upon close inspection.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: September 12, 2010
- Image File Name: white_pine_1190948.png



Leaf Number/Attachment:

- Description: Evergreens do lose their needles! Just look under any pine, especially white pine, as it has an impressive annual needle drop.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: July 5, 2008
- Image File Name: white_pine_1890.png

**Winter interest:**

- Description: The picturesque pagoda shape and soft texture look especially nice with snow laden branches. In this grove of white pines notice the yellow/green winter foliage of the white pine in the forefront. This is a typical color for white pine in the winter.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: January 19, 2014
- Image File Name: white_pine_4352.png

**Special ID feature(s):**

- Description: The smooth gray stems with space between the whorls of branches (long internodes) and soft, fine foliage held at the tips is a dead giveaway for identifying *Pinus strobus*.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: November 28, 2008
- Image File Name: white_pine_1080904.png