

2004 Forest Health Highlights

New Hampshire



January 2005

The Resource

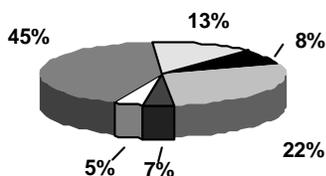
New Hampshire's forests provide a wide variety of goods and services to an ever-increasing number of residents and visitors. These forests offer pleasant surroundings for outdoor recreational pursuits; critical habitat for fish, birds, and wild animals; and countless goods to serve our daily needs, such as paper products and shelter; and acts as a giant sponge to absorb and cleanse our water supply. We could not survive without them. Keeping New Hampshire's forests healthy, provides a positive quality of life that is important to those who live, work, and recreate in the State.

- 84% of the State is forested (4,800,000 acres)

Out of the forested area:

- 94% timberland
- 6% noncommercial or reserved forest land

Major Forest Types:



- spruce/fir (8%)
- white/red pine/hemlock (22%)
- oak/pine (7%)
- other (5%)
- northern hardwoods (45%)
- oak/hickory (13%)

Special Issues

Forest health surveys are conducted annually on the forest land within the State. The State and Federal lands, along with private lands, are monitored to determine the incidence and extent of forest damage caused by a variety of insect pests and tree diseases. Several native insects have caused damage to forest trees in several locations. There are also specific concerns regarding nonnative pests that can cause the greatest threat to the State's forest resource.

The **hemlock woolly adelgid**, an exotic insect, arrived in southern New Hampshire in 2000 due to natural spread from southern New England. Since the initial infestation in Portsmouth, in Rockingham County, the adelgid has been found in Hillsborough, Cheshire, and Merrimack Counties. The leading forest health threat in the State in 2004 was the discovery of the insect on imported nursery stock. Approximately 1000 infested hemlock trees were destroyed. In addition, new natural infestations were found in Nashua, Hollis, and Kensington. So far, successful control has been achieved in these small infestations. There is a quarantine in Rockingham County to prevent the spread of the adelgid. All hemlock trees harvested in Rockingham County must be inspected and certified free of the insect by an official inspector before transport to non-infested areas.

There was noticeable defoliation in 2004 caused by **forest tent and eastern tent caterpillars, gypsy moth, and bruce spanworm**. Other active insects were **pine needle miner** in Ossipee and **maple webworm** in Grafton County. No aerial survey was conducted this year, so the total extent of the defoliation is uncertain.

Balsam woolly adelgid, a native insect, has become increasingly noticeable and most balsam fir stands in New Hampshire are currently infested. The level of damage ranges from light to heavy and mortality has occurred on sites with other stress factors.

Ash rust, a disease that relies on marsh grass as an alternate host was found along coastal areas and as far inland as Deerfield.

Special Issues cont.

Surveys For Nonnative Pests

Surveys to determine the presence of **sudden oak death**, caused by *Phytophthora ramorum*, turned up negative. Sudden oak death is a nonnative disease threat that has potential to move into the state on nursery stock from infected areas, specifically on the west coast. Surveys were conducted in conjunction with the New Hampshire Department of Agriculture, Markets, and Foods. The Department of Agriculture surveyed nursery stock and forestry personnel surveyed the trees and shrubs around the nursery perimeters.

Surveys have been ongoing for **Asian longhorned beetle**, an exotic insect killing maple and other hardwoods in New York, Illinois, New Jersey and Toronto, Canada. Fortunately, this insect has not been found in New Hampshire.

Statewide surveys were also conducted related to declining ash to look for **emerald ash borer**. Emerald ash borer is a new threat, not yet discovered in New Hampshire, that attacks and kills ash trees within a couple of years. It is a particular problem in Michigan. Surveys were also conducted in State parks, because a major pathway for movement of this insect has been through transporting firewood.

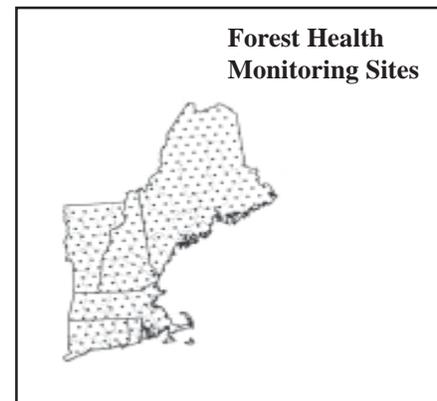
Regional Surveys

National Forest Health Monitoring Program

The program's objective is to assess trends in tree condition and forest stressors. The New England States have been involved since the program was initiated in 1990.

New Hampshire has participated since the program's inception. The permanent plot data, now collected annually by the USDA Forest Service Inventory and Analysis unit, is incorporated into the program database and included in annual forest health regional and national reports. Other surveys for forest damage are conducted each year by State forestry personnel, according to the adopted survey standards. The survey information is shared with other agencies and the general public to inform them of the extent of biotic and weather related damage.

Plot results indicate that there has been minimal change in crown condition in the last 15 years, with 95 percent of trees greater than 5 inches diameter having normal crown fullness, about 85 percent with little or no crown dieback, and over 70 percent showing no measurable signs of damage. The most common damage was decay indicators, which were more evident on hardwoods than softwoods. Additional surveys indicate there are concerns for individual species such as ash, butternut, and hemlock due to various damage agents.



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