



# Eastern Hemlock

*Tsuga Canadensis (L.) Carr.*

By **Coleen Vansant**, Information Manager, Alabama Forestry Commission

**A**lthough not found in very many places in Alabama, the Eastern hemlock with its graceful lacy foliage is one of our most beautiful trees. If you want to see one, you'll have to go to the northern part of the state.

For those who have ever seen an Eastern Hemlock, particularly when they are in a small stand, the most memorable thing about it is the smell. It's indescribable yet unforgettable. Most people say it smells spicy, piney, sharp, crisp, clean, or any combination of these.

Native hemlock grows from Labrador west to Wisconsin and Minnesota and south to the mountains of north Georgia and north Alabama. Jefferson County is the southern limit in the state. The largest concentration in Alabama is in the Bankhead Forest and Sipsey Wilderness area in Winston and Lawrence counties.

The Eastern hemlock prefers acid soils and is most often found with hickories, yellow-poplar, and oaks. It is the most shade tolerant of the eastern conifers. It is usually found in moist cool valleys, on north facing slopes, in older forests, and along rocky stream valleys. Hemlock grows slowly, but can grow up through almost any forest type when healthy. When growing in a pure stand, they are almost magical with their dark shade, their straight, tall trunks and their clear forest floor. Hemlock may remain in the understory in natural stands for hundreds of years. Very few plants can grow with the little light in a hemlock stand.

The tree is usually 60-80 feet high with a trunk diameter of 2-3 feet. It often has a broad-based pyramidal shape with the lower branches drooping and sweeping the ground.

Hemlock is the only conifer that has the shiny green needles on short thread-like stems (petioles). The needles are dark green and two-ranked, flat, blunt pointed, silvery white beneath, with



Photo by Coleen Vansant

two pale lines on the underside. They are one-third to two-thirds of an inch long. The bark is dark silver and flaky on young trees and branches, turning gray brown to cinnamon red. It is thick and roughly grooved when older. Both male (yellow) and female (pale greenish violet) flowers appear on the same tree in May. Hemlocks have the smallest cones of all conifers, about 1/2 inch long, short-stalked, red brown. They remain on the tree during winter and slowly release the winged seed in spring. Although there may be 400,000 seed to the pound, reproduction is rare because few are blown into shady places, which is necessary for germination.

The wood of the hemlock is light, soft, brittle, and difficult to work. There is no distinction between heartwood and sapwood. Both shock and decay resistant, it is used occasionally for rough or construction lumber and for pulpwood. It is also used to build boxes, crates, pallets, casks, shingles, and siding. The bark was once the principal commercial source for tannic acid, used in tanning leather. Pioneers made tea from the leafy twigs and brooms from the branches. It makes a graceful shade or ornamental tree and it can also be trimmed into hedges.

Ruffed grouse, wild turkey, and songbirds find food (seeds) and shelter in this tree. Deer browse it heavily when deep snow makes other food scarce.

Eastern hemlock is the official state tree of Pennsylvania. The National Champion can be found in Great Smokey Mountain National Park in Tennessee. It is 202 inches in circumference, 165 feet tall, with a crown spread of 38 feet for a total point value of 377. The Alabama Champion, located in Winston County, has a circumference of 150 inches, a height of 126 feet, and a spread of 43.5 feet for a total point value of 286.88. 🌲



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