



UNIVERSITY OF ILLINOIS EXTENSION

HOME, YARD & GARDEN PEST NEWSLETTER

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

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First Issue

Welcome to the first issue of the 2004 *Home, Yard, and Garden Pest Newsletter*. This newsletter is published 20 times per year through the growing season for arborists, landscapers, lawn-care personnel, golf-course managers, garden-center operators, and other professional horticulturists. We try to provide timely information on disease and insect pests as they are occurring in the landscape. Occasionally, weed information is also included.

Issues will be biweekly in April, weekly in May and June, and biweekly in July through September, with monthly issues in October and November.

Sightings of pests are very welcome, as it helps the authors be more current. Suggestions are always welcome and should be directed to the author of particular articles, whose name appears in parentheses at the end of each article. Suggestions about the newsletter as a whole should be directed to the newsletter coordinator, Phil Nixon. Contact information for the authors is available at the end of the newsletter. (*Phil Nixon*)

PLANT DISEASES

Sudden Oak Death (SOD) Alert

This disease causes a wide range of symptoms on forest and nursery plants. In general, symptoms are of two types: bark cankers that may kill the host and foliar blights that may serve as a reservoir for the pathogen. The host range covers 59 host species.

Last August, when we wrote about SOD, we did not believe this pathogen was going to come to the Midwest anytime soon. Some details about the disease can be found in the 2003 issue 15 of this newsletter. At that time, the pathogen, *Phytophthora ramorum*, had not been found in the United States outside of California and Oregon. That is no longer true.

On March 8, 2004, *Phytophthora ramorum* was confirmed on six varieties of camellias at a nursery in southern California. Since then, other nurseries have also been involved. Plants from these nurseries were sold and shipped to other states. USDA's Animal and

Plant Health Inspection Service (APHIS) staff has been working since March 8 to track shipping records to other states. Each state plant-health regulator now knows which nurseries received shipments from confirmed infection sites. Those nurseries have been or will be inspected. Plants that remain in the nurseries have been placed on hold until they can be tested for *Phytophthora ramorum*. In many cases, however, shipments have been sold to the public and are untraceable. California nurseries have cooperated to help get this disease under control, and many plants have been destroyed. As of March 26, 2004, APHIS has regulated the interstate movement of *Phytophthora ramorum* hosts from all California nurseries.

Recently, three positive cases of *Phytophthora ramorum* were confirmed in north Florida on camellias that originated at a southern California nursery. In Illinois, only eight nurseries received shipments of plants. Three now have plants on hold until sampling and testing can be completed. At this point, *Phytophthora ramorum* has not been identified in Illinois.

Because this disease can cause symptoms that range from cankers to leaf blights, it can be hard to confirm. The USDA will be launching a national survey to determine whether *Phytophthora ramorum* is present in areas of the United States other than California and Oregon. The UI Plant Clinic will assist in testing Illinois samples. In Illinois, it is more likely that the disease will appear first on shrubs that have foliar infections rather than trees with canker infections. Spore formation on foliar hosts can serve as inoculum to other plants and so is of greater concern. Still, many details of spread, infection, and host range are not known. The list of regulated foliar hosts is very long and still expanding. Included are *Vaccinium* spp., *Rhododendron* spp., honeysuckle, *Viburnum* spp., *Camellia* spp., and *Pieris*, but the list goes on.

For more information about SOD, visit the APHIS Web site at <http://www.aphis.usda.gov/lpa/issues/sod/sod.html> or the APHIS PPQ (plant protection and quarantine) SOD Web site at <http://www.aphis.usda.gov/ppq/ispm/sod>.

Also, concise information is presented in a fact sheet on SOD produced by the North Central Region Pest Management Center at <http://www.ncpmc.org/sod/>.

At this point, SOD has not been found in Illinois, and this article is intended as an alert. In upcoming issues, we will announce findings of Illinois testing. You can also check the references above for updates. If you have a plant sample that you think is suspect, call your Extension educator before sending a plant sample to a lab. The University of Illinois Plant Clinic opens May 1 and will be ready to test for this pathogen. Whenever dealing with unknown pathogens of this type, place plant samples in a double layer of zip-lock bags to prevent potential spread of spores. Seal box cracks with strapping tape. New information about SOD and its spread will be provided in upcoming issues. (*Nancy Pataky*)

Fire Blight Management

This bacterial disease can spread rapidly and be devastating to pears (both edible and ornamental), as well as apples and crabapple trees. We see it on cotoneaster, hawthorn, quince, firethorn, and mountainash, as well as a few other species in the Rosacea family. If you have not seen this disease, you'll know it by this description. The newest leaves and flowers wilt, turn brown or black, and remain attached to the infected stems. The stem tips curl over in what is called a "shepherd's crook" symptom. It appears that the branch tips have been scorched with fire, so appropriately the disease is called fire blight. Bacteria quickly move down the shoot to the wood, causing it to turn brown to black as well. The causal bacterium is *Erwinia amylovora*. Symptoms could be confused with frost injury or wind burn, but wood is affected as well with fire blight. Peel back the bark to reveal dead wood underneath. Most labs can confirm the presence of bacteria fairly quickly. Most infection occurs via flowers, but wounds can also serve as infection sites.

If you have had problems with this disease in the past, consider using a resistant variety (or more resistant variety) as a replacement. Another option is to use protective sprays. Sprays are usually timed to protect flowers from infection, as that is the major infection site for this disease. If the disease has been a problem in the past, you can use a copper spray before green tip. Green tip means leaves are just beginning to emerge and you can see green tips on the buds. Most of Illinois is beyond this stage now, but fruit pathologist Dr. Babadoost says it is not too late for some benefit from copper compounds. Copper sprays will help because they are applied to the tree where the

bacterium might have overwintered. They kill the bacterium as it begins to ooze out of these areas. In addition, if storms occur, tissue will be wounded, and the copper sprays may provide additional protection of those sites. Antibiotic sprays are applied to protect the tree from infection during bloom. These sprays are applied when the tree is 0% to 10% bloom or when no more than 10% of the blooms are open on the tree. They provide a system protection rather than the protective/contact action of the copper compounds. Antibiotics are used in commercial fruit production. There are a few products available for use in landscape settings as well, but we do not recommend their use due to resistance concerns. Refer to the *Commercial Landscape and Turfgrass Pest Management Handbook* or *Home, Yard, and Garden Pest Guide* for registered chemicals for your specific host plant. If you wish to use an antibiotic, consult your local garden center or chemical supplier.

It is also helpful to remove cankered wood that may harbor the fire blight bacterium, but do this in the dormant season. Doing so now will stimulate new growth, which is more susceptible to fire blight infection because it is easily wounded. High nitrogen rates should be avoided for the same reason.

Ornamental pears have been particularly hard hit by fire blight in the last few years. Information on fire blight-resistant species can be found on multiple Web sites, but I find conflicting reports on cultivar resistance. Try to use a resistant variety and then keep dead wood cleaned out in the dormant season and use a low level of fertilization. Also refer to the University of Illinois *Report on Plant Disease* on fire blight at <http://www.ag.uiuc.edu/~vista/>. (*Nancy Pataky*)

Plant Clinic Opening/Changes

The University of Illinois Plant Clinic will open this year on May 1. There have been many changes over the past winter, including the use of a new regional software requiring data reporting on a national level. Some new equipment has been purchased, and the clinic has been gearing up to handle some new potential pathogens in Illinois, including the possibility of soybean rust and sudden oak death coming to our state. Already this past winter, the clinic was involved with an outbreak of *Ralstonia* on greenhouse geranium production. We are part of the National Plant Diagnostic Network and will have news to report as the season progresses.

On a client level, fees have changed only slightly to accommodate the increased use of ELISA (enzyme-linked immunosorbent assay) testing. In the past, some ELISA test kits were used at no additional cost

to the consumer. This new fee line will help us cover our costs but will affect only those requesting ELISA testing. Clinic fees for 2004 are as follows:

General diagnosis (including cultures)	\$12.50
SCN or PWN*	\$18.75
ELISA tests*	\$25.00
Other nematodes (usually corn)	\$40.00

*SCN indicates the assay for soybean cyst nematode. PWN indicates pinewood nematode analysis. ELISA tests are specific serological tests. Call first if uncertain of testing needed.

As in the past, payment must accompany the sample for diagnosis to be initiated. Checks should be made payable to the University of Illinois or to the Plant Clinic. Please don't send anything until May 1, 2004. The Plant Clinic Web site is located at <http://plantclinic.cropsci.uiuc.edu/>. (Nancy Pataky)

INSECTS

Zimmerman Pine Moth

Guess what? It is that time of the year to be on the lookout for the notorious Zimmerman pine moth, *Dioryctria zimmermani*, larvae or caterpillars that are actively crawling on the bark of trees. During this period, the larvae are highly exposed and susceptible to insecticide-spray applications, after overwintering in bark crevices in silken webs often referred to as *hibernacula*. Zimmerman pine moth larvae feed on all pines; however, Scotch and Austrian pines are most susceptible. The larvae bore into trees and create masses of pitch at branch whorls on the trunk or on shoots near the terminal leader. The pitch masses resemble galls. Excessive tunneling by the larvae can kill terminal leaders. Heavily infested terminals curve downward, resembling a "fishhook." Repeated trunk attacks by the larvae can cause tops to break off, making the tree unsalable. Young trees are more susceptible to attack by the larvae and are more attractive to adult females for egg laying. This is most likely due to stress from transplanting.

When managing Zimmerman pine moth with insecticides, it is important to use high-volume sprays to thoroughly "soak" the stem and bark, where the larvae are primarily located. Additionally, high-volume spray applications are more appropriate because a thick canopy of pine needles may prevent sprays from reaching the trunk. Pyrethroid-based insecticides such as permethrin (Astro) are recommended and most effective for controlling Zimmerman pine moth. (Raymond A. Cloyd)

Spruce Spider Mite

It is time for one of the "cool mites" to be active. In this case, spruce spider mite, *Oligonychus ununguis*. During this time of year, spruce spider mite will be actively feeding on conifers such as arborvitae, Douglas fir, hemlock, juniper, spruce, and some pine species. Spruce spider mites use their piercing-sucking mouthparts to remove plant fluids and chlorophyll (green pigment). This leads to injured foliage appearing bronze or brownish.

Adult mites are oval-shaped and about 1/60 inch long. They are black or tan, whereas the nymphs are light gray-green in color. The round, brown eggs are laid under bud scales or in the axils of needles. Female mites lay the overwintering eggs on plants from September through November. The eggs hatch into nymphs during spring (like right now!!!). It typically takes spruce spider mite 3 to 6 days to go from egg to nymph. These mobile or active stages feed mainly on needles, preferring older needles. There can be as many as three generations per year in Illinois.

Spruce spider mite presence can be verified by knocking the mites off branches onto a sheet of white paper, where they are easily seen. When spruce spider mites are crushed, they produce a green streak, in contrast to predatory mites, which leave a red streak.

The primary method of managing spruce spider mites involves implementing proper cultural practices, including watering, fertilizing, and mulching. Providing appropriate moisture and fertility requirements goes a long way toward reducing plant stress and avoiding high populations of spruce spider mite.

Pest-control materials may be used to manage established spruce spider mite populations. These include bifenthrin (Talstar), hexythiazox (Hexygon), summer oil, and insecticidal soap. These materials primarily work by contact activity, which means that it is critical to cover thoroughly all plant parts to obtain sufficient control of spruce spider mite. Hexygon is a miticide (= acaricide) that has activity only on mite eggs. It is important to consider that improper use of any of these pest-control materials can result in mite outbreaks because most of these materials are harmful to the natural enemies of the spruce spider mite. If "realistically" possible, use a hard stream of water to remove mites from plants before using any pest-control material. This approach is less harmful to natural enemies. Exercise extreme caution when using summer oils on blue-needled conifers because the oil may cause discoloration. Be sure to read the label carefully before applying any pest-control material. (Raymond A. Cloyd)

Scouting Watch

Leaf crumpler overwinters as a caterpillar in its damage on pyracantha, cotoneaster, crabapple, and hawthorn. Damage appears as several damaged leaves webbed together in a mass of frass-filled silk. Sprays of *Bacillus thuringiensis kurstaki* (Dipel, Thuricide), bifenthrin (Talstar), lambda-cyhalothrin (Scimitar), and other insecticides are effective when sprays are soaked into damaged areas.

Boxwood psyllid was heavy in several areas of Illinois last year. Damage appears as cupped leaves, particularly at branch tips, that later turn brownish. One method of control is to apply imidacloprid (Merit) to the soil so that this systemic insecticide is taken up into the plant. Application into the root zone with a soil needle may be the most effective method. Because Merit can take 2 months to circulate through the plant, application should be made now.

Japanese beetle can also be controlled with imidacloprid (Merit) as a soil application as described under boxwood psyllid. Due to the time required for circulation through trees and shrubs, this application should be made by the end of April. Research indicates that this application is effective in many situations, but expect spotty cases of little or no control.

As described in the book *Coincide* by Don Orton, saucer magnolia (*Magnolia x soulangiana*) is a major phenology plant during its bloom, which is occurring now or will soon occur in Illinois. Accordingly, the following insects should be scouted to verify treatment timing. **Cooley spruce gall adelgid** and **eastern spruce gall adelgid** can be controlled on spruce at this

time in the northern half of Illinois. It will be too late once the galls form. **Ash plant bug** and **pine sawfly** should be present and treatable in southern Illinois and treatable in central Illinois in mid-April. **Spring cankerworm** and **fall cankerworm** will be present in all but northern Illinois, where hatch should occur in mid-April. Refer to the 2003 *Commercial Landscape & Turfgrass Pest Management Handbook* for management suggestions. The book *Coincide* can be obtained from the publisher, Labor of Love Conservatory at (630)668-8597. (*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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