Ohio - 2008

Forest Health Highlights

The Resource

Ohio encompasses 26,209,700 acres, 30 percent of which are forested. Forest cover has 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 249 Tree City USA communities. These communities represent over half of the 80 percent of Ohioans living and/or working in urban areas, and 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 northwest Ohio, where the emerald ash borer had become established. Here, 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. To date, about 30 of these plans have been completed in Ohio.

Special Issues

The emerald ash borer (EAB, Agrilus planipennis) is non-native insect pest of ash trees in the United States. 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 United States 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. The pest was first identified in Ohio (Lucas County) in February 2003. Subsequently, several infestations of EAB were discovered in the State, 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 ash trees within a ½-mile radius around these infestation sites. More than 30,000 trees were cut, chipped, and burned at the four sites. In 2005 and 2006, 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. Eradication efforts were suspended in 2006 due to a lack of funding to support this enormous effort. ODA's current strategy is focused on containment through quarantine, early detection, and educating the public about this destructive pest and what can be done to prevent its artificial spread. ODA has quarantined ash trees, logs, lumber, bark, chips, and firewood from all infested counties in Ohio. In 2006 and 2007, ODA completed statewide EAB detection surveys with a focus on counties in which the pest had not yet been discovered. EAB has now been detected in a fairly contiguous area starting in northwest Ohio and going east to Cleveland and south to Columbus and Cincinnati. The infested counties between northwest Ohio and Cleveland, Columbus, and Cincinnati correspond very closely to the Interstate 80/90, US 23, and Interstate 75 corridors, respectively. By the end of 2006, EAB had been detected in 26 Ohio counties. Detection efforts revealed infestations in nine additional counties in 2007, bringing the number of infested counties in Ohio to 35. The ODA used the purple trap survey procedure in 2008 and EAB was found in 4 more counties, bringing the total known infested counties to 39. ODA has placed these counties plus an additional five counties (44 counties total) under quarantine due to these discoveries. USDA APHIS has implemented a similar quarantine that prohibits the movement of regulated articles over the state lines of Ohio, Michigan, Indiana, and Illinois. The Federal quarantine also applies to St. George's County, Maryland, and a four-county area in western Pennsylvania. The ODNR Division of Forestry continues to help woodland owners manage their forests and utilize their ash resources, assist communities that are dealing with current and future EAB issues, and work to increase public awareness about the insect. 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

and about 2,100 acres of defoliation. Oak mortality is localized. Dry weather conditions in May lessened the impact of the fungus *Entomophaga maimaiga* in Ohio in 2008. Gypsy moth infestation continued to spread to new areas in the State, including the oak-hickory forests of southern Ohio.

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 — Although we experienced short-term dry conditions in 2008, wet soils during the past four growing seasons are still contributing to decline and mortality of white pine. About 1,400 acres of white pine forests were affected in Ohio in 2008. 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 soil conditions and/or overstocking. A similar decline was observed in the mid 1990s. Timely thinning of white pine stands seems to be the best defense against periodic decline.

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 then, the area has been periodically inspected for BBD, and the arboretum set up a monitoring program for its beech trees. In December 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 2008, 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 — Defoliation of white oak trees in southern Ohio was more difficult to find in 2008. Mortality has slowed, but has continued through 2008, requiring continued salvage of dead and dying white oak trees in some areas. Several insect pests began defoliating white oak trees in 2002. Severe defoliation, coupled with drought conditions in 1999 and 2002, caused significant tree mortality starting in 2002, especially in some Ross County white oak stands. Other affected counties included Pike, Lawrence, Scioto, Vinton, and Athens. The half-wing geometer (*Phigalia* spp.), the common oak moth (*Phoberia autumalis*), and tent caterpillars joined forces to cause the initial defoliation damage. Two-lined chestnut borer, armillaria root rot, hypoxylon canker, and phytophthora root rot worked together as a group of secondary pests to kill already weakened trees.

Hemlock Woolly Adelgid (HWA) — HWA was found in a Summit County landscape in 2008. Last year, a few trees in Lake County were found to be infested with HWA. The infested trees discovered this year and last year were destroyed by the Ohio Department of Agriculture (ODA). Surveys completed in the areas around all infestation sites showed no evidence that HWA had spread into other surrounding trees.

Forest Health Issues

Forest Health Monitoring — Collection of annual forest inventory and forest health information started in Ohio in 2001 and has continued through 2007. 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. The ODNR Division of Forestry and the U.S. Forest Service are leading this cooperative effort among several agencies and universities. This study is focused on the effects on oak forests of burning alone, thinning alone, and both practices combined.

For More Information

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