

Pest Update (August 9, 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 and now (at least in Brookings) receiving some much needed rain! The summer flowering shrubs; hydrangeas, hypericums and potentillas; are all in bloom. We are also seeing one of our best late summer flowering trees in bloom, the Amur maackia (*Maackia amurensis*). This small tree (less than 20 feet at maturity) is native to Asia and is planted in this country for its late summer

flowering and attractive coppery bark.

Emerald ash borer - Update

This summer's confirmation of emerald ash borer in Buena Vista County in Iowa, a mere 80 miles from South Dakota, has 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 known population in Iowa.



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.

Timely Topics

Cicadas are still buzzing in the trees across South Dakota. I am sure there are some that will disagree, but I like the sound of cicadas synchronizing their shrill buzzes on a warm summer evening. This is an insect more often heard than

seen so some folks are surprised to find large (usually dead) stout bodied insects lying on their sidewalk or driveway.



These are the annual or “dog-day” cicadas (*Neotribicen canicularis*), with the adults becoming a little more than 2-inches long, usually with a brown to gray body and clear wings that fold over the abdomen like a tent. These are different from the periodical cicadas (*Magiciada*) that emerge every 13 or 17 years. Dog-day cicadas emerge from the ground every summer and spend the months of July and August buzzing away in trees

(actually it’s the males that are making all that noise).

While some annual cicadas emerge from the soil every year, the life cycle of an individual can take several years or more. The adults lay eggs in slits made in the twigs of trees, maples and cottonwoods being some of their favorites. This is usually not harmful to the tree but some young trees can have a substantial number of slit twigs break off. Once the eggs hatch the nymph drops to the soil to spend the next several years feeding on tree roots. Eventually the nymph crawls out of the soil and climbs a tree to molt forming an adult. The ‘cast skin’ from this molt often remains hanging from the trunks and lower branches of trees.



The Cicada Killer. While spending most of your life buried in the dirt only to live a few short weeks in the summer sounds bad, it gets worse. The cicadas are easy prey for the cicada killer (*Sphecius speciosus*). This is a large (1-inch or longer) digger wasp that is flying now in search of cicadas. The wasp is black to reddish brown with yellow stripes on the abdomen. The color pattern makes them look like a big yellowjacket. However, unless you are

a cicada, you have little to fear from this insect. The female does have a stinger but unless you handle them roughly or they accidental get in your shirt (and this

has occurred to some motorcyclist), you are not likely to be stung and the sting is not that bad, more of a pin-prick.

But if you are a cicada, look out! Once the female find you, you will be stung, not to kill but to paralysis and now the real nightmare begins! She flies you back to her nest (and since you are bigger, she makes a few rest stops along the way), places you in the burrow and lays a single eggs next to the stinger puncture. Once the egg hatches, the young wasp larvae burrows in to the living cicada and eats in from the inside out then bursting out to become an adults (just like the scene in *Alien* where the creature burst out of Kane). Sometimes the females leaves a couple of paralyzed cicadas as a snack for the larvae.

The adult male cicada killers are very territorial and aerial combat is common. If you find yourself in a middle of a dogfight, just keep walking away. They will not bother you.



Japanese beetle (*Popillia japonica*) adults are out in several communities in South Dakota (south of Highway 14). The adult beetle are about 3/8 inch long with a dark metallic green head and metallic tan wing covers. There are also several other closely related insects, the rose chafer (*Macrodactylus subspinosus*) to name one, that look similar but lack the white tufts of hairs along the lower abdomen.

The larvae is a C-shaped grub that feed on grass roots. During hot, dry summers (like this one), the severing of roots can add to the water stress and large dead patches of turf can develop in grub infested soil. Skunks, moles and shrews find the grubs tasty so heavily infested lawns will also be torn up at this time of year as these animals search for the insect.

While the larvae are a concern to anyone that likes turf, the adults can defoliate trees and shrubs. The defoliation is not complete, instead the adults feed on the soft tissue between the veins leaving a lace-like appearance to the foliage. Japanese beetle adults do not feed indiscriminately but prefer certain hosts. The trees that are their favorites include American elm (*Ulmus americana*), linden (*Tilia*), apple and crabapples (*Malus*),



birch (*Betula*), cherry and plum (*Prunus*), Norway maple (*Acer platanoides*) and walnut (*Juglans nigra*).

E-samples



Cotoneaster infested with woolly apple aphid (*Erisoma lanigerum*) appear in e-samples about this time of year. The woolly apple aphid feeds on a range of Rosaceae hosts from apple to mountainash and cotoneaster is one of the most common ones. The aphid is a reddish brown to purple but they are usually covered with long

white cotton-like filaments. These insect usually soon fly to elms, either American or slippery, to overwinter but have been known to remain on apple over the winter. They generally do little harm to cotoneasters and will be leaving this host soon so treatments may not be necessary. The waxy filaments reduce the effectiveness of soaps and oils, two of our best treatments for aphids but insecticides containing Acephate as an active ingredient are effective as a foliage and shoot spray.



Cotoneaster leaf spots also appear at this time of year – cotoneasters usually just look tough as fall arrives. There are a couple of fungi that cause spotting on cotoneasters, *Entomosporium mespili* and *Phyllostictia contoeastri*, and their spots differ somewhat with *Entomosporium* having reddish spots

with a dark red to purple halo. Regardless of species, these diseases can be treated with a fungicide containing either chlorothalonil or copper applied in the spring as the buds open and repeated for several times at intervals of 10 days apart.

Yellowing linden leaves seem to appear in pictures every August. There are a multitude of reasons for the yellowing foliage. Aphids and soft scales (such as the cottony maple scale discussed in an earlier issue of the *Update*) are feeding on foliage and this can result in yellowing and premature falling of these infested leaves. Usually this trees are also “weeping”. The weeping is not from the tree but the aphids that are feeding on the leaves and excreting a sticky substance known as honeydew. However, we also get leaves just turning yellow and



dropping on lindens for no apparent reason. The loss is minor, rarely more than 10 percent of the foliage but just enough to be noticed. The trees seem to be fine the following year and often the problem is not repeated on a host.

Samples received/site visits

Lincoln County FL1700022-23

We are having branches die from the ground up on our evergreens. Could you please tell me what I can spray for a treatment solution / chemical to kill whatever bug is killing our trees.

I looked at the tree groves and there are two major problems; 1) many of the trees are on poorly drained soils and 2) they are all planted too close together. The trees farthest out are next to a low area and these trees are probably not going to perform well. Deciduous trees that are tolerant of poor drainage such as European alder, would be a better choice for this location rather than Colorado spruce. The other evergreen rows are closer to the buildings and away from the low area but these mature trees are now being crowded by the adjacent deciduous trees and are also too close to one another in a row. The only solution here is to remove trees so that the remaining one receive adequate light. All evergreens common to our area, pine and spruce, will shed their lower branches with shading.

Lawrence County

What is causing the terminal dieback on this Sensation maple? I also see some white substances and lesions on the tree.

The Sensation boxelder (*Acer negundo* 'Sensation') is one of the prettiest maples we have in the trade. The reddish fall color is spectacular and the upright growth habit is much different from the crooked form typical of boxelder. Unfortunately this cultivar is as susceptible to 2,4-D damage as the species and if 2,4-D is used anywhere near it the terminal leaves will be distorted. I have seen mostly trees with distorted leaves in Spearfish so I suspect there is a lot of lawn spraying in the summer there. The whitish substance is the normal bloom found on new twigs and the lesions are nodules formed by the boxelder twig borer (*Proteoteras willingana*). This insect can be treated with an application of Carbaryl applied now (find one labelled for borers) but usually the nodules do not harm the tree so treatments are rarely applied.

Minnehaha County FL700018

What is wrong with this spruce? It is standing next to one that appears fine. Both trees are about 40 years old.

An inspection of the declining tree did not reveal any major pest problems. There was no needlecast pathogens and the major insects and mites commonly found with spruce were either not detected or at very low densities. A few spruce

needleminers were found as well as the bronzing and debris associated with spruce spider mite but not any more than found on the nearby healthy spruce to the north. The trees are on a slight slope and while the trees are probably receiving some irrigation from the lawn system it may not be enough this hot, dry summer. My suggestion is mulch beneath the trees to improve water retention and cool the soils. Spruce are very shallow rooted and are sensitive to heat and dry soils. I also recommend that a growth regulator, specifically Cambistat be considered as a means of improving rooting. Old spruce, and 40 is old for a spruce, often suffer through a few years of root decline before the canopy begins to thin. Cambistat application often greatly increases fine root production and halts or even reverses decline.

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