

Number 3 - May 9, 2016

First Weekly Issue

Starting with this issue and continuing through June, the Home, Yard, and Garden Pest Newsletter will be published weekly. At this time of year, diseases, weeds, and insect pests appear often and in large numbers, making timely control necessary. We will revert to an every two week publishing schedule in July through September when timing is less critical. (*Phil Nixon*)

Phenology Timing and Bridal Wreath Spirea

Bridal wreath spirea, or Vanhoutte spirea (*Spiraea x vanhouttei*), is blooming throughout the state. This is a major phenology plant in Don Orton's book *Coincide*. With phenology, stages of plant development (usually bloom time) are used to predict stages in pest development. This method is more accurate than using calendar dates because the plant is exposed to the same climatic conditions as the insect. Thus, "early" and "late" springs associated with unusually high or low temperatures, respectively, cause similar responses in both plant and insect.

Coincide is published by Labor of Love Conservatory, 723 Dawes Avenue, Wheaton, IL 60187, (630)668-8597, dennyjam@aol.com. Although occasionally sold in gift stores in locations such

as the Morton Arboretum, Chicago Botanic Garden, and Missouri Botanic Garden, it is normally not seen in bookstores. It is probably easiest to obtain directly from the publisher.

Phenology helps predict when pest stages susceptible to control are likely to be present, but it is not a spray guide. When a phenological event predicts that a pest is susceptible to control, one needs to scout to verify that the pest is present and in a susceptible stage before using a control measure. We include phenology information from *Coincide* in our University of Illinois Extension pest management recommendations published in the Illinois Commercial Landscape and Turfgrass Pest Management Handbook. Following are the most common pests that are in susceptible treatment stages during vanhoutte spirea bloom.

Full bloom: 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).

Full to late bloom: Lilac (ash) borer newly hatched larvae; oystershell scale (brown) crawlers; emerald ash borer adult beginning emergence.

Finishing bloom: Bronze birch borer newly hatched larvae.

Most blossoms brown, still a few white: Flat-headed appletree borer larval hatch; peach tree borer newly hatched larvae; viburnum borer newly hatched larvae.

Bloom finished: Oystershell scale (gray) crawlers. (*Phil Nixon*)

Emerald Ash Borer Control

As reported in Kelly Estes' article in this newsletter issue, emerald ash borer adults are emerging in southern Illinois and will soon do so in central and northern Illinois. Now is the time to apply systemic insecticides to control this pest if emerald ash borer has been found within 15 miles.

The systemic insecticides azadirachtin (Azatin), dinotefuran (Safari), emamectin benzoate (Tree-Age), and imidacloprid (Merit), provide excellent control of emerald ash borer by killing adults feeding on ash leaves. This is probably the major method of control with the exception of emamectin benzoate which has been shown to also be very effective in killing larvae within the tree.

Many female beetles rely on leaf-feeding after emergence to mature their ovaries prior to egg production. It is likely that male beetles benefit by leaf-feeding as well. Although emerald ash borer beetles can fly one-half-mile or more, it appears that they do not fly as far if suitable hosts are close at hand. Long-distance flights apparently are most common when an area's trees are heavily infested.

Heavily damaged, untreated trees are likely to produce large numbers of beetles that are likely to fly to nearby healthy, treated trees. However, because heavily damaged trees typically have few leaves, those flying to treated trees are likely to feed on the treated trees' leaves and be killed before laying eggs. This is borne out by many instances of healthy, treated trees surviving while nearby untreated trees die.

Pollinating insects generally do not visit wind-pollinated trees such as ash. The pollen of wind-pollinated plants typically does not contain the high protein content found in pollen of insect-pollinated plants. However, ash produces large quantities of pollen when local higher quality sources such as dandelion and other spring flowers might not be present. When this occurs, up to 30% of the pollen collected by honey bees during this time has been found to be ash. Because systemic insecticides are likely to enter pollen, we recommend treating after ash leaflets have expanded to at least three-quarters of full size. By that time, ash have completed pollination, greatly reducing the potential of harm to honey bees and other pollinators. Three-quarter leaflet expansion has occurred throughout Illinois. (*Phil Nixon*)

Hold Off Pruning Oaks and Elms

Warm spring weather provides ideal working conditions for many landscape maintenance projects. However, some projects, such as pruning, can be harmful if done at the wrong time of year. For example, Oak Wilt and Dutch Elm Disease (DED) are two devastating fungal diseases that are more likely to occur on

trees pruned early in the growing season. Recently pruned trees can attract insect vectors that transmit the spores of the fungal pathogens. Once infected, both diseases rapidly kill their host tree, often in a matter of weeks. The hazard of either disease entering a tree through a pruning wound can be reduced by pruning during the dormant season. Pruning elm and oak trees, especially oaks within the red oak group, should be avoided from April to October. The risk of this type of infection decreases by mid-July. However, those erring on the side of caution may choose to postpone any pruning until dormancy.

Exceptions to this rule occurs with storm damaged trees and some DED infected elm trees. Storm damaged trees should be promptly pruned to eliminate hazardous conditions and to facilitate wound closure. If a new, upper-crown DED infection is detected early enough, the DED fungus can be eradicated from the tree by pruning out the diseased limb or limbs. While this can be a fairly aggressive procedure, it can be quite successful. Such pruning is most likely to work when less than 5% of the crown is affected.

A minor pruning related problem occurs to maples, walnuts, birches, beeches, hornbeams, and yellowwood. These trees species are collectively referred to as “bleeders” because they will “bleed” clear sap if pruned in early spring. Although the heavy sap flow can be quite alarming, will not harm the health of the tree. To avoid sap loss, delay pruning these species until later in the spring after the trees have fully leafed out.
(Travis Cleveland)

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

Station Location	Actual Total	Historical Average (11 year)	One- Week Projection	Two-Week Projection
Freeport	229	200	296	367
St. Charles	217	193	281	347
DeKalb	227	222	301	377
Monmouth	288	259	368	453
Peoria	311	286	395	482
Champaign	348	287	434	523
Springfield	400	324	494	594
Perry	393	315	478	569
Brownstown	394	371	492	594
Belleville	545	391	647	752
Rend Lake	548	429	657	769
Carbondale	528	411	629	731
Dixon Springs	562	450	669	778

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)

Emerald Ash Borer Adult Emergence Beginning

We generally think of Memorial Day as the time of year to begin thinking about emerald ash borer emergence. Given the warm weather this spring, the southern part of Illinois has already reached the accumulated degree days to signal adult emergence (Table 1). This was confirmed last week with adult emergence

confirmed in Marion. Wayne County, Missouri also confirmed adult emergence last week. Given the degree day predictions in the table below, the southern half of the state may begin observing some initial emergence in the next two weeks. Peak activity is expected to occur when degree day accumulations reach 1000.

Emerald ash borer has been confirmed in 60 of the state's 102 counties. While it is believed to be widespread, residents are still urged to keep an eye on their ash trees, assess their health, and report infestations in previously unconfirmed areas. Remember, potentially infested trees may have D-shaped exit holes on the trunk and branches, reduced foliage/dieback, and epicormics shoots.

It is also important to note that Illinois recently lifted its internal EAB quarantine. By deregulating, the state of Illinois will no longer restrict the movement of any cut, non-coniferous firewood within the state. Scott Schirmer, State Plant Regulatory Officer is the Illinois Department of Agriculture shared the following: *"Though the Illinois Department of Agriculture (IDOA) no longer has a quarantine and internal regulations surrounding EAB, they are still tracking its movement and would like to be notified of new county or town finds. The Department still encourages Illinois residents to not move firewood other than as needed locally, and to be aware that Federal regulations still exist regarding out of state movement of ash material(s). If there is ever a question about the legality of moving these materials, please contact the IDOA, USDA, or your local U of I extension office. Property owners and managers are still advised to monitor their ash trees and remove them before they become hazardous."*

Modified Growing Degree Days (Base 50°F, March 1 through April 27)

Station Location	Actual Total	Historical Avg. (11 year)	One-Week Projection	Two-Week Projection
Freeport	229	200	296	367
St. Charles	217	193	281	347
DeKalb	227	222	301	377
Monmouth	288	259	368	453
Peoria	311	286	395	482
Champaign	348	287	434	523
Springfield	400	324	494	594
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Table 1. Degree day accumulations and projected totals for Emerald Ash Borer. (Kelly Estes)

2016 Invasive Species Awareness Month

May is once again Invasive Species Awareness Month in Illinois. This statewide effort is held each year to educate and inform citizens about the threat of invasive species. This year's theme is "Preserving Illinois' Wild Side." Invasive species impact the wildlands and natural areas of Illinois. Together we can help protect these beautiful and important areas.

There are many events being held statewide, including two great educational opportunities.

The Morton Arboretum is hosting "Species on the Move: Updates on Invasive Threats to Urban and Natural Areas" on May 12. The workshop will review NEW pests, pathogens, and invasive plants that threaten trees in Illinois, with a special focus on oak problems. More information can be found [here](#); be sure to scroll to the bottom to register.

On May 26th, the Illinois Invasive Species Symposium will be held in Champaign. This year's symposium will feature a keynote presentation on "Invasive Plants Across Illinois: Status and Trends from a Statewide Monitoring Program" by INHS biologists James Ellis, Tim Rye, and David Zaya. Other presentations will be given on a variety of invasive species topics, including emerald ash borer de-regulation, Illinois Wildlife Action Plan's Invasive Species Campaign, jumping worms, aerial control of bush honeysuckle, prescribed fire and Japanese stiltgrass, thousand cankers disease, Oriental bittersweet control, forest health monitoring, and more. Registration is also required for this event and can be completed [here](#). (Kelly Estes)

Is It Crabgrass or Something Else?

Crabgrass will be germinating soon if it hasn't already. Often times, we find that crabgrass is cursed by gardeners even when it's another grassy weed species that is really to blame. Poor crabgrass. It's the one grassy weed name that many homeowners and gardeners alike know, unfortunately. Of course improper identification can lead to improper control methods ... and a remaining weed problem.

Though not really look-a-like species, these grasses are commonly confused with crabgrass. Note they are all perennials meaning they can spread by seed but plants may and very likely have overwintered from last year:

Tall fescue (*Schedonorus phoenix* [Scop.]) is a cool season perennial so it is actively growing now. This clump forming grass typically appears as a circular

patch that can become wider from tillering. Short rhizomes (underground runners) may be present. The leaf blades are fairly wide. When tall fescue gets mixed in with a slower growing, finer textured turfgrass species, it becomes quite noticeable. Mowing can help to even out the height difference, however tall fescue's lower stems are often lighter colored, allowing for the spots to remain noticeable. The leaves are dark green in color and the lower surface is glossy.

Quackgrass (*Elytrigia repens*) is another cool season perennial that is rapidly making ground wherever it can be found growing right about now. It spreads by seeds and long, white rhizomes and aggressively forms patches. Young plants can be hairy which could make it easily confused with crabgrass. However, growth occurs earlier in the spring. To know for sure if what you have is quackgrass, look for clasping auricles at the base of the leaf. These finger-like projections are key identifiers for quackgrass.

Johnsongrass (*Sorghum halepense*) is not typically confused with crabgrass, as far as I know at least. I've included this weed only because this week I overheard a northern Illinois garden center employee tell a customer who thought they had crabgrass that they probably had Johnsongrass. Johnsongrass is a large-growing grass that does not tolerate close mowing. It's found primarily in the southern half of the state. It spreads by thick, aggressive rhizomes and seeds. The leaf blades are smooth.

Will the real Crabgrass please stand up?

Crabgrass is a warm season annual. Reproduction is by seed and it's not capable

of overwintering in Illinois. So, plants will always begin as seedlings. Most crabgrass seeds germinate when soil temperatures are in the mid 60's for about 3 to 6 consecutive days. However, crabgrass seeds are capable of germinating from very early in the spring to very late in the fall as long as adequate soil moisture is present. Plants that germinate in the fall will have a short life as a hard frost will kill them. Again, poor crabgrass. Crabgrass stems are often purplish near the base and root at the nodes. All of this tillering makes the plant very difficult to pull. The leaf sheath is densely hairy. Large crabgrass leaves are hairy on both sides while smooth crabgrass leaves are sparsely hairy.

Need help with identification?

Grasses can be challenging to identify! For assistance, check out *Identifying Turf and Weedy Grasses of the Northern United States*. This pocket sized guide is available for sale at: <http://pubsplus.illinois.edu>.
(Michelle Wiesbrook)

Scouting for Cankers

Trees and shrubs in Illinois have had a hard couple of years. We had two years of back-to-back drought several summers ago, followed by some harsh winters and then last year's record-setting wet spring. All-in-all, our plants are pretty stressed.

We've been seeing a lot of cankers at the Plant Clinic recently. Cankers are localized areas of dead tissue, and they show up on stems, trunks, and branches. Cankers can be sunken or swollen, and may

bleed (or ooze) sap. The bark may be split or cracked. The term "canker" describes a symptom; there can be many causes, including fungi, bacteria, and mechanical damage. Fungal and bacterial cankers tend to show up on stressed trees. These are pathogens that are ubiquitous in the environment, so attempting to control the pathogen is usually not helpful. Once a canker pathogen has invaded the stressed plant, it begins to damage the vascular system. This can lead to dieback and death due to girdling.

We recommend scouting trees for cankers by carefully examining the trunk and base of major branches. Look for areas of disrupted bark, or discoloration. A common fungal canker of spruce and pine causes a white, sticky exudate to drip down branches and the trunk. While there isn't much you can do about a canker – no pesticides have been found to be effective, and wound dressings are not recommended – they can be used as a gauge for how stressed your trees are. The best management for cankers is prevention: try to reduce stress on your trees! We recommend lightly mulching the base of trees (this has the benefits of maintaining even soil moisture and reducing the likelihood of a mower or trimmer damaging the trunk), fertilizing when appropriate (late fall and early spring for most), watering during periods of dryness lasting more than 2 weeks in the summer, and pruning out dead wood in dry weather. If you have recently installed a tree or shrub, remember that transplant care lasts more than one season and the plants should be actively maintained (including watering) for 3 years.
(Diane Plewa)