

# West Central Region Forest Pest Update – 12/13/2007

(Todd Lanigan)

## Topics covered:

### Insects:

Jack Pine Budworm (recap)  
Sirex Woodwasp

### Diseases:

Annosum Root Rot  
Ash Yellows

### Other:

White Pine Decline  
Hickory Decline and Mortality

## Insects:

**Jack Pine Budworm** – Jack pine budworm has now been found in 12 counties in West-central Wisconsin in both jack and red pine stands. The counties where budworm is known to be defoliating and laying eggs on needles of jack and/or red pine are: Adams, Clark, Dunn, Eau Claire, Jackson, Juneau, Marathon, Monroe, Pierce, Portage, St. Croix and Wood counties.

Budworm was confirmed for the very first time in Pierce and St. Croix counties this year.

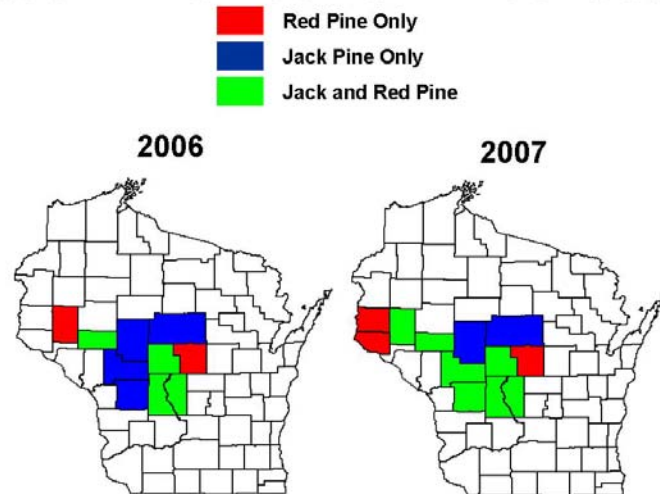
In these two counties, budworm is found only in red pine stands. 2007 is also the first year budworm has been confirmed in red pine stands in Jackson and Monroe counties. Only two counties remain where budworm is found strictly in jack pine, Clark and Marathon.

In Dunn and Portage counties, jack pine budworm expanded into more red pine stands. This is following the same pattern as it did in the other counties when budworm was first found in red pine stands. The first year, budworm was found in a small area, and then in the second year, budworm expanded out into the county.

In Adams, Eau Claire, and Wood counties, a couple of 20-30 year old red pine stands were thinned during the winter/spring 2006-2007 on industrial lands. Every third row with selective tree removal in the remaining two rows was harvested. These stands had light to moderate defoliation this year. No egg masses or only a couple of egg masses were found in these harvested stands, which indicates no defoliation or very light defoliation is expected in these stands. It will be interesting to see what affects (if any) the harvesting will have to these stands in 2008.

Based on egg mass counts, the potential for damaging defoliation in jack and red pine stands for 2008 exists in Adams, Dunn, Jackson, Juneau, Pierce, Portage, and Wood counties. Egg mass counts were nonexistent or low in Clark, Eau Claire (this surprises me), Marathon, Monroe, and St. Croix counties and damaging defoliation is not expected in these counties.

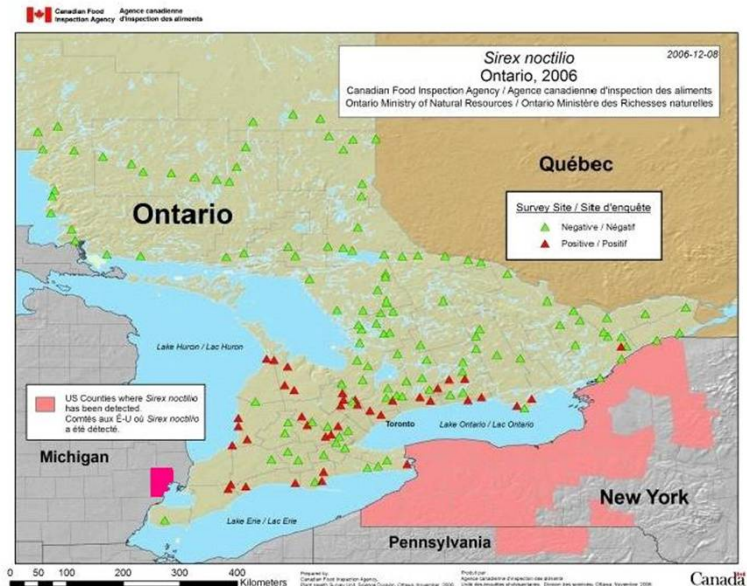
## Jack Pine Budworm Counties



Normal top dieback and mortality can be found in both the defoliated jack and red pine stands. Pine bark beetles, and red turpentine beetles are helping to add to tree mortality. Pine sawyers can also be found in these stands.

Jack pine budworm is doing fine in red pine stands in West-central Wisconsin. And it appears red pine carries jack pine budworm populations longer than jack pine will. The red pine stand in Adams County where budworm was first observed in 2004 is still carrying a budworm population with no signs of a population crash. Based on egg mass counts, the potential for damaging defoliation in this stand exists again for next year. 2008 will be the 5<sup>th</sup> consecutive year for jack pine budworm to potentially cause moderate to heavy defoliation in this stand which it has done the last 4 years.

**Sirex Woodwasp –** *Sirex* woodwasp is an exotic Siricid woodwasp that was first found in upstate New York. Currently it is known to be in New York, Pennsylvania, Macomb County, Michigan, and Ontario, Canada. The green triangles are negative finds and the red triangles are positive finds in Canada.



Thirteen intercept traps were placed in Jackson County to survey for *Sirex* woodwasp. The traps were set in early July and removed in late October. Three trap sites were on the Black River State Forest (BRSF) and one was on the Jackson County Forest. On the BRSF, two sites were in red pine stands; site 1 (4 traps) was in-between the railroad tracks along HWY 12 and I 94 by Millston, site 3 (3 traps) was on the corner of HWY 54 and Co. K, and site 4 (3 traps) was south of Clay School Road along the railroad tracks in a mixed white pine stand. Site 2 (3 traps) was on the Jackson County Forest in a red pine stand across from North Settlement Road along HWY 54.

A total of 5 woodwasps were caught in the traps. I identified four of the woodwasps as *Urocerus cressoni* and they were caught at sites 2, 3, and 4. These are native woodwasps and their host species are Fir, spruce and pine. The 5<sup>th</sup> woodwasp was identified as the Pigeon tremex (*Tremex columba*) and was caught at site 3. This is also a native woodwasp, and its hosts are hardwoods - beech, elm, hickory, oak, poplar, apple, pear, sycamore, and hackberry. If you have the US Forest Service publication "Guide to the Siricid Woodwasps of North America" look at pages 13 and 67 to see photos of the captured woodwasps. Or click on the link below to view the Guide to Siricid Woodwasps of North America.

<http://www.fs.fed.us/foresthealth/technology/pdfs/GuideSiricidWoodwasps.pdf>

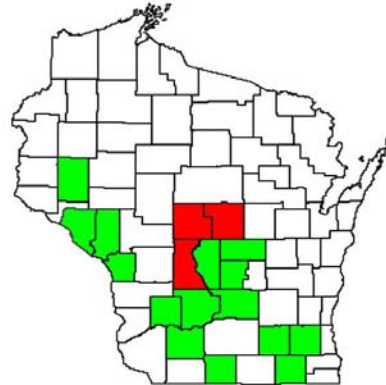
Click on the link below for more information on *Sirex* Woodwasp.

[http://www.na.fs.fed.us/spfo/pubs/pest\\_al/sirex\\_woodwasp/sirex\\_woodwasp.htm](http://www.na.fs.fed.us/spfo/pubs/pest_al/sirex_woodwasp/sirex_woodwasp.htm)

## Diseases:

**Annosum Root Rot** – Annosum root rot has been confirmed in three more counties and all three are in the WCR. The new counties are: Juneau, Portage, and Wood. With the addition of these three counties, that brings the total number of confirmed counties for Annosum up to 18. Annosum has been found on the following species: jack, red, and white pine, balsam fir, red cedar, and sapling red oak.

## Confirmed Counties With Annosum Root Rot



It is highly recommended that when you are harvesting in conifers to use Sporax on the fresh cut stumps to reduce the overland spread of the disease. Sporax needs to be applied as soon as possible after cutting, and no longer than one day after cutting (see DNR publication “Annosum Root Rot and Red Pine Pocket Mortality in Wisconsin - Biology and Management” for more information). Sporax can be purchased at the Wilbur-Ellis distribution centers in Almond and Grand Marsh.

The Annosum ad hoc committee (Steve Grant and I are members) is moving forward. Red pine plantations in counties adjacent to known Annosum counties were surveyed this year for the presence of Annosum (2 of the 3 new counties were found this way). Additional counties will be surveyed for Annosum in 2008.

The ad hoc committee found a liquid DOT Wood Preservative that is registered here in WI for use in forests to control Annosum. It is called Cellu-Treat. A drawback to Cellu-Treat is the packaging of the product, large quantity containers and volume needed to be purchased. A drawback to applying the liquid control agent is the cost associated with installation of the application equipment on harvesters. Both of these issues are being looked in to.

**Ash Yellows** – (from Kyoko Scanlon, Statewide Forest Pathologist) - Ash yellows is caused by a phytoplasma, a wall-less bacteria-like microorganism. Symptoms of ash yellows include yellow/sub-normal size foliage, slow twig growth, thin crown, branch dieback and vertical cracks on the trunk near the ground, as well as witches’ brooms.

In the summer of 2007, leaf and wood samples were collected from trees that were showing dieback from 3 campgrounds (Columbia, La Crosse, and Rock Cos.), 1 urban woodlot (Milwaukee Co.), and 1 forest stand (Kewaunee Co.). All of the sampled trees were exhibiting crown dieback and epicormic sprouting. Some sampled trees also exhibited yellow/subnormal size leaves, slow twig growth, and/or witches’ brooms.

Samples were tested for the presence of phytoplasma through genetic analysis. Results were positive for the presence of phytoplasma for the samples from 4 out of 5 sites. All of the samples taken from trees with a witches’ broom were positive as well as one sample without a witches’ broom.

## Confirmed Counties With Ash Yellows

Based on the existence of witches' brooms and results of the genetic analysis, in 2007, La Crosse, Milwaukee, and Rock Counties were added as Counties confirmed with ash yellows. In Wisconsin, ash yellows is currently found in 20 counties.



Click on the link below for more information on ash yellows.

[http://na.fs.fed.us/pubs/howtos/ht\\_as\\_h/ht\\_ash.htm](http://na.fs.fed.us/pubs/howtos/ht_as_h/ht_ash.htm)

### **Other:**

**White Pine Decline** – I am still getting some questions concerning white pine that are thin crowned, thinned crowned with yellow and/or brown foliage, or are dying. This is definitely a widespread problem here in the region.

Unfortunately, I still do not have a clue as to what is going on with the white pine. In early fall I dug some small soil pits (approx. 3 feet deep) by declining white pine in Eau Claire and Jackson counties. The roots looked fine and I did not hit a hard pan or plow layer in the soil.

Based on what I did not find, my best guess as to what is going on with the white pine is abiotic in nature - summer droughts and heat, frost injury to roots, open winters, etc. If time permits, I want to continue looking into this problem in 2008. Again, here are some photos showing white pine in various stages of decline.



**Hickory Decline and Mortality Study** – I talked with Dr. Jennifer Juzwik (the lead researcher) who is with the U.S. Forest Service Northern Region Research Station out of St. Paul, MN about the study. Dr. Juzwik is looking for sites on state or county lands here in the region where she would be able to inoculate healthy hickories with the fungus *Ceratocystis smalleyi* in 2008. This will help to determine what role *Ceratocystis smalleyi* is playing in hickory dieback/decline. After the trees have been inoculated and the fungus has done its thing, the trees will be cut and removed from the site so the trees can be analyzed in the lab.

If you know of any sites that could be used for this study, please let me know. I will pass the site information on to Dr. Juzwik. I will also give Dr. Juzwik your contact information so she can talk to you in greater detail about the study and the site.

The ultimate goal from this study is to development management guidelines.

**Arthropod Proverb: (Persian)**



**Even the hand of compassion is stung when it strokes a scorpion.**

Previous issues of this update and regional forest health updates from NOR, NER, SCR/SER, and WCR are available from the WI DNR Forestry website at:  
<http://dnr.wi.gov/forestry/fh/inthenews/>