

Northeast Wisconsin Forest Health Update

April 17, 2012

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Insects:

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Insects

*information and photos in this document from Linda Williams unless otherwise noted.

Ash leaf curl aphid and a special fungus – ever wonder where Ash Leaf Curl Aphid spends the winter? No? Well, for some of us this is great fodder for pondering on long winter nights. So, in case you're interested, here's the story. The Ash Leaf Curl Aphid, sometimes called the Woolly Ash Aphid, feeds on the leaves of ash, causing them to become curled, cupped, and disfigured. This aphid overwinters in the soil, by the roots of ash trees. But that's not the cool part. The cool part is the fungus that provides them a home. *Gyrodon meruloides* is a fungus that grows under white ash and other ash species, and apparently this is the only place it grows. The fungus provides a safe place for the aphids, effectively creating a gall for the aphids to live in, and the honeydew that the aphids produce apparently provides nutrients for the fungus. I'm not sure of all the ins-and-outs but this complex interaction just seems very fascinating!



Feeding from ash leaf curl aphid causes curling and cupping of ash leaves.

Asian longhorned beetle – from Bill McNee. An infestation of the non-native Asian longhorned beetle has been found in England for the first time. One infested poplar and additional trees with exit holes were found in southeast England, adjacent to a business that uses wood packing to import stone from China. An adult beetle had been found in the area in 2009 but its origin was unknown. Current plans are to cut and burn all host species within 1.25 miles of the infested tree. More information is available at:



Asian longhorned beetle adult. Photo from www.forestryimages.org

<http://www.telegraph.co.uk/earth/countryside/9178519/Destructive-Chinese-beetle-found-breeding-in-Kent.html>.

Blister beetle – I found this large blister beetle over the weekend. These metallic blue beetles are fascinating critters, although worthy of caution. From their leg joints, blister beetles can exude droplets of liquid that contains the chemical cantharidin, which can blister skin (I did not test this with this beetle). These oils remain effective even after the beetles are dead and animals consuming hay with dried beetles in the hay can suffer blistering of their mouths and internal systems. Literature claims that this beetle falls on its side and feigns death when disturbed but this one didn't, this one was just ticked.



My books tell me that they undergo “hypermetamorphosis” which means that they change forms more than once throughout their life, first emerging from the egg as a slender long legged larvae (which to me looks similar to a stonefly), then later turning more grub-like and losing the legs, eventually pupating to emerge as the adult as shown here. The larvae are parasitic on bees. Adults lay their eggs on the ground and after hatching larvae climb nearby plants waiting for bees to come to the plants, when the bees arrive the blister beetle larvae grab on and hitch a ride back to the bees’ nest. Once there they begin munching on bee larvae.

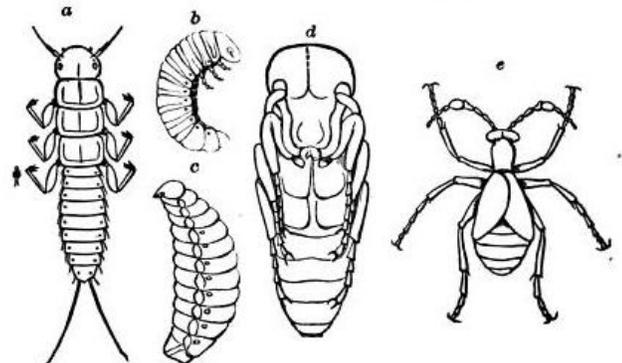


Fig. 98.—a, freshly-hatched larva of *Meloë*, first or Campodea-form stage ; b, second or carabidoid stage ; c, coarctate, footless larva, third stage ; d, pupa ; e, imago, male.

Life cycle of blister beetles. From the book *Entomology For Beginners* by Alpheus Spring Packard.

Eastern Tent Caterpillar – in my March pest update I noted that eastern tent caterpillars were already hatching during that week of warm weather that we had in March. After that it cooled down, with cold nights and cool days causing the cherry trees to pause in their efforts to push leaves out, but this hasn't phased the caterpillars too much. A couple nights of temps in the 20's didn't cause any caterpillar mortality that I could see. And, so far I haven't seen any evidence of starvation of eastern tent caterpillar (most trees have at least small leaves that could be fed on). Lately the caterpillars have been just waiting out the cold nights and cool days sitting on their web nests.

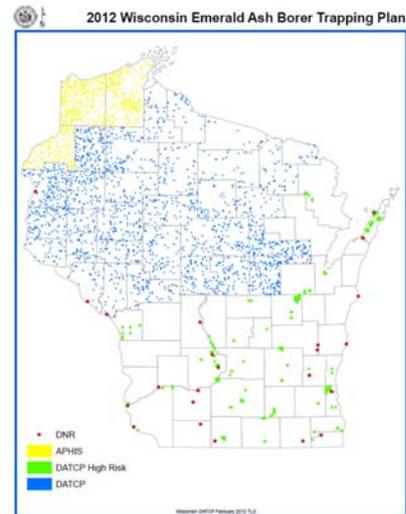


Eastern tent caterpillar, 1st instar on web.

Emerald ash borer – from Bill McNee. Wisconsin's 2012 EAB trapping plan has been announced (see map) and trap hanging will begin in late April. The northern half of Wisconsin will have ~2,500 purple panel traps, with trap locations determined by a new detection model. In the southern half of Wisconsin, there will be purple panel traps at selected high-risk sites and double-decker traps at selected state parks and forests. Northeast Wisconsin will have 40 high-risk traps in Brown, Door, Marinette, Outagamie and Winnebago Counties.

Communities wanting to buy their own traps can purchase them from two vendors; contact Bill McNee for details (bill.mcnee@wisconsin.gov). If you did not receive the recently-released "Options for Local EAB Detection Efforts" document and would like an electronic copy, contact Bill.

If you are planning EAB insecticide treatments this spring, it may be appropriate to move your treatment window up by about 2 weeks due to the accelerated tree phenology. Application periods will vary by product and application method. For more information on insecticide treatments, visit: www.emeraldashborer.wi.gov.



Wisconsin's 2012 EAB trapping plan. Map by DATCP.

Gypsy Moth – from Bill McNee. Wisconsin's first gypsy moth hatch was seen on April 2 in Green County, south of Madison. This is the earliest hatch in memory - last year our first report of hatch was on May 9. Gypsy moth hatching in southern Wisconsin is currently running about 2-3 weeks ahead of average, and slow-the-spread spraying in southwest Wisconsin is expected to begin in late April.

Biosim phenology software is predicting that the one DNR spray area, at Gov. Thompson State Park in Marinette County, will be sprayed between May 15 and May 21. This area is usually sprayed at the end of May or beginning of June.



Gypsy moth caterpillars hatching from an egg mass.

Mild winter temperatures and early hatching forecast an abundance of insects this summer as long as we don't have a cool and wet spring. Some areas can expect to see the return of nuisance caterpillars and interest in aerial spraying in 2013.

Preparing sticky bands on ornamental host trees (oak, birch, crabapple, etc.) would be appropriate at this time. If there are groups interested in aerial spraying this spring, an applicator list and guide to aerial spraying are available online at www.gypsymoth.wi.gov. Applicators should be contacted as soon as possible.

Ashland, Bayfield and Clark Counties have been added to the state gypsy moth quarantine area. More information is available at: <http://datcp.wi.gov/news/?Id=519>.



Counties quarantined for gypsy moth shown in red.

Hemlock woolly adelgid – from Bill McNee. The Michigan Dept. of Agriculture recently reported that hemlock woolly adelgid had been detected at two sites in far southwestern Michigan. This exotic insect had previously been found in other parts of Lower Michigan and eradication efforts had been undertaken. Heavy hemlock mortality has occurred in eastern states where this insect is well-established.

If you see small cotton balls on hemlock branches in Wisconsin, contact a DNR forest health specialist. For more information on this insect, visit: http://na.fs.fed.us/spfo/pubs/pest_al/hemlock/hwa05.htm.



Hemlock woolly adelgid on hemlock. Photo from www.forestryimages.org

Salt Marsh Caterpillar – found this caterpillar last fall in Oconto County, and I'm just getting around to identifying it. This is a salt marsh caterpillar which feeds on wide variety of field crops but also apple, walnut, and a variety of other trees. It comes in a range of colors from a pale yellow to this dark black with brown color. Additional interesting stuff about this caterpillar ... my books indicate that it is "an exceedingly rapid crawler" and that it is reported to occasionally eat other caterpillars!



Ticks – I've been getting a lot of comments from a variety of folks that there are lots of ticks out there this year. I'm not sure if the populations are up or if the weather has just been so nice that people are just out in the woods more. Marathon County, in the center of the state, reported 3 cases of Lyme disease in March, which is earlier than normal, although I don't know if these were the first cases of the year for Wisconsin.



Adult deer tick (left) and immature deer tick (right).

Diseases

Annosum, additional location in Oconto County – a second location has been confirmed to have Annosum in Oconto County. The newest location is directly across the road from the first site found in Oconto County but is owned by a different landowner. The last thinning in this stand was 2003, so the fungus has been present at least that long. The new site has 3 pockets, 2 of which I was able to find a significant numbers of fruiting bodies on old stumps, dead trees, and freshly dead trees. One of the pockets was a larger, diffuse pocket (or perhaps 3 small pockets converging) that had one tree which had obviously been struck by lightning. I was just about to dismiss that part of the pocket at being caused by the lightning, when I noticed that the old stump right next to the lightning-struck tree had an annosum fruiting body growing on it. Annosum continues to show me that there is a wide range of signs/symptoms that may or may not be present. Below are 3 pictures of the fruiting body which can vary quite a bit. More information on annosum can be found at

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



Annosum in "flat form". I'm pointing to a small shelf portion of the fungus but the cream colored flat form on the stump was much more impressive.



Above, the shelf form of the fungus.



Arrow at left points to a cream colored "blob" which is the fruiting body of annosum with needles and grass mixed in.

White pine blister rust – the first reports of white pine blister rust producing spores was on March 23 this year, which is very early! We had a number of additional reports that followed quickly after that. Blister rust causes a canker on white pine which can girdle the branches and the main stem. 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 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). If the canker is located close to the main stem the fungus may have already grown into the main stem, in which case a canker will eventually form on the main stem. Cankers on the main stem will eventually girdle the tree, although in healthy trees with good growth rates this may take many years.



Blister rust spores must first infect a needle, and then grow into the branch. Since white pine seedlings and saplings often have needles attached directly to the main stem this can allow the fungus an entry point directly into the main stem of the tree. Damage from a girdling canker may not be severe enough to cause tree decline and mortality for



Canker on the off-color branch. several to many years.



Rusty red needles on a branch that died from blister rust.

Other/Misc.

Invasive Species awareness month – The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) has declared April "invasive species awareness" month. The USDA urges the public to visit www.HungryPests.com to learn more about invasive pests and what they can do to help prevent the spread of these threats. Some suggestions that they had include:

- Buy Local, Burn Local. Invasive pests and larvae can hide and ride long distances in firewood. Don't give them a free ride to start a new infestation—buy firewood where you burn it.
- Plant Carefully. Buy your plants from a reputable source and avoid using invasive plant species at all costs.
- Do Not Bring or Mail fresh fruits, vegetables, or plants into your state or another state unless agricultural inspectors have cleared them beforehand.
- Cooperate with any agricultural quarantine restrictions and allow authorized agricultural workers access to your property for pest or disease surveys.
- Keep It Clean. Wash outdoor gear and tires between fishing, hunting or camping trips. Clean lawn furniture and other outdoor items when moving from one home to another.
- Learn To Identify. If you see signs of an invasive pest or disease, write down or take a picture of what you see, and then report it at www.HungryPests.com.
- Speak Up. Declare all agricultural items to customs officials when returning from international travel. Call USDA to find out what's allowed:
 - (301) 851-2046 for questions about plants
 - (301) 851-3300 for questions about animals

Ordering Brochures - DNR staff wanting to order forest health brochures can visit this site on the DNR Intranet and order them directly:
<http://intranet.dnr.state.wi.us/int/land/forestry/Publications/>. Most brochures can also be printed as a PDF directly from this website.

Non-DNR staff can contact Linda or Bill for a list of forest health brochures that can be ordered. We may also be able to send you a PDF so you can make as many copies as you need.

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 dnrfrgypsymoth@wisconsin.gov

visit the website <http://www.gypsymoth.wi.gov/>

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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.