

Ohio

Forest Health Highlights



January 2001

The Resource

Ohio encompasses 26,209,700 acres, 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 11,102,000 people (1994 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 communities continued during 2000 to plant more trees than they removed, while maintaining more trees than they planted. This represents a significant commitment to the quality of life for roughly 80 percent of Ohioans living and/or working in urban areas. A series of statewide surveys and open forums, conducted with municipal leaders, revealed that managing an aging forest is their major concern. The ramifications of over-mature urban trees are substantial, and will be a primary community tree care focus for years to come.

Special Issues

Asian Longhorned Beetle — This destructive exotic insect has not been found infesting trees in Ohio, but proactive plans were made to address the issue should action become necessary. Public outreach efforts have emphasized public awareness of this insect, with special attention

focused on city, urban, and utility foresters, and other tree care professionals. Key to the outreach was the development of a website <http://www.hcs.ohio-state.edu/ODNR/Health/alb.htm>, where information can be readily accessed by all interested parties.

Forest Fragmentation — Changing land use in Ohio has converted forests to other uses. Historically, forests were often cleared for farming. Some of these agricultural lands are reverting to forests, resulting in increased forested acreage. Today, however, land development breaks forests into smaller parcels as an increasing population places demands on Ohio's land. Forest fragmentation decreases woodland continuity, impacting plants and animals that depend upon large areas of continuous forest cover. Construction of buildings, roads, and utility corridors, while important to our economy, significantly impacts the quantity and quality of Ohio forests. The Ohio Division of Forestry's land acquisition program focuses on purchasing parcels of land connecting existing parcels of state forests. The goal is to create larger, contiguous acreages of permanent forests within Ohio.

Forest Pest Issues

Gypsy Moth — Gypsy moth surveys conducted by the Ohio Department of Agriculture revealed high population densities on State and private forests in Ohio. In addition, oak mortality has occurred in four counties due to repeated defoliation. In 2000, gypsy moth caterpillars defoliated 23,293 acres of forestland. The impact of gypsy moth includes forest ecosystem degradation, economic losses to businesses, loss of recreational opportunities in areas severely defoliated, reduced private property values, and nuisance from gypsy moth caterpillars. The threat of gypsy moth has been lessened recently by the occurrence of the insect pathogen, *Entomophaga maimaiga*. This fungal pathogen has drastically reduced gypsy moth populations in many areas since 1996. Though not much is known about how the pathogen survives or spreads, it is generally thought that abundant rainfall and high humidity during the late spring and early summer favor growth of the fungus. Even though this insect pathogen is present in Ohio, the fungus did not control gypsy moth numbers in 1999 or 2000. Also, gypsy moth continues to spread to new areas in the State.

Yellow Poplar Discoloration — Aerial surveys revealed premature yellowing of yellow-poplar foliage scattered across nearly 506,000 acres in five eastern Ohio counties. The cause of the yellowing could not be determined, but monitoring of this problem will continue.

Eastern Tent Caterpillar — Populations of this native defoliator were high in some areas of southern Ohio. Complete defoliation of black cherry trees was common during the spring.

Oak Wilt — This fungal disease of red oaks, killed trees in some northeast Ohio communities. Confirmed cases of oak wilt will be watched to determine if the disease continues to spread.

Southern Pine Beetle — Southern pine beetle infestations discovered in Adams, Meigs, Jackson, and Pike Counties late this year killed loblolly pine trees. A series of mild winters followed by the drought in 1999 probably allowed this southern species to infest trees in Ohio. The problem is expected to disappear as normal winter weather patterns return, but the problem will be watched carefully.

Elm Mortality — There are two diseases, Dutch elm disease and elm yellows, killing both American elm and red elm in Ohio. Dutch elm disease is caused by a wilt fungus spread by bark beetles. Elm yellows (elm phloem necrosis) is a disease caused by a phytoplasma (a bacteria-like organism). Historically, elms affected by elm yellows were more prevalent in southern Ohio, and Dutch elm disease was more common in northern Ohio. Both diseases have been found extensively in central Ohio. In 1998-99, the Ohio Division of Forestry participated in a multi-state survey to delineate areas of elm mortality. This survey indicated that elm yellows and Dutch elm disease are present across the State.

Butternut Canker — Decline and mortality of butternut, *Juglans cinerea*, has occurred throughout Ohio. The Ohio Department of Natural Resources, Division of Forestry, developed and implemented a butternut management policy in 1994 to protect the 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.

Dogwood Anthracnose — From 1996 to 1998, cool and moist spring weather contributed to the occurrence of dogwood anthracnose across the State. Dogwood anthracnose, a fungal disease first reported during 1978, has caused widespread and often rapid deterioration of flowering dogwood trees across many areas of the northeast United States. Reports of dogwood mortality have been increasing in Ohio, especially from southern and southeastern counties. Dry weather in 1999 greatly reduced reports of the disease, but dogwood decline and mortality still could be observed.

Forest Health Issues

Forest Health Monitoring — The Ohio Division of Forestry developed plans to collect forest inventory and forest health data starting in 2001. 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 five-year cycle, with one-fifth of the total plots being visited each year.

Prescribed Fire — A study was initiated to determine how prescribed fire enhances the health of Ohio's oak ecosystems. This is a cooperative effort between ODNR Forestry Division, Mead Woodlands, and USDA Forest Service. The effects on oak forests of burning alone, thinning alone, and both practices combined will be studied.

For More Information



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