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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# INSECTS

## Biweekly Issues

No, you didn't get missed in your newsletter delivery last week. We have switched to every-other week issues and will continue sending out issues biweekly through September. Issue 21 will be sent in late October, and the final issue for this year, No. 22, will be sent in late November. *(Phil Nixon)*

## Zimmerman Pine Moth

For maximum management with insecticides, this is one of the times of year to treat for Zimmerman pine moth, *Dioryctria zimmermani* (Grote). Zimmerman pine moth larvae (caterpillars) feed on all pines, especially Scotch and Austrian. Larvae bore into trees and create masses of pitch resembling galls at branch whorls on the main stem or on shoots near the terminal leader. Larvae can kill terminal leaders. Heavily infested terminals curve downward, resembling a fishhook. Repeated attacks by larvae in the trunk can cause tops to break off, which makes the tree unsalable.

Adults are gray with a 1- to 1-1/2-inch wingspan. Forewings are gray and mottled with a zigzag line pattern of red and gray. Adults are active at night from mid-July to mid-August. They can live from three days to two weeks. Female moths can lay between 20 to 30 eggs underneath bark in the whorl region of trees. From late July to early September, eggs hatch into pinkish green larvae with a brown head.The body is covered with small black dots. These young larvae feed at the base of terminal buds and on the bark of the trunk in late summer and fall.

Larvae overwinter in bark crevices in silken webs (hibernacula). In the spring, they leave the hibernacula and crawl across the bark before tunneling into the trunk or shoot. They then bore into the shoots and stem where they form a characteristic pitch mass at the entrance site to the tunnel where they feed. Older, fully grown larvae are approximately 3/4 inch long. The brown pupae are found in shoots and pitch masses from mid-July to late August.

Management of Zimmerman pine moth involves sanitation and the use of chemical insecticides. On Christmas tree plantations, scout regularly by visually inspecting trees for pitch masses on the main stem or terminal leader. Prune out damaged wood and injured shoots or remove trees that show visible symptoms of Zimmerman pine moth damage.

The larvae are active on the outside of the tree in early April and from late summer to fall, making them susceptible to insecticides. The insecticide chlorpyrifos (Dursban) or dimethoate (Cygon) can be used to control the larvae by spraying the bark and foliage in April or from mid- to late August. The best time to control this insect is in the caterpillar stage before it enters the bark. Use high volume sprays to drench the stem and bark because a thick canopy of pine needles may prevent sprays from reaching the trunk. Planting resistant varieties of Scotch pine such as the short-needled varieties from Greece, Turkey, and west and south Eurasia may be a long-term alternative option to minimize problems with Zimmerman pine moth. *(Raymond Cloyd and Phil Nixon)*

## White Grubs

So far, we have not received any reports of high white grub numbers or heavy damage. Conditions were right in early July for egg laying to be concentrated in irrigated turf, and the flights of both Japanese beetle and masked chafer adults were large. Typically, white grub damage makes itself known by late August, particularly in the southern and central areas of the state.

Keep a watch on irrigated areas that you haven't treated. Brownish turf areas that are 6 inches to a foot across can be an early sign of a grub damage problem that is about to explode into major damage. Realize that this early damage mimics some turf disease symptoms. Pull up the turf in these areas to check for grubs. Ten or more C-shaped white grubs per square foot should be in the root zone, but they may be deeper if the soil is dry. At this time of year, the grubs

should be about 3/4 inch long. Turf damaged by white grubs is also easily pulled up because the roots have been eaten. Unlike root-diseased turf, the sod holds together and comes up like a carpet.

Rescue grub treatments include trichlorfon (Dylox, Proxol) and bendiocarb (Turcam). Both of these insecticides should kill the grubs in three to five days, giving immediate relief. Diazinon also quickly stops grub damage, but the treated, nonfeeding grubs live for about three weeks before dying, which is difficult to explain to clients. Remember that diazinon cannot be used on sod farms or golf courses. Hb *(Heterorhabditis bacteriophora)* nematodes are also effective once the grubs are present. Water in any application with at least 1/2 inch of water to get the insecticide or nematodes down into the root zone where the grubs are located. If the soil is dry, water a couple of days before treating to entice the white grubs up into the root zone where they can be more effectively controlled.

Consistent watering at this time of year and in the spring can replace an insecticide application if grub numbers are moderate—in the range of 10 to 18 grubs per square foot. If you provide plenty of water, the turf will grow new roots as fast as the grubs eat them, as long as there aren't too many grubs. Remember that raccoons, skunks, and birds may damage turf while feeding on as few as three grubs per square foot, so there are situations when treatment is warranted where there are few grubs. *(Phil Nixon)*

### Leaf Crumpler

Leaf crumpler is a common pest in ornamental landscapes and on nursery plants. Although their ugly masses are not very noticeable, this is the best time to control this caterpillar and prevent heavy damage next year. Heavy infestations tend to occur on the same plants year after year.

Leaf crumpler attacks cotoneaster, crab apple, pear, hawthorn, pyracantha, and privet. Small (first-instar) caterpillars (larvae) skeletonize leaves, but as the caterpillars increase in size, they consume all plant tissues except the midrib. Mature caterpillars are about 3/4 inch long. Caterpillar feeding is greatest in June and early July.

Caterpillars construct cases made of dead leaf fragments, silk webbing, and frass pellets that are attached to twigs and branches. Cases may be almost 2 inches long. These habitats make the host plant appear ugly. Leaf crumpler uses these cases to hibernate and pupate. The cases may remain on plants for several months after moths emerge. Moths (adults) emerge in late June with peak emergence in mid-July. Adult females lay eggs from late July to August. Eggs are laid either individually or in masses along the veins on the leaf underside. Females live for approximately 10 days. The insect overwinters as larvae, and there is one generation per year.

Pruning out or destroying cases can manage small populations of leaf crumpler. Materials that can be used to control leaf crumpler include *Bacillus thuringiensis kurstaki* (Dipel), diazinon, and lambda-cyhalothrin (Scimitar). *Bacillus thuringiensis* works best on young caterpillars; it must be ingested to be effective. Diazinon and lambda-cyhalothrin work by contact, so thorough plant coverage is essential. All materials mentioned must be applied in the late summer and early fall before the caterpillars hibernate in the cases. Diazinon and Scimitar should also be effective in the spring when the caterpillars start to feed again. *(Raymond Cloyd)*

## PLANT DISEASES

### Plant Clinic Closes for Season

It is almost time for the Plant Clinic to close its doors for the season.Wednesday, September 15, is the last day of operation for this century! We will open again May 1, 2000. Any samples that arrive by September 15 will be finished, but no samples will be processed after that date. This is a firm deadline.

If you have a plant problem after the closing date, contact your local Extension office. If further help is needed from a specialist, Extension personnel can help direct you. The following specialists may be available for telephone questions, but do not send samples unless the specialist has determined it is necessary.

**Insect problems:** Phil Nixon, 333-6650; Raymond Cloyd, 244-7218
**Disease problems:** Nancy Pataky, 333-2478; Bruce Paulsrud, 244-9646
**Tree/shrub problems:** David Williams, 333-0350
**Turf problems:** Tom Voigt, 333-0350
**Herbaceous plant problems:** Jim Schmidt, 244-5153
**Nematode problems:** Dale Edwards, 244-2011

## Diseases of Brambles

Many readers are concerned with bramble appearance at this time of year, and clinic telephone inquiries about brambles have been common as well. The most common diseases that may be involved are anthracnose, cane blight, and spur blight, and we have seen each of these diseases in 1999. All are easy to diagnose with the aid of *Reports on Plant Diseases* No. 700 and 709.

Although fungicides control the diseases if they are used as preventive sprays, we prefer to stress some cleanup measures that should help considerably. A bramble spray schedule can be found on page 120 of the *Illinois Homeowner's Guide to Pest Management*. Horticulture specialist Allan Otterbacher, who manages small fruits on the campus farm, recommends removal and destruction of all fruiting canes as soon as they have finished fruiting. Do not touch the young cane that will bear next year's fruit. This process decreases the amount of future fungal inoculum, and it opens the planting to better air circulation and more rapid drying. Refer to University of Illinois Circular 1343, *Small Fruits in the Home Garden*, for information on culture of raspberries.

One other disease that we sometimes see on raspberry—especially Heritage red raspberry—is a root and crown rot caused by *Phytophthora*. This fungus invades in very wet seasons and on poorly drained sites. The plant loses vigor because roots are rotted and uptake of water and nutrients is inhibited. Infected plants may be stunted; and the rotted roots may have an interior color of brown or red-brown, whereas healthy roots have white inner tissues. Phytophthora may cause the stem to turn brown or black an inch or two above the soil line. Symptoms alone cannot provide a positive diagnosis of Phytophthora root and crown rot, so laboratory confirmation may be necessary. Ridomil has been used in commercial settings to control the disease, but improving soil drainage is also necessary. *(Nancy Pataky)*

## Apple Note

Based on the number of questions about apples received at the Plant Clinic, there are many home gardeners in Illinois growing apple trees. Fruit pathology specialists recommend pruning apple trees as soon as the crop is off. It is probably a little better for tree health to prune in March, but it is much easier to do a good job in the fall when healthy plant material is easy to distinguish from diseased tissue.

The goal of pruning is to remove all the dead tissue. This practice limits the development of fire blight, black rot, sooty blotch, fly speck, and apple scab. If the tree is known to be infected with fire blight, be sure to disinfect the pruners after every cut to prevent further spread of the disease. Disinfect by dipping the blades in 10 percent Clorox or rubbing alcohol solution. *(Nancy Pataky)*

## Watch for Pine Wilt

Pine wilt, caused by the pinewood nematode, was discussed in issue No. 4 of this newsletter. I have seen several cases of pine wilt in the Champaign-Urbana area in the last two weeks, so review the symptoms of this disease and watch for it on your pines. Trees dying now were probably infected in spring or summer.

Watch for the appearance of entire dead branches or the sudden decline and death of an entire pine within a few weeks or months of initial symptoms. Be particularly suspicious of 15- to 20-year-old Scotch pines with these symptoms. If white pine is affected, consider the information on white pine decline in issue No. 2 of this newsletter. Although the Plant Clinic has certainly assayed many white pines for pinewood nematodes, we have confirmed this nematode in only two cases involving a white pine. In both cases, we suspect that the nematode invaded after the tree died. Also, keep in mind that Austrian pine is the only species that may show a tip dieback as the first symptom of pine wilt.

Sawyer beetles vector the nematode from pine to pine. Unfortunately, we still do not have an easy method of stopping the beetle, and we do not have a treatment for an infested tree. Early detection of infected trees is therefore critical to disease control. To break the disease cycle, remove infected trees quickly. Consult *Report on Plant Disease* No. 1104 for details about pine wilt. *(Nancy Pataky)*

## Leaf Scorch of *Aegopodium* (Bishop's Weed)

The ground cover *Aegopodium*, also known as goutweed, ashweed, ground ash, ground elder, herb gerard, or bishop's weed, can grow in most soil types and in either sunny or shady locations. However, the variegated form that is used most often in gardens is prone to scorch in sunny locations. The usual foliage color is green with white markings, but when they are scorched, the leaves develop brown edges. The leaves then become entirely brown, giving the plant a weak,

thinned appearance. We usually see this injury when hot, dry weather follows a time of very lush growth (the usual July or August weather in Illinois). Whenever the foliage looks bad during the growing season, mow it off to encourage new growth and a dense habit. Avoid mowing so low that you injure the crowns and kill the plants. This scorching is not an infectious disease problem. *(Nancy Pataky)*

Home, Yard & 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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