

Western and Central Wisconsin Forest Health Report – May 2016

By Mike Hillstrom, Todd Lanigan, Paul Cigan

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Arthropods

Emerald Ash Borer

EAB was recently detected in street ash trees in the cities of Steven's Point and Wisconsin Rapids. Portage and Wood Counties are quarantined as a result of these finds.

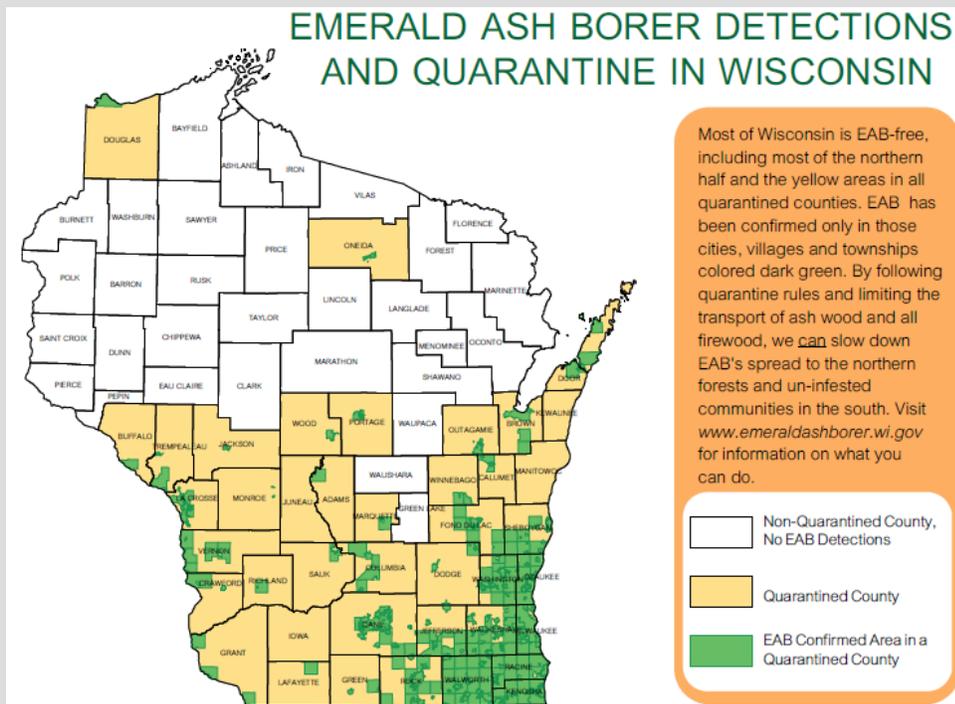


Figure 1. Known locations of EAB in Wisconsin.

Gypsy Moth

Gypsy moth egg masses started hatching on April 25 in southern Wisconsin. DATCP and DNR spraying is in progress and will continue throughout May and into June. Btk applications will cover approximately 19,075 acres and mating disruption flakes will cover approximately 221,004 acres. Additional spray program updates, including information on treatment locations and progress, are available at <http://gypsymoth.wi.gov/>.

Eastern Tent Caterpillar (By Todd Lanigan)

Depending on your location, you may be seeing white tents in wild cherry trees formed by



eastern tent caterpillar (ETC). The caterpillars feed on cherry, apple, crabapple, and will also feed on oaks and aspen when worse comes to worse. Small tents are becoming visible in many parts of the state but the infestations seem localized. The easiest control methods are to pull the tents out of the tree and soak them in soapy water for a couple of days or put them in sealed trash bags. Insecticides are rarely necessary but need to penetrate inside the tent if used. Do not prune branches, burn tents or soak tents with WD-40 as these methods cause more harm to the tree than the defoliation would.

Figure 2. Eastern tent caterpillars of several instars on a tent.

Forest Tent Caterpillar (By Paul Cigan)

Similar to recent years, forest tent caterpillar (FTC) populations and associated defoliation is forecast to be light in northwest Wisconsin in 2016. In April, I sampled FTC egg mass densities in the counties of Bayfield, Douglas, Iron, Sawyer, and Washburn. Sites sampled were recently coppiced aspen stands with residual crowns. Only two egg masses were discovered across all the sites sampled. Other regional Forest Health Specialists are also expecting light to no defoliation in their regions. Heavy defoliation by FTC occurs in years of population outbreak. While an FTC outbreak was anticipated for northwest Wisconsin and northeast Minnesota by 2015, surveys suggest FTC populations may instead be stable to declining, rather than building.



Figure 3. Forest tent caterpillar egg mass on an aspen shoot with recently emerged caterpillars. Photo by Paul Cigan.

Eastern Larch Beetle (By Todd Lanigan)

Taylor County and DNR Forestry established timber sales on the county forest and on the



Pershing Wildlife Area in tamarack/black spruce stands. Both timber sales were modified because ELB was found in the stands. Eight to ten seed trees per acre of tamarack and black spruce were left in the harvested areas. Both sites were partially harvested over the winter of 2014-2015. No harvesting took place over of the winter of 2015-2016 because of the lack of frozen ground. From personal communication, the leave trees on the county forest did well with very few leave trees killed. Unfortunately the same cannot be said for the leave trees on the Pershing Wildlife Area, the leave trees died.

Figure 4. Tamarack and black spruce seed trees at Pershing Wildlife Area. Photo by Scott Lindow.

Mealybugs on Leatherwood (By Paul Cigan)

Mealybugs, a relative of scale insects, are soft-bodied, oval-shaped insects often covered with a white cottony wax. They feed on a variety of plant tissues—stems, foliage, and leaf petioles—and host species, preferring hosts with soft, succulent stems. Its make sense, then, that I discovered several deceased mealybug colonies on soft-stemmed leatherwood shrubs (*Dirca palustris*) in April in Sawyer Co. I observed residual feeding damage under individual mealy bug carcasses and a still-sticky film of honeydew, yet the shoots were flowering and appeared healthy.



Figure 5. A leatherwood shrub infested with a colony of deceased mealybugs (Sawyer Co.). Photo by Paul Cigan.

Ash Flower Gall Mite (By Todd Lanigan)

Although EAB is spreading to more and more counties in western and central Wisconsin ash trees have a variety of other issues that affect them. One common issue is ash flower galls caused by eriophyid mites. At first the galls are green, then turn brown and eventually turn black. The galls may also distort the shape of the leaves. The galls are a cosmetic issue. The galls do not affect the health of the tree but may be unsightly or a minor nuisance when they fall off the tree. Pesticides are effective in killing the mites if timed properly but due to the difficulty of treating entire trees and the cost do so it is rarely warranted. For more info see <https://hort.uwex.edu/articles/ash-flower-gall/>.

Diseases

Diplodia Infection of Red Pine Regeneration (By Paul Cigan)

The foliar fungal pathogen, *Diplodia pinea*, is a devastating disease of red pine in the upper Great Lakes region. Diplodia symptoms include: basal cankers on young trees, resinous branch and stem cankers on seedlings and saplings, shoot tip blight, and occasionally mortality of all size classes. The disease spreads via: transport of infected nursery stock, vectoring by cone insects, and deposition of spores through rain splash. In addition, latent *Diplodia* infection of advance regeneration—a condition under which shoots become infected but remain asymptomatic—can persist for years without visual detection. However, damage from biotic and abiotic agents (e.g., drought; hail and/or frost injury; pine spittlebug attack) eventually occurs and activates disease expression. Once activated, *Diplodia* kills shoot tips and after 1-2 years of repeated infection can kill entire seedlings and saplings. Due to a high incidence of infection and subsequent mortality of advance regeneration in pine plantations, *Diplodia* is a limiting factor in the viable management of multi-cohort stands of red pine. Cultural practices that reduce incidence of infection include: retaining a 1 chain (66 ft.) buffer strip between the edge of existing red pine overstories and seedling plantings; avoiding the retention of red pine residuals on replanting sites; if retaining red pine residuals, configure them in clusters near plantation edges rather than evenly dispersed.



Figures 6, 7. Blighted shoot of a *Diplodia*-infected red pine sapling in a plantation understory and a *Diplodia*-killed cohort of understory red pine seedlings in Washburn County. Photos by Paul Cigan.

Oak Wilt Sites Needed for Herbicide Study

We are still looking for oak wilt pockets to include in our oak wilt herbicide study.

Sites characteristics:

- at least 60% oaks from the red oak group
- low slope
- BA greater than 35 sq.ft./acre
- sandy/loamy sand or sandy loam/loam soils
- at least ¼ mile to any known untreated oak wilt pocket
- able to monitor the site for five years

Please let us or Jed Meunier (Jed.Meunier@Wisconsin.gov) know if you have any potential sites.

Heterobasidion Root Disease in Norway Spruce (By Mark Guthmiller)

Last year the DNR Forest Health program detected Heterobasidion root disease (HRD) in a white spruce (*Picea glauca*) plantation in the Southern Unit of the Kettle Moraine State Forest. This prompted a survey of two clustered Norway spruce (*Picea abies*) stands as this species had previously been planted in parts of the Kettle Moraine State Forest as well. Surveys were conducted earlier this month and indeed HRD was detected in these Norway spruce stands. Samples have been taken back to the lab for additional culturing and final confirmation but conks were indicative of this disease.

Twelve stumps were confirmed with conks and numerous additional stumps had stringy white rot also indicative of this disease. Based on information from DNR forester, Mike Sieger, these spruce stands were planted in 1952 and had previously been thinned and are due for another thinning. These stands are a little over ½ mile from a previously HRD confirmed red pine plantation and about 7 miles from the 2015 confirmed white spruce plantation. In addition to Norway spruce, both red and white pine planted adjacent to these stands were confirmed with HRD.

So far, minimal impacts were observed on Norway spruce trees adjacent to these spruce infected stumps. There were areas with an individual or clusters of a few trees showing thin crowns adjacent to infected stumps. There were also an occasional scattered standing or tipped dead tree in these stands but not always associated with adjacent stumps with conks. We did not see large basal cankers and resin pitch on these trees, which was different than what was observed in the white spruce plantations last year. It is suspected that HRD impacts may be more of growth reduction due to root rot than outright mortality to Norway spruce based on these preliminary observations.

Invasive Plants

Online Guide to Financial Resources for Invasive Plant Control (By Mike Putnam)

A [list](#) of financial resources for controlling invasive species of all kinds has been posted on the Governor's Wisconsin Invasive Species Council [website](#) under the "resources" tab. The list, prepared by the Department of Natural Resource's Invasive Species Team, provides links or other contact information to funding sources provided by federal and state agencies along with private foundations.

The list can be searched by grantee and taxa eligibility. Eligible grantees range from government agencies, tribal and local governments, businesses, non-profit organizations to private individuals. Eligible taxa include plant pests and diseases, invasive plants, aquatic invasive species and invasive animals, both invertebrate and vertebrate. Eligibility categories can be selected using one or both of the drop-down menus.

Some grants are solely for invasive species work. Others include work on invasive species as part of a larger goal. For example, DNR wildlife stamp grants can support invasive species control as part improving the habitat of gamebirds and waterfowl.

The webpage has an email link by which you can alert us to out-of-date information and broken links. Please use them if you encounter these problems and, especially, to inform us of funding opportunities not included in the list.

***Sorbaria sorbifolia* discovered in Columbia County (By Mark Guthmiller)**

False spirea (*Sorbaria sorbifolia*), a non-native shrub in the rose family, was confirmed by DNR staff, showing invasive tendencies in and around a pine plantation in Columbia County. Moist, well drained sites appear to be preferred by this species. This plant is currently not regulated under NR40 but has been on the watch list here in Wisconsin. In such situations, control is recommended to prevent further spread and establishment in a woodland stand. This plant could be confused with Staghorn sumac. To see a photo of this plant in fully expand foliage and flowering stage visit: http://dnr.wi.gov/topic/Invasives/documents/wetland_species.pdf.

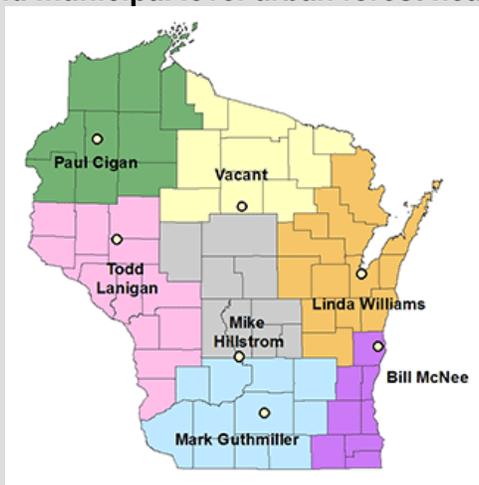


Photos 8, 9. A pine plantation with *Sorbaria sorbifolia* spreading throughout the understory and newly expanding leaves in early April.

Herbicide Recommendations

Looking for herbicide recommendations for invasive plants? Recommendations are available in the factsheet for all NR40 listed species at dnr.wi.gov keywords **invasive plants**. Additional pesticide information including pesticide tables are available at dnr.wi.gov keyword **herbicide**.

For general forest health and municipal level urban forest health issues contact:



<http://dnr.wi.gov/topic/ForestHealth/staff.html>

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Statewide reporting systems:

Report EAB:

by phone 1-800-462-2803
by email DATCPEmeraldAshBorer@wisconsin.gov
visit the website <http://emeraldashborer.wi.gov/>

Report Gypsy Moth:

by phone at 1-800-642-6684
by email dnrfgypsymoth@wisconsin.gov
visit the website <http://gypsymoth.wi.gov/>

For additional information visit the Forest Health web site: <http://dnr.wi.gov/topic/ForestHealth/>

Note: This report covers forest health issues occurring in the West Central District of Wisconsin. The purpose is to provide up-to-date information on forest health issues to foresters, forest landowners, and anyone else interested. We welcome your comments/suggestions on this newsletter as well as reports

on forest health problems in your area. If you would like to subscribe to this newsletter, please contact Mike Hillstrom at Michael.hillstrom@wisconsin.gov. Previous issues of this update and regional forest health updates from NER, NOR and SOR, are available from the WI DNR Forestry website at <http://dnr.wi.gov/topic/ForestHealth/Publications.html>. Articles written by Mike Hillstrom unless otherwise noted.

Pesticide use: Pesticide recommendations contained in this newsletter are provided only as a guide. You, the applicator, are responsible for using pesticides according to the manufacturer's current label directions. Read and follow label directions and be aware of state or local laws regarding pesticide use.