

Needle Features



Eastern hemlock



Balsam fir



Douglas fir



Canada yew

Eastern hemlock needles are about ½ inch long, flat, dark-green on top with two parallel, white stripes underneath. Needles are attached to twigs by small stems.

Balsam fir needles are about ¾ inch long, flat with two white stripes on the underside. Needles have a broad, roundish base or suction cup attachment to the twig.

Douglas fir needles are 1-1 ½ inches long, flat and grooved on the upper surface, ending in a soft point. The undersides have a white stripe on each side of a prominent mid-rib. Needles have a suction-cup attachment to the twig.

Canada yew needles are ½ to 1 inch long, dark green on the top with a pale underside showing a prominent midrib and two light stripes. Needles are sharply pointed and attached by a short stem.

TIP: If needle ends are sharp or pointy, the tree is not a hemlock.

Cones



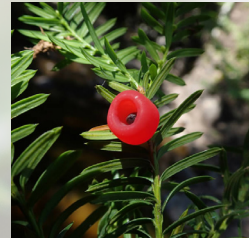
Eastern hemlock



Balsam fir



Douglas fir



Canada yew

Eastern hemlock have small, papery cones about ¾ inch long that hang downward from branches. Cones can remain on trees for several years

Balsam fir cones are 2 to 4 inches long and point upward. Seeds drop in the fall, leaving disintegrated cones or just central stalks on branches.

Douglas fir cones are 1 to 4 inches long and point downward. Look for an upward-facing 3-pointed bract at the end of each scale.

Canada yew bears a cup-shaped, berry-like cone called an aril, up to 3/8 of an inch long, which turns red in the fall and contains a single seed.

TIP: if cones are pointed upward or are longer than 1 inch, the tree is not a hemlock.

A note about hybrid landscape trees:

Nurseries offer a variety of dwarf, cascading or other specialized hybrid hemlock trees. This guide does not cover identification of hybrid varieties; however, these hybrids may be susceptible to hemlock woolly adelgid, an invasive pest that can cause tree death in Eastern hemlocks.

Eastern Hemlock Identification Guide

Coniferous trees, often called “evergreens” can look very much alike. A few tips and comparisons can help you identify the Eastern hemlock.

Eastern hemlock (*Tsuga canadensis*), also known as Canadian hemlock, is a coniferous tree in the pine family (Pinaceae). Highly shade tolerant, Eastern hemlock is found naturally in moist forest environments and along streams and water bodies. Hemlocks also are used in home, urban and park landscapes in many areas.

Hemlock, spruce or pine?

If you aren't sure what type of conifer you have, looking at the needles is a good place to start. Needles with sharp points or ones that are longer than the width of your thumbnail (about 1/2 inch) are not hemlocks. If you can roll the needles between your thumb and fingers, the tree is not a hemlock. Hemlock needles are short, flat and blunt-tipped. They can be distinguished from pines and spruces by the two white "racing stripes" on the undersides of each needle.

Comparing similar trees

The Balsam fir (*Abies balsamea*), Douglas fir (*Pseudotsuga menziesii*) and Canada yew (*Taxus canadensis*) also have short, blunt-tipped, flat needles and share the striping on the needle's underside. A more careful comparison can help you tell the difference between Eastern hemlocks and these similar-looking trees.

Tree Shape



Eastern hemlock



Balsam fir



Douglas fir



Canada yew

Eastern hemlock is a loosely cone-shaped tree up to 75 feet tall with drooping or feathery branches. Often, the tip of the tree, or leader, leans to one side.

Balsam fir is cone shaped, grows to 65 feet tall and has a narrow, spire-like top.

Douglas fir is cone shaped, with the ends of its branches pointing upward. It grows over 100 feet tall.

Canada yew is a low-growing, multi-stemmed shrub reaching 6 feet tall.

Branch Features



Eastern hemlock



Balsam fir



Douglas fir



Canada yew

Eastern hemlock needles grow singly (not in clusters) from the sides of twigs, giving the branch a flat appearance.

Balsam fir needles grow singly and are attached in a spiral around the twig. Needles point upward, sometimes making the branch look flat.

Douglas fir needles grow singly and are spiraled around the branch like a bottle brush.

Canada yew needles grow singly and are spiraled around the branch but twist toward the outer sides, making the branch appear flat.

TIP: If needles attach to twigs in clusters of two or more, the tree is not a hemlock.

