Pest Update (August 15, 2018)

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John Ball, Forest Health Specialist SD Department of Agriculture,
Extension Forester SD Cooperative Extension

Email: john.ball@sdstate.edu
Phone: office 605-688-4737, cell 605-695-2503
Samples sent to: John Ball
Agronomy, Horticulture and Plant Science Department
rm 230, Berg Agricultural Hall, Box 2207A
South Dakota State University
Brookings, SD 57007-0996

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/

Plant Development

The early season apples and crabapple fruit is beginning to ripen so the end of summer is not too far away. Most of my pest calls and questions relate to something wrong with the leaves; spots (usually a fungus) or yellowing, sticky leaves due to aphids and their honeydew. These problems are not even real problems and the trees will be just fine. Now is not the time to treat most fungal problems and most of the aphids are nearly finished with their feeding so my advice is put away the spray and grab a fishing pole and enjoy a lazy August day.

Timely Topics

Emerald ash borer update

I am finding few adults anymore through some must still be flying about. However, I doubt we will see any more this year. Larval densities are increasing in infested trees, but I am seeing insect mortality in treated trees. This does not mean that infested trees that were injected this summer look perfect. It can sometimes take a year before you start seeing a noticeable improvement in an infested tree's canopy that was injection. Just have patience.

An emerald ash borer is not the only potential problem out there…….

More possible velvet longhorned beetle. Earlier this spring an adult beetle emerged from a new walnut table and the owner sent some pictures of the holes coming from the table and the adult beetle. It appears to be the velvet longhorned beetle (*Trichoferus campestris*) and after adult specimens were send it was confirmed.

Last week another suspicious larva was found in an air-dried walnut board in Sioux Falls. The tree was harvested in Minnesota this spring, cut into boards, air-dried and shipped to South Dakota. We collected larvae and wood samples and are sending these for identification (we have a lot of

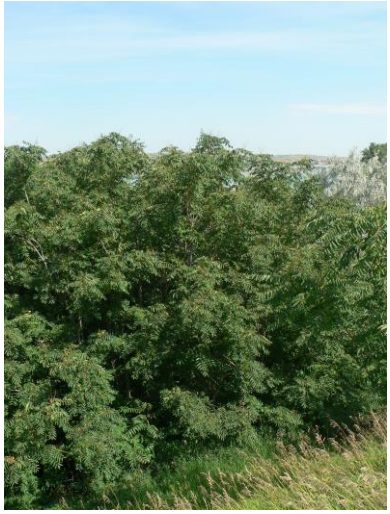
look-a-like native longhorned beetles).

The velvet longhorned beetle is a wood boring insect from East Asia, native to China, Korea and Russia. It was first detected in North America in Quebec (2002) and since then in 14 states including Colorado (2013) and Minnesota (2010). The insect is typically detected in traps and in warehouses, not trees, but it is established in fruit orchards in Utah.

The larval stage of the insect can continue developing in raw timber and even dry wood. The preferred living host is apple/crabapple (*Malus*) and peaches (*Prunus*). But it has been found in birch (*Betula*), honeylocust (*Gleditsia*), mulberry (*Morus*), pine (*Pinus*), spruce (*Picea*), walnut (*Juglans*), and willow (*Salix*). Infested trees usually present with declining canopies and epicormic shoots. There will also be pencil size oval holes on the trunk and frass (sawdust-like pellets) at the base of the tree. Finding these symptoms and signs does not positively identify the tree as infested by the velvet longhorned beetle as infestations by our native longhorned beetle will present the same.

This insect has the potential to be a significant pest in apple and peach orchards. It also can become a structural problem in rustic furniture, any wood product with some bark retained on the edge. The insect has been known to live 18 months in furniture before emerging.

Another potential pest, not yet found in South Dakota, is the spotted lanternfly (*Lycorma delicatula*). This Asian insect was first detected in Pennsylvania in 2014. It does not seem to be spreading outside the state but has become established in several counties there.



This insect is a potential threat to fruit crops – peaches and grapes – as well as timber trees. The feeding is a little unusually for a sucking insect, it injects a chemical that keep the sap oozing from the puncture after feeding – like a mosquito bite that just keeps bleeding – but instead of blood streaking down, it's a grey streak of sap. The sap loss can be enough to weaken or even kill a plant. The insect also produces a tremendous amount of honeydew and everything beneath the tree is covered with this sticky substance.

While the insect feeds on a wide range of plants, one key plant host for the completion of its life cycle

is Tree-of-Heaven (*Ailanthus altissima*). This is considered a weed tree in much of the country – another invasive from Asia. Its also not hardy throughout much of the state. Unfortunately, it has naturalized along the Missouri River from Vermillion to Pierre (as can be seen in the picture on the previous page taken near Chamberlain) so we have enough of these host to allow the insect to become established along this riparian corridor.

E-samples

Ash flower galls are appearing on the twigs of ash throughout the state. The brown to black "balls" hang in clusters beneath the shoots. The galls from feeding by the ash flower gall mite and this mite only feeds on the male flowers of ash. Many of the black, green and white ash cultivars are "male-only" as most tree owners do not like to deal with cleaning up the small winged samaras that develop from the female flowers. However, many trees, such as this one have male and female flowers as you can see the galls and the samaras in the picture. The galls may be objectionable and detract from the appearance, but do not harm the health of the tree.

Now is the time of year we see lots of leaf diseases on tree. While most of the diseases started in the spring, the symptoms do not appear until mid to late summer. This is a picture of **cedar-apple rust** that shows the aecia appearing on the lower surface of the leaf. These produce the spores that carry the disease back to its alternate host – eastern redcedar and Rocky Mountain juniper.

Crabapples and apples are not the only trees to share a rust disease with junipers. There is also **cedar-hawthorn rust** and usually we start to see the symptoms appearing on the hawthorns at this time of year. This is an excellent picture of the disease sent in by Dave, one of the Department of Agriculture's foresters in the Black Hills. The disease is similar to cedar-apple, in that the pathogen moved back and forth between the two hosts. The spots seen in the picture are related to the fruiting structures that are producing the spores that will now infect the "cedars" (junipers). The disease cannot be controlled on the hawthorns at this time of year, nor the crabapples in the case of cedar-apple rust. Managing the disease on the hawthorn or crabapple requires fungicide

applications beginning in the spring to protect the expanding foliage from the disease. Once the disease enters the leaf there is nothing that can be used by homeowners to prevent the infection from continuing.

I received a picture of maple bladder galls appearing on a silver maple leaf. These galls are the work of the maple bladder gall mite. The mite moves from the bark to the expanding leaves and feeds on the underside of the foliage. The result is a colorful gall forming on the upper side of the leaves, usually beginning as a green bump but then becoming red, yellow and black as the season progresses. The galls may look as though they are a serious threat to the tree, but they are almost insignificant in the injury they cause even if the entire leaf is covered with them. No control is recommended and very few are even effective.

Amanda, our urban entomologist, received a picture of these "caterpillars". These are not caterpillars, but **woolly oak galls** formed by the feeding of a cynipid wasp (*Andricus*). The insect forms these elongated woolly growths along the veins on the underside of the leaves on bur oaks. There is a lot of color variation in the galls from white to red and many are striped. The galls do not harm the tree and there are usually enough parasitoids to feed on them that treatments, even if available, would not be needed.

Sample received/site visits

Beadle County **What is wrong with this silver maple? It was transplanted a year ago and the leaves are browning**.

This appears to be just transplant-stress made worse by the hot, weather we experienced during the spring and summer. I recommend mulching around young trees, at least two feet out from the base, no deeper that 6 inches (and leaves a 6-inch open area around the base to keep the mulch from becoming a rodent home). The mulch helps conserve moisture and provide a cooler environment for the roots.

Lincoln County **What is the problem with this cherry?**

The spots on the cherry leaves are a leaf spot disease caused by a fungus (*Coccomyces* spp). The disease results in whitish spots or lesions that

eventually separate from the surrounding leaf tissue leaving shot-holes. Control is not necessary as the disease rarely develops to the point that it will harm the tree, certainly not on this plant if the rest of it looks as infected as the sample.

Minnehaha County **What is this tree?**

This is the Kentucky coffeetree (*Gymnocladus dioicia*), and despite the name it is found in some isolated pockets as far west as Lincoln County, South Dakota. The tree is noted for its large bipinnately compound leaves and the reddish brown to brown, leathery pod that hangs from the female trees (unlike many tree species, Kentucky coffeetree has separate sexes, male and female trees).

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