

## Entomology & Plant Pathology Weekly Review, July 17, 2024

Indiana Department of Natural Resources sent this bulletin at 07/17/2024 08:43 AM EDT



## Weekly Review for July 17, 2024

This informal report by the Division of Entomology & Plant Pathology is a commentary on insects, diseases, and curiosities division staff encounter on a week-to-week basis. Comments and questions about this report are welcome and can be sent to your respective Inspector.

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**Eric Biddinger (Nursery Inspector & Compliance Officer) - [EBiddinger@dnr.IN.gov](mailto:EBiddinger@dnr.IN.gov)**

I am still trying to work through nursery inspections. This time of summer, it starts to become "same old same old," so it's exciting to find something new. I found this in a perennial grower's landscaping and was intrigued. I am thinking this is foliar nematodes on Solomon's Seal. Interestingly, I didn't see symptoms on any other species and only in this one patch of Solomon's Seal out of several on the site.



Photo 1 – Suspected foliar nematodes on Solomon's Seal

**Diane Turner (Nursery Inspector & Compliance Officer) – [DTurner2@dnr.IN.gov](mailto:DTurner2@dnr.IN.gov)**

The oak lace bug, *Corythucha arcuata*, is often found on white and bur oaks throughout Indiana. They feed on plant juices through slender piercing mouthparts, mainly on the underside of leaves. Feeding damage is noticeable on the upper leaf surface, causing stippling and pale-yellow spots. You may also notice specks of excrement left behind from their feeding.

Adult oak lace bugs have extremely ornate wings and are about 1/8 inch long. Females deposit eggs on the underside of leaves with hatching occurring in about two weeks. Nymphs continue to feed on the host through all instars. After about 30 days, the final molt takes place and the nymphs become adults. Indiana has three generations per year.



Photo 2 – Oak lace bug feeding damage on the surface of bur oak



Photos 3 & 4 – Close-up of an adult oak lace bug (*Corythucha arcuata*)

**Angela Rust (Nursery Inspector & Compliance Officer) - [ARust@dnr.IN.gov](mailto:ARust@dnr.IN.gov)**

Rhizosphaera needle cast disease caused by the fungus *Rhizosphaera kalkhoffii* can have serious damaging effects on Colorado blue spruce. Sometimes spruce needle cast disease is caused by another fungus *Stigmata* sp./spp. is also found. This tree was confirmed through lab analysis to be infected by both pathogens. Both diseases can cause serious damage to spruce trees. This [link](#) has information on the prevention and management of these diseases.



Photo 5 – *Rhizosphaera* and *Stigmina* on Colorado Blue Spruce



Photo 6 – *Rhizosphaera* and *Stigmina* on Colorado Blue Spruce

**Jared Spokowsky (Nursery Inspector & Compliance Officer) - [Jspokowsky@dnr.IN.gov](mailto:Jspokowsky@dnr.IN.gov)**

This past week I was able to get a couple of nursery inspections in and found a rather healthy population of magnolia scale at one location. It's pretty easy to find issues like this when you have this much sooty mold. But sooty mold can be caused by anything which excretes honeydew including scale insects, aphids, and our newest invasive, spotted lanternfly.



Photo 7 – Magnolia Scale on ‘Ann’ Magnolia



Photo 8 – Honeydew from magnolia scale colonized by sooty mold

I also had a couple of visits back to the hive I talked about last week showing excessive amounts of bald brood. The beekeeper's initial thought was to cull the frames of brood exhibiting the symptoms which I did not think necessary. It's hard to say definitively what happened each day but I have a feeling that a lot of the bald brood, if not the majority, developed without issue. What I saw was a

progressive reduction in the amount of bald brood over several visits and the brood disappeared in the same pattern that you would expect with normal emergence.

Unfortunately, the pictures I took didn't really convey that all that clearly, but I did catch a couple of shots that might be of interest. The below photos are of the same frame and push pin and I have two sets of circles (red and blue). The photo on the left is from 7-8 and the right is from 7-10. The red circles show open pink/purple-eyed larvae that are then capped two days later. The blue circles show open brood but on 7-10, they appear to be almost fully developed. I took a little too long when placing this push pin and some other markers on this frame as you can see from the 7-10 photos there are also dead pupae due to prolonged UV exposure. Otherwise, the recapping and development behavior may have been even easier to see.

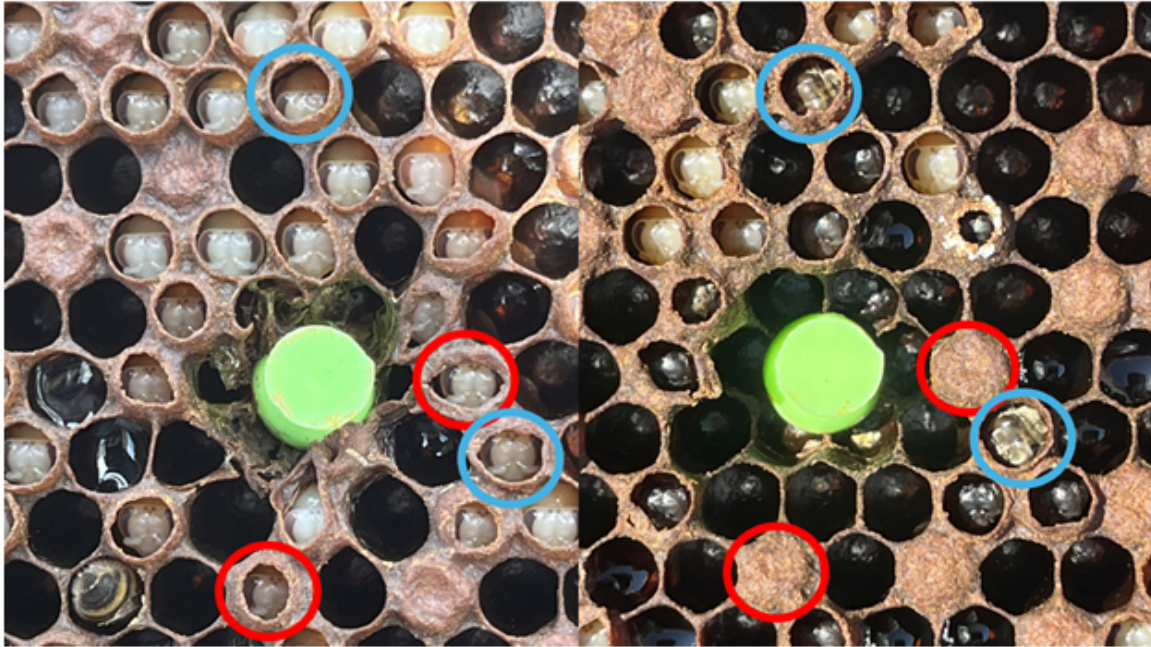


Photo 9 – Uncapping comparison

The other thing that I saw in this hive, and I have seen in a couple of other hives this year is a little bit of sacbrood virus. Sacbrood virus is not something that generally causes too much trouble and there is no treatment for it, but you should be aware of it in case you see it. You can pull these larvae out of the cell, and they should hang like a fluid-filled sac. I have gotten reports from other apiary inspectors from across the country that they are also seeing an uptick in sacbrood this year.

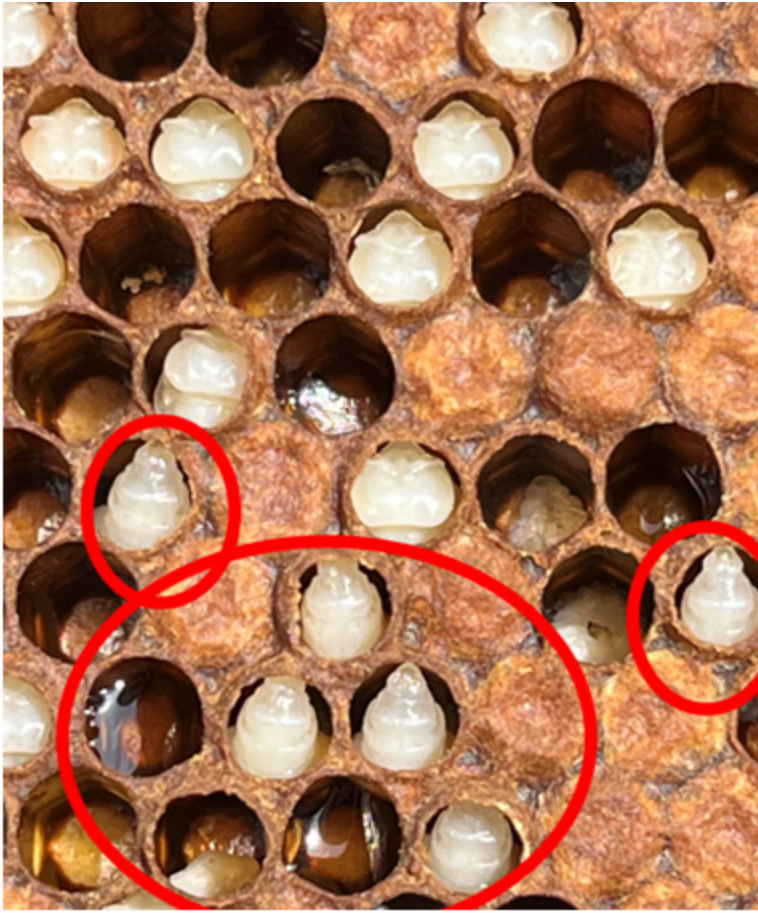


Photo 10 – Sacbrood virus

**Bonnie Spindler (Nursery Inspector & Compliance Officer) - [BSpindler@dnr.IN.gov](mailto:BSpindler@dnr.IN.gov)**

While out this week I found a great example of scarlet oak sawflies on the march. These were found on swamp white oak but will feed on a wide range of oaks.





Photo 11 – Scarlet oak sawflies lined up on swamp white oak

The glistening slimy larvae are leaf skeletonizers, consuming everything but the veins and upper epidermis resulting in a transparent leaf appearance. The sawflies look like they're wearing sunglasses but you don't have to deal with it. Most years, natural enemies and microbial disease will keep them in check. In outbreak years, with significant numbers over the course of three generations, treating high-value trees may be necessary.



Photo 12 – Scarlet oak sawflies with sunglasses

**Will Drews (Nursery Inspector & Compliance Officer) - [WDrews@dnr.IN.gov](mailto:WDrews@dnr.IN.gov)**

I've noticed some interesting aphid-like insects called phylloxerids on some ornamental and commercial crops in my area recently. The two I've spotted recently are Oak Leaf Phylloxera (*Phylloxera* spp., possibly *P. rileyi*) and Grape Phylloxera (*Daktulosphaira vitifoliae*). Phylloxerids are closely related to both aphids and adelgids and look very similar to aphids in shape. Like aphids, phylloxerids feed with piercing-sucking mouthparts getting at the sap of the plant. Some phylloxerids also inject saliva when they feed to induce gall formation (like Grape Phylloxera).

Oak Leaf Phylloxera symptoms include yellow spots, especially along the leaf veins, of oaks as well as some distortion near the tips of the leaves and leaf browning. Grape Phylloxera symptoms include noticeable galls on grape leaves with the predominant swelling occurring on the underside of the leaves.

Phylloxerid damage is generally more cosmetic in nature, but heavy population years can result in leaf browning and premature leaf drop, which can affect the growth of young plants. As for treatment, Grape Phylloxerans are very difficult to control because they are protected in their galls. More resistant varieties of grape are being developed to combat pressure from this pest. As for Oak Leaf Phylloxerans, they can be controlled with insecticidal soaps or horticultural oils applied to the underside of the leaves, if control is warranted.

Here are some of the pictures I have taken recently of some phylloxerids and their damage:



Photo 13 – Oak Leaf Phylloxera damage on Bur Oak leaves.



Photo 14 – Close-up of immature Oak Leaf Phylloxera young nymphs and eggs. The nymphs are yellowish orange in color, and the eggs are a translucent whitish color.



Photo 15 – A slightly more developed Oak Leaf Phylloxera nymph. Note the orangish color and protrusions on top of the body.



Photo 16 – Grape Phylloxera damage on a Muscadine Grape.



Photo 17 – Grape Phylloxera damage on the underside of a Muscadine Grape leaf.

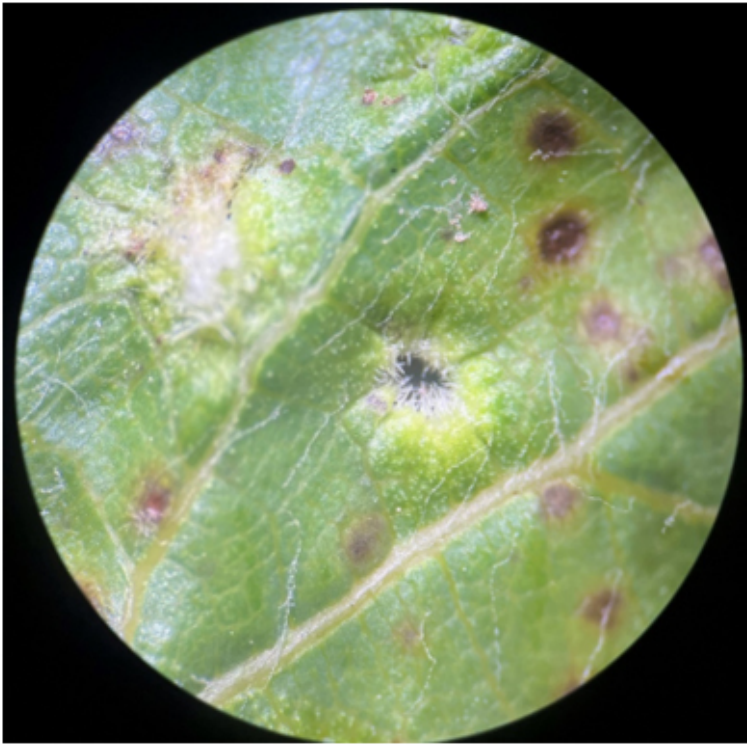


Photo 18 – Close-up of the entrance of a Grape Phylloxera gall. The spiky hairs around the entrance protect the developing young as well as make it hard to control this pest with insecticides.



Photo 19 – Close-up of the Grape Phylloxera gall on the underside of the leaf.



Photo 20 – Dissected Grape Phylloxera gall. The darkish colored blobs in the middle are the remains of the adult female that created the galls and laid eggs in the late spring/early summer. The eggs are the small darkish colored ovals just to the right.

**No reports this week**

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