

Maryland Forest Health Highlights



January 2001

The Resource

Maryland occupies a land area of 6,264,876 acres. Forestland comprises 2,709,062 acres of which nearly 90 percent is privately owned. Healthy, productive forests are critical in urban and rural areas for soil conservation, clean air and water, wildlife habitat, outdoor recreation, and aesthetics. The forest products industry is the largest employer in Allegany and Garrett Counties and the second largest employer on the Eastern Shore.

Forest Health Monitoring

The Forest Health Monitoring (FHM) Program has two components: plot network and aerial survey. Maryland Department of Natural Resources administers the network of plots in Maryland. The plot network is designed to annually monitor, assess, and report on changes in the long-term condition of trees, soils, lichens, and air quality in forests. During 2000, measurements and observations of these forest health variables were made on one-quarter of Maryland's 40 plots. The Maryland Department of Agriculture conducts the aerial survey component in order to delimit, map, and report on forest pest defoliation and tree mortality. Aerial surveys, data collection, and reporting are conducted according to USDA Forest Service standards for air operations and GIS.

Forest Pests Issues

Gypsy Moth — Defoliation from this major pest of Maryland's forests increased dramatically from 1,197 acres in 1999 to 22,824 acres in 2000. This resurgence necessitated an expanded suppression project this year to protect foliage and reduce larval populations. Consequently, 16,971 acres were treated in

2000, the most since 1996. Utilizing GIS, Maryland Department of Agriculture is compiling historical gypsy moth defoliation and treatment records and forest-type maps, so that a risk assessment of future tree mortality exceeding 25 percent can be made for each forest type in Maryland. This pilot project will be used to evaluate methodology in the development of a national risk map.

Bark Beetles — Since 1993, through USDA, APHIS-CAPS, Maryland Department of Agriculture has searched for **exotic bark beetles** in Maryland as part of a national survey for five European bark beetle species. These exotic bark beetles, which have the potential for causing economic and ecological impacts in the U.S., are sampled with pheromone-baited Lindgren funnel traps. Traps were placed in Maryland's forests in the seven counties around the Chesapeake Bay. For the fourth consecutive year, none of the five target species were found. The **pine shoot beetle**, another European bark beetle, was the target of another USDA, APHIS funded survey in 10 Maryland counties. The pine shoot beetle, first found in western Maryland in 1995, was discovered as far east as Frederick County this past year. This exotic bark beetle has now been recorded from all four western Maryland Counties (Allegany, Frederick, Garrett, and Washington). A federal quarantine restricts pine material moving from these counties.

Hemlock Woolly Adelgid (HWA) — HWA remains the major threat to the health of eastern hemlock. Older areas with infested hemlocks occur in the metropolitan area between Baltimore and Washington and in natural stands in Harford and Frederick Counties. HWA continues to slowly move westward; new populations can now be found at Rocky Gap State Park, Allegany County. As part of a mid-Atlantic multi-state survey, 13 plots have been set up in six counties to assess the HWA impact on hemlock stands. So far, HWA has not killed trees. The potential for HWA biological control by the predatory ladybird beetle, *Pseudoscymnus tsugae*, was evaluated for the second consecutive year in recently infested hemlock stands in Harford County, cooperatively with the USDA Forest Service. Low numbers of this predator were recovered at the release site.

Fall Cankerworms — Light to moderate defoliation to maples, singly and in groups, occurred in the Maryland suburbs of Washington, DC. The communities of Cheverly, College Park, University Park, and Accokeek had nuisance levels of caterpillars in the spring with spotty defoliation.

Walkingsticks — For the second year in row, a small area of mixed hardwoods on ridge tops at the Green Ridge State Forest, Allegany County, received late summer defoliation by walking sticks. These native insects defoliated the same area in 1979.

Special Issues

Asian Longhorned Beetle (ALB) — This exotic beetle presently exists in the cities and suburbs of New York and Chicago and represents a major threat to a wide variety of shade and ornamental trees in urban and community forests. Beginning in 2000, Maryland Department of Agriculture will be conducting an ALB Information and Education Project centering on the arboriculture and urban forestry communities in Maryland. Informational displays, direct mailings, presentations, and training will be targeted at professional arborists likely to encounter ALB. This project is a cooperative effort between the Maryland Department of Agriculture's Plant Protection, Forest Pest Management, and the Maryland Forest Service.

Invasive Plants — The concern over exotic pests is not limited to insects and diseases. Well known invasive plants, such as kudzu, Japanese knotweed, Japanese honeysuckle, and mile-a-minute weed, occur in many of the woodlots in Maryland, where they replace native plant communities at a site and reduce aesthetic values. Invasive plants pose a threat to forests by preventing tree regeneration. Maryland Department of Agriculture participated with the USDA Forest Service for the past three years in the search for mile-a-minute weed, *Polygonum perfoliatum*, bio-control agents by surveying and collecting insects and diseases on this plant at 15 sample sites in the northern tier of Maryland counties.

Urban Forestry

Roadside Tree Forest Health Assessment — The first-ever assessment of roadside trees health along right-of-ways in five metropolitan counties of Maryland between Baltimore and Washington, DC, con-

tinued for the second successive year. In 1999, 500 plots were randomly selected to assess tree health, as well as tree species distribution. In 2000, an additional 300 plots were selected. Each year, plot trees were rated using Forest Health Monitoring crown and bole damage procedures. This has been a collaborative assessment involving the Maryland Departments of Agriculture and Natural Resources and the USDA Forest Service. The Maryland Roadside Tree Law, in effect since 1914, places all trees in the road right-of-way under the DNR's protection. This effort provides the initial data on the quantity and quality of the Roadside Tree resource growing along more than 30,000 miles of improved road in Maryland. A team from the partnering agencies has been analyzing the data collected and has prepared a report on the Health of Maryland's Roadside Trees. In association with this effort, MD DNR-Forest Service personnel were trained as part of the Maryland Tree Expert Program in forest insect and disease recognition and reporting.

Watershed Protection

Riparian Forest Initiative — The Chesapeake Bay Riparian Forest Buffer Initiative and the Conservation Reserve Enhancement Program has been called "Stream ReLeaf". The Program is administered by the Maryland DNR and is involved with riparian buffer restoration for all tributaries entering the Chesapeake Bay. Within Maryland, 600 miles of buffer strips are projected by the year 2010 to be planted with one or more of 45 species of riparian trees/shrubs. Over the last four years, 329 miles have been planted. This represents an average of 82 miles of riparian habitat that has been restored each year, nearly double the initial goal of 43 miles. The survival of trees planted in riparian buffers was assessed by Maryland Forest Service personnel trained in pest presence and damage recognition by Maryland Forest Pest Management and USDA Forest Service Forest Health Protection crews. The training resulted in recognition and reporting of tree mortality and causal agents in buffer plantings in 21 Maryland counties in 2000.

For More Information



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