

# West Central WI Forest Health Report

July 2011

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## Insects

### Japanese Beetles

Forest health staff have received complaints about Japanese beetle outbreaks throughout central Wisconsin and as far north as Green Bay and Wausau as the population of this insect pest continues to expand across the state. Japanese beetle larvae live in the soil and eat the roots of turf grass and ornamentals. Adult beetles are pests of more than 300 plant species including Norway and Japanese maples, birch, crabapples, purple-leaf plums, roses, mountain ash and linden. They are such a destructive pest because of their wide host range, ability to fly (1/2 mile), and long (for an insect) adult feeding period (~ 2 months). Adult feeding on leaves creates a characteristic lace-like skeleton (Photo 1) as the beetles chew between the veins. Adult beetles are shiny, metallic green with coppery-brown wing covers (Photo 1).



Photo 1. Adult Japanese beetles feeding

**Japanese beetle management-** Management of Japanese beetles is typically frustrating and difficult. Putting up traps to capture beetles has been shown to attract more beetles to the area which can lead to more damage than if you did nothing. Maybe you'll be lucky and your neighbors will put up traps! Spraying the beetles with insecticide works for a few days but the



beetles often return from nearby areas that were not treated. This means the only realistic option for many landowners is maintaining tree health and letting the beetles run their course (Photo 2). If you want to protect high value plants with insecticide keep in mind that both the adult and larvae cause damage and treatment of both life stages may be necessary. Insecticides for use on Japanese beetles can be found at any garden or hardware store and should be applied to foliage and flowers in the afternoon when the beetles are most active. Several biological control options (milky spore disease, nematodes, fungal pathogens) are available to kill larvae in the soil but their effectiveness is inconsistent. Find more info at (<http://entomology.wisc.edu/~rcwillie/x1062.pdf>).

Photo 2. Damage from Japanese beetle feeding on a little leaf linden in Tomah. Thanks to Christine Walroth for the great photo!

### **Asian Longhorned Beetle (Bill McNee)**

Asian Longhorned Beetle (ALB) (Photo 3) has been found in and around Bethel, Ohio (about 25 miles east of Cincinnati). The pest was identified after a local vineyard owner noticed unusual damage to several maples. Recent media reports indicate that over 300 infested trees have already been found in the area. ALB attacks many hardwood species, including maple, poplar, willow and elm.



Photo 3. Adult Asian longhorned beetles.  
Photo credit Ohio DNR

Here are links to ALB identification and how to distinguish ALB from the native lookalikes (most notably the pine sawyer). ALB is glossy, has banded antennae, and lacks a white dot where the wing covers meet.

[http://www.na.fs.fed.us/pubs/palerts/alb/alb\\_pa.pdf](http://www.na.fs.fed.us/pubs/palerts/alb/alb_pa.pdf)

[http://massnrc.org/pests/blog/uploaded\\_images/ALBvsPinesawyer-715980.jpg](http://massnrc.org/pests/blog/uploaded_images/ALBvsPinesawyer-715980.jpg)

<http://www.uvm.edu/albeetle/identification/>

### **Gypsy Moth**

Forest health has received very few gypsy moth complaints this year. Recent aerial surveys revealed minimal damage even in areas heavily defoliated last year. Tree mortality from gypsy moth feeding last year has also been minimal thanks to the abundance of rain last summer. If you have gypsy moth damage to report please let us know so we can plan for next year.

## Emerald Ash Borer

Adult Emerald ash borers are being spotted across the Midwest and several new finds have been made in and around Wisconsin. DATCP has confirmed six EAB infested trees in Kenosha near the purple panel traps that captured beetles the past two years. This is the 4<sup>th</sup> known EAB infestation in the state. Minnesota also recently discovered an infestation in Shoreview more than 10 miles from the nearest known infestation in Minneapolis. In Illinois, 22 suburban communities near Chicago have discovered EAB this year alone. Rockford, IL also recently discovered its first EAB infested trees. As EAB populations continue to expand in and around Wisconsin new EAB finds in the state are imminent. Hopefully increased public awareness and continued trapping and survey efforts by DATCP and DNR will allow us to catch new infestations early. Please report and suspect trees or insects immediately!

## Jack Pine Budworm

### Todd Lanigan

Budworm populations are building in red pine stands in Dunn and Pierce counties after a two year hiatus. The red pine stand in Dunn County may have visible defoliation based on larval surveys. The budworm population that was building in jack pine in Monroe County has disappeared. In Jackson County there is moderate to heavy defoliation in jack and red pine.

I was contacted by a forester that works for the Jackson County Forest about a red pine stand that looked like it had budworm defoliation from the air and from the ground. The red pine stand is 54 years old, was last thinned in 2004, and is 77 acres in size. It is an interesting stand to look at. This stand does not follow the pattern of jack pine budworm defoliation I have seen in the past in "older" red pine stands that were defoliated. This stand has widespread defoliation. The stand has moderate to heavy defoliation in the center, but as you move towards the edges of the stand, the defoliation is less severe. Jack, red, and white pine that are in the understory are defoliated, some of them are severely defoliated (Photo 4). What I found interesting is that on the border of the stand, there is jack pine and that was not defoliated. If the jack pine was directly under the red pine on the edge, they were defoliated. But if there was red or white pine that went out into the jack pine a little ways, they were defoliated - strange. The pattern of the defoliation on the trees is interesting too. It seems like most of the trees have a good upper crown and the lower crown is defoliated (Photos 5, 6). But then you come across an individual tree or a small pocket of trees where the entire crown is defoliated.



Photos 4, 5, 6. Defoliation of understory (photo 4) and overstory (photos 5, 6) pine by jack pine budworm larvae (photos by Todd Lanigan)

I meandered through the stand and checked trees here and there for signs of bark beetles, and I am happy to report, I did not find any signs of bark beetles at this time. I did not notice any Red Turpentine Beetle activity on the trees I checked, and I did not hear any Pine Sawyers chewing away either, which is good. The trees seem to be doing well at this point in time.

Egg mass sampling was a royal pain because of the height of the trees. I was able to sample a few trees that were open grown and had some branches lower on the tree that I could get to, so I did not sample many trees. I did not find any egg masses on the trees I did sample from.

I plan on going back to look at the site again later this fall. It will be interesting to see if the stand conditions will change.

### **Mike Hillstrom**

My surveys in the eastern counties of the WCR with Todd revealed larval populations capable of light to moderate defoliation. If you notice any moderate to severe damage in the next few weeks please let me know.

## **Post Oak Locust**

Post oak locusts (a.k.a. post oak grasshoppers) are back in central Wisconsin (Photos 7, 8). This is an easy species to identify because as their scientific name (*Dendrotettix quercus*) suggests they feed on oak trees. Very few grasshopper species feed in trees! The large head and red coloration on the largest segment of the hind legs also help identify this species. This locust is well known for large outbreaks that occur periodically from southern New York to Tennessee and from Wisconsin to eastern Texas. Several years of heavy defoliation can cause tree mortality but researchers studying this species do not recommend spraying large areas with insecticide because it is difficult to treat an entire oak canopy and grasshoppers are highly mobile. In most cases the outbreak will be short lived and no long-term damage will be done to the trees. Post oak locusts emerge from eggs laid in the soil near margins of oak woods in late May or early June and mature around early July. Mating and egg laying occur in mid-July. A biological control bait that contains the protozoan *Nosema locustae* (trade names NOLO Bait or Semaspore) may help control young grasshopper populations.



Photos 7, 8. A post oak locust feeding on an oak leaf near Rome, WI on July 11, 2011 and leaves damaged by locust feeding.

## Diseases

### Annosum

Marinette County in Northeast Wisconsin is now the 23<sup>rd</sup> county to have a confirmed case of annosum root rot. Please continue to report suspect pine so that we can test for annosum and track it's spread. Read all about annosum at <http://dnr.wi.gov/forestry/fh/annosum/>

### Dutch Elm Disease

Elm trees infected with Dutch elm disease have been a common sight in my travels around central Wisconsin over the last few weeks (Photo 9). Yellowing, wilting branches or whole trees are evidence of this exotic fungal disease spread by elm bark beetles or through grafted roots.

**Management:** Options include sanitation, insecticides to kill the bark beetles, breaking root grafts, injection of fungicide, pruning out early infections and planting DED tolerant or resistant elm cultivars.



Photo 9. An elm tree with characteristic symptoms of Dutch elm disease.

### Oak Wilt



I suspect many of you have also noticed active oak wilt infections over the past few weeks (Photo 10). Oaks that rapidly turn brown and drop their leaves are the most obvious sign of oak wilt. Leaves typically remain partially green even after they fall off the tree. Oak wilt is non-curable (although fungicide injections can prevent trees from dying) and affects red oaks more severely than white oaks. The oak wilt fungus will spread from tree to tree through root grafts creating a pocket of dead trees over time. Please contact us if you would like to discuss oak wilt management in your area. And don't forget to utilize the online oak wilt risk guide (<http://dnr.wi.gov/forestry/fh/oakWilt/guidelinesform.asp>).

Photo 10. An oak tree infected with Oak wilt.

## **In the News**

### **Whitebark pine going extinct?**

Whitebark pine, a common high elevation tree across the western U.S. and Canada, faces the threat of extinction due to climate change, fire, attack by mountain pine beetle and infection with white pine blister rust. The tree species has already been listed as endangered in Canada. The U.S. considered listing whitebark pine (Photo 11) on the endangered species list recently but had to decline because of lack of funding currently. However, the listing is considered necessary and will be reconsidered every year. The attempted listing occurred in part because a recent study found that more than 80% of the whitebark pines in the Yellowstone area are dead or dying. Whitebark pine plays an important role in the hydrology of mountain ecosystems and is an important source of food for birds and bears. Warming temperatures in alpine ecosystems have allowed mountain pine beetles to invade whitebark pine niches at high altitudes. Mountain pine beetle invasion has been further aided by the spread of the exotic disease white pine blister rust. The combination has proven to be a deadly cocktail for whitebark pines.



Photo 11. Whitebark pine tree (Photo from mt.gov)

### **Imprelis herbicide damage to conifers (by Linda Williams)**

Imprelis is a new herbicide put out by DuPont and is suspected of causing conifer damage and mortality in areas where it has been used (Photo 12). Imprelis is used on lawns and turf grass to combat broadleaf weeds, but, it appears it may be having a significant impact on some conifers, including spruce and pines of all sizes. DuPont is in the process of researching this problem so if you have applied Imprelis to your lawn or turf and suspect that recent damage to pine or spruce may be due to the chemical please contact DuPont or if you're in Wisconsin contact the Plant Disease Diagnostic Clinic:



Photo 12. Suspected Imprelis injury on a Norway spruce (Photo by Don Wild)

you have applied Imprelis to your lawn or turf and suspect that recent damage to pine or spruce may be due to the chemical please contact DuPont or if you're in Wisconsin contact the Plant Disease Diagnostic Clinic:

<http://tdl.wisc.edu/Interactive%20Pages/ImprelisFactSheet062111V2.pdf>

For more information and additional photos check out:

[http://news.msue.msu.edu/uploads/files/122/Imprelis%20homeowner%20factsheet\\_Bert%20Cregg.pdf](http://news.msue.msu.edu/uploads/files/122/Imprelis%20homeowner%20factsheet_Bert%20Cregg.pdf)

<http://www.ppd.purdue.edu/PPDL/hot11/6-10.html>

Herbicide damage can be difficult to diagnose but if you're looking at spruce or pines that are in a yard, or next to a yard, it would be worth your time to find out if chemicals have been applied to the lawn.

# Technology

## Using the macro function on your digital camera

As the saying goes “A picture is worth a thousand words”. That’s particularly true when trying to diagnose insect and disease issues. However, taking in focus pictures of a small insects or a spot on a leaf can be a difficult (if not impossible) task in the standard shooting mode of most digital cameras. Because so much of what we deal with is tiny the macro function can be our best friend on a camera. Although high end cameras may require a special lens to take macro photos, on most digital cameras the macro function is on the main dial or can be turned on easily by pushing a button. The macro function is typically symbolized as a flower (Photo 13) and is very easy to use. Simply put



your camera in macro mode (read your camera instructions if the flower symbol is not obvious on your camera), zoom all the way out (this is very important) and start taking pictures. Because you are zoomed out you will need to get the camera very close to the insect or leaf. I frequently end up accidentally touching the insect or leaf with the camera if it’s extremely small. It’s also worth noting that because you are so close to the object the flash will not work. So thinking about how to get light on your subject is also important when taking macro photographs. I look forward to seeing all your macro masterpieces!

Photo 13. Typical macro symbol.

## Arthropod Proverb/Sayings (by Todd Lanigan)

Because of all the deer fly activity this summer, I thought two arthropod proverbs/sayings would be appropriate. ☺ (Proverb\*) (Egyptian\*\*)

**Do what we can, summer will have its flies.\***

**A fly is nothing; yet it creates loathsomeness.\*\***

**For general forest health and municipal level urban forest health issues contact:**



<http://new.dnr.wi.gov/Default.aspx?Page=4e114a1b-6bc4-4fd7-9e0b-755e7d11dd22>

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**Statewide reporting systems:**

**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 [dnrfgypsymoth@wisconsin.gov](mailto:dnrfgypsymoth@wisconsin.gov)  
visit the website <http://gypsymoth.wi.gov>

For additional information visit the Forest Health web site: <http://dnr.wi.gov/forestry/fh>

Note: This report covers forest health issues occurring in the West Central Region of Wisconsin. The purpose is to provide up-to-date information on forest health issues to foresters, forest landowners, and anyone else interested. We welcome your comments/suggestions on this newsletter as well as reports on forest health problems in your area. If you would like to subscribe to this newsletter, please contact Mike Hillstrom at [Michael.hillstrom@wisconsin.gov](mailto:Michael.hillstrom@wisconsin.gov). Previous issues of this update and regional forest health updates from NER, NOR and SOR, are available from the WI DNR Forestry website at <http://dnr.wi.gov/forestry/FH/intheNews/>. Articles written by Mike Hillstrom unless otherwise noted.

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.