

2006 Forest Health Highlights

New Hampshire



January 2007

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 wildlife, and countless goods to serve our daily needs, such as paper products and shelter. They also act as a giant sponge to absorb and cleanse our water supply. 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.

Special Issues

Forest health surveys are conducted annually on the forest land within New Hampshire. 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 leading forest health concern in 2006 was the increase in hemlock woolly adelgid infestations. In 2006 there were 29 properties in 8 towns found to be infested in southern New Hampshire. All of the infestations outside Rockingham County have been treated with the chemical imidicloprid or cut and destroyed. The majority of sites in Rockingham County have also been treated, however, there is no mandate that landowners must take control measures due to the fact that Rockingham County is currently regulated under a State quarantine.

There was noticeable defoliation or foliage discoloration caused by various insects including **forest tent** and **eastern tent caterpillars**, **fall cankerworm**, **gypsy moth**, **saddled prominent caterpillar**, along with **anthracnose fungus**, in 2006.

Defoliation from **forest tent caterpillar** reappeared in 2004, defoliating over 10,000 acres. The affected area declined to 28,000 acres in 2006 from a peak of more than 60,000 acres in 2005 in the southwestern and central portion of the State. However, pheromone trap catches in northern New Hampshire have risen sharply which may suggest the outbreak is spreading north. Damage was considerably heavier in stands of sugar maple and red oak. The **eastern tent caterpillar** is found throughout the State. While the tents are conspicuous, the damage to the tree is typically minimal. Defoliation from the gypsy moth was at endemic levels due to the fungus and virus that affects the larvae.

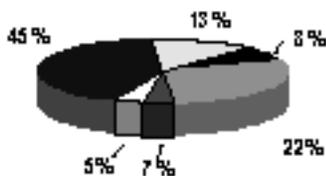
The aerial surveys conducted by the Division of Forests and Lands and the US Forest Service jointly mapped over 400,000 acres of forest damage between June and September. The majority of that acreage was **anthracnose leaf disease** and **bark beetle damage** associated with birch decline in the White Mountain National Forest.

- 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%)

Defoliation by the **saddled prominent** caterpillar has risen dramatically throughout central New Hampshire. Approximately 60,000 acres of damage was reported in the White Mountains, with numerous larvae observed throughout the State. This is the first damage to occur in over 20 years. Surveys indicate an increase in the intensity of the outbreak in 2007.

Balsam woolly adelgid continues to damage balsam fir throughout its range below 2000 feet elevation, with tree mortality occurring over 16,000 acres. The adelgid populations fluctuate with cold winter temperatures.

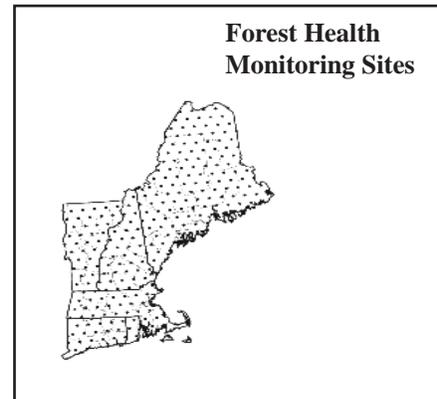
Detection surveys continued in 2006 to determine the presence of **emerald ash borer, sudden oak death** and **Asian longhorned beetle**. There were no positive finds of these invasive species in the New Hampshire. Sudden oak death is a non-native disease that has potential to move into the state on nursery stock from infected areas on the west coast. The emerald ash borer is causing extensive mortality in Michigan, while the Asian longhorned

National Forest Health Monitoring Program

In cooperation with the USDA Forest Service, New Hampshire participates in the National Forest Health Monitoring Program. The program's 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. A healthy forest is defined as having the capacity for renewal, for recovery from a wide range of disturbances, and for retention of its ecological resiliency.

The overall health of the forests in New England is good, with various damage agents present at different times and locations. Results from permanent sample site locations indicate that there has been minimal change in crown condition in recent years. There are varying impacts from forest fragmentation, drought, fire,

The most significant pests are those that have arrived here from other parts of the world, such as the gypsy moth, beech bark disease, and hemlock woolly adelgid. A summary report of *Forest Health Monitoring in the Northeastern United States* can be found at



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