EXTENSION
UtahStateUniversity

Landscape IPM Advisory

UTAH PESTS

Weekly Pest Update for Woody Ornamentals, Utah State University Extension, **April 9, 2014**

Insect/Disease Information

WINTER INJURY OF EVERGREENS AND DECIDUOUS TREES

While the eastern U.S. was suffering through the polar vortex, Utah's winter was pretty mild. In early December, however, there was a sharp drop in temperatures from warm conditions to the high negative digits over a 24-hour period. This event resulted in bud kill, dieback, and dessication on some trees.

Trees that are somewhat more tender or not entirely adapted to the zone in which it was planted will have some bud kill or death of smaller twigs. To determine if buds are alive or dead, remove a random sample and slice them in half. Dead buds will be almost hollow or completely brown inside. By now, live buds have started to plump up and expand, and will be easier to detect. Flower buds are usually less hardy than leaf buds, so if you notice fewer flowers on ornamental trees and shrubs, the reason may be winter kill.

Across much of Utah, many evergreens are showing brown leaves and needles. This type of injury is due to dessication, partly from the cold temperatures in December, and partly from the lack of snow cover in January. Evergreen plants transpire throughout the winter months, particularly on windy or sunny days. However, once the soil freezes, the plant's roots are no longer able to absorb moisture and cannot replace the moisture lost from the leaves or needles. While the injury occurs during the winter months, foliage don't start browning up until late winter or early spring. Damage is most often located on the south and west sides of evergreens. Trees that are especially injured may have experienced drought conditions last summer.

Plants with dessication injury still have viable buds. The brown foliage will eventually drop and when live buds emerge, the new growth will "cover" the injured areas. Evergreens that have sustained light to moderate damage will look much better by late spring.

What to do Now and This Summer

If you suspect dieback on hardwoods or see needle burn on conifers, you can help trees along this season. Apply a light application of fertilizer now and water the trees during the dry months to encourage new growth and speed recovery. Any parts of the plant that are still completely brown or bare of leaves or needles by early June are dead, and should be pruned out.

What's In Bloom

(Salt Lake City area)

Andromeda: end bloom
Barberry: begin bloom
Chanticleer pear: begin bloom
Currant: full bloom
Forsythia: full - end bloom
Japanese flowering cherry: bloom
Kwanzan cherry: begin bloom
Norway maple: bloom
Quince: begin bloom
Serviceberry: full bloom
Spirea: begin bloom
Star magnolia: full bloom

Insect/Disease Activity continued from previous page

IPS ENGRAVER BEETLES

Hosts: Spruce (primarily) and Pines

Adult beetles of the spruce Ips (*Ips hunteri*) are beginning to emerge from spruce trees and will then mate and lay eggs on new hosts. If your spruce trees have been affected by Ips, now is the time to treat.

There are several species of Ips beetles that attack conifers, primarily pines and spruces. The adults are tiny black beetles that are attracted to certain chemicals that the host trees exude. They bore into the bark of host trees and create an egg gallery in the inner bark from which larvae hatch and then bore laterally. The spruce ips will typically only feed in the top part of the tree.

Treatment:

The beetles are attracted to stressed or wounded trees, so keeping your conifers as healthy as possible is the best measure of defense.

- Prune trees properly and dispose of debris or any fresh-cut trees.
- Provide supplemental watering.
- Drenching the trunk of specimen trees with carbaryl or permethrin can prevent successful entries, but the material must be present before the beetles enter the tree.
- A second treatment may be necessary because there are several generations over the summer.

White Pine Weevil

Hosts: Spruce

White pine weevil adults start becoming active at forsythia full bloom. During that time, and within two weeks afterward, is the time to treat, targeting the adults.

Insect/Disease Activity continued from previous page

This pest attacks the terminal leader of blue spruce in many parts of Utah. It rarely attacks pines in the West, but is a common pest of pines in the East.

Adult weevils spent the winter in leaf litter. In spring, females emerge from the ground and either crawl up the bark to the top of a nearby tree or will fly a great distance to the top of another host.

They feed on tissue just below the terminal bud, and soon after, they lay their eggs within the feeding sites. A single female can lay about 100 eggs on various host trees. The eggs hatch into grub-like larvae that bore into the terminals, resulting in wilting and tip dieback, which is evident by mid summer.

Treatment:

- Thoroughly spray the upper portion of the tree (bark and needles) with a pyrethroid insecticide such as one containing the ingredient bifenthrin or permethrin. On larger trees, homeowners should get a professional to apply the insecticide. Depending on the product used, a second application may be required 2-3 weeks later.
- At the first sign of wilting (in summer), prune out the shoot and destroy (the larvae will be inside).

Fire Blight

Hosts: Ornamental pears, Hawthorn, Quince

Fire blight is a bacterial disease that primarily infects trees through open flowers. On ornamental trees, usually only the infected shoot will die. (On the other hand, highly susceptible apple and pear varieties are sometimes killed.)

An infection happens when bacteria are spread into open flowers via wind-driven rain or by pollinators. Infected shoots will wilt and eventually turn brown and die. If these infected shoots are not pruned out, each one will harbor the bacteria for future infections. And if you have apple or fruiting pears nearby, the disease can spread to those trees.

Treatment:

A spray of streptomycin can help to prevent fire blight infection. But because it is an antibiotic, it should be used very carefully. Only spray when trees are in bloom, and the day before or the day after a wetting event (2+ hours of rain, dew, sprinkler irrigation, etc.)

Alternatively, you can avoid spraying and instead, prune out the infection just as it becomes visible. This will mean watching all the shoots that had flowers weekly, starting about 2 weeks after full bloom. Remove twice the length of the visible dead plant tissue. Do not prune in wet weather.

Lilac-Ash Borer

Hosts: Ash species, Lilacs, Mountain-ash, Privet

Lilac-ash borer adults will be flying and laying eggs on trunks when the common lilac is in full bloom. The bark of ash trees should be treated about 7 to 10 days after full bloom of lilacs and again 2 to 3 weeks later, depending on the product used.

Lilac-ash borer attacks green and white ash, mountain-ash (*Sorbus*), lilac, and privet. There are very few ash trees left in Utah that have not been attacked by at least a few lilac-ash borers. Affected trees have round exit holes on the bark, rough and cracked bark mostly near branch crotches, slowed growth, and some limb dieback.

A heavy infestation can result in trees that are susceptible to breakage in strong winds. Lighter attacks causes branch dieback and localized bark death.

This insect overwinters as a larva inside the host tree and pupates in spring, emerging as an adult moth, usually in early to mid May. Emergence continues for about 6 weeks.

Healthy plants are able to withstand minor infestations, while stressed plants are more susceptible to attack and failure.

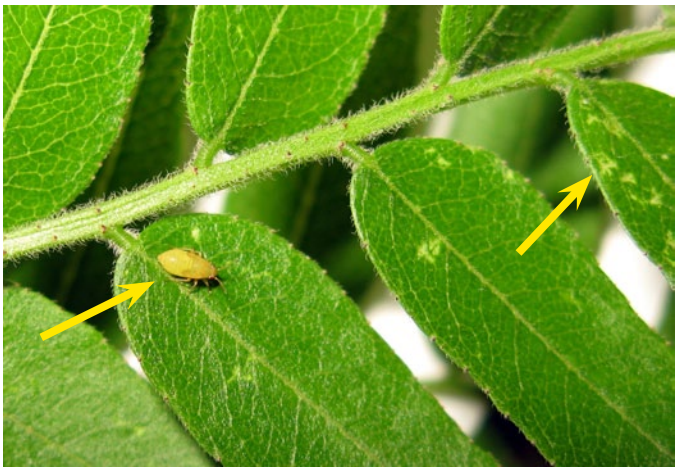
Once larvae are feeding within the tree, there is little that can be done. For chemical control, the best option is to target the adults.

Treatment:

- Small trees can be treated by the home gardener, but in order to get thorough coverage on large trees, treatments should be made by a licensed pesticide applicator.
- Start the first application at full bloom on lilac, and repeat as necessary to keep bark protected over the following 6 weeks.
- Options include:
  - products containing permethrin (Hi-Yield), bifenthrin, or lambda-cyhalothrin (*homeowner use*)
  - chlorantraniliprole (Acelepryn), permethrin (Astro, Covert, Waylay), or bifenthrin (Onyx) (*commercial use*)

Honeylocust Plant Bug

Hosts: Honeylocust



Honeylocust plant bugs have begun to hatch and can be treated now.

The young nymphs feed on newly emerging foliage by sucking out plant juices. Heavy feeding can cause necrosis and distorted foliage, and the bugs themselves can be a nuisance. There is just one generation per year, and they feed for about 6 weeks.

Treatment:

- Materials should be applied now or in the next few weeks for best control.
- Organic options include insecticidal soap (Safer, Concern, Garden Safe, etc.) or horticultural oil (Concern, Lilly Miller).
- Other options include bifenthrin (Tundra, Talstar), permethrin (Aloft, Brigade, Pounce), carbaryl, malathion.

Powdery Mildew:

Hosts: Many deciduous plants, including Ornamental Pears

Powdery mildew is a fungal disease that affects a wide host range. But the species of powdery mildew affecting a plant is usually specific to that host. For example, the powdery mildew on ornamental pear will not affect lilac (that is a different species).

Ornamental pears ('Bradford', 'Callery') are very susceptible to powdery mildew. The fungal species that attacks pears is difficult to control because it overwinters in infected terminal buds. As leaves expand, the fungus sporulates, infecting the succulent new tissue right away. In addition, new infections occur throughout the summer.

Treatment:

- Managing powdery mildew is best done through prevention because it is difficult to treat after it is visible.

- Options include potassium bicarbonate (Kaligreen, MilStop), lime sulfur, myclobutanil (Rally, Eagle), neem oil, horticultural oil (Sunspray, Prescription Treatment, etc.), Rubigan, and many more.

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