



COOPERATIVE EXTENSION SERVICE

# 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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## PLANT DISEASE \_\_\_\_\_

### Rhizosphaera Needle Cast of Spruce

This fungal disease of spruce will cause “holes” in trees. The holes are not in the trunk—they are areas of the tree canopy from which needles have dropped. The needles have been cast from the tree; thus, the name “needle cast.” Because spruce trees are not able to form new needles where the old ones dropped, the holes in the canopy are with the tree for its entire life. The disease will not kill the tree, but it can cause enough aesthetic damage that you might wish the tree had died. For this reason, *Rhizosphaera* needle cast has become a disease for which preventive fungicides have been recommended. As long as entire branches are not killed, the new growth at the branch tips can be protected from infection. As tips continue to grow, the new growth may mask the defoliation that has occurred on older needles near the center of the tree.

This fungal disease is a particular problem on Colorado blue spruce, but it may also infect other spruce species as well as some pines. If you have had a problem with this disease in the past, now is the time to take action. How do you know you have had problems? The disease will cause first-year needles to turn brown to purple in the fall. (Keep in mind, however, that many environmental stress factors will cause these same symptoms.) On trees with *Rhizosphaera* needle cast, the affected needles may stay attached until the next summer or fall.

*Rhizosphaera* needle cast may kill twigs if infection recurs from year to year. Often the newest needles appear as green, healthy tufts at the end of defoliated branches. When infected needles are moist, the fungal pathogen will form pinhead-sized fruiting structures (pycnidia) in neat rows on the needles. To test for pycnidia, place affected needles in a plastic bag with a wet paper towel; if present, pycnidia should develop in one or two days. These pycnidia actually protrude from the needle surface and are readily visible, especially with a hand lens.

As with most fungal diseases, infection occurs in warm, wet weather. With *Rhizosphaera* needle cast, spores are released from spring until fall. Good air circulation will help prevent infection, so prune surrounding plants to attain better air movement, or consider removing crowded plants. Fungicides are effective as a preventive control but must be applied when needles are half elongated and again when fully expanded. Keep an eye on the new growth on your spruce and make the first application when new needles are half grown. Chemical options are given on page 106 of the *Illinois Commercial Landscape and Turfgrass Pest Management Handbook, 1998–1999*. Homeowner chemical options are listed on page 35 of the *Illinois Homeowners' Guide to Pest Management*. (Nancy Pataky)

### Peach Leaf Curl

According to fruit pathology specialist Dr. Steve Ries, peach leaf curl is now at epidemic levels throughout most of Illinois. On every infected tree that Ries has seen, all of the leaves have been infected. Confirmations of the disease have come from local home-growers in Champaign as well as from the CES educator in DeWitt County, Pat Toohill.

Peach leaf curl occurs on peach, nectarine, and some ornamental *Prunus* species. It also occurs, although rarely, on cherry and plum. Leaf distortion and blisterlike growths or puckering of the leaves is common. The leaves are often thickened and almost crisp; they turn downward and inward and may become red or purple.

The causal fungi (*Taphrina*) survive over winter in buds and twigs. They infect leaves and flowers in the cool, moist weather of early spring, from bud swell to bud opening. Infected trees may show early leaf drop, but generally the life of the tree is not threatened. Repeated yearly infection may weaken a tree and predispose it to other problems. Fruit growers are often concerned because of reduced fruit quality. Ries said that peach trees showing leaf infection will also have infected fruit.

Why is the disease so prevalent this year? Ries suggests two reasons. First, the typical control for this disease on a peach tree is a dormant fungicide spray that cannot be applied after the tree breaks dormancy. The spray can be applied any time after fall leaf drop and before spring bud swell. Bud swell this year was a full three weeks earlier than usual, which may have caught many growers off guard, resulting in a missed application. The second reason for increased disease is likely the fact that peach buds took a long time to open due to cool temperatures after budbreak, which allowed the window of opportunity for fungal infection to be left open longer than usual.

The good news is that peach leaf curl is a monocyclic disease—there is no secondary infection. The leaves will pucker and curl, spores will form on the leaves and fruit (peach fruit), and leaves will fall. Peach fruit will be shriveled and drop early. Then infected species will form new leaves that will not be infected. Growers and homeowners can help their trees by applying a 12-12-12 or similar fertilizer **now**. Do not overfertilize: Ries recommends no more than 2 to 3 pounds of 12-12-12 per tree. The idea is to help the tree produce new leaves and allow it to go into dormancy in late summer.

The heavy infection this year means inoculum levels will be high for next year. Peach growers should mark their calendars now to remind them to apply a dormant fungicide spray (Bravo, Carbamate, Ziram, Bordeaux, copper hydroxide, or copper oxychloride) in the first week of February 1998. Spraying now will do nothing to stop peach leaf curl or leaf blisters.

For more information on leaf curls and blisters, consult *Report on Plant Diseases* No. 805, Peach Leaf Curl and Plum Pockets, or No. 663, Oak Leaf Blister. (Nancy Pataky)

### Disease Briefs

In central Illinois, **cedar-apple rust galls** have been sporulating on red cedar since about April 21. Galls of **cedar-quince rust** were seen sporulating on cedar a few days later. To protect hawthorns from the stem-damaging cedar-quince rust, apply the first protective fungicide sprays when Red Delicious apples in your area are flowering. If you use a fungicide with some systemic activity, you may be able to delay sprays 3 or 4 days.

On May 1, **apple scab** sporulation was apparent on crabapples on the University of Illinois campus in Urbana. According to weather data, the required wetting criteria (a combination of leaf surface wetting

and temperature) for scab infection have been met in central Illinois. This early infection and sporulation probably indicates that we are in for a heavy scab year. The first sprays for scab should be applied at budbreak to target primary infection. If the first sprays are delayed and late fungicide sprays are applied, there may still be some efficacy on the secondary infection. Still, no one can accurately predict efficacy of late sprays.

**Fire blight** has not yet reared its ugly head in central Illinois. This bacterial disease infects under precise environmental conditions monitored by a forecast system used at the University of Illinois orchards. As of May 1, conditions for infection had not occurred. Fruit pathologist Dr. Steve Ries said that if conditions stay cool through bloom, fire blight is not likely to be a problem in central Illinois.

**Sphaeropsis blight** on pine has been a major problem in the past several years. The new strain that causes oozing cankers is particularly damaging to pines. If you have diagnosed this problem on your trees in the past and are considering fungicide applications, remember that three applications are necessary. The first application is made at pine budbreak; the second when candles (new growth) are half elongated; and the last when needles are fully expanded. Watch the pines in your area to know when these stages have been reached. (Nancy Pataky)

## INSECTS

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### Hunting Billbug

Billbugs are weevils that attack turfgrasses as well as a wide variety of other grasses and grasslike plants. The two most important on turf are the bluegrass billbug and the hunting billbug. The bluegrass billbug attacks Kentucky bluegrass, tall fescue, red fescue, and perennial ryegrass. The hunting billbug damages zoysiagrass and bermudagrass. In the southern United States, it also attacks bahiagrass, centipedegrass, and St. Augustinegrass. Damaged turf turns brownish and is easily pulled up in tufts because the root system is being eaten away. Frass that looks similar to sawdust is usually present at the crown. Damage usually appears as roundish, brown areas in the same general area year after year. Adult billbugs are poor fliers, resulting in infestations staying somewhat localized.

Billbugs tend to overwinter as adults, about 1/4 inch long and blackish. They are very hard shelled and have an elongated “snout” that contains tiny chewing mouthparts at the end. When digging in turf,

you can sometimes find whitish to brownish adults. These callow adults have recently emerged from pupae and have not “tanned” to their final color. The adults are active on warm winter days and throughout the spring, when they can be found along the edges of sidewalks and in the turf.

Adult billbugs feed on the stolons and crowns of turfgrass. They insert their eggs into stems and leaf sheaths. The resulting larvae tunnel through the leaf sheaths and stems until they are too large to fit inside, at which point they leave the stems and move into the soil to feed on the roots and stolons. The larvae, which are white with brown heads, are plump and legless. Mature larvae are 1/4 to 3/8 inch long. The larvae pupate three to five weeks after hatching, with the adults emerging from pupae.

Due to the longevity of the adults, larvae can be found at any time of the year, although they are most common in June and July. In the last week of April, hunting billbug larvae were found in large numbers in the St. Louis area feeding on zoysiagrass. These larvae were found four to six inches below the surface, probably in response to a recent cold spell. The mild fall and winter may have resulted in a higher level of late-season egg-laying and larval feeding.

Control adult billbugs with foliar sprays of chlorpyrifos (Dursban) or other labeled insecticides at this time of year. Larvae are usually controlled in June and July with imidacloprid (Merit) or halofenozide (Mach 2). Endophyte-containing grasses have been found to be effective against bluegrass billbug. (*Phil Nixon*)

## Plant Bugs

Ash plant bugs are active and feeding throughout the state, causing light spots on ash leaflets. This damage, along with additional stippling damage, will be present on the leaves throughout the summer.

Honeylocust plant bugs have hatched in southern and central Illinois and will soon hatch in northern Illinois. Be particularly watchful in northern Illinois because this insect caused heavy damage in that part of the state the last time we had a mild winter.

Both of these plant bugs are slender, flat-topped, long-legged insects that feed on the sap of leaves and stems. Honeylocust plant bugs are green and about 1/8 inch long as adults. Ash plant bugs are brownish and about 3/16 inch long as adults. Nymphs of both species are similarly colored and smaller.

Honeylocust plant bugs are present only in the spring. They feed on the expanding leaflets, causing them to be distorted and twisted. These leaflets

usually stay on the tree, marring its appearance for the entire growing season. Heavy infestation will cause leaves to drop from the tree during June, but damaged trees will refoliate with undamaged leaves. As few as one nymph per compound leaf will cause obvious damage.

Control these plant bugs with synthetic pyrethroids such as bifenthrin (Talstar) or cyfluthrin (Tempo) or other labeled insecticides such as acephate (Orthene). Insecticidal soap is also effective. (*Phil Nixon, Fredric Miller, and staff at The Morton Arboretum*)

## Scouting Report

**Succulent oak galls** are common in southern Illinois on pin oak and shingle oak. These green, marble-sized galls will shrivel and turn black in a few weeks. No control is recommended.

**Eriophyid mite galls** are starting to appear on wild plum in northern Illinois. They will develop into slender galls about 1/8 inch long on the upper leaf surface. Control is not recommended.

**Cooley spruce gall** eggs have been found on Douglas-fir in northern Illinois. On Douglas-fir, this insect appears throughout the summer as white, pinhead-sized, fluffy aphidlike adelgids on the needles. This insect also attacks spruce, causing galls to form on the ends of the branches. Most contact insecticides will provide control.

Large numbers of **eastern tent caterpillar** have been found in southern Illinois; smaller numbers have been seen in central and northern Illinois. Control these insects by pruning or pulling out the silk tents they spin in twig crotches. (Do this during the night or on cloudy or rainy days when the caterpillars are in the tents.) Control can also be achieved with many insecticides, including *Bacillus thuringiensis kurstaki*, sold as Dipel, Thuricide, and various other trade names. (*Phil Nixon, Fredric Miller, and staff at The Morton Arboretum*)

## HORTICULTURE

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### Controlling Cool-Season Perennial Grassy Weeds in Turf

Spring is a great time to use postemergence herbicides on creeping bentgrass and quackgrass and to control tall fescue problems in desirable turfgrass.

Creeping bentgrass is a desirable turf, but it becomes a problem when it invades other cool-season turfgrasses. It forms dense patches and is characterized by soft, fine-textured (narrow), blue-green leaf

blades and above-ground creeping stems called stolons.

The appearance and growth habits of quackgrass and tall fescue are much different than those of creeping bentgrass. Quackgrass has coarse-textured (wide) blue-green leaves with long, clawlike auricles (appendages where the leaf blade meets the stem). Quackgrass typically does not appear as distinct clumps in turf. It spreads by strong rhizomes, or horizontal underground stems. If you pull up quackgrass, the long white rhizomes will be visible. Quackgrass seeds and rhizomes will often find their way into lawn areas in agricultural soils.

The leaves of tall fescue are dark, emerald green, and coarse-textured. Tall fescue does not normally spread by above- or below-ground horizontal stems. It is apparent in lawns as clumps that grow more rapidly than the other lawn grasses it has invaded. It normally stands out several days after mowing because it grows taller and faster than the desirable species, resulting in a patchy appearance in most lawns.

Controlling these perennial grassy weeds is often difficult. One option is to pull or dig them out. Get as much of the roots as possible, including the stolons on creeping bentgrass and the rhizomes on quackgrass. Preemergence herbicides that prevent annual grasses such as crabgrass will not control these weeds.

No selective herbicides are available for creeping bentgrass and quackgrass, but the nonselective herbicide glyphosate (Roundup, Klearaway) can be used to control these weeds and tall fescue as well. For the most effective control, apply herbicides when the weeds are green and actively growing. Glyphosate

can damage or kill other actively growing plants it comes into contact with, so caution is advised. In the case of creeping bentgrass and quackgrass, be sure to spray an area large enough to include all of the creeping stems growing in the area; untreated stolons or rhizomes may continue to grow and develop into more unsightly weeds.

Chlorsulfuron (TFC) is a selective postemergence herbicide that can be applied to control actively growing tall fescue that has invaded Kentucky bluegrass. Chlorsulfuron often works slowly, causing the tall fescue to decline gradually rather than die quickly. It will kill or damage perennial ryegrass and may also cause yellowing or phytotoxicity to Kentucky bluegrass.

After the weeds have been removed or killed, the area needs to be replanted. Sod can be installed in the dead areas, or they can be reseeded. While the best time to reseed is late August and early September, the cool-season perennial grassy weeds may not be actively growing at that time. (Bruce Spangenberg and Tom Voigt)

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Major authors are Phil Nixon, (217) 333-6650, and Fredric Miller, (708) 352-0109, entomologists; Nancy Pataky, plant pathologist, (217) 333-0519; and Rhonda Ferree, Tom Voigt, and David Williams, horticulturists, (217) 333-0350.

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UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN  
69 MUMFORD HALL  
1301 WEST GREGORY DRIVE  
URBANA IL 61801



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