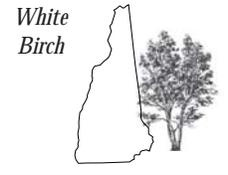


2003 Forest Health Highlights

New Hampshire



January 2004

The Resource

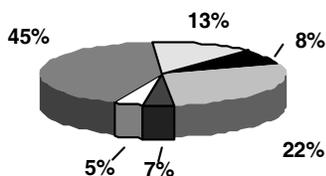
New Hampshire's forests provide a wide variety of goods and services to an ever-increasing number of residents and visitors. These forests offer pleasant surroundings for outdoor recreational pursuits; critical habitat for fish, birds, and wild animals; and countless goods to serve our daily needs, such as paper products and shelter; and act 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)

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

Statewide, forest health surveys were conducted on 4.8 million acres of forest land. One method used by the NH Division of Forests and Lands to collect information about forest health is aerial survey. It is an excellent method for tracking insect outbreaks and other widespread problems such as weather damage. The Forest Health Section has used statewide aerial surveys for forest health monitoring for over 30 years.

The leading forest threat in 2003 was the discovery of **hemlock woolly adelgid** in additional sites. An infestation was found in Cheshire County, bringing the total to four counties where the adelgid has been found, including Rockingham (in 2000), Hillsborough (in 2001), and Merrimack (in 2002). Also in 2003, two new small infestations were found in Rockingham County. So far, successful control has been achieved in the small infestations outside of Rockingham County. Currently 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 adelgid-free by an official inspector before transport to noninfested areas.

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

The more noticeable forest defoliators in 2003 were **birch leaf miner**, **birch skeletonizer**, **locust leaf miner**, **poplar blotch leaf miner**, and **alder flea beetle**. **Forest tent caterpillar**, **gypsy moth**, **saddled prominent**, **hemlock looper**, and **spruce budworm** were virtually nonexistent in 2003.

Pine shoot beetle trap catches decreased this year and the insect remained in Coos County. The beetle prefers Scots pine and other hard pines, but will feed on white pine. The insect bores in the shoots of the pine and is considered more of a problem in Christmas trees because tree shape is affected.

Special Issues cont.

An investigation of **ash decline** evolved into a survey for emerald ash borer and ash yellows disease throughout the state. **Ash yellows disease** was positively identified for the first time in three new counties. Ash yellows disease is the most likely cause of white ash decline throughout New Hampshire. **Emerald ash borer** was not found.

Since 1995, butternut trees have been surveyed for **butternut canker**, a disease that has killed butternuts from Wisconsin to Maine. More than 90 percent of the butternut trees in New Hampshire are infected with the canker causing fungus *Sirococcus clavigignenti-juglandacearum*. In 2003, butternut trees from the Division of Forests and Lands disease resistant seed orchard were planted into a natural area. The seedlings are surviving and already producing nuts.

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.

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 is incorporated into the regional New England database and included in annual forest health regional and national reports. The aerial surveys for forest damage are conducted each year according to the adopted survey standards. The survey information is shared with State forestry personnel and the general public to inform them of the extent of biotic and weather related damage.

Results indicate that there has been minimal change in crown condition in the last 14 years, with about 95 percent of trees greater than 5 inches

Forest Health Monitoring Sites



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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