



# Tree Pest Alert



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## In This Issue

Plant Development.....	1
Timely topic.....	1
Emerald ash borer update.....	1
Pine looper update.....	2
Mountain pine beetle update.....	2
E-samples.....	2
Banded/redheaded ash borer – not EAB.....	2
Samples received/site visits.....	3
Codington County (Normal fall needle drop).....	3
Codington County, Nebraska (Spruce bud scale).....	3
Fall River County (Normal fall needle drop).....	3
Pennington County (String trimmer injury to trees).....	4

## Samples

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of plants or insects from other states. If you live outside of South Dakota and have a question, please send a digital picture of the pest or problem.

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 as 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.

Reviewed by Master Gardeners: Carrie Moore and Dawnee Lebeau.

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## Plant development for the growing season

We are still enjoying some warm (80°F) days this fall. But the nights are cool with occasional frost. The Growing Degree Days – base 50 (GDD) are slowing to almost a stop. Here is the GDD for communities across the state. We only gained about 50 to 60 GDD since last week.

Aberdeen	2,930
Beresford	3,460
Chamberlain	3,490
Rapid City	2,780
Sioux Falls	3,450

The fall foliage display is rapidly ending. The warm weather and wind are resulting in the leaves rapidly falling (and blowing into the neighbor's yard).

## Normal needle drop

I am still receiving calls and texts from pine tree owners that are alarmed by the yellow needles in their trees. These are the older needles so are in the interior of the trees, not at the tips. This is the normal fall needle drop of the 3rd to 5th year needles.

The reason it is so noticeable this fall is the dry, sunny weather. When we have these weather conditions the needles often turn a golden yellow before shedding. If we have a wet, cloudy fall, the needles may just turn a less noticeable brown before dropping.

## Timely Topics

### *Emerald ash borer update*



Emerald ash borer sampling continues in Canton and Sioux Falls. The larvae are now 4th instar, the final larval

instar. Many of these larvae are beginning to burrow into the outer layer of sapwood to form their overwinter chamber. They will remain here for the winter, becoming pupae sometime in early May and emerging as adults at the end of May or early June.

### **Pine looper update**



Tree mortality from two years of defoliation by the pine looper is becoming more noticeable along the ridge northeast of Pringle. The pines that have only scattered needles in their canopies have started to die or are already dead. These trees are riddled with woodpecker pecks and sawyer beetle egg niches cut into the bark of the trees. The bark on these infested trees is easily separated from the wood and reveals the tunneling of sawyers and turpentine beetles.



There are also many trees that have thin canopies from the defoliation but appear to survive the stress. These trees are not being infested by engraver beetles or sawyer beetles – insects that typically go for stressed trees.

### **Mountain pine beetle update**

Mountain pine beetle (*Dendroctonus ponderosae*) did not disappear at the end of the 1997-2016 epidemic. The population just declined to a level where tree mortality became scattered and isolated to individual trees. This is a normal stage for insects. It is not cyclical – like the

periodic cicada that emerges on a specific schedule. Instead, the beetle population and tree mortality go through periods of low tree mortality only to rise for a decade or more before declining again.

Pine mortality from the beetle is beginning to increase in some areas of the Black Hills. It is still in the endemic stage for the much of the forest. The endemic stage is less than one tree killed by the beetle per acre or one tree per five acres per year.

There are some housing developments in the Lead-Spearfish and Custer areas that are experiencing some low levels of infestations. This is not necessarily mortality. Many of these infested trees are strip attacks. These are attacks – as evident by pitch tubes - to one side of the tree, usually from about 3 feet to 15 or 20 feet. The pitch tubes are created by the tree in response to the attack. The large whitish tubes are usually indicators of unsuccessful attacks. These trees often survive.



There are some trees that have smaller, reddish, and granular pitch tubes that encircle the tree trunk. These are usually successful attacks. These trees should be removed during the winter and the wood destroyed before May.

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### **E-samples**

#### **Banded/Redheaded ash borer – not EAB**

This was a picture sent in by a grounds person that wondered if it was emerald ash borer. Since they are in an adjacent county to the quarantine it was a good question. The dead tree was covered with these long meandering powder-filled tunnels.





This is the clue it is not emerald ash borer. The tunnels are not serpentine, winding back and forth, but meandering. Emerald ash borer only attacks living trees and the serpentine tunnels prevent the larvae from being suffocated by the sap flow. The banded and redheaded ash borers (closely related *Neoclytus* species, *N. caprea* and *N. accuminatus*) will attack trees near death or trees that recently died so the tunnels can wander around.

Another clue is the holes in the wood are oval, not D-shaped. The emerald ash borer makes D-shaped emergent holes while the other two borers carve oval holes.

## Samples received/Site visit

### Codington County, Normal fall needle drop



This was a Scotch pine sample from a declining row of trees. Scotch pines are dying throughout the state from the lethal disease pine wilt. This disease causes the tree to desiccate in early fall leaving the tree with dry, yellow, hanging needles and brittle twigs.

These were not the symptoms presented by this sample. The yellowing needles were in the interior of the twigs, not the tips. They were also still very flexible. This is the normal fall needle drop.

### Codington County, Spruce bud scale on white spruce

This sample was covered with debris along the blackened twigs and needles. The black, sticky film (about as sticky as a post-it note) is honeydew excreted by the spruce bud scales infesting the tree. The honeydew becomes infected with a sooty mold which makes the film have its powdery black texture.



Spruce bud scale is easy to overlook as the adult females are founded at the twig whorls and look like round, reddish buds. These insects can be treated next June to kill the newly hatched young, called crawlers. Pesticide options will be provided next spring.

### Fall River County, Normal fall needle drop



This was a stop to look at some golden yellow pines. The yellowing needles were along the interior of the branches. They were also just barely hanging on the branches, a soft touch they would fall.

This is the normal fall needle drop. It is discussed under Plant Development for the growing season.

## ***Pennington County, String trimmer injury on a maple***

This was a stop to look at a declining crabapple in New Underwood. The reason for the decline was apparent. The problem was not in the branches but the base. The base of the trunk had been repeatedly struck by the string to a trimmer. The tree was indented completely around the base.



It may be a little late to save this tree, but a mulch circle will help provide the separation.