

Northeastern Wisconsin Forest Health Update

November 16, 2012

Topics covered this month:

Insects:

Cooley spruce gall adelgid
Eastern spruce gall adelgid
 And comparing the two
Emerald ash borer
Gypsy moth
Ladybugs
Mountain pine beetle in the west

Diseases:

Phytophthora root rots
Tar spot

Other:

Deer camp and firewood
Drought

Insects

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

Cooley Spruce Gall Adelgid – Cooley Spruce Gall Adelgid (*Adelges cooleyi*) is a native pest that prefers blue spruce. Cooley spruce gall adelgids form large (1-3 inches long) pineapple- or cone-like swellings on the tips of the branches. For part of their life, adelgids live within these galls that the tree creates for them. As fall approaches the galls will turn brown, dry out, split open, and release the adelgids. Old adelgid galls will remain on the tree for the life of that branch. The gall does kill that branch tip and the branch will have to send out new growth on side branches or send out new buds for growth the following year. Some trees will be more susceptible to attack than others due to natural genetic variability.



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Pineapple-like gall caused by Cooley spruce gall adelgid. Photo from bugwood.org

Eastern Spruce Gall Adelgid - Eastern Spruce Gall Adelgid (*Adelges abietis*) prefers to attack white spruce and Norway spruce, while Cooley Spruce Gall Adelgid (covered above), prefers blue spruce. The lifecycle of an adelgid is somewhat complicated but they do complete one generation per year. They overwinter as wingless, immature females. When spring arrives they become mature, lay eggs, and tiny nymphs emerge from the eggs and begin feeding at the base of needles where the gall will eventually form. As fall arrives the gall will dry out, turn brown, and open to release the nymphs which mature into a winged female which lays eggs and the cycle starts over.



Eastern spruce gall adelgid forms galls at the base of new growth. New galls are green above (arrows pointing to galls), older galls are brown and remain on tree (below)

Spruce have a wide range of susceptibility to this insect, both between species and within species. Some spruce, such as Black, Red, or Engelmann Spruce are generally less susceptible to Eastern Spruce Gall Adelgid. Norway Spruce and White Spruce are considered susceptible to this insect but some cultivars are less susceptible and even certain trees within each species will be less susceptible than their neighboring tree may be.

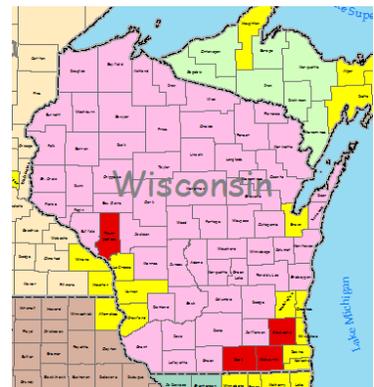


Cooley vs Eastern ... what are the differences you need to know for easy identification?

	Primary Host	Gall location / size
Cooley Spruce Gall Adelgid	Blue spruce	At the tips of branches / 1-3 inches long
Eastern Spruce Gall Adelgid	White spruce, sometimes Norway spruce	At the base of new growth / ½ - 1 inch long

Emerald Ash Borer (EAB) – from Bill McNee. An EAB-infested tree was found in the City of La Crosse in early November. The county had its first EAB detection in a trap near the city in 2011, about 3 miles from this recent find. More information can be found at: <http://datcp.wi.gov/news/?Id=689> EAB has been found in 13 of Wisconsin’s 72 counties.

The pest has also been found at 3 locations in and around Houghton in the Upper Peninsula of Michigan. The pest had previously been found in Calumet, about 12 miles away.



Counties in red had first EAB detections in 2012.

Gypsy Moth – from Bill McNee. The Wisconsin Dept. of Agriculture, Trade and Consumer Protection (DATCP) has released its final data from the 2012 gypsy moth trapping project. DATCP caught 174,000 moths this year, compared to 234,000 moths in 2011 (note: the number of traps changes annually). The highest numbers of moths were caught in these counties: Bayfield (46,000 moths), Ashland (26,000), Jackson (16,000), Wood (11,000) and Clark (10,000). The counties with the highest number of moths per trap were: Ashland (122 moths per trap), Wood (120), Iron (95) and Bayfield (73). Far northern Wisconsin is the area of the state where gypsy moth has spread fastest over the last 5 years.

Egg mass surveys can now be done in order to predict gypsy moth populations in 2013. For more information on how to do egg mass surveys, visit www.gypsymoth.wi.gov. Information on oiling or removing egg masses is also available at this website.

Applications to the 2012-13 DNR gypsy moth suppression program are due by Friday, December 7 of this year. Applications and a list of local gypsy moth contacts are available at www.gypsymoth.wi.gov.

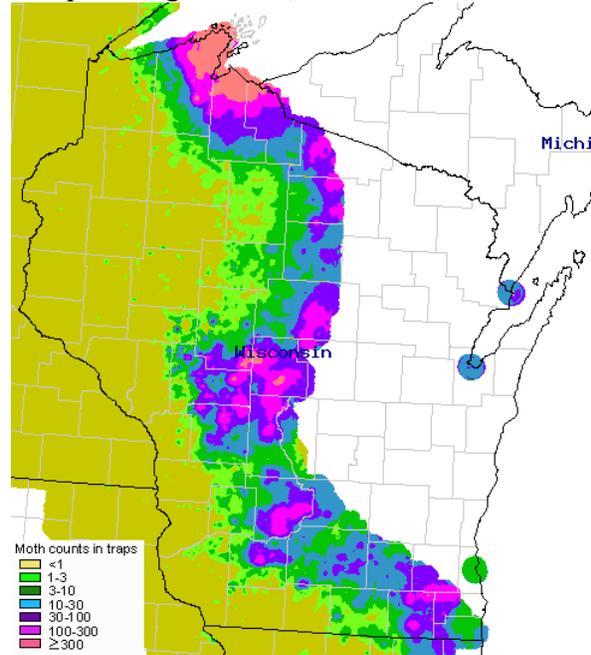
If you decide to participate in the suppression program to spray in 2013, please let Bill McNee know in advance of the December deadline (bill.mcnee@wisconsin.gov). If you decide to do privately-organized spraying, a list of for-hire aerial applicators is available at the above website. The December 7 deadline does not apply to privately-organized spraying.

If an area is thinking of participating in the DNR suppression program to spray in 2013, oil the masses or wait until this December to remove them so that surveyors can determine if an area should be sprayed.

Ladybugs – in the pest update last month I asked for reports from anyone seeing congregations of ladybugs in northeastern Wisconsin, and I received exactly ONE report of a small congregation. So I guess it's generally not a problem this year :)



Mountain pine beetle in the west – if any of you have travelled to the western US or western Canada over the past few years, you may have noticed vast swaths of dead pines, currently being killed by Mountain pine beetle, a bark beetle that attacks primarily lodgepole and ponderosa pine. A recent study showed that the current outbreak started with the drought of 2001-02, which helped to push the beetle populations high enough that local outbreaks coalesced into a regional epidemic, which is still continuing. Mountain pine beetle is native to the west, and there have been periodic outbreaks in the past, this current one just happens to stretch from the



Map of 2012 gypsy moth trap catches in the DATCP trapping program. Areas in white are not trapped. Map produced by the Gypsy Moth Slow-The-Spread Project.

southwestern US up into Canada. Check out this article for more info <http://www.sciencedaily.com/releases/2012/11/121105140403.htm>

I'm sure you're wondering, why does this matter to us here in Wisconsin? Well, maybe it doesn't make it onto your radar yet. But in Canada, the northern and eastern portions of the mountain pine beetle outbreak, are attacking not only their typical host up there, which is lodgepole pine, but they are also attacking jack pine. Could the beetle march eastward across Canada and eventually move into the jack pine resource of the Lakes States? Possibly. At the recent North Central Forest Pest Workshop that I attended, a Canadian researcher spoke on the long distance dispersal flights of these beetles, and he mentioned that the front is not receding but is continuing to advance. Canada has done a risk assessment of this beetle for the boreal forests if you're interested in reading it <http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/28891.pdf> but what we really need is a nice cold winter to knock down the current outbreak in the western states/provinces so that I don't have to mention it ever again in my pest updates!

Diseases

Phytophthora root rots – last year at this time I reported that a new Phytophthora root rot was found in October, 2010, that was killing fir, Douglas fir, and spruce in Christmas tree plantations.

The following paragraph is from the DATCP pest bulletin Nov 8, 2012 - As of late October, 49 diseased Christmas tree samples have been received by the Plant Industry Lab for diagnosis. The samples were collected from Christmas tree fields by DATCP inspectors as part of a multiyear survey for new Phytophthora root rots. Thus far, four different Phytophthora species have been identified: *Phytophthora cactorum*, *P. citricola*, *P. europaea* and *P. sansomeana*. The latter two species are new to science and were first identified in Wisconsin on Fraser fir in 2011. In addition to Phytophthora, Armillaria root rot was also a cause of tree dieback in some of the fields.

I still have not seen Phytophthora causing problems in traditional forestry plantations, just Christmas tree plantations, although I have seen it in Christmas tree plantations that were abandoned as Christmas trees and were being allowed to grow naturally.



Christmas trees with root rot symptoms. Photo by Sara Ott, Wisconsin DATCP.

Tar spot – As I drive around the region I’ve been seeing some maples (mostly in cities) with a few leaves remaining on them, almost all of which have tar spot. I’ve also recently been in some woodlots with leaves on the ground that had tar spot infections. Tar spot a fungal leaf disease that affects maples, forming large, small, or speckled black spots on the leaves. There are 3 species of tar spot, *Rhytisma acerinum* which is found on Norway maple, *R. americanum* which produces solid spots which we often see on silver maple in this area, and *R. punctatum* which produces numerous speckles rather than a solid black spot. Usually tar spot is



Tar spot on maple.

merely cosmetic and no control or concern is warranted, although occasionally the damage will be so severe that the tree will drop its leaves early. Infection begins early in the spring, developing as the summer goes on, and the fungus will overwinter on fallen leaves. Raking and removing or burying the damaged leaves when they fall is the best option for homeowners concerned about this disease.

Other/Misc.

Deer Camp and Firewood – from Bill McNee. Hunters heading out to deer camp are encouraged to buy firewood where they are hunting, or to purchase certified wood. This is important so that hunters do not spread pests such as emerald ash borer (EAB) or gypsy moth into an uninfested area. It is also illegal to move firewood out of areas that are quarantined for either of those insect pests.

Fifty-one counties in Wisconsin are quarantined for one or both pests. A map showing the quarantined counties is available online at:
http://datcpservices.wisconsin.gov/eab/articleassets/Firewood_Movement_in_Wisconsin.pdf. Although firewood may be moved within a quarantine area, it is best to buy certified wood or buy it where you are camping.

Firewood tips:

- Gather or buy your firewood at your destination.
- Use all the firewood you obtain and don’t take any home with you.
- Consider buying certified firewood. A list is available at:
<http://datcp.wi.gov/uploads/Plants/pdf/CertifiedFirewoodDealers.pdf>
- If camping on DNR-managed land, firewood cannot come from more than 25 miles away unless it is certified.

Additional information about EAB and gypsy moth can be found online at www.emeraldashborer.wi.gov or at www.gypsymoth.wi.gov

Drought – The effects of the drought will continue to show themselves for the next year or two, so keep this in mind when as you’re evaluating tree mortality over the next couple years. If you have photos of drought related tree mortality and would like to share them please send them to

me and I'll try to get them into future pest updates so that others can see the extensive effects that the drought had on trees this year.

The photos below are from Waupaca County, thanks to Ben Baumgart for the photos.



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://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.