Pest Update (April 29, 2009)

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John Ball, Forest Health Specialist, Extension Forester

Email: john_ball@sdstate.edu
Phone: 605-688-4737
Samples sent to: John Ball
Horticulture, Forestry, Landscape and Parks
Rm 201, Northern Plains Biostress Lab
North Campus Lane
South Dakota State University
Brookings, SD 57007-0996

Available on the net at:
http://www.state.sd.us/doa/Forestry/educational-information/Pest-Alert-Archives.htm.

In this issue **pg**

Plant development (Phenology) for the growing season

We are slipping even further behind normal this year. Usually serviceberries would be in full bloom in Brookings during this week and they are still in the bud stage. Crabapple buds are just now beginning to expand. Many of our typical early spring treatments, the first apple scab spray for example, that start in mid-April may be pushed back to late April and early May.

Treatments to do soon

Apple scab and cedar-apple rust – The apples and crabapples buds are beginning to swell so the treatment is very soon. Please see the last issue of the *Update* for more information on treatments.

Spruce needleminer treatment – the larvae will begin moving to form their webbed nest and resume their feeding – a spray of high-pressure water will knock them off the tree though be sure to rake up the fallen needles (and larvae) after the spray. The other approach is spray acephate (Ortho Systemic Insect Killer) to kill the larvae as they begin moving out onto the foliage. Remember to spray inside the canopy, not just the exterior. Actually "power washing" the lower canopy of the spruce is a good way of cleaning off all the dead and dying needles as well as some insects and diseases. Be aware the tree will appear a little more open afterwards!

Tent caterpillars can be treated right now by pruning, **but do this quickly as the eggs are starting to hatch!** Tent caterpillars, eastern, forest and western, are common defoliators of mountainash, cherry, crabapples 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 and some will already have fine webbing around them as the eggs are hatching. 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.

Zimmerman pine moth control should begin now. If the pine has pitch masses around the junction of the branches and trunks this is a good indicator that the trees are infested and should be treated. The most effective treatment is an application of an insecticide containing permethrin as the active ingredient applied as a trunk drench.

E-samples

Flooding has been a problem in parts of western and northern South Dakota. The flood waters are receding now but many trees and shrubs are still standing in water or are in very water saturated soils. Brian, our service forester in Lead, sent me this picture of recent flooding at Shadehill. The prognosis for flooding injury depends upon the species, the water condition and the duration. Cottonwoods and willows,

particularly young trees, can tolerate flooding better and longer than most trees but even these trees can be affected if the flooding extends into the growing season. At the opposite extreme most evergreens and fruit trees have a very low tolerance to flooding and even several days of saturated soils can lead to decline or death. Most deciduous trees can survive brief periods of flooding, a week or so, if the water is cold and moving and the waters recede before the trees break bud. If the flood waters warm, become stagnant, or persist while the tree is beginning its spring shoot growth then the tree may suffer dieback or death as a consequence of its roots declining due to the lack of available oxygen.

"What is wrong with my juniper? There are all these bumps on the tips." ThIs a common question right now and generally the answer is there is nothing wrong with the plant, the "bumps" at the tips of the twigs are just the expending shoots and flowers. This is a normal spring process and it not an indication of a problem. The next question I'll receive regarding junipers is about the "dust" that flies out as a branch is shaken. This will be the pollen from the flowers.

Pine needle scale is still in the egg stage and it is too early to treat. Jessie, the forest health forester in Rapid City, sent me this picture of the eggs that are beneath the scales. The female scale lays the eggs beneath the scale covering and about the end of May or early June, a week after Tartarian honeysuckle blooms. At that time the infested plants can be treated with a 2% horticultural oil or insecticidal soap to kill the newly hatched crawlers. Infestations often appear heavier than they really are as the long dead female scales can remain attached to the older needles for a couple of years.

Samples received

Clark County (Extension) **These shoots are from some ash trees that had their leaves dry up last fall and there are now black dots or growths on them. What is the problem?**

This is from ash rust (*Puccinia sparaganioides*), that fungus disease that affected thousands of ash trees last summer. The disease was far worse than what we have seen in several

decades and numerous trees suffered shoot dieback as well as premature defoliation of the distorted leaves. We do not know if the disease will be as widespread or severe as it was last year. The only treatment is to apply a fungicide containing the active ingredient myclobutanil on the leaves as they just begin to open. Unfortunately there are very few fungicides available to homeowners for control of the disease and the best option may be to contact a commercial applicator to provide the control. Generally this is not a disease that control is recommended as usually it is not severe enough to warrant treatment.

Dewey County (Extension) **These are some browning pine needles on trees next to a parking lot. Some of the trees are green and some are brown. They used Roundup to spray the parking lot last summer.**

There are no signs of an insect or pathogen on the twigs or needles so most likely the cause for the discoloration is environmental or chemical. The other possible is the symptoms are due to a root or stem problem that cannot be determined from the sample. Roundup drift onto needles can result in browning and it may be the reason for the discoloration.

Lake County (Extension) **This is a 15-year old spruce with browning and falling needles. The problem started last fall.**

The needles are being shed from the new and older branches and I suspect this is due to cytospora canker, one of the most common diseases of spruce in our region. We usually start seeing problem with this disease by the time the trees become 15 or 20 feet tall – just when they are looking their nicest! The disease affects the lower branches first with infected branches having the needles brown then fall prematurely until the entire branch is bare. If you look into the tree, towards the base of these bare branches, you'll notice these bluish white patches of resin. They sometimes almost look like bird droppings. These are the cankers and unfortunately other than removing the dead and dying infected branches during dry weather, there is little that can be done to stop or slow the infection.

Sully County (Extension) **This poplar is in the center of a double row and appears to be dying. The next tree seems to be affected as well.**

The branch samples provided are covered with stem canker. The canker appears to be Cryptodiaporthe canker (formerly known as dothichiza canker) a common disease of cottonwoods and many hybrid poplars. The cankers appear on small branches and stems and callus and woundwood often forms around the margins of the cankers as tree attempts to overcome the disease. There were also borer holes along the stems and most likely these were popular borers based on the gallery characteristics

though no insects were found in the samples. These two stressors, the canker and the borer, occur in weakened hosts and probably are indicators that the trees are declining and dying. The best option may be to remove the declining trees and destroy the wood.