

Southern Region Forest Health Update

Wisconsin DNR, Forest Health Protection Unit
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The following articles were written by Mark Guthmiller (page 1 - 6)

Mystery Insect Question:

Along with many other critters hanging out in Sauk County (see forest tent caterpillar article), this insect was hanging around on the garage of one landowner. It is about an inch and a half long with feathery antennae. Do you know what it is? (Answer on page 6)



Ash Anthracnose:

Although we had an early warm up this spring, we have experienced a couple cool and wet spells that were conducive to leaf fungi. Reports of anthracnose on ash, oaks, and silver maple have been frequently reported in southern WI. Although some frost injury was possible this spring, I am attributing most of the symptomatic black leaves to anthracnose. Often lower canopy leaves are more severely affected from previous year infected stems and petioles raining spores down on lower emerging leaves. Anthracnose is a general term used to reference many species of leaf fungi. I believe the samples observed had the conidial state (*Discula* sp.) of *Gnomoniella fraxini* affecting the ash trees.



Fig. 1 Typical symptomatic leaves



Fig. 2 Fruiting bodies from previous year on old petiole



Fig. 3. New acervuli on petioles

Eastern Tent Caterpillar

Eastern tent caterpillar once again generated a lot of calls and complaints in southern Wisconsin, especially in Columbia, northern Dane, Iowa, and Sauk Counties this spring. Fortunately this critter is winding down for the year and most have stopped feeding and started to pupate. Cocoons with pupa inside can be found on tree trunks and branches, fence posts, and other outdoor structures. These were actually found inside the tent of the caterpillars-sneaky!



Fig. 4 . Pupa inside yellow powdery cocoon.

Elm Leafminer

The larvae of this exotic sawfly were observed causing browning of elm leaves in Dane County. Advanced damage might be mistaken for anthracnose. Cultural controls such as mulching and watering heavily impacted trees during dry spells is probably the best course of action. Systemic insecticides at time of leaf expansion could offer some level of control as well.



Fig. 5 Larvae mining between epidermis layers of elm leaf

Life stage photos:

<http://www.ipmimages.org/browse/subthumb.cfm?SUB=147>

A research publication on elm resistance to elm leafminer might be of interest for folks planting elm cultivars:

<http://www.ces.ncsu.edu/fletcher/programs/nursery/metria/metria08/m89.pdf>

Euonymus Caterpillar

One report of euonymus caterpillar was received from Brookfield causing some feeding damage in a wooded area. This exotic caterpillar is periodically observed attacking the exotic burning bush euonymus, in southern Wisconsin. The heavy webbing that enshrouds the shrubs can generate a lot of interest. It appears here that they are attacking the native eastern wahoo, *Euonymus atropurpureus*.

For more information: <http://learningstore.uwex.edu/assets/pdfs/A3633.pdf>



Fig. 6 Euonymus caterpillar attacking what appears to be eastern wahoo



Fig. 7 Webbing coverings plants growing close to the ground

Fall Cankerworm

While gone over Memorial weekend, fall cankerworms caused some heavy defoliation to about 40 acres of boxelder in Dane County near Oregon. When I had returned very little evidence of the culprits were remaining. After some searching some shed skins were found to confirm fall cankerworm damage at this site. They have a very close synchronized hatch and apparently a synchronized pupation period as well. They burrow into the soil to pupate, thus the disappearing act. We may see more reports of this critter next year. Cankerworms were also present in lower numbers on the oaks at the DNR regional office in Fitchburg and caused some minor shot-hole feeding.



Fig. 8 Shed skin of fall cankerworm



Fig. 9 Low area with boxelder defoliated by fall cankerworm



Fig. 10 Fall cankerworm on oak

More information on cankerworm:

<http://www.extension.umn.edu/distribution/horticulture/DG0876.html>

Identification:

<http://www.ipmnews.msu.edu/landscape/Landscape/tabid/92/articleType/ArticleView/articleId/399/Fall-cankerworms-Another-shade-tree-pest-makes-an-appearance-this-spring.aspx>

Forest Tent Caterpillar and, and, and.....

A report in May that I received regarding defoliation was assumed to be gypsy moth and eastern tent caterpillar. It turned out to be forest tent caterpillar causing “most” of the damage. About 400-500 acres of aspen, oak, and other hardwoods is estimated defoliated over a 1,500 acre area in this area just east of Devils Lake state park in Sauk County extending to the Columbia County border. The outbreak generated some publicity in the local Baraboo paper thanks to a concerned

landowner calling in. This story was followed up with a Madison TV station checking out the situation.



After visiting this area I observed a number of caterpillar species. Eastern tent caterpillars, forest tent caterpillars, gypsy moth caterpillars, and elm spanworms were all present. There were just a few eastern tent caterpillars still wondering around, masses of forest tent caterpillars causing most of the current damage with some starting to pupate, a few gypsy moth caterpillars with a couple weeks of development and feeding left, and a lot of elm spanworms causing additional feeding damage to maple, ash, elm, and other hardwoods. An entomologist's smorgasbord! Aerial surveys to better delineate the outbreak will happen later in the month.

Fig. 11 (left) Forest tent caterpillar with blue sides and white to yellow keyhole shaped spots on top



Fig. 12 Forest tent caterpillar white to yellow cocoons on house siding



Fig. 13 Gypsy moth and forest tent caterpillar getting ready to duke it out...an ESPN pay per view classic



Fig. 14 An estimated 500 acres in a 1,500 acre area suffered heavy defoliation by FTC

For more information on forest tent caterpillars: <http://dnr.wi.gov/forestry/FH/FTC/>

Here is a great caterpillar comparison handout to share with public. Also note that Forest Tent Caterpillars do NOT make tents like Eastern Tent Caterpillars.

<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2299.pdf>

Friendly flies were not present but may show up in the future or next year.

and, and,...(spanworms)

A couple species of spanworm were also present at this Sauk County site. The adult phase of, what I believe to be, the "fringed looper" (pale beauty), *Campaea perlata* were hanging around in fair numbers on the garage at one site. There also were high numbers of what I believe to be "elm spanworm" caterpillars, *Ennomos subsignaria*. These spanworms are also being reported in other parts of Sauk County west of Devils Lake and can erupt into damaging levels causing large areas of defoliation to hardwoods. Elm spanworm caterpillars have two color phases (yellow-green to brown). The darker ones are apparently more common during population outbreaks.



Fig. 15 Possible fringed looper adult



Fig. 16 Dark phase of elm spanworm



Fig. 17 Both color phases of elm spanworm catching a free ride

More information on spanworms:

<http://ento.psu.edu/extension/factsheets/elm-spanworm>

Oak anthracnose

On some white oaks, symptoms are quite severe and a fair amount of leaf drop may occur. Proper cultural controls such as raking up leaves, mulching and watering trees during dry periods should help maintain tree health and reduce spore levels for next year. For more information on oak anthracnose: <http://www.plantpath.wisc.edu/pddc/factsheets/AnthOak.pdf>



Fig.18 White oak leaves hit hard by anthracnose



Fig. 19 Acervuli forming on leaf vein



Fig. 20 Discula fruiting state producing conidia

Agrilus on Walnut

Two adult agrilus beetles were reared from walnut associated with some black walnut trees exhibiting decline in Richland County. With help from UW Madison entomologist, Nate Hoftiezer, we are working at identification of the beetles. Nate says they are likely either *A. transimpressus* or possibly the less common *A. cliftoni*. Both specimens collected were females and a male specimen is needed to confirm species. Both of these species are native and likely playing a secondary role to the decline of the walnut. Further attempts at confirming the species is planned and will be useful information as we continue to monitor black walnut health with the threat of “thousand canker disease” present in the western United States.



Fig. 21 Two agrilus beetles reared from black walnut



Fig. 22 Beetles are very small at less than a ¼ inch long



Fig. 23 Larva observed under bark on black walnut

Mystery Insect Answer:

At first I thought maybe it was a dobsonfly but it was missing the large mandibles. It turned out to be a close relative called a “fishfly”, likely a male *Chauliodes rastricornis*. It is an aquatic related species in the larval stage and not a forest pest. For more information on fishflies: <http://bugguide.net/node/view/3610>



Gypsy Moth Updates - Mark Guthmiller/Bill McNee

Development status:

As of June 3rd, caterpillars in Rock County were developing rapidly with many 5th and some female 6th instar larvae present. Just a few larvae were starting to shrink into pupation. Feeding in Rock County should start winding down in a week or so. In Dane County many late 4th and some 5th instars were observed. I would anticipate feeding damage to become more noticeable over the next week. In Sauk County there were still a number of third instars present with many 4th instars. We still have a couple weeks or more of continued feeding damage possible in this area. In the Milwaukee area, the development is running a little behind the Madison area, and caterpillars can be expected for the next 2-3 weeks.



The larger gypsy moth caterpillars can rapidly consume foliage

Aerial spray results:

It is too early to know just how effective treatments were this year. So far there is a mix bag of reports coming in. In Beloit, at the Beloit College, we have a fair amount of defoliation being observed. This was a site with very high egg mass densities. Another site in Beloit looked very good and the population appears to be crashing out. In Dane County there are a few calls coming in with nuisance caterpillar reports that appear to be within or on the edge of treatment blocks. We may get additional reports in this area over the next week or so. In Sauk County, reports from a couple of woodland treatment blocks are currently indicating a fair reduction in gypsy moth

caterpillars. At Devils Lake state park south beach treatment area we continue to see a fair number of caterpillars feeding. Treatment sites in the Milwaukee area have not been generating caterpillar complaints this year.

Defoliation reports:

We are starting to get some reports of defoliation in parts of southern Wisconsin. As mentioned earlier, we are seeing defoliation at Beloit College with a few other reports down there. Dane County is starting to get some reports of defoliation in Madison, Monona, Sun Prairie, and a rural area west of Lodi. We are also getting some reports of defoliation in Columbia and Sauk County as well. Due to increase in the native forest tent caterpillar in Sauk Co., we will have to be cautious on what we are calling gypsy moth defoliation and what is caused by some of the other insects mentioned earlier. We are planning aerial defoliation surveys later this month to assess damage from the air. Watch for more information on this topic in an upcoming newsletter. There is a large outbreak in progress in northeast Wisconsin, so you may notice many caterpillars and defoliation if you own property in Marinette, Menominee, Oconto or Shawano Counties.



Heavy defoliation on June 4th in a conservancy park area in Madison

Caterpillar disease observations:

The recent wet weather has been conducive for development of the gypsy moth caterpillar fungal disease, entomophaga. Entomophaga and the NPV viral disease appear to be starting to take a toll on caterpillars in some sites in Rock and Dane County. No caterpillar disease was observed in Sauk County during site visits on June 4th. When killed by the fungus, entomophaga, the caterpillars hang head down on the trunk of the tree and when killed by the NPV they usually hang in an inverted V. If you observe lots of caterpillar mortality from these diseases please share that location information with me. Thanks.



NPV killed caterpillar on left and Entomophaga killed caterpillar on the right

Gypsy moth slow-the-spread treatments to begin:

The Wisconsin Dept. of Agriculture, Trade and Consumer Protection is tentatively scheduled to begin mating disruption treatments in western Wisconsin counties on June 21 as part of the slow-the-spread program. For more information on the slow-the-spread program and to view maps of the treatment areas, visit www.gypsymoth.wi.gov. Treatments saturate the area with the moth's pheromone to prevent male moths from finding female moths. This technique is only effective at very low populations and is not used in the DNR Suppression Program because populations are far too high in the areas where the DNR sprays.

Emerald Ash Borer confirmed in West Bend - Bill McNee

EAB was confirmed in the city of West Bend on Wednesday, June 9. Larvae and adult beetles were found in a tree located in Old Settler's Park, after city workers noticed signs of infestation while removing the tree. Four trees are currently known to be infested in downtown West Bend. Washington County is already under quarantine for EAB. The press release can be read at: http://datcp.state.wi.us/press_release/result.jsp?prid=2509.

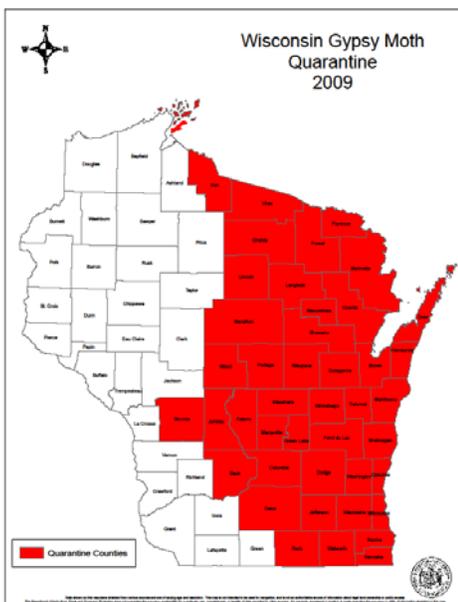
Adult EAB beetles have begun to fly in southeast Wisconsin. Traps placed in infested trees in Newburg trapped adults as early as June 3.

Other recent EAB detections of note: Cut Rock State Park near Rockford, Illinois (only about 10 miles from Beloit, WI), and Allamakee County, Iowa (Iowa's first EAB detection, across the river from the Wisconsin infestation at Victory).

An EAB training session will be held in De Soto (Crawford/Vernon Counties) on July 22. The session will cover the biology and management of EAB, and will have field visits to look at infested trees as well as the management of lowland and upland forest stands. For more information, contact Greg Edge, DNR La Crosse Area Forestry Leader (608-785-9011, gregory.edge@wisconsin.gov).

New Firewood Rule - Kyoko Scanlon

It's warm, it's sunny, and it's time for camping! While you pack up your tent, utensils, and marshmallows, please consider obtaining firewood locally to where you will be camping. A variety of forest insects and diseases can hitchhike on firewood, and we want to avoid accidental long-distance movement of those pests.



DNR has developed a permanent rule that prohibits visitors from bringing firewood into Wisconsin State Parks and onto other state-managed lands from out of state or from locations farther than **25 miles away** from the property. Some of you may be saying "Hey, wasn't it 50 miles?" A new rule became effective as of June 1, 2010, and it is now 25 miles. If you would like to know the 25-mile-radius around your destination, please check out a map that shows the 25-mile radius around each state property, available at <http://dnr.wi.gov/invasives/firewood/firewood-maps.htm>.

In addition, if you live in counties under quarantine for the emerald ash borer, make sure you are aware of the state and federal laws that prohibit the movement of firewood out of emerald ash borer quarantined areas. Currently, the quarantined counties include Brown, Crawford, Fond du Lac, Kenosha, Milwaukee, Racine, Ozaukee, Sheboygan, Vernon, Washington, and Waukesha counties. Firewood that has been stored, purchased, harvested, or that has moved through the quarantine areas with stops longer than what it takes to re-fuel a vehicle, may not be moved out of these areas. Furthermore firewood may not be moved from counties in eastern Wisconsin to anywhere farther west under gypsy moth

quarantines (see the gypsy moth quarantine map). Many county parks and private campgrounds as well as national parks have firewood restrictions in place for their properties as well.

It is getting complicated to move firewood, isn't it? Maybe it's easier to buy firewood locally. For more information about firewood rules, please visit the WI DNR website at <http://dnr.wi.gov/invasives/firewood/>.

Beech scale survey - Kyoko Scanlon



Beech resource in Wisconsin. Darker color represents higher density of beech resource in a particular area.

An exotic scale insect called beech scale (*Cryptococcus fagisuga*), and beech mortality were detected near Sturgeon Bay in Door County last summer, for the first time in Wisconsin. Beech bark disease is a disease of American beech (*Fagus grandifolia*) caused by the combination of a scale insect and one of several species of canker-causing fungi (*Neonectria* sp.). Beech bark disease results when the beech scale colonizes beech and makes them susceptible to invasion by *Neonectria* fungi.

Detection surveys in 2009 revealed widespread light infestation by the beech scale that extended outside Door County. Survey efforts will continue by the DNR forest health specialists in areas where beech resources are present. Beech is found as a minor component in the eastern edge of SOR. If you know of a stand suitable to monitor for the beech scale in SOR, please contact Kyoko Scanlon at Kyoko.Scanlon@Wisconsin.gov or 608-275-3275. Thank you.

About the newsletter

“Southern Region Forest Health Update” is an informal newsletter created by the Wisconsin DNR, Forest Health Protection Unit. The purpose of this newsletter is to provide foresters in the Southern Region with regional up-to-date forest health information. This newsletter will be issued monthly during the growing season and on an irregular basis during winter as topics come up. We welcome your comments/suggestions on this newsletter and your reports on forest health problems you observed in your area. If you would like to subscribe to this newsletter, please contact Kyoko Scanlon at Kyoko.Scanlon@wisconsin.gov.

Previous issues of this update and regional forest health updates from NER, NOR and WCR, are available from the WI DNR Forestry website at <http://dnr.wi.gov/forestry/FH/intheNews/>. Articles were written by DNR forest health specialists who cover Southern Region unless otherwise noted.

Please report to us

We appreciate reports of forest health problems in your areas. Please contact the following staff for regional forest health problems/questions. Thank you.

Forest health and gypsy moth assistance staffing changes - Mark Guthmiller

Some temporary changes have been made to forest health staff assistance. For forest health assistance in southern Wisconsin, please check the list below of staff and forest health concerns they can assist you with. This would be a good page to print out and keep for future reference.

SOR Forest Health Assistance
Wisconsin DNR, Forest Health Protection Unit
September 2009 to June 2010

Contacts for DNR staff, municipal foresters, and forestry cooperators

For general forest health issues

Jane Cummings-Carlson (northern part of SER Team area)	608-275-3273
Kyoko Scanlon (southern part of SER Team area, and SCR)	608-275-3275

For municipal level urban forest health issues (other than Gypsy moth and EAB)

Mark Guthmiller (SCR and SER Team area)	608-275-3223
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For gypsy moth

Mark Guthmiller (SCR area)	608-275-3223
Bill McNee (SER Team area)	920-662-5430
Andrea Diss-Torrance (Statewide issues)	608-264-9247

For emerald ash borer

Mark Guthmiller (SCR Team areas)	608-275-3223
Bill McNee (SER Team area)	920-662-5430

Direct public inquiries regarding yard tree concerns to UW county or state extension offices or:

Emerald ash borer hotline	1-800-462-2803
Emerald ash borer e-mail	DATCPEmeraldAshBorer@wi.gov
Gypsy moth hotline	1-800-642-MOTH

Additional Program Web-based Resources:

Forest Health web site: <http://www.dnr.state.wi.us/org/land/forestry/FH/>
 Gypsy Moth web site: <http://www.gypsymoth.wi.gov>
 Emerald ash borer web site: <http://dnr.wi.gov/forestry/fh>

SCR Team Counties: Columbia, Dane, Dodge, Grant, Green, Iowa, Lafayette, Richland, Rock and Sauk

SER Team Counties: Kenosha(S), Milwaukee(S), Ozaukee(N), Racine(S), Sheboygan(N), Walworth(S), Washington(N), and Waukesha (N) (S=Southern Counties serviced by Kyoko Scanlon and N=Northern counties serviced by Jane Cummings-Carlson)