Northeastern Wisconsin Forest Health Update

Wisconsin DNR – Division of Forestry

June 17, 2013

Topics covered this month:

Insects:
Cicadas are emerging
Forest tent caterpillar
Gypsy moth
EAB emergence degree days
EAB infestations in quarantined counties
EAB state property 25-mile radius
Ticks

Diseases:
Ash anthracnose
Diplodia
Slime molds

Other:
Cedar browning
Critter damage, more and more
Drought
Heavy seed production on maple
Imprelis update
Late leaf out

Spider with lunch. Photo by Dale Romback (Jean's son).

Of Historical Interest:
This is a new section! I will be going back through old WI DNR Forest Health Annual Reports and reprinting assorted info that I think you might find interesting or useful. Hope you enjoy this new section!

Insects

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

Cicadas are emerging –cicada nymphs are emerging from the ground. These are not Periodical Cicadas, which only emerge every 13 or 17 years in certain areas of the United States; these are our Annual or Dog Day Cicadas. Immature cicadas live underground, feeding on roots. They take 2-5 years to complete

Fully grown annual cicada nymph emerged from ground, it will molt once more into the adult. Photo by Ryan Brown.

development, living underground for most of that time. Fully grown nymphs emerge from the ground, climb up on something, and do a final molt into an adult, complete with wings. The adults can emit a loud shrill whine, usually during the heat of the day, which gives them one of the common names that I've heard them referred to … heat bugs.

We do have one brood of Periodical Cicada, Brood XIII, which emerges in the far southern part of the state, but their last emergence was in 2007 and we will not see them again until 2024.

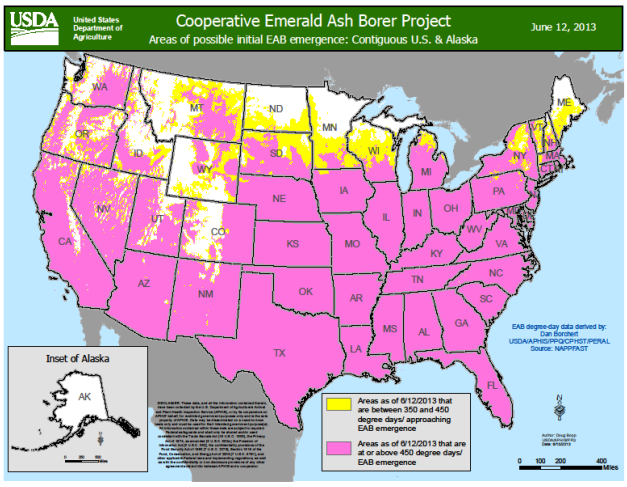
Forest tent caterpillar – the May 2013 issue of Minnesota DNR's Forest Insect & Disease Newsletter has a great selection of info on forest tent caterpillar including predictions for 2013, the forest tent caterpillar wedding and vacation planner, and a great section on how outbreaks build up, among other topics. Check it out at http://www.dnr.state.mn.us/fid/may2013/index.html The forest tent caterpillar at the right is one of the few I've seen this year, so if there are any big populations of them in northeastern Wisconsin I haven't found them yet.

Forest tent caterpillar.

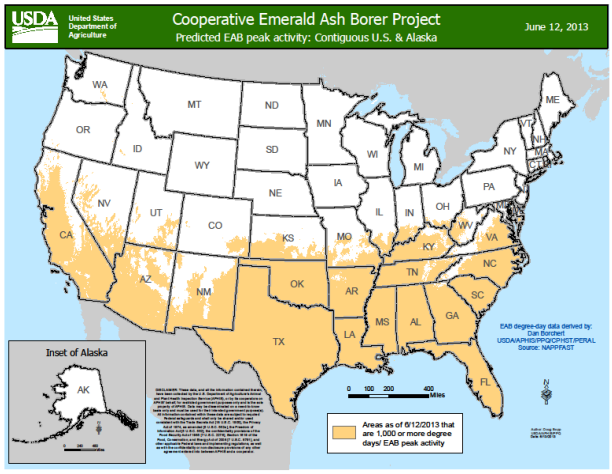
Gypsy moth – check out this link to a cool gypsy moth song done by a couple of enterprising young men http://www.youtube.com/watch?v=zaKcUF4L5Ec&feature=youtu.be

Gypsy moth caterpillars continue to develop, although the late spring this year has definitely delayed development. We've also had a fairly moist spring, so maybe, just maybe, we'll get to see some mortality from the fungal disease Entomophaga, but we'll have to wait and see. Pupation is predicted to begin soon in southern Wisconsin, but in the north the caterpillars are still fairly small. Homeowners concerned with gypsy moth caterpillars can put up burlap skirts on their trees and begin their killing spree as the caterpillars seek a protected place to spend some time. I've seen people use a stick to "stab" the caterpillars under the burlap skirts, or someone homeowners take a pair of scissors to snip the caterpillars, and some people scrape the caterpillars into a can of soapy water where they will drown. Any of those methods work just fine. For more info go to http://fyi.uwex.edu/gypsymothinwisconsin/pest-management-2/management-guide-for-homeowners/

EAB emergence degree day maps – these maps are from June 12. The one at right shows the areas of the United States where the growing degrees are such that we would start to see adult EAB emergence. Yellow areas indicate approaching EAB emergence dates; pink shows initial emergence is possible. The map below shows areas in tan where peak emergence of EAB adults is expected based on growing degree days (GDD). Literature indicates that EAB adults



can emerge from May thru September, but peak emergence usually begins around 1000GDD.



EAB infestations in quarantined counties – so far this year EAB has been found in a number of locations in counties that are already under quarantine. The very first find in a new county is often something that the media (newspapers, TV, etc) will report on, but subsequent finds, in an already quarantined county, may or may not be picked up by the media, so if you want to stay up to date on new finds, you can subscribe to get EAB updates from Wisconsin at http://datcpservices.wisconsin.gov/eab/ In counties that are already quarantined it is still important to try to minimize the spread of EAB within the quarantine area. A document with suggestions to help minimize the spread is available at http://datcpservices.wisconsin.gov/eab/publications.jsp just page down and click on the link titled "Recommendations to Reduce the Spread of EAB.pdf" There are lots of other EAB related documents on this page too so you may want to take some time to check them out.

EAB state property 25-mile radius – this link http://dnr.wi.gov/topic/Invasives/FirewoodMaps.html allows campers to view a map of where the 25 mile radius around state campgrounds/properties is. This is important because campers/visitors are only allowed to bring firewood onto a state owned property if the firewood is all of the below:

1. from within Wisconsin;
2. from within 25 miles of the state property; and
3. from outside of a quarantined area [PDF], unless the property is also within a quarantine.

Or, visitors can bring firewood from a Wisconsin Certified Firewood Dealer. To determine where the 25 mile radius is that wood must come from, you simply go to the above website, select your state trail, wildlife area, flowage, forest, or park, then click GO and the map will pop up. It also includes info like "do not move firewood across state lines" for those state properties near our borders.

Ticks – did you know that May was Lyme Disease Awareness month? A report from the Dept. of Health Services notes that "reported cases of Lyme disease and other tickborne diseases have been increasing in Wisconsin over the past 10 years". Lyme disease isn't the only disease that ticks in Wisconsin can spread. Other diseases include anaplasmosis, ehrlichiosis, babesiosis, and Powassan.

Diseases

Ash anthracnose – leaves dropping off ash trees in the spring of the year is often caused by early infections of anthracnose. When ash leaves are infected early with anthracnose the tree drops those leaves. If they drop enough leaves, the trees will send out an additional set of leaves to replace them. The first reports this year came in to me on May 29. I've had reports of this from Brown, Marinette, Oconto, Outagamie, and Winnebago Counties so far this spring. Confounding these diagnoses is the presence of frost damage on some of the ash leaves as well. Frost damage will typically show up as blackened dead tips or edges of the leaves, whereas anthracnose will cause dead patches that will cause the leaves to be distorted.

Anthracnose infected leaves that dropped this spring.

Diplodia – pines are more susceptible to Diplodia when they are under drought stress. Additionally, trees may become severely affected following a hail storm (even small hail). Diplodia can infect Austrian Pine, red, jack, and scotch pine. Diplodia is capable of causing significant red pine seedling and sapling mortality by infecting and girdling the root collar area. Diplodia also attacks the shoot tips of saplings and mature trees killing the outer 6-12 inches of the branch. Mature trees that are severely affected may be weakened enough that bark beetles can attack and kill the tree. If diplodia is a problem in your stand you may want to remove trees where more than 50% of the crown has been killed or where the leader has been killed back 3 feet or more.

Branch tips killed by diplodia.

Slime molds - slime molds are usually a nice bright color (pink, orangish, or yellow), and are not a true fungus although they do produce spores. They are a slimy mass of protoplasm that is capable of moving as they ooze over things that they hope are edible. They consume/digest dead organic material and bacteria, yum, but they don't do damage to live trees so no control is necessary. The photo at right shows a pretty orange slime mold on a stump. UW Extension has a website with more information at http://hort.uwex.edu/articles/slime-molds

Slime mold on stump. Photo by Lee Klaus.

Other/Misc.

Cedar browning – I'm receiving many reports and photos from around the region about Northern White Cedar browning out. Upon examination, I have not found any fungal disease (or only minimal problems) and no insect issues. It appears to be either directly related to the drought last year, or it is winter desiccation. Last fall was dry … so, the trees went into winter dry, it was a long winter, and they dried out even further, creating the symptoms that we're seeing now. Additionally, there was a very heavy cone crop on many of these trees that are affected and this not only makes them appear to be more brown since the old cones are still attached, but could also indicate stress.

Heavy cone production and dead needles/shoots on northern white cedar.

Critter damage, more and more – if you have young trees that did not leaf out this spring, or tried to leaf out but then died, it's important to check the base of the tree for rabbit or vole damage, or in some cases, to check the main stem and crown for squirrel or porcupine damage. Due to the long winter, with lots of snow cover, there is lots of critter damage to trees, and you may not notice it until the trees fail to leaf out this year. In some urban areas I noticed that rabbit damage started at about 4' tall and went up from there because that is how deep the snow had been piled around the trees.

Extensive rabbit damage in young plantation. Photo by Tim Siehr, Door County.

Needle and twig damage at about 5' tall on red pine (both pics at right) was probably due to deer feeding done during the winter when snow weighed the branches down for easy access.

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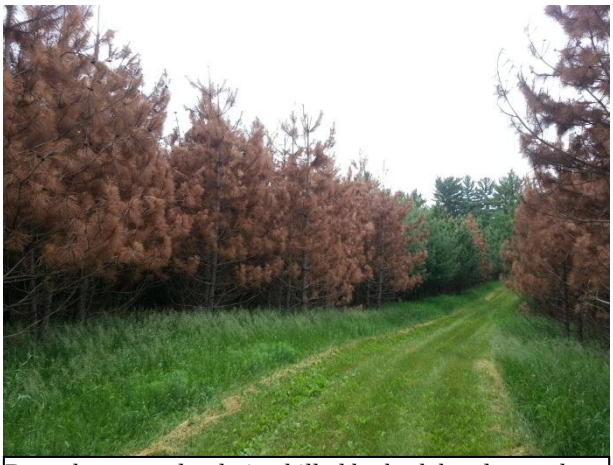
Drought – drought affected trees continue to brown out and die, or in some cases landowners are just returning to their properties again after the winter and are noticing the mortality. In a young red pine plantation that I looked at, there were a variety of symptoms including completely dead trees which no longer had any bark beetle activity in them, and half-dead trees that did have active bark beetle attacks occuring, and then there were trees that were just a bit off-color, but when you looked closely at the off-color trees you could find sawdust from bark beetle attacks in the crown of the tree, and you could also find some damage from red turpentine beetles near the base of some of the trees. When salvaging stands like this it's important to take the dead stuff, the mostly dead stuff, and the trees that are off-color because they're already being attacked by bark beetles.



Drought stressed red pine killed by bark beetle attack. The white pine in the stand seemed to be doing ok.

Red pine with some live branches, stressed from drought and being attacked by bark beetles. It will not survive.

One stand we visited was a mix of red and white pine, and the red pine was showing significant mortality in areas, while the white pine looked pretty good overall.

In one young red pine stand there were trees that were being attacked by bark beetles but they also had branches that had been killed by diplodia (see above).

Heavy seed production on maple – I've been noticing some maples with extremely heavy seed production this year. In some cases there are entire branches or entire trees that appear to have put all their resources into seed production with very little attempt at leaf production. With other trees fully leafed out it makes the trees with heavy seed appear to be defoliated, but they're not, they just don't have a lot of leaves. I've also heard reports of heavy seed production on some conifers.

Imprelis update – Michigan State University posted an update regarding Imprelis http://msue.anr.msu.edu/news/imprelis_update_for_spring_2013?utm_source=Turf+%26+Landscape+-+MSU+Extension+News+-+6-7-13&utm_campaign=Turf+%26+Landscape+6-7-13&utm_medium=email in which they note that although Imprelis has been decaying in the soil, the concentrations within tree tissues appear to be breaking down much more slowly. In the pest update last month I included information on landfilling Imprelis contaminated materials.

Late leaf out – a gis application from the US Forest Service, called Forest Disturbance Mapper, is a tool that forest health folks can use to detect deviations from the norm in forested areas, to

help detect areas of defoliation. It compares the current satellite view with an average of the past 3 or 5 years, and then highlights those areas that are showing a major deviation from the average (that's a very very basic description of what it does). This year our spring was so late that leaf emergence was delayed significantly, and especially so in the lowland areas. Currently, when I look at Forest Disturbance Mapper it is highlighting many lowland areas that are still lagging behind the "norm" for having full leaf out. It has not highlighted any areas of significant defoliation in northeastern Wisconsin yet but I'll keep an eye on it ☺

Of Historical Interest

60 years ago, in 1953 –

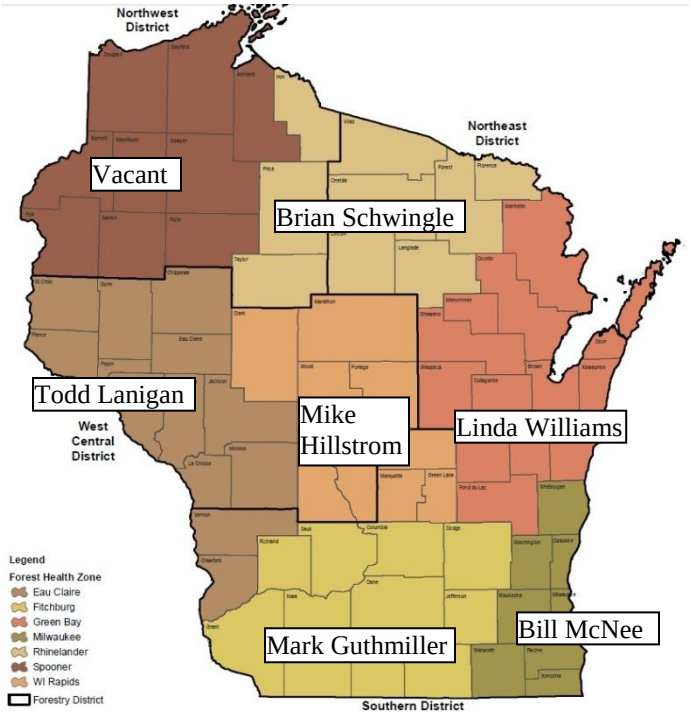
- Pine Tortoise Scale (*Toumeyella numismaticum*) – Heavy populations throughout the state were quickly brought under control by ladybird beetles except on some of the best plantations of jack pine in Marinette and Florence Counties. The ladybird beetles in these areas were rendered ineffective by a parasite, *Scymnophagus townsendi*. This coupled with two consecutive mild winters has developed into a serious problem.
- Walking Sticks (Diapheromera femorata) – Heavy to moderate infestations were reported locally in several counties. Damage was concentrated in the northeast and was spotty elsewhere. There appears to be a definite increase in the number of infestations over 1951. (This insect has a 2-year cycle, therefore comparisons cannot be made with the previous year but two years previous).

25 years ago, in 1988 –

- Early Fall Coloration and Premature Leaf Drop – Drought
  Aspen in Chippewa and northern Clark counties exhibited premature leaf drop in early August due to drought stress. Rain in August caused many of these trees to refoliate. Aspen leaves turned yellow and dropped in late July in west-central Washburn County. No refoliation occurred. Premature leaf drop was light and scattered throughout Washburn, Burnett, Polk, and Barron Counties, northwestern Wisconsin.
- Christmas Trees – Drought
  The extreme drought of 1988 caused mortality of many new plantings and one-year-old plantings of balsam fir, fraser fir, white pine and Scotch pine statewide. Older balsam fir, white pine and Scotch pine were also killed on sandy soils in western and central Wisconsin.

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



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.