

Pest Update (July 19, 2017)

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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 particular 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 for the growing season

We are right on schedule for plant development, maybe even a little ahead still. The smoke trees are still blooming in Brookings just about on schedule. During cooler summer they often begin blooming in the middle of July.

Emerald ash bore - Update

The recent confirmation of emerald ash borer in Buena Vista County in Iowa, a mere 80 miles from South Dakota, is heightening concern about its eventual presence in South Dakota. The day is certainly getting closer. Confirmed infestations are found in the Omaha, Nebraska and Minneapolis-St. Paul Minnesota metro areas and now in about half the counties of Iowa. The most ominous finding with the Alta Iowa discovery is that it was about 100 miles from the closest confirmed finding.



The *Update* will provide weekly information on the location of emerald ash borer confirmed in South Dakota or a bordering county of an adjacent state. ***At this time no emerald ash borer infested trees have been identified in the state or an adjacent county of a bordering state.*** The nearest infestations are highlighted in red; the Twin

Cities of Minnesota; Buena Vista County and the counties in central Iowa and the Omaha-Council Bluff area of Nebraska and Iowa.



I am continuing to receive numerous pictures of ash trees infested by the redheaded (*Neoclytus acuminatus*) and the banded ash borer (*N. caprea*). These are native insects that generally attack declining or even dead ash. They were rarely noticed in trees before the emerald ash borer came along and now since people are more closely examining dying ash these insects are drawing attention. The *Neoclytus* adult makes a slightly larger exit hole (about 1/4-inch) than the one constructed by

the emerald ash borer. The hole is round to oval and can also appear D-shaped but is usually is not the crisp D-shaped one made by the emerald ash borer.

Timely Topics

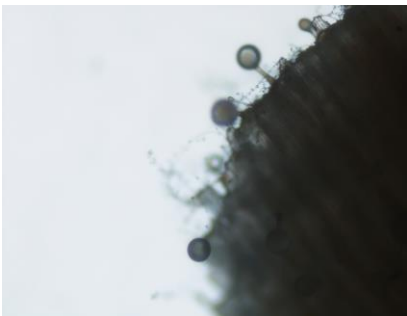


Dutch elm disease (*Ophiostoma novo-ulmi*) reports are increasing as we move into midsummer. These infected trees have one or more branches with leaves that are curling and turning yellow to brown, symptoms that are referred to as flagging. While flagging is a common symptom of trees infected by Dutch elm disease, flagging can also be due to broken branches, branches girdled by squirrels and sap-sucking insects such as aphids and soft scales.

If the bark is peeled away from a section of these branches, there may be brown streaks running along the surface of the wood. This streaking is a good indicator of Dutch elm disease and is usually sufficient to determine the presence of the disease and have the tree removed. However, the only way to be certain the tree is infected with Dutch elm disease is to send a sample in for isolation and identification to confirm its presences.



The sample should be taken from a branch that is flagging, not dead. The branch should be about 1/2-inch in diameter and the sample piece about 8 inches long. Place the sample in a plastic bag and do NOT add water or moist paper towels. The sample should be mailed on a Monday or Tuesday so it will arrive before the weekend. If the sample is cut later in the week it may be best to refrigerate it until Monday and mail.



Once the twigs arrive at our diagnostic lab, a small piece of the streaked sapwood is cut out and placed on a plate for isolating the pathogen. After a short time period the conidia, the asexual fruiting structures, will form. They are easy to identify as they look like little lollipops sticking up on the wood! This is positive identification of the pathogen. However, to find the pathogen in the tree, it must be present in the sample so collecting

branch samples from recently flagging branches is the key to positive identification of the pathogen.

The best means of managing Dutch elm disease for the community is to quickly remove infected trees. Valuable elms can be protected with injections of any number of fungicides but these need to be applied by a commercial applicator and treatments must be redone every two to three years.



Weeping trees: The problem with honeydew. Sucking insects are becoming the concern as we enter the summer heat. Each year at about this time the volume of calls increase with the question; “Why is my tree weeping?” or “Why is everything beneath my tree sticky?” This is honeydew, a fluid excreted by sap-sucking insects, either aphids or soft scales, as they feed on the tree. These insects suck sap from tree leaves, twigs and branches and their

utilization of this sap is very poor. Only about half the ingested nitrogen is absorbed, along with some of the sugars, so the rest is passed from the insect. The honeydew is a food source for ants and you’ll often find trees with sticky leaves also covered with ants. These ants protect the aphid from predators and parasites as they move their ‘herd.’ The honeydew also serves as a food source for sooty mold which forms dark colonies on the sticky material. The honeydew and mold do not harm the tree, though the mold can reduce photosynthesis slightly. The real problem is the sticky material covering decks and other surfaces. Usually a mild soap and warm water solution is all that it takes to remove the honeydew and mold from outdoor furniture and cars. Sometimes plastic and treated wood will require household bleach: water solution, usually a 1:4 ratio, but always use caution when applying bleach and test a small area first.

E-samples



Ash seed weevil (*Lignyodes helvolus*) are beginning to “pepper” the ground beneath large ash trees. These white, legless larvae are about 1/10-inch long and are dropping from ash seeds (so you will not find them beneath male trees). Once on the ground they burrow into the soil to pupate and become an adult weevils in the

spring. The adults lay eggs on the developing seed and the larvae burrow into the seed to feed for the summer. Since almost no one cares about ash seeds this is a non-problem though they are a nuisance when they are falling on your picnic potato salad – just a little more protein.



The trees are “buzzing” with the sound of the **cicada**. These insect make a high-pitched noise that sounds like a very loud hum. The adults are difficult to find as they are usually high in a tree. Adult cicadas are stout, about one inch long, and fold their wings over the body. The nymphs feed in the soil on roots of many different plants then crawl out of the ground to molt on vertical objects like tree trunks or fence posts. The cast skin from the molt is what people usually find and wonder what was in this hollow shell. The adults are harmless to us (but tend to scare folks due to the size of the insect) and really do not cause much harm to plants. However, cicada do make slits in tree branches and twigs for egg laying and this can result in broken twigs.



Cottonwood leaves with small bumps are falling. This is the **cottonwood petiole gall aphid** (*Pemphigus populitransversus*). If you break open one of the galls you'll find one or more white, fuzzy nymphs. These soon will become winged aphids that exit from a slit in the side of the galls and fly to the alternate host,

mustard or canola plants. They remain on these plants until fall when they return to the cottonwood to lay eggs. Once the eggs hatch in the spring, the nymphs move out to the new petioles to feed. The nymphs also inject growth regulators into the petioles causing the petiole to form a gall around them. While the loss of foliage might appear alarming (and raking annoying), the aphids do little harm to the trees.



Root weevils are beginning to show up in homes. There are at least four root weevils in our state, the strawberry root weevil (*Otiorhynchus ovatus*), the rough strawberry root weevil (*O. rugostriatus*), the lilac root weevil (*O. meridionalis*) and the black vine weevil (*O. sulcatus*). They spent the early part of the summer putting notches in the

leaves of lilacs (*Syringa vulgaris*) and other plants. The root weevils overwinter as mature larvae which have been feeding in the soil on the roots of a wide range of plants from clover to spruce. The insect pupates in the spring with the adults emerging from the soil in June. The adults do not fly, but climb up on the plants

at night to feed and lay eggs. When the adults are disturbed they quickly drop to the ground and hide. They are not easy to find in the leaf litter but they are darn easy to find in the house. The adults seem to have a preference for an air-conditioned home during these hot days and you can find these insect walking around in your family room looking for a place to hang out and relax. The adults are beetles about 1/3 inch long with a long stout. They also like moisture so keeping the foundation of your home moist by watering flowers next to the house encourages them to come on in. Treatment once in the house is either a vacuum or cat.

Samples received/site visits

Charles Mix County

What is wrong with this American elm?

Fortunately it is not Dutch elm disease. Instead the wilting and yellowing leaves are due to the European elm scale (*Gossyparia spuria*). This insect sucks the sap from the twigs and branches and deposits a sticky substance called honeydew on anything below the scales. The scales rarely cause serious harm but heavy infestations such as was occurring on the branch submitted can cause some wilting and yellowing of foliage. The best control is an insecticide containing imidacloprid as the active ingredient applied as a soil drench in early spring. There are also insecticides that can be injected into the trunk, however these require a commercial applicator.

Grant County

What is wrong with this maple tree?

This is a red maple (*Acer rubrum*) and these trees are not well adapted to our region. The combination of our climate's spring and fall extreme temperature fluctuations and dry, alkaline soils means that these trees often produce leaves that are smaller than normal and off-color. There is not much that can be done to correct this problem though trees sometimes improve on their own if the weather turns favorable. I would suggest watering to reduce other stresses.

Gergory County

What is causing these bumps on the black walnut?

The galls forming on the petiole of the black walnut leaves are from the black walnut erineum (*Eriophyes caulis*), a mite. There is no effective control and the problem is rarely serious enough to harm the walnut.

Lake County

Why are the leaves turning brown this crabapple tree?

The symptoms of browning and yellowing leaves, some having brownish to olive-drab blotches indicates two problems, drought/heat and apple scab. The early cool, moist weather we experienced last May in eastern South Dakota allowed the apple scab to develop and the current hot, dry weather is resulting in drought stress. At this time watering is the only option.

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