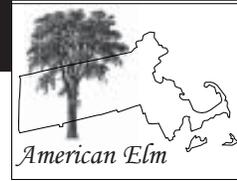


# 2001 Forest Health Highlights

## Massachusetts



### The Resource

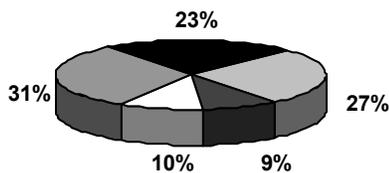
The forest resource of Massachusetts has great demands placed on it. Although Massachusetts is thought of as an urban State, 64 percent of the land area is forested. This forested area is managed for a multitude of purposes, including recreation, water quality, wildlife habitat, and a forest product industry.

•64% of the State is forested  
(3,225,000 acres)

Out of the forested area:

- 90.8% timberland
- 9.2% noncommercial or reserved forest land

#### Major Forest Types:



- white/red pine/hemlock (27%)
- oak/pine (9%)
- other (10%)
- oak/hickory (31%)
- northern hardwoods (23%)

### Special Issues

The overall health of the urban and rural forests of Massachusetts is good. However, there are some concerns about the impact on the forest resource from native and introduced forest diseases and insect pests. The level of damage from these pests often varies from year to year, depending on weather and other factors.

**European gypsy moth** defoliation increased slightly from 2000. A total of 47,949 acres were defoliated, with the heaviest defoliation concentrated in the Plymouth area. Field observations found that the fungal pathogen *Entomophaga maimaiga* is present in many of the infested areas. Fall egg mass surveys indicated that some defoliation should be expected in 2002, but to a lesser extent.

**Hemlock woolly adelgid** continues to spread. Infestations have been documented in 11 new communities, raising the State's total infested communities to 120, or 34 percent. The release of the predatory ladybird beetle *Pseudoscymnus tusgae* continued, with two releases being made in environmentally sensitive areas in the eastern part of the State. This is a cooperative effort between the State and the USDA Forest Service.

Feeding by the **hemlock looper** occurred in Hampden and Berkshire Counties. Approximately 500 acres were treated with a bacterial insecticide to protect foliage in a State campground. **Fall webworm** populations increased significantly and by mid-August many trees in central and western Massachusetts were completely defoliated.

**Red pine plantation mortality** in Hampden and Berkshire Counties continues; however, no new infestations were observed in 2001. Ground surveys in 1999 identified the presence of *Diplodia* and *Fusarium*, both disease pathogens, along with the red pine scale. **Tar spot**, a foliage disease, was observed on Norway maple throughout the State. The most severe defoliation was reported in parts of Berkshire and Middlesex Counties.

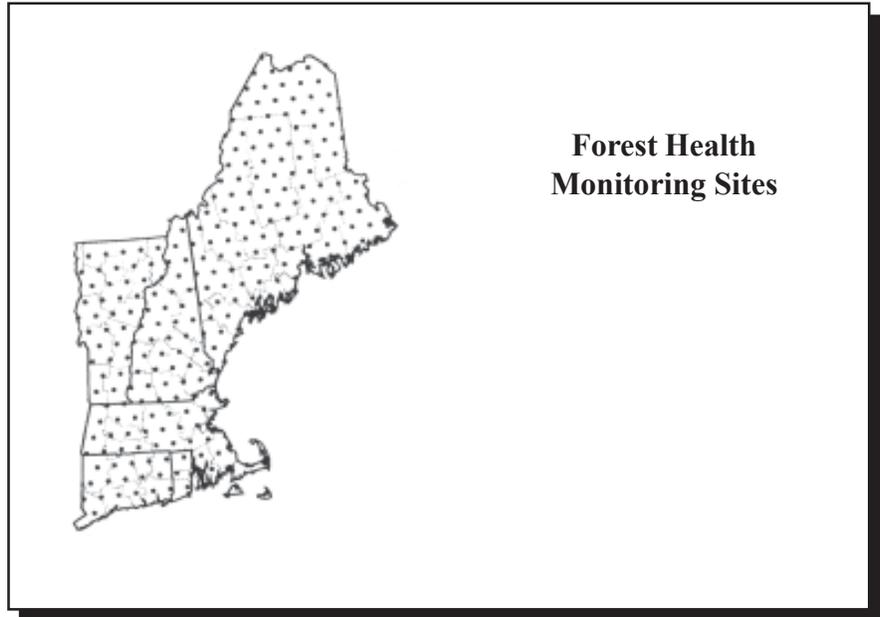
**Frost damage** on red and black oaks occurred on over 100,000 acres in Middlesex, Worcester, Hampden, and Hampshire Counties in early May. Lesser degrees of damage were observed in other parts of the State as well. Unusually warm temperatures and sufficient moisture to cause the buds to open prematurely preceded the sudden drop in temperature. Many trees in the State are still showing signs of stress from the 1998 and 1999 **drought**, especially street trees and trees growing at the higher elevations.

## Regional Surveys

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

### 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. Results indicate that there has been minimal change in crown condition in the last 12 years. In 2000, 95 percent of trees greater than 5 inches diameter had normal crown fullness, about 85 percent had little or no crown dieback, and 70 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 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 look at change in sugar maple tree condition. The Northeastern States that continued to survey in 2001 include New Hampshire, Vermont, 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 nonsugarbush stands.

### For More Information



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