Entomology Weekly Review - July 12, 2023

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Weekly Review for July 12, 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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I'm finally seeing some Japanese beetle and bagworm. Not in large quantities and not a lot of damage yet, but the bagworms are getting bigger.

Last week, I found oystershell scale on multiple species of trees in lots of locations. I'm seeing more scale this year than last but mostly, it is the year of the aphid! Aphids are everywhere I look!



Photo 1 - Aphids

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This tree is one that I set an insect trap in as part of our invasive species monitoring initiatives. It's at a box store and part of a line of 20 trees where every one has this same issue - girdling roots around the trunk. This is something that could have been fixed with proper planting, making sure the roots were not wrapped around the stem. It might not have seemed like a big deal at time of planting, but as the tree and the roots get larger, eventually this root might harm or kill this tree.



Photo 2 - Girdling root

Another interesting find last week was virus on spicebush. I found this at a nature park in Indianapolis. Many of the spicebushes on the property were infected. I sent a sample to Purdue's Plant & Pest Diagnostic Lab (PPDL). They shared this article about a new emaravirus found on spicebush a few years ago.



Photo 3 – Spicebush emaravirus symptoms

Eric Bitner and I were at an inspection where he found this rose bush with suspected rose rosette disease. The leaves and buds were twisted and stunted (witches' broom) and this shoot was elongated compared to the others on the plant.



Photo 4 and 5 – Normal rose growth versus suspected rose rosette disease

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This past week I received another call from a beekeeper who thought that they had a hive with American foulbrood. Upon inspection of the hive I did find that it was diseased but it was European foulbrood (EFB) and not American foulbrood (AFB). I have seen a number of cases of EFB this year and in each one it appeared that the bees were under nutritional stress. This beekeeper was in north central Indiana with acres and acres of corn and beans surrounding them. The beans didn't look like they had started blooming and there wasn't much around that the bees could use for forage. There was little pollen in the hive and almost all the larvae that were not diseased looked dry (i.e. there was no pool of brood food surrounding them). Frequently nutrition is implicated in EFB infections and some of the more recent research shows that *Melissococcus plutonius* (the causal agent for EFB) is present in many hives including those not showing any signs of infection.



Photo 6 - EFB infected larvae (red circles) and apparently healthy larvae without any brood food (blue circles)

If you are unsure if you have an EFB or AFB infection, you can check with an over-the-counter test kit available at most bee suppliers. Directions are to take a composite sample of multiple infected larvae and place them in a supplied bottle with metal ball bearings. Shake the sample vigorously for 20-30 seconds. Then using the supplied eye dropper place several drops of the liquid into the sample plate. As the liquid seeps into the strip it will show either one or two lines. The first line is the control line and the second is the positive line. With EFB the second line can be faint but if the line is there at all it indicates a positive. One trick with this test is to make sure you include not just sick looking larvae but place a couple of healthy larvae in the vial as well.



Photos 7 and 8 - Using a foulbrood test kit and the resulting positive lines.

This leads me to another topic - the dearth. In Indiana most areas have already entered a dearth or will be entering one shortly. I have heard quite a bit from beekeepers about how little is blooming until the golden rod starts in late summer. But I would like to point everyone's attention to our many native perennial species which are just now starting to bloom. Some will continue to bloom throughout July and into August. Many of these species have very high honey potential. Milkweed started blooming about two weeks ago in my area. This past week I had anise hyssop and Virginia mountain mint blooming. Cup plant should start to bloom shortly. All these species have been estimated to produce more than 400 pounds of honey per acre.



Photo 9 - Hyssop



Photo 10 - Mountain mint



Photo 11 - Cup plant



Photo 12 – Milkweed No reports this week

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