



United States Department of Agriculture



Michigan Department of Natural Resources

# Michigan Forest Health Highlights 2020

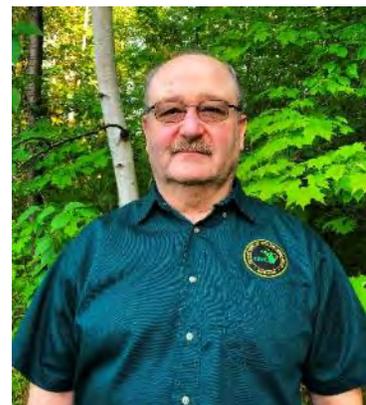
Michigan Department of Natural Resources, Forest Resources Division



## Introduction

The value of trees became apparent in 2020 like no other year. People turned to the outdoors for recreation and peace of mind. They grew more interested in local surroundings as they spent an increasing amount of time outdoors and sent record numbers of questions about backyard trees to Michigan Department of Natural Resources staff. They also purchased loads of lumber to embark on home improvement projects.

Michigan's nearly 20 million acres of forest land are essential and provide substantial value to our state. Forests create places to explore, jobs and raw materials. They provide clean air and water and even boost our physical and mental health when people visit them to hike, hunt, bike, fish, ski or birdwatch.



With that value in mind, partnerships among government agencies, universities, local action groups and the community are key in preventing pests and diseases that threaten Michigan's trees and forests.

In 2020, our work in the DNR Forest Resources Division was profoundly complicated by the effects of COVID-19, a common issue in many professions. Despite the difficulties introduced by the pandemic, Michigan's forest health partners devised creative solutions and stepped up to the challenge of continuing to protect our forest resources.

Crews scoured wooded areas along the Lake Michigan coast for the tiny hemlock woolly adelgid insect, identified and planned treatments for new pockets of Heterobasidion root disease – a fungus attacking red pines – and tested new ways to fight the devastating oak wilt disease. With agency partners, quarantines were established to protect forests from new threats and community members were educated on how to keep a watchful eye on their trees close to home.

The DNR's Forest Health Team and its many partners are committed to caring for Michigan's forests so everyone can enjoy their benefits now and into the future. Thank you to our partners for their dedication to protecting forest resources, and to readers for your interest Michigan's trees and forests.

Sincerely,

Jeff Stampfly

DNR Forest Resources Division Chief and State Forester

mammals. Humans aid the dispersal of adelgids through movement of infested materials such as firewood.

When balsam woolly adelgids feed, they inject a salivary substance into the tree, causing gall-like structures and calluses to form on branches and twigs, sometimes called “gouting.” Heavy stem infestations can kill a tree in two to three years, while crown infestations cause progressive decline.

If the balsam woolly adelgid were to become established in Michigan, it would adversely affect the timber, nursery and landscaping industries as well as the Christmas tree and tourism industries. The Michigan Department of Agriculture and Rural Development implemented a balsam woolly adelgid quarantine in 2014, regulating the movement of true firs entering the state from other parts of the U.S. and from Canada. The balsam woolly adelgid quarantine generally prohibits movement of fir nursery stock and timber products originating from infested areas. Exemptions include seedlings and transplants less than 3 years of age. Cut fir Christmas trees, wreaths and boughs are exempt during the period of Nov. 1 - Jan. 31.

### **Gypsy moth - *Lymantria dispar dispar***

European gypsy moths were the talk of the town in the northern Lower Peninsula this year as nearly 1 million acres were defoliated. Michigan has not seen this much defoliation since the early 1990s when populations last exploded.

Introduced in the early 1950s into southern Michigan, gypsy moths spread like wildfire and can be found throughout the state today. Unlike the defoliation in the 1990s, today’s outbreaks are typically brief and localized due to the introduction of *Entomophaga maimaiga*, a fungus that only infects and kills gypsy moths.

Coupled with native predators, parasites and a virus that targets gypsy moth populations during outbreaks, gypsy moths are now considered “naturalized” into Michigan’s forests. Consequently, they now behave more like native pests such as forest tent caterpillars. Outbreaks still occur but now are usually related to weather such as drought or other tree stressors that allow populations to build.

In 2016, 2017 and the summer of 2018, drought plagued Michigan, allowing gypsy moth populations to grow. In 2019, much-needed rain brought a significant collapse of populations throughout southern Michigan. However, the northern Lower Peninsula did not fare as well, and over 200,000 acres were defoliated. With fewer rainy days and long hot dry spells in 2020, gypsy moth populations continued to thrive in the northern Lower Peninsula, and nearly 950,000 acres were defoliated.

Most healthy deciduous trees can withstand severe defoliation from gypsy moth attacks for a few consecutive years with no long-term impacts. Trees in forests and backyards generally recover, re-leafing later in the summer. Trees subject to drought or other stressors may start to die after a few years of consecutive defoliation. However, after a few years of high activity, gypsy moth populations are likely to collapse without human intervention. To help high-value trees survive, deep watering during extended dry spells is the most important action to take. A light fertilizer application in late fall can also help trees rebound from stress caused by gypsy moth feeding.



Michigan's [Forestry Assistance Program](#) helps family forest owners become active stewards of their forests and woodlands. MDARD, , conservation districts, other state and federal agencies, Michigan State University Extension and private-sector natural resource professionals work together to help family forest owners achieve their goals and get the most from their wooded property. The program consists of 19 conservation district foresters serving 46 counties. Forestry Assistance Program foresters offer no-cost services to family forest owners and do not compete with the private sector. They serve as an initial point of contact for forestry-related natural resource concerns in their community.

[Michigan State University Extension](#) provides forest health information to landowners through articles, workshops and webinars.

The State of Michigan values these public-private partnerships to provide resources, information and experts to help Michigan's family forest landowners maintain and improve the health of their woods.

## Contact information and acknowledgements

### Contact

Michigan Department of Natural Resources  
Forest Resources Division, Forest Health Program  
[DNR-FRD-Forest-Health@Michigan.gov](mailto:DNR-FRD-Forest-Health@Michigan.gov)

### Acknowledgements

This report was developed and published with the support of the United States Department of Agriculture Forest Service.

Information and articles for this publication were provided by:

- The Michigan Department of Natural Resources
- The Michigan Department of Agriculture and Rural Development
- The Michigan State University McCullough Lab
- The Michigan State University Sakalidis Lab
- The Michigan Technological University Bal Lab

Many thanks are due to the article writers and agencies for their contributions.

U.S. Department of Agriculture  
Forest Service  
Eastern Region  
State and Private Forestry  
626 East Wisconsin Avenue  
Milwaukee, WI 53202  
[FS.USDA.gov/naspf/](https://www.forestservice.gov/naspf/)

Forest Health Protection  
Eastern Region  
State and Private Forestry  
180 Canfield Street  
Morgantown, WV 25305  
304-285-1545

Michigan Department of Natural  
Resources  
Forest Resources Division  
PO Box 30452  
Lansing MI 48909-7952  
517-284-5900  
[Michigan.gov/DNR](https://www.michigan.gov/DNR)



In accordance with Federal law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, disability, and reprisal or retaliation for prior civil rights activity. (Not all prohibited bases apply to all programs.)

Program information may be made available in languages other than English. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, and American Sign Language) should contact the responsible State or local Agency that administers the program or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339.

To file a program discrimination complaint, a complainant should complete a Form AD-3027, USDA Program Discrimination Complaint Form, which can be obtained online at <https://www.ocio.usda.gov/document/ad-3027>, from any USDA office, by calling (866) 632-9992, or by writing a letter addressed to USDA. The letter must

contain the complainant's name, address, telephone number, and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to USDA by:

- (1) Mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue SW, Washington, D.C. 20250-9410; or
- (2) Fax: (833) 256-1665 or (202) 690-7442; or
- (3) Email: [program.intake@usda.gov](mailto:program.intake@usda.gov).

