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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Last Weekly Issue

This is the last weekly issue of the *Home, Yard, and Garden Pest Newsletter* for this year. We are switching to biweekly issues through September. We will close out the year with monthly issues for October and November. Thank you for your continued support. *(Phil Nixon)*

Turfgrass and Landscape Field Day

The 2002 University of Illinois Turfgrass and Landscape Field Day is scheduled for Thursday, August 1, 2002, at the Landscape Horticulture Research Center and the Hartley Selections Garden, both on South Lincoln Avenue in Urbana. This annual event is planned to provide current information and education to professional turfgrass, nursery, landscape, and garden center personnel, as well as Master Gardeners and home horticulturists.

Field Day Schedule

8:30–9:30 a.m., Registration, coffee, trade show
9:30–10:00 a.m., Introductions, opening remarks
10:00–11:55 a.m., Tour research plots and trial garden
Noon–1:00 p.m., Barbecue lunch
1:00 p.m., Trade show, equipment demo, seminars

Morning: Arrive in time to visit the trade show and view current turfgrass, nursery, and landscape research. Research stops for golf and amenity turfgrass managers include *Poa annua* and other weed controls, insect updates, disease identification and management, cultivar evaluations, and turf cultural studies. Landscape and nursery managers will observe landscape plant selection, ornamental grass studies, and nursery crops soil-mix research. See the latest bedding plant selections at the Hartley Selections Garden in the U of I Arboretum.

Afternoon: Visit the trade show, watch the equipment demonstration, and take in one of the several horticultural seminars and tours. Moreover, U of I horticulturists, educators, plant pathologists, and entomologists will be available to discuss research, answer questions, and diagnose plant problems. Bring samples of your plant problems.

For registration information, phone Carol Preston, (217)333-7738.

PLANT DISEASES

Dutch Elm Disease Showing Now!

Symptoms of Dutch elm disease (DED) generally begin in early summer. The Plant Clinic has received several positive cases in the last few weeks; and the Morton Arboretum in northern Illinois also reports many. Monitor elms for development of DED. It is not likely that you will be able to save the infected tree, but you can help nearby healthy elms.

American elms are very susceptible to the DED fungus. Although Chinese elm and Siberian elm are known to be more resistant, infection of these species can occur. Breeding programs have produced the more resistant Sapporo Autumn Gold, American Liberty, and Urban elms. Ask about DED resistance when purchasing elms.

Dutch Elm Disease (DED) is caused by the fungus, *Ophiostoma ulmi* (*Ceratocystis ulmi*). The fungus works much as the other vascular pathogens, causing plugging of the vascular tissues and resultant wilting and death of foliage. Watch for yellowing of the elm leaves, followed by wilting and browning. A single branch usually shows symptoms first (called flagging), with rather rapid spread to adjacent branches and the entire tree. Look for vascular discoloration to help with diagnosis of this disease. As with oak wilt (discussed in issue no. 11 of this newsletter), DED causes a streaking of the sapwood. Peel the bark of a symptomatic branch to reveal the brown streaks in the otherwise tan outer sapwood. Verticillium wilt and Dothiorella wilt can also cause this streaking in elm. Positive identification requires laboratory culturing of the fungus; this service is offered by the University of Illinois Plant Clinic. Cut several 6- to-8-inch-long sections from wilting, but living, branches that show definite streaking in the sapwood, but send sections you have not peeled. The fresh wood sections should be thumb thickness and can be sent in plastic or foil to the Plant Clinic for testing. Chilling the wood is necessary for oak wilt suspects but should not be necessary with Dutch elm suspect samples. Expect about 7 days of lab time for the fungus to grow to the

point where it can be positively identified. There is a $12.50 fee for this service.

There are no chemicals available to homeowners for control of DED. Some products are available to commercial applicators. These products are used as preventive or therapeutic treatments when the disease is caught early. Consult the *Commercial Landscape and Turfgrass Pest Management Handbook* for details. For more information on DED, including control procedures, consult *Report on Plant Disease (RPD),* no. 647. A similar disease caused by a phytoplasma is discussed in *RPD,* no. 660, "Elm Yellows or Phloem Necrosis and Its Control." These reports are available in Extension offices or on the Extension Vista Web site. *(Nancy Pataky)*

Pine Wilt

Pine mortalities from the pinewood nematode, the cause of a vascular disease called pine wilt, are submitted at all times of the year. The greatest number seems to coincide with stress. The pine wilt name appropriately describes the sudden gray–green, wilted appearance of limbs or entire mature pine trees. There is no recovery, and trees quickly turn brown in heat. Trees do not recover with watering because they cannot absorb the water.

Pine wilt is most common on Scotch and Austrian pines in Illinois. Still, it may infect all pine species except white pine. The disease affects entire branches or entire trees and not just branch tips. Of course, there is always an exception; and in this case it is Austrian pine. We have documented cases of pinewood nematodes in Austrian pine that initially showed symptoms on branch tips only. This symptom can be confused with Sphaeropsis blight. Sphaeropsis was discussed in issue no. 4 of this newsletter.

Although many nematodes infest the soil and roots, the pinewood nematode is present in the wood. It does not move into the root system of pines. Pinewood nematodes are vectored (spread) by Sawyer beetles and a few related long-horned beetles that feed at the top of trees moving the nematode from tree to tree as the beetle feeds. The nematode is microscopic and causes blockage of the water-conducting tissues—resulting in a wilt symptom. Nematodes are not visible to the naked eye, but symptoms are apparent.

Samples to be tested for pine wilt should be sent to the Plant Clinic or another lab where a nematologist is available. Our fee is $18.75. Branch samples should be 1 to 2 inches in diameter and long enough to put into a vise —so that wood discs can be cut from both ends of the branch. The pinewood nematode is not uniformly distributed within a tree. We find that the most reliable samples are from branches that have brown needles still attached. When sampling Austrian pine, also include the terminal 12 inches of a stem with brown needles attached.

There are no known effective chemical controls for pine wilt or its vector. Affected trees should be burned or buried to reduce reservoirs of infection. Recent research shows that it is probably safe to chip the trees for mulch. Still, you might want to compost the mulch before use or spread it out to dry before placing it near pines. Prune dead branches from live trees to minimize attractiveness to beetle feeding. Beetles that emerge from the dead wood may carry the nematode and fly to healthy pines several miles away.

Replace dead pines with Norway or blue spruce, Douglas-fir, cedar, hemlock, or other nonhost species. Consider the site, soil, and space when selecting a replacement tree. Consult *Report on Plant Disease (RPD),* no. 1104, "Pine Wilt Disease," for details about this disease. *RPDs* are available in Extension offices, as well as on the Web at the Extension VISTA Web site. *(Nancy Pataky)*

Thick, Thorny Stems on Roses

This is a persistent disease of roses that causes the new growth to appear deep red, both on leaves and stems. Leaves may show crinkling, distortion, or a mosaic of green, yellow, and red. An infected plant produces numerous lateral shoots, giving the plant a witches'-broom appearance. These shoots are typically deep red and much larger in diameter than the canes from which they grow. Thorns on these stems are more numerous than normal, giving the stem an almost hairy appearance. Plants usually die within about 22 months of infection. Rose rosette is caused by a double-stranded RNA, which means that it is a viruslike disease. It cannot be cultured in a lab, and confirmation of the disease by the Plant Clinic is based purely on symptomatology.

Multiflora rose is the most common host of this disease, but it has been reported on cultivated flowering varieties as well. Climbers, hybrid teas, floribundas, miniatures, and a number of old variety roses have been infected. Hybrid teas typically show a color that is more yellow than red. So far, no other host besides rose has been found. Our clinic has seen a few cases of this disease on hybrid roses in the past few years. Because the symptoms are so striking, nurseries often spot this disease and quickly rogue out infected plants, helping to keep the disease in check.

The vector of this disease is an eriophyid mite, a mite so small that 20 could fit on a pinhead. Eriophyid mites are much smaller than red spider mites, which are commonly seen on plants. Grafting may also spread rose rosette disease.

Currently, infected plants cannot be salvaged. Plants with symptoms should be dug up and destroyed (including roots) when first noticed. Remember, these plants are going to die soon anyway. It is strongly suggested that multiflora and garden roses be separated as far as possible from each other. The efficacy of mite control has been questioned in control of this disease; but if miticides are used, research suggests that the critical mite transmission time is May and June. So concentrate your efforts in those months. For details of this disease, consult *Report on Plant Disease (RPD)*, no. 666. *(Nancy Pataky)*

Disease Overview

Frequently, callers to the Plant Clinic request information about currently active diseases. Sometimes consultants want this information before making client field calls. Other times, growers are trying to diagnose their own problems. Many times, master gardeners are just trying to get a handle on diseases before staffing the county phone lines. Here are some diseases we have seen frequently this summer.

We have seen many cases of root rots on herbaceous hosts. Earlier in the season, Pythium was the most common because of wet weather. In recent drought stress, Rhizoctonia root and crown rot has appeared. Both diseases cause root loss and stress in hot, dry weather.

Dutch elm disease and oak wilt have been confirmed in a few cases. Calls about elms and oaks have been numerous. We have not seen too many cases of pine wilt but expect that soon.

The early season leaf diseases were abundant this year because of the cool, wet spring. This includes anthracnose of many hosts, including ash, oak, and maple. We saw Septoria on dogwoods and leaf blisters on oak as well. New leaves have looked better, without infection, but old leaves remain for the season. These should be raked when possible.

Fire blight has been very common on crabapple, apple, pear, and a few other rosaceous plants. This damage followed by heat and drought may contribute to the decline of many woody plants.

We have seen many juniper samples this season, but none of those have been infected with Phomopsis blight. Kabatina blight has been common; this fungal disease invades wounded or weakened tissue. It is speculated that many junipers suffered winter injury followed by *Kabatina* infection.

Cedar-quince rust has been very common on hawthorn fruit. This is a good year to get a picture of that rust. You won't have to look hard to find it. The same goes for Sphaeropsis blight of pines, black spot of rose, Cytospora of spruce, and slime molds in general. Chlorosis on river birch started particularly early this year and may be stressing these plants enough to cause branch dieback. *(Nancy Pataky)*

INSECTS

White Grubs

Japanese beetle and masked chafer adults are attracted to turf with moist soil. The females tunnel into the soil to lay their eggs; moist soil is surely easier to dig through than hard, dry soil. In addition, the eggs dry up and die under very dry soil conditions. The eggs also die when soil temperatures are around 90°F. Higher soil temperatures are typically associated with drier soils, as well as high air temperatures.

After a wet spring with lush grass, much of Illinois has turned typically dry and hot for the white grub egg-laying period. Under dry conditions, the adult beetles seek golf courses, irrigated lawns, and other watered turf to lay their eggs. This results in high white grub populations in these areas in August, causing turf damage in late summer and fall. When there is sufficient rain and moderate temperatures in July, the turf stays green and actively growing in unwatered areas. The beetles lay their eggs over large areas, with the result that few areas have grub numbers high enough to cause damage.

Both the northern and southern masked chafers occur throughout Illinois. These 1/2-inch-long, tan, stocky June beetles emerge and start laying eggs in late June in southern Illinois, in the first week of July in central Illinois, and in the second week of July in northern Illinois. If one goes out about 10:30 p.m. and shines a light just above the turf, these beetles can be seen flying low over the turf. Because the adults do not feed, egg-laying occurs for only about 2 weeks before the adults die. Their larvae are commonly referred to as annual white grubs.

Japanese beetle adults emerge throughout the state slightly earlier, having emerged in southern Illinois in the third week of June, central Illinois in the last week of June, and northern Illinois at the beginning of July. Although the adults feed and are numerous for 6 weeks or so, eggs appear to be laid primarily during the first half of July. This results in Japanese beetle white grubs' appearing in August at about the same time as annual white grubs.

In areas with hot, dry weather, it is likely that grub numbers will be high this year in irrigated turf. During July, apply imidacloprid (Merit) or halofenozide (Mach 2, Grubex) to prevent later grub problems. It is best to water the insecticide in if rainfall does not wash it into the root zone within a few days. Insecticide sitting in full sunlight is likely to break down

under the ultraviolet light. Another reason to water it in with at least 1/2 inch of water is that no grubs are being killed while the insecticide is sitting on the grass blades and thatch. Nonirrigated areas, those receiving infrequent watering, and locations in the state where rainfall has been plentiful may not have enough grubs to cause injury. Scout these areas in early August and treat spots with high grub numbers with trichlorfon (Dylox). *(Phil Nixon and Donna Danielson, Morton Arboretum)*

Scurfy Scale

Scurfy scale, *Chionaspis furfura,* eggs have hatched throughout Illinois and are looking for a "tasty morsel" to feed upon. Scurfy scale has a very wide host range; however, it primarily attacks plants in the rose family (Rosaceae) including hawthorn, quince, peach, crabapple, cherry, firethorn, and mountain ash. Other susceptible hosts include horsechestnut, elm, hickory, maple, willow, and dogwood. Scurfy scale is not a very common scale in Illinois, but there have been more reports of infestations in the last couple of years.

Female scurfy scales are flat, thin, grayish white, 1/8-inch long, and rounded on one side, which makes them appear pear- or oyster-shell-shaped. The females lay up to 80 eggs, which are distinctly reddish purple. They are retained under the female covering after she dies. The insect overwinters in the egg stage, with eggs hatching in late spring into purple crawlers that move around on plants and eventually locate a suitable place to settle and feed. Scurfy scale can be abundant on bark, giving a plant a "scurfy" appearance (hence the common name). The scale tends to be located on the shady side of trees or in areas under a dense canopy of leaves. Scurfy scale is a hard scale, so there is no honeydew produced during feeding. There are one or two generations per year in Illinois.

Scurfy scale in landscapes can be managed by applying pest-control materials when crawlers are active. Recommendations include acephate (Orthene), diazinon, insecticidal soap, and summer oil. Although many crawlers have settled down, reasonable control may still be possible. This scale is susceptible to dormant oil sprays during the winter.

Scurfy scale (like most scales) is susceptible to parasitoids (*Aphytis* spp.) and ladybird beetles; and, in sufficient numbers, these natural enemies may provide some level of control. The use of acephate, diazinon, and other persistent, broad-range insecticides is harmful to them and may disrupt natural control. Insecticidal soap and summer oil are less likely to seriously harm parasitoid numbers. *(Raymond Cloyd)*

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 Daniel-son of The Morton Arboretum also provide information and articles.

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