

# Northern Atlantic White Cedar Swamp

State Rank: S1 - Critically Imperiled



Small AWC tree. Photo: Steven Roble, NHESP.

**Description:** Northern Atlantic White Cedar Swamps (AWCS) are restricted to basins over 1100 feet, the highest known elevation for Atlantic white cedar (AWC) in the state. As with all AWCS, water-saturated peat overlies the mineral sediments, and standing water generally occurs for over half of the growing season. The water and soil are nutrient-poor, and particularly low in nitrogen and

Northern Atlantic White Cedar Swamps are a type of mixed conifer swamp with Atlantic white cedar in the tree canopy. This nutrient-poor community type is restricted to basins at high elevations.

phosphorus. There is a high iron content in the soil; the iron (called "bog iron") was mined in the early days of manufacturing. Soil pH is acidic (3.1-5.5) and leaf litter decomposition is slow. Because of the dominance of conifers in the canopy, occurrences may be dark and have limited understory growth. Fallen and tipped trees are common.

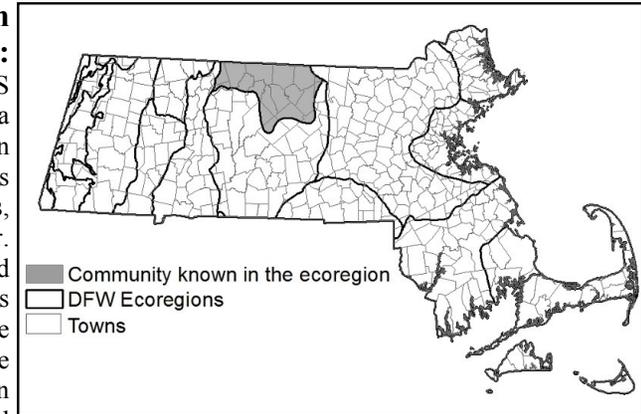


Bunchberry, a cool area species found in Northern AWCS. Photo: P. Swain, NHESP.

**Characteristic Species:** All AWCS are defined as having >25% cover of AWC in the canopy. Plants that commonly co-occur with AWC include red maple, high-bush blueberry, and swamp azalea. The ground layer is dominated by Sphagnum mosses. Northern AWCS are dominated by northern conifers such as black and red spruce and balsam fir; AWC occurs as an associate at about 30% cover. Shrubs and herbs also include species of cool northern areas, such as mountain holly, creeping snowberry, bunchberry, Labrador tea, and rhodora.

## Differentiating from Related Communities:

Although each of the AWCS community types has a characteristic vegetation structure and composition, as with all natural communities, transitions and mixes occur. Northern AWCS are restricted to basins at high elevations with the known example >1100 ft. Northern AWCS are codominated by northern conifers such as black and red spruce and balsam fir. Shrubs and herbs include typically northern species such as



Creeping snowberry with white fruit. Photo: Rob Routledge, Sault College, Bugwood.org.

Labrador tea and rhodora as well as creeping snowberry and bunchberry that also are found in high-elevation variant Inland AWCS. Inland AWCS typically occur at elevations <1000 ft. and lack the full set of northern species. Red Spruce Swamps may occur near Northern AWCS, but red spruce dominates the overstory and AWC is seldom present, and then <25% canopy cover. AWC Bogs are relatively open peatland communities with tree canopy cover <25%, including AWC.

## Habitat for Associated Fauna:

AWCS contribute variation to the habitats of wide-ranging wildlife species. Young AWC thickets provide excellent cover for deer, rabbits and birds. Swamps provide vernal pool habitat if water remains for 2-3 months and they lack fish.

## Examples with Public Access:

Westminster State Forest, Westminster.



Labrador tea in flower. Photo: Bryan Connolly, NHESP.

