



UNIVERSITY OF ILLINOIS EXTENSION

HOME, YARD & GARDEN PEST

College of Agricultural, Consumer and Environmental Sciences, University of Illinois at Urbana-Champaign
Illinois Natural History Survey, Champaign

NEWSLETTER

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PLANT DISEASES

Sparse Spruce

Did you notice last year that patches in your spruce tree had apparently healthy new growth but purplish brown 1-year-old needles? These symptoms are caused by a fungal disease, *Rhizosphaera* needle cast. Affected needles are cast (dropped). Evergreens do not re-foliate along the branch but continue to grow at branch tips. If disease is severe for a few years, bare areas appear scattered throughout the tree. Norway spruces are considered resistant to this needle cast, with Colorado blue spruce a common host.

Want to be certain you have identified this disease correctly? One way is to consult the nearest plant diagnostic clinic, such as the U of I Plant Clinic (<http://plantclinic.cropsci.uiuc.edu/>). There is a fairly simple test you can try on your own to confirm the presence of the causal fungus. This fungus forms black fruiting bodies about the size of a pinhead. In humid conditions, the fruiting bodies emerge through the stomates on the needle. Place some discolored needles in a plastic bag with a damp paper towel. Within 24 hours, these fruiting bodies will be visible in infected needles.

If you had this disease on spruce last year, and if you are able to confirm it now, consider treatment to protect the new growth. Chemicals are effective if the disease is caught early. Two applications are recommended: Spray when the new needles are half-grown (or as soon as the bud caps fall off), again when needles are fully elongated. Some products to choose from include copper (Camelot), chlorothalonil (Chlorostar, Daconil, Echo, Manicure), mancozeb (Protect), or two products that have some systemic activity in the plant: Spectro (chlorothalonil + thiophanate-methyl) or TwoSome (chlorothalonil + fenarimol). Homeowner options are listed in the *Home, Yard, and Garden Pest Guide*. (Nancy Pataky)

Cedar–Apple Rust Galls “Ripe” in Central Illinois

Cedar–apple rust is a fungal disease that requires two tree species to survive. It lives through winter on eastern red cedar. The warm-season host may be apple or crabapple or a few other rosaceous species. Spores move from one host to another via wind, and it is the basidio-

spores that infect apple or crabapple foliage.

With cedar–apple rust of greatest concern in apple orchards, it is not nearly as problematic in crabapple plantings. This is because resistance is available in most of the new crabapple cultivars, and fungicides used to control scab also control cedar–apple rust on this host. If you have had problems with this rust in the past, now is the time to apply sprays to protect your susceptible crabapple cultivars. In central Illinois on April 25, the galls are swelling and will gelatinize in warm, spring rains. Given warm, humid conditions, these spores will germinate and release other spores (basidiospores) that can be easily blown to susceptible crabapples.

Spray options are listed in the Illinois commercial and homeowner pest management handbooks. 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 determine which products 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 wash off in rainy periods.

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/horticult.htm>. (Nancy Pataky)

Be Ready for Fire Blight

Fire blight was common in 2007, setting the stage for a problem this year. Stem cankers left from last year’s infection will provide the inoculum. Warm, wet conditions provide the ideal environment. Many landscape trees are common hosts. Know how to recognize and manage this disease.

Fire blight is a bacterial disease that causes concern to growers with apples, pears, crabapples, and ornamental pears (yes, Callery pear). You might also see infection on other rosaceous hosts, such as cotoneaster, hawthorn, quince, firethorn, and mountain-ash. Fire blight is caused by a bacterium (*Erwinia amylovora*), and the bulk of the infection occurs during flowering when temperatures are warm (mean daily temperature of at least 60°F) and conditions are wet. The causal bacterium may spread by wind, water, equipment, and animals. Rain or insects may move the bacterium from cankers and bark to open blossoms, vigorous shoot tips, and leaves. As long as

warm, wet conditions continue during bloom, the bacterium can continue to infect. Management practices focus on controlling the bacterium during flowering.

Look for water-soaked or wilted new growth that quickly turns brown to black and remains attached to the stem. Also, dark cankers may develop in the wood, especially on edible and ornamental (Callery) pears. Generally, the affected foliage is at branch tip, with a distinct demarcation between affected and unaffected leaves.

Because the bacterium originates on old cankers and bark infection, removal of branches killed by fire blight is extremely helpful in disease control. This should be done when the tree is dormant or when weather is hot and dry. Do not remove infected wood in the spring. Disinfecting pruning equipment is an important step in reducing disease spread. Use 10 percent household bleach or similar disinfectant between cuts. Cut out infected branches, going 6 to 8 inches into the good wood to be certain all infected tissue is removed.

If you are thinking of planting new trees, do a bit of searching for resistant varieties. It will be well worth your search. Among the ornamental Callery pears, 'Aristocrat' and 'Autumn Blaze' have good resistance reports, although we find that sometimes cultivars get mixed reviews. Also refer to the University of Illinois *Report on Plant Disease* on fire blight at <http://www.ag.uiuc.edu/~vista/horticult.htm>.

Pesticides may be used for fire blight prevention. A dormant (early-season) application of copper may be of benefit to kill bacteria as it oozes from cankers. Copper compounds are usually applied before green tip (when green leaf tips begin to emerge from buds). Copper products may include Camelot, Champion, Chipco Aliette, Junction, Kocide, Magellan, Nu-Cop, and Phyton 27. Antibiotics are used in commercial-fruit-production areas to prevent fire blight. Sprays are made during bloom, specifically when no more than 10 percent of the blooms are open on the tree. This year, southern Illinois fruit farms began fire blight sprays the week of April 17. Few antibiotics are available or recommended for ornamental plants. It is best to rely on non-chemical management practices to control fire blight on ornamental plants. A few other helpful management tips include avoiding high-nitrogen fertilizers, which promote lush susceptible growth; removing water sprouts when they are small; and removing nearby neglected pear and apple trees. (*Nancy Pataky*)

INSECTS

Scouting Watch

Saucer magnolia, *Magnolia x soulangiana*, blossoms are opening in northern Illinois. Refer to issue no. 1 of this newsletter for insect emergence and treatment periods associated with this phenological plant.

Painted hickory borer has emerged in central Illinois. This longhorned beetle is about 1 inch long and black, with W-shaped yellow and white lines on the back. It has long, obvious antennae and is very similar in appearance to the locust borer, a closely related insect that emerges in the late summer to early fall. Painted hickory borer attacks dead and dying trees, commonly emerging from firewood and dead branches of not only hickory but also many other species of Illinois forest trees. Because they do not attack healthy trees or healthy portions of trees, they are not considered to be pests.

Paper wasp, **yellowjacket**, and **carpenter bee** mated females are emerging from overwintering sites and will soon be starting their nests for the coming growing season. These insects overwinter in cracks and crevices of tree bark and under loose bark. You are likely to encounter them during tree pruning and removal activities. Particularly on cold mornings, they are likely to be sitting on the bark, warming in the morning sun. Due to being cold, they are sluggish and may not fly or crawl away. Crushing them with your hand is likely to result in a painful sting. For sensitive persons, even a single sting can be life-threatening. (*Phil Nixon and Pat Toohill*)

Asian Longhorned Beetle

The Asian longhorned beetle (ALB) was officially declared to be eradicated from Illinois on April 17, 2008. For an insect to be declared as eradicated, it or its fresh damage must not be found for at least two generations. Although ALB typically has a 1-year life cycle, it can take as long as 2 years. It has been 4 years since the last ALB-damaged trees were found in Illinois. The ceremony took place in the Chicago neighborhood, Ravenswood, where the first ALB in Illinois was discovered in 1998. It was subsequently discovered in several other locations in the Chicago metropolitan area. The beetle attacked and killed healthy maple, birch, horse chestnut, elm, and ash trees.

Illinois is the first state to eradicate the beetle; infestations still occur in New York and New Jersey. Eradication was achieved through the removal of over 1,500 infested trees, and the application of systemic insecticides to about 50,000 surrounding trees on an annual basis. The cooperation of local citizens in tree removal and treatment, as well as the support of the mayor of Chicago and Chicago government was critical in this success.

Although the beetle has been declared to be eradicated, it is impossible to be sure that no more survive in Illinois. It is important to continue to be on the lookout for this severe pest. (*Phil Nixon*)

Emerald Ash Borer Survey Traps

The Illinois Department of Agriculture, in cooperation with the USDA Animal and Plant Health Inspection Service (APHIS), will use purple traps in Illinois to look for emerald ash borer (EAB), an invasive pest that is deadly to

ash trees. The beetle is small and stealth-like in its behavior patterns and is extremely difficult to detect. If not controlled, it threatens to devastate all of the ash species in North America.

The box-kite-looking purple traps will be hung in trees primarily in a 100-mile band on the outskirts of the last known southernmost infested site in Peru, Illinois. The area essentially is a 100-mile wide arc that includes 49 counties across central and northwestern Illinois, where about 2,700 of these traps will be placed. An additional 750 traps will be placed in the Chicagoland area and another 250 in southern Illinois at various high-risk sites, such as tree nurseries and campgrounds.

“It is important to note that these traps will not bring EAB to a noninfested site. They will simply let us know if the beetle is already there,” Warren Goetsch, chief of the department’s Bureau of Environmental Programs, said. Department officials are asking for the public’s cooperation in ensuring that these traps are left alone to “do their thing.”

“We realize these traps may be an eyesore to some and a source of entertainment to others, but for these traps to work, they must be left alone,” Goetsch said. “It’s important that the public is aware of their purpose and helps us keep them in place.” (*Phil Nixon, adapted from Illinois Department of Agriculture news release*)

Emerald Ash Borer Quarantine

First discovered in Illinois in June 2006, emerald ash borer (EAB) has since been confirmed in communities within Kane, Cook, LaSalle, and DuPage counties. A quarantine has been issued for the northeasternmost area of the state in an attempt to prevent its spread. EAB-quarantine-provision compliance is urged for all contractors and public works officials around the state, especially those within the EAB-quarantined area in all or parts of the 18 northeasternmost counties of the state.

The quarantine prohibits the removal of the following items from regulated areas:

1. The emerald ash borer in any living stage of development.
2. Ash trees of any size.
3. Ash limbs and branches.
4. Any cut, nonconiferous firewood.
5. Bark from ash trees and wood chips larger than 1 inch from ash trees.
6. Ash logs and lumber with either the bark or the outer 1 inch of sapwood, or both, attached.
7. Any item made from or containing the wood of the ash tree that is capable of spreading the emerald ash borer.
8. Any other article, product, or means of conveyance determined by the Illinois Department of Agriculture to present a risk of spreading the beetle infestation.
9. Waste haulers must cover regulated material from an

infested area during transport through EAB flight season, which is from June through August.

Anyone convicted of moving prohibited items from the quarantine area without prior certification by an Illinois Department of Agriculture nursery inspector may be fined up to \$500.

How the emerald ash borer arrived in Illinois is unknown, but the department suspects it may have been transported here in contaminated firewood. To avoid the accidental introduction of the beetle to new areas, the department encourages Illinoisans to purchase only locally grown nursery stock and locally cut firewood. Anyone who suspects a tree has been infested is urged to contact the department or their village forester for a consultation.

The entire counties of Boone, Cook, DeKalb, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, LaSalle, McHenry, Putnam, Will and Winnebago are under quarantine, as well as the following.

1. The eastern portion of Ogle County, described as
 - bounded on the north by the northern Ogle County line from Meridian Road to the eastern Ogle County line;
 - bounded on the east by the eastern Ogle County line;
 - bounded on the south by the southern Ogle County line from the eastern Ogle County line to Meridian Road;
 - bounded on the west by Meridian Road or its northern projection from the southern Ogle County line to the northern Ogle County line.
2. The eastern portion of Lee County, described as
 - bounded on the north by the northern Lee County line from Meridian Road to the eastern Lee County line;
 - bounded on the east by the eastern Lee County line;
 - bounded on the south by the southern Lee County line from the eastern Lee County line to the southerly projection of Meridian Road;
 - bounded on the west by Meridian Road or its southerly projection from the northern Lee County line to the southern Lee County line.
3. The eastern portion of Bureau County, described as
 - bounded on the north by the northern Bureau County line from IL Rte 40 to the eastern Bureau County line;
 - bounded on the east by the eastern Bureau County line;
 - bounded on the south by the southern Bureau County line from the eastern Bureau County line to IL Rte 40;
 - bounded on the west by Illinois Route 40.
4. The northwestern portion of Livingston County,

described as
 bounded on the north by the northern Livingston County line;
 bounded on the east by Interstate 55 from the northern Livingston County line to the intersection of Interstate 55 and Illinois Route 116;
 bounded on the south by Illinois Route 116 from the intersection of Interstate 55 and Illinois Route 116 to the western Livingston County line;
 bounded on the west by the western Livingston County line.

The emerald ash borer is difficult to detect, especially in newly infested trees. Citizens should watch for metallic green beetles about half the diameter of a penny on or near ash trees that are showing signs of disease or stress. Other signs of infestation in ash trees include D-shaped holes in the bark of the trunk or branches and shoots growing from its base. Anyone who suspects a tree has been infested is urged to contact a county Extension office. For more information, visit www.IllinoisEAB.com. (Phil Nixon, adapted from Illinois Department of Agriculture news release)

Emamectin Benzoate Approved For EAB

Illinoisans will now have an effective alternative to tree removal in their arsenal against the emerald ash borer (EAB), a deadly, wood-boring beetle that has plagued Illinois and North America long before its initial discovery in 2002.

The Illinois Department of Agriculture on April 15 approved a special local need request for the use of Tree-age™, an insecticide touted as the most effective chemical weapon against EAB. Nearing 100 percent effectiveness, the product, developed by Swiss agrochemical company Syngenta and Massachusetts firm Arborjet, has an active ingredient called emamectin benzoate that is injected

directly into the ash tree’s vascular system, where EAB larvae feast. The direct injection affects only the beetle larvae and will not harm anything coming into contact with the tree such as butterflies, birds and squirrels.

After yearlong preliminary studies, Michigan—and most recently, Indiana—officials have approved the chemical. Based on results in Michigan, preliminary evidence suggests that a single treatment could provide up to 2 years of control.

Ideally intended as a preventive treatment for healthy, non-EAB-infested trees, Tree-age™ is most suitable for trees in close proximity to EAB-infested areas.

“IDA encourages property owners to consult with a certified arborist or tree-care company to discuss treatment pricing and other options suitable for their situation,” says Warren Goetsch, bureau chief of Environmental Programs. “Cost will be a factor for most homeowners. This tool will most likely be used by golf courses and other landscape areas where entire canopies will be devastated, affecting local commerce.” (Phil Nixon, adapted from Illinois Department of Agriculture news release)

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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