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

Number 2 - April 30, 2012

Weekly Issues Begin

The Home, Yard, and Garden Pest Newsletter will be issued weekly from this issue through May and June. In July, we will switch to issues every other week. This corresponds to the time period when the greatest number of diseases and insect pests are controlled. It is also when timeliness of management is most critical. (*Phil Nixon*)

Weather & Insect Emergence

Cooler weather over the last two weeks has helped bring the insect activity pattern closer to normal. Based on growing degree days with a base temperature of 50 degrees F, southern Illinois is slightly over two weeks ahead of last year, central Illinois is three weeks early, and northern Illinois is slightly over four weeks early. Two weeks ago, growing degree days in southern Illinois were almost four weeks ahead of 2011, central Illinois four weeks early, and northern Illinois over five weeks early. The spring of 2011 was relatively normal into May.

Phenologically, northern Illinois insect emergence should be similar to that of full bloom of bridal wreath spirea, *Spiraea X vanhouttei*. Central Illinois insect emergence should be similar to that of the end of bridal wreath spirea bloom. Southern Illinois insect emergence should be similar to that of full bloom of mock orange, *Philadelphus*. Although these plants have already bloomed this year and some of the insects associated with that blooming period may have already emerged, the cool weather of the last few weeks should have kept the insects from developing beyond their susceptible control windows. (*Phil Nixon*)

Scouting Watch

Following are the most common pests that should be in susceptible treatment stages. Be sure to scout to verify that the susceptible stages of the insect are present before applying controls.

Northern Illinois: Birch leafminer young larvae; elm leaf beetle young larvae; European pine sawfly feeding larvae; Gypsy moth feeding larvae; pine needle scale crawlers (first generation), black turfgrass ataenius (first generation); lilac (ash) borer newly hatched larvae; oystershell scale (brown) crawlers.

Central Illinois: Bronze birch borer newly hatched larvae; emerald ash borer adult emergence; flat-headed appletree borer larval hatch; peach tree borer newly hatched larvae; viburnum

borer newly hatched larvae; oystershell scale (gray) crawlers.

Southern Illinois: Emerald ash borer flight; elm leaf beetle larvae; mimosa webworm larvae; peach tree borer egg-laying; whitemarked tussock moth larvae; viburnum crown borer newly-hatched larvae. (*Phil Nixon*)

Emerald Ash Borer

Emerald ash borer should be flying in both central and southern Illinois and will continue to emerge and fly for several weeks. Although insecticide sprays against the adults are effective, applications of systemic insecticides between 50% leaf expansion in spring until approximately six weeks before leaf fall are recommended. Emerald ash borer adults feed on ash leaflets, and it is probably during this activity that sprayed insecticide is ingested resulting in beetle mortality. Systemic insecticides kill the beetles in this manner, but also kill the larvae in the cambium area under the proper application rates. Systemic insecticides applied to the soil or injected into the tree reach the leaves within a week or two. Trunk injections reach effective levels in the cambium area in about two weeks; whereas soil applications take about six weeks. Additional information on emerald ash borer including our management recommendations can be found at http://ipm.illinois.edu/landturf/insects/index.html . (*Phil Nixon*)

Black Cutworm

There have been large early flights of black cutworm moths throughout Illinois for several weeks. Golf course personnel should be on the lookout for black cutworm larval infestations in bentgrass, ryegrass, and fescue. Cold temperatures have little effect on the survival of eggs and larvae. Black cutworm larvae avoid cold temperatures by remaining in the thatch. The eggs also survive short bouts of freezing temperatures at least down to 19 degrees F, as reported at http://www.ipm.iastate.edu/ipm/icm/2007/4-16/bcw.html .

Damage on greens appears as circles 2 to 3 inches in diameter where the grass blades are eaten down to the crowns. Frequently, there is a shallow hole in the center of the circle. Cutworm caterpillars feed at night, tending to feed in a circle, as far as they can reach, with their posterior end frequently inserted in a shallow hole. These damaged areas are most numerous within 30 or so feet from the green apron because the older, larger cutworms like to hide in the taller turf around the green during the day, commuting onto the green at night to feed. Feeding damage looks like ball marks where a golf ball skipped across the green, rubbing off the grass blades. Thus, golfers do not recognize the damage as being caused by an insect.

More serious damage is caused by insect-feeding birds, such as starlings, robins, grackles, cowbirds, and blackbirds. In feeding on the younger cutworms that hide in the thatch of the green, they pull up a small divot 1/2 to 1 inch across. These little divots are large enough to deflect putts, causing golfers to get upset. The sand in these divots also quickly wears the edge of greens mowers blades, causing the blades to

require sharpening and replacing more often.

Damage to lawns is frequently hidden by the taller grass, although lawns may have irregular, roundish, brown areas where the green grass blades have been eaten, revealing the thatch. More commonly, bird damage is obvious. Because lawn turf is rooted deeper and more firmly, it is unlikely to be pulled out by the birds as occurs on golf greens. Instead, round holes about 1/2 inch in diameter are punched through the turf by the birds' beaks as they search for larvae. Lawns with many cutworms look dingy from a distance due to the brownish to blackish holes where the underlying soil shows.

Black cutworm larvae are dark-colored and heavy-bodied. They can be flushed from the turf with a teaspoon of 5% pyrethrum or 1 tablespoon of dishwashing detergent in a gallon of water. Distribute this evenly over a foot square of turf; a watering can works well. Within a couple of minutes, the irritated larvae come up onto the turf surface. Only two to three cutworms per foot square are enough to result in noticeable injury. An application of bifenthrin (Onyx, Talstar), carbaryl (Sevin), chlorantroniliprole (Acelepryn), deltamethrin (DeltaGard), spinosad (Conserve), or trichlorfon (Dylox) controls the caterpillars. Insecticidal nematodes are also effective.

Cutworm moths lay their eggs near the tip of grass blades, so frequent mowing and clipping removal reduce caterpillar numbers 75 to 97%. Dump clippings baskets well away from greens and other bentgrass areas. Over 90% of the eggs survive the mowing process, so dumping the clippings at the green apron results in caterpillars that can easily attack the green. Homeowners who collect grass clippings and use them to mulch around vegetable plants and flowers concentrate the eggs into smaller areas, resulting in heavy feeding damage from the resulting larvae to their garden plants. Top-dressing the green with sand also reduces the number of cutworm larvae. (*Phil Nixon*)

A New Disease to the United States, but not yet Detected in Illinois: Boxwood Blight

"Box blight" or "Boxwood Blight", was first described in the United Kingdom (UK) in the mid-1990's, but the disease was not formally identified. In 2002, this disease was found in New Zealand and was described and named as a new species, *Cylindrocladium pseudonaviculatum*. Later in the same year, the boxwood fungus described in the UK was named, *Cylindrocladium buxicola*. They are now known to be the same fungal disease. Since these first reports, this disease has been found throughout Europe.

In October of 2011, Boxwood Blight (*Cylindrocladium pseudonaviculatum*) (syn. *C. buxicola*), was detected in North Carolina and Connecticut. Later, there were more detections of this disease in the United States. Below is the current table that outlines the detection of Boxwood blight in the United States.

Date Confirmed in US	Location
10/26/2011	Surry County, North Carolina
10/26/2011	Middlesex, Fairfield, Hartford, New London Counties, Connecticut
11/01/2011	Carroll County, Virginia
12/13/2011	Providence County, Rhode Island
12/14/2011	Prince Georges County, Maryland
12/19/2011	Barnstable County, Massachusetts
12/20/2011	Washington County, Oregon
12/23/2011	Westchester County, New York
1/24/2012	Lancaster County, Pennsylvania
3/28/2012	Lake County, Ohio

To date, this disease is known to infect all Boxwood or *Buxus* species as well as pachysandra. The fungus that causes Boxwood blight or *Cylindrocladium pseudonaviculatum* can infect all above ground parts of the plant, but does not appear to infect roots.

Symptoms may start out as dark or light brown spots (lesions) on leaves. Later, the spots develop dark borders, enlarge, and grow together. A concentric pattern of rings may be found within the spots. These infected leaves eventually turn brown or straw colored or "blight". Defoliation quickly occurs after infection of leaves. Heavily infected plants will drop most of their leaves, but, often times have a few green leaves remaining on top. This disease pathogen can also infect stems and cause distinct and diagnostic dark brown to black lesions to develop from the soil line to the shoot tips.

The boxwood blight fungus form fungal structures that appear as white tuffs on the undersides of infected leaves and on black lesions. It may be possible to see this with a hand lens. The boxwood blight fungus has been reported to survive in cankers and fallen, infected leaves.

It has been noted that this disease will not kill the plant; however this disease will repeatedly infect plants, which can weaken the plant and lead to death, especially for young plants or new transplants.

Boxwood blight can spread very rapidly during warm and humid conditions and can be a very serious problem in commercial production.

Some other boxwood problems include Volutella blight and winterburn

If you suspect Boxwood Blight on your boxwood or pachysandra, please contact and submit a sample to the U of I Plant Clinic (217-333-0519) immediately. (*Stephanie Porter*)

Brown rot vs. Fire Blight

Brown Rot can cause blossom blight, stem canker, and dieback of peach, cherry and other stone fruit species. The visual symptoms of brown rot have many similarities to symptoms caused by fire blight on apple, pear and many other species in the rose family. The pathogens that cause brown rot and fire

blight are very different. Fire blight is a bacterial disease caused by the pathogen *Erwinia amylovora*. Brown rot is a fungal disease caused by the pathogen *Monilinia fructicola*. Proper identification of the disease is critical when considering control options, especially when selecting pesticides.

Brown Rot is a common and destructive disease of stone fruits (peach, plum, cherry, etc.). Fruit growers face significant yield losses as a result of infected fruits rotting in the orchard, in storage and transit, as well as at the market. In the landscape, ornamental species are commonly damaged by blossom blight and twig cankers. Fire blight can also cause significant yield losses in orchards. Similarly to brown rot, fire blight can cause blossom blight, shoot blight, as well as branch cankers.

Blossoms infected with brown rot have rapidly enlarging brown spots on the flower petals, stamens, and pistils. Infected flowers soon wilt and turn brown. Withered flowers may persist on the tree into the summer and may be covered with brownish-gray fungal spores. Blossom blight caused by the fire blight pathogen will not have the brownish-gray fungal spores present. Fire blight will cause blossoms to appear water soaked, shriveled, and brown-black in color.

Both infections continue to progress into fruit spurs, small stems, and branches. Brown rot infections on twigs and smaller branches appear as oval or elliptical cankers. They are usually brown, sunken, and form a definite outline. Gum commonly oozes out at the edge of the cankered surface during wet periods, especially on apricots. This gumming may be confused with bacterial oozing associated with fire blight. Cankers associated with brown rot which may have scattered, tan-gray spore tufts also appear on the bark surface under wet and humid conditions. Twig blight results when a canker completely encircles a twig or branch. Blighted twig leaves often wilt, turn dull green, then a light brown, wither, and die but remain attached to the blighted twigs.

Fire blight cankers appear somewhat sunken and a darker color, relative to the surrounding healthy tissue. The margins of expanding cankers may appear slightly raised. Cankers may exude a milky-white or amber colored ooze, especially from bark lenticels. Leaves on blighted stems die and turn either dark brown or black and remain attached throughout the growing season. Frequently, the tip of the blighted shoot bends over and resembles a shepherd's crook, a distinctive identification feature for this disease.

More Information on the identification and control of brown rot as well as fire blight can found within the following Reports on Plant Disease
RPD #801 Fire Blight of Apple
RPD #804 Brown Rot of Stone Fruits
(*Travis Cleveland*)

NPDES

On November 1, 2011, the federal requirement for an NPDES permit for certain pesticide applications went into effect.

Essentially if you are applying any pesticide “in” or “on” water you are affected. There currently are no

exemptions for farmers, municipalities or state agencies. Lawn care companies, golf courses, mosquito abatement districts, conservation districts and homeowner association are all included. The only water sources not covered by the NPDES permit are backyard ponds, swimming pools or bird baths.

A little hazier is the third aspect of "near water's edge." It's harder to define, and most definitely may affect more people.

Essentially, if the product you are using around the water's edge, be it a ditch, pond/lake/stream/river or other moveable water source, you have to consider weather forecasts, slope, nearness of the water source, and whether the product has a residue that can eventually cause problems. Using "Best Professional Judgment" should help you determine whether you need a permit or not. Spraying on flat ground where there is little if no chance of pesticide movement is safe.

Illinois EPA (IL-EPA) is the lead agency on the NPDES permit process. Either the spray applicator or the land owner (municipality, park district, homeowner association, homeowner, farmer) must have a permit, which is called an NOI (Notice of Intent) which is a form stating you plan to apply pesticides "in", "on," or "near water's edge."

The University of Illinois Pesticide Safety Education Team has prepared an FAQ to answer many of the questions involving NPDES and the relatively simple application process. Go to http://web.extension.illinois.edu/psep/ for the summary and FAQ with links to the IL-EPA's application.
There currently is no fee for the NOI permit; the permit is good for 5 years. (*David Robson*)