

Pest Update (November 30-December 7, 2016)

Vol. 14, no. 39

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
Plant Science Department
rm 230, 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/>

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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Timely Topics

Frost cankers and cracks on ornamental trees; wrap or don't wrap? I received a question this week on the benefit of wrapping trees to prevent winter injury, specifically splitting of trunks. This splitting is either due to a frost canker or a frost crack.

A frost canker, sometimes called sunscald injury, is a shallow vertical split in the bark extending into the cambial zone and forms as a result of extreme temperature fluctuations. While these cankers are more common on the southwest side of the tree, hence the name “Southwest disease”, they can occur on any side of the trunk. The problem occurs when tissue that is beginning to deacclimate – losing its cold hardiness – is exposed to cold temperatures during late winter nights. The tender bark and cambial tissue is killed. This is most common on thin-barked trees, crabapples, lindens and maples in our region, but is more related to stress than species. Moisture stress, during the previous summer and fall, is most often correlated to frost cankers, so drought and transplanting are two key stress factors in the occurrence of this disorder.



Frost cracks are deep, longitudinal cracks that appear on the lower trunks of trees. While referred to as frost cracks, the origin of the crack is not related to frost or cold but an injury to the trunk. The genesis of the crack is a wound to the trunk; typically a grass-whip or lawn mower (hence their appearance on the lower trunk) and this results in a structural weakness in the trunk. When the trunk is exposed to warm winter days that are followed by a rapid temperature change in the evening, the crack ruptures to the surface. Frost cracks also almost always appear on the southwest side of the tree as this is the area of the trunk that may experience temperature changes of 20 to 30°F or more from a sunny winter day to a clear winter evening – when you hear them split it sounds like a rifle shot. Frost cracks are most common on the same species as frost cankers but may also be found on thicker barked trees such as oaks and walnut.

Will wrapping trees during the winter help? It might, but keep in mind that moisture stress and wounding are the two key factors in the formation of cankers and cracks. Wrapping with paper or plastic wrap may not prevent temperature fluctuations; in fact it may actually cause a more rapid temperature change according to research done in neighboring Minnesota. In addition, if the wrap is left on into the next growing season it may trap moisture creating a favorable habitat for pests. Left on even longer it can girdle the tree. Wrap or don't wrap? Don't since the problems of leaving it on too long outweighs the small benefit of winter protection, but do make sure the trees are



receiving adequate water during the growing season and do not wound the trunk – these are the means to reduce frost cankers and cracks.

E-samples



Why are the small branches falling off my tree? This was an interesting question (and posed by a new home buyer). The reason it's a new owner is important is that the tree has been doing this every fall. This is Kentucky coffeetree (*Gymnocladus dioica*) and what is littering the ground is not twigs, but the petiole to the very large compound leaves. The center stalk to these large leaves (the leaf may be 2 feet across and composed of up to 40 leaflets) usually remains hanging on the twig after all the leaflets fall. The stalk falls several weeks or even a month later.



What are these dimples on the pine bark? This is a very common question out in the Black Hills. After numerous years of mountain pine beetle people are getting use to examining their trees for insect activity. However, this small indentation in the bark, almost resemble the bark being struck by a BB, are natural features of the outer bark on ponderosa pine and are not a concern. If you trace them into the deeper layers of bark you'll find they end quickly.

Samples received/site visits

Aurora County **Is this herbicide? We lost two rows of cedars this fall and the producer wants to know why.**

I will check for herbicide but I need to know what the suspected herbicide is first. However there is some cercospora injury on the sample and this might also be the cause. We have had several similar instances of the same symptom pattern this fall and I am investigating the cause. I will be in touch.

Brule County
tree?

What is this insect collected from a dead ash tree?



This fairly large insect was discovered in a dead ash tree felled for firewood. This is the larvae of the carpenterworm (*Prionoxystus robiniae*). This is a common insect in dead or dying ash trees and is one of the largest larvae you can typically find in these trees. This “worm” may become 2 to 3 inches long. The adult is a large

gray moth that appears in late spring to early summer. The presence of the insect is more an indication that the tree is dying or dead rather than the sole reason the tree is condition. I would not blame this insect for the death of the tree and there is no need to spread nearby healthy ash to prevent an infestation.



Pennington County

What is in this firewood?



This is one of the powerpost beetles (they are several species) that can occasionally be found in rough sawn boards and firewood. The tell-tale signs of an infestations are small pinhole openings in the wood and fine sawdust accumulating around the holes and wood. The adults will emerge from this wood if it is stored in the home. Powerpost beetles can lay their eggs on any unfinished wood surface so are not a threat to most furniture and flooring

but I have seen them invade the subflooring and unfinished paneling. This is another good reason not to store firewood in the home or garage and only bring it what you will burn in an evening.

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