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 5 - May 26, 2015

Modified Growing Degree Days (Base 50°F, March 1 through May 21)

Station Location	Actual Total	Historical Avg. (11 year)	One-Week Projection	Two-Week Projection
Freeport	408	348	484	571
St. Charles	414	333	484	564
DeKalb	413	384	496	588
Monmouth	519	435	603	700
Peoria	545	470	631	730
Champaign	579	476	672	777
Springfield	665	533	767	880
Brownstown	626	587	733	852
Belleville	712	616	823	944
Rend Lake	782	668	899	1028
Carbondale	727	632	838	962
Dixon Springs	745	684	862	989

Insect development is temperature dependent. We can use degree days to help predict insect emergence and activity. Home, Yard, and Garden readers can use the links below with the degree day accumulations above to determine what insect pests could be active in their area.

GDD of Landscape Pests
GDD of Conifer Pests

Degree day accumulations calculated using the Illinois IPM Degree-Day Calculator (a project by the Department of Crop Sciences at the University of Illinois and the Illinois Water Survey). (*Kelly Estes*)

Illinois Invasive Plant Phenology Report for May 18, 2015

Several invasive plant experts from around the state are continuing their series of reports focusing on the phenology of invasive plants in Illinois. The intent of these reports is to provide an update on the development of invasive plants across the state of Illinois – what plants are in bloom, leafing out, setting seed, or senescing in different areas of the state.

Readers are encouraged to share what they see in their area of the state by emailing Chris Evans, Invasive Species Campaign Coordinator of the Illinois Wildlife Action Plan (chris.evans@illinois.gov).

(Contributors include Mike Davis, Nick Seaton, Caleb Grantham, Scott Schirmer, Cathy McGlynn, and Kathleen Garness)
**Report based upon observations between May 11-15, 2015*

Southern Illinois

- **Multiflora rose, *Rosa multiflora* and bush honeysuckle, *Lonicera maackii* -** These two common woody shrub species are in full bloom. Spring leaf expansion is complete and the plants are susceptible to herbicide treatments (both foliar and cut stump work at this time of year). Since both species do attract pollinators, it is recommended that you wait until the blooms have diminished before any foliar applications of herbicide.
- **Japanese honeysuckle, *Lonicera japonica*** - this invasive plant is blooming now. This species has a

very long bloom window and can flower from now through the summer and fall, even into early winter.

- **Autumn olive, *Elaeagnus umbellata* and Callery pear, *Pyrus calleryana*** - These invasive shrubs/small trees are both past flowering and have small, unripe fruits. They are both susceptible to herbicide treatments at this point in development.
- **Garlic mustard, *Alliaria petiolata*** - This herbaceous woodland invader is nearly finished blooming and now mostly has green, unripe fruit pods. Herbicide treatments are not effective at this developmental stage. Instead, hand pull, bag, and remove plants.
- **Sweet clover, *Melilotus* sp. and Sericea lespedeza, *Lespedeza cuneata*** - both of these invasive members of the bean family are starting vigorous growth. Sweet clover is in full flower. Sericea lespedeza is not flowering yet but is in some place about knee high. Look for these species growing in open areas, prairies, pastures, and roadsides.
- **Japanese stiltgrass, *Microstegium vimineum*** - this annual grass species started germinating about three weeks ago and is now several inches high. As the temperatures increase, expect the growth rate of this plant to drastically increase. While the plants can be easily killed at this time of year, subsequent germination can still occur. Either plan on coming back at a later date for follow up treatments or hold off on treatments until mid-late summer.
- **Poison hemlock, *Conium maculatum* and Wild parsnip, *Pastinaca sativa*** - Both of these are biennial members of the carrot family. Poison hemlock is flowering at this point and wild parsnip is just starting to come into flower. Herbicide treatments can still be effective at this point, but watch poison hemlock and stop applying herbicides when the flowers start to turn into fruit.
- **Reed Canarygrass, *Phalaris arundinacea*** - This perennial grass species is just starting to flower. Now is a great time of year to control this species with an herbicide application. Keep in mind that this species often grows in wet areas. If so, an aquatic-labelled herbicide should be used.
- **Crown vetch, *Securigera varia*** - This perennial herbaceous vine is just starting to bloom. You can find this plant along many roadsides in the region.

Central Illinois

- **Garlic mustard, *Alliaria petiolata*** - This biennial invasive plant is in full flower right now but many are starting to show the seed pods. While herbicides could still be effective at this point with so few seed pods, it may be more effective to hand pull, bag, and remove plants.
- **Sweet clover, *Melilotus* sp**. - is starting to bolt but is still low and "bushy" looking with no flowers yet. This is a great time of year to treat this species, taking care to avoid non-target impacts.
- **Dame's Rocket, *Hesperis matronalis*** - Is in full flower right now, but no seed pods have been observed yet. As with garlic mustard, the best method of control when the plants are in full flower is to hand pull, bag, and remove all plants.
- **Poison hemlock, *Conium maculatum* and Wild parsnip, *Pastinaca sativa*** - both of these biennial plants are bolting but neither is flowering

as of yet. This is the ideal time to treat them.

- **Crown vetch, *Securigera varia*** - This perennial herbaceous vine is growing quickly, but no flowers as of yet.
- **Bush honeysuckle, *Lonicera maackii* and Autumn olive, *Elaeagnus umbellata*** - These woody invasive shrubs are both flowering, but no fruit formation as of yet. Spring leaf expansion is complete and the plants are susceptible to herbicide treatments (both foliar and cut stump work at this time of year). Since both species do attract pollinators, it is recommended that you wait until the blooms have diminished before any foliar applications of herbicide.
- **Star of Bethlehem, *Ornithogalum umbellatum*** - This weedy low growing plant is in full flower, but is past peak. Flowering should end soon.

Northern Illinois

- **Garlic mustard, *Alliaria petiolata* -** This biennial invasive plant is in full flower right now and just starting to develop seed pods. While herbicides could still be effective at this point with so few seed pods, it may be more effective to hand pull, bag, and remove plants.
- **Yellow rocket, *Barbarea vulgaris*** - This weedy mustard is in full bloom now. You can see this plant in roadsides, old fields, and other open areas.
- **Canada thistle, C*irsium arvense*** - This perennial thistle is starting to grow but not yet near bloom. **Bull thistle, *Cirsium vulgare*, and teasel, *Dipsacus* sp.**, rosettes are apparent but not near blooming.
- **Reed canarygrass**, ***Phalaris arundinacea* -** This perennial grass is starting to mature but not in flower yet. The best time of year to control this species with an herbicide application is just at the point of flowering. Keep in mind that this species often grows in wet areas. If so, an aquatic-labelled herbicide should be used.
- **Common buckthorn, *Rhamnus cathartica*** - This woody invasive shrub/small tree is fully leafed out. Spring leaf expansion is complete and the plants are susceptible to herbicide treatments (both foliar and cut stump work at this time of year).
- **Japanese honeysuckle, *Lonicera japonica*** - this woody invasive vine is just starting to bloom. This species has a very long bloom window and can flower from now through the summer and fall, even into early winter.
- **Bush honeysuckle, *Lonicera maackii* and Japanese barberry, *Berberis thunbergii* -** These woody invasive shrubs are both in bloom right now. Spring leaf expansion is complete and the plants are susceptible to herbicide treatments (both foliar and cut stump work at this time of year).
- **Leafy spurge, Euphorbia esula -** This herbaceous plant is in full bloom.

(*Kelly Estes*)

Rhizoctonia on Turfgrass

Brown Patch, a common disease of turf, is caused by the fungus *Rhizoctonia solani.* It is a warm-season disease which affects the leaf tissue of infected plants. However, there is a much milder cool-weather Rhizoctonia disease called Yellow Patch which bookends summer Brown Patch in the spring and fall. With the cloudy, wet spring in the Midwest, a few samples have shown up at the Plant Clinic.

Yellow Patch is a cool-weather disease; it primarily occurs from late March through mid-May and sometimes reappears from late September through early November. The disease is favored by periods of prolonged cool, wet weather. Yellow patch is caused by *Rhizoctonia cerealis.* This pathogen prefers cloudy, wet weather on shaded lawns while *R. solani* thrives in the muggy nights and dry days of summer. *R. cerealis* is the much less destructive of the two pathogens, and turf will generally grow out of the symptoms after a few days of warm, dry weather.

Areas affected by Yellow Patch are irregular to circular in shape, and can be as large as 3' in diameter. Foliage will first turn yellow, followed by tan, and finishing as a bronze color. The edges of the patches may become brown and look similar to dormant grass if the weather becomes too cold. Yellow Patch is most commonly observed on lush grass with a high nitrogen content. Excessive thatch (over 0.75 inch thick) is also associated with the development of this disease.

Because turf will generally grow out of Yellow Patch when the weather changes, Yellow Patch is mostly considered to be a cosmetic disease. Chemical control is rarely warranted. Instead, maintaining adequate nutrient levels while reducing nitrogen fertilization and improving drainage are recommended to manage Yellow Patch. If over 0.75 inches of thatch has accumulated, dethatching may help, but a fertilization program that avoids the accumulation of thatch is better. In problem areas where Yellow Patch has been a recurring issue, two or more preventative applications of a fungicide labeled to control Yellow Patch in late fall have been shown to suppress the development of the disease in spring, and to encourage the recovery of turf in which symptoms develop. (*Sean Mullahy and Diane Plewa*)

Witches'-broom of Hackberry

Witches' brooms are diseases known to affect a variety of deciduous and evergreen hosts. They cause a dense clustering of shoots originating from a single point on a stem. A lack of apical dominance essentially causes all the shoots to develop equally. Affected branches have short internodes resulting in broom-like or dense clusters of branches. Depending on the host, the witches' broom may be caused by insects, fungi, viruses, or phytoplasmas.

Witches' broom is an especially common, disfiguring disease of hackberry (*Celtis occidentalis*). Damage from the disease is most noticeable in the winter months when leaves are absent. Leaf fill during spring and summer months mask the damage. However, the tree in Photo 1 had damage that was evident even during the summer months. Witches' Broom of Hackberry is believed to be caused by two agents: a minute, wormlike, eriophyid mite (*Eriophyes celtis*) and a powdery mildew fungus (*Podosphaera phytoptophila*). Though not fully understood, observations suggest that mites may induce brooms and that the powdery mildew fungus exploits the weakened plant and favorable habitat created by deformed buds and dense branching.

There are no practical control measures available for witches' brooms on hackberry. Fortunately, hackberry witches' broom, though unsightly, rarely poses a threat to the health of the tree. In some situations, the trees appearance can be

improved by pruning the affected branch back to healthy wood, but this if often not necessary. (*Travis Cleveland*)

Periodical Cicada

Periodical cicadas have emerged in southern Illinois. This is a 13-year brood referred to as Marlatt's Brood XXIII or the Lower Mississippi River Valley Brood. This brood touches only small portions of Illinois, emerging in western Kentucky and Tennessee, southeastern Missouri, eastern Arkansas, most of Mississippi, and the eastern half of Louisiana. It emerges in southeastern Illinois in Crawford, Lawrence, and Wabash counties; in southwestern Illinois, in Alexander, Pulaski, Union, Jackson, southeastern Perry, and the western edges of Williamson, Johnson, and Massac counties. This brood emerged in early May and will be present for 6 to 8 weeks.

Feeding is done primarily by nymphs sucking sap out of roots. Where periodical cicadas are numerous, tree growth is reduced the last few years before adult emergence when nymphs are larger and consuming more sap. Even so, this growth reduction is not considered important enough to warrant control. Adult cicadas feed by sucking sap out of stems, but not enough to cause appreciable damage. The adult stage exists primarily for reproduction.

Males sing during the daytime to attract females to them for mating. After 2-3 weeks, the males die off, so the singing stops. Females live a few weeks longer to develop and lay their eggs. They insert their eggs through slits they make in stems up to 2 inches in diameter. These eggs hatch in the fall into nymphs that free-fall to the ground. They tunnel into the soil, find a root, and feed there for the next 13 or 17 years. Although they may feed on several different roots over the years, they do not burrow more than a few inches.

In high-emergence areas, enough egg-laying occurs to weaken stems, causing them to wilt and snap in windy conditions. On established trees and shrubs, this causes aesthetic damage but no real threat to overall plant health. However, oviposition into trunks up to 2 inches in diameter can cause the trunk to snap off, severely damaging or killing young trees. We recommend against planting small transplants the year before emergence to avoid damage.

The next emergence of periodical cicadas in Illinois will be in 2020 in the Chicago collar areas of Cook, DuPage, Lake and Will Counties. This is the Northern Illinois sub-brood, which is apparently part of Marlatt's Brood XIII, a 17 year brood. It emerged first in 1969, 13 years after the previous emergence and has continued to emerge every 17 years. Periodical cicada life cycles are 13 years in the southern U.S. and 17 years in the northern U.S. Those broods north of the Mackinaw River just north of Bloomington, IL are 17 years; those south of that river's latitude are 13 years.

Trunks of susceptible trees can be wrapped or caged to reduce egg-laying damage. Emergence will not be heavy in housing developments and other areas where the trees and shrubs were removed within the past 50 to 100 years. Such activity kills the root systems and thus the cicada nymphs feeding on them. Periodical cicadas are slow to invade new areas, primarily because they get

the chance only every 13 or 17 years when the adults are out.

Several insecticides are labeled and effective in killing large numbers of adults. However, in heavily infested areas, insecticide spraying causes little or no reduction in egg-laying damage, so treatment is normally not recommended. For additional information, go to the University of Illinois Extension web site, Cicadas in Illinois, at http://web.extension.illinois.edu/cicadas/. (*Phil Nixon*)

May Beetles

There are many species of the genus *Phyllophaga*, also known as true white grubs or May beetles that occur in Illinois. Their larval stage is one of the genera known as white grubs that feed on turfgrass roots. While Japanese beetle, *Popillia*, and masked chafer, *Cyclocephala*, larvae or white grubs feed only on the roots of grasses, true white grubs also feed on dead organic matter. For that reason, they are commonly found in flower beds, under dead logs, and in mulch causing no apparent damage.

All true white grubs can be distinguished from others by their raster pattern of two parallel rows of thick setae or light spines on the underside of the last abdominal segment. Different species of *Phyllophaga* can be distinguished by the number of setae per row and the amount and location of divergences of the two rows.

The most familiar species have three-year life cycles and are commonly known as three-year white grubs. In the second year of the life cycle, large grubs are present through the growing season, causing concern to turf managers. Heavy infestations are sporadic in appearance, but can cause severe turf injury like that caused by the more common Japanese beetle and masked chafer larvae. True white grubs have lower water requirements than other white grubs, and commonly damage non-irrigated turf.

Adult May beetles feed on oak, crabapple, ash, and other tree foliage at night in the spring (May), eating at the leaf margin to the mid-vein. Damaged tree leaves with no apparent responsible insect during the day may be due to May beetle feeding. Verify the cause by scouting the foliage after dark with a flashlight; adults hide in turf during the day. Most three-year white grub adults are about one-inch long stocky dark brown to reddish brown beetles. In southern Illinois, one of the common May beetle species has a one-year life cycle and is a one-half inch long, tan adult beetle. Spring sightings of what appear to be adult masked chafers are usually this species.

Three-year white grubs are typically controlled with insecticide applications applied to control Japanese beetle or masked chafer grubs. However, three-white grub infestations commonly occur in non-irrigated areas that are not usually treated. Large larvae are commonly discovered that are best controlled with insecticidal nematodes, particularly *Heterorhabditis bacteriophora* (Hb nematodes). The higher cost of the nematodes and the need for irrigation before and after application can make treatment problematic.

Adult feeding on tree foliage is usually not heavy enough to warrant treatment. If needed, a single application of carbaryl (Sevin) or a pyrethroid will provide control. (*Phil Nixon*)