Fact Sheet: White Poplar

White Poplar

Populus alba L.
Willow family (Salicaceae)

NATIVE RANGE

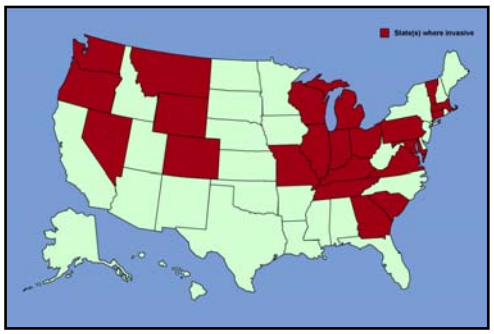
Central and southern Europe to western Siberia and central Asia

DESCRIPTION

White poplar, also known as silver-leaved or silverleaf poplar, is a tall tree that, at maturity, may reach 70 feet or more in height and 2 feet in diameter. The smooth, greenish-white bark becomes dark and rough on older trees. Young green or brown twigs are coated with dense woolly hair, especially near the tip. A cross-section of the stem reveals a five-pointed, star-shaped pith. The 2 to 5-inch long leaves are oval to maple-leaf in shape with 3-5 broad teeth or lobes, and are dark green above and covered with dense white hair below. Male and female flowers are borne in catkins on separate trees and appear sometime in March and April. The small seeds are adorned with cottony fluff that is easily blown by the wind in late spring, and is a bane to many landscape maintenance workers.

ECOLOGICAL THREAT

White poplar outcompetes many native tree and shrub species in mostly sunny areas, such as forest edges and fields, and interferes with the normal progress of natural community succession. It is an especially strong competitor because it can grow in a variety of soils, produce large seed crops, and resprouts easily in response to damage. Dense stands of white poplar prevent other plants from coexisting by reducing the amount of sunlight, nutrients, water and space available.



DISTRIBUTION IN THE UNITED STATES

White poplar is found in forty-three states throughout the contiguous U.S.

HABITAT IN THE UNITED STATES

White poplar seems to grow best in full sun habitats such as fields, forest edges and wetland fringes.

BACKGROUND

White poplar was first introduced to North America in 1748 and has a long history in cultivation. It is chiefly planted as an ornamental for its attractive leaves of contrasting color (i.e., green above, white below). It has escaped and spread widely from many original planting sites. Because it is susceptible to a wide variety of pest insects and diseases, and is easily damaged by storms and wind, the ornamental value of white poplar is low.

BIOLOGY & SPREAD

Local spread of white poplar is primarily by vegetative means, through root suckers. Root suckers arise from adventitious buds on the extensive lateral root system. Large numbers of suckers from a single tree can quickly develop into a dense colony. Suckering can occur naturally or as a result of damage or other disturbance to the parent plant. Mature white poplar trees produce thousands of wind-dispersed seeds that may be carried long distances. However, seed germination of white poplar appears to be very low in the U.S.

MANAGEMENT OPTIONS

White poplar can be controlled using a variety of physical and chemical controls. Removal of seedlings and young plants by hand will help prevent further spread or establishment. Plants should be pulled as soon as they are large enough to grasp. The entire root system, or as much of it as possible, should be removed to prevent resprout from fragments. Hand removal of plants is best achieved after a rain, when the soil is loose.

Trees of any size may be felled by cutting at ground level with power or manual saws. Because resprouts are common after cutting, this process may need to be repeated many times until the reserves of the tree are exhausted. Girdling, which kills the tree by severing tissues that conduct water and sugars, also may be effective for large trees, especially if accompanied by application of a systemic herbicide to the cut area. A hatchet or saw is used to make a cut through the bark encircling the base of the tree, approximately six inches above the ground and deep into the bark. Girdling will kill the parent tree but may require follow-up cutting or treatment of sprouts with an herbicide.

Chemical
Chemical control of white poplar seedlings and small trees has been achieved by applying a 2% solution of glyphosate (e.g., Roundup®) or triclopyr (e.g., Garlon® 3) and water plus a 0.5% non-ionic surfactant to the foliage until the leaves are thoroughly wet. Use of low pressure and a coarse spray with large droplet size will reduce spray drift and damage to non-target plants.

NOTE: Because glyphosate is a non-selective systemic herbicide, it may kill other grasses, broad-leaved herbaceous and woody plants that it contacts. Triclopyr kills broadleaf (dicotyledonous) plants but causes little or no damage to grasses and is useful for areas where desirable grasses are to be maintained.

The cut stump herbicidal method should be considered when treating individual trees or where the presence of desirable species precludes the use of foliar herbicides. Stump treatments can be made at any time of year as long as the ground is not frozen. After cutting the tree near ground level, a 25% solution of glyphosate or triclopyr and water is applied to the stump by spray bottle or brush, making sure to cover the outer 20% of the stump. Basal bark herbicidal treatment is also effective throughout the year, as long as the ground is not frozen, and does not require cutting of the tree. A mixture of 25% triclopyr in an ester formulation (e.g., Garlon® 4) and 75% horticultural oil is applied to the bark in a wide band around the base of the tree to a height of 12-15 inches from the ground. Thorough wetting is necessary for good control; spray until run-off is just noticeable at the ground line, but not running off-site.

USE PESTICIDES WISELY: Always read the entire pesticide label carefully, follow all mixing and application instructions and wear all recommended personal protective gear and clothing. Contact your state department of agriculture for any additional pesticide use requirements, restrictions or recommendations.

NOTICE: mention of pesticide products on this page does not constitute endorsement of any material.

CONTACT
For more information on the management of White Poplar, please contact:

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SUGGESTED ALTERNATIVE PLANTS
Hundreds of native tree species are available that can be used in place of white poplar. A few examples, for parts of the eastern U.S. only, include white oak (*Quercus alba*), red maple (*Acer rubrum*), American holly (*Ilex opaca*), persimmon (*Diospyros virginiana*), and sweetgum (*Liquidambar styraciflua*). Check with your local native plant society for further suggestions on trees native to your area and where you can purchase them.

OTHER LINKS
- http://www.invasive.org/search/action.cfm?q=Populus%20alba
- http://www.lib.uconn.edu/webapps/ipane/browsing.cfm?descriptionid=87

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