



# Project BudBurst

A National Phenology Network Field Campaign for Citizen Scientists



www.budburst.org

**Common Name:** Eastern White Pine  
**Scientific Name:** *Pinus strobus*  
**Plant Family:** Pinaceae



Photograph by J.S. Peterson @ USDA-NRCS PLANTS Database



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## Phenological observation:

Budburst/First Leaf, Full Leaf, First Flower, Full Flower, End of Flower, Seed Dispersal

## Identifying Characteristics:

**Size:** Large up to 40 meters (130 feet) and almost 6 meters (20 feet) in diameter coniferous evergreen tree with distinctive thick scaly plate bark. They are the largest conifer of the eastern and upper Midwest forests.

**Leaves:** The evergreen needles (leaves) are found in clusters of 5, soft, flexible, 6 to 12 cm (2.5 to 5 inches) long, straight to twisted, and bluish-green with white stripes on bottom (stomata).

**Flowers:** Male cones yellow, turning brown when they shed pollen, elliptical in shape about 1.25 cm (0.5 inches) long. They occur mostly at the base of new twigs (shoots), on older lateral branches on lower part of tree. Female cones are elliptical to cylindrical gray-brown sometimes with purple tint, 7.5 cm (3 inches) or more in length. First flower is defined as when you first see pollen on the male cones, full flower is when >50% of the branches have cones with pollen, and last flower is when you no longer see pollen on the cones. Note that in some trees male cones are not produced every year.

**Fruits (Cones):** The cones are about 10 to 20 cm (4 – 8 inches) long and 2.5 cm (1 inch) thick. These remain attached for 1 to several months after ripening in the autumn of the second season. Cone production peaks every 3 to 5 years. Seed dispersal is defined as when cone scales turn from green to yellow-green or light brown. Dispersal generally occurs between mid August and late September depending on elevation and latitude.

**Bark:** On young trees, the bark is thin, smooth, and greenish-brown in color. On older trees the bark becomes thick, deeply fissured and dark grayish brown.



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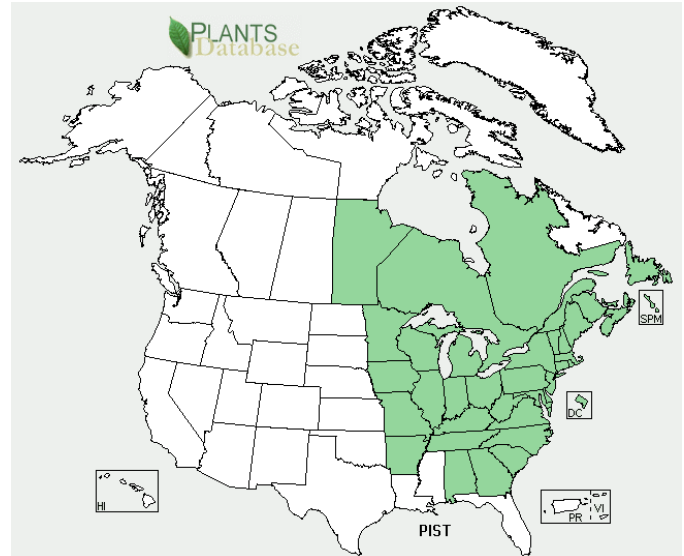
**Habitat:** Eastern white pine prefers well-drained sandy soil and cool, humid climates, but can also grow in boggy areas and rocky highlands.

**Bloom time:** Pollen dispersal generally occurs in May and June.

Information sources:  
USDA ([plants.usda.gov/plantguide](http://plants.usda.gov/plantguide))

**Did you know?** White pine has the most valuable and versatile wood of any tree in the East. During the age of sail, the tall trees with their high quality wood were valued for masts. In colonial times, many trees were marked with a broad arrow reserving them for use by the British Royal Navy. Today, wood from the eastern white pine is used for all forms of lumber and structure, for cabinets, toys, boxes, and similar items. It is frequently used for windbreaks and screens long fields and new right of ways. White pine bark is used as an astringent and an expectorant, and the wood has been used to produce tar. Pines are also good at stabilizing strip mine spoils.

## Distribution Area:



Map courtesy of USDA-NRCS PLANTS Database ([plants.usda.gov](http://plants.usda.gov))