

Forest Health Highlights

Connecticut



April 1998

The Resource

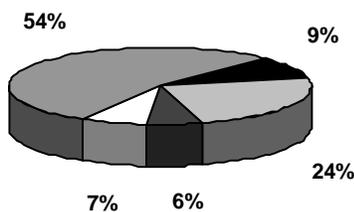
Connecticut's forests are 85% privately owned and made up of mostly oak/hickory and northern hardwood tree species. These forests provide clean water and air, wildlife habitat, and sources of recreation, timber and fuel. Forested parks and shade trees aesthetically enhance communities as well as provide energy savings, habitat for wildlife, and recreation opportunities.

- 59% of the state is forested (1,826,000 acres)

Out of the forested area:

- 97.3% timberland
- 2.7% non commercial or reserved forestland

Major Forest Types:



- white/red pine/hemlock (9%)
- northern hardwoods (24%)
- other (6%)
- elm/ash/red maple (7%)
- oak/hickory (54%)

Special Issues

Most major forest pest problems in Connecticut are currently caused by insects and fungi which have been introduced into the United States and are considered exotic species. Free from the predators in their native environments, they are able to flourish and cause major forest health problems.

The **hemlock woolly adelgid** continues to be a major forest pest in Connecticut. The adelgid, which apparently originated in Japan, first appeared in the United States in 1921 in Virginia, and was found in Connecticut in 1985. Only 11 of the 169 towns in the state remain uninfested. The insect has spread northward along the Connecticut River slowly encompassing towns to the east and west. Researchers at the Connecticut Agricultural Experiment Station have reared and released a coccinellid ladybug beetle, an insect found to attack the adelgid in Japan. Over 18,000 beetles have been released in Connecticut and Virginia. Significant reductions in adelgid populations have been observed at these sites, confirming that this is an effective predator of the hemlock woolly adelgid.

Populations of the **gypsy moth**, an introduced pest from Europe, have been low throughout New England for several years. Despite small amounts of precipitation in the spring of 1997, there were many cold foggy days which were favorable for the development of the fungus, *Entomophaga maimaiga*, which infects gypsy moth caterpillars. Consequently there was no defoliation observed during the aerial surveys conducted over the state in the summer of 1997. In addition, egg mass surveys, used to estimate populations in the following year, indicated low numbers. Therefore no noticeable defoliation is expected during the spring and summer of 1998.

Butternut canker is a pathogenic fungus that was first documented in the United States in 1967. Cankers that develop on the stem and branches can coalesce, which kill the tree. During the summer of 1997, approximately 72 percent of the butternut trees examined in the state were infected. There is no known cure for the disease,

Special Issues cont.

however, some trees have shown a resistance to the disease and are being cultivated for outplanting. The disease is widespread throughout the range of butternut.

The **Asian long-horned beetle** is another introduced pest, currently under quarantine in Brooklyn and Amityville, New York. The pest was discovered in August of 1996, and an extensive eradication program is underway to eliminate the insect. Many hardwoods have been found infested in the affected area. To date the insect has not been found in Connecticut. Extensive surveys in the southwestern part of the state have been conducted in cooperation with the United States Department of Agriculture, Animal and Plant Health Inspection Service. Monitoring of various sites is continuing.

Chestnut blight, is caused by a fungus introduced from Asia in the early 1900's. It continues to kill trees and sprouts throughout the eastern United States. This tree was once one of the most important hardwoods in the state, but now it is reduced to an understory shrub that sprouts from tree stumps, which become infected, die back, and sprout again. Thirty years ago a less virulent form of the fungus, which is infected with a virus, was discovered in

France. Researchers at the Connecticut Agricultural Experiment Station have been testing a genetically engineered form of the fungus on a limited basis. They have found it to be very hardy. This new strain has spread to surrounding trees

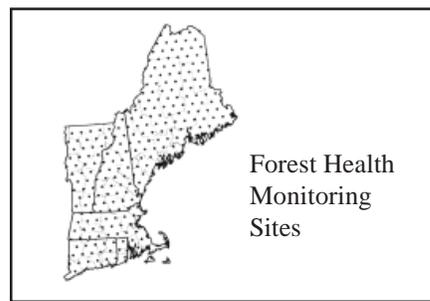
carrying the virus with it, and has infected lethal cankers, making them non-lethal. This is a significant step forward in the efforts to control this devastating disease.

Regional Surveys

Interest in regional forest conditions prompted the implementation of the National Forest Health Monitoring Program and the North American Maple Project.

FOREST HEALTH MONITORING PROGRAM

The objective is to assess trends in tree condition and forest stressors. All of the New England States have been involved since the program was initiated in 1990. Results indicate that there has been minimal change in crown condition in the last 8 years. In 1997, about 98 percent of trees greater than 5 inches diameter had normal crown fullness. About 97 percent of the trees had little or no crown dieback, and 78 percent showed no measurable signs of damage. The most common damage was decay indicators, which were more evident on hardwoods than softwoods. Additional surveys indicate that there are concerns for individual species such as ash, butternut and hemlock due to various damage agents.



NORTH AMERICAN MAPLE PROJECT

This cooperative project with Canada was initiated in 1988 to examine changes in sugar maple tree condition. There are several states in the Northeast involved including New York, New Hampshire, Vermont, Maine, and Massachusetts. Overall, sugar maple located within the sample sites are in good condition. Periodically, insect defoliation has affected crown condition in some areas. There was little difference found between sugarbush and non-sugarbush stands.

For More Information

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