BUCKEYE YARD AND GARDEN LINE 2013-13
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This is the 13th 2013 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 - COLEOUS (Solenostemon scutellaroïdes). These versatile foliage plants come in many colors, sizes, shapes, and can grow in the sun or shade, making them fairly easy to grow them in the garden. Plant sizes and shapes vary depending on the cultivar as does the shape and color of the leaves. The majority of the varieties grow around 1 - 3' tall and as wide. There are also those that cascade or hang down over a container or basket. In the full sun, the foliage tends to be a bit smaller and fades somewhat compared to the same plant growing in the shade.

Coleus can be planted in sun or shade, in the garden or in a container. If you use coleus in a container, make sure you know how big it gets. Some varieties grow up to 4' tall and as wide and can take over a smaller container. The age-old question for coleus is, "should they be deadheaded?" The answer to that is, "it depends." Do you like the flowers or not? Many varieties tend to get a little straggly in appearance
when they bloom. If you don't like this appearance, deadhead the flowers. The Coleus has very few pest problems.

*PERENNIAL - LAVENDER (*Lavandula angustifolia*). Lavender is in full bloom in central Ohio providing a wonderful fragrance to those who walk in the garden. All parts of the plant are fragrant and used for a variety of items including soap, potpourri, flower arrangements, drying, tussie mussies, cooking, and more. The plants have gray-green foliage that looks good all season, even long after the flowers are gone. They grow in a rounded mound about 2 - 3' tall and as wide. The purplish-blue flowers appear on stalks about 10 - 12” above the plant in June and last for 2 - 3 weeks.

An absolute must to succeed with lavender in the garden is to give it well-drained soil. Lavender will not tolerate wet soils. If it is a wet year, lavender is susceptible to root rotting. Place it in full sun for best growth and flowering. In the early spring, Pam Bennett likes to cut hers back to the ground to prevent "legginess" and keep the plant vigorously growing.

There are numerous cultivars of lavender available and they may be cultivars of *L. angustifolia* or a hybrid of this one and *L. intermedia*. 'Alba' is a cultivar with whitish flowers. 'Hidcote Pink' has light pinkish-white flowers.

*WOODY - GOLDENRAIN TREE (*Koelreuteria paniculata*). There are not many trees with such spectacular flowers as goldenrain tree this time of year. This tree was in full flower last week in Portsmouth and now is in full bloom in northern Ohio. Goldenrain trees have a storied history in American filmdom: think Elizabeth Taylor, Montgomery Clift, Lee Marvin, Eva Marie Saint, the Civil War, and the mysterious tree discoverable only via a trek to the Indiana swamps of the movie "Raintree County" (Trekkie alert: DeForrest Kelley plays a minor role in the movie).

Goldenrain tree is a small to medium tree, growing to 25 - 30', with a rounded crown. It has compound leaves and an attractive canopy, but the real feature is the upright panicles of golden flowers that cover the tree for several weeks in early to midsummer. The light green papery, bladder-like fruits that follow are interesting at first, and as they change to orange or pink, but then are less attractive later in the season as they turn brown. In southern states such as Florida seed production and germination is high and this Asian native tree has become an issue with invasiveness there. Here, goldenrain trees provide a spectacular summer-flowering addition to the landscape. It is highly adaptable to various soil types. Goldenrain tree grows best in full-sun.

*VEGETABLE - EGGPLANT (*Solanum melongena*). Eggplant is related to tomato, potato, and peppers (family Solanaceae). With its upright growth habit, large dark-green, deeply lobed leaves, showy purplish-white flowers, and deep purple, green and/or cream fruit, eggplant is very versatile as a garden crop and seasonal ornamental. Eggplant is native to India and has been cultivated for more than 1,500 years. It is a very important crop in the Far East and is used more widely than the tomato in India, China, and the Philippines. Plants need full-sun. Eggplant also requires soil with good drainage. Eggplants thrive in hot weather and will not grow until the soil has warmed. When growing from seed start plants indoors approximately 2 weeks before the frost-free date. The plants will take approximately 6 - 8 weeks to reach a size where they can be easily transplanted. Plants should be set 12" apart with 24 - 30" between rows. To maintain healthy, productive plants, side-dress with a high nitrogen fertilizer when plants are half grown and ensure that plants are getting 1" of water a week. Keep eggplants and all plants in the Solanaceae crop family, on an every three-year rotation through the garden to help keep plants healthy. Harvest eggplant fruit when they reach their full size and are glossy. Waiting too long to harvest may reduce the potential yield as well as give you a spongy, bitter fruit.
*WEED - STINGING NETTLE (Urtica dioica).* Stinging nettle is an upright perennial that is perhaps most notable for its tendency to cause skin irritation for those unlucky enough to come in contact. When touched, the hairs and spines on this prickly plant release a mixture of formic acid, histamine, serotonin, and acetylcholine which causes a burning or stinging sensation in humans.

Primarily a weed found in orchards, pastures, and roadsides, stinging nettle reproduces both vegetatively (by rhizomes) and sexually (by seed). The weed is widely variably in its morphology. Serrated, egg-shaped to lanceolate leaves occur on petioles and are arranged oppositely along the stem. Leaves are mostly smooth, aside from the infamous stinging hairs that are found on the underside. Stems, which are covered in stinging hairs, are mostly un-branched, erect, and may reach 6.5' in height. Occurring in clusters that arise from the area between the stem and leaf axis, flowers are inconspicuous and green to yellowish in color.

Stinging nettle can be removed by hand (be sure to wear heavy gloves!). It's important to remove the entire rhizome to ensure that the plant will not re-sprout.

2. HORT SHORTS.

A. CORRECTING OFF-COLOR LEAVES. Questions have come into County Extension offices in southern Ohio regarding what to do for maple or oak trees with leaves showing interveinal chlorosis. Although the leaf veins appear a deep, healthy green, the remainder of the leaf tissue is a sickly tint of yellowish-green. Many instinctively rush to apply either fertilizers or chelated iron but that is not really the first correct step. The first correct step in the whole procedure to help off-color leaves is to take a soil test. A typical soil test will not only provide the pH of the soil, but it also indicates the amounts of certain nutrients found in the soil. Those nutrients in the soil typically tested for will be phosphorous, potassium, calcium and magnesium. This is the best starting point because the soil pH, combined with what nutrients are present or are missing in the soil solution, will ultimately determine how to correct the problem.

The resolution may be as simple as adjusting the soil pH up or down to allow the nutrients to become more readily available to plants. For most landscape plants, the soil pH should be adjusted to reside between a pH of 6.0 and 7.0. In this soil pH range, most of nutrients held in the soil reservoir, will be readily available to most plants, more so than at any other range of soil pH. We know that higher soil pH's (above 7.0) will restrict the availability of the necessary micronutrient iron (Fe) in oaks; however, those same pH values often result in a manganese (Mn) deficiency in red maples! Additionally, soil pH is not the only story because many factors become intertwined from this point forward.

While the soil test allows one to know what is in the soil, the next step is to then sort through and then tease out what is causing the lack of that nutrient in the plant. It may be that the nutrient, (e.g. calcium) in order to be available to the plant, must be moved via the water stream and drought-like conditions are common. It may be that one nutrient has been over-applied to that point that it begins to interfere or "tie up" the uptake of other nutrients by the plant. It is possible there is a girdling root on the root flare of the tree that is prohibiting the uptake of nutrients by the plant, even though the soil may be loaded with that nutrient. If a plant's root system has been compromised, regardless of whether it occurred naturally or is a man-made problem, anything affecting the root system will have direct consequences for the plant. Remember that a plant's compromised root system will be the single greatest cause for many underlying plant nutritional problems; specifically, those limitations which result in a restriction of a plant's ability to absorb and utilize soil nutrients, which ultimately leads to those sickly, chlorotic, off-color leaves.

B. SPINY SILHOUETTES. Within the last few weeks, towering stems of spiny plants have begun to shoot up all across Ohio. The silhouettes of these prickly invaders produce quite a daunting scene,
especially where they have invaded and taken over natural landscapes. Common and cut-leafed teasel (Dipsacus fullonum and D. laciniatus) are both considered invasive in Ohio. Teasels produce large quantities of seeds that remain viable in the soil for several years. With a seed germination rate as high as 86%, it's easy to see how teasel can outcompete native plants for space, water, and sunlight.

Teasels are endemic to Eurasia and North Africa. Like many invasive plants, teasels were brought to North America for a good purpose. The spiny heads were used for combing wool and the dried flowers were often used in flower arrangements. In fact, dried teasel flowers still adorn flower arrangements today.

Teasels are biennial plants that form a basal rosette the first year and send up a flowering stalk the second year before the plant goes to seed and dies. During the first year of growth, teasels will develop a large (sometimes up to two feet in length and one inch in diameter) taproot, adding to the frustration of control and eradication. While common teasel boasts pink or purple flowers and undivided leaves, cut-leafed teasel blooms in white and has deeply lobed leaves (hence the name "cut-leaved"). Both species have large, oblong, opposite, sessile leaves that form cups that may hold water in rain events. Leaves and stems are prickly. While both species thrive in disturbed areas including old fields and roadsides, cut-leaved teasel is often found in wetter environments than common teasel.

To control teasels, individual rosettes can be dug up (be sure to remove the entire taproot to avoid re-sprouting). Flowering stalks can be cut once that plant has flowered, but teasels have been shown to continue developing and maturing seeds even after cutting so it's important to remove and dispose of cut stalks. In situations where mechanical control is not effective, applying herbicides may be necessary for control. Foliar application of herbicides is recommended and should be done in the rosette stage. Application of herbicides in natural areas is advisable during late fall and early spring when non-target species are dormant.

C. HAIL NO - SAY IT ISN'T SO!!!! Pam Bennett seems to have problems going on vacation only to come home to a mess. Last year, she arrived back home after a major storm event (Derecho) in late June 2012, only to find that her grill was swept off the porch and smashed several ceramic pots. In addition, two very heavy Adirondack chairs were blown more than 50 yards, UP AND OVER her 'Karl Forester' ornamental grasses (at least she assumes this happened as the grasses weren't bent, broken or otherwise damaged).

Last week, on the way home again, she received a text that a storm went through her neighborhood, swiping the grill off the porch again, smashing pots, and only tossing one chair 50 yards this time. In addition, when she arrived home, she noticed that it had hailed and she had significant damage in the vegetable and flower garden. Along with the broken branches of the tomato plants from the wind and the normal shredding of the leaves caused by hail, she noticed some odd-looking damage on her onion, peas, and tomatoes. After a little thinking, cursing, and a closer inspection, she realized that this too was hail damage.

The only thing to do after a hail storm is clean up the mess and remove any broken or damaged branches and leaves. Hopefully the vegetable plants still have enough energy to go on and resume growth for the rest of the season. The peas are still edible but you should consume them soon after the damage. The onions should be pulled once the tops are broken off. Pam also pulled off any damaged tomatoes as these will continue to decay around the spots damaged by hail.

The moral of the story, anchor down the grill or don't go on vacation. The latter isn't an option so does anyone have as good sturdy chain for Pam??!?!?!?!?!!?
D. BLUEBERRY HARVEST SEASON HAS STARTED IN OHIO. Gary Gao reported that blueberry harvest season has started in many parts of Ohio. Several blueberry growers started picking 'Duke' blueberry last week in southern Ohio. 'Duke' is an early season cultivar. A blueberry farm in southwest Ohio will have its blueberry "Opening Day" on Saturday, June 29. Their main cultivars are Bluecrop and Blueray. At least three blueberry farms in central Ohio have opened their blueberry farms for the you-pick season this week. Please call ahead for picking hours and prices since blueberry patches can be "picked out" quickly.

Blueberries are loaded with antioxidants and very tasty. It is time for all of us to visit a blueberry farm near you. Some folks are willing to drive one hour or so to pick fresh blueberries. Blueberry farms are scattered in many parts of Ohio. Two good websites for locating fruit farms (including blueberries) are [http://www.pickyourown.org/OH.htm] and [http://oh.marketmaker.uiuc.edu/].

Gary Gao also showed pictures of a blackberry cultivar, 'Ouachita' during this week's BYGL Conference call. He conducts a trial on high tunnel blackberry production at OSU South Centers in Piketon. 'Ouachita' blackberries started ripening last week in his high tunnel plot. 'Ouachita' berries in high tunnel are huge and are almost 2" long! They happened to be very tasty as well.

E. TREE ID ALL OVER THE PLACE. One BYGLer traveled to the Smoky Mountains last week, and was reminded of the vagaries of plant identification. ID is wonderfully challenging in that it is oft lacking in precision. Maple leaves on the same stem may vary in shape, from the familiar palm shape of maples to more narrow foliage. Size of leaves also frequently varies greatly, depending on where the leaves are, high or low, on the plant. Some maples do not even have palm-shaped leaves at all, including the unusual hornbeam-leaved maple, though the tell-tale winged helicopter-like fruits give the game away as a true maple.

Along one nature trail in the Great Smoky Mountains National Park (no admission fee, by the way) there was a vine of Virginia creeper crawling up a tree, with its tell-tale five leaflets. Yet on the same vine a few of the leaves had only three leaflets, which reminds us of the "leaflets of three, let them be" of poison ivy. There was some order to this chaos, though. On this same vine, the leaves with their variable three to five leaflets, were arranged alternately, not oppositely along the vine. Virginia creeper, not poison ivy.

One of the main evergreens on Mount Le Conte in Great Smoky National Park is the lovely Fraser fir (Abies fraseri). One of the ways you can distinguish between true firs in the genus Abies and other conifer such as spruce, pine and hemlock, is that firs have upright cones rather than cones which hang downward.

Sometimes even the names of plants are a challenge. On Mount Le Conte, there were, predictably enough, numerous mountainashes (Sorbus americana). Mountainash is not a true ash in the genus Fraxinus and thus fortunately is not being devastated by the emerald ash borer insect. Alas, the eastern hemlocks in the lower elevations in the Great Smoky Mountains are true hemlock trees (though not related to the poison hemlock herb of Socrates lore) and are susceptible to the hemlock woolly adelgid insect which is devastating there, and now establishing a beachhead here in Ohio.

It was a wonderful trip from start to finish, from Ohio backyards to the mountains and at rest areas and towns in between, from noticing the small glands at the base of the leaf blade and along the leafstalk of Prunus (cherries and their relatives) to the glories of southern magnolias in Portsmouth and points south. From the invasive mimosas and kudzu down south to the elderberries we share with our southern cousins.

Then there are the hydrangeas. There are so many hydrangeas, from the glorious re-blooming Endless Summer series with pink and blue flowers to the smooth hydrangea of both gardens and mountain
woodlands and the oakleaf hydrangeas and their spectacular creamy panicles blooming now. And keep those plant ID skills honed. With warmer winter temperatures, southern magnolia with its spectacular large, aromatic blooms, and kudzu with its creepy coverage of all things green are coming soon.

The next group of plants are the Ericaceae. That ending of "aceae" is a tip off that we speak of a plant family, which by definition is a group of related genera, which by botanical definition is a group of related species. In other words, plants related to each other, in this case, the heath or rhododendron family. The Ericaceae is a group of over 4000 species of plants that genetically share the traits of bell-like or tubular flowers and typically a preference for acid soils. The woodlands of the Appalachian mountains on one BYGLer's trip are ideal for ericaceous plants and they are legion, from huckleberries (wild blueberries) and the many species of rhododendrons and azaleas, to enkianthus, mountain laurel, leucothoe, and mountain myrtle.

Mountain myrtle (*Leiophyllum buxifolia*), a plant not usually observed by Ohio BYGLers, has a low-growing habit, tiny boxwood-like foliage, red flower buds and tiny white flowers was common on the high altitude trails found on Mount LeConte including the wonderful overlook of the eponymous Myrtle Point. At 6593' above sea level, the LeConte Lodge and cabins are the highest altitude inn found in the eastern United States. The seven mile or so hike up is the only way to get there, unless you are a helicopter pilot making the once a year supply airdrop or a llama making the every other day trip. Purple rhododendrons and orange flame azaleas, delicate mountain laurels and tiny mountain myrtle...BYGL readers - put on your hiking boots.

F. GOOSE NO-FLY ZONE. Ohio citizens have been taking notice of the many geese families milling around ponds and lawns. One of the management options for Canada geese that have become a nuisance is harassment, or in other words, agitating geese with a variety of tactics (noise makers, dogs, visual deterrents, predator decoys) until they take flight and vacate the area. This time of year, however, employing harassment techniques will be difficult if not futile because the geese are not flying. Why? First of all, the goslings are not able to fly yet and second, the adults are molting their flight feathers. Every year around the end of June into early July, adult geese replace their flight feathers, a process that lasts roughly 3 weeks. During this time the adults are unable to fly and considerable damage can occur. Restricting flightless geese from areas can be done by herding geese out of the area then installing a temporary fence. At the end of July and into early August, harassment can resume as the geese and goslings will be flying once again. For more information on managing nuisance geese, such as other management techniques, see OSU Extension FactSheet W-3-10, "Coping with Canada Geese: Conflict Management and Damage Prevention Strategies."

G. ARE YOU MY MAMA? The nesting season for birds is in full swing, and many birds already are or are soon to be proud parents. Marne Titchenell has received several reports of young birds found on the ground, with the question of what to do. The first question you should ask yourself when a baby bird is found, is if it is a nestling or fledgling. A nestling is a baby bird that should still be in a nest, hence the name nestling. In other words, the baby bird is not old enough to be on its own and still requires a safe place and parental care. Nestlings typically have their eyes partially or fully closed, lack many feathers, and won't be moving around much at all. A fledgling, on the other hand, is a young bird that has recently left, or fledged, the nest. While these young birds appear wobbly and uncoordinated, they are capable of fending for themselves outside of the nest. A fledgling is usually hopping around and capable of movement. The eyes should be fully open, and the young bird should have most of its feathers. Sometimes there may be a few areas where feathers are still growing in or maturing, such as around the head, but there should be no major areas where feathers are absent.

When a young bird is ready to leave the nest, it often will fly to the ground or even a nearby shrub or tree. Depending on the species, the parents will often be nearby encouraging the young to move around and
fly. Sometimes this takes some time, with the fledgling on the ground squawking and flopping around and the parents nearby squawking right back. It's not uncommon for a person to stumble into this scene and mistake the fledgling for a baby bird that fell out of its nest - especially with the parents nearby in what can appear to be distress. On the other hand sometimes nestlings fall from the nest, whether from their own shuffling around or a parent accidentally shuffling a nestling right out of the nest. If you've ever seen a bird's nest with 5+ growing baby birds in it, you understand how crowded it is and can probably imagine how such an accident might happen.

So you've come across a baby bird? Try to identify whether it is a nestling or a fledgling (look at the eyes, movement, and feathers). If you still can't decide, pick the bird up and see if it can perch on its own on your finger. It is a myth that if you touch a baby bird, the parents will abandon it. Most birds have a poor sense of smell, and won't be able to detect the human scent on their young. Does the young bird perch on your finger? If so, great - it's a fledgling. Put it back where you found it and let nature take its course. If the baby bird is unable to perch on your finger, look for the nest and place the bird back inside. If you can't find the nest, use a butter tub or plastic container and create a make-shift nest. Line the plastic tub with a towel or something equally soft and hang it up in a tree close to where you found the bird. Watch and wait for the parents to retrieve the bird. Give the parents plenty of time - nothing can replace the care of the bird's real parents. If the parents don't return, contact a licensed wildlife rehabilitator. For a listing of rehabilitators in your county, contact the Ohio Division of Wildlife at 1-800-WILDLIFE.

3. BUG BYTES.

A. MIGHT BE A MITE. Ashley Kulhanek reported on receiving several calls on large numbers of mites in area homes. The mites were identified as NORTHERN FOWL MITE (Ornithonyssus sylviarum) and confirmed by Dr. Hans Klompen, OSU Acarologist.

These mites usually go unnoticed until their mass exodus from a vacant bird's nest brings them into contact with humans. The sight of a multitude of tiny gray specks moving in mass is enough to give any homeowner concern. However these temporary visitors are not harmful to humans and are little more than a nuisance that will die off shortly.

Two common species of bird mite in Ohio are the northern fowl mite and CHICKEN MITE (Dermanyssus gallinae). These mites live on the blood of birds and poultry and are usually found in nests. When chicks leave the nest, or the host bird dies, the mites venture forth to find another host. When nests are located in close proximity to a home (attics, garages, walls, eaves, gutters, windowsills, etc.), the mites may enter the home in search of a host.

The important thing to know is that these mites are not known to transmit disease and can neither survive on, nor reproduce on the blood of humans. However, they may bite humans and pets, causing irritation or itching. Without a suitable host, the mites will die off within a few weeks.

Successful control of these pests begins with proper identification. Take mite specimens to your local OSU Extension office for identification. The first step to control these mites is to locate the source, likely a bird nest. The source should be removed from the home, keeping in mind that many migratory and non-game birds are protected and should not be killed, and eggs should be left in their nests. Affected areas should be well vacuumed. However, this alone will not kill the mites. The vacuum bag or contents of bag-less canisters should be put into a sealed trash bag and either placed in a freezer to kill the mites, or thrown out in an outside trash container to prevent re-infestation. Mites on walls or other structures can be wiped off with a wet soapy cloth or sprayed off with a hose if mites are found on an exterior wall. Affected linens and clothing can be washed in the hot cycle with your everyday detergent.
Future prevention involves sealing any access points to prevent further nesting in the home. Pesticide recommendations are available but usually are not necessary. For information on red mites, refer to BYGL 2012-13 (6/6/13).

B. JAPANESE BEETLE ADULTS EMERGE. Gary Gao and Joe Boggs reported observing JAPANESE BEETLE (Popillia japonica) adults in southwest and southeast Ohio, respectively. The game is afoot! Joe noted that he had found just one beetle while Gary (not to be outdone!) reported finding hundreds of beetles feeding on grapes in his research plot at the OSU South Centers in Piketon. These early-bird beetles typically represent just the tip of the iceberg with numbers gradually climbing as the season progresses; however, the disparity in their reports demonstrate that Japanese beetle population densities can vary widely across the state with some heavy localize populations.

Landscape managers should consider a few points as they develop plans to respond to the annual appearance of Japanese beetles. First, the beetles are on the wing for a relatively short period of time with peak populations typically occurring in July in Ohio. Most woody plants such as roses have time to recover from the damage. While the beetle's leaf skeletonizing damage may affect the aesthetics of favored hosts such as lindens, the damage is unlikely to cause serious long-term harm to the overall health of the tree. Thus, a valid management plan for Japanese beetles is to do nothing.

Second, where it is possible to do so, physically removing and destroying the beetles will help to reduce seasonal plant damage. When Japanese beetles find a suitable host plant, they emit a chemical attractant to let other beetles know about the good eats. Removing the "scout" beetles early on will help to reduce the eventual arrival of hungry hoards. Dropping the beetles into a bucket of soapy water will do the trick.

Third, if an insecticide application is deemed necessary, the beetles are highly susceptible to a range of traditional insecticides including pyrethroids (e.g. Talstar, Mavrik, etc.) and carbamates (e.g. Sevin) as well as some neonicotinoids such as imidacloprid (e.g. Merit) and acetamiprid (e.g. Talstar). While soil applied neonicotinoids usually have a reduced impact on beneficial insects, they need to be applied some weeks before the arrival of the beetles. There are foliar applied formulations of acetamiprid (e.g. Ortho Rose and Flower Insect Killer) that provide quicker protection. Another strategy to preserve beneficial insects is to use naturally occurring insecticides such as azadirachtin (e.g. Azatin) or spinosad (e.g. Captain Jack's Deadbug Brew). Of course, as with all pesticides, read and follow label directions and make certain the target plant is not listed as sensitive to damage from the pesticide.

Finally, Japanese beetle traps will not protect landscape plants. In fact, university research has shown that instead of protecting plants, the traps can actually enhance plant damage by attracting far more beetles to the landscape than would otherwise appear naturally. While Japanese beetle traps may be a satisfying method to apply a bug coup de grace, their true impact on a beetle management program may fall under the heading of unintended consequences.

C. ANNUAL DOG-DAY CICADA SERENADE. Annual dog-day cicadas (Tibicen spp.) are now being heard in southwest Ohio. Annual dog-day cicadas develop underground, just like periodical cicada (Magicicada spp.). However, periodical cicadas require 13 or 17 years to complete their development with adults emerging en masse early in the season, usually beginning around mid-to-late May. Although it takes 2-3 years for dog-day cicadas to complete their development, some adults emerge every year due to overlapping generations.

Adults appear sporadically throughout the "dog days" of summer. Like their periodical cousins, dog-day cicadas also "sing" to attract females. However, the sound of an occasional dog-day cicada buzzing to entice a female doesn't compare to the cacophony created by a multitude of periodical cicadas; a
barbershop quartet doesn't compare to a million man chorus! An abrupt halt in the buzzing of a cicada, often punctuated by a high-pitched screech, usually means a CICADA KILLER WASP (Sphecius speciosus) has committed an insecticidal act.

As their common name clearly describes, the wasps are the nemesis of cicadas. It's no accident that the emergence of dog day cicadas means the huge wasps will soon be making low-level flights over poorly managed lawns, golf course sand traps, and sand volleyball courts. Cicada killers range in size from 1 1/8" - 1 5/8" long. Their black bodies are marked with yellow to white patches on the first three abdominal segments. The head, thorax and legs are rusty red and the wings russet-yellow. As with all hymenoptera (wasps, bees, etc.), only the females possess stingers (ovipositors); however, they are not aggressive.

D. ANTLIONS ON THE WING. Joe Boggs reported observing antlion adults (Myrmeleon spp.) on the wing in southwest Ohio. This means that the curious looking pitfall traps constructed by their larvae in loose soil will soon appear. Antlions belong to the insect order Neuroptera (neuro = nerve, optera = wing). Adults have long, thin bodies that measure around 1" in length. They superficially resemble damselflies; however, antlions have conspicuous antennae that are clubbed at the front and about as long as the combined length of their head and thorax. Their finely veined wings ("nerve wings"), which are held tent-like over their body, are transparent with a dappling of black markings. Damselflies have very short, bristle-like antennae and their wings are held vertically, almost flag-like above their body.

Females of the "pitfall-type" antlions insert their eggs into dry, powdery soil. Favored locations include loose soil near building foundations or around the base of trees. Once the eggs hatch, the true "antlion" portion of the life cycle appears on the scene. The grayish-brown, slightly hairy larvae are heavily plated, almost armor-like, and they sport impressive out-sized, sickle-shaped mandibles; necessary equipment for a predator. The pitfall-type antlions excavate their pits by moving backwards in the loose soil in a spiral pattern and using their mandibles like tiny shovels to flip away soil. Eventually, a funnel-shaped pit, measuring around 3/4-2" wide and 1/2" deep is created with the antlion buried at the bottom; only their wicked looking mandibles are exposed.

The loose dry soil particles provide no traction for escape when a hapless victim blunders into the pit-fall trap. The antlion uses its sharp-pointed mandibles to seize its trapped prey and to pierce the victim's body allowing the essence-of-insect to drain into the antlion's mouth. Their dining menu includes their namesake prey as well as any other arthropod the antlion can skewer with its mandibles.

Antlions are sometimes called "doodlebugs;" however, as with many common names for insects, geography plays a role in exactly which insect is attached to the doodlebug moniker. In some parts of the US, the doodlebug name is attached to dung beetles (Order Coleoptera; Family Scarabaeidae) while in other locations the name refers to the larvae of tiger beetles (Family Carabidae). Of course, an antlion by any other name is still a ferocious and fascinating predator!

E. ROBBERS ON THE WING. Joe Boggs reported that another fascinating insect predator, ROBBER FLIES (family Asilidae), are also on the wing in southwest Ohio. There are over a thousand species of robber flies in North America representing a wide range of forms and sizes. The largest sized species found in Ohio is the scary-looking (and named!) RED-FOOTED CANNIBALFLY (Promachus rufipes) which can measure over 1.25" long. The cannibalfly makes a loud buzzing sound as it flies and alert observers may hear the buzz periodically punctuated by a very loud "snap" which means the fly has committed an insecticidal act!

Cannibalflies have narrow bodies and long, dangling legs. Their stout thorax appears slightly humped when viewed in profile. Each leg is tipped with two formidable tarsal claws that function like grappling
hooks. In a smashing display of aerial acrobatics, the fly slams into its airborne quarry which stuns the hapless insect victim. The high-speed collision produces a snapping sound that may be heard several feet away. The fly then grasps its dazed prey with its claws, and uses its piercing-sucking mouthparts to inject saliva containing neurotoxic and proteolytic enzymes. The enzymes paralyze the victim and digest the internal tissues. The fly then lands, and sips the life out of its victim.

Adults of all species of robber flies are predators and they will attack a variety of insects including bees, wasps, grasshoppers, dragonflies, damselflies, and sometimes each other. They often seize prey that is much larger than their own body size. Their larvae are also predaceous and live in the soil, or in decaying wood and other organic matter, where they feed on insect larvae. Thus, both the adults and larvae rob insects of their lives.

F. WHEN IS A BEE NOT A BEE? When it is a fly, of course! Curtis Young reported encountering a "bumble bee mimic" in a wood lot while searching for subjects to photograph. The mimic is related to the robber fly reported by Joe Boggs in the article entitled, "Robbers on the Wing." The BUMBLE BEE MIMIC ROBBER FLIES (Laphria thoracica) were patrolling the wood lot in search of prey to capture. It is a predator. Unlike its model, the real bumble bees, the mimic cannot sting and is not a pollinator. There are other flies and additional insects that mimic the more threatening insects such as the Syrphid flies (a.k.a. hover flies or flower flies) (family Syrphidae) which mimic bees and wasps, bee flies (family Bombyliidae) which mimic bees, and clearwing moths (Family Sesiidae) which mimic bees and wasps. These mimics are striking in their appearance and are truly a wonder to see.

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

* Curtis Young reported that the BAGWORM (Thyridopteryx ephemeraeformis) has hatched in northern Ohio. Last Friday (June 21, 2013), he visited one of his bagworm observation sites to check out the progress of their development and verified that they had hatched. The bagworm caterpillars were mostly still in the 1st instar stage with only a few looking like they had already advanced to the 2nd instar stage. Their newly formed bags looked like little dunce caps clinging to the partially eaten needles of the Colorado spruce they were infesting. Newly hatched bagworms' mouths are too small to devour entire needles, thus their early feeding is more like mining. They chew into a needle from the side and clean out the softer tissues in the middle leaving remnants of the hollowed out needle to turn brown and eventually fall off of the tree. If one is concerned about bagworm feeding on their landscape plants, especially their evergreens, now is the time to scout for and treat infestations.

4. DISEASE DIGEST.

A. MOIST CHAMBER. Jim Chatfield observed plant diseases all over the place in Ohio to the Smokies where he was traveling last week. The observations started in a northeast Ohio backyard with a CONE RUST of hemlock, caused presumably by Melampsora abietis-canadensis, a heteroecious rust fungus which cycles between poplars and hemlocks. Then on Buzzardsroost Trail in the Edge of the Appalachian Nature Preserve in Adams County Ohio, there was PSEUDOCERCOSPORA LEAF SPOT of redbud. Moving southward was fruit rust as well as leaf rust due to CEDAR APPLE RUST on apple at Berea College in Kentucky, and finally two unusual plant pathogens in the Smokies, namely the weird pathogenic plant, the fishing-wire like orange vining DODDER (Cuscuta spp.) on a variety of trailside plants and the unusual ALGAL PLANT PATHOGEN, Cephaleuros virescens on rhododendron. There is truly a plethora of plant pathogenic possibilities for all.

5. TURF TIPS: No report.
6. INDUSTRY INSIGHTS.

A. GET YOUR GREEN INDUSTRY FIX WEBINAR: JULY 10. We had a great Webinar session on rose rosette disease, the many names of trees, and insect galls this past Wednesday. Next up: Wednesday, July 9, 8:00 - 8:50 a.m. Join OSU Buckeye Yard and Garden Line (BYGL) experts for this Ohio Nursery Landscape Association's Green Industry Webinar then. If you have questions about registering, contact ONLA at 614-899-1195 or 800-825-5062.

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 June 1 - 25, 2013, with the exception of the soil temperatures which are readings from Wednesday, June 25, 2013 at 5:05 p.m.

<table>
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<tbody>
<tr>
<td>Ashtabula</td>
<td>NE</td>
<td>72.9</td>
<td>55.0</td>
<td>4.31&quot;</td>
<td>3.7&quot;</td>
<td>78.47/84.94</td>
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<tr>
<td>Wooster</td>
<td>NE</td>
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<td>56.5</td>
<td>3.35&quot;</td>
<td>3.2&quot;</td>
<td>79.92/77.95</td>
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<td>80.5</td>
<td>58.7</td>
<td>2.22&quot;</td>
<td>3.0&quot;</td>
<td>88.78/79.49</td>
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<tr>
<td>Columbus</td>
<td>Central</td>
<td>81.8</td>
<td>60.5</td>
<td>1.89&quot;</td>
<td>3.7&quot;</td>
<td>82.09/79.95</td>
</tr>
<tr>
<td>Piketon</td>
<td>South</td>
<td>81.9</td>
<td>59.6</td>
<td>4.78&quot;</td>
<td>2.3&quot;</td>
<td>86.45/83.50</td>
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For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm].

8. COMING ATTRACTIONS.

A. SOUTHWEST OHIO BYGLIVE! DIAGNOSTIC WALK-ABOUT. The July 2013 Southwest Ohio BYGLive! Diagnostic Walk-About for Green Industry professionals will be held from 12:00 - 3:00 pm. on Monday, July 8, at Glenwood Gardens, 10397 Springfield Pike, Woodlawn, 45215. Participants will walk-about with Joe Boggs and Julie Crook (OSU Extension) and our host Carol Mundy (Head Naturalist at Glenwood Gardens, Hamilton County Park District) to look at plants, plant pests, diseases, and other points of considerable interest until 3:00 pm. ISA Certified Arborist Credits, ONLA OCNT Credits, and Landscape Architecture Continuing Education System (LA CES) CEU's for Landscape Architects will be available. Visit the following website for registration information as well as driving directions: [http://hamilton.osu.edu/topics/horticulture/byglive-diagnostic-walk-about].

B. DIAGNOSTIC WALKABOUT FOR THE GREEN INDUSTRY. Diagnostic Walkabout for the Green Industry series is once again occurring around Ohio this summer. ONLA, AGI and OSU Extension will be hosting 5 more events in 2013: July 18, Mingo Park, Delaware; August 1, Stan Hywet Hall and Gardens, Akron; August 15, Toledo Botanical Gardens; September 12, Inniswood Metro Gardens, Westerville; September 26, Sunset Memorial Park, North Olmsted. Pre-registration is required and class size is limited to 30 per class. ODA, ISA and OCNT credits available. For registration, location and pesticide credit information see: [http://www.onla.org].
C. TCD WORKSHOP. On Wednesday, July 31, 2013, a workshop will be held in Hamilton, Ohio to discuss THOUSAND CANKER DISEASE ON WALNUT. The program will be held at the Butler County Extension and include both an indoor and outdoor portion. Information, including a flyer about the workshop can be found on the Woodland Stewards website at [http://woodlandstewards.osu.edu/]. The workshop runs from 9:00 a.m. - 3:45 p.m. Registration cost is $20.00 per person. Questions about the program can be directed to Kathy Smith at 614-688-3136.

D. YOUTH SCIENTIST ADULT EDUCATION CLASS. OSU Extension, USDA Forest Service, Ohio Woodland Stewards, and the Ohio Environmental Protection Agency- Ohio Environmental Education Fund are sponsoring an adult education class August 8-9, 2013. This class will showcase a new hands-on curriculum being developed for youth to learn about invasive species utilizing their own neighborhoods, school yards, and local parks. This curriculum fulfills newly revised State science curriculum standards. The program will be held at the OSU Mansfield campus and includes lots of hand-on activities! Information about the workshop can be found on the Woodland Stewards website at [http://woodlandstewards.osu.edu]. The workshop runs from 9:00 a.m. Thursday through 3:00 p.m. Friday. Registration cost is $225 with Graduate Credit or $50 without graduate credit. Deadline for registration is July 31, 2013. Questions about the program can be directed to Cindy Meyer at 513-887-3722.

9. BYGLOSOPHY. "The whole of nature is a conjugation of the verb to eat, in the active and the passive." - William Ralph Inge

APPENDIX - ADDITIONAL WEBSITE RESOURCES:

Ask a Master Gardener Volunteer (Consumer Gardening Questions)
http://mastergardener.osu.edu/ask

Buckeye Turf
http://buckeyeturf.osu.edu

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

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

Hungry Pests Website
http://www.HungryPests.com

Ohio State University Department of Horticulture and Crop Science Plantfacts
http://plantfacts.osu.edu/web/

Ohio State University Extension Master Gardener Volunteer Program
http://mastergardener.osu.edu

The C. Wayne Ellett Plant and Pest Diagnostic Clinic (CWEPPDC)
http://ppdc.osu.edu/

USDA APHIS Beetle Buster Website (Asian Longhorned Beetle)
USDA APHIS Beetle Detective Website (Asian Longhorned Beetle and Emerald Ash Borer)
http://beetledetectives.com/

Following are the participants in the June 25th conference call: Pam Bennett (Clark); Joe Boggs (Hamilton); Jim Chatfield (Hort and Crop Science); Julie Crook (Hamilton); Erik Draper (Geauga); Gary Gao (OSU South Centers); Denise Johnson (State Master Gardener Volunteer Program); Ashley Kulhanek (Medina); Cindy Meyer (Butler); Marne Titchenell (School of Natural Resources); Danae Wolfe (Summit); and Curtis Young (Van Wert).

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

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). Any materials in this newsletter may be reproduced for educational purposes providing the source is credited.

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.

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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. TDD No. 800-589-8292 (Ohio only) or 614-292-6181.