Pest Update (October 7-14, 2020)

Vol. 18, no. 35

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insects from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem.

Available on the net at:
http://sdda.sd.gov/conservation-forestry/forest-health/tree-pest-alerts/

Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement or the exclusion a criticism regarding effectiveness. Please read and follow all label instructions as the label is the final authority for a product's use on a pest or plant. Products requiring a commercial pesticide license are occasionally mentioned if there are limited options available. These products will be identified as such, but it is the reader's responsibility to determine if they can legally apply any products identified in this publication.

Plant development for the growing season

The dry, crisp weather is resulting in a long period of brilliant autumn foliage color. The sugar, red and freeman maples are displaying deep red. Aspen and ash are

becoming a bright yellow – some of the best color I have seen in years. Get out there and enjoy it while it lasts!

The colors are also as striking in the evergreens but are causing panic rather than pleasure. I am still receiving calls and pictures from concerned owners of evergreen about the bright yellow needles. This picture of a Black Hills spruce with the interior almost aglow was sent in by Krista, a South Dakota Department of Agriculture service forester in the Northern Hills. It is a tree suffering from drought, which causes older needles to discolor, but combined with seasonal needle drop, the color is striking.

Timely Topics

Emerald ash borer update

Emerald ash borer (EAB) sampling continues in Sioux Falls and Canton. A few the larvae are 3rd instar (pictured), but now most are 4th instar. No 2nd instars were found in the past week's collection.

Injecting now is not effective. The feeding is just about finished, plus all the damage this generation of larvae were going to do is done. Injection can resume next spring just as the trees begin to break bud, usually sometime in early June.

Emerald ash borer is NOT in Kimball

There have been rumors that emerald ash borer is in Kimball. This start, as with other rumors, with the phrase "Did you hear that the beetle was found in….." Since several people have heard about the report, it was worth stopping to check it out.

Kimball is along I-90, a major transportation corridor in the state. Nebraska has seen a slow spread out from Omaha to Lincoln then an outlier in Kearney. Highways are ways we drive, and the beetles come along for the ride, either in raw ash wood products we carry (firewood and pallets) or just hitchhike on/in the vehicle.

Kimball has its share of declining ash. It is a common tree in town, as with most South Dakota communities, and since many are mature trees planted back in the '50s, they are beginning to show signs of old age – dead and dying branches. Now there is no way to prove emerald ash borer is not in Kimball unless we cut down

every ash tree and strip all the bark off to examine the surface of the sapwood for signs of the insect. This destructive sampling is impractical and killing the patient to prove they are not infested is not a good idea.

However, I did not see any ash trees with the common symptoms associated with an infestation. There was not any blonding of the bark in the upper canopies nor any telltale drills of woodpeckers searching for the insects. There were not trees that presented thinning, where a portion of the canopy has smaller and light-colored leaves than the rest of the tree. I also did not see any beyond the normal number of suckers and watersprouts we typically see on old ash trees.

But rumors sometimes start with an element of truth. And this appears to be the rumor of emerald ash borer in Kimball. The person that found emerald ash borer still had some of the logs and they were riddled with tunnels when you looked at the ends. There was even a larva trying to escape. It was not the emerald ash borer but the native *Neoclytus* borer, either the banded ash borer or the redheaded ash borer.

The adults of these two insects look quite different but the larvae are almost identical as well as the damage they create. They are creamy white, legless grubs with a brown head capsule that leave large, powder-filled tunnels that extend into the wood. This is not the gallery pattern associated with the emerald ash borer. While the tunnels of emerald ash borer are also powder-filled, they are much narrower and are found on the surface of the sapwood (with older galleries usually found in only a few of the outer-most rings.

The forests are dipping!

Photo credit: Kurt Allen

I have been receiving numerous reports of dipping pines in the Black Hills. Some comment that the deck, car or driveway is tacky with the sap. Kurt Allen, with the Forest Service, has also had numerous inquiries about this phenomenon. Kurt and I each stopped by a few properties this past week and our conclusion was the same – the giant pine aphid.

These giant aphids, and there are numerous species that feed on coniferous trees, are in the genus *CInara*. They are large, long-legged aphids that almost look spider-like. The aphids are large enough that they are noticeable in young trees as they feed in groups on the foliage. You will not be able to see the aphids on large pines – it is hard to see a 1/4-

inch insect, even in groups, from 40 feet below – but you will not miss the honeydew.

Honeydew is a sticky, sugary substance that the aphid secretes as they suck the sap from the tree. This rains down from and through the tree and some large pines in the Black Hills are almost glistening from the coating.

The sugary substance is a good medium for growing fungus and bacteria. One, sooty mold, is commonly found living on and from this film and they turn the surface into an almost black, powdery substance.

Heavy infestations can also cause needles to turn yellow (needles near the tips of branches, not the interior) and sometimes these can become curled and twisted. Rarely does any damage extend beyond this so the pests are more of a nuisance to us (especially if you parked your car beneath an infested tree) rather than a problem for the tree.

E-samples

Apple with a split lower trunk

Splits along the base of young trees are not unusual. These are usually short vertical cracks into the bark. Trees with thin bark are more susceptible to this type of injury so we see them more often in fruit trees.

While the splits are common in young fruit trees, there is not one cause for these wounds. They can be “frost cracks” splits that originate from rapid temperature changes that occur during the winter. Drt summer weather followed by wet weather can also start cracks. Lawnmowers nicking the base is also a common beginning of these injuries.

Regardless of the genesis, anything that breaks the bark allows pathogens to directly enter the wood. This can have long-term consequences with decay slowly rotting the base of the tree. However, if the tree is otherwise healthy, it can wall off this infection and the new wood that forms remains free of the disease.

There is not much that can be done to help the tree with a small split near the base. Do not apply paint or pruning sealer. These do not protect from infection and may even provide a better environment for decay to expand. The best management is to help the tree remain healthy by watering during dry weather.

Ash seed weevil

Some people are finding these small rice-grain sized insects on their driveway and gutters during the last couple of weeks. These whilte, legless larvae are the ash seed weevil (*Lignyodes bischoffi*). The larvae feed in the long sarmaras (seeds) of ash and will almost hollow out the seed before dropping to the ground. Anywhere between 10 and 50 percent of the seeds on a tree are typically infested and some years have more seeds than others, so we see the insect population fluctuate. Some years I receive lots of calls about the insect, other years very few.

The insect only feeds on the seeds so they are not a threat to the tree. Not that it matters with emerald ash borer beginning to move into the state.

Horntails and the murder hornets

The continual reports of the 'murder hornets' out in Washington are causing folks to report any big bug they find on their tree. Reports of murder hornets in South Dakota have all been false. The most common insect people catch are the horntails. These are wood borers that are found in dying or dead trees.

The Asian giant hornets are big. They are about two-inches long, and they are murderers….if you are a honeybee. They like to bite the heads off honeybees and can go through a hive about as fast as we can go through a Pringle can of chips. It is a major worry for beekeepers and no one wants to see it spread out from Washington state.

Yes, they can sting and it is reported to be a painful sting. The venom, as with other bees and hornets, can be fatal to some with reports of more than 50 deaths per year in Asia. Fortunately, they avoid people and focus their attention on bees, so not a major worry for us but you might want to avoid the bee costumes for Halloween.

Poplar blackmine leafminer

While people are beginning to rake up the pile of leaves beneath their big cottonwoods, some are noticing these black thread-like lines looping through the leaves. This brings the question, more out of curiosity rather than concern, "What is this?"

These are the mines tunneled through the leaves by the poplar blackmine leafminer (*Zeugophora scutellaris*). The adult beetles are small black and yellow insect that are out on the foliage in early summer. They munch on small patches of tissue between the veins and lay eggs on the leaf.

Once the eggs hatch, the tiny larvae spend their life tunneling within the leaf. There are many insects that mine leaves but this one is easily recognized by the black, thread-like line that runs along the serpentine blotches. If an infested leaf is pulled apart during late summer, a small dark larva can found in the tissue. It drops to the ground in early fall to form a pupa for the winter and emerges in the spring as an adult.

The damage caused by the adult and larval feeding is minimal. There is no need for treatments.

Samples received/Site visit

Pennington County **Spruce spider mites on blue spruce**

Spruce spider mites are blamed for more problems than they cause. The yellowing of the interior spruce needles, a normal fall occurrence, is being blamed on spider mites. But sometimes spider mites are the problem.

Spruce spider mites (*Oligonychus ununguis*) feed on many conifers, though spruce is a favorite. They feed on sap through their piercing-sucking mouthparts. This leaves numerous small, irregularly shaped yellow dots on needles, a symptom called stippling. The infested interior needles turn yellow or bronze and fall prematurely. The symptoms are like seasonal needle drop.

The interior infested needles will also have debris from the mites, old skins, and fine webbing. The mites are impossible to see with the eye, unless you are using at least a 15X hand lens, 20x is better. The adults are out right now. They are cool-season mites with the populations out and active during the Spring and Fall.

An easy treatment at this time of year is a high-pressure stream of water into the interior of the tree. This will

dislodge the mites. They also dislike the open and are more common in the dark environment of the interior branches where there is little air movement. Tightly shearing spruce trees create an impenetrable shell of foliage that restricts air flow and contributes to increased mite populations.

Reviewed by Master Gardeners Dawnee Lebeau, Carrie Moore, and Bess Pallares

This publication made possible through a grant from the USDA Forest Service.