EASTERN HEMLOCK (*Tsuga canadensis)*

Eastern hemlocks have been known to live over 500 years and grow to heights over 150 feet. Because the species is shade tolerant, its seedlings will germinate and grow even in the dense shade created by more mature trees. When one of the overstory trees dies and falls, the young hemlocks respond to the increased sunlight and begin to grow rapidly until it overshadows nearby hardwood competitors creating a hemlock thicket. When a hemlock thicket is finally formed, few other species of tree are able to survive in its shade creating an open forest floor.

Note the short needles that are white on the underside and the flexible branch tips of the hemlock. It's easy to identify a hemlock within a stand of evergreens; its nodding branches and graceful curves soften its profile, while balsam fir and spruce have a distinct, more cleanly defined triangular shape. The hemlock's singular compact needles distributed all along its branches distinguish it from the white pine's long needles, which are scattered in distinct bundles of five near branch ends.

Hemlocks were crucial historically in the tanning industry (https://northernwoodlands.org/articles/article/hemlock-and-hide-the-tanbark-industry-inold-new-york), but now are prized in fence and pole construction as a “green” option because they are very resistant to decay without any additives.

The hemlocks of New Hampshire are now threatened by the hemlock woolly adelgid (*Adelges tsugae*), a sap-sucking insect accidentally introduced from East Asia into eastern North America in 1924. The picture (https://www.agriculture.nh.gov/divisions/plant-industry/hemlock-woolly-adelgid.htm) shows the hemlock wooly adelgid infestation of a hemlock branch. Its egg sac resembles a bit of cotton and are usually located at the base of the needles. The woolly adelgid has not yet been reported Grantham, but it was reported in Charlestown to our southwest in 2014 and New London and Sunapee to our southeast in 2022.