

ATLANTIC WHITE CEDAR

Chamaecyparis thyoides (L.)
B.S.P.

Plant Symbol = CHTH2

Contributed by: USDA NRCS New York State Office



Robert H. Mohlenbrock
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Uses

Buffers: Atlantic white cedar is not often used due to its exacting site requirements, but has potential for use on coastal buffer sites, in wetlands, and for recreating cedar swamps.

Wildlife: This species is a highly preferred food of deer during winter stress periods. It can easily be browsed out as seedlings or saplings with extensive damage done.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Atlantic white cedar is one of only six species in this genus. Only three of the six are native to the continent, and two of them are west coast species. This leaves Atlantic white cedar as the only representative in the East, where it occurs in a narrow band along the Atlantic coast. Atlantic white cedar is an evergreen with scaly leaves that occur in a flat fern-like appearance. This species usually grows in very dense, solid stands, and has small rounded cones.

However, Atlantic white cedar can be confused with arborvitae (also called northern white cedar -*Thuja occidentalis*) which also occurs in the region where the ranges overlap in New York and New England. In Atlantic white cedar, the evergreen leaves are paired and have short points on the tip. Arborvitae has leaves that are more rounded-appearing to the naked eye but also have short points when viewed closely or with a lens. Arborvitae has cones of similar size but are more elongated than those of Atlantic white cedar.

Adaptation and Distribution

Atlantic white cedar is adapted to acid (pH 5.5 or lower), wet, lowland sites within 200 feet elevation of seas level. The growing season is about 140 days or longer. The habitat of this species is very limited, and increasingly rare due to coastal development. Associated trees include red maple, black gum, white pine, hemlock, gray birch, and pitch pine. Associated shrubs include lowbush and highbush blueberry. The great range in latitude that white cedar occupies (from Maine to Florida) helps account for the broad species association.

Arborvitae has a much broader longitudinal and elevational range, and is adapted to soils that are slightly acid to alkaline. Arborvitae grows on upland and lowland sites, and in areas with growing seasons as short as 30 days up to 200 days.

Both species can be grown on wet, lowland sites with moderate acidity.

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Due to the dense stands which white cedar often creates, it should not be surprising that 8-9 million seeds per acre may be disbursed in a decent seed crop. These seeds are winged and very light, and may be carried long distances by strong winds. Seed dormancy is common and seed can remain viable in the forest litter for many years. Light and moisture are required for germination to occur, and continuous moisture appears to be mandatory. Seedlings grow to saplings at the rate of about 12 inches per year on favorable sites with open but moist conditions. Seedlings are very vulnerable to crowding from other species.

White cedar seedlings are not commonly grown in the nursery, so little is documented about the size and age of transplants. It is likely that the 1-0 class would be preferred as bare-root stock. White cedar has a shallow root system, so suitable planting sites must have abundant moisture very close to the surface.

Management

Site selection is critical to the success of white cedar. Moisture must be reliable, and competition from other species must be controlled. The site must also have protection from high winds or else severe wind-throw will result. Fire will readily kill white cedar if it gets into the crowns. Finally, heavy ice and snow will often break or topple young trees. Deer will preferentially browse white cedar. Beaver presence favors white cedar as deciduous species are preferentially cut by them, leaving the cedar saplings or poles.

Pests and Potential Problems

No insect or diseases pose serious threats.

Cultivars, Improved, and Selected Materials (and area of origin)

None are known to exist.

Prepared By & Species Coordinator:

John Dickerson, Retired
USDA NRCS New York State Office, Syracuse, New York

Edited: 01Feb2002 JLK; 01jun06 jsp

For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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