

Pest Update (July 29, 2015)

Vol. 13, no. 23

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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

Our late summer shrubs are all in bloom now. Now we just wait for signs of fall!

Timely topics

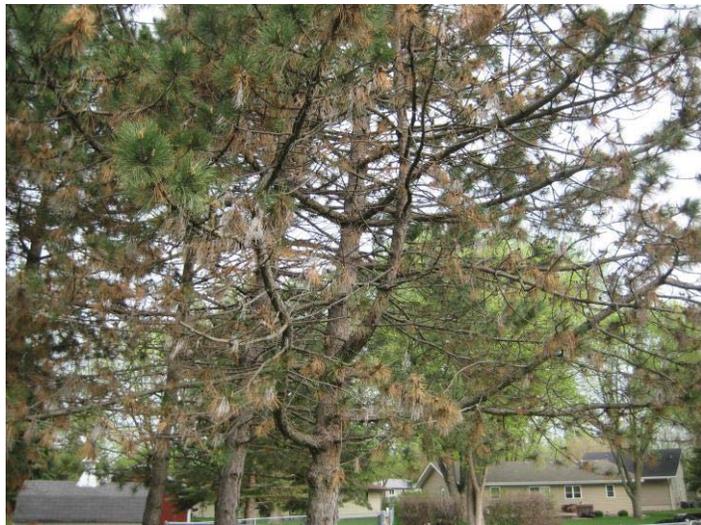
Why is my pine turning brown at the tips?



Diplodia tip blight (*Diplodia pinea*) is a common disease of pine, particularly Austrian and ponderosa pines. Diplodia tip blight, as the name implies, results in the death of the terminals so the most visible symptoms are misshaped tops as not all the tips on a tree are usually affected by the disease. We have infected trees on campus that continue to have tips die throughout the lower canopy but unaffected side shoots survive and fill in. However, sometimes

the infection can cause branch dieback and even tree mortality.

The disease typically kills only the current season buds and shoots and these appear as stunted shoot with partially expanding needles. The disease progresses into the older tissue so often the needles surrounding the tip turn straw yellow, then brown and finally turn gray and hang from the shoots. The fruiting bodies occur at the base of the needles, beneath the papery sheath, and also on the second-year cone scales.



The disease is associated with hail, not because the hail wounds provide a point of infection, though this can occur, but because the mechanical injury stresses the tree and the already present disease becomes aggressive.

We have had a lot of hail this year in the Black Hills and now numerous reports of discolored pine canopies are coming in. Some tree owners are associating the discoloration with mountain pine beetle spraying, assuming since the spraying occurred just before the needles started to discolor that the two events are related. While we are looking at a few instances where the spray may have been a factor in the tree's discoloration, the large majority of my visits to these properties the culprit has been winter burn or diplodia along with other needle diseases.

Diplodia tip blight can be managed, but not cured, with timely applications of a fungicide. A fungicide with propiconazole, copper or chlorothalonil as the active ingredient (and labelled for Diplodia tip blight) applied just as the buds are opening (usually early May) and repeat just before the needles completely emerge and again 10 days later.

Why are my spruce needles turning brown?

Declining spruce calls come in as they do all summer. This points to the prominence of the tree in the landscape and the frequency of pest problems. The calls at this time are about bronzing or discoloration of the needles. The injury is (or better was) due to the feeding activity of the **spruce spider mite** (*Oligonychus unungulis*). The feeding results in flecking or stippling of the needles from the piecing of the foliage by the sucking mouthparts of the mite. A close examination of these affected needles will also show debris, fine strands of webbing for example, evidence of the mite's presence. The mite may not be easily seen now, however, as they go dormant during the heat of the summer. The spruce spider mite is a cool season mite with most of its activity occurring in the spring (as silver maples are leafing out) or in the autumn (as maple leaves are beginning to color). Since the damage does not become noticeable until the summer, many people assume the mite is active now and spray an insecticide for control. This is not helpful as 1) the mite is not susceptible to sprays at this time and 2) the insecticide will probably kill insects rather than the mite.



A good example of this is a sample that recently came in that showed extensive damage from the spider mite. A close examination found a small dark critter moving slowly about the needles. A spider mite perhaps? No mites have eight legs and this interesting creature had only six. This is the **spider mite destroyer** (what a name!) (*Stethorus*) a very tiny ladybeetle that feeds on spider mite. Spraying an insecticide now

would be a good way to help the spider mite as you would be killing the ladybeetle that feeds on the mite.

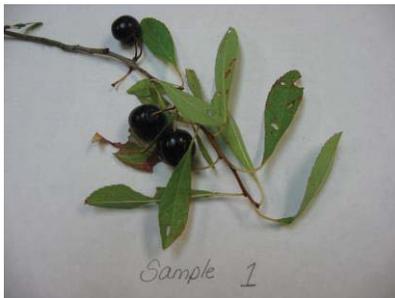
The best window to treat for spruce spider mite is in the spring as the silver maple leaves begin to form. Treat with a pesticide containing spiromesifen or thiamethoxam as the active ingredients with two applications spaced 6 to 10 days apart. Pesticides containing these active ingredients and labelled for spider mites are available to commercial applicators and this is a pest I recommend tree owners contact a commercial company to do the treatments as they have the products and equipment to do the proper job. There are pesticides containing

tau-fluvalinate that are available to homeowners for use but, due to cost, are probably limited to small landscape spruces. Horticultural oil (2%) may also be used by tree owners but oils can remove the blue coloration from spruce needles. Insecticidal soaps may be used but have limited effectiveness against this mite as soaps rarely penetrates the web. This can also be a problem with oils.

E-samples

Plant identification for making jams and jellies

This seems to be the time of year where folks are out looking for fruit to use for jams and jellies. I seem to get a lot of pictures at this time of year with the questions; what is it and can I eat it? Well you can eat just about anything, but it might not be good for you so some better questions may be; what is this and will it make a suitable jam or jelly?



Two plants that I am receiving a lot of pictures with these questions are **western sand cherry** (*Prunus besseyi*) and **mulberry** (*Morus alba*). The western sand cherry has almost a waxy leaf that is wider at the tip than the base. The plants are usually between 2 and 6 feet tall. The birds have already taken much of the fruit crop but I was able to collect the fruit last week still.



Mulberry is a common small tree and can be found in much of the state. It was brought to the state for fruit and the birds now have spread it everywhere. The dark purple raspberry-like fruit is not all that tasty, a little bland and watery for my taste but the some folks enjoy the fruit and if you put enough sugar on them I can eat them too. Mulberry leaves come in several different shapes and you can usually find two different types of leaves on the same tree, many will appear mitten shaped. There are male and female mulberry trees so it is common to find a few trees without fruit on them, those are the guys.



I also received a nice picture of window pane feeding on a plum leaf. This is a term for a defoliator that only feeds between the veins on the upper leaf tissue so the leaf appears more like a window panes. The insect responsible for this interesting damage is called the **pear slug** (*Caliroa cerasi*) an insect that feeds on more than pears (cotoneaster, pears, mountainashes and

most *Prunus* are its favorites) and is not a slug but a sawfly. The larvae, which do resemble slugs, are about ½-inch long, dark green and slimy. They are often night feeders so people may not notice any insects feeding on the leaf. There can be two generations per year of this insect with the first generation larvae having completed most of their feeding by now. A second generation of larvae may appear in September and if they do, they often defoliate the plant than merely feed on a portion of the leaf. The treatment is a spray of an insecticide containing carbaryl applied when the damage is first noticed.



Bacterial leaf spot (*Xanthomonas*) is showing on some *Prunus* this summer. This is a disease we do not often see this disease but a number of samples have come in over the past week or two. The disease is very common in eastern states but our lower rainfall and humid (in most years) might keep the symptoms in check. The most easily recognized symptom of the infection is watery lesions, they almost look like water spots, towards the midribs of the

leaves. These spots darken and enlarge as the season progresses. The centers may fall out by late summer so this is one of many “shot hole” disease. The entire leaf may also drop prematurely. The disease may also result in twig cankers and cause cracking and lesions on the fruit. A late dormant application of a copper fungicide can provide some reduction in this bacterial disease. The spray must be applied before the leaves have started to expand. Copper can be damaging if applied to the tender leaves.



Hawthorn rust (*Gymnosporangium globosum*) is also beginning to show up now. All the wet spring weather has really pushed leaf diseases and this one is no exception. This rust disease mostly affects the leaves and results in yellow spots that may pepper the leaf by early August. The infected leaves will also drop prematurely. I see this disease primarily on Arnold and Downy hawthorn though it can occur on most hawthorn species. The alternate host is

juniper (cedars) just as with cedar-apple rust. A fungicide containing Myclobutanil as the active ingredient can be applied as the leaves unfold and repeat three more times at 7 to 10 day intervals.

Samples received/site visits

Faulk County

Please identify this plant

This is a very stunted black chokeberry. I doubt if the fruit is going to be of any value but it is edible.

Minnehaha County

What is gone with this spruce?

The sample showed a very severe infestation of spruce spider mites (the spider mite destroyer picture was from your sample). The foliage was also infected with stigmata, a foliage disease of spruce that is becoming very common. Chlorothalonil applied when the new growth begins to expand then every 10-days through August is the most treatment.

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This publication made possible through a grant from the USDA Forest Service.