Maryland - 2002
Forest Health Highlights

The Resource

Maryland occupies a land area of 6,255,800 acres. Forestland comprises 2,565,800 acres of which nearly 76 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 off-plot survey. The USDA Forest Service Northeastern Station Forest Inventory and Analysis Staff administers the plot network 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 2002, 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 off-plot survey component of FHM. The objectives of the FHM Program are delimiting, mapping, and reporting forest pest problems as a supplement to the FHM plot network. Aerial and ground surveys, data collection, and reporting are conducted in accordance with FHM standards for air operations and GIS.

Forest Pests Issues

Gypsy Moth — In 2002, the MD Cooperative Gypsy Moth Suppression Program treated trees on 29,775 acres of municipal, recreation, county, or private land; 9,359 acres of State-owned land; and 445 acres of federal land. The total acreage of 39,134 in 14 counties and Baltimore City was nearly 10,000 acres less than treated in 2001. Most of the acres treated were in Cecil County (13,114 acres) and Washington County (5,204 acres). A total of 13,739 acres of trees were defoliated across the State. This was a significant decrease from the 46,000 acres defoliated in 2001. Most of the defoliation occurred on untreated lands in Dorchester and Wicomico Counties.

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. During the past several years, traps were placed in counties surrounding the Chesapeake Bay; however, in 2002, importers of marble, tile, and granite were identified as possible sources of solid-wood-packing-material that may be infested with bark beetles. Black-light traps and pheromone-baited traps were placed in and around warehouses from May through October. In June, specimens of *Ips typographus*, a target species, were found in a trap outside a warehouse in Frederick County. Additional inspections found pallets infested with beetles in dumpsters at the warehouse. All infested material was destroyed, and intensified trapping in the area found no additional beetles. This location will be intensively surveyed in 2003. The **pine shoot beetle**, another European bark beetle, was the target of a USDA, APHIS funded survey conducted for the tenth consecutive year in 10 Maryland counties. The pine shoot beetle, first found in western Maryland in 1995, has now been recorded from all four western Maryland Counties (Allegany, Frederick, Garrett, and Washington). In 2002, no additional counties were found to be infested, but significantly more beetles were found in traps in Garrett County. A federal quarantine restricts pine material moving from these counties. **Southern pine beetle** populations continue to remain low in the State.

Hemlock Woolly Adelgid (HWA) — HWA remains the major threat to the health of eastern hemlock. Infested hemlocks occur in the metropolitan area between Baltimore and Washington and in natural stands from Harford to Allegany Counties. HWA continues to slowly move westward; in 2002, new infestations were found in several locations in Garrett 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. The potential for HWA biological control by the predatory ladybird beetle, *Pseudoscymnus tsugae*, was evaluated during 2002 in Rocky Gap State Park in Allegany County.

Fall Cankerworm — This native spring defoliator declined dramatically in the Washington, DC suburbs of Cheverly, University Park, and College Park. The communities of Greenbelt and Takoma Park had nuisance levels of caterpillars with some spotty defoliation. Isolated infestations caused spotty defoliation in Montgomery and Frederick Counties.

Miscellaneous Forest Insects — Fall webworm, locust leafminer, orange striped oakworm, and **eastern tent caterpillar** infestations were reported, but caused little to no damage. There was a noticeable increase in drought-induced diseases in many locations around the State. **Canker diseases**, ***Armellariella* fungus** and **two-lined chestnut borers** were reported in several locations. These normally secondary species were often seen attacking and killing drought-stressed trees.

Special Issues

Invasive Species — The concern over exotic pests is not limited to insects and disease. Well known invasive plants such as kudzu, Japanese knotweed, and mile-a-minute weed occur in many woodlots in Maryland where they replace native plant communities and reduce aesthetic values. Other invasive species such as the northern snakehead fish, mute swans, and nutria became important issues in 2002. Maryland Department of Agriculture personnel were instrumental in organizing the Maryland Invasive Species Council (MISC). The goal of MISC is to inform the public of the threat of exotic species to the health of forest and non-forest ecosystems in Maryland.

Bacterial Leaf Scorch — There were increasing numbers of reports of this disease, caused by the bacteria, *Xylella fastidiosa*, in the late summer of 2001. Significant numbers of infected oaks and maples were found in the Washington DC suburbs, Annapolis, and some locations on the Eastern Shore. In 2002, with special USDA Forest Service Focus Funds, Maryland Department of Agriculture conducted a statewide survey to define the distribution of this potentially serious this disease. Infected trees were found in all but four Maryland counties, in both urban and rural forests. Future surveys will look at the impacts of this disease on the forest landscape. A working group was formed to facilitate information exchange about the disease among researchers, surveyors, and the municipal and private arboriculture community.

Urban Forestry

Roadside Tree Forest Health Assessment — The Maryland Roadside Tree Law, in effect since 1914, places all trees in the road right-of-way under the DNR's protection. Since 1999, MDA and DNR have worked on a collaborative project with USDA Forest Service to assess the quantity and quality of the Roadside Tree resource growing along more than 30,000 miles of improved road in Maryland. In 2001, this team of agencies developed urban forest health monitoring protocols to initiate a roadside tree survey. In 2001, 300 plots were visited across the State, and inventory data (species, DBH, and height,) along with tree health data (crown condition, dieback, and damage) were taken for each tree in a plot. In 2002, a subset of these baseline plots were revisited to begin to monitor change in this urban forest resource. Data from each year of this survey has been compiled and is being analyzed by MDA, DNR, and the USDA Forest Service.

For More Information

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