

Pest Update (May 15, 2019)

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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, instead 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 and 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.

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Plant Development

Crabapples and Amur chokecherries are blooming in Brookings, a little later than most years. The expected cold temperatures for the coming week (and continual rain/snow) is probably going to slow the season even more.

Treatments to do soon



You probably should have applied your second application of fungicide for apple scab soon. Remember most of our fungicides labeled for homeowner use are protectants. They provide a chemical barrier between the susceptible tissue and the pathogen's spore. Once the spore germinates and enters the leaf it is too late for fungicide treatments. This is the reason for beginning treatments as the leaves open and then continuing applications on a regular basis into the growing season. If you have not yet started treating your apple or crabapple for apple scab it is probably too late to prevent infection this summer.



Lilac/ash borer treatment with an insecticide containing permethrin as an active ingredient can begin probably a week from now. The lower 6 to 10 feet of the ash trunk should be sprayed to protect susceptible trees and the lower couple of feet of lilac canes. The insecticide will kill the adults as they are walking on the bark to lay their eggs. The insecticide will also kill the newly hatched larvae before they burrow into the wood. Systemic treatments are generally ineffective so injecting a pesticide or pouring one around the soil are not practical means of managing this borer. The adults are usually out flying about a week or so after Vanhouttee spireas begin to bloom and the shrub will be flowering soon. You will also know the adults are flying when you see the pupa skins sticking out of the emergent holes on infested trees as seen in the picture to the right.

All ash trees do not need to be sprayed, just ones that are showing stress from drought or other stressors. A healthy ash tree usually is not susceptible to this borer. Lilacs that have canes less than 1 inch in diameter at the base are also not susceptible to this borer, but it is common in the older canes of mature lilacs.

Timely Topics

Satellite infestation of emerald ash borer confirmed in Sioux Falls

This past week a satellite infestation of emerald ash borer was discovered and confirmed in Sioux Falls. The infested tree was discovered by a local tree company that was removing ash street trees as part of the ash reduction plan by the City of Sioux Falls. They noticed tunnels just beneath the bark and reported it to the city foresters who in-turn contacted me.

The infestation appeared to be very small, almost a surprise it was detected at all considering the tree appeared healthy. However, the tree was also already



infested by the redheaded ash borer so it must have been stressed enough to attract the attention of this insect. The stress may have been the emerald ash borer, but the attack by this insect appeared very light and recent, perhaps only in the past year or two. It is equally likely that the emerald ash borers were attracted to the tree stressed by the redheaded ash borer.

Redheaded ash borer and its winding tunnels in an ash tree.

We conducted a delimiting survey of the neighborhood and could not find any trees with the symptoms generally associated with emerald ash borer – blonding in the upper canopy with numerous woodpecker pecks. A survey of the upper canopies of trees also revealed no signs of the emerald ash borer, just our native borers (see next article).

Satellite infestations, ones not connected with the main body, are a common feature of emerald ash borer infestations in a community. These often appear several miles or more away from the core and usually begin with only a few trees. The discovery of a satellite infestation is not a cause for alarm but more a reminder of the need for action. Homeowners living in Sioux Falls who want to keep their ash trees should consider contacting a tree company to have their trees injected to protect them from this insect. A treatment is good for two years and the injection season has just started.

Guilty by association

Since emerald ash borer was confirmed almost a year ago, we have all been on a state of alert when looking at ash trees. Every dead branch must be attributed to this insect and any live bug inside is assumed to be emerald ash borer.

Ash already had several serious boring insects before the arrival of emerald ash borer. When foresters in Ohio began their community surveys for emerald ash borer back in the mid-2000s they were surprised to discover just how many ashes

were already home to the lilac/ash borer (*Podosesia syringae*), the banded ash borer (*Neoclytus caprea*) and the redheaded ash borer (*Neoclytus acuminatus*).

The lilac/ash borer tends to be found in smaller diameter declining or damaged ash – they particularly seem to like ash suffering from “lawnmower blight.” This insect burrows into the sapwood, deeper than you typically find emerald ash borers and unlike emerald ash borer they clean their tunnels, so you find piles of fine sawdust (frass) on the ground and bark around the holes rather than packed in the tunnels behind the larvae.



Redheaded ash borer larva.

Not so with the banded and redheaded ash borers. The tunnels (more properly called galleries) made by their larvae are like those created by the emerald ash borer and are sometimes confused with it. While these closely related insects can burrow deep into the sapwood, they sometimes are content to feed in the thin strip of inner bark where emerald ash borer makes its home. The tunnels between these two can also be similar. All three insects pack frass behind them as they burrow through the tree as

larvae. While the tunnels are more meandering, than serpentine, for the banded and redheaded ash borers, I have seen them create serpentine galleries in healthy trees.

The larvae are relatively easy to separate, the banded and redheaded ash borer larvae are about one-half to one inch long, cylindrical with rounded abdominal segments. They have a small head with dark jaws and an enlarged area (prothorax) just behind the head.



Emerald ash borer larva.

The emerald ash borer larva is usually one and one-half inches long at maturity. They are almost flat with bell-shaped abdominal segments. The head is slightly darker and there are two small pinchers on the rear.

There is nothing saying that a tree cannot have all three insects in them as we saw with the satellite infestation of emerald ash borer discovered last week.

E-samples

A borer in lilac



I received this picture of a lilac cane that is riddled with tunnels. This is most likely the work of the lilac/ash borer (mentioned in the previous article). This insect will attack the trunks of ash but is usually limited to the lower canes in lilacs. They can create enough tunnels that the canes are weakened and snap off. The borer is in the resting (pupa) stage now and will be emerging from infested plants in the next week or two as spireas begin to bloom. The adults, which

resemble wasps, lay eggs on the bark. The larvae soon hatch and burrow into the wood to spend the remainder of the growing season feeding.

The most common treatment is to spray the lower lilac canes with an insecticide labeled for control of this insect. The most common active ingredients are bifenthrin and permethrin and products containing permethrin are available to homeowners at garden centers. Borer insecticides containing imidacloprid are not effective for this insect. The spray should be applied in about two weeks.

A fungus on ash



I also received this picture with the question about the funny growths on the tree. This is an ash tree, and these are conks, the spore-producing fruiting bodies, of a decay fungus. The fungus is probably the ash heart rot (*Perenniporia fraxinophila*), but it might be one of the other related species that infect ash. These fruiting bodies are usually seen along the upper trunk and large limbs and are often associated with dead branch stubs or cavity openings.

The fungus is an indicator that the tree is severely decayed and that the upper trunk or large limbs could fail and fall. Infected trees should be evaluated and most likely removed if the tree is near homes or other areas where people could be injured or property damaged. These are not trees that should be treated for emerald ash

borer once the insect is confirmed in the area. Otherwise these trees should be retained as the soft wood is suitable for excavation by birds creating cavity nests.

Samples received/Site visits

Custer County

Is this winter-burn on the pine?

The discoloration on the needles is a common symptom for winter injury. This year we have seen many pines affected by winter injury. This may be more winter-kill than just winter-burn as many of the discolored needles already were infected with saprophytic fungi feeding on dead tissue. While I would wait a few more weeks to see if the foliage recovers, a common situation with winter-burn, if it still is discolored and is becoming brittle by then its winter-kill and affected branches (or perhaps the entire tree) may need to be pruned.

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