

Number 1 - April 17, 2009

Newsletter Changes

The Home, Yard, and Garden Pest Newsletter is changing to an internet only publication that is free of charge. The retirement of our editor for many years, Mary Overmier, the subsequent loss of that position, and a decline in subscriptions has resulted in the cessation of editing, designing, and publication by University of Illinois Information Technology and Communications Services. These professional services were paid by the newsletter subscription fees.

This occurs at the same time that the University of Illinois Integrated Pest Management Program is looking to expand its offerings to clientele. The result is that this newsletter will be published through the IPM program and will also be available at their web site: <http://hyg.ipm.illinois.edu>. The major authors, Nancy Pataky and myself will be editing each other's articles.

All of these changes along with other factors have resulting in the newsletter getting started about a week later than normal. As a result, there will be 19 issues this year rather than the customary 20 issues. The next issue will be two weeks from now, but then there will be weekly issues through May, June, and into July. There will be biweekly issues through September, with monthly issues in October and November.

As always, we welcome your suggestions about the newsletter. We are particularly interested in learning about pest situations that you see so that we can provide better information. Disease reports should be sent to Nancy Pataky at: npataky@illinois.edu, and insect reports should be sent to myself at: pnixon@illinois.edu.--Phil Nixon

Scouting Watch

The prime phenology plant at this time of year for insect pests is saucer magnolia, *Magnolia X soulangiana*. It is nearing the end of its bloom in central Illinois and is in mid-bloom in northern Illinois. Bloom is probably over in southern Illinois.

Insect and other pests susceptible to control at this time throughout the state are spring and fall cankerworm, hemlock eriophyid mite, pine bark aphid, spruce spider mite, and Eastern tent caterpillar. European pine sawfly should be present and susceptible to control in southern Illinois. Zimmerman pine moth should still be susceptible to control in northern Illinois.--Phil Nixon

Japanese Beetle

The soil drench application of imidacloprid, sold as Merit and other

brand names, should be applied to susceptible plants at least two months before adult beetles emerge. With emergence in southern Illinois occurring around the end of the third week of June, central Illinois in late June, and northern Illinois in early July, it is time to make these applications.

Research on emerald ash borer and other pests has shown that application within two feet of the trunk is most effective. Because imidacloprid adsorbs onto dead organic matter, mulch or sod should be removed before a drench application is made. Otherwise, the insecticide will glom onto the dead organic matter and will not be picked up by the tree roots. Once the insecticide has soaked into the soil, the organic matter can be returned. Using a soil needle to inject the insecticide below the mulch or sod eliminates these steps.

Although Japanese beetle adults feed on a couple hundred species of trees and shrubs, those most at risk of severe damage in Illinois are linden, crabapple, birch, willow, and rose. Feeding is heaviest at the top of the tree and moves downward through the season. The beetles sit on top of the leaves and eat holes through the leaf laminae between the veins. They may also eat the upper surface or epidermis of the leaf, consume the interior mesophyll, and leave the lower epidermis which is initially light-colored. These exposed cells soon die and this window-feeding results in thin, brown leaves.

The low winter temperatures that we experienced in central and northern Illinois this past winter may have greatly reduced the number of overwintering larvae. Most Japanese beetle grubs

migrate no deeper than eleven inches into the soil for the winter. They survive freezing temperatures, but can only tolerate them for about three weeks. In central Illinois, the soil froze to about 18 inches last winter; those in northern Illinois froze about two feet deep. They remained frozen for about six weeks. Based on previous experience, this will likely result in only about one-third of the number of beetles emerging than expected. Time will tell whether this prediction is accurate.--*Phil Nixon*

Cankerworms

Spring and fall cankerworms are feeding at this time throughout Illinois. Their primary host is American elm, but they also feed on other elms, hackberry, crabapple, honey locust, and other trees. Heavily attacked trees appear to be slow in leafing out. Closer inspection reveals that the leaves are being eaten as they emerge.

Before American elm was decimated by Dutch elm disease, cankerworm populations periodically became very large in Illinois, removing all of the early spring foliage which resulted in bare trees into June. Since then, this insect has been much less numerous.

The caterpillars are green, brown, or mottled green and brown. Cankerworm larvae are called loopers, or inchworms, because they form their bodies into loops as they move. Spring cankerworm caterpillars have only two pairs of prolegs, located at the posterior end of the abdomen; fall cankerworm caterpillars have two pairs of prolegs and a partial third pair.

While most caterpillars wriggle as they crawl with their three pairs of true legs and five pairs of prolegs, it is more efficient for cankerworms to loop. The larva extends its body out and grabs onto the leaf or twig with its three pairs of true legs located just behind the head. The posterior prolegs then let go and move forward to grab onto the leaf or twig just behind the true legs. In the process, the long, thin abdomen forms a loop. The prolegs then hang on while the true legs release and the caterpillar extends forward.

After feeding through the spring, the mature cankerworms drop to the ground on strands of silk. Pupation occurs in the soil. Adult fall cankerworms emerge in the fall, being the last moths of fall. Males have brown wings and a wingspan of about one inch. Females are wingless and crawl up the tree to lay her eggs. Adult spring cankerworms are similar in appearance to fall cankerworms, but emerge in late winter. They are the earliest moths of spring. Both species' eggs hatch in the spring at bud break.

In the past, bands of Tanglefoot, Tack-Trap, or other sticky substances were applied as bands around the tree trunks to catch ascending females. This effectively eliminated caterpillar feeding. Unfortunately, these substances reduce the diameter growth of the tree. Over several years, the banded area became the narrowest area of the trunk. If this method is used, the corky outer bark is shaved away with a drawknife or other tool and then a band of kraft or other heavy paper is put around the trunk. The sticky substance is then applied to the outside of the paper. This

keeps the sticky substances from contacting the tree.

Scout for cankerworms by sharply striking the branch. Many of the cankerworm larvae will be dislodged from the foliage and hang on several-inch-long silk threads. If caterpillar numbers are high, a spray of *Bacillus thuringiensis kurstaki*, sold as Dipel, Thuricide, and other brand names, should provide control. There are other labeled, effective insecticides, but avoid applying them to trees in bloom to protect honey bees and other pollinating insects.--*Phil Nixon*

Spruce Spidermite

Spruce spidermite and its needled evergreen relatives such as pine mite and juniper mite are active and feeding in the spring. They are present through April in southern Illinois, but are active progressively later farther north. In northern Illinois, these mites are active through May. These mites are also active in late summer and early fall, but treatment timing then is more difficult.

Scout for spidermites by holding a sheet of white paper under a branch and striking it sharply. Many of the mites will be dislodged onto the paper where they can be easily seen. Those that streak green when smashed are feeding on the plant; those that streak red are predatory mites feeding on the harmful species. If predatory mites are numerous, natural control will probably control the damaging mites without miticide application.

Spidermites feed by sucking the juices out of groups of cells. Due to the

removal of the green chloroplasts, these cells turn white, resulting in white-speckled foliage that appears light-green from a distance. Soon these damaged cells die, turning brown, resulting in brown-speckled foliage that appears bronzish from a distance. Widespread, heavy damage results in the death of the plant. Most needled evergreens are attacked by spruce spidermite or one of its relatives, but spruce is the most commonly damaged.

Spidermites are tiny, eight-legged, soft-bodied animals more closely related to spiders than insects. They are so tiny that one hundred or more could sit on the head of a straight pin. Because they are not insects, many insecticides will not control them. Spray a labeled miticide or acaricide such as acequinocyl (Shuttle), bifenthrin (Talstar, Onyx), insecticidal soap, spiromesifen (Forbid), or summer spray oil to obtain control.--*Phil Nixon*

Plant Clinic Still Going Strong

Despite rumors to the contrary, the Plant Clinic at the University of Illinois will be opening again this season. Opening day is May 1, 2009. Although May 1st is a Friday, we will be starting business that day. Do not send samples before that date because mail service will not begin until then. Sending samples to the clinic earlier may result in samples lost in the mail.

The University of Illinois Plant Clinic provides a service to the general public, offering unbiased plant problem diagnosis and access to opinions of specialists in multiple disciplines,

funneled through one location. There is a support fee for all plant samples.

For those of you who have never used the Plant Clinic services, a web site with details can be found at <http://plantclinic.cropsci.illinois.edu/>. There are few changes from the 2008 season. One that is probably not too surprising is an increase in sample fees. We have not increased fees for over 10 years; and the increase this year is minimal. Basic samples, including those needing laboratory culturing, are now \$15.00 (previously \$12.50). Both pinewood nematode and soybean cyst nematode samples are \$20.00. Complete soil nematode assays remain at \$40.00. If you plan to send soil for a complete nematode analysis, please call first at 217-333-0519. All sample fees are required with the sample.

When submitting a sample for diagnosis, be sure to include live, symptomatic tissue. It is always a good idea to send a healthy portion along with the affected, but that is not mandatory. A specimen data form is required with each sample. Forms are available on our web site or in extension offices. The more information provided, the better we can accurately assess the problem. Feel free to include photos or a disc of digital images with the sample. We generally prefer three pictures: one picture of the entire planting or landscape, one of the affected plant showing the base at the soil line, and a close-up of symptoms. Always take pictures with the sun at your back. Send only clear images. Remember, if the pictures are blurry for you, they are still blurry when they arrive at the Plant Clinic.

The Plant Clinic processed 2,434 plant samples in 2008. Only four diagnosticians were employed to handle plant samples, but an additional 19 campus specialists provided input from disciplines that included weed science, nematology, plant pathology, entomology, horticulture, and agronomy. Additionally, 850 telephone inquiries, 505 walk-in diagnoses, and over 500 electronic inquiries were processed through the Plant Clinic from May through mid-September. We look forward to another productive year in 2009. If you have specific services or testing needs, let me know at npataky@illinois.edu. We can provide ELISA testing for many pathogens and will accommodate for specific tests when there is a need.--Nancy Pataky

Cedar-Apple and Related Rusts

Cedar-apple rust is a common rust disease on Illinois edible apple and crabapple. Two other closely related rusts in Illinois are cedar-hawthorn rust and cedar-quince rust. As you might guess from the names, two hosts are associated with each disease. Half the life cycle occurs on redcedar or other juniper species. A species in the Rosaceae family hosts the other half of the life cycle. Cedar-apple is the most common. We occasionally see cedar-hawthorn rust, but it only causes some aesthetic damage, seen as leaf spotting on hawthorn. Cedar-quince rust is actually the most damaging to landscape trees. On hawthorn the disease causes deformed swellings and galls, infected fruit, and stem tip dieback. This disease may also infect serviceberry, flowering quince, cotoneaster, crabapple, pears, and mountain-ash. Still, the most

common host seen at the Plant Clinic is hawthorn.

If you choose to control these diseases, focus on protecting the rosaceous hosts: apple, crabapple, or hawthorn. Galls form on the cedar/juniper hosts, but these galls do not harm the cedar/juniper. Soon, however, the galls will swell. Spore horns will form. A series of spore releases occurs and rust spores will blow onto nearby apple, crabapple, or hawthorns. As of this writing, the cedar apple rust galls in Champaign looked like those in the image. If you are to protect the alternate host, you need to use sprays that will protect the host when spores from these galls invade. Moderate temperatures (50s and 60s Fahrenheit) and moist conditions favor infection of the alternate host.

Chemical options for control are listed in the *Illinois Commercial Landscape and Turfgrass Pest Management Handbook* or the *Illinois Home, Yard, and Garden Pest Guide*. Fungicides are preventive, intended to protect plants from infection. Many chemical options are listed. Review the information at the end of the chapter that lists the mobility of each product. Generally systemic products will withstand effects of rain, will provide better protection, but are more expensive than contact chemicals. Sprays are applied to hawthorns as flower buds begin to open. Sprays are continued until 1 to 2 weeks past petal fall.

If these diseases are problems annually, you may want to consider a more permanent solution. Resistant varieties are available to many of the rust

diseases. English hawthorn is reported to be resistant to hawthorn rust. We do not know of any resistance of hawthorn to cedar-quince rust. Thornless cockspur hawthorn and Washington hawthorn are quite susceptible.

If cedar-apple or related rusts have been a problem, try the following:

1.) Where possible, try to keep redcedars and the alternate hosts separated. Although spores can be blown a mile or more to the alternate hosts, most infections occur within a few hundred yards (several lengths of a football field).

2.) Use resistant species of junipers, crabapples, apples, and hawthorns in new plantings. A good source of information on crabapples for Illinois can be found at http://www.extension.uiuc.edu/IPLANT/plant_select/trees/Selecting_Crabapple_s.pdf (Adobe PDF). Resistance information is provided for cedar-apple rust, scab, and fire blight. Juniper resistance information is available in *Diseases of Trees and Shrubs*, 2nd edition, by Sinclair and Lyon.

3.) If fungicides are the chosen management option, make sure you start applications as stated above, continuing according to label recommendations until 2 weeks after petal fall. That time period represents the most common window for infection by these rust pathogens.

For more information on Cedar-Apple and Related rusts, refer to the fact sheet on these diseases, RPD #802, [Rust Diseases of Apple, Crabapple and Hawthorn](#) (Adobe PDF). This report is available free of charge. For those who

grow edible apples, take a look at the [Illinois Fruit and Vegetable News](#).--
Nancy Pataky

Spring Clean-up for Plant Disease Management

As we look around the landscape now we see fresh, new growth emerging. There is not a great deal in the way of disease problems at present. To help keep it that way longer, try some of these common sense spring clean-up tips.

Once the threat of a major frost is past, remove old foliage from around annual and perennial beds, grasses, and weedy areas. Many diseases caused by fungal pathogens, such as Cladosporium leaf spot of peony or anthracnose of hosta, will over-winter on old, infected foliage. Tender new spring foliage is more susceptible to fungal infection than older, thickened leaves. Spring weather is usually cool and moist, favoring fungal growth. Removing the old, infected foliage will reduce the amount of fungal inoculum that might otherwise infect in the favorable spring conditions.

Remove dead wood in trees and shrubs. Most of the wood rotting fungi and canker fungi invade stressed or injured wood. They will, however, move from a dead stem into the older wood in the same plant. Now is a good time to remove dead or cankered wood. It is easy to spot against the new growth. Examples include dead branches from Cytospora canker on spruce, rose cane cankers, and stems of redosier dogwood killed by winter stress and subsequent canker fungi. If you are removing dead wood from pears, disinfect pruners

between cuts to avoid spread of potential pathogens such as the bacterium causing fire blight.

Pines infected with *Diplodia* can benefit from spring clean up. Remove the dead stem tissue. Rake and remove pine cones where this fungus overwinters.

It is usually a good idea to avoid putting diseased material in compost piles. Infected foliage should be safe if the composted material is allowed to decompose. When in doubt, find other means of disposing of diseased plant material.--*Nancy Pataky*