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First Issue for 2007

This is the first issue of the *Home, Yard, and Garden Pest Newsletter* for 2007. We will have 20 issues, bi-weekly during April, followed by weekly issues from May into early July. From July through September, the schedule switches back to biweekly, finishing up with monthly issues in October and November. This schedule is meant to provide issues when pest-management decisions are most critical.

This newsletter is for professional horticulturists, including landscapers, arborists, nurserymen, Christmas tree growers, golf-course superintendents, sod growers, lawn-care operators, and garden-center operators. Each issue will focus primarily on the diseases and insect pests that are prevalent or are likely to be prevalent throughout the state. Occasionally, there will also be weed articles.

Realize that Illinois is 400 miles long from Cairo to Rockford. As the spring progresses, insect pests and many diseases become prevalent a month earlier in the southern part of the state than in the northern. Similarly, pests may be present a month later in the fall in southern Illinois. We will try to indicate where pests are occurring so that you can determine when they are likely to appear in your part of the state.

The authors welcome sightings of pests, particularly ones that we may be less likely to be aware of. With the primary authors located in Urbana, we may not be aware of something happening far away from us. The authors are also open to comments about the articles in the newsletter. The author's name is given at the end of each article. Contact information for the authors is given at the end of the print version of the newsletter. Click on the author's name at the end of the article in the online version of the newsletter to contact the author via e-mail. (*Phil Nixon*)

New Pest Management Handbook Available

The 2007 *Illinois Commercial Landscape and Turfgrass Pest Management Handbook* is available at local Extension offices and online at <https://pubsplus.uiuc.edu/ICLT-07.html>. This biannual handbook provides U of I Extension recommendations for the control and management of weeds, diseases, and

insect pests in commercially managed trees, shrubs, turf, flowers, and groundcovers. Its cost is \$16.50 plus handling and shipping. (*Phil Nixon*)

Plant Clinic Preparing for 2007

The University of Illinois Plant Clinic will be open for business on May 1, 2007. Please do not send samples until that time because no one will be there to open the door to the mailman. The lab is located on the U of I campus, west of the historic round barns. The mailing address is Plant Clinic, 1401 W. St. Mary's Rd., Urbana, IL 61801; phone, (217)333-0519. Hours are Monday to Friday, 8 a.m. to noon and 1 to 4:30 p.m.

The Plant Clinic is a diagnostic lab that specializes in identification of disease pathogens, nematodes, insects and insect injury, weeds and herbicide injury (field crops only). Any plant problem submitted to the Plant Clinic will be assessed for cultural and environmental problems, limited only by the amount and quality of information provided. Sample types may include ornamental plants, fruit crops, vegetables, weeds, field crops, or turfgrass.

The clinic Web site (<http://plantclinic.cropsci.uiuc.edu/>) provides information on how to submit a sample, sample fees, sample forms, clinic services, and links to other sites. Diagnostic responses and information on how to manage the problem will be returned to clients by U.S. mail and electronically (if an e-mail address is provided). Extension personnel, agricultural consultants, homeowners, and those in the green industry are our typical clients, but anyone may submit a sample. Be advised, however, that there is a small fee for all samples, regardless of sample source. The fee schedule is posted on the Web site and has not changed from last year. Most standard testing is \$12.50 per sample. Specialty tests require more time and equipment, thus a higher expense. Payment must accompany the sample.

The Plant Clinic is a member of the North Central region (<http://www.ncpdn.org/DesktopDefault.aspx>) of the National Plant Diagnostic Network (NPDN) and is the only Illinois lab recognized as an official NPDN lab. Plant Clinic personnel have been upgrading diagnostic techniques and now help monitor

for Ramorum blight (aka sudden oak death), Asian soybean rust, legume viruses, emerald ash borer, giant hogweed, and other plant pathogens and pests that might be exotic invasive concerns in Illinois. Clinic data is recorded on a national database to help monitor pathogen and pest threats. (*Nancy Pataky*)

PLANT DISEASES

Three *Gymnosporangium* Rusts

Most of our readers are well aware of three *Gymnosporangium* rusts on trees. These are **cedar–apple**, **cedar–hawthorn**, and **cedar–quince** rusts. Two hosts are needed for the diseases to be maintained in the landscape. In all three cases, the evergreen host is eastern red cedar and the deciduous host is a plant in the Rosaceae family. Although cedar–apple rust is of greatest concern in apple orchards, it is not nearly as problematic in crabapple plantings. Resistance available in most of the new crabapple cultivars and fungicides used to control scab also controls cedar–apple rust on this host.

The current disease (and associated host) of concern in the landscape is cedar–quince rust on hawthorn. Some ask why this disease is not called cedar–hawthorn rust, but that name is associated with a different *Gymnosporangium* rust that causes only leaf spots. Cedar–quince rust is the most damaging to hawthorn because it affects fruit, stems, and petioles. The galls that form on hawthorn stems give the stem a roughened, swollen appearance that is much more obvious when the orange masses of spores are visible. The pathogen kills fruit and girdles twigs, causing tip blight on hawthorn. You can see last year's damage now because blight twig tips do not develop leaves. The twig tips fall off, or you can help improve tree appearance by pruning them out.

Galls of the *Gymnosporangium* rusts can be found on red cedar now. They are hard and pitted. Internal tissue is solid. Insect galls may appear similar but contain chambers, exit holes, or insects. As spring temperatures increase and moisture fluctuates, the red cedar galls form orange, gelatinous spore masses. These spores blow to susceptible hawthorns, where stem galls are initiated.

Resistant varieties are the easiest disease control for these rusts, but unfortunately there is no resistance in hawthorns to cedar–quince rust. In addition, the thornless cockspur hawthorn and Washington hawthorn are both very susceptible to this disease. So how can we control cedar–quince rust on hawthorn? Look for swollen stem galls on red cedars in the area. Either remove this source of infection (spores blow from the red cedars to the hawthorn) or spray the hawthorns

to protect them from spores that will soon be moving from the red cedars. Spray options are listed in the Illinois commercial and homeowner pest management handbooks, available online at <https://PubsPlus.uiuc.edu/>. Sprays are protective and must be initiated as hawthorn flower buds begin to open. For complete protection, the sprays must continue according to label recommendations until 1 to 2 weeks past petal fall. Look at the chemical options at the end of each chapter to see which ones have systemic mobility. The systemic products have some kickback activity if you are bit late in getting the sprays out; and they are less likely to be affected by weather conditions. Product cost is higher for the systemic chemicals, compared to protective-contact costs, but you have fewer sprays and more reliable disease control.

For more information, refer to *Report on Plant Disease*, no. 802, "Rust Diseases of Apple, Crabapple, and Hawthorn," available on the Web at <http://www.ag.uiuc.edu/%7Evista/horticul.htm>. (*Nancy Pataky*)

What Is Killing My Turf Now?

I receive many questions about dead turf in March and April from homeowners wondering what disease has killed parts of their lawn. When we get a question about dead turf at this time of year, we usually look to something that has happened in the past. Sending a sample of dead turf to the lab probably won't provide a definite answer at this time of year, unless a snow mold fungus was present and has left telltale mycelial growth or overwintering structures. For the most part, dead areas do not yield the original pathogen. Saprophytic fungi have invaded the dead areas, and the original pathogen is unlikely to be revealed. Wait until symptoms appear again on actively growing turf, then sample the margin of the affected area—the area between dead and healthy grass. This is where the pathogen is most prevalent, if indeed a pathogen is involved in turf decline. At the U of I Plant Clinic, we usually ask for a 4-inch-by-4-inch sample of turf from the margin of the affected area. The sample should be deep enough to include roots. Wrap the soil and roots in plastic and put a rubber band around the sample at the soil level, leaving the blades out of the plastic. Follow submitting instructions on the Web site at <http://plantclinic.cropsci.uiuc.edu/submit.html>.

Meanwhile, rake and remove the dead turf. Overseed with a blend of grass varieties adapted to your area. Visit this Extension site for information on lawn grasses: <http://www.urbanext.uiuc.edu/lawnchallenge/lesson1.html>. Now is a good time to overseed, but be certain not to use a preemergence herbicide on the seeded area. Your weeds would not germinate, but neither would your desirable grasses.

Sometimes it helps to look at the turf disease possibilities. Don't rely on images alone, because many noninfectious problems can look like diseases. U of I Extension has a site on managing home-lawn diseases, <http://www.urbanext.uiuc.edu/lawnchallenge/lesson8.html>. Visit this site as a starting place to determining the possibilities. (*Nancy Pataky*)

INSECTS

Periodical Cicada Emergence

We are expecting a large emergence of periodical cicada in northern Illinois this spring. Cicadas are expected to emerge north of a line from northern Iroquois County on the east, dipping southward to northern Sangamon County in the center of the state, and then rising northward to the Moline and the other Quad Cities on the west. This is the Northern Illinois Brood, also known as Marlatt's XIII brood. They last emerged 17 years ago, in 1990.

Avoid planting small trees in heavy-emergence areas this spring. After mating, the female cicada uses her ovipositor, or egg-laying device, to slice several inch-long crevices in twigs and branches to lay their eggs. Small transplanted trees, particularly fruit trees, commonly have a trunk diameter small enough that egg slits are made in the trunk, resulting in the tree snapping off.

Insecticide applications kill huge numbers of visiting cicadas, but analysis of egg-slit trunk damage shows little difference between treated and untreated research plots. In fact, Fredric Miller found similar results in insecticide-efficacy research conducted in the Chicago area in 1990. The only way to protect small trees from serious damage in a heavy-emergence area is to protect the trunk with screening or other material. This is expensive in materials and labor. It is much better to delay small-tree planting for a year or install larger stock, preferably those with a trunk diameter of at least 2-1/2 inches.

Emergence of periodical cicadas is not heavy in many areas, so tree planting can continue there. These areas are very predictable. The memories of people living in particular areas during the 1990 emergence are very useful. Similarly, local newspaper accounts can be useful. Some thought about periodical cicadas and their needs can also help. Realize that these insects require a steady supply of sap-supplying tree and shrub roots for 17 years. Housing developments in which all trees and shrubs were removed prior to building will have few cicadas because the nymphs died when the trees were removed. Similarly, housing developments in areas that were originally farm fields or prairie will have few cicadas due to the lack

of trees. The practice of bulldozing all trees off of a housing development site has been common only since the 1960s, so older housing developments probably will have large numbers of cicadas. (*Phil Nixon*)

Vole Damage Prevalent

With the heavy snowfall that remained for several weeks this past winter, many turf areas in northern and central Illinois are experiencing severe vole damage this spring. Vole damage appears as 2-inch-wide, winding, open runways through the turf. Occasionally, there is a burrow into the soil. Many young trees and shrubs have also been girdled.

Voiles are native mice. Although several species occur in Illinois, all are brownish to black, with blunt faces and short tails. Their bodies are 4 to 5-1/2 inches long not, counting the 1- to 2-inch tails. They eat seeds and plants, including the roots, stems, and leaves of turfgrasses. They also feed on the shoots and bark of trees and shrubs, as well as flower bulbs.

Voiles are fed upon by many predators, including dogs, cats, coyotes, mink, weasels, skunks, opossums, raccoons, snakes, hawks, and owls. As a result, voles are very secretive mammals, hiding in the soil or mulch under groundcovers most of the time. When deep snow remains for several weeks, voles are able to move and feed under the snow without fear of predation. This results in severe damage to turf, trees, and shrubs.

Shrews are commonly blamed for vole runways, as they are frequently seen in them. In reality, these short-tailed, pointed-faced, mammals with 2- to 4-inch bodies are very predatory. A shrew in a vole runway probably killed and ate the vole.

Damaged turf quickly heals as the grass plants on either side of the runways grow over them. This process can be hastened with overseeding. Damaged shrubs typically grow back from the roots; severely damaged trees are usually killed.

Damage is difficult to avoid on turf during heavy snowfalls. Avoiding large areas of thick ground-cover and keeping turf mowed regularly keeps the vole numbers low by keeping down their cover from predators. Young trees and shrubs can be protected with wire screening in the fall around the trunk of small trees or completely covering very small shrubs. Do not mulch more than 1 to 3 inches deep, and pull most of that away from the base of young trees and shrubs in the fall. After heavy snowfalls, shovel the snow away from the base of young trees. Both the mulch and snow removal exposes the voles to their natural enemies, reducing the likelihood of damage.

Although these mammals are susceptible to labeled mouse poisons, it is generally best to avoid using

them in landscapes. House mouse snap traps are too small to effectively trap voles. If baits or traps are used, they need to be placed into the vole burrows or into bait boxes in the runways. Otherwise, it is likely that birds or pets will get into them. (*Phil Nixon*)

Pest Watch

Eastern tent caterpillar has hatched and is numerous in southern Illinois from Mattoon south. Tents already range from 2 to 6 inches long, reflecting the length of time during which various egg masses hatch. Their eggs hatch at and after leaf emergence on crabapple and other rose family hosts, but they do not appear to be numerous in central Illinois. *Bacillus thuringiensis* kurstaki (Dipel, Thuricide) is very effective against this insect when sprayed onto the foliage. Pyrethroid insecticides are also effective, but care should be taken not to spray blooming plants, to avoid harming bees and other beneficial pollinating insects. The caterpillars feed at various times during the daytime but are all inside the tent at night and on cloudy or rainy days. At those times, pruning off the tents is an effective control.

European pine sawfly should have hatched in central and southern Illinois. Look for masses of greenish worms on the foliage of Scotch, Mugo, and other pines. Hand-removal is effective, as are sprays of carbaryl (Sevin) and pyrethroid insecticides. Sawflies are the larvae of wasplike insects. Because they are not caterpillars (larvae of butterflies or moths), *Bacillus thuringiensis* kurstaki is not effective against them.

Zimmerman pine moth can still be controlled in northern Illinois with sprays of permethrin (Astro) or other pyrethroids on the trunk. In central and southern Illinois, it is probably already too late to obtain control, but the recent cold spell may still allow effective control.

Spruce spider mite and other conifer-feeding spider mites, such as pine mite and juniper mite, should be controllable throughout the state. Hold a piece of white paper under infested branches and strike the branch sharply to knock the mites onto the paper to verify their presence before spraying. Mites that streak green are feeding on the tree; those that streak red are predatory mites feeding on the harmful mites. The presence of many predatory mites may make spraying unnecessary. Acequinocyl (Shuttle), bifenthrin (Onyx, Talstar), insecticidal soap, spiromesifen (Forbid), or summer spray oil should be effective. Be sure to get thorough coverage with the spray. (*Phil Nixon*)

Home, Yard, and Garden Pest Newsletter is prepared by Extension specialists from the University of Illinois at Urbana-Champaign and the Illinois Natural History Survey. Information for this newsletter is gathered with the help of staff members, Extension field staff, and others. Karel Jacobs and Donna Danielson of The Morton Arboretum also provide information and articles.

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