

OHIO - 2006



Forest Health Highlights

The Resource

Ohio encompasses 26,209,700 acres, and 30 percent of these acres are forested. Forests have increased dramatically since 1940, including an increase from 7.1 to 7.9 million acres since the late 1970s. Ohio's forests are 93 percent privately owned and 96 percent deciduous forest types.

Urban Forestry

Within the State, there are 11,353,000 people (2000 U.S. Census). Ohio's 942 incorporated municipalities (cities and villages) occupy 11 percent of the land area and represent a substantial urban forest resource. Ohio leads the Nation with 237 Tree City USA communities. These communities represent more than half of the 80 percent of Ohioans living and/or working in urban areas, and their Tree City USA status signals a significant commitment to their quality of life. Throughout most of the State, these Tree City USA communities planted more trees than they removed, while maintaining more trees than they planted. This was true everywhere except northwestern Ohio, where the emerald ash borer had become established and cities, villages, and townships were faced with the reality of removing dead and dying ash trees. To proactively address the economic and environmental burden presented by this pest, all Ohio communities are being encouraged to develop emerald ash borer management plans.

Special Issues

The emerald ash borer (EAB) is non-native insect pest of ash trees in the U.S. It was first found damaging ash trees in southeastern Michigan in May 2002. It may have been in Michigan for as long as 10 to 15 years. The insect's short history in the U.S. shows that it can spread rapidly and kill trees quickly. If unchecked, EAB could easily cause more than an estimated \$3 billion in damage to Ohio's economy during the next 10

years. It was first identified in Ohio (Lucas County) in February 2003. Subsequently, several infestations of EAB (*Agrilus planipennis*) were discovered, most traced to infested logs and nursery stock from Michigan. In 2004, the Ohio Department of Agriculture (ODA) completed eradication projects at four sites in Ohio by removing all trees within a ½-mile radius around these infestation sites. More than 30,000 ash trees were cut, chipped, and burned at the four sites. In 2005, after checking detection trees and receiving many tips from a knowledgeable public, new EAB finds popped up at an alarming rate not only in new areas but also in areas where eradication efforts had been previously implemented. By the end of 2005, EAB infestations were found in a total of 13 Ohio counties. Due to lack of funding, the ODA focused its eradication efforts on only the furthest outlying areas. The Ohio Department of Natural Resources (ODNR) Division of Forestry used a USDA Forest Service grant to hire four new foresters to assist the increasing number of landowners and communities affected by this pest. These foresters are helping woodland owners manage their forests and utilize their ash resources, assisting communities that are dealing with current and future EAB issues, and increasing public awareness about the insect. The ODNR Division of Forestry has also been assisting property owners with restoration tree planting at eradication sites. In an effort to prevent further spread, the ODA has quarantined ash trees, logs, lumber, bark, chips, and firewood from all infested areas of Ohio. In 2006, the ODA completed a statewide EAB detection survey. EAB has now been detected in a fairly contiguous area starting in northwestern Ohio and extending east to Cleveland and south to Columbus. EAB was also detected in one location south of I-70 in Warren County. As a result of the new finds during the survey, the ODA expanded its quarantine to include 26 Ohio counties, and USDA APHIS enacted a statewide quarantine for Ohio, Indiana, and Illinois. Michigan had already been subject to this quarantine. An Ohio EAB Task Force has continued to help address these rapidly changing issues.

Forest Pest Issues

Gypsy Moth — Gypsy moth surveys by the Ohio Department of Agriculture revealed high population densities on some Ohio forests with gypsy moth caterpillars defoliating about 840 acres of forested land. Oak mortality is localized. Gypsy moth impacts include forest ecosystem degradation, economic losses to businesses, loss of recreational opportunities in severely defoliated areas, reduced private property values, and nuisance from gypsy moth caterpillars. The gypsy moth threat has been lessened by the fungus *Entomophaga maimaiga*, which has drastically reduced this pest in many areas since 1996. Even though this pathogen was active in Ohio in 2006, the

fungus is not completely controlling gypsy moth populations. Gypsy moth continues to spread to new areas in the State, including the oak-hickory forests of southern Ohio. Evidence of this spread is found in the treatment of about 80,000 acres in unregulated parts of Ohio as part of the National Gypsy Moth Slow the Spread Program.

Butternut Canker — Decline and mortality of butternut, *Juglans cinerea*, have occurred throughout Ohio. The Ohio Department of Natural Resources Division of Forestry developed and implemented a butternut management policy in 1994 to protect remaining resources and promote any potential genetic resistance to the disease. The policy requires retention of healthy butternut trees in State forests. It also encourages education of private woodland owners regarding proper health assessment and management of this threatened species.

White Pine Decline — Wet soils during the past four growing seasons may be contributing to decline and mortality of white pine. Mortality is highest in overstocked stands. Blue stain fungi appear to be invading wounds created by heavy pine bark adelgid feeding on the trunks of white pine trees weakened by either or both of these factors. A similar decline was observed in the mid 1990s.

Beech Bark Disease (BBD) — The beech scale, *Cryptococcus fagisuga*, was first discovered in Ohio in 1985 at the Holden Arboretum in Lake and Geauga Counties. Since that time, the area has been periodically inspected for BBD, and the arboretum set up a monitoring program for its beech trees. In December of 2003, the fungal component of this disease was found on American beech trees at the arboretum. This was the first case of BBD confirmed in Ohio. In 2006, beech surveys continued in northeastern Ohio. While the BBD fungus was not found at any new sites, beech scale is still easily found in several northeastern Ohio counties, including Medina, Portage, Cuyahoga, Trumbull, Ashtabula, Lake, and Geauga.

White Oak Mortality — Caterpillars of *Phoberia atomaris*, a native noctuid moth known as the common oak moth, defoliated noticeably fewer areas of white oak trees in southern Ohio in 2006. This pest began defoliating white oak trees in 2002. The defoliation appears to have peaked and defoliation levels seem to greatly decrease in extent and severity. Severe defoliation, coupled with drought conditions in 1999 and 2002, caused significant tree mortality in some Ross County white oak stands starting in 2002. This mortality continued in 2006, requiring continued salvage of dead and dying white oak trees in some areas. A defoliating inchworm caterpillar in the genus *Phigalia* joined the common oak moth in damaging white oaks in recent years. This insect sometimes defoliates trees in combination with the common oak moth, while in other areas it acts alone to damage white oak trees.

Hemlock Woolly Adelgid (HWA) — HWA was found at three new sites in Ohio in 2006. About 10 landscape trees were removed and destroyed by the Ohio Department of Agriculture (ODA) in Lorain, Cuyahoga, and Geauga Counties. The ODA removed infested trees at two Ohio sites in 2004 in an effort to eradicate this exotic insect from landscape trees. Eight to ten trees were removed at a site in Summit County and two trees were destroyed at a site in Geauga County. Surveys of the area in this part of Ohio showed no evidence that HWA had spread into other surrounding trees. Two HWA infestations were previously discovered in 2002, and trees were destroyed in Lake and Summit Counties at that time.

Forest Health Issues

Forest Health Monitoring — Collection of annual forest inventory and forest health information started in Ohio during 2001 and has continued through 2006. Sample plots are part of a nationwide grid design. An estimated 1,334 inventory plots and 83 forest health monitoring plots will be permanently established in Ohio forests. The plots will be visited on a 5-year cycle, with one-fifth of the total plots being visited each year.

Prescribed Fire — An ongoing study continues to reveal how prescribed fire enhances the health of Ohio's oak ecosystems. This is a cooperative effort among several agencies and universities and led by the ODNR Division of Forestry and the USDA Forest Service. The effects on oak forests of burning alone, thinning alone, and both practices combined are being studied.

For More Information



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