

# Northeastern Wisconsin Forest Health Update

Wisconsin DNR – Division of Forestry

April 29, 2015

## Topics covered this month:

### Insects:

Allegheny mound ants  
EAB awareness week  
EAB new finds in WI  
Eastern tent caterpillars hatching  
Gypsy moth  
Additional insect reading

### Other:

Invasive plant control database  
Ticks are out

### Diseases:

Lacquered polypore fungus  
Oak wilt, red oak vs white oak  
Additional disease reading

### Of Historical Interest

25 years ago - 1990 –  
    Jack pine budworm  
60 years ago - 1955 –  
    Jack pine budworm

## Insects

**Allegheny mound ants** – got ants? Those large conical shaped mounds that you see in some areas can be bad news for trees. They're made by Allegheny Mound Ants, sometimes called Field Ants (*Formica* sp.). The ants can kill the trees outright, or they can protect aphids feeding on the trees, which then promotes sooty mold on the trees which can block photosynthesis and cause eventual decline or mortality of the tree.

Why would ants kill trees directly? If the tree is shading their nest, or growing too close to their nest, the ants will bite the tree, injecting formic acid into the tree, eventually causing enough damage to kill the tree. This allows more sunlight to reach their nest to warm it.



Mound ant nest (arrow).

Ants will also “farm” aphids or scale insects that are feeding on trees in the area of their nests. The aphids and scales suck the sap of the tree, and exude honeydew, which is excrement that is slightly sweet (or so I’ve heard). The ants will protect the aphids, and collect the honeydew. But, some honeydew always drips onto the foliage below. This sticky sweet material encourages sooty mold to grow on the twigs and foliage. Sooty mold can become so thick on conifer needles that it can block the needles from photosynthesizing. So in this case, although the tree would decline due to the sooty mold blocking photosynthesis, the real reason that it was a problem in the first place is because the ants are there protecting the aphids and scale insects.

So what can you do about the ants? Often there are many mounds in an area, and they can be very hard to control. There are 2 options to try ... one is direct control of the ant mounds, and the other is to eliminate their food source. Direct control of the mounds includes pushing a rod into the nest several times to create channels that you then pour an insecticide into to kill the ants. Nests can go several feet deep into the soil so getting the insecticide to penetrate the whole nest is important. Or, you can try spraying the trees to eliminate the aphids and scale insects. If there is no food for the ants they will probably move on. For more info check out the [UW Extension fact sheet](#) or this [Michigan State University site](#). As you’re disturbing their nests, the ants can get quite testy, pouring out of the nest to defend it from danger. You may want to wear rubber boots smeared with Vaseline or some other product to keep them from running up your pants legs and biting you ... a very unpleasant experience.

**EAB awareness week** – May 17-23, 2015 is EAB Awareness week! There is so much information about EAB it can sometimes be overwhelming. Check out the [Don’t Move Firewood website](#) for the EAB Toolkit, which includes press releases, outreach materials, videos, and projects for kids of all ages. Print directions to create a [3D EAB](#) complete with log, or plans for an [EAB Purple Trap game](#). At the very least check out the animated EAB life cycle [video](#) and share with others.



Aphids feed on plant sap and excrete honeydew. Needles at left and right sides of photo have black fuzzy sooty mold. Ant in upper right is protecting the aphids.



Black sooty mold on needles.



the weather doesn't follow the averages.

### **Additional insect reading:**

- **EAB mortality factors** – a new paper in The Canadian Entomologist (published online November 10, 2014), by D. Barry Lyons, reviews some of the ways that EAB can be killed, including native parasitoids and predators that are utilizing EAB, cold temperatures, and woodpeckers. It also includes the following statement in the [abstract](#): North American species of *Fraxinus* possess some resistance to *A. planipennis* via defensive mechanisms, but these are quickly overcome by expanding larval populations.
- **Invasive pests for middle school students** - USDA-APHIS is introducing a new curriculum, "Hungry Pests Invade Middle School," to encourage students across the country to learn more about invasive pests and the simple steps everyone can take to stop them. Check it out [www.hungrypests.com/resources/educators.php](http://www.hungrypests.com/resources/educators.php).
- **Florida seeing hybridization of termites** - Asian and Formosan subterranean termite species are hybridizing in southern Florida and the hybrids are reproducing at twice the rate of either parent species. Read more about this [threat](#).
- **Mountain pine beetle in National Geographic** – the massive amount of tree mortality caused by mountain pine beetle out west is impressive, extending throughout the Rocky Mountains north into Canada. National Geographic recently had an article about it, including information on how the beetle is expanding its range into areas that haven't typically had to deal with mountain pine beetle, including areas in Canada where mountain pine beetle is encountering, and attacking jack pine. Read the article and check out the photo gallery [here](#).
- **Slowing ash mortality research** – a new paper in The Canadian Entomologist (published online March 17, 2015), by Deborah G McCullough et.al. reviews some of the ways of reducing EAB populations and slowing the mortality of ash trees. You can read the abstract [here](#). The following statement was in the text of the paper: Continued research is needed, however, to identify factors affecting ash resistance among and within native ash species, improve methods to detect, delineate and monitor EAB, and develop practical options to enhance biological control of EAB by native and introduced natural enemies. Whether such technical advances will be achieved in time to preserve the functional role of ash in North American forests remains to be seen.
- **Walnut twig beetle survey info and other info** – everything you want to know about walnut twig beetle, in a single handy spot. This document will walk you through the survey, as well as including the Pest Alert, a list of other beetles that could look similar, testing for *Geosmithia* (the fungus in Thousand Cankers Disease), and so much more.

Most of you will be totally uninterested in this level of info, but I just know that someone out there will be thrilled that I included this [link](#) 😊

## Diseases

**Lacquered polypore fungus** – if you see this fungus it indicates a white butt rot and possible root rot. It can act as a parasite on live trees, or as a decomposer on dead trees. Two species of the fungus that you might see in this area grow on different hosts. *Ganoderma tsugae* prefers conifers, in particular hemlock, while *Ganoderma lucidum* prefers hardwoods, in particular oaks. The shiny,



Lacquered polypore, new fruiting bodies.

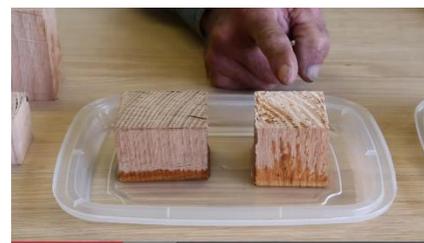
richly colored fruiting bodies can

remain on the tree for some time. One book I have states that this fungus can be “exceptionally beautiful or woefully ugly”. Either way it indicates decay in the tree.



Lacquered polypore, old fruiting bodies.

**Oak wilt, red oak vs white oak** – ever wondered why the oak wilt fungus moves so much more quickly in the red oaks compared to white oaks? This interesting [YouTube video](#) is made by a shipbuilder describes how to tell the difference between red and white oak just by setting a piece of each in a bowl of alcohol and watching how the alcohol moves through the wood. The alcohol very rapidly moves through the red oak and he uses several examples and a good description of the process to explain how to tell the difference, it’s really interesting! Check out the [video](#)!



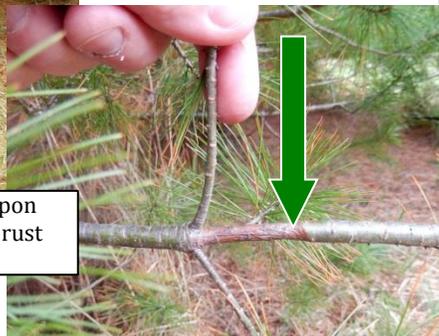
A shot from the video illustrating some differences between red oak and white oak wood.

**White Pine Blister Rust** - blister rust causes a canker on white pine which can girdle the branches and the main stem. Blister rust cankers will be sporulating soon, producing orange pustules along the canker margins. This disease is specific to white pine but the disease cannot be transmitted directly from one tree to another. Spores that are produced on white pine can only infect *Ribes* (gooseberry) plants which will then produce spores later in the summer, those spores from the *Ribes* plants will then be able to infect a white pine tree, completing the life cycle.

If you have just a few blister rust cankers on branches of young trees you should prune off those infected branches. These branches can be spotted from a distance because they will be off-color (below, red arrow) or the foliage will have turned a rusty red color. Prune infected branches at the main stem. By doing so you've just saved your tree (at least from that particular canker). Cankers on the main stem will eventually girdle the tree, although in healthy trees with good growth rates this may take many years.



Off-color branch (red arrow) is easy to spot. Upon closer inspection a sunken canker from blister rust was found on the branch (green arrow).



Orange pustules produce spores on a seedling infected with blister rust.

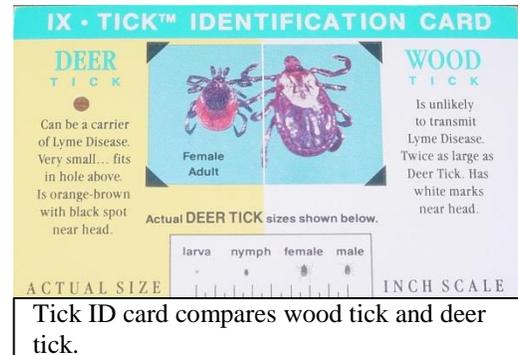
#### Additional disease reading:

- **Annosum cause for harvest of school forest** – read about the River Valley School District forest that is being cut due to annosum.  
[http://host.madison.com/news/local/disease-claims-school-forest-near-spring-green/article\\_18ac8334-9eb6-5a7c-956a-6a95602536da.html](http://host.madison.com/news/local/disease-claims-school-forest-near-spring-green/article_18ac8334-9eb6-5a7c-956a-6a95602536da.html)
- **Oak diseases** - A new document from the US Forest Service is a great resource for recognizing common diseases of oaks, including bacterial leaf scorch, botryosphaeria canker, bur oak blight, anthracnose, and many more.  
<http://www.myminnesotawoods.umn.edu/wp-content/uploads/2015/03/HowToRecognizeCommonDiseasesOaks.pdf>
- **White pine blister rust fungus now infecting resistant Ribes plants** – in 2012 it was noted that some cultivated Ribes species that were supposed to be blister rust resistant were now being infected with the fungus. The latest study showed a race of the blister rust fungus is able to overcome the resistance gene in some Ribes species, and is being found infecting white pine in areas of the northeastern US and Canada. Read the latest research abstract [here](#) and an article with more info from the USFS [here](#).

## Other/Misc.

**Invasive plants control database** – check out this [website](#) from Midwest Invasive Plants Network which lists control methods for a variety of invasive plants. You can search by common name or scientific name, then select whether you're a novice or not, the location of the problem and time you want to control it, and you'll get back a listing of non-chemical and chemical control options for that plant.

**Ticks are out** – how many of you have picked up ticks already this year? Ticks come out almost as soon as the snow melts, so they've been out for a while this year. If you would like some tick ID cards, let me know, I can send you some. If you need a large supply I can get you info on where to order them. Many of you recently saw news articles about a relatively new tick-borne virus, the Powassan Virus. For information on that virus, and other tick-borne diseases, check out the [CDC tick disease website](#). There is also info on Powassan virus in Wisconsin on the [UW Madison Dept. of Entomology website](#).



Tick ID card compares wood tick and deer tick.

## Of Historical Interest

**25 years ago, in 1990** –

- **Jack Pine Budworm** – *Choristoneura pinus* (Rohwer). Populations continue at low levels in northern Wisconsin. A slight increase in larval numbers was observed in Polk County but no defoliation was observed.

**60 years ago, in 1955** –

- **Jack Pine Budworm** – *Choristoneura pinus* Free. The area infested by this pest increased substantially this year. The largest heavy infestation is in Douglas County and encompasses some 62,000 acres of jack pine (see map). The heavy center of infestation in Washburn County collapsed but the intensity of the infestation has increased in Burnett County with the heaviest defoliation occurring in the town of Sterling. A severe outbreak totaling 13,000 acres has been reported from



the towns of Stevenson and Silver Cliff in Marinette County. A similar outbreak of approximately 9,000 acres was reported in the town of Cassion in Oneida County. Lighter infestations were reported in Buffalo, Chippewa, Jackson, and Clark Counties. The total area of infestation ranging from medium to heavy is in excess of 114,000 acres.

## Contact Us

**Forest Health Staff** - contact info for each Forest Health Specialist can be found our webpage at <http://dnr.wi.gov/topic/ForestHealth/staff.html>

Vacancy area coverage:

Oneida, Vilas, Forest, Florence Co's – Linda Williams

Lincoln, Langlade Co's – Mike Hillstrom

Price, Taylor Co's – Todd Lanigan

Iron County – Paul Cigan

Report EAB:

by phone 1-800-462-2803

by email

[DATCPEmeraldAshBorer@wisconsin.gov](mailto:DATCPEmeraldAshBorer@wisconsin.gov)

visit the website

<http://emeraldashborer.wi.gov/>

Report Gypsy Moth:

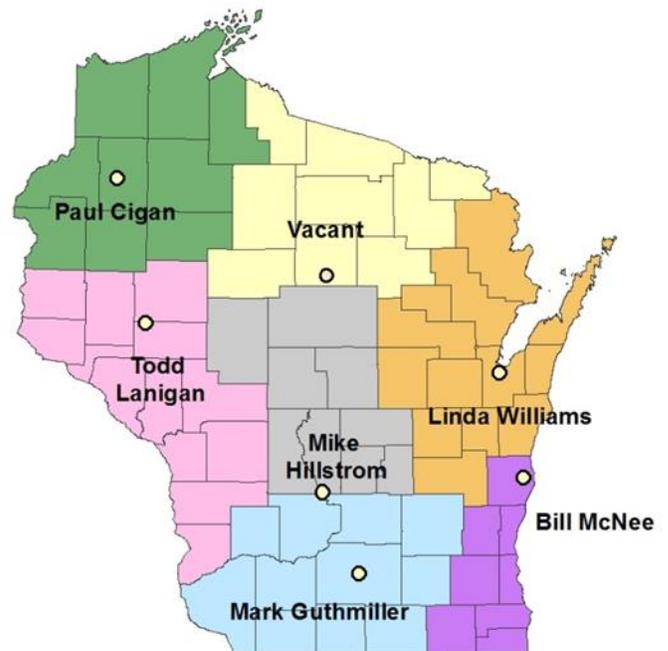
by phone at 1-800-642-6684

by email

[dnrfrgypsymoth@wisconsin.gov](mailto:dnrfrgypsymoth@wisconsin.gov)

visit the website

<http://www.gypsymoth.wi.gov/>



**Northeast Region Pest Update produced by:**

Linda Williams

Forest Health Specialist

Wisconsin Department of Natural Resources - Northeast Region

[Linda.Williams@wi.gov](mailto:Linda.Williams@wi.gov)

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

**Note:** This pest update covers forest health issues occurring in Northeastern Wisconsin. This informal newsletter is created to provide up-to-date information to foresters, landowners, and others on forest health

**issues. If you have insect or disease issues to report in areas other than northeastern Wisconsin please report them to your local extension agent, state entomologist or pathologist, or area forest pest specialist.**

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.