

# Pest Update (August 12, 2015)

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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. **Walnut samples may not be sent from any location – please provide a picture!**

## 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

We are beginning to see just a hint of foliage color change, but it is not due to fall but stress. The wet weather is resulting in some poorly drained soils becoming saturated and the trees are suffering from the low oxygen root environment. A common symptom to this condition is premature fall color.

## Timely topics



**Fall webworm** (*Hyphantria cunea*) is on the march. These insects are often referred to as tent caterpillars as they form a lacy nest. They are tent-making insects that feed in colonies on trees, but there are a few differences between the tent caterpillars and fall webworm. First, the tent caterpillars appear in the spring while the fall webworm larvae feed during late summer. Second, the tents of the tent caterpillars typically are constructed in the

interior of the tree at branch crotches while the fall webworm nests are made at the branch tips and are wound around twigs and leaves. Third, the primary hosts differ with tent caterpillars generally feeding on fruit trees while the fall webworm is found on walnut. There are other hosts, of course, and I can find tent caterpillars, particularly the forest tent caterpillar on ash, maples and other hardwoods and at this time of year I find fall webworms on chokecherry, cottonwood and maples as well as walnut, but they certainly seem to prefer walnut as a home and meal.

Fall webworm adults are white moths that fly during July with the females depositing eggs in masses on foliage. Eggs hatch soon afterwards and the larvae form loose nests and feed throughout the late summer months. The nests often appear as a few randomly masses dotting the canopy of the tree but as the larvae grow, more nests appear. I have seen young chokecherries almost completely wrapped in silky webbing from this insect. After completing their feeding, the mature larvae drop to the ground to pupa to spend the winter beneath debris and litter.

An otherwise healthy tree can withstand several years or more of defoliation by this insect. Sometimes we find dieback on small chokecherries that have been repeatedly defoliated but on mature cottonwoods and walnuts there seems to be

no outward expression of cumulated defoliation; they seem to continue to grow just fine.

There really isn't much needed to treat for this insect. The nests are already forming and the damage to the host tree is minimal. A contact insecticide such as one containing carbaryl, cyfluthrin, or permethrin as the active ingredient will kill the larvae as they feed and these can still be applied. If they are used, be sure to spray the foliage, not just the nest, as the insects leave the nest to feed on foliage at night and this is when they will pick up the pesticide. Pruning off the nests while the insects are still inside may do more injury to the tree than the feeding, however, removing the nests with a rake or other object will destroy the webworms' shelter and reduce survival. Burning the nests might be entertaining but will injure the tree and possibly the arsonist and other trees and nearby structures.



**Mountain pine beetles** (*Dendroctonus ponderosae*) are attacking ponderosa pines in the Black Hills. I have received numerous reports from landowners noticing globs of white pitch forming on their pines. Some observant landowners have noted that the pitch seems to appear on a few trees and the number increases from day to day. Mountain pine beetle will focus an attack on specific trees and these trees are often mass attacked over a one to four day period so the beetles can

overwhelm the sap flow of the tree. The beetles are trying to push and burrow their way in while the tree is trying to either push them out or drown them in the pitch. Once this tree or a group of trees is successfully attacked, other beetles will expand the infestation by attacking nearby trees and the cycle continues.

This year's flight that started a week ago, a little later than most flights and attacks will probably peak in another week or so. However, the flight and attacks will continue for the remainder of the month and then decline to finally stop in early October. Once the current flight ends and the new brood are developing within these infested trees, work will begin to remove and treat these hosts to reduce the emerging population in 2016. The overall trend over the past couple of years is a reduction in beetles and tree mortality and hopefully this year will see a continuation of a decrease in the number of infested trees.

## **E-samples**

**Worms in the willows.** I had some pictures sent in about a worm invasion on trees near Aberdeen and decided to stop out to look. These are willow trees that



have been defoliated by elm sawfly (*Cimbex americana*) larvae. This is the same sawfly that was discussed in the July 1 issue of the *Update* when the adults were out flying. The adult females “saw” a slit in the leaves to lay about 10 or 12 eggs per leaf and these eggs usually start hatching in 10 day. The larvae can become almost two inches long by maturity and they are light green or yellow-green with a single middorsal dark or black stripe. They feed along the margins of elm and willow leaves, usually in groups, devouring the entire leaf in the process before moving to another leaf. I have seen some trees almost completely defoliated by August. Another common symptom of an infestation is the ground beneath the tree is covered with the very fine frass pellets (insect poop) from these insects. Once the larvae are finished feeding they drop to the ground to pupae with the adults emerging the following spring (Interesting note: not all the cocoons open in the spring. Some pupae do not become adults until spring of the following year so cocoons forming in the soil now may produce adults next summer and the following summer!).



The insect does not appear in large numbers every year, nor is it widespread. It is more common to find elm sawflies on a few trees scattered across the state but you will find pockets of defoliated trees in towns and in windbreaks. This year the northeast and east central portion of the state was where most of the defoliation occurred. The treatment is an application of an insecticide containing carbaryl when the larvae are first noticed on the tree.

Now is really too late for control. The larvae have mostly finished feeding and have dropped to the ground to burrow in and form a cocoon.



**Fireblight on cotoneaster.** This is hard to tell from the picture but this might be fireblight on the cotoneaster caused by the bacterium *Erwinia amylovora*. The symptoms of darkening and curling leaves, along with blackening shoots, are consistent with those expressed by this disease. If it is fireblight, my recommendation is this fall after the plants go dormant cut the infested plant to within 3 inches of the ground and destroy the clippings. This usually removes the disease. The entire row can be

treated this way and it will come back as a nice hedge next spring. However, disinfect the pruners when moving from diseased to healthy plants to avoid spreading the infection next year.

**Oak anthracnose** (*Discula quercina*) is appearing in eastern South Dakota so I am getting a few pictures sent in including this one from Rick, an urban and community forester with the South Dakota Department of Agriculture. We are seeing a lot of anthracnose, a general term for fungal diseases that cause lesions and browning in foliage, throughout South Dakota this year. The disease is very common on ash and oak this year. Oak anthracnose is sometimes confused with oak wilt (*Ceratocystis fagacearum*), a far more serious disease of oak which is fatal to red oaks, such as northern red oak and eastern pin oak, and a stress to white oaks such as bur and swamp white oak. Oak anthracnose can be found throughout the state while oak wilt has only been verified in a couple of counties.



There are a few clues to separate the two diseases in the field. First, oak anthracnose is more noticeable and common in white oaks while the reverse is true for red oaks. The symptoms also differ with the leaves becoming discolored and wilting for oak wilt and the leaves having water-soaked, darkened blotches in the leaf and along the margin for oak anthracnose. The blotches eventually turn tan and the leaves will also cup.

Finally, oak wilt symptoms often start at the top of the canopy while the symptoms first appear along the lower and interior parts of the canopy for oak anthracnose.

Oak anthracnose can be managed by fungicide applications in the spring as the leaves are opening but the disease is rarely treated. It only becomes a problem when we have wet springs and by the time we realize it has rained a lot in May, it's too late for treatments. Fortunately it is not a serious disease of oak.

Oak wilt and oak anthracnose are not the only diseases of bur oak in the eastern edge of South Dakota. Bur oak blight (*Tubakia iowensis* sp nov) also known as BOB also occurs in this region and we are examining a number of oaks in the woody draws of Sioux Falls for the presence of this disease. This will be reported in next week's *Update*.

## **Samples received/site visits**

Brule County FL1500014  
**spruce?**

**What is wrong with these 15 to 20 year old**

Frequent readers of the *Update* already know part of the answer, cytospora canker, a very common disease of Colorado spruce (but rarely on Black Hills spruce). The spruces also had stigmina needlecast disease, a relatively newly discovered disease of spruce with symptoms similar to Rhizosphaera needlecast fungi. This needlecast disease can be found on Black Hills and Colorado spruce. The disease can be treated but the treatments need to be initiated in the spring as the foliage opens so it too late for this year. Since this is a new disease, updated treatments will be identified next spring before the treatment season begins.

Lincoln County

**What is the problem with this basswood?**

The small spindles on the leaves are galls caused by a small erineum mite. The mite does not harm the tree, only the appearance, and there is no effective control.

Minnehaha County FL1500018 **Why are the needles turning yellow on these spruce?**

The sample showed a fairly heavy population of spruce spider mites based on the amount of debris and stippling caused by the activity of the mite. The spruce spider mite is a cool season mite and become dormant during the heat of the summer. However, the yellowing often does not become apparent until mid-summer. The next window for treatment is when maples leaves are beginning to turn color in the fall. There are a number of effective miticides for commercial applicators to use such as pesticides containing spiromesifen or thiamethoxam. These should be applied as two applications, 6 to 10 days apart, beginning when silver maples leaves begin to form.

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