

Pest Update (April 3, 2019)

Vol. 17, no. 8

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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 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

The spring has started! The temperatures are more often above freezing than below and the winter-long snow pack is rapidly disappearing. Warm rain is predicted across much of the state this week but a cool down next week so while spring has started, it's a slow start.

Treatments to do now



Tent caterpillars can be treated right now by pruning. Tent caterpillars (there are three different species, eastern, forest and western), are common defoliators of mountainash, cherry, crabapples, apple, and plums. If you look at one of these trees right now you might find these globs of what appears to be molten glass around the twigs. These are the egg mass to the tent caterpillar (see picture). If these egg masses are pruned off and

destroyed (don't just throw them on the ground, unless the mice eat them the eggs will still hatch) you'll save the tree from defoliation. The new egg masses do look like molten glass, very smooth and shiny. If the egg masses are a gray to white and have lots of holes in them, they are last year's egg masses and not a threat to your tree.

Timely Topics

Ash tree removal



Ash tree owners in Sioux Falls have about another eight weeks to complete any removals of unwanted ash before the summer ban on the felling, pruning, or transport of any ash brush. The dates are the same as last year, no ash felling, pruning, or brush movement between Memorial Day and Labor Day. These dates bracket the flight period of the emerald ash borer. Since the emerald ash borer will be emerging from the trunks,

limbs, and branches of infested trees through much of this three-month period, the ban reduces the spread of emerging adults throughout the city.

The City is removing ash along streets this spring with about 100 completed at this time. Many homeowners are also taking advantage of the spring weather to remove ash trees that they have decided are not worthy of treatment. These are trees that are already dying from stresses unrelated to the emerald ash borer or have defects that compromises the tree's integrity or limits uptake and distribution of injected pesticides.

Injection treatments to protect an ash from emerald ash borer will begin in about a month. The window for treatment is about the time the ash leaves out until sometime in mid-summer. Ash tree owners in the Sioux Falls area (within 15-miles of the

northern edge of the town) may want to contact a commercial service to have their ash trees evaluated and scheduled for treatment.

E-samples

Blister beetle



The winner for the longest distance e-sample is this one that came in from Syria last week. The question was what is this insect? The answer; a blister beetle (Meloidae: Meloe). We have similar insects in South Dakota. There are more than 7,000 blister beetle species and they have almost a global distribution. The name blister beetle comes from their defenses. They can spray cantharidin, a chemical that causes blistering and

swelling of contacted skin, so are best to leave along no matter where you find them!



Rabbit damage

I received a great picture of rabbit damage (well nice picture, not so great for the tree) from the Watertown area. This is a good reminder to all that much of our rabbit damage to woody plants occurs during late winter. A tree's inner bark is sweetest in late winter and there is not much else to eat. Once the grass greens up, the rabbits attention turns to other foods and our young trees are not so much a target. Its still a little to early to remove any rabbit protection.

Also, a reminder that once the rabbits have removed the bark from completely round the trunk the tree is no longer salvageable. It may sprout back from the base, but these shoots are from the rootstock which is not the same plant as the top.

Samples received/Site visits

Lawrence County

Update to the dying pine e-sample and physical sample posted in an earlier Update.

This last week I visited the pine tree discussed in the February 6, 2019 *Update*. This was the shoot sample that we could not isolate any pathogen, only some saprophytic fungi – fungi making a home on dying tissue rather than being

responsible for the death. I mentioned in the February 6th *Update* that I needed to inspect the tree as the problem was mostly likely in the branches or trunk.

When I visited the tree, I noticed some of the branches had woodpecker pecks in them as they searched for insects. When I peeled the bark away, I found galleries (tunnels made by insect larvae) and an adult insect – a pine engraver beetle (*Ips pini*).



While the mountain pine beetle epidemic is over, its smaller cousin, the pine engraver beetle, is still a threat to trees in the Black Hills and I have seen several pines in the Black Hills this winter that people thought were killed by mountain pine beetle that were instead infested by the engraver beetle. The pine engraver beetle generally attacks only stressed trees, but the drought that persisted through last summer was enough stress to trigger these attacks.



What might have been the stress agent to trigger the attack on this lone pine and not others nearby? If you look closely you can see the pattern to the dead branches – they spiral round the canopy - and this is a common pattern for soil herbicide uptake. I asked if they used herbicide last year and they had a company treat the grass in the small acreage. They only sprayed around the tree, but not on the tree but readers of the *Update* know that roots extend far beyond the canopy edge and can absorb herbicide from considerable distance.

So, the work of diagnosis is not over. Needles samples were collected, and we are analyzing for herbicide residue. Since the application was made last year, we may not find much herbicide as trees do metabolize these chemical but stay tune!

Lawrence County

Why are the pine needles turning yellow?

This is a common question from Black Hills communities every spring. The common symptoms are ponderosa pines with the current year needles (the ones formed in 2018) turning a pale yellow-green. The common pattern is these are always naturally growing pines now in a landscape setting and the sites tend to have shallow, rocky soils.

Some of these trees I have looked at three or four times over the past two decades as new homeowners move in and are alarmed at the spring appearance to the pines surrounding their home nestled in the woods. These same trees always have their needles turn the normal gray-green as the temperatures warm so it is a very temporary problem.



I have watched this same tree in Spearfish go from yellow-green in late winter to the normal green in summer for about 20 years now. The pines upslope or near the bottom of the hill never seem to have this color change.

The why for this color change is the more difficult question. It has been suspected that it's a temporary nitrogen deficiency as the cold soils limit water and element uptake. Compound this issue with limited rooting volume in shallow, rocky soils and you have a perfect combination for nitrogen deficiencies. Nitrogen is a mobile nutrient and can be 'robbed' from older tissue and transported to the young, expanding tissue at the tips. We have not measured nitrogen concentrations in these

needles so it's only a possibility, but it seems like a likely one. Regardless, the trees green up once the soils warm.

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