

# Pest Update (May 31, 2017)

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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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**Plant development for the growing season**



The vanhoutte spireas, one of our most common spring flowering shrubs, are now in full bloom in Brookings. The arching branches are lined with small clusters of pure white flowers. This is an old-fashion favorite and usually too large for the modern single-story home (since the shrub can become 6 feet tall) but it is one of the prettiest signs of mid-spring.

**Treatments to do now**



**Cottonwood borer treatments can begin soon.**

The adults will begin to emerge in June to lay eggs at the base of the trunk of young cottonwood trees. This is an unusual insect in that you probably will not see the emergent holes from the adults as they may emerge underground, from the root flare, and burrow up to the soil surface. The adults feed on the leaves – mostly the petiole – resulting in premature leaf drop but the biggest problem is the feeding activity of the larvae. The larvae upon hatching quickly burrow in the lower trunk and roots. The tunneling results in disruption of the movement of food from the leaves to the roots and also reduces the structural strength of the trunk so often the young trees snap off close to the ground. Management use to be digging out the larvae with a pocket knife in late August but I doubt many people have that much time on their hands. The easiest and most effective is to treat the lower trunk with a permethrin product anytime between now and the third week of June (note: read the label carefully, not all permethrin products are labeled for borers).

In addition to the cottonwood borer (*Plectrodera scalator*), we also have a **poplar borer** (*Saperda calcarata*). The primary difference between the two on cottonwoods is that the cottonwood borer attacks young trees and these often break off at the ground, while the poplar borer attacks mature trees and its activity results in stem dieback. The poplar borer has creates ribbons of finely shredded wood.





**We should begin shearing pines now.** Pines set only terminal buds, not along the new shoots as do spruce and fir, so the only time to shear them, removing a portion of the current season's shoot growth, is during the candle phase where the expanding new shoot is still tender. Removal of a portion of the shoot during this time period will allow the new shoot to set buds. If the pine is sheared after the new growth has completed expansion and hardened, no new buds will be set and the shoot will dieback after the older needles are shed, usually in a couple of years. Shearing begins now and can be performed until the new needles along the candle are about  $\frac{1}{2}$  the size of the older needles. After that time, probably in a few more weeks, it will be too late. Shearing is only necessary if shaping an ornamental pine such as a mugo pine to keep it more compact. Other than Christmas trees (and mugo pines) we do not usually shear pines for a particular shape.



## Timely Topics



**Pine male cones** are creating some questions this past week. I have received calls asking what this dust is coming out of their pine trees. The dust is pollen being released from the male cones. These are usually attached near the tips of the lower branches. The female cones, which forms the woody cone with seeds, are higher up in the canopy. Since most conifers produce both male and female cones, the thought is that having the male cones lower in the tree contributes to cross-pollination with other trees.

## E-samples

What would spring be without a picture or two of the ash leaf curl aphid? I often do not receive the first pictures until sometime in June, but apparently the warmer spring has got them started earlier. The **ash leaf curl aphid**, also known as the woolly ash aphid (*Prociphilus fraxinifolii*) is showing up across the state again as it does every summer. The symptoms are curled leaves forming rosettes at the ends of ash shoots; particularly the rapid growing terminal shoots



of young trees. If you unfolded the leaves you'll find little "fuzz balls" that are aphids. You might also find lady beetle larvae that are feeding on the insects. Treatment is usually either 1) letting it be since any treatment will not uncurl the leaves or 2) spraying the foliage with an insecticide containing acephate. This chemical is a systemic so will be absorbed by the foliage and kill the aphids as they feed (but not remove the damage). Most other insecticides are contact poisons and will not reach the aphids living inside the curls. A soil drench systemic insecticide, usually one containing imidacloprid, will not be absorbed fast enough to provide any control for the aphids

this year but a spring application next year can prevent the problem from occurring in the summer.

An insect on a string was photographed last week. This is the **fall cankerworm** (*Alsophila pometaria*). The word 'Fall' applies to when the adults fly, not when the larvae are out and feeding. This insect and its cousin, the spring cankerworm, are common leaf feeding insects on many trees species, though most often a problem on elms, boxelder and ash. The larvae eat small holes in the leaves and later will devour all the leaf tissue but the veins. They can be managed by a number of tactics. Banding the tree trunk with Tanglefoot<sup>®</sup> or other sticky material in October will prevent the female from climbing the tree to lay eggs (she cannot fly). Treat the leaves with an insecticide containing either carbaryl, permethrin or spinosad as the active ingredient when leaves are fully expanded and the larvae are beginning to feed.



**Maple anthracnose** (*Discula*) is appearing on maples in eastern South Dakota, an area that has had rain this past few weeks (while much of western South Dakota has been dry). The wet, cool weather has provided the perfect environmental conditions for leaf diseases to develop. Anthracnose is a general term for a number of fungal pathogens that cause leaf spots, blotches and distortions on leaves.

**Maple leaf blister**, a *Taphrina* disease, can also cause spots and distortions which look similar and are difficult to separate on the purple-leaved Norway maple cultivars (and both disease can appear on the same leaf). Managing these diseases with fungicides is generally not necessary as the trees can survive the minor defoliation.



**Maple bladder galls** are beginning to appear on silver maple leaves. Josh, one of the South Dakota Department of Agriculture foresters, sent in this picture of the galls forming on a leaf. The galls are due to the feeding of a very small eriophyid mite called (you guessed it) the maple bladder gall mite (*Vasates quadripedes*). The mites overwinter under the scaly bark of the trunk then move to the expanding leaves in the spring. The mites feed on the underside

of the leaves causing a pouch or bladder to form. Eggs are laid in this bladder and the young mites live and feed within this protective structure. The galls turn color during the season from green to red to black and usually the color is what catches the eye of the tree's owner. The mites and the galls do not harm the tree, the leaves are still able to manufacture food, so no management is needed. Besides, once the galls are noticed, it would be too late for any treatments as nothing can remove the bumps (unlike pimple treatments for acne plagued teenagers!).



**Oak apple galls** are large, rounded plant growths (about 1- to 2-inch diameter) caused by the feeding of larvae of a small cynipid wasp. There are several different insect species that cause similar appearing galls, but they can be separated based upon the size and color of the galls as well as the specific oak host. This gall has a single wasp larva in the hard center that is surrounded by a spongy mass. The gall will dry to a brown, papery, hollow mass

by the time the insect emerges as the wasp adult. The galls typically form on the petiole or midrib of the leaf. There are no effective treatments for these galls, but they rarely harm the tree.

**Oystershell scale** (*Lepidosaphes ulmi*) on aspen in the Black Hills. There are lots of reasons for aspen to decline in the Black Hills but one of the most overlooked agents is the oystershell scale. The adult female scale is immobile and has a hard, gray to brown, comma-shaped shell over her body. The bark on an infested tree has a gray, mottled appearance that contrasts with the otherwise smooth, creamy white to green bark of an aspen.



Eggs overwinter beneath the shell of their now dead mom and begin to hatch in late May. The nymphs (referred to as crawlers) are very small and a pale yellow so very easy to overlook. The females walk around for a few days before finding a suitable place to insert their long tube-like mouthpart beneath the bark. They suck sap from the tree, not directly from the phloem but individual cells so they are not honeydew producers such as the soft scales.

Usually the populations are very well managed by their numerous natural enemies. However, very heavy infestations can result in dieback and decline in the trees. Apply horticultural oil when the crawlers begin to move, about the time lilac flowers begin to fade (late May) but read and follow label directions very carefully to avoid damaging the foliage. Commercial applicators have more effective treatments.



**Pine sawflies** (*Neodiprion*) are out feeding on the pine needles formed *last* year. These insect feed in colonies and will move in union if disturbed, perhaps as a means to frighten predators. These insects usually do not kill the tree as the new foliage that is expanding now will soon replace the foliage lost. The loss of the older foliage does weaken the tree and make it more vulnerable to dying when affected by other stresses such as diplopedia or pine engraver beetle. Sawflies can be managed with an application of an insecticide containing acephate, carabaryl or malathion when the larvae are first observed. The name sawfly comes from the female 'sawing' notches along the edge of the needles to insert the eggs.



**Plum pockets** are a fungal disease of plums caused by *Taphrina communis*. All species of plums are susceptible (as well as some other stone fruits) and the disease is very common in our area. The symptoms begin as white blisters on the small developing fruit. As the blisters enlarge, the fruit becomes distorted and spongy. Eventually the fruit darkens to become grayish and hollow. There is nothing that can be done about the disease now and little even during the appropriate season for treatment as timing is critical. The treatment is a single spray of a copper sulfate fungicide applied *just* before bud-swell (note: do not apply a sulfate fungicide after the leaves form as it will damage them). A second application to the tree after leaf fall in autumn may also be beneficial in reducing the occurrence of the disease the following summer.



A **Rose chafer** (*Macrodactylus subspinosus*) was photographed on a birch leaf. While rose chafers feed primarily on rose and peonies flowers, they also feed on the leaves of birch, crabapple, grapes and roses. The adults, a pale green, slender beetle, emerge from the ground in late May and begin feeding. The females lay eggs in the soil about a month later before dying. The

larval are one of many C-shaped insect we call white grubs. They feed on the roots of grasses and other plants but rarely cause damage to lawns unlike other white grub species.



Other insects that produce C-shaped larvae are May/June bugs and **Japanese beetles**. We had a large outbreak of May/June bugs last year with many ash almost commonly defoliated by these insect. Japanese beetles are a relatively recent arrival into South Dakota. The adults also emerge from the soil in May and one of their favorite foods are linden (basswood) leaves. The feeding by the adult beetles can leave the leaf with a lace-like appearance as they feed on the tissue between the veins which is softer (like eating the cream in an Oreo cookie and leaving the rest). This picture of a linden with damage that appears to be caused by Japanese beetles was sent in from southeastern South Dakota.

## Samples received/site visits

Lawrence County

### Gall adelgids and frost injury on spruce



The galls associated with the **eastern spruce gall adelgids** (*Adelges abietis*) are not as frequently seen in South Dakota as I remember from Michigan, but I still get an occasional sample or picture. However, last week I visited several groupings of white spruce that were covered with the galls. The galls, often described as pineapple-like, are formed by the feeding by the nymphal adelgids. Adelgids are sucking insects that look like aphids but lacking cornicles so honeydew is not produced by these insects. The nymphs feeding causes the gall to form around them and here they remain until late summer where they become winged adults. The females lay eggs on

the same tree or an adjacent one as she is a very poor flier so stays close to home.

The eastern spruce gall adelgid is found on Norway and white (Black Hills) spruce in our state. The insect is widespread in the eastern United States to Minnesota with localized populations found in Montana, Wyoming and South Dakota. A dormant oil can be applied in the fall to kill the adult gall adelgids, but there is usually no need to treat as the damage is minor. However with heavy infestations as are occurring here, they can cause significant twig dieback and occasionally trees can die.



As if the gall adelgid were not enough of a problem, the younger trees showed frost damage from last year. The expanding candles from 2016 were still hanging from many of the smaller trees and all were discolored and brittle.

#### Stanley County

#### Possible emerald ash borer tree (NOT)



I looked at several trees in the Pierre area that were reported as 'possibles' for emerald ash borer. The first tree was a street tree that appears to have had a tangle with a car several years ago and lost. There was a large area of dead bark on the lower trunk of the tree. There were also many exit holes from the clearwing ash borer. The exit holes created by this native insect are round and almost pencil size. This is a common insect in damaged or young ash. The second tree was also showing some exit holes from the clearwing ash borer and had extensive dieback. The dieback may be related to the flood event that occurred along the river in 2011 (trees can decline years after this stress), but ash presenting dieback are a common sight through South Dakota.



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