Entomology Weekly Review - May 4, 2023

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Weekly Review for May 4, 2023

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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Jared Spokowsky (Nursery Inspetor & Compliance Officer) - Jspokowsky@dnr.IN.gov

Last week I did some inspections with Ren and found what looked like Fletcher scale on *Taxus*. But after taking a closer, I look realized it was cottony taxus scale. If my identification was correct, that was the first time I have encountered this pest.



Photo 1 - cottony taxus scale (aka cottony camellia scale) on yews

On the beekeeping side, I listened to a <u>talk by the USDA's Dr. Zach Lamas</u> about spring *Varroa* mite loads on drones and how it can give us an early season skewed sense of our mite load. It is well worth a listen.

I fielded phone calls from two individuals thinking they had disease in their hives (Nosema and American foul brood). In neither case did I see evidence of either. With the bee samples I screened for Nosema, I did not find any spores, but I noticed quite a few mites. And on the suspect AFB dead out colonies, I could not find any signs of an AFB infection, but I did find a number of frames with mite poop, indicating a high mite load.

Ken Cote (Nursery Inspector & Compliance Officer) - KCote@dnr.IN.gov

Some trees that just don't seem to care about freezes. Japanese tree lilacs come out early, but even after two nights of temperatures as low as 25 degrees, they seem to be doing fine. White fringe trees are very cold tolerant and hardy. They leaf out very late in the season and often miss late frosts; however, the new growth on white fringe is very susceptible to frost injury. The tree in my yard suffered severe frost damage.

Aphids are becoming active on some trees in the landscape. I observed aphids on burning bush in garden centers during inspections last week. I also saw two spotted spider mites actively feeding on butterfly bush. It is too early and too cold for this pest to be active in Indiana outside of a greenhouse, meaning this problem was shipped in. Pay attention to new stock you get because there can be low levels of two spotted spider mites on the undersides of leaves. You may not see much damage other than a small amount of stippling, but this infestation will become a serious problem as temperatures warm. Boxwood psyllid were found actively feeding in parts of Bloomington. Look for leaf cupping and wax inside distorted leaves. I was not able to get a good photo of an individual psyllid, but the damage is easy to see. Boxwood leafminers are beginning to pupate, and adult flight will likely occur in about 14 days.



Photo 2 - Aphids on burning bush



Photo 3 - Two spotted spider mites on butterfly bush



Photo 4 - Wax and leaf cupping from boxwood pysllid

I don't see many disease issues yet during my inspections. I occasionally see plants being shipped to Indiana with leaf spot problems. Oak leaf hydrangeas commonly have leaf spot issues. I have not seen any cedar apple rust, botrytis or anthracnose, but I those disease are probably infecting hosts during this cool, wet period. Symptoms will likely develop in the next few weeks.



Photo 5 - Leaf spot on oakleaf hydrangea

Kallie Bontrager (Nursery Inspector & Compliance Officer) - KBontrager@dnr.IN.gov

I had the pleasure of having a high school student interested in entomology job shadowing. We spent part of the day inspecting a greenhouse. Overall, the greenhouse was clean, but we did see a scattering of thrips on dahlia, hollyhock, *Agastache*, bellflower, and blanket flower. Spider mites were found on elephant ears, popcorn cassia, Peruvian lily, and caladium. We found a peony showing signs of tobacco rattle virus. This virus can infect more than 400 plant species. The peony showed mottling and the start of ringspots indicative of this virus. We also saw spongy moth caterpillars. They hatched last week but are still hanging around the egg masses since the weather has been too cold for them to move into the trees. Finally, we checked a Kudzu site that isn't showing much activity.

Ren Hall (Nursery Inspector & Compliance Officer) - RHall@dnr.IN.gov

I inspected a lot of nursery dealers the past two weeks, especially box store chains. It's still early, so I'm not seeing many pest or disease issues. Almost every place I've visited has the same two issues in varying severity right now: frost damage and drought stress.

It seems like every year plants arrive at nursery dealers earlier. As a gardener, I like to be aware of the average last frost dates for my area, and I keep a close eye on the weather forecast. Purdue has a nice website for this here. A lot of the dealers I visited last week had tender annuals and tropical plants that had been damaged in the cold weather we had after the warm spell of 60-degree-or-higher days a few weeks ago. Some places had staff disposing of hundreds of plants that had only recently come in that hadn't been protected from the frost.



Photo 6 - Canna damaged by frost

Many dealers also had plants that were dead or dying because they aren't watered enough. I think there's an idea that if it's colder outside or rain is in the forecast, plants don't need to be watered, but the crispy plants I saw at nearly every store contradict that. It's still early in the growing season, and several store managers told me they don't have the staff yet to water regularly, which is a problem when their stores are already packed full of plants.

I love to see stores with procedures in place for protecting plants from frost, so I'm including a few pictures. Some even have PVC arches built into their shelves so they can easily clamp on cloth covers if frost is in the forecast.



Photo 7 and 8 - Protecting Plants from frost

This past week, I saw Japanese barberry plants (*Berberis thunbergii*) at a nursery dealer I was inspecting. This is one of the 44 species of invasive plants that are illegal to sell in Indiana as part of the <u>Terrestrial Plant Rule</u> that went into full effect in 2020. As such, these plants were placed on stop sale and destroyed. My coworkers also found barberry at the same chain store in their areas and issued stop sale and destruction orders. Later, I was contacted by the store's corporate compliance office to inform me that they had issued a recall notice to all branches of their store in Indiana, and the plants would be destroyed.

When this law took effect, we sent out notice of it with license renewals, announced it in our newsletters and social media, and presented about it at every green industry event we attended; however, mistakes happen. The person who renews the license may not be the person who orders plants. The vendors for these chain stores or the growers in other states who supply the plants may not be aware of our rules. If you see any of these plants being sold in Indiana, please tell your local nursery inspector.



Photo 9 - Barberry is prohibited from sale or transport in Indiana

I found some sawfly larvae on roses inside the entryway of a nursery dealer last week. They were very tiny, and the damage to the leaves was minimal. I thought it might be early for sawflies in Indiana since these plants were being kept inside and had come from the southern United States. So, I went outside to check my roses. Turns out it is not too early for sawfly larvae in Indiana. I found similar tiny larvae just beginning to chew on my rose leaves. I also found what I believe to be an adult sawfly laying eggs on the leaves of my plants.

Although the larvae are superficially similar to caterpillars, they are actually the larval stage of wasps, not butterflies or moths. The "windowpane" damage they cause on rose leaves is mostly aesthetic. It doesn't seem to harm the plant. Now that larvae are beginning to emerge and feed, it's probably a good time to explore treatment options if you want to keep your roses windowpane-free.



Photo 10 and 11 - Rose sawfly larva and an adult sawfly laying eggs

I also found suspected tobacco rattle virus on peonies as shown by ringspots and yellow discoloration on the leaves. It seems like I find this just about every year on peonies. At the same nursery dealer, I found bleeding heart (*Dicentra*) with virus symptoms as well – yellow mottling and unusual patterns of discoloration.

Last, I found some Japanese maples with poor planting. It looks as though these were allowed to stay in small pots long enough for the roots to circle the pot. When they were bumped up into larger pots, the roots continued to grow in a circle the size of the smaller pot with few or no roots branching out into the soil of the larger pot. Ideally, the plants would be bumped up before the roots form a tight circling pattern in the smaller pot, and when they were transplanted the roots should have been loosened and/or trimmed to get them back to a more ideal shape. I was able to pull the trees up with soil still clumped in the shape of the smaller pot. Circling roots can eventually girdle other roots or even the main stem of the tree as it gets larger, so it's important to prevent or fix this problem for longevity of the plant.



Photo 12 - Tobacco rattle virus on peony



Photo 13 and 14 - Possible virus on bleeding heart



Photo 15 - Poor planting of Japanese maple

Kristy Stultz (Nursery Inspector & Compliance Officer) - KStultz@dnr.IN.gov

I've slowly been doing several greenhouses in my area. So far, everything is pretty clean except for a little thrips damage, so I'm going to write about something else.

It's a new month and a new slogan will inundate all those who peruse social media - No Mow May!

When insects that overwinter as adults, like bumble bees, emerge, they desperately need to replenish energy stores, and our up and down early spring temperatures in can be extra tough if they can't find good sources. Early spring wildflowers are critical to support insect life, and insects are critical to life on Earth.

And there is much more to helping our native pollinators than skipping a mow or two in May. In fact, if your lawn is regularly mowed, raked, mulched and/or chemically treated so that it is nothing but grass, skipping a mowing or two isn't likely to have the desired effect. To truly help those early emerging insects desperate for energy, we need more than non-native dandelions and clovers. We need native early spring bloomers.

I understand there are lots of areas where tall lawns are not only frowned upon, but strictly forbidden, but there's still something you can do.

Why stop with No Mow May? Take a piece of your lawn and create a small haven with native plants and flowers that bloom in each season. Even just a small garden area is beneficial.

If you're interested in learning more about the importance of all our wonderful insect pollinators and how create a haven for native insects, I highly recommend any of Doug Tallamy's books. Many of his talks are available on YouTube. <u>Creating a Homegrown National Park</u> is a good one.



Photo 16 - Early native bloomers are even popular with honey bees

Diane Turner (Nursery Inspector & Compliance Officer) – <u>DTurner2@dnr.IN.gov</u>

Last week I visited the garden center for a routine nursery dealer inspection. During this time, I noticed several *Hosta* sp. with unusual leaf spotting and leaf necrosis. A sample was collected and sent to the Purdue Plant and Pest Diagnostic Laboratory. Results indicated *Botrytis* blight/leaf spot.

Finding *Botrytis* on *Hosta* is unusual, but it can happen when plants are grown close to one another creating a high humidity situation that favors infection on susceptible plants. Symptoms with *Hosta* include lesions that appear mostly as water-soaked spots. These lesions increase in diameter becoming circular with dark halos around the outside. As the lesions mature and increase in size, rings can be seen within the lesions, which appear light to dark tan in color. Like many other plant diseases, *Botrytis* blight requires free moisture on the leaf surface to proliferate. Therefore, preventing the accumulation of free moisture for extended periods on leaves is critical to *Botrytis* management.



Photo 17 – Botrytis on Hosta sp.

No reports this week

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