

Atlantic white-cedar

Chamaecyparis thyoides



Atlantic white-cedar (AWC), an evergreen cone-bearing tree found in swamps and bogs on the east coast, is valued not only for its rot resistant wood, but also for the habitat it provides many unique species of plants and animals. Since the settlement of America in the early 18th century, people have recognized the value of Atlantic white-cedar. Cedar totals have fallen dramatically since that time and only 22% of original cedar stands still exist. The New Jersey Forest Service values this unique species and promotes its active management to reverse this declining trend. Through these efforts, New Jersey Forest Service strives to restore AWC forest type to our landscape.

Description

Height	40' - 90'
Spread	10' - 20'
Shape	Pyramidal & Narrow
Growth rate	Moderate
Light requirement	Full Sun
Soil requirement	Damp/Wet

Products

Atlantic white-cedar wood is lightweight, resistant to decay, aromatic, and shrinks and warps very little. In colonial times it was used for shingles, siding, barrels, and boats. The wood and products were also a chief export in this area. Today, AWC wood is commonly used for fencing, decoys, outdoor furniture, and decking. Landscapers occasionally use this tree as an ornamental.

Benefits

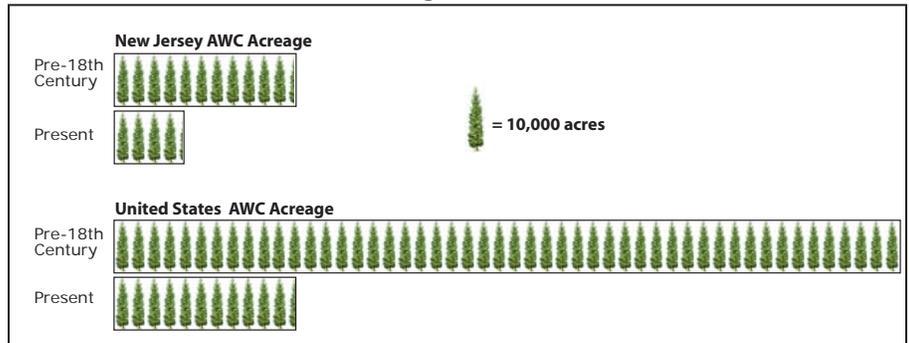
Stands of AWC provide many unique benefits for the environment. AWC swamps filter and absorb pollutants, protect stream banks from soil erosion, control and retain flood waters, and store water in drought. Another notable feature of cedar swamps is that they provide habitat for many species, including the Pine Barrens treefrog, timber rattlesnake, barred owl, black-throated green warbler, and a rare butterfly, Hessel's hairstreak. This butterfly lays its eggs on the foliage of the Atlantic white-cedar. When the larvae emerge, they feed exclusively on Atlantic white-cedar foliage.



Decline of AWC

Pre-18th century, the east coast had as many as 500,000 acres of AWC stands. Many factors affect Atlantic white-cedar. Although changes in land use such as development or agriculture account for the manmade issues, foresters working with Atlantic white-cedar also encounter natural disturbances such as floods, storm damage, salt water intrusion, wildfire, bark beetles, and natural succession conversion to a climax forest of maple and gum species.

Atlantic white-cedar Acreage



Deer

In the early 20th century, deer were scarce because of over hunting. Once tighter restrictions were enforced and the deer restocked, the population increased to the state's carrying capacity by 1935. The current overpopulation of deer has adversely affected cedar growth and sustainability. During the winter, deer browse Atlantic white-cedar, but they do the most damage to young seedlings. Foresters protect Atlantic white-cedar trees from deer by installing fencing around restoration sites, or by placing mesh collars around individual trees to exclude the deer from eating the AWC regeneration.



Fire

The increased incidence of catastrophic wildfire decreased AWC acreage. Fire affects Atlantic white-cedar in two ways. When exposed to fire, even at a low-intensity, seedlings are killed. Even mature cedars cannot withstand fire and usually die after exposure. While fires negatively affect cedar trees, cedar's seeds can withstand fire. If a fire occurs during the wet season, the seed is preserved in the sphagnum moss. A new cedar stand forms from the seed germination. However, if an intense fire burns and consumes the sphagnum moss layer, the seed will be lost.



Beavers and Floods

Beavers have an impact on AWC. Although they have been noted to consume competing vegetation to allow more growing light and room for the AWC seedlings, the beaver's dam affects cedars most. When a beaver dams a stream and the water rises, cedar trees and seedlings die. Once the dam is removed and the affected Atlantic-white cedar trees are harvested, the seed in the sphagnum moss on the ground can regenerate to establish a new young stand of AWC.



For more information on Atlantic white-cedar please contact your regional forester:

North (973) 786-5035
 Central (609) 726-1621
 South (609) 625-1124

References

Little, S. 1959. Silvical characteristics of Atlantic white-cedar (*Chamaecyparis thyoides*). Station Paper NE-118. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station.

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New Jersey Forest Service. 1997. Forest health action update: Atlantic white-cedar decline. Trenton: New Jersey Department of Environmental Protection, New Jersey Forest Service.



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