

Forest Health Highlights

Massachusetts



July 1999

The Resource

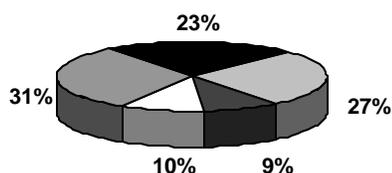
The forest resource of Massachusetts has great demands placed on it. Although Massachusetts is thought of as an urban state, 64% of the land areas is forested. This forested area is managed for a multitude of purposes including recreation, water quality, wildlife habitat, and a forest product industry.

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

Out of the forested area:

- 90.8 % timberland
- 9.2 % non commercial or reserved forestland

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. There are however a few concerns regarding 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.

The most recent forest health concerns in the state are related to **maple trees**. Aerial surveys over forest lands indicate that there were 5,100 acres of maple that were damaged by various factors in 1998. At the higher elevations, foliar damage from the pear thrips was evident. The thrips entered the maple buds following warm temperatures in April. When it turned cool, the buds did not expand and the thrips fed inside the buds for an extended period of time. There was also a late spring frost in the cooler valleys which resulted in damage to young tender leaves. The situation was compounded by a period of wet weather, which resulted in Anthracnose leaf disease occurring in many locations.

Defoliation by the **European gypsy moth** increased to 12,000 acres in 1998, up from a 30 year low the previous year. The fungus, *Entomophaga maimaiga*, which infects the gypsy moth caterpillars, has reduced populations of this pest throughout New England for the past several years. Ground surveys indicate that the populations had collapsed in all areas of the state, except for 2 locations, and no communities planned control operations in 1999.

The **hemlock woolly adelgid** is another introduced pest and has been spreading northward from southern New England throughout Massachusetts for several years. Many native hemlock trees are now infested. In 1998, 11 new infestations were discovered in Massachusetts. Currently, about 20 percent of the communities in the state are known to have infestations. Efforts are underway to test the effectiveness of a ladybird beetle, a natural predator of the adelgid from Japan, in controlling adelgid populations.

The **browntail moth** populations on outer Cape Cod continue. This insect was also observed in moth traps on Plum Island off Newburyport in 1997. The caterpillar creates webs on shrubs and trees and its hairs cause a severe skin irritation.

The most extensive hardwood defoliation in the state was caused by **spring and fall cankerworms**. Over 26,000 acres of the south shore from Weymouth to Plymouth were affected. A small infestation of the **black turpentine beetle** is occurring on Cape Cod. There were also **conifer needle diseases** in some locations caused by *Diplodia* and *Lophodermium* fungi. Damage from **beech bark disease** was evident on over 2,000 acres in northern Berkshire County.

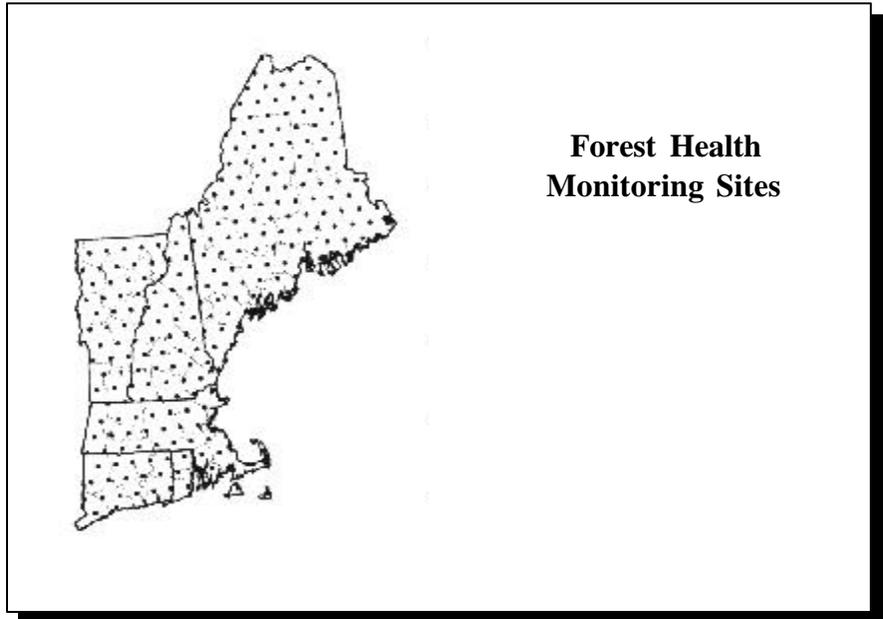
Regional Surveys

Interest in regional forest condition 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 trend 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 9 years. In 1998, 96 percent of trees greater than 5 inches diameter had normal crown fullness. About 96 percent of the trees had little or no crown dieback, and 76 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. 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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