

# New Jersey

## Forest Health Highlights



April 1998

### The Forest Resource

Currently, about 42 percent of New Jersey is forested. Although some of the state's forested land has been lost to development, programs such as Farmland Assessment, Forest Stewardship, Green Acres, and Tree Farm have helped in maintaining a green environment. During the seventies, 500,050 acres of the pinelands were saved. At present, preservation plans are being discussed for the 17,500-acre Highland Region of northern New Jersey.

### Exotic Forest Pest Issues

Exotic or introduced pests are a serious factor affecting New Jersey's forests and shade trees. Unlike native pests, introduced pests usually have no natural regulatory enemies (parasites or predators). Some introduced pests have caused permanent, irreversible damage. Dutch elm disease and chestnut blight are both caused by introduced fungi. There are several exotic pests of concern in New Jersey.

**Gypsy Moth** — The 1997 aerial defoliation survey showed only 1,910 acres affected by gypsy moth activity. This area involved only the counties in the southern fourth of the state. This is the lowest acreage defoliated since 1968 when only 562 acres in northern New Jersey were infested. The population decline can likely be attributed to the presence of the fungus, *Entomophaga maimaiga*.

**Hemlock woolly adelgid** — The hemlock woolly adelgid (HWA) is an exotic pest that is spreading along the central and northwestern hemlock forests of New Jersey, causing a steady decline in this native tree species. The adelgid is a tiny

sap sucking insect recognized by the white cottony substance near the base of hemlock needles. As of 1997, more than 50 percent of the estimated 26,000 acres of hemlock forest are known to be heavily infested, with the Highland Region having had the greatest impact.

The New Jersey Department of Agriculture Beneficial Insect Laboratory in West Trenton is currently rearing a tiny predator beetle called *Pseudoscymnus tsugae* for release in New Jersey this spring within four State parks. This tiny ladybeetle, native to Japan, has proven to have a ferocious appetite for HWA and is the first biological control agent to be made available for control of the pest.

**Purple Loosestrife** — This exotic species was introduced into the United States in the early 1800's. In New Jersey, it has become a problem during the last 8-10 years. This plant loves wetland areas, marshes, wet fields, and drainage ditches. It produces a beautiful purple flower during late summer. The problem is that it is crowding out and taking over the habitat of native wetland species.

The changing of the ecology will no doubt affect the wildlife that has been dependent on the indigenous species for food and cover. Several insect biocontrol agents are being released in a few select wildlife management study areas. Studies are to begin in order to see if the endangered Bog Turtle will be detrimentally impacted with the proliferation of purple loosestrife.

This plant provides an abundant source of pollen to New Jersey beekeepers. The influence of their lobby has prevented a more aggressive battle against the loosestrife via the parasites/predators reared and released by personnel of the NJ Beneficial Insect Laboratory in West Trenton.

### Native Forest Pests

**Fall Webworm** — The webs of the fall webworm are evident toward the end of summer. The larval stage feed on the foliage of deciduous trees and spin a web around the chewed leaves as protection against predators. These webs are commonly found at the ends of the branches and have been conspicuous on black walnut

trees in Mercer, Hunterdon, and Warren Counties. Many of these trees were observed along the Delaware River Basin.

## Urban Forest Health Alert

A three-year study, surveying 108 municipalities, conducted by the New Jersey Department of Environmental Protection's State Forest Service, reveals that many of the street trees growing in these towns are under stress and are in need of maintenance. An estimated 30 percent of the state's approximate two million street trees are not in good health, and 75 percent need maintenance. Twenty-five percent are considered hazardous, creating sidewalk damage and potential overhead personal liability.

Over 326 plots were established in the northern half of the state in order to detect the presence of the Asian long-horned beetle, *Anoplophora glabripennis*. It attacks healthy trees, and its primary hosts are maples, elms, willows, poplars, and horsechestnut. The beetle was first discovered in Brooklyn, NY, in August 1996 and was thought to have been brought in on wooden pallets. The adult females bore into the branches and trunks and lay eggs in late summer. Larvae emerge and bore into the green inner bark and continue to feed for several months, creating large winding galleries in the heartwood. Adults emerge from pupae in the spring, chewing their way out and creating large exit holes.

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Approximately 80 percent of the 326-plot survey has been completed. Several suspect trees were identified for further examination, and they proved to be negative for infestation. To date, no Asian Longhorned beetle has been found in New Jersey.

## Forest Fire and RCFP

Forest fires have always been a factor in New Jersey forests. The southern pine-oak forests are particularly susceptible to frequent, fast moving fires. Forest fires can be ecologically important and a natural factor in the growth of forests. However, today with many people living in or near forests, fires can be a severe threat to public safety.

The Rural Community Fire Protection (RCFP) program is a cooperative agreement between the state Department of Environmental Protection and the USDA Forest Service to improve the capability and effectiveness of the 129 rural fire departments in New Jersey.

Through this program, rural fire departments receive technical and financial assistance to organize, train, and equip their operations.

Although rainfall during April 1997 was slightly above normal, during June and July it was spotty and sporadic, with little accumulation. A summary of the fire activity for January-August 1997 is as follows:

Month	Number of Fires	Acres Burned
January	34	24
February	78	233
March	173	274
April	311	324
May	221	204
June	182	106
July	382	3,205
August	83	43

### For More Information



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