

Southern Wisconsin Forest Health Update

Wisconsin DNR, Forest Health Protection Unit

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Articles in this newsletter were written by Mark Guthmiller, Regional Forest Health Specialist, unless otherwise noted.

Emerald Ash Borer– Bill McNee

New detections - Since the last Southern District pest update, there have been too many new EAB detections to list them all. Communities with first detections include Bayside, Big Bend, Eagle, East Troy, Lake Mills, McFarland, Menomonee Falls, Pewaukee, Richfield, River Hills, Sheboygan, Stevens Point and Stoughton. A complete list of municipal EAB detections can be found here:

<http://datcpservices.wisconsin.gov/eab/articleassets/ConfirmedEABFindInWisconsin.pdf>. To get the fastest updates on new EAB detections, sign up for email notification:

http://datcp.wi.gov/Gov_Delivery/EAB/index.aspx.

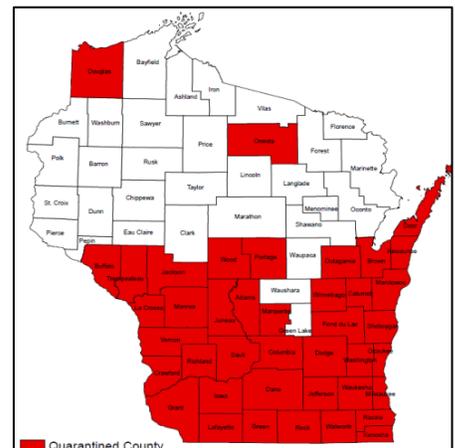
Woodpecker damage, known as ‘flecking,’ exposed many new infestations this winter as the birds found overwintering EAB larvae beneath the bark. At many of these sites, symptoms of EAB infestation could not be seen last fall even though the pest was suspected to be present.

EAB quarantine expanded - With the first detection of EAB in the city of Stevens Point, the EAB quarantine area has been expanded to include Portage and Wood Counties. A current quarantine map is available here:

http://datcpservices.wisconsin.gov/eab/articleassets/WI_EAB_Quarantine.pdf.



Woodpecker ‘flecking’ on EAB-infested ash trees. Photo by Bill McNee, WI DNR.

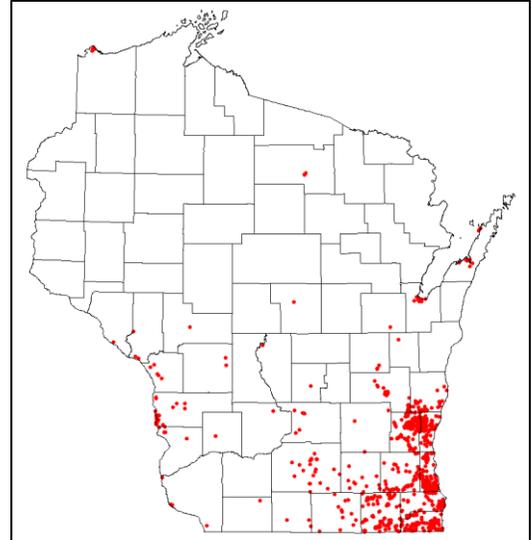


Current EAB quarantine areas are shown in red. Map by DATCP.

A map showing permitted firewood movement has also been updated and is available here:

<http://datcpservices.wisconsin.gov/eab/articleassets/Firewood%20Movement%20in%20Wisconsin.pdf>. These maps will change in response to future EAB detections.

New Reports - If EAB has not already been found in a community or county, send reports of suspected infestations to the EAB website, www.emeraldashborer.wi.gov, using the “Report EAB” link. Submitting pictures of suspect galleries, exit holes, larvae or adult beetles is greatly appreciated. A larva or adult beetle specimen is needed to confirm EAB in a new county. DNR forest health specialists, DNR urban forestry coordinators and UW Extension staff are able to assist with confirmations in already confirmed counties. Pictures of EAB signs and symptoms can be found online at www.emeraldashborer.wi.gov.



Emerald ash borer detections as of mid-April 2016 are shown in red.

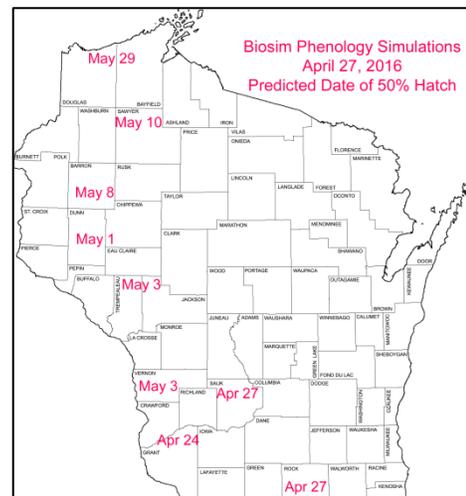
EAB treatment timing – Now is a good time to consider insecticide treatments for high-value ornamental ash trees, since the ash trees in all of southern Wisconsin are at high risk for becoming infested soon if they are not already infested. As long as a tree is not heavily infested, properly-done treatments should provide good protection even as adjacent, untreated trees become infested and die. Some of the insecticide products can be purchased and applied by property owners, whereas other products are only available to tree-care professionals.

Many insecticides used in EAB treatments are applied between mid-April and mid-May. If using these chemicals, follow label instructions so that treatments are properly timed for optimal effectiveness. UW Extension Factsheets (for homeowners and professionals) can be found here: http://labs.russell.wisc.edu/eab/eab-news-and-resources/#Management_Factsheets.

EAB stand management tool – Greg Edge, WI DNR Silviculture Specialist, has created a checklist to help determine options for managing an ash stand. The checklist asks questions about the stand and suggests management options based on the answers. It’s not online and is a draft version, but if you would like a copy, contact Mark Guthmiller or Bill McNee.

Gypsy Moth– Bill McNee

Hatch update - Biosim phenology software predicts that gypsy moth hatch is now underway in southwest and south central Wisconsin. The simulations are currently predicting that hatch is about a week ahead of its 30 year average. First observed hatch occurred Monday, April 25th in Rock, Dane, Vernon, and Trempealeau Counties.



Predicted dates of 50% gypsy moth egg hatch using Biosim phenology software.

Homeowner controls - Homeowners who are interested in reducing gypsy moth populations should now oil or remove any egg masses within reach, and put up sticky barrier bands on host trees with more than a few egg masses on them. Additional management options for homeowners and woodlot owners are available at www.gypsymoth.wi.gov.

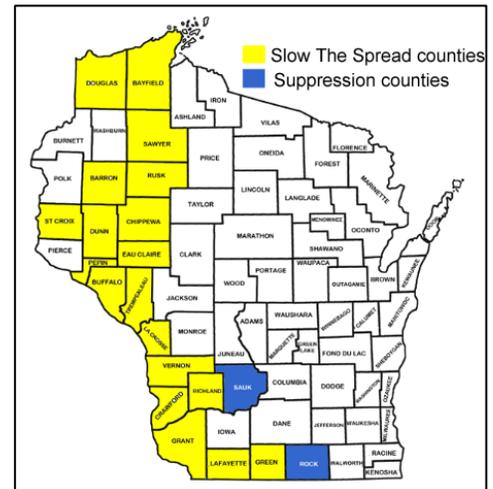
Individuals considering insecticide treatments this spring should contact an Arborist or Tree Service as soon as possible if they have not already done so. The Wisconsin Arborist Association has a list of ‘Certified Arborists’ available at www.waa-isa.org. Additional businesses offering insecticide treatments may be found in the phone book under ‘Tree Service’ or ‘Pest Control.’ Homeowners can also purchase insecticides at garden centers, hardware stores and large retailers.



Gypsy moth caterpillars hatching from an egg mass. Photo by Bill McNee, WI DNR.

Suppression treatments – The DNR gypsy moth suppression program will be spraying a total of about 100 acres at two sites in Rock County (Town of Beloit) and Sauk County (Mirror Lake State Park). Aerial spraying is currently predicted to occur in mid-May.

Slow-The-Spread (STS) gypsy moth treatments - The Wisconsin Dept. of Agriculture, Trade and Consumer Protection (DATCP) has announced that this year’s STS program will consist of approximately 19,000 Btk acres and 221,000 Mating Disruption acres. Beginning in May and continuing through late July or early August, DATCP plans to treat selected areas in western counties using low-flying planes. Sites are treated in order to help slow the population buildup and spread of gypsy moth into uninfested areas. STS treatments will occur in 19 counties this year. More information about the sites and treatments is available online at www.gypsymoth.wi.gov. Click on the county and then use the interactive map to see detailed treatment boundaries.

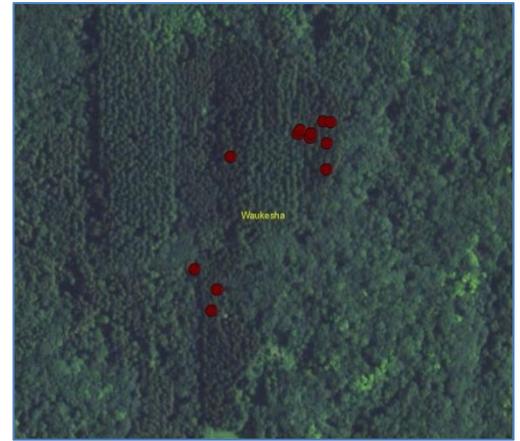


Map of counties where suppression (blue) and slow-the-spread (yellow) treatments will occur in 2016. Only a small portion of these counties will be treated. Map by DATCP.

Heterobasidion Root Disease in a Norway Spruce Plantation

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 (for more information on this topic visit: [December 2015 SOR FH Newsletter](#)). 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.



Red dots represent Norway spruce stumps confirmed with HRD conks in two spruce plantations in the Southern Unit Kettle Moraine State Forest in Waukesha County.

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.



Left to Right: DNR Forest Health Specialist, Bill McNee, with first conk detections on a Norway spruce stump; thin canopy of Norway spruce adjacent to infected stump; stump with large HRD conks. Photos by Mark Guthmiller. WI DNR.

Suspect *Phellinus* Heart/Canker Rot in a Norway Spruce Plantation

After confirming HRD in Norway spruce a subsequent report of dying Norway spruce in western Jefferson County prompted a site visit. The site was apparently an old Christmas tree plantation that has now been developed into a residential area. The stand did have observed areas of mortality (somewhat pocket like) but no observed HRD conks. The stand also was overstocked and there was no apparent thinning to allow for the HRD pathogen to get a foothold. There were a number of trees with conks that appear to be one of the *Phellinus* species. This is apparently a diverse complex of heart and canker rot fungi and taxonomy is still evolving. In addition to the observed conks there were numerous cankers on both the main trunk and branches. Since these trees appeared to be impacted in a somewhat pocket like pattern, roots were also excavated and large canker/tumor like growths were observed along with some root decay. Interestingly, in the Sinclair and Lyon reference manual: “Diseases of Trees and Shrubs”, they mention bacteria, including nitrogen-fixing bacteria associated with decay by the canker rot fungus, *Phellinus cancriformans* on fir. The root canker or tumor growth reminds me of possible crown gall, *agrobacterium tumefaciens*. In addition to these observations there were some secondary spruce bark beetle and wood borers present on some of the trees but not consistently observed and likely not playing much of a role in the tree mortality. Further investigations continue.



Left to right: Single conk below an old branch stub; underside of conk showing more angular pore like structures; a cluster of small conks on a swollen main stem.



Left to right: Large tumor/canker like growth on root; upper main stem canker at branch whorl; white pocket rot from base of dead tree.

Strange Branch Growth on White Spruce

DNR forester, Randy Stampfl, shared a couple sites in Dodge County having some issues with white spruce. We may have some similar things going on as with the Norway spruce in Jefferson County, possibly Phellinus heart/canker rot. What was different here was some strange branching growth, almost broom like, at both sites. With the presence of this broom like growth, I will be requesting we add these sites to our phytoplasma test locations this season. I have no idea if this could be the issue but it may be worth testing. There was a report out of Poland in 2011 confirming the presence of phytoplasma in three spruce species, including *Picea glauca*, *P. abies*, and *P. pungens*. I would be curious if others see this broom growth, which was often associated with dead branch material in the same area of the branch.



Left to right: dead branch from upper canopy showing stunted “broom like” branching growth; partially live branch showing dense growth along with dead twigs.

More Shagbark Hickory Brooms Observed

Since the report last August of brooms and tumor like growth on shagbark hickory in Rock County, a number of other similar observations have been made in southern Wisconsin.



Examples of “brooming” woody growth on main stems and branches of shagbark hickory observed

WI DATCP sent a report observing the strange growth on a shagbark hickory in Walworth County. In addition, I have made observations of this growth on shagbark hickory at two county parks in Rock County and two private woodlots in Iowa County. We did confirm phytoplasma (Yellows) on the outer branch brooms at the first Rock County site last year. These new sites may be added to our phytoplasma testing sites this coming season. I would be interested in additional reports if others observe this.

False Spirea, *Sorbaria sorbifolia*, confirmed in Columbia County

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 . Thanks to Mike Hillstrom, DNR Forest Health Specialist, for his assistance investigating this report.



False spirea showing invasive tendencies in and around a pine plantation. Photo to right shows compound leaves of this shrub just starting to come out for the season. Photos by Mike Hillstrom.

Miscellaneous Topics and Observations

Weather outlook – Several weather forecasts are indicating that temperatures are most likely to be above average for the next few months. If true, we are likely to have more insect pest issues than we did last year. In particular, gypsy moth populations could have a noticeable increase if the conditions are warm and dry.

Hemlock woolly adelgid (HWA) – Last year it was announced that the hemlock-killing exotic insect, hemlock woolly adelgid, had been detected at several sites in western Lower Michigan. Hemlock nursery stock imported from infested, eastern states is the most likely introduction vector. These recent detections appear to be older and more widely established than previous infestations that were eradicated. Attempted eradication is likely to occur again. Hemlock woolly adelgid has not been found in Wisconsin.



White balls of hemlock woolly adelgid wool on a hemlock twig in Maryland. Report this if you see it on hemlock in Wisconsin, because the insect is not known to occur here. Photo by Bill McNee, WI DNR.

HWA produces distinctive, small balls of white wool at the base of hemlock needles. If you see this on a hemlock tree, it is important to report it to DNR forest health staff. The crawling stage of HWA is tiny and can be spread by wind and birds, and thus could be spread across Lake Michigan into Wisconsin (the infested areas in Michigan are roughly due east of Milwaukee). Wisconsin DNR forest health staff have conducted surveys for HWA in hemlock stands since the mid-2000s. We will be conducting an expanded survey in 2016 as a result of the Michigan HWA detections. More information about HWA can be found here: <http://dnr.wi.gov/topic/ForestHealth/Adelgid.html>.

Beech scale update – DNR staff have periodically revisited sites where beech scale, the insect associated with beech bark disease, has been lab-confirmed by the UW-Madison Insect Diagnostic Lab. We are continuing to find that scale populations remain very low, except in Door County, where beech scale and beech bark disease were first found in 2009. Thus, tree damage from beech bark disease is not expected to occur in the next few years outside of Door County. More information about beech scale and beech bark disease can be found here: <http://dnr.wi.gov/topic/ForestHealth/BeechBarkDisease.html>

2015 DNR forest health annual report available – The DNR Forest Health Program’s Annual Report is now available online if you are interested in seeing what we accomplished in 2015. It can be found here: <http://dnr.wi.gov/topic/ForestHealth/documents/AnnualReport2015.pdf>.

An Online Guide to Financial Resources for Invasive Species Control Now Available

By [Michael Putnam](#), WDNR Invasive Plant Program Specialist.

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.

Squirrel busted munching on bur oak buds!



SOD Forest Health Assistance

Wisconsin DNR, Forest Health Protection Unit

April 2016

Contacts for DNR staff, municipal foresters, and forestry cooperators

<p>Mark Guthmiller Forest Health Specialist Wisconsin DNR 3911 Fish Hatchery Road Fitchburg, WI 53711 Phone: (608) 275-3223 Email: Mark.Guthmiller@wisconsin.gov Columbia, Dane, Dodge, Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, and Sauk</p>	<p>Bill McNee Forest Health Specialist Wisconsin DNR 1155 Pilgrim Rd. Plymouth, WI 53073 Phone: 920-893-8543 Email: Bill.McNee@wisconsin.gov Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington, and Waukesha</p>
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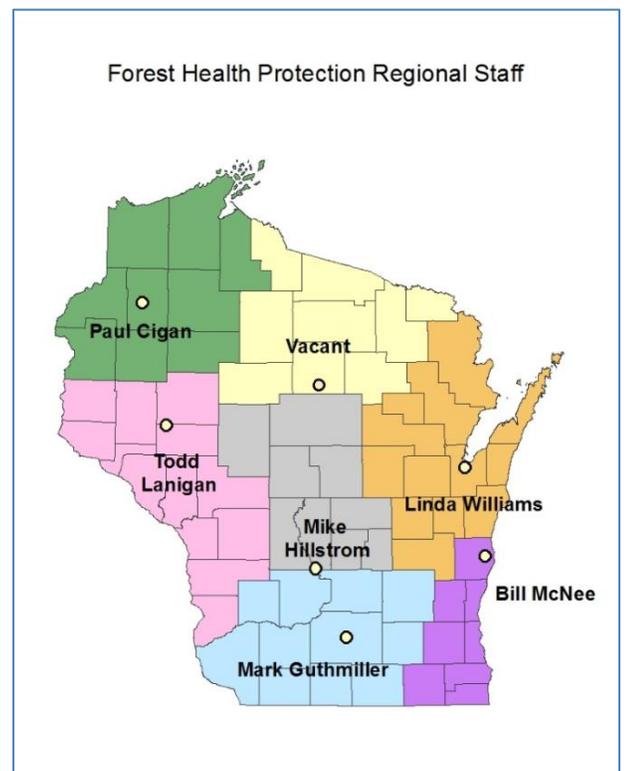
For a statewide forest health staff list:
<http://dnr.wi.gov/topic/ForestHealth/staff.html>

Additional Program Web-based Resources:
WI DNR Forest Health web site:
<http://dnr.wi.gov/topic/ForestHealth/>

Report Emerald Ash Borer in Unconfirmed Counties:
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: dnrfrgypsymoth@wisconsin.gov
visit the website: <http://gypsymoth.wi.gov>
(It is also recommended to report gypsy moth to your local government)

Please direct **public inquiries** regarding **yard tree concerns** to UW county or state extension offices: <http://www.uwex.edu/ces/cty/>



[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 any state or local laws regarding pesticide use.]