

Western and Central Wisconsin Forest Health Report – July 2016

By Mike Hillstrom, Todd Lanigan, Paul Cigan

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Jack Pine Budworm

Cigan - Jack pine budworm larval surveys were conducted in Washburn County and defoliation surveys were conducted in Bayfield, Burnett, Douglas, Polk, Sawyer, and Washburn Counties.



All but Polk County experienced widespread, light defoliation. Localized, moderate defoliation was observed in several townships in Douglas County (Solon Springs, Bennet, Highland) on jack pine saplings. Late instar larvae and pupae were generally present on partially defoliated shoots.

Figure 1. A goldenrod crab spider preying on a jack pine budworm larva in Washburn County. Photo by Paul Cigan.

Lanigan - Surveys were conducted in Dunn, Eau Claire, Jackson, Monroe, Pierce and St. Croix counties. In Dunn County one caterpillar was found in jack pine and one dead caterpillar was found in red pine at one site in the Town of Otter Creek. In Eau Claire County, one caterpillar was found at each of three different sites in the Towns of Lincoln and Bridge Creek. In Jackson County, one cocoon was found in jack pine in the Town of East Manchester. Based on the number of caterpillars found and the lack of visible defoliation, the jack pine budworm population is still low. However, if you see any jack pine that looks like it was scorched by fire in August, this may be moderate to heavy defoliation caused by jack pine budworm. If you see this, let me know the location so I can check it out.

Hillstrom – Visual surveys did not reveal any jack pine budworm defoliation in Adams, Juneau or Wood Counties. A recent report from Wood County will be investigated.

Emerald Ash Borer

EAB was recently detected in Juneau County for the first time. Juneau County was previously quarantined in 2014 as a result of a detection in Adams County so no regulatory changes will occur as a result of this find.

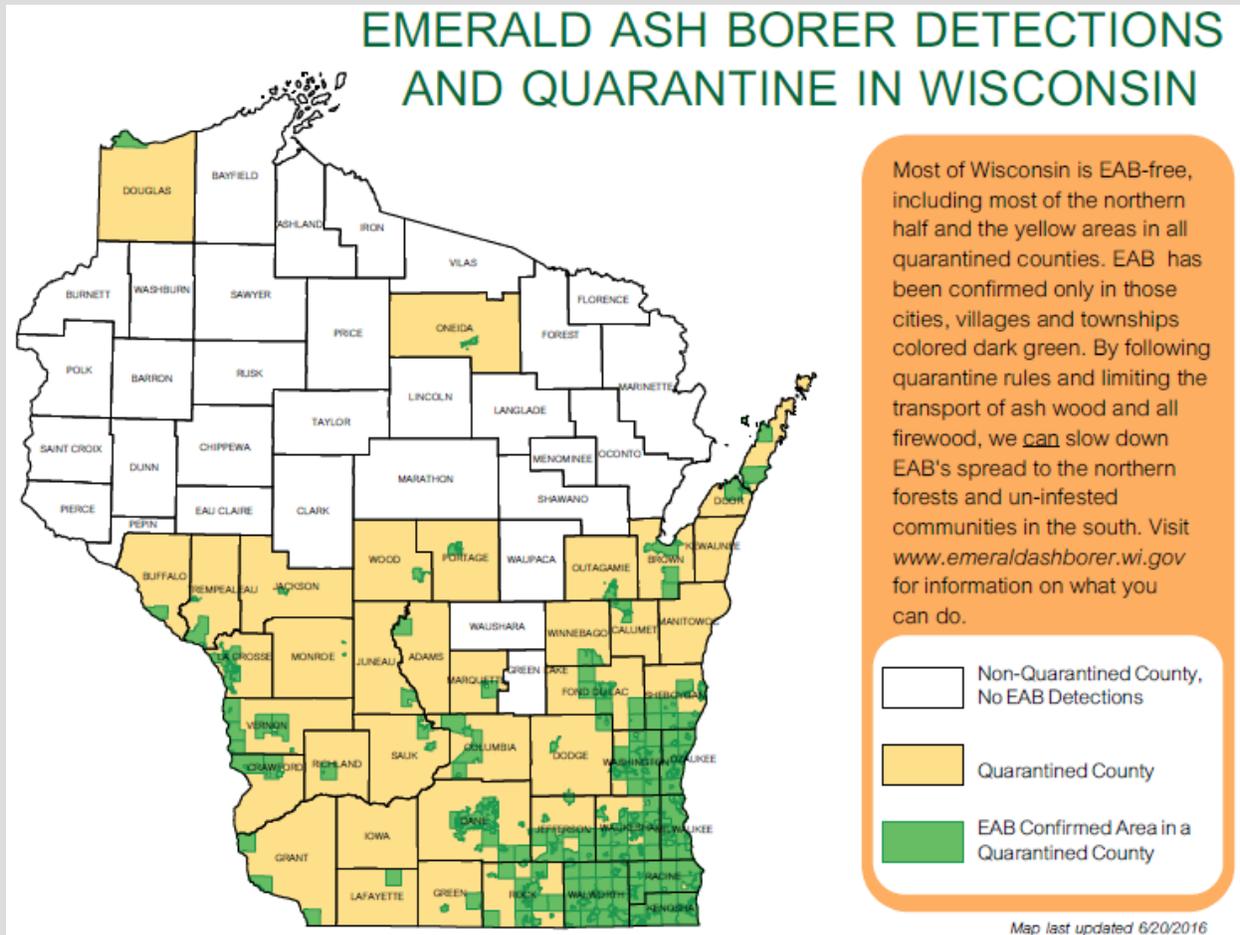


Figure 2. Known locations of EAB in Wisconsin.

Gypsy Moth

Gypsy moth caterpillars are in the final instars or have recently pupated. Please let us know if you notice any defoliation or diseased caterpillars dead on trees. The majority of DATCP traps are in place for the start of moth flight in the next few weeks.

Figure 3. The best variety of gypsy moth caterpillars, dead.



Hickory Mortality

We receive regular reports of hickory mortality in central Wisconsin. In many cases, the mortality is caused by a complex of biotic and abiotic factors including the hickory bark beetle and the fungus *Ceratocystis smalleyi*. The hickory bark beetle is a native insect that usually attacks overmature, weak, or recently killed trees, but will attack healthy trees during outbreaks. Several other insects are also commonly found in dead and dying hickory but it is suspected that the hickory bark beetle transmits the fungus, *C. smalleyi*, which causes bleeding cankers and contributes to tree mortality. Fusarium and Phomopsis fungi are also associated with dead and dying hickory. Management is limited to removing and destroying infested trees during winter and spring to reduce the beetle population.

Oak Wilt and Frost Damage

Actively wilting trees dying from infection with the oak wilt fungus are just starting to show up in central Wisconsin. Earlier reports of oak trees dying this spring were the result of frost damage that occurred in May. The majority of frost impacted trees flushed out new leaves as needed and look healthy again.

Diplodia vs Red Pine Shoot Moth (By Todd Lanigan)

I have noticed a lot of new shoots that are dead on red pine lately. Because of all the rain, I was chalking the shoot mortality up to Diplodia Shoot Blight. I have taken a closer look, and some of the shoot mortality is caused by the Red Pine Shoot Moth. From a casual glance these two problems will look the same, you really need to take a closer look. If the shoot mortality is caused by Diplodia, the shoot usually forms a shepherd's crook, and in time you will find the fungal fruiting bodies on the needles, especially if you look under the fascicle (depending on your location in the state, it could be Sirococcus Shoot Blight and not Diplodia). With red pine shoot moth, the dead shoot will not form a shepherd's crook, and if you break the shoot off, it will be hollow from the caterpillar feeding inside the branch. Diplodia will grow down the branch, causing branch mortality and can form a canker on the main trunk at the branch axil. Red pine shoot moth will just kill the current year shoot, but the pine usually sets a bud behind the dead shoot. If you get a couple years of heavy shoot mortality from the red pine shoot moth, it can slow down growth.



Figure 4 (left). Look for curved shoot tips and fruiting bodies on the needles to diagnose Diplodia shoot blight. Joseph OBrien, USDA Forest Service, Bugwood.org

Figure 5 (right). Red pine shoot moth infested shoots are straight and hollow. Steven Katovich,

USDA Forest Service, Bugwood.org.

Oak Webworm (By Todd Lanigan)

You may be noticing leaves tied together on seedling and sapling scrub, black and red oaks that sort of look like an oblong ball. Oak webworm caterpillars spin a dense web around the leaves



and feed inside. If you open up the webbed leaves, it will be messy. Inside you will find the caterpillars, bits and pieces of leaves and also caterpillar frass. The feeding damage does relatively little damage to trees other than making them look kind of ugly. If a homeowner has them in their trees, they can just open up the webbed leaves and leave it as is, collect the caterpillars and put them in a container of soapy water for a couple of days before disposing of them, or do nothing and let nature take its course.

Figure 6. Oak webworm nest. Steven

Katovich, USDA Forest Service, Bugwood.org.

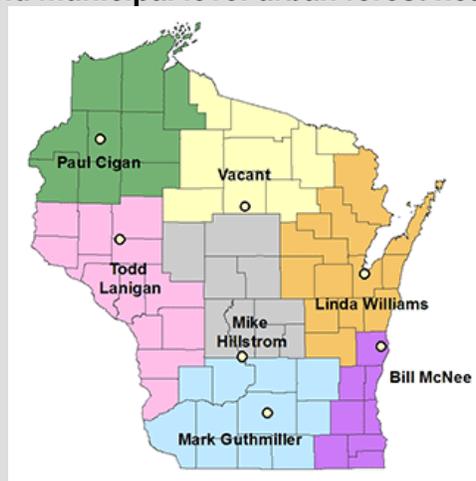
Zimmerman Pine Moth (By Todd Lanigan)

I have not seen any evidence of Zimmerman Pine Moth for the past couple of years, but have recently seen it here and there while doing field work. Zimmerman pine moth will attack all



species of pine. I have only seen it in jack pine so far. Young caterpillars overwinter under bark flaps and then in spring they bore under the bark and feed in the cambium. This will cause large pitch masses to form on the main trunk and you can usually find a hole in the pitch mass where the caterpillar bored into the tree. The pitch masses will be found by the branch whorls. Feeding damage in the cambium can cause the tree to break off at the feeding site. Zimmerman pine moth is not a serious pest in forest stands typically but management may be necessary in Christmas tree plantations. Figure 7. Pitch mass caused by Zimmerman pine moth.

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<http://dnr.wi.gov/topic/ForestHealth/staff.html>

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Statewide reporting systems:

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://gypsymoth.wi.gov/>

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

Note: This report covers forest health issues occurring in the West Central District 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. 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/topic/ForestHealth/Publications.html>. 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 state or local laws regarding pesticide use.