

Pest Update (October 19-26, 2016)

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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 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



Fall foliage color is appearing on arborvitae. During the past few weeks I have received numerous calls and pictures of interior needle yellowing (or turning brown) on pines and spruce. This is normal autumn needle shedding that often is more noticeable during Octobers with sunny, mild days. Now calls about arborvitae turning color are coming in. The yellowing of the arborvitae foliage appear almost as ribbons of yellowing foliage throughout the entire plant.

However if you look close it is the older foliage that is coloring. If instead, the tips are turning brown, it is due to a disorder, usually root-related.



The long relatively frost-free fall is resulting in some spectacular foliage color we generally do not get to see in South Dakota. A number of trees noted for brilliant fall foliage color east of our state rarely color here as our first frost appears before their leaves begin to change. But not this year! The late fall has resulted in beautiful color on our campus 'Legacy' black maples (*Acer nigrum* 'Legacy'). The leaves on this cultivar usually turn brown in the fall as our first frost comes before the leaves begin to color. Since we have not yet had a hard frost in Brookings, these trees have had time to develop their color. This is also true of ginkgo (*Ginkgo biloba*), another tree that is late to develop fall color. We see good fall color on these trees about every 10 years so enjoy the warm weather and fall color while you can!



Woolly apple aphid appeared across the eastern part of the state this summer and fall.

This insect receives its name from the white waxy covering on the adult aphids and is easy to spot as it lines branches. The aphid is very common but is often overlooked until the white clusters of insects appear, usually mid-summer. The insect is often found around the base of apple and crabapple trees usually clustered around the succulent growth the lines wounds, such as those created by hitting the tree with

the lawn mower or grass whip. Winged females fly to nearby elms in the fall and lay eggs. These eggs will hatch in the spring and the young nymphs feed on elm leaves resulting in distortions to the leaves before becoming winged adults and migrating to the apples. The insects rarely are serious problems for either host, elm or apple.

E-samples



A **Chinese mantis** (*Tenodera sinensis*) picture was sent in by Aaron, the Aberdeen City Forester. These are unusual insects, noted for their modified raptorial forelegs used to capturing prey. Mantis are predators of other insects, actually almost anything smaller (including other mantises) that moves in front of them. They are not native to South Dakota; introduced from either Asia (the Chinese mantis) or Europe (the European mantis).

Neither do well surviving our South Dakotan winters and usually are introduced each year by gardeners buying egg masses to hatch out and serve as a biological control. They are not great controls as 1) there is only one generation per year so pest populations can expand faster than the mantis and 2) mantis will also eat other mantis.



A picture came in of a 'Colorado ash'; never heard of that name for a European mountainash (*Sorbus aucuparia*). This is a common small ornamental trees through the country. It is also a relatively short-lived tree, about 20 or 30 years, as it is susceptible to an array of diseases, disorders and insects. This tree appears to be infected with the bacterial disease fireblight (*Erwinia amylovora*). The tree is presenting the typical symptoms of this disease, gray

to black curled leaves that are persisting into late fall. The disease is systemic so the infection occurs beyond the symptoms. Sometime pruning an infected branch a foot or so beyond the dead and dying tissue can eliminate the fireblight, but in situations such as this where almost a third of the tree is infected 'basal pruning', removing the tree, is probably the best option.





Pigeon tremex (*Tremex columba*), a horntail (and you can see why it gets that name) picture was sent in from Yankton. I usually receive about a dozen samples a year, mostly in the fall. Pigeon tremex is a wood borer commonly found in old, declining ashes, cottonwoods, elms and maples. The adults are out from June to early October and can be found crawling along the bark. This is a non-stinging wasp and the stout spine projecting from the end is not a 'stinger' but an ovipositor, used to lay eggs beneath the bark.

The question in the email was if this insect was harming the tree and I answered with a yes....and no. The presence of these insect on or in a tree is an indication that the tree is declining and these horntails are not generally the cause of the decline. Instead the adults seek out declining trees to lay their eggs. However, the adults also introduce a white rot fungus into the wood which provides an expanding food source for their larvae but the fungal infection also increases decay and hasten the death of its host.



The white bumps on these needles are the **pine needle scale** (*Chionaspis pinifoliae*). This is an armored scale, a type of scale that forms a hard, wax covering over their body. These oyster-shell shaped scales are the females and this gender is responsible for sucking the sap from the foliage. The males are rarely seen, tiny gnat-like flyer, that don't eat. Right now the females are dying but beneath these shells are lots of small eggs.

These eggs hatch in the spring and the young, called crawlers as they are mobile, travel out to the new needles to settle and begin to suck the sap from the foliage. Once settled, they lose their legs and remain in this spot for the rest of their short life. There may be two generation per year with winged adults of both sexes present during mid-summer.

The best way to suppress pine needle scale populations is to let their natural predators and parasitoid wasps do their work. Most of our chemical treatments kill more of the scale's natural enemies than scales. If you look close at the picture, you will notice small holes in many of the scales from the emergence of a parasitoid. There are also several beetles, lacewings and even mites that feed on pine needle scale so often the best treatment is no treatment and let nature do the job for you.

I do not receive a lot of turf pictures but here is an interesting one that came in this week. The red powder on the lawnmower is from the spore of a **lawn rust** disease (*Puccinia*). This is a common turf disease in the fall, particular if we

have a dry summer. The rust infection shows up in the fall as blotches of red and orange on the grass blades. If you look close at these grass blades you can see



the little pustules that produce the red-orange “powder”, the spores that are carried in the wind. These spores cover shoes or lawn mowers in a red-orange powder. These rust disease have a very complex life cycle, with many alternate hosts and stages during a year. The rust disease overwinters in plant debris but must infect its alternate host before being able to infect the turfgrasses in a lawn. Most rust diseases require the hosts to be in

relatively close to one another, within a mile or two, but with some lawn rust disease the spores are so small and light they are carried by the wind from down south. The alternate are hundreds of miles away from South Dakota! There is no need to apply a fungicide, it’s too late and usually not necessary even if the application is made in late summer when the infection occurs. Instead, a little nitrogen fertilizer next spring is probably all that is needed to help the lawn recover from the disease.

Samples received/site visits

Day County
treated this fall?

Is this cedar-apple rust and can it be

This is cedar-apple rust on the apple leaves. The disease cannot be treated now, instead the fungicide must be applied in the spring as the leaves are just about fully expanded. This is also the time when the galls are opening on the juniper (cedar) trees) and the spores that infect the apple are being releases. The fungicide application must be repeated for at least three times about 10 days apart. I’ll make a fungicide recommendation next spring once we see what will be available to homeowners next year.

Minnehaha County
for them?

Are these pine needle scales? Should they spray

While the older needles (2015) are still covered with the shells of the long-dead pine needle scales, the new foliage (2016) appears to be almost free of this pest. Generally pine needle scales are not a serious problem on pines unless the number exceeds 4 or 5 per needle – the number on the older foliage far exceeded this threshold so no doubt the infestation was affecting the health of the tree a year or two ago, but not this year so no treatments are necessary.

McCook County
grown spruce?

What might be the problem with this

The sample contained the bluish-white resin blisters commonly associated with cytospora canker. This is a very common canker disease of mature (more than 20 years old) Colorado spruce and the infection will often result in the loss of the lower branches. Unfortunately the only control is to prune out infected branches as they decline.

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