

CT ENVIROTHON Common Tree Diseases and Pests

Without using a key, be able to visually recognize any of the following trees and their associated diseases/pests. Access pictures on Wikipedia or other online resources. Be prepared for several questions from the text on these 2 pages as well as other posted CT Envirothon Forestry Resources.

Tree Species	Pest or Disease	Problem	Severity
White Pine <i>Pinus strobus</i>	White Pine Weevil <i>Pissodes strobi</i>	Small beetle lays eggs on terminal leader and larvae kill the leader. Lateral branches take over and tree becomes permanently crooked.	Harms lumber value due to crooked stems but tree survives. Mostly affects pines in direct sunlight and less than 20ft. tall.
Red Pine <i>Pinus resinosa</i>	Red Pine Scale <i>Matsucoccus resinosa</i>	Introduced insect first seen in CT in 1946. Weakens tree making it susceptible to other diseases and pests.	Created mass die offs of red pine plantations in CT but CT never had many red pine trees to begin with as it is a more northern species.
Pitch Pine <i>Pinus rigida</i>	Southern Pine Beetle <i>Dendroctonus frontalis</i>	Native in the south but global warming is increasing the range northward (recently found in CT – keep an eye out for it and report if seen.	Currently devastating pitch pines in New Jersey Pine Barrens and on Long Island. Recently (2015) found in CT.
Spruce genera <i>Picea sp.</i>	Eastern Spruce Gall Adelgid <i>Adelges abietis</i>	Affected needles collectively grow into a stunted pineapple-shaped gall.	Infested trees have reduced aesthetics and less vigor – though rarely killed
Eastern Hemlock <i>Tsuga canadensis</i>	Woolly Adelgid <i>Adelges tsugae</i>	This alien sap sucking bug introduced in 1924 and continues to spread northward. Warming temperatures associated with climate change may increase hemlock mortality.	Hemlocks in the south are experiencing higher mortality from this invasion. Hemlock dominant riparian ecosystems are being adversely affected.
Eastern Red Cedar <i>Juniperus virginiana</i>	Cedar-Apple Rust <i>Gymnosporangium juniper-virginianae</i>	A disfiguring disease that alternates between two host plants (cedars and apples/hawthorns)	Use of fungicides or removal of 1 host can effectively manage this disease.
Birch Canker <i>Betula sp.</i>	Target Canker <i>Nectria sp.</i>	Fungal spores infect birch trees and create sunken areas of dead tissue in trunk and branches.	Cankers on trunk are untreatable and can kill the tree.

American Beech <i>Fagus grandifolia</i>	Beech Bark Disease <i>Neonectria sp. (2)</i> Beech Scale Insect <i>Cryptococcus fagisuga</i>	1920 Nova Scotia - 1929 start in Massachusetts - Invasive fungus enters tree via invasive scale insect, causes cankers that girdle and kill trees	There is some resistance with a small % of trees and with proper management practices the beech tree can be saved.
American Chestnut <i>Castanea dentata</i>	Chestnut Blight <i>Cryphonectria parasitica</i>	1904 the blight was discovered in trees in Bronx Zoo. Quickly spread throughout the chestnuts natural range	Near total loss of species except for sprouts and specimens planted outside range of the fungal disease. Research underway to produce a disease resistant Am. chestnut.
Oak (<i>Quercus sp.</i>) and many other trees and shrubs	Gypsy Moths <i>Lymantria dispar dispar</i>	1869 imported to be crossed with silk worms but they escape in Medford Mass. and continue to spread today across U.S. at approximately 13 miles/year via small larvae being blown aloft on small silken threads	Serious defoliation events continue. Biological control with some funguses and viruses can be effective when rainy weather occurs during caterpillar stages. 2018 could be devastating in CT if the spring season is dry.
American Elm <i>Ulmus americana</i>	Dutch Elm Disease <i>Ophiostoma sp.(3)</i> Bark Beetles <i>Scolytus sp. (2)</i> <i>Hylurgopinus rufipes</i>	Invasive bark beetles penetrate the tree and introduce disease spores that germinate and kill the tree.	There is some resistance among a small % of trees and since the elm produces seeds at a young age, the species may evolve resistance.
Black Cherry <i>Prunus serotina</i>	Cherry Canker <i>Pseudomonas syringa</i> Black Knot <i>Dibotryon morbosum</i> Eastern Tent Caterpillar <i>Malacosoma americanum</i>	Unfortunately black cherry is commonly afflicted with a variety of pests and diseases that you will surely encounter when in the field or woods.	Tent caterpillars (and fall webworms) can defoliate trees while fungal diseases reduce wood marketability and can sometimes kill trees.
Maple sp. <i>Acer saccharum</i> et al	Asian Long-horned Beetle <i>Anoplophora glabripennis</i>	Beetle larvae (grubs) feed on inner tissues and kill the tree. Intensive efforts are underway to eradicate this pest.	Potential to wipe out all maple species as well as elms, willows and more. Outbreaks appear contained at the moment.
Ash species <i>Fraxinus sp.</i>	Emerald Ash Borer <i>Agrilus planipennis</i>	Larvae (grubs) destroy inner bark tissues and kill the tree via girdling	May result in total loss of white ash and other ash species

