Topics covered this month:

**Insects:**
- Cherry scallop shell moth
- EAB emergence degree day maps
- EAB new county quarantine – Jefferson Co
- EAB new locations in counties already quarantined
- EAB parasitic wasp releases
- Gypsy moth
- Oak branch flagging and Kermes scale
- Pine sawyer beetles
- Woolly alder aphid

**Diseases:**
- Ash anthracnose
- Aspen fungal leaf diseases
- Oak wilt
- Rhizosphaera on spruce

**Other:**
- Heavy seed production in maples
- Missing jack pine needles on new growth

**Of Historical Interest:**
This is a new section! I will be going back through old WI DNR Forest Health Annual Reports and reprinting assorted info that I think you might find interesting or useful. Hope you enjoy this new section!

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**Insects**

**Cherry scallop shell moth** – significant webbing and damage is showing up in some areas of Marinette, Oconto, and Shawano Counties on wild black cherry. Moths emerge in June to lay eggs. The caterpillars feed in groups and tie leaves together, feeding within the webbed leaves which provide protection from predators, and eventually turn brown. After feeding is done for the season, the larvae drop to the ground to pupate and overwinter. Wild black cherry that has been defoliated by cherry scallop shell moth may be
at higher risk for attack by the Peach Bark Beetle, *Phloeotribus liminaris*. This bark beetle infests Prunus species that are under stress, although most of the damage I’ve seen from cherry scallop shell moth this year has been on young understory trees that may not be as attractive to the bark beetle.

EAB emergence degree day maps – the map below is from July 24 and shows the areas of the United States where the growing degrees are such that we would see peak or past peak adult EAB emergence. Literature indicates that EAB adults can emerge from May thru September, but peak emergence usually begins around 1000GDD. Graphic below shows peak emergence (light green) and past peak emergence (olive green), as of July 24, 2013.
**EAB new county quarantine** – Jefferson County, in southeastern Wisconsin, was quarantined in early July after EAB was found on the other side of its border with Walworth County and tell-tale signs of the pest were found inside Jefferson County itself. That brings Wisconsin to 17 counties quarantined for EAB (map at right). Those of you who need to move ash products (logs, chips, brush, etc) out of the quarantined areas will need to have a compliance agreement to do so. Contact info can be found here [https://datcpservices.wisconsin.gov/eab/article.jsp?topicid=26](https://datcpservices.wisconsin.gov/eab/article.jsp?topicid=26)

**EAB new locations in counties already quarantined** – when emerald ash borer is first found in a county it often makes the news; but what about after that, when it is found for the 2nd, 3rd, or 4th time in a county? Well, quite frankly, it may or may not make the news. If you want to stay up to date on all of the locations where EAB has been identified in Wisconsin, check out [https://datcpservices.wisconsin.gov/eab/articleassets/ConfirmedEABFindsInWisconsin.pdf](https://datcpservices.wisconsin.gov/eab/articleassets/ConfirmedEABFindsInWisconsin.pdf) for the latest list by county. If you think you’ve identified EAB in an area but it’s not listed at the above link, please contact your forest health specialist or one of the DNR urban forestry staff to verify your find. In the past couple months emerald ash borer has been identified in the following areas around the state where we already have a quarantine in place:

- Town of Randall, Kenosha County
- Village of Holmen, LaCrosse County
- South Milwaukee, Milwaukee County
- City of Racine, Racine County
- Town of Bradford, Rock County
- Mirror Lake State Park, Sauk County
- City of Delavan, Walworth County
- City of Elkhorn, Walworth County
- Town of East Troy, Walworth County
- Village of Genoa City, Walworth County
- Village of Sharon, Walworth County
- Town of Farmington, Washington County

An interesting story – at one of the new locations a homeowner had spotted some dead beetles on the sidewalk and reported them. Now keep in mind that usually we don’t find EAB just hanging out on sidewalks, but in this case, the homeowner had been treating the ash trees with a systemic insecticide and the adults beetles had come to feed on the tree, ate some of the leaves, and died! Thus, the dead beetles on the sidewalk. Since I hadn’t really heard of this before I thought I would share 😊

**EAB Parasitic Wasp Releases** – parasitic wasps are tiny critters that are related to wasps although these don’t sting, instead they parasitize other insects … in this case EAB. There are 3 parasitic wasps that have completed rigorous testing and can be released to help control EAB,
including larval parasites *Tetrastichus planipennisi* and *Spathius agrili*, and the egg parasite *Ooobius agrili*. Releases of *Tetrastichus* and *Ooobius*, have begun in southern Wisconsin where EAB is present. These 2 species have previously been released in Ozaukee and Washington Counties, and Vernon County, and are now being released in Kenosha, Milwaukee, Racine, and Walworth Counties. The third species (*Spathius agrili*) will not be released in Wisconsin this year because research has found that this species does not establish well in the colder upper Midwest states. Researchers are testing a different *Spathius* species to determine if it will be more cold hardy than *Spathius agrili*.

**Gypsy moth** – a fair amount of mortality of gypsy moth caterpillars has occurred due to *Entomophaga* (fungus) and NPV (*Nucleopolyhedrosus virus*). Surviving caterpillars have mostly pupated and are emerging or will soon emerge. Adults will mate, lay eggs, and die relatively quickly. A tiny egg parasite (*Ooencyrtus kuvanae*) will parasitize the eggmasses after they are laid and adult *Ooencyrtus* will emerge in the fall, leaving behind empty eggshells and tiny pinprick holes in the fuzzy eggmasses.

**Oak branch flagging and Kermes scale** – I’ve noticed some areas in Marinette County with significant oak twig mortality. Although Botryosphaera canker fruiting bodies are present on some of the flagged branches, the vast majority of the problem seems to be due to Kermes scale. Oak twigs with Kermes scale present will often be killed from the point where the scale feeds to the branch tip. Female Kermes scales are fairly large, light brown and round. They are immobile, tend to cluster near buds of a twig or branch, and are often tended and protected by ants. These scales feed on sap causing a loss of plant vigor and growth, as well as twig dieback. While a heavy infestation may cause young trees to be
stunted or deformed, natural enemies are usually plentiful and control is not usually necessary.

**Pine sawyer beetles** – this native beetle is commonly mistaken for Asian Longhorned Beetle (ALB), and seeing pine sawyer beetles often causes people to call in and report it. Pine sawyer beetle populations are fairly high this year, so a lot of calls have been coming in. So why are pine sawyers common this year? Pine sawyers feed on stressed pine (or recently cut pine). Any areas of the state that experienced the drought last year will have stressed pine, so we’re seeing more beetles due to the expansive areas that were stressed by the drought.

In the photos above you’ll notice that our native beetle appears dusty or pitted, whereas ALB is smooth and shiny. Additionally, the white spots on ALB are usually more clear than on pine sawyer, although pine sawyer will always have a whitish dot at the point where the elytra (wing covers) come together; ALB does not have this dot. The link below will take you to a website with more pics of other insects commonly mistaken for ALB. You might chuckle when you see some of the “look a likes” thinking that they don’t look anything like ALB, but these are all insects that get submitted as potential ALB on a regular basis [http://www.uvm.edu/albeetle/identification/index.html](http://www.uvm.edu/albeetle/identification/index.html)

**Woolly alder aphid** – populations of Woolly Alder Aphid (*Paraprociphilus tessellatus*) are high this year. This aphid species requires both alder and maple to complete its life cycle, spending spring/early summer on maple and the remainder of the year on alder. While on alder they are a plump bluish colored aphid covered by white waxy filaments. They will often be found in a group, forming a solid mass of white fluff on the stems. When present on maple they are sometimes referred to as Maple Blight Aphid. They spend the winter in bark crevices of silver maple. They don’t usually do any significant damage but can be quite noticeable at times because of the large patches of fluff, or, as with this summer, the high populations on maple can create enough honeydew (aphid excretions) to create a sticky layer on anything parked or placed below the maples that they’re
feeding on. Shawano, Oconto, Marinette, and Winnebago Counties all have high populations this year.

### Diseases

**Ash anthracnose** – leaves dropping off ash trees in the spring of the year is often caused by early infections of anthracnose. When ash leaves are infected early with anthracnose the tree drops those leaves. If they drop enough leaves, the trees will send out an additional set of leaves to replace them. The first reports this year came in to me on May 29 and have been continuing. I’ve had reports of this from Brown, Marinette, Oconto, Outagamie, and Winnebago Counties so far this year. Confounding these diagnoses is the presence of frost damage on some of the ash leaves as well. Frost damage will typically show up as blackened tips or edges of the leaves, whereas anthracnose will cause dead patches/blotches that will cause the leaves to be distorted.

**Aspen fungal leaf diseases** – have you noticed the occasional aspen with a crown that looks thinner than its neighbors? Or maybe a small group of aspen with thinner crowns than other aspen in the area? I’ve been noticing this around the region and so far have only found leaf diseases to be the culprit.
**Oak wilt** – oak trees infected with the oak wilt fungus are currently wilting. At one site I visited recently a slight breeze caused many of the wilting leaves to drop from the trees as if it were fall. The leaves that fall will often have browning on the outer portion of the leaf and a watersoaked green color near the petiole. You can also cut a wilting branch, to check for the vascular staining, to help you determine if oak wilt is causing the leaves to drop.

For control options (trenching) or info on the biology and spread of oak wilt, check out the document [Lake States Woodlands Oak Wilt Management](http://learningstore.uwex.edu/assets/pdfs/G3590.pdf) or if you or a landowner are interested in trying to use herbicides to control oak wilt we do have some protocols that we can suggest, although this method of oak wilt control has not yet had the vigorous testing and trials that trenching has and is still considered experimental.

**Rhizosphaera on spruce** – spruce trees continue to be reported as declining and dying. Examination of these trees sometimes reveals the fruiting bodies of Rhizosphaera needlecast, sometimes I see Stigmina, occasionally I’ll find extreme populations of spruce gall adelgid, and sometimes I find nothing at all. The drought of last year is still having its way with some tree species and I suspect some of these declining and dying spruce are finally succumbing to the stress of last year. But, having said that, I am seeing an increase in Rhizosphaera this month, probably due to the wet spring that we had.

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**Other/Misc.**
Heavy seed production on maple – last month I mentioned that I was noticing extremely heavy seed production on some maples, to the exclusion of leaves. At right is a photo taken recently of some trees that I’d noted as having very heavy seed crops. Clearly the tops are still thin and I’m not sure if they’ll recover much more this year. The over abundance of seed on maples often follows a stressful year, like the drought of last year.

Missing jack pine needles on new growth – earlier this spring it was noted that some new growth on jack pine had “gaps” in the growth of new needles. I was lucky to find an example of just what was happening on this new growth … pollen cones! This was reported from a number of counties around the state, so, if you’re still noticing a strange gap in the needles along a twig, this is probably the explanation.

Gaps in needle development (arrows) along the twig occur wherever pollen cones were present along the twig (photo at right) earlier this spring.

Of Historical Interest

60 years ago, in 1953 –

- Larch Casebearer (Coleophora laricella) – This pest is present over the range of its host. There was a very noticeable decrease in the northeast quarter of the state and a lesser decrease in other parts of the state (survey map at right). Very few parasites were found; finches were numerous.
- White Pine Weevil (Pissodes strobi) – High populations were found in many counties in open grown white pine and Norway spruce and poorly stocked stands of jack pine.
25 years ago, in 1988 –

- Grasshoppers – Melanopus sp. – An eighty acre plantation of balsam fir, white spruce, and Scotch pine in Marinette County was attacked by heavy numbers of grasshoppers which were eating the needles and wounding the tender new shoots in early July. The plantation was sprayed with carbaryl.

- Sugar Maple Mortality – Drought – Mortality of six- to nine-inch dbh sugar maple was scattered throughout eastern Menominee County where forest tent caterpillar defoliation occurred. The affected trees were weakened by defoliation by the forest tent caterpillar in 1987 and died in 1988 from drought stress and Armillaria root rot.

Contact Us

Forest Health Staff - contact info for each Forest Health Specialist can be found on our webpage at
http://dnr.wi.gov/topic/ForestHealth/staff.html

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/

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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.