

Northeast Wisconsin Forest Pest Update

December 15, 2010

Topics covered this month:

Insects:

Beech Scale
Emerald Ash Borer
Gypsy Moth
White Pine Weevil

Diseases:

Annosum, symptoms
Annosum, winter stump treatments
Butternut Canker, genus change

Other:

none

Insects

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

Beech Scale – from Bill McNee. Beech scale, the insect associated with beech bark disease, has been found in Mequon (Ozaukee County). The insect had previously been found elsewhere in Ozaukee County, and this is the southernmost detection of the insect in Wisconsin. A low-level beech scale infestation has been found in 8 eastern counties, with beech bark disease detected only in Door County.

Keep an eye out for trees with small dots of white wool, as shown in the picture. Contact a DNR Forest Health specialist or DNR Forester if a suspicious tree is seen. For more information on beech scale and beech bark disease, visit:

<http://www.dnr.wi.gov/forestry/FH/bb.htm>.



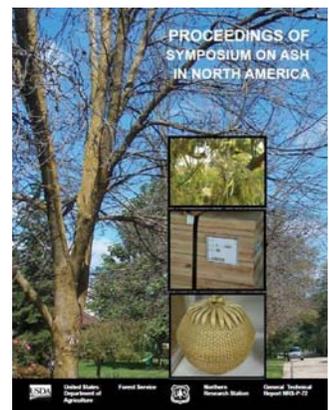
Small white spots are beech scale, low population.

Emerald Ash Borer – from Bill McNee. In case you missed it, the Urban Natural Resources Institute recently held a webcast featuring innovative methods for managing EAB in Oakville, Ontario, Canada. This webcast can be seen by visiting: <http://www.unri.org/webcasts/archive/december-2010/#video>. It's an hour and 15 minutes in length. ISA continuing education credit can be obtained if the webcast is watched and quiz taken before the end of December.

The 2010 Ash Symposium Proceedings have been released, and are available at: http://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs-p-72.pdf. A study of the EAB aftermath forests has been included, and is available at:

<http://www.nrs.fs.fed.us/pubs/gtr/gtr-p-72papers/11-knight-p-72.pdf>.

These links contain very interesting information and is worth reading.



White Pine Weevil – white pine weevil is a native insect that causes injury to the terminal leaders of several conifer species, including white pine, jack pine, and spruce. In early spring the adult weevils lay their eggs at the very top of the terminal leader just under the buds that will soon be expanding. The eggs hatch a few days after they're laid and



Terminals damaged by white pine weevil showing wilting symptoms. Photo by Jake Bonak.

the larvae begin boring downwards just under the bark of the terminal leader, damaging the cambium as they go. The terminal buds break and begin to expand. The larvae continue to feed downwards, causing the terminal growth to wilt, eventually turning brown, often maintaining the “wilted” look.

White pine weevil prefers young, open grown trees with stout leaders. Although the terminal leader dies due to the attack the tree will recover by allowing one of the lateral branches to grow upwards, taking over apical dominance.



Natural controls include parasitic wasps, pitch drowning, and winter mortality of the adults. The two practices that are commonly used to

minimize damage from this insect are regenerating pine in the understory, or planting at high densities. The first option, with pine in the understory, causes the pines to grow more rapidly upwards resulting in thinner terminal leaders which are less desirable to the weevils. The second option, planting at high densities, also causes the trees to grow rapidly as they attempt to out-compete their neighbors for sunlight, which causes the terminal leaders to be thinner as the trees put their resources into growing rapidly upwards. Chemical controls can be utilized to control the adults if damage is significant.

Diseases

Annosum symptoms – pockets of mortality in pine plantations should be examined for the presence of annosum (*Heterobasidion irregulare*). If fruiting



Large fruiting body on old stump.

bodies are present they will be at the very base of trees and/or old stumps from previous harvests. You may have to pull back the duff layer to see smaller fruiting bodies, which will look somewhat like a shelf fungus and will have a white or cream-colored lower surface which under magnification



Small, popcorn-like fruiting bodies.

is pitted (photo below). Other symptoms can be quite variable but you may see the following:

- You may or may not see understory species that are being killed by annosum, which can kill all conifers and some hardwoods as well. If understory is being killed you may be able to find fruiting bodies on these young trees.
- The pocket may look like a “typical” pocket with dead trees in the center and fading/dying trees on the edges.
- Or, the pocket may look like a clearly defined area of mortality which you might mistake for a lightning strike or a bark beetle pocket
- You may not see any fruiting bodies, or you might find them only on old stumps, only on dead understory, or only on recently dead trees
- The fruiting bodies may be large shelf-like fungi, small popcorn-like spots, or the flat form which I seem to find more commonly on white pine



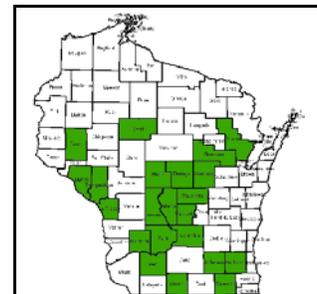
Underside of annosum fruiting body, close-up.

The point is that the pockets of annosum that I have visited have had highly variable symptoms, so if you see dead pines I would highly recommend that you examine them more closely to try to determine if annosum was the cause of the mortality. If you find annosum in the northeast region please let me know.

Annosum, winter stump treatments – recently an email from the State Forester and an email from Kyoko Scanlon, the DNR State Forest Pathologist, were sent out addressing the questions of treating stumps during the winter to prevent new annosum infections. Although the risk of getting new infections of annosum is very low during the winter it is still possible and stump treatment should still be explored for all conifer harvests. The manufacturer of Cellu-Treat is in the process of changing the label to allow the use of an additive that will act as an anti-freeze, but until the label is changed what can you do?

Here’s what Kyoko suggests you consider:

- Consider the use of Sporax. Sporax is a granular material that can be applied on fresh cut stumps to prevent annosum root rot. It will have to be applied manually.
- Explore the possibility of adjusting lines and the solution tank to keep the Cellu-Treat solution from freezing. The manufacturer of Cellu-Treat has suggested that a heat element be used around a tank and wires be placed near hydraulic line. Unfortunately, at this point, such attempts have made only limited success.
- Consider postponing the harvesting until the temperature increases above freezing (32F) when the solution will not freeze.
- Consider risk and economical benefit analysis. When the daytime temperature does not reach above freezing (32°F), and the forecasted temperatures for the next 10 days are not predicted to exceed 40°F, it is considered very low risk for infection. Especially if there is over one foot of snow on the ground, the majority of the conks will be covered under the snow and will not disseminate spores. Can a landowner/property manager accept low to very low risk and harvest pines this time of the year without treatment? It is important that a landowner/property manager understands the risks of introduction and benefit prevention to make a decision.



Shaded counties are known to have annosum present.

More information on annosum can be found at <http://dnr.wi.gov/forestry/Fh/annosum/> Don't wait for annosum to show up in your stand or your county to take action!

Butternut Canker, genus change – recent work on the fungus that causes Butternut Canker has caused pathologists to reclassify the fungus into a different genus. The scientific name of Butternut Canker was previously *Sirococcus clavigignenti-juglandacearum*, but has now been changed to *Ophiognomonia clavigignenti-juglandacearum*. Butternut Canker causes oblong dark sunken areas which can be found anywhere on the tree and first showed up in Wisconsin in 1967. Since then the disease has moved through the butternut population, eliminating many of the trees but leaving a few that are resistant to the disease. These resistant trees should be identified in stands and landowners may choose to manage their stands to increase the likelihood of seedlings from those trees surviving, ensuring that we will have butternut into the future.



Dark areas indicate the presence of butternut canker.

Other/Misc.

No other items this month

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/>

Northeast Region Pest Update produced by:

Linda Williams

Forest Health Specialist

Wisconsin Department of Natural Resources - Northeast Region

Linda.Williams@wi.gov

<http://dnr.wi.gov/forestry/fh/>

For more information contact:

Bill McNee

NER Gypsy Moth Suppression Coordinator

920-662-5430

Bill.McNee@wi.gov

Linda Williams
NER Forest Health Specialist
920-662-5172
Linda.Williams@wi.gov

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.