

Pennsylvania - 2002

Forest Health Highlights



The Resource

Pennsylvania covers a land area of 25,333 square miles and is 59 percent forested. Seventy-five percent of the forest land in the State is privately owned by 513,900 landowners. Yet with a population of 12 million people, forest landowners account for only 4 percent of the total population. Forests provide not only timber, but also, watershed protection, wildlife habitat, and recreational benefits for all Pennsylvanians.

Weather Conditions

Severe drought conditions persisted until September. Precipitation patterns improved during the later part of the month and continued through December. As a result, water supplies have returned to near normal throughout the State and drought conditions have almost disappeared.

Forest Pest Issues

Insect Defoliators: Gypsy moth - During 2002, 55,798 acres of Pennsylvania forestland were defoliated by the gypsy moth. This represents a 76 percent reduction in defoliation from 2001's total of 237,559 acres. Most of the defoliated acreage this year was concentrated in

central Pennsylvania, and much of that acreage, though defoliated, has gypsy moth populations decimated by *Entomophaga maimaiga*. Although a few scattered areas around the State continue to support population levels that could, theoretically, qualify for treatment, no requests for treatment were submitted for the 2003 project. As a result, there will be no Bureau of Forestry-conducted gypsy moth suppression project in 2003.

Variable oakleaf caterpillar - This defoliator caused noticeable defoliation in 2001. However, this year's defoliation was limited to 180 acres of northern hardwood stands of north-central Pennsylvania.

Miscellaneous insects - Damage associated with an elongated hemlock scale was 869 acres. Walkingsticks, locust leafminer, fall webworm, hemlock leaf-miner amounted to 2,402 acres.

Hemlock Woolly Adelgid - Approximately 531 acres of damage in hemlock stands was reported in 2002. Three additional counties reported infestation by hemlock woolly adelgid during 2002. The pest has been detected in hemlock stands throughout most of the eastern and central regions of the Commonwealth and is now reported in 43 counties.

Another mild winter in 2001-2002 produced explosive growth of hemlock woolly adelgid (HWA) populations along the leading edge of the infestation in central Pennsylvania. One of the "new" counties, Allegheny County in southwestern PA, had reported HWA several years ago in a north Pittsburgh suburb, but that spot infestation on nursery stock was quickly eradicated. The

2002 infestation, also apparently of nursery origin, is in Mount Pleasant, several miles south of Pittsburgh. The continuing drought conditions throughout the spring and early summer of 2002 placed additional stress on infested and declining hemlock over much of the state, but dry soils were especially prevalent in central and south central Pennsylvania.

Releases of the predatory lady beetle *Pseudoscymnus tsugae* Sasaji and McClure were accelerated in 2002. Over 86,100 adult beetles were released at about 39 sites. Forest Pest Management purchased 50,000 of these predators, and the rest were provided by the USDA-Forest Service and the NJ Department of Agriculture. Evaluations (87) of releases made since 1999 yielded over 339 beetle adults and 70 larvae at 30 sites. Establishment appears likely at most sites, but as yet few sites have shown promising rates of beetle reproduction and spread.

Work with Pt and another promising species of lady beetle from China, *Scymnus sinuanodulus* (Ss), was conducted in field cages again in 2002. Cages (netting sleeves) with two Ss adult beetles confined to infested hemlock branches showed a 58 percent HWA population reduction compared to controls. Similar cages containing two Pt adults tended to show a reduction in HWA (~20 percent), but these results were not statistically different than the controls.

Plans for 2003 include the purchase of 120,000 Pt with actual release numbers approaching 200,000 beetles. Release sites will include hemlock stands in newly infested areas, older infestations in central and eastern Pennsylvania, and sites where pine bark adelgid (*Pineus strobi* (Hartig), a pest of white pine and an alternate host of Pt, is present along with HWA.

For More Information



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