BUCKEYE YARD AND GARDEN LINE 2014-09
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This is the 9th 2014 edition of the Buckeye Yard and Garden Line (BYGL). BYGL is developed from a Tuesday morning conference call of Extension Educators, Specialists, and other contributors in Ohio.

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1. PLANTS OF THE WEEK.

*ANNUAL - ANGELONIA (*Angelonia angustifolia*). Though this plant has been on the market for several years, it still isn't widely used in flower beds. It was introduced in the mid- to late-90's and is an excellent low-maintenance flower that withstands hot, cold, wet, dry, and just about any conditions thrown its way. Summer snapdragon is another common name which is appropriate as the flowers resemble snapdragon flowers. They bloom on stems that rise slightly above the foliage and make great cut flowers. The flowers come in the pastel range, and include pink, purple, white, lavender, and bi-colors.

The plant has a vase-shaped growth habit and can grow around 1 - 3' tall depending upon the cultivar. There are also cultivars that are shorter with more compact flower stems as well as those that are spreading. Angelonia are great for flower beds or hanging baskets and containers. Plant them in full sun for best flowering.

**Author: Pamela J. Bennett**

*PERENNIAL - ALLIUM or ORNAMENTAL ONION (*Allium* spp.). This genus has around 500 species that are used for ornamental and culinary purposes and includes onions, chives, and garlic. The ornamental bulbs are really cool when in bloom and can be dried for use in arrangements. In fact, don't deadhead the flowers until they completely lose their ornamental value. Many look great even dried in the garden. Some people like to be creative and spray paint the dried bloom various colors to add interest to the garden. Many *Allium* are great re-seeders; however, it can pose a problem if one lets it get out of control so be aware. All of the species will provide the aroma of onion when the flowers are crushed and all have a bulbous-type growth. In addition, *Allium* tend to be deer-resistant - another factor in their favor!

Ornamental *Alliums* range anywhere from 6” - 3’ tall depending upon the species and cultivar. Most *Alliums* bloom in late May and/or early June in central Ohio. They prefer full sun and well-drained soil for best results. The foliage is usually non-descript except for the Turkistan onion (*Allium karataviense*), that has wider than normal leaves that are silver-gray in color, and last until mid-summer. When the foliage or flower stems begin to look ragged, cut them back clear to the ground.

**Author: Pamela J. Bennett**

*WOODY - PURPLE ROBE BLACK LOCUST (*Robinia pseudoacacia* 'Purple Robe'). The month of May is festooned with the soft lavender-violet blooms of this black locust cultivar, and May is indeed this tree's finest moment. The large clusters of the sweet pea-like or wisteria-like flowers on a small tree (though it will grow quickly to 30’ or so) are quite dramatic, and many are surprised that this is a close cousin to the ubiquitous white flowered species black locust along the interstate highways.

The strength of this ornamental tree is its adaptability to a range of soil pH, including alkaline soils and to soil textures and moisture, though permanently wet sites are a problem. There are some weaknesses, including brittle twigs and branches that can litter the ground, and though a native, an aggressive growth habit that may result in spreading more than desired. Black locusts are colonizers, and include their ability to fix nitrogen as a member of the Fabaceae (pea or bean family).

**Author: Jim Chatfield**
VEGETABLE - SWISS CHARD (Beta vulgaris subsp. cicla). Swiss chard is a highly nutritious and very easy plant to grow if you and/or your family members enjoy spinach. Chard, a close relative of the beet, is grown for its vitamin-rich leaves and leafstalks (petioles), rather than an enlarged root; however, like beets, chard "seeds" produce multiple seedlings and therefore, thinning them is required. Thin chard seedlings to about 12” apart to allow plants to grow to their mature size, which is about 2 - 3’ tall. Seedling plants, removed when thinning, are a wonderful addition to any salads. Swiss chard leaves can be harvested and used as soon as they are appropriate in size for use, that is approximately when the leaves are 7 - 10” tall. Chard may be harvested throughout the entire growing season, right up until the killing frost. Remove the outer-most, larger leaves, cutting them about 1” from the soil surface with a sharp knife. Try to avoid damaging the inner-most area where the new leaves and stems continuously emerge from the growing center. Harvested chard can be stored unwashed in the refrigerator for a few days. The leaves and petioles can all be cooked, prepared, or utilized just like spinach.

There are many cultivars available: like those with red petioles ('Burgundy,' 'Rhubarb,' 'Ruby Red'); white petioles ('Fordhook Giant,' 'Geneva,' 'Large White Ribbed,' 'Lucullus,' 'Perpetual,' 'Winter King,' 'Virgo,' 'Bionda di Lyon'); yellow petioles ('Bright Yellow,' 'Gold Stem,' 'Pot of Gold'); magenta petioles ('Magenta Sunset'), or a mixture of red, pink, orange, purple, white, and yellow petioles ('Five Color Silverbeet,' 'Rainbow,' 'Bright Lights,' 'Neon Lights,' 'Northern Lights'). Now your eyes can be served a colorful treat too, while your taste buds are enjoying Swiss chard!

Author: Erik Draper

WEED - DAME'S ROCKET (Hesperis matronalis). Considered an invasive plant in much of the US, dame's rocket is a short-lived perennial (though often considered a biennial) in the mustard family. Much like its invasive relative, garlic mustard, first year plants develop into ground-level rosettes that stay green throughout the winter. In its second year of growth, dame's rocket rosettes send up a 2 - 4’ tall erect stem and flower clusters form from the upper part of the plant. Flowers are four-petaled and may be white, pink, and/or purple.

Dame's rocket is often confused with phlox. Luckily, there is an easy way to tell the difference between the two. Dame's rocket flowers have four petals, while phlox will have five petals.

While beautiful, dame's rocket out-competes native wildflowers in the landscape and can spread quickly to form dense stands. This plant can invade a variety of habitats including open woodlands, prairies, ditches, roadsides, and other disturbed environments.

Wildflower seed mixes often contain dame's rocket seeds so be sure to check seed packets before purchasing and planting. To control established stands of dame's rocket, remove flower heads before the plants have set seed. Plants can also be pulled by hand. If removing plants that have already flowered, bag the plants and send to the landfill (similar to garlic mustard) as plants can continue to set seed. Composting is not recommended. For large infestations, a glyphosate-based herbicide can be applied in late fall when desirable plants are dormant.

Author: Danae Wolfe

2. HORT SHORTS.
A. HAIL NO! SAY IT ISN’T SO! There is nothing worse than standing at your door watching hail pelting your plants. Pam Bennett had this helpless feeling on Wednesday May 22, 2014 for 10 solid minutes during a very heavy thunderstorm. It just kept coming and she knew it wouldn’t be good for her newly planted vegetables, her annuals that were sitting on the patio waiting to be planted, and various trees, shrubs and perennials in the landscape. UGH!

Though the hail was less than a quarter inch in diameter, the damage was extensive due to the length of time it hailed. Most of the landscape plants in her area took a pretty good beating. Hail can either just hit the leaf and stem tissue, leaving a "scarred-like" appearance or it can go right through a leaf, leaving a ragged slit or tear. Think about holding a big Hosta leaf taught and then having someone toss a small rock through it. The leaf tissue is not missing like it might be when a chewing insect attacks, but rather is torn or slit. In addition, if herbaceous plants are in bud or blooming, hail hitting the stems can break the flowers off as well. And finally, tender stems of taller herbaceous plants can be struck by hail and broken off.

Keep in mind leaves that are damaged will eventually turn brown and appear ragged. At some point they may fall from the plant or may just be covered up by new growth. Damaged leaves can be removed in order to "clean up" the plant. It’s fairly easy (thought maybe time consuming) to remove damaged leaves on perennials and annuals but not so much on trees and shrubs. If the leaves are damaged enough they will eventually drop from the branches. Otherwise, you may have to put up with a ragged appearance for a while, at least until new growth continues and may cover the damaged foliage.

Author: Pamela J. Bennett

B. SSSSSSSSNakes in the garden. It is not uncommon this time of year to encounter a slithery visitor in gardens, landscapes, and backyards. There are several species of snakes happy to live their lives in backyards, but one of the most common is the GARTER SNAKE. Named for the 3 light stripes that run along the length of its black, brown, gray, or olive body, the garter snake is sometimes nicknamed the ‘garden’ snake because that is where unsuspecting gardeners often encounter them. The stripes running vertically along the length of the snake’s body resemble the once stylish sock garters worn by men. While it can be startling to encounter a snake while weeding or planting, if their presence can be tolerated, garter snakes are doing the constant gardener a favor. They feed on worms, slugs, insects, and small mammals that may otherwise be feasting on garden plants and flowers.

Garter snakes are most active during the day and on sunny summer days are often found basking on rocks, sidewalks, decks, or patios. On hot days and when sleeping, they retreat to sheltered areas such as under foundations, rocks, logs, stumps, or porches. There are no repellents that effectively work to keep snakes away. The best approach, aside from sharing the garden with them, is to eliminate denning and sleeping sites (rock or log piles) and shoo them away from basking areas. They are rarely aggressive and habituate to humans easily. Some gardeners find relief using glue traps to capture and remove snakes from around the home.

The COMMON WATERSNAKE, on the other hand, is not a snake that should be picked up without the expectation of a strong bite. The coloration of this snake, which prefers streams, creeks, and other bodies of water, can sometimes cause it to be mistaken for a NORTHERN COPPERHEAD, one of Ohio’s 3 venomous snakes (the other 2 are the TIMBER RATTLESNAKE and EASTERN MASSASAUGA RATTLESNAKE). The northern copperhead
has a distinct triangular head that the watersnake lacks, and is not common among well-settled areas. Because of the common watersnake’s preference for water, it is also often mistaken for a water moccasin, a venomous snake that does NOT occur in Ohio.

While it would be rare to encounter a venomous snake while gardening, never disturb or handle a snake without first determining the species and if it is venomous. Other snakes found around the home are the MIDLAND and NORTHERN BROWN SNAKE, EASTERN MILKSNAKE, and BLACK RAT SNAKE. For help identifying Ohio snakes, see the Division of Wildlife Reptiles of Ohio Field Guide.

Author: Marne Titchenell

C. MEET THE EDUCATOR. Meet Ashley Kulhanek, Extension Educator for Agriculture and Natural Resources in Medina County and writer for The BYGL. Ashley joined Extension in January of 2013 after working at the Ohio Agricultural Research & Development Center (OARDC) as Program Coordinator of the Good Agricultural Practices (GAPS) Team. There, she taught produce growers about reducing produce contamination risks and preparing farms for the FDA Food Safety Modernization Act. As an Extension Educator, she has continued that mission as part of the GAPS Team and the Local Foods Signature Program, teaching growers across the state about food safety at the farm level.

Her new role in extension has also allowed her to educate people about her first passion, bugs! Ashley received her Master's Degree in Entomology and is a self-described bug enthusiast. She enjoys teaching the public about insects, both good and pesky. As part of the Department of Entomology’s "A Bug’s World" educational program for 3rd graders, Ashley teaches children about the important role insects play in the diets of people in different cultures at "Café Insecta". Other outreach themes have covered pollinators, phenology, and invasive species awareness.

Author: Ashley Kulhanek

D. ASK A MASTER GARDENER - YOUR ONLINE GARDENING GUIDE. Master Gardeners are Ohio State University trained volunteers who answer questions and offer advice to assist Ohio residents with their backyard gardening efforts. Ask a Master Gardener Volunteer (AaMGV) is an online system for asking your landscape, yard, and garden questions and receiving University research-based answers quickly. This on-line service allows questions to be asked 24 hours a day, 7 days a week.

The AaMGV questions continue to increase on a variety of gardening topics. We continue to get questions on winter damage and non-flowering trees and shrubs. There are numerous questions about starting vegetable gardens and what the growing requirements are for specific crops. Homeowners are submitting good quality photos that are helpful with the identification of unwanted or unknown plants and also with pest and disease problems. Questions can be asked at: [http://mastergardener.osu.edu/].

Author: Julie S. Crook

3. BUGBYTES.

A. 13-YEAR PERIODICAL CICADAS IN OHIO! When most people think of periodical cicadas, they think of the 17-year variety: they only appear every 17 years over a given geographical
region in the eastern half of the United States. However, there are some cicadas that only take 13 years to complete their development so they emerge every 13 years. Cicadas are not "locusts" which are grasshoppers, and periodical cicadas are different from dog-day cicadas (Tibicen spp.) that emerge every year during the dog-days of summer. Periodical cicadas (Magicicada spp.) spend 17 or 13 years below ground as nymphs sucking juices from tree roots. They emerge in huge numbers in the spring, usually sometime in May. Each group of synchronously emerging species is referred to as a "brood" and given a distinct Roman numeral.

This year, Dr. Gene Kritsky at the College of Mount Saint Joseph in Cincinnati and fellow cicada enthusiast Roy Troutman are documenting the emergence of a 13-year periodical cicada in southern Ohio and northern Kentucky. Based on historical records, he and Troutman actually predicted this emergence would happen, but this brood has remained undocumented mainly because of historical confusion with 17-year broods. Indeed, thus far, a Roman numeral designation has not been firmly assigned to this brood. Brood XXII, which is known as the "Lower Mississippian" or "Baton Rouge" brood is another 13-year group of cicadas that are emerging this spring along the Mississippi River in parts of Louisiana and Mississippi. This brood is composed of three cicada species: M. tredecim; M. tredecassini; and M. tredecula. Cicada experts have not yet decided if the Ohio-Kentucky 13-year brood should be lumped in with the Mississippian Brood, or given a new designation.

The confirmation that this brood exists is big news since there are only two other known 13-year broods in the United States; there are twelve 17-year broods. Thus far, only one species has emerged and has been tentatively identified as M. tredecassini; however, it is suspected that other species may yet emerge which is common for periodical cicada broods. Also, the exact geographical range has not been firmly established; emergence activity appears to be focused along the Ohio River east of Cincinnati and across the river in northern Kentucky. The cicada researchers are trying pin-down the exact area as well as the species that are emerging. You can help! If you live in or are driving through this region and you spot periodical cicadas emerging, turn on their smart phone’s GPS functions and send pictures of the insects to the cicada researchers at: [www.msj.edu/cicada].

Author: Joe Boggs

B. SCARLET OAK SAWFLY. First generation scarlet oak sawfly (Caliroa quercuscoccineae) larvae are munching oak leaves in southwest Ohio. Despite this sawfly’s common name, larvae may be found feeding on a wide range of oaks including pin, black, red, and white oaks as well as its namesake oak. The larvae feed gregariously side-by-side on the lower leaf surface consuming everything except the veins and upper leaf epidermis. Initially, the upper epidermis has a faded, whitish appearance. Eventually the epidermis dries out, turns brown, and drops from the leaf leaving behind the veins to produce the skeletonizing symptom associated with this sawfly.

The larvae are currently a little over 0.25” long. Their semi-transparent bodies are flattened towards the front and tapered towards the back. The flattened area is trimmed in yellow with the visible gut contents making it appear a greenish-black line is running down the middle. The tapered area is grayish-black to black. The larvae glisten in the sun and appear slug-like. This is due to their interesting habit of covering themselves with their own excrement which helps them stick to leaves and presumably dissuades predators. Their slimy appearance gives rise to another common name: oak slug sawfly.
The sawfly spends the winter as late instar larvae inside cocoons in the leaf litter. Development is completed in the spring. Once the black, fly-like females are mated, they use their saw-like ovipositors to insert eggs in rows along major leaf veins. There are 2 - 3 generations per season in Ohio; consequently damage tends to escalate as the season progresses.

First generation populations appear to be small and randomly scattered. However, populations of each succeeding generation should be closely monitored because this sawfly has a history of producing significant defoliation on oaks in Ohio forests and landscapes. In 2011, Erik Draper reported heavy defoliation of oaks in the northeast part of the state and heavy defoliation of oaks occurred in the southern part of the state in 1997 and 1998.

**Author: Joe Boggs**

C. HICKORY PETIOLE GALLS. Curtis Young wowed BYGLers with a photograph of a tight cluster of hickory petiole galls produced by *Phylloxera subelliptica* (family Phylloxeridae) that were hanging grape-like from the leaves of its namesake host in northwest Ohio. Joe Boggs noted that he observed the same hickory galls in a nature preserve along the Ohio River just east of Cincinnati. The occurrences of these petiole galls on hickory appear to be on the rise and were observed in numerous Ohio locations last season (BYGL 2013-10, 06/06/13)

The single-chambered, ball-like galls range in size from 1/4 - 1/2" in diameter and arise from leaf petioles as well as along leaf midveins. The top-half of the galls were greenish-white; their bottom half a mottled reddish-pink. Fully mature galls split open at to release the phylloxeran adults through a longitudinal slit. Spent galls either dry out to become whitish structures that retained the gall's general size and shape, or they became shriveled, brown, collapsed husks.

The galls are not the same as the notorious HICKORY LEAFSTEM PHYLLOXERA GALL produced by *P. caryaeaulis*. Hickory leafstem *Phylloxera* galls are much larger, sometimes measuring almost 1" in diameter. They often have multiple chambers joined together into a single, lumpy gall-mass. Their formation and development may be highly destructive causing significant twig dieback. While the hickory petiole galls that were observed by Curtis and Joe may appear unsightly to non-galloholics, they seem to cause much less damage to their hickory host compared to the leafstem galls.

**Author: Joe Boggs**

D. ALL CARPENTER ANTS AREN'T EQUAL. Ants belonging to the genus *Camponotus* are collectively known as "carpenter ants" based on the strong affinity that some species have for nesting in wood; the most notorious being the BLACK CARPENTER ANT (*C. pennsylvanicus*). However, there are over 50 species of carpenter ants in the U.S. and some have little to no affiliation with wood. This includes the CHESTNUT CARPENTER ANT (*C. castaneus*).

Chestnut carpenter ants are swarming in southwest Ohio. Ant swarms are composed of winged males and females (= alates) that emerge from nests to mate and establish new colonies. Some ant species swarm in the spring, others in the fall, and some may swarm during both seasons or even in the summer. Carpenter ants tend to swarm in the spring. Large numbers of winged ants suddenly appearing around or in homes is understandably a cause for concern and inevitably leads to three questions: what kind of ants are they; do they cause damage; and what can be done to control them?
The chestnut carpenter ant alates measure around 0.5" in length with females being slightly larger than males. They are so-named because of their chestnut colored heads; the specific epithet *castaneus* means "chestnut colored." The rest of their bodies are reddish-brown which occasionally causes them to be mistaken for CORNFIELD ANTS (*Lasius neoniger*), or the LARGER YELLOW ANT (*L. interjectus*) which is a type of citronella ant. A distinguishing feature is the length of the first antennal segment; the "scape." The scapes of chestnut carpenter ants are extremely long extending well beyond the top of the head while the scapes of *Lasius* ants just reach the top of the head.

Despite being called a carpenter ant, chestnut carpenter ants are only occasionally associated with wood with their nests sometimes being located under heavily decayed stumps or logs; they rarely nest in homes. Thus, they are not associated with causing damage to structural wood. They prefer to nest in exposed soil or in soil covered by objects such as stones or pavers. However, the alates are attracted to porch lights at night meaning large numbers may be drawn to homes located far from the ant's nests. Also, like many ants, chestnut carpenter ants will sometimes come into homes to scavenge for food. Cleanliness plays an important role in keeping this ant, or other ants, from becoming a nuisance pest in homes. Vacuuming wayward food crumbs on floors and keeping counter tops, tables, and storage cabinets free of spilled food will reduce rewards for ants tacking into homes. The bottom line is that since these are not home-nesting ants, or a species that tunnels through wood, control recommendations such as those targeting other more destructive carpenter ants are not necessary.

Author: Joe Boggs

E. PUBLIC BECOMING MORE AWARE OF VIBURNUM LEAF BEETLE. Several BYGLers reported that damage from the viburnum leaf beetle (VLB) (*Pyrrhalta viburni*) is becoming more common-place in northeastern Ohio and that homeowners and landowners are asking more questions about the insect. Several samples have been submitted as well as email/internet inquiries with images of severe damage have been received. What is catching the eyes of these people is the intensely damaged viburnum leaves from the feeding activity of this spring’s VLB larval feeding. In a number of cases, the feeding activity of the larvae has resulted in near complete defoliation. And in those areas where viburnum, such as ARROWWOOD VIBURNUM (*Viburnum dentatum*) is the dominate understory shrub, it looks very bad!

Currently, VLB larvae are still feeding on the leaves, but are approaching the end of this activity. Soon the larvae will abandon the leaves, move to the soil and progress in their development to the pupal stage.

Both VLB larvae and the adults feed on the foliage of viburnums, however the feeding damage alone is not a definitive identifying characteristic for VLB. Japanese beetles also readily feed on viburnum and their injury can look very similar to VLB feeding. The undisputable pieces of evidence that VLB is the culprit in damaging viburnum include: finding the larvae feeding on the foliage in the spring; capturing the adults feeding on the foliage in the summer; and observing the oviposition marks made by the female VLB when she lays her eggs into the bark of the stems of viburnum which are then covered by regurgitated wood fibers and feces.

Recommendations for management of VLB may include both foliar and systemic insecticides, however, there are concerns being raised about the use of systemic insecticides on flowering ornamental plants that are attractive to foraging honey bees and other pollinators. The best strategy for managing VLB is to spray the foliage with a pyrethroid or something like acetamiprid (e.g. TriStar) or clothianidin (e.g. Arena) to knock out the larvae. Foliar applications of TriStar or...
Arena do not get translocated into the nectar and flowers. When flowering is over (most of the species and cultivars bloom from late April through May with a couple of late bloomers in mid-June), a drench or soil injection of imidacloprid (e.g. Merit) in late June/early July could be used to knock out the adult beetles to stop egg laying.

**Author:** Curtis E. Young

**F. WINDSHIELD WIPES.** BYGLers also ran into a number of other insect pests this week including:

* Finding large numbers of ants on PEONY FLOWER BUDS is such a common occurrence that it has led to a common misconception: the ants are there to help open the peony's flowers. Of course, this isn't true; peonies will flower without the help of ants. What is true is that the peony flower buds have specialized glands, known as "extrafloral nectaries," that produce nectar. The ants are their gathering this sugary sweet treat. It is speculated that in return for the nectar, the ants guard the flower buds against herbivorous insects that could damage or destroy the buds. Then the peonies would not have flowers. So, in a round-about way, the ants are indeed helping the peonies to flower!

**Author:** Joe Boggs

* The annual holey-handiwork of the THISTLE TORTOISE BEETLE (*Cassida rubiginosa*) is beginning to appear on its non-native host, CANADA THISTLE (*Cirsium arvense*). The beetles are pale green or yellowish-green which allows them to blend with its host's leaves. Like other tortoise beetles, the adults have a body shaped like a flattened pith helmet. The head and legs of the adults are typically hidden under the flares of their helmet-like body. The antennae can be hidden or extended out from underneath the front of the beetle. The oval-shaped larvae are grayish-green and have a ring of spines arranged crown-like around the edge of their bodies. The larvae sport a pair of spike-like appendages (ceri) at the tip of their abdomen which are used to spear and carry umbrella-like over their bodies an odious collection of feces and shed exoskeletons; presumably for protection against predators. Both the adults and larvae feed as leaf skeletonizers and are capable of producing enough damage to cause their thistle-host to die out … this is a very good beetle!

**Author:** Joe Boggs

* WOOLLY BEECH APHID (*Phyllaphis fagi*) nymphs are beginning to appear on the leaves of European beech (*Fagus sylvatica*) tree in southwest Ohio. The aphid has no approved common name, but entomologists generally refer to it as the "woolly beech leaf aphid" owing to the profusion of white, waxy filaments that issue forth from the hind portion of the nymphs. The aphids also exude copious quantities of honeydew and droplets of this sugary, sticky substance creates a gummy mess on underlying beech leaves, sidewalks, building decking, slow-moving gardeners, etc. The deposited honeydew may become colonized with black sooty molds adding to the unsightly appearance of the goo. However, the aphid has little impact on its beech host other than a reduction in aesthetic appeal caused by the high contrast between the brilliant white aphid colonies and the lustrous dark green or dark purple beech leaves. This non-native European aphid retains its preference for its non-native European beech host; it does not infest American beech (*F. grandifolia*).

**Author:** Joe Boggs
4. DISEASE DIGEST.

A. GUIGNARDIA LEAF BLOTCH OF AESCULUS. We are beginning to see symptoms of this disease following the initial infections that occurred on the emerging foliage of buckeyes and horsechestnuts over the past several weeks. As the season progresses, we will see varying amounts of this disease on the different Aesculus taxa. For example, most horsechestnuts and their cultivars and hybrids and Ohio buckeye are less susceptible than red buckeye, with bottlebrush buckeye being the least susceptible species.

This disease eventually becomes a serious aesthetic problem on susceptible types. Large irregular reddish-brown lesions with surrounding yellowed tissue occur on leaves, often badly disfiguring foliage by early to mid-summer. Now the leaf blotches are fairly limited and have a somewhat water-soaked, grayish appearance but will soon turn reddish-brown. Leaves often curl and brown and, by August, the overall plant often looks as if it was blow-torched. Early leaf drop also occurs. The problem is enhanced by wet foliage conditions and the disease is not a problem in drier Western US sites.

Initial infections are in spring from spores produced in infected leaves from the past year. Moist conditions during leaf emergence, such as occurred this year enhance the infections and subsequent cycles of infection occur if moist conditions continue. Black fruiting bodies of the fungus are often evident in lesions by late summer. The disease does not appear to be a serious health problem, as much of the annual growth of Aesculus has occurred by the time foliage is badly damaged. Controls for the serious aesthetic damage include fungicide applications made as leaves emerge, with repeated applications at 10 - 14 day intervals if wet conditions persist. Use a labeled fungicide containing, for example chlorothalonil or mancozeb. Also practice sanitation by cleaning up infested foliage at the end of the season, and improve air movement in the tree canopies to hasten leaf drying.

Author: Jim Chatfield

B. MOIST CHAMBER. From calls, images sent, and samples in OSU Extension offices and diagnostic workshops, there are: many examples of MAPLE ANTHRACNOSE and ASH ANTHRACNOSE with gray-black blotches and spots along veins and to some extent interveinally, FROGEYE LEAF SPOT OF CRABAPPLE with numerous tan spots with purple or reddish rings, and the occasional PEACH LEAF CURL ON PRUNUS and BUCKEYE RUST disease. The infections for anthranoses, frogeye leaf spot, and SEPTORIA LEAFSPOT OF DOGWOOD, occurred during wet conditions weeks ago, with symptoms from these earlier infections now showing up on the leaves.

5. TURF TIPS.

A. RED THREAD ON THE RISE. Joe Rimelspach, Turfgrass Pathology Ohio State University Extension Specialist, mentioned to the assembled group of BYGLers that RED THREAD, pathogen *Laetisaria fuciformis*, has begun its assault on lawns. Joe held forth on his favorite soapbox of lawn diseases and helped everyone to understand why suddenly this fungal disease seems to appear out of nowhere. He asked if anyone else noticed a change in lawn color. Of course everyone quickly agreed that they had noticed lawns turning off-color. He then explained why this "sudden onset" of the red thread fungus. With the cool temperatures and the rapid
growth of turf and all we’ve done is mow, mow, mow - the turf has exhausted the nitrogen in the soil. For this disease, its emergence is typical in spring and early summer, just about the time that the benefits of the fall-applied nitrogen fertilizer are exhausted!

Red thread is most commonly found on Kentucky bluegrass, perennial ryegrass, and tall fescue. Outbreaks ordinarily occur in low maintenance stands of turfgrass, like residential lawns. Red thread development is most common where overall turfgrass and soil nutrition is poor and other environmental factors exist to slow turf growth.

The best way to manage red thread is to first do a soil test to confirm or correct any soil factors, like pH, and adjust any nutrient deficiencies other than nitrogen. Once those factors have been amended, the best way to manage the red thread fungus is to apply about 0.25 - 0.5 pounds of nitrogen to the turf to help it "outgrow" the infected tissue. It is always recommended that when applying nitrogen fertilizers to turfgrass, ensure that at least one-third of the amount of nitrogen is in a slow release form, often termed "water insoluble nitrogen." This will allow the nitrogen to be released over a longer period of time, rather than all at once, which should help the turf combat that aspect of poor nutrition!

Author: Erik Draper

B. LAWN CARE TIPS. Joe Rimelspach with the OSU Buckeye Turf team reported that there are three important lawn care maintenance tips for this time of the year; mow at the proper height, use a sharp blade, and mow frequently. As fast as the grass is growing at this time of the season it can be difficult to keep up with these recommendations however following these tips are important steps to establishing a healthier and thicker lawn.

Mowing height is one of the primary cultural practices that can improve and maintain the health of grasses in a lawn. It is also the most time consuming practice because of the frequency with which it is occurring at this time of the growing season. Because of this some may be tempted to cut grass very short (<1") in an attempt to reduce the number of times the lawn needs to be mowed. Unfortunately, this may damage the health and longevity of the lawn. It is also important to use a sharp blade(s) when mowing. Dull and/or damaged mower blades will shred the tips of the grass blades rather than cutting them. The shredded tips will take on a brown tint which are unsightly and indicate damaged turfgrass.

The lawn should be mowed frequently enough so that no more than 1/3 of the leaf blade length is removed during any one mowing. During this time of active turfgrass growth, many lawns may require mowing more than once per week. Properly mowed lawns will have fewer weed populations, better moisture stress tolerance and generally better quality than lawns not properly mowed.

Author: Julie S. Crook

6. INDUSTRY INSIGHTS.

A. MONITOR FOR BAGWORMS. Readers in southwest Ohio should start monitoring for 1st instar COMMON BAGWORMS (Thyridopteryx ephemeraeformis). Joe Boggs reported that the Growing Degree Day (GDD) accumulation for his location in the southwest part of the state had reached 613 as of Tuesday of this week; the GDD for bagworm egg hatch is 630. A percentage of the tiny 1st instar caterpillars will produce a strand of silk upon hatching from overwintered
eggs. The silk catches the wind to transport the caterpillars to new locations. This method of distribution is known as "ballooning" and it is one of the reasons bagworms often appear on hosts that were not infested last season. Once the 1st instars find a suitable feeding site, either by ballooning or remaining on the host selected by their mother, they begin to construct their characteristic sack-like bags.

The 1st instar bagworm caterpillars carry their bags held upward making them look like tiny dunce caps. Also, major portions of the 1st instar bags are constructed of tiny pieces of reddish-brown, sawdust-like frass (excrement) stuck to the outside of the silk. The 2nd instar bagworm caterpillars, as well as all succeeding instars, carry their bags held downward like pine cones. From the second instar stage onward, the bags are constructed with plant debris woven into the bag's silk. The plant material provides structural stability and helps to camouflage the caterpillar bag-abodes.

Late instar bagworms can be highly destructive, particularly to evergreens. The best way to avoid damage is to monitor for egg hatch and target early instar caterpillars for control. It is a common misconception that bagworms only eat evergreens; however, the caterpillars can feed on over 130 different species of plants including a wide range of deciduous trees and shrubs. Indeed, deciduous trees and shrubs are sometimes overlooked during bagworm inspections allowing the plants to become heavily damaged and to serve as reservoirs of bagworms that can spread to neighboring trees and shrubs.

Early instar bagworms can be effectively controlled using the naturally occurring biological insecticide Bacillus thuringiensis var. kurstaki (Btk) (e.g. Dipel, Thuricide, etc.). Unfortunately, Btk is most effective on small bagworms and becomes much less effective when bags surpass 3/4" in length. Fortunately, Btk does not kill bio-allies such as predators and parasitoids that help provide natural control of bagworm populations. Once eggs begin to hatch, bagworm populations should be closely monitored since egg hatch can occur over an extended period of time. Btk is a stomach poison which means it must be consumed to kill the caterpillars and it has short-live residual activity. Thus, two applications may be required. Once bags exceed 2/3" in length, standard insecticides will need to be used to suppress heavy infestations.

Author: Joe Boggs

7. WEATHERWATCH.

A. WEATHER UPDATE. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from May 1 - 28, 2014, with the exception of the soil temperatures which are readings from Wednesday, May 28, 2014 at 5:20 p.m.

<table>
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<td>NE</td>
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<td>1.63</td>
<td>3.1</td>
<td>70.22/69.85</td>
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<tr>
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<td>Central</td>
<td>73.6</td>
<td>52.8</td>
<td>3.63</td>
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<td>81.85/78.13</td>
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<tr>
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<td>48.8</td>
<td>2.42</td>
<td>4.0</td>
<td>82.40/79.53</td>
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</table>
For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm].

*Author: Amy Stone*

B. GROWING DEGREE DAYS (GDD). GDD is a measure of the daily maximum and minimum temperature and directly relates to growth and development of plants and insects. The GDD of any zip code location in Ohio is estimated using the GDD of ten OARDC weather stations and available on the web at: [http://www.oardc.ohio-state.edu/gdd/].

The range of GDD accumulations in Ohio from north to south is 419 to 691. Following is a report of GDD for several locations around Ohio as of end of the day of May 28, 2014: Painesville, 419; Cleveland, 454; Toledo, 496; Canfield, 469; Findlay, 504; Van Wert, 515; Wooster, 501; Coshocton, 578; Columbus, 634; Springfield, 609; Dayton, 615; Cincinnati, 668; Ironton, 689; Portsmouth, 691; and Piketon, 684.

To put these GDD accumulations into perspective, the following is an abbreviated listing of plant and insect species with their respective phenological event and average GDD accumulations at which these events occur. Due to variations in weather, temperature, humidity, etc., these events may occur a few days earlier or later than predicted by the average GDD. By looking at a city, town, or village nearby on the above list, or visiting the above web site, one can see what is approximately taking place in the landscape.

Vanhoutte spirea, full bloom, 406; euonymus scale (first generation), egg hatch, 406; black cherry, full bloom, 419; Miss Kim Manchurian lilac, first bloom, 422; locust leafminer, adult emergence, 437; doublefile viburnum, full bloom, 444; black locust, first bloom, 467; common ninebark, first bloom, 478; oystershell scale, egg hatch, 497; smokebush, first bloom, 501; catawba rhododendron, full bloom, 503; white fringe tree, full bloom, 517; arrowwood viburnum, first bloom, 534; American yellowwood, first bloom, 546; bronze birch borer, adult emergence, 547; multiflora rose, first bloom, 548; black locust, full bloom, 548; emerald ash borer, adult emergence, 550; American holly, first bloom, 556; mountain laurel, first bloom, 565; potato leafhopper, adult arrival, 568; juniper scale, egg hatch, 571; common ninebark, full bloom, 596; American yellowwood, full bloom, 599; arrowwood viburnum, full bloom, 621; and multiflora rose, full bloom, 643.

*Author: Curtis E. Young*

8. COMING ATTRACTIONS.

A. CHAINSAW SAFETY WORKSHOPS. As the emerald ash borer marches across Ohio, it has left millions of dead ash trees - and a cleanup challenge for land managers, foresters, and homeowners. That's why the Ohio Woodland Stewards Program is co-sponsoring two upcoming workshops on chainsaw safety with the Ohio Forestry Association (OFA). Dead ash trees often must be cut down for safety reasons, especially around homes and buildings or in public places. Both workshops meet at Ovalwood Hall on Ohio State University's Mansfield Campus, 1760 University Drive, Mansfield, Ohio.

* The first workshop, CSAW ("Chainsaw Safety Awareness That Works")-Custom, 8:00 a.m. to noon, June 6, 2014 covers basic chainsaw safety and operation. Participants will practice.
cutting an already downed tree. Registration is $50. The registration deadline is June 2, 2014. Details and a link to register are at [http://go.osu.edu/hVx].

* The second workshop, CSAW-Level 1 Training, 8:00 a.m. - 5:00 p.m., June 20, 2014 takes an advanced look at chainsaw safety, felling techniques, and personal protective equipment. Participants will fell a tree while guided by an instructor. Registration is $100 for OFA members and $150 for non-members. The deadline to register is June 16, 2014. Details and a link to register are at [http://go.osu.edu/hVZ].

B. PESTICIDE SAFETY TRAINING - New Commercial Applicators and Training Servicepersons, August 27, 2014. Core and Trained Serviceperson trainings are held in the morning, and Categories 8, 5, 2c, and 6c in the afternoon. The session will be held at the ODA in Reynoldsburg, Ohio. For more information about the event, check out the PestED website at [http://pested.osu.edu].

C. PESTICIDE SAFETY TRAINING - New Commercial Applicators and Training Servicepersons, September 24, 2014. Core and Trained Serviceperson trainings are held in the morning, and Categories 8, 5, 2c, and 6c in the afternoon. The session will be held at the ODA in Reynoldsburg, Ohio. For more information about the event, check out the PestED website at [http://pested.osu.edu].

D. WOOD-DESTROYING INSECT INSPECTION TRAINING, October 8, 2014. Mandatory training is required for applicators becoming licensed in commercial Category 12. Recertification credit is available. The session will be held at the ODA in Reynoldsburg, Ohio. For more information about this event, check out the PestED website at [http://pested.osu.edu].

9. BYGLOSOPHY. “The birds pour forth their souls in notes, of rapture from a thousand throats.” - William Wordsworth

APPENDIX
ADDITIONAL WEBSITE RESOURCES:

Ask a Master Gardener Volunteer
http://mastergardener.osu.edu/ask

Buckeye Turf
http://buckeyeturf.osu.edu

Emerald Ash Borer Information
http://ashalert.osu.edu

National Plant Diagnostic Network and First Detector Program
https://www.npdn.org/first_detector

Growing Degree Days and Phenology for Ohio
http://www.oardc.ohio-state.edu/gdd/

Hungry Pests Website
Following are the participants in the May 27th conference call: Pam Bennett (Clark); Joe Boggs (Hamilton); Jim Chatfield (Hort and Crop Science and Plant Pathology); Julie Crook (Hamilton); Erik Draper (Geauga); Denise Johnson (Master Gardener Volunteer Program); Jacqueline Kowalski (Cuyahoga); Ashley Kulhanek (Medina); Joe Rimelspach (Plant Pathology); Nancy Taylor (C. Wayne Ellett Plant and Pest Diagnostic Clinic (CWEPPDC)); Marne Titchenell (School of Natural Resources); Danae Wolfe (Stark); and Curtis E. Young (Van Wert).

BYGL is available via email, contact Cheryl Fischnich [fischnich.1@osu.edu] to subscribe. Additional fact sheet information on any of these articles may be found through the OSU FactSheet database [http://plantfacts.osu.edu/web].

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BYGL is available online at: [http://bygl.osu.edu], a website sponsored by the Ohio State University Department of Horticulture and Crop Sciences (HCS) as part of the "Horticulture in Virtual Perspective." The online version of BYGL has images associated with the articles and links to additional information.

BYGL is a service of OSU Extension and is aided by support from the ONLA (Ohio Nursery and Landscape Association) [http://onla.org; http://buckeyegardening.com] to the OSU Extension Nursery, Landscape and Turf Team (ENLTT).

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Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension; and Gist Chair in Extension Education and Leadership.