BUCKEYE YARD AND GARDEN LINE 2015-05
05/07/15

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Buckeye Yard and Garden Line (BYGL) enhanced with photos and links is available online at: [http://bygl.osu.edu]. Become a fan of the BYGL on Facebook at [http://www.facebook.com/OSUBYGL] or follow the BYGL on Twitter at [http://www.twitter.com/OSUBYGL].

This is the 5th 2015 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.

*****HOW TO: BUCKEYE YARD AND GARDEN LINE SUPPORT. The Ohio State University (OSU) Buckeye Yard and Garden Line (BYGL) writers need your support to continue this newsletter. OSU puts a great deal of resources into this project and we do not receive funding necessary for full support. We know you like BYGL, as in the 2014 Reader's Survey respondents indicated BYGL saved them $2.45 million dollars, 96% indicated BYGL was useful in their jobs, and 87% indicated BYGL helped with their diagnostic skills.

Funds will support on-going work of the Ohio State University Extension Nursery Landscape and Turf Team in matters regarding preparation, compilation and travel for the weekly April-October BYGL e-newsletter. Expenditures will include but not be limited to equipment such as cameras, upgrades of computers and related devices, management of the website, editing and webinar costs, and travel reimbursements.

Here's how you show your support:

This is the direct link to the OSU giving site: [http://go.osu.edu/byglsupport].

Or:

Go to [https://www.giveto.osu.edu/makeagift/OnlineGivingDonation.aspx?fund=315145] and click on "search," then enter the fund number into the box. The fund number is 315145 and the name is Buckeye Yard & Garden Support. The fund, its name and description will appear in a new, smaller box. Click "Select this fund."

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Also, if you would like to make a larger gift, please contact Jennifer Heller ([heller.4@osu.edu]), the Director of Development for the OSU College of Food, Agricultural and Environmental Sciences with your name and contact information. Jennifer's cell phone number 614.975.1317 and she will be more than happy to speak with you.

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1. PLANTS OF THE WEEK.

*ANNUAL - CALIBRACHOA (Calibrachoa).* Calibrachoa is native to South America and is grown as a somewhat evergreen perennial. It can survive winters in hardiness zones of about 8 or 9. In Ohio, Calibrachoa is grown as an annual. Sometimes called million bells or trailing petunia, Calibrachoa is related to the petunia and has small blooms that resemble petunia blooms. They are great for containers and hanging baskets because they do not tolerate high pH soils that are found in western half of Ohio and therefore may not do well in flower beds in that part of Ohio. Flowers come in various shades of violet, blue, red, pink, magenta, yellow, orange, bronze, and white. The compact mounding plants grow to around 9” tall on trailing stems; some cultivars grow up to 24” in width. Common series and cultivars include, 'Million Bells', 'Terracota', ‘Lyrica Showers’, ‘Starlette’, ‘Colorburst’, ‘Kabloom’, ‘Cabaret’, and 'Superbells'.

Author: Cindy Meyer

*PERENNIAL - HOSTA (Hosta spp.).* This may not be a new perennial to most gardeners, but hostas are still a favorite for the shade garden. These plants, which are grown for their foliage, are easy to grow. From yellow-green, dark green, green-white variegated, to blue colors as well as oval, heart-shaped or strap-shaped leaves; the shapes and colors come in endless varieties. So much so that there are many folks who collect hostas.

Hostas are considered shade-tolerant plants, but most do not thrive if grown in deep shade. Hostas grow best in an exposure with morning sun and afternoon shade. Some cultivars will tolerate some afternoon sun, although plants grown in full afternoon sun (especially variegated plants) will show signs of marginal scorching on leaves in the summer months. Hostas grow best in rich organic soil. The recommended soil is well drained, has a slightly acidic pH, and is enriched both with nutrients and organic matter.

Slugs are a common pest of hostas. Using such control methods as chemical slug pellets and baits, beer traps (place a small shallow container, such as a jar lid, level with the soil and fill with beer. Slugs are attracted to it, crawl in, and drown), using a copper strip or band around planters or stems of large plants to deter them, or using newspaper traps (lay wet newspapers down overnight and come back the next day to find slugs that have taken refuge under the traps will allow you to dispose of them) can help control these pests.

To ensure that you keep your plants free from Hosta Virus X, a disease that may cause stunted growth, leaf distortion and various patterns of leaf discoloration, clean your dividing tools between each plant that you dig up. A good solution is 1 part bleach to 3 parts water. Use vegetable oil to keep your tools lubricated and to help tools from rusting.
**WOODY - EASTERN REDBUD (Cercis canadensis).** Eastern redbud is a small, native, deciduous tree well-known for its early spring bloom. It blooms lavender to rosy pink flowers before leafing out. Flowers grow from buds along both branches and trunk alike giving it an impressive full display of blooms in spring. The enjoyment of this tree does not end with the flowers. It has large heart-shaped leaves that turn yellow in fall. Leaves are arranged alternately in a "zig-zag" pattern along branches, making the redbud easily identifiable in the landscape.

Redbud is a member of the Fabaceae or pea family, made obvious with the formation of its 2 - 3" long seedpods. It grows 15 - 30' tall at maturity. Though it is considered an understory and woodland species, it can tolerate full sun if the roots are kept shaded and cool, making it a popular landscape ornamental in yards. Horticulturalists have been successful at developing cultivars with varying shades of flower and leaves for a variety of redbud options for the landscape including weeping forms. Flowers can be found in magenta, pink, or white and foliage that is peachy to dark green as in 'JN2' Rising Sun redbud, or even purple as seen in 'Forest Pansy' redbud.

**Author: Ashley Kulhanek**

**VEGETABLE - TURNIP (Brassica rapa var. rapifera).** Turnips are a wonderful addition to cool season gardens. In Ohio, they can be grown direct seeded into the garden beginning in March or early April and then again in July for a fall crop. Turnips should be planted in full sun locations with well-drained soil. Amending soil with compost or other organic matter source is a must if it is rocky or has high clay content because roots will not form properly. These veggies also do well in raised beds.

When planting turnips they should be sown 1/2" deep, 8 - 10 seeds per foot in rows 12" apart. To plant in beds, sow in rows 10 - 12" apart across the beds. As soon as seedlings are 4" tall, thin them to about 3" apart, and use the extra ones for greens.

Turnips mature within 5 - 7 weeks. The tops of turnips can also be utilized for greens and are a good source of calcium. Greens can be harvested 5 weeks after sowing. For use as turnip greens, cut petioles an inch above the crown so that tops can regrow. As with most plants, 1" of water is needed to keep turnips sufficiently growing. If plants are left beyond maturity the roots will be tough, woody, and have poor flavor. Several varieties that are great for growing roots are: Purple Top, White Globe, Tokyo Cross, and White Lady. For good greens try, Alltop, Seven Top, or Topper varieties.

**Author: Cindy Meyer**

**WEED - GARLIC MUSTARD (Alliaria petiolata).** Garlic mustard is a non-native biennial herb belonging to the Mustard family (Brassicaceae). It grows in and around the edges of wooded areas throughout Ohio. Leaves and stems emit a strong garlic-like odor when crushed, thus the common name. First-year plants look like a rosette of kidney-shaped leaves growing near to the ground. Second year plants have single or multiple erect 2 - 4' tall stems with alternating dark green, wrinkled, scallop-edged leaves. Small white flowers, each with four petals, are borne at the top the stems. Garlic mustard can produce several thousand seeds per plant with seeds remaining viable for seven or more years. Dense populations that dominate understory growth may develop to out-compete native plants including wild flowers and food plants for wildlife.

Garlic mustard is difficult to control once established because of the sheer number of plants that often occur in small areas as well as the longevity of the seed. Recommended controls include hand-pulling entire plants or cutting plants at ground level as well as the application of appropriately labeled herbicides. Timing of control efforts should focus on removing plants before seed is produced in the spring. Since seed may still develop on plants that are flowering when cut or hand-pulled, both should be done long before flowering occurs, or hand-pulled plants should be bagged, removed from the scene and destroyed. Herbicide applications should be timed so plants die before flowering.
2. HORT SHORTS.

A. ITCHIN’ FOR SPRING. Just as the lilacs are beginning to bloom, POISON IVY (Toxicodendron radicans) shoots begin to emerge. This native plant grows on shallow-rooted vines that wrap and climb their way up trees, fence posts, buildings, and many other objects sometimes growing 20’ in one season. In direct sunlight, the vine can also grow in a shrub-like form.

We’ve all heard, "Leaves of three, let it be" but in reality, poison ivy has one leaf, growing in alternate positions along the vine. Each leaf consists of three individual leaflets. The central leaflet grows on a stalk or petiole, up to 4” long and is flanked on either side by leaflets on much shorter stalks. The leaflets can be lobed or have smooth margins, are glossy-green and smooth. Often the leaves will have a blisterly appearance. Flower clusters 2 - 5” long are formed in the spring and can be greenish-white. Later green berries are formed, which turn white to tan, and are frequently eaten by birds.

Unfortunately for the backyard gardener, poison ivy has many look-alikes. The common boxelder tree (Acer negundo) has leaves of three leaflets, but are grown in opposite positions along the main stem, rather than the alternate positioning of poison ivy. Virginia creeper (Parthenocissus quinquefolia) can also be mistaken for poison ivy, but has five leaflets in an arrangement like an outspread hand. Likewise, the berries and flowers of poison sumac (Toxicodendron vernix) resemble those of poison ivy, but its leaves contain seven to thirteen leaflets, not three.

All parts of the poison ivy plant release an oil (urushiol (you-ROO-shee-all)) upon bruising that may cause severe dermatitis with swelling and blistering. Sensitivity to this toxin does vary among individuals, plants, and circumstances under which the person was exposed. Ironically, only humans seem to be impacted by the toxin. Pets such as dogs and cats are unaffected. Unfortunately for us however, we can pick up the oil off of the fur of these pets after they walk through a stand of poison ivy. After contact with poison ivy or its oil, affected areas should be washed immediately with soap and cold water (cold water reduces the extent to which pores and glands on the skin open). Any clothing or objects (e.g. gardening tools and gloves, toys) that may have come in contact with the oil should also be washed. Great caution should be taken around fires where poison ivy might be consumed in the fire. Smoke of burning poison ivy plants can carry the oil inside the lungs setting off severe reactions that are potentially extremely dangerous.

Controlling poison ivy may be accomplished by mechanical means, cutting it back repeatedly in an attempt to starve the plant. However, if any part of the root remains, new growth can sprout and each time you run the risk of unintended exposure. Glyphosate (e.g. Roundup) can be very effective in getting rid of the pesky plant, but take care to apply only on the leaves of poison ivy. The herbicide can be used to treat poison ivy growing on trees with heavy, thick bark with minimal risk of injury to the tree as long as only the bark is contacted. Thin barked trees such as cherry trees (Prunus) should not be treated in this manner. Additionally, the herbicide does not have soil activity; therefore, desirable plants growing in the area of treatment cannot absorb the chemical from the soil.Dicamba and 2,4-D can also be used in treatment of poison ivy and will not injure grass but will damage trees or nearby shrubs if spray drift is experienced. However, dicamba is active in soil and can damage broadleaf plants near treatment areas. Another product that will control poison ivy is triclopyr (e.g. ORTHO MAX Poison Ivy and Tough Brush Killer Concentrate). One must be extremely careful with this product because it can move through the soil and negatively impact desirable trees and shrubs. As with all herbicides, follow instructions on the label for spray rates and other information.

Author: Amanda M. Bennett
A. CANKERWORMS HAVE INCHED ONTO THE SCENE. Joe Boggs reported observing heavily tattered leaves on maples; the calling card of cankerworms. The exact culprit was SPRING CANKERWORM (*Paleacrita vernata*); however, it was just as likely the damage could have been caused by FALL CANKERWORM (*Alsophilia pometeria*) since both have a similar host range and their caterpillars feed at this time of the year. Joe noted that populations were highly localized in southwest Ohio. This is also common for both moths. Although widespread outbreaks have been recorded in Ohio, damage is usually confined to a single tree or groups of closely growing trees.

Spring and fall cankerworms belong to the moth family Geometridae. Caterpillars of moths in this family are also called "inchworms," "spanworms," and "loopers." The common names of spring and fall cankerworm refer to the season when the flightless female moths lay their eggs. Fall cankerworm moths lay eggs in the fall; spring cankerworms lay their eggs in the spring. However, the eggs of both species hatch in the spring and it is not uncommon to find caterpillars of both species feeding together on the same tree.

Distinguishing the two species can be challenging since caterpillars of both species have a wide range of color variations from light-green to yellow-green to various shades of brown and even black. The best way to tell them apart is to count the prolegs: fall cankerworms have three pairs; spring cankerworms have two pairs. Both species feed on a range of deciduous trees including beech, cherry, crabapple, elms, hickories, maples, honeylocust, and oaks. Young caterpillars create holes in leaves as they feed giving the leaves a tattered appearance. Older caterpillars consume the entire leaf sometimes leaving behind the midvein or only the petiole. Complete defoliation of heavily infested trees is not uncommon.

Caterpillars also rappel down on silken threads from tree canopies if they run out of food or as they near pupation. Large numbers of dangling cankerworms beneath infested trees can make these caterpillars a serious nuisance pest as they entangle unsuspecting homeowners. Fortunately, both species only have one generation per year and heavily defoliated trees will still have time to produce new foliage for the season. While localized outbreaks may occur periodically, both species are targeted by a wide array of predators and parasitoids that typically prevent recurring outbreaks in the same location.

Author: Joe Boggs

B. MOTHS AND BEETLES BORE AND FLEA BUCKEYES. BYGLers reported spotting two insect pests of Ohio buckeyes (trees): the BUCKEYE PETIOLE BORER (*Proteoteras aesculana*); and the BUCKEYE FLEA BEETLE (*Derocrepis aesculi*). Neither of these pests is considered life-threatening to the buckeyes; however, their damage can draw unwanted attention to infested trees.

The handiwork of the buckeye petiole borer was spotted in southern Ohio by Pam Bennett, in Clifton Gorge, and Joe Boggs in a Butler County park, as well as northwest Ohio by Curtis Young. The caterpillars of this tiny moth bore into leaf petioles causing new leaves to droop, shrivel, and turn dark green to black. Symptoms may superficially resemble frost or freeze damage. Look for a slight swelling and a small hole in the petioles of affected leaves. Small quantities of sawdust-like frass (insect excrement) may hang from the hole.

Damage by this borer may appear conspicuous; however, the insect seldom causes significant leaf loss on buckeyes, so no chemical control recommendations are currently available. Hand-picking and destroying infested leaves now will reduce the number of moths available for producing a second generation later in the season. On the other hand, this same moth is considered a key nursery pest where it goes under the common names of MAPLE SHOOT BORER, MAPLE TIP MOTH, and MAPLE TWIG BORER. Significant damage to young maples in Kentucky nurseries have been reported over the years with the borer causing the loss of main leaders.
The buckeye flea beetle appears to have a much narrower host range with damage confined to its namesake host. Joe reported spotting damage on buckeyes at several locations in the southwest part of the state. The tiny beetle shows-up early in the season to create obvious holes in buckeye leaflets. The beetles live and feed on the underside of the leaflets and they prefer leaves on lower branches as well as leaves on heavily shaded understory trees. As with all flea beetles, when disturbed these beetles use their powerful hind "hopping legs" to flee by hoping away. Joe noted that he has been observing small localized population in wooded areas, but he has never seen the beetle causing damage to buckeyes planted in landscapes.

Author: Joe Boggs

C. BUZZ-BUMBLING BEETLES. BYGLers reported that the familiar "bzzzzzzz...thud!" sound made by MAY/JUNE BEETLES as they fly around porch lights at night and bounce off walls, doors, windows, startled homeowners, etc., is now being heard in southwest Ohio. There are five species of beetles in the genus *Phyllophaga* in Ohio that share the general common name of May or June Beetles. The 1/2 - 1" long adults are slightly oblong, and reddish-brown to black in color. Their obnoxious evening behavior often causes them to be dismissed as nuisance pests. In most cases, this is true. Although adults of most of these species feed at night on flowers, or on tree and shrub foliage, they seldom cause significant damage.

However, large numbers of these beetles occasionally produce noticeable leaf damage, and their nocturnal life-style makes them a deceptive defoliator. In 2000 and again in 2011, conspicuous defoliation of oaks and maples caused by these beetles was reported in Ohio and Kentucky. In a few cases, heavy damage literally occurred overnight. The defoliation involved the removal of all of the leaf tissue with the exception of the main veins. Since the beetles are night feeders, casual observers were left in the dark trying to explain the damage. Although damage may appear severe, the beetles only fly for a few weeks, leaving plenty of time for defoliated trees to produce new leaves.

Larvae of these beetles are white grubs with feeding habits similar to JAPANESE BEETLE (*Popillia japonica*) and MASKED CHAFER (*Cyclocephala* spp.) grubs; however, May/June beetle grubs prefer pasture grasses. Hence, damage to trees most often occurs near pastures. Likewise, significant May/June beetle grub populations are seldom found beneath older lawns, but are sometimes observed where new homes occupy ground which was recently in pasture. Larvae require anywhere from 1 - 5 years to complete their development, depending upon the species.

Author: Joe Boggs

D. CARPENTER BEE COMPLAINTS. BYGLers have begun to hear from homeowners about Carpenter Bees (*Xylocopa virginica*) and notably their hovering aggressive behavior that tends to bring them into conflict with humans. Carpenter bees are often spotted under the eaves of homes or near decks and wood fences where they excavate cavities in unpainted wood for shelter and rearing their brood. When humans get near a nest, the males often harass the intruder by exhibiting a territorial behavior of hovering near or buzzing past people, which can worry or panic passers-by. However, it is the males of the species who perform these aggressive displays, and the males are incapable of stinging, making them all buzz and no sting! Females can sting but typically only when provoked.

Carpenter bees overwinter as young adult bees in their cavities. They emerge in early spring to mate and continue to excavate their tunnels for more brood. They are loyal to their birth site and continue to expand the cavities they first emerged from. Therefore, the first generation's activities may yield insignificant damage, yet consecutive years may result in more severe wood damage as each generation returns to the original nest or nearby, creating extensive networks of tunnels. Holes made by carpenter bees are identifiable as they are perfect circles about 1/2" in diameter.

To manage carpenter bees, you can apply an insecticidal dust into openings following all label instructions. Carpenter bees passing in and out of the cavity will pick up the insecticide. Holes can be
sealed with wood dowels or wood putty. Painting wood will help protect it from future bees. Stain is not as effective as paint. Liquid pesticides applied to wood surfaces may provide some repellency, but these perimeter-type sprays wear off with time and may not provide long-lasting prevention. As carpenter bees do not “eat” the wood, they would not ingest sprayed-on pesticides. Carpenter bee “traps” do exist but documented efficacy could not be found at the time of this posting. One style offers an untreated piece of lumber in hopes the bees will choose it to excavate as opposed to other structural wood faces. This wood can then be disposed of in winter full of the overwintering bees (or left as a pollinator habitat). Other traps are available that include a clear container that bees supposedly become trapped in upon entering the pre-drilled wood face. While we cannot attest to how well these traps work, they are an option for those interested in trying them out.

Author: Ashley Kulhanek

4. DISEASE DIGEST.

A. IMPATIENS AND DOWNY MILDEW. Impatiens (Impatiens walleriana) is a favorite bedding plant for adding color to shady spaces in the garden. However, gardeners that have long favored the plant may be turning away from this vibrant annual due to concerns about IMPATIENS DOWNY MILDEW (Plasmopara obducens). Impatiens Downy Mildew is a fungal-like pathogen (it’s really a water mold) that has the potential to kill susceptible Impatiens, which include any Impatiens walleriana or hybrid of I. walleriana. Symptoms include leaf yellowing and stippling, curled leaf edges, defoliation and flower drop. Infected plants will develop white spores on the underside of the leaves. It is important to get a confirmed diagnosis when downy mildew is suspected because there are other diseases and environmental conditions that could contribute to plant decline in general. Samples should be sent to the C. Wayne Ellett Plant and Pest Diagnostic Clinic to document its prevalence in the state.

It is important to note that planting impatiens does not guarantee this disease will occur, so gardeners do not have to give up on impatiens yet! Find out if downy mildew of impatiens has been confirmed in your county. Downy mildews are typically species-specific, so downy mildew on other plants will not infect impatiens, and impatiens downy mildew will not infect other species of plants. If it is diagnosed, you should remove the diseased plant immediately to prevent its spread to other plants of the same species in the area. The downy mildew spores can be spread on the wind or splashed from the soil up onto the plants by rain. Typically, downy mildew of impatiens gets to Ohio on weather fronts from southern states where it is active year-round. Cool, dewy nights are perfect for disease development. Gardeners not willing to lose impatiens yet can plant NEW GUINEA IMPATIENS (Impatiens x hawkeri), which are resistant to the disease. But remember that any plant will still require proper care and may be affected by other conditions.

Commercial growers have been educated about this disease and are well-versed in preventive treatments for this pathogen. However, gardeners should inspect plants for any problems before purchasing and then continue to inspect the plants throughout the season. If plants begin to decline and defoliate, inspect leaves for powdery white or gray spores on the undersides of the leaves. This is possibly downy mildew. Stay tuned to BYGL or contact county extension educators to learn if downy mildew has been reported in your area. With a little planning, impatiens may still be enjoyed this summer. If gardeners do not want to risk planting susceptible impatiens, this may be an opportunity to try out other plants in the landscape. Possible replacements for shade tolerant-plants include New Guinea impatiens, caladium, large-leaf begonias, or polka dot plants.

Author: Ashley Kulhanek

5. TURF TIPS.
A. TALKIN’ TURFGRASS TACTICS. Denise Johnson had some turf-type questions that needed some answers, so ambling down the hall she decided to pick Dr. David Gardner’s brain. Her first question to him was, “What can be done right now if a crabgrass controlling product was not applied earlier?” Dr. Gardner indicated that there are a couple of "rescue" treatments for post emergent crabgrass applications during the month of May; namely, Dimension (dithiopyr), Cavelcade PQ (prodiamine & quinclorac combo), and Echelon (sulfentrazone & prodiamine combo).

Denise asked her next pressing question, "When is the best time to get rid of dandelions?" Dr. Gardner answered, "Dandelions are more susceptible to herbicides after they begin to bloom. They can be sprayed anytime thereafter and you don't have to wait for the puffball!" Dr. Gardner indicated that for most broadleaf weeds, like those dreaded dandelions and others in turfgrass; herbicidally speaking, at this time of year, it is best to use the amine herbicide formulations. The amine formulations are less likely to volatilize (turn to a vapor), which may then move off target and damage desirable plants. Dr. Gardner also mentioned that the ester formulations of herbicides will work best on broadleaf weeds with ambient temperatures below 65F; however, they must be used with extreme caution around desirable ornamentals.

Denise's last question was regarding paying attention to which turfgrass cultural practices right now would yield the greatest benefits? Dr. David Gardner gave some very insightful answers. He pointed out to "Avoid the temptation to over-fertilize the lawn and do not use all fast release fertilizers, at least one-third of the nitrogen should be slow release or water-insoluble nitrogen (WIN)." Then came the double-whammy regarding mowing practices. Dr. Gardner said to "mow frequently and to not remove more than one-third of the grass height. DO NOT SCALP the grass at the end of May because you are tired of mowing so often. This practice is what opens the door to crabgrass going crazy!"

Check the latest by Dr. David Gardner talking about chemicals and crabgrass control: [https://www.youtube.com/watch?v=rUpXwgVG0so&feature=youtu.be].

Author: Erik Draper

6. INDUSTRY INSIGHTS.

A. CALICO SCALE PUFFING-UP. Calico scale (Eulecanium cerasorum) females are now "puffing-up" and pumping out impressive quantities of clear, sugary honeydew in southwest Ohio. This is a non-native, globular "soft" scale which means mature scales are protected by a soft shell. Their common name is derived from the starkly contrasting calico pattern of black-and-white markings on the hemispherical-shaped shells of mature females. The mature females measure about 1/4" in diameter and their distinct markings make them easy to recognize, particularly on bark and branches that are blackened by sooty mold.

As with all soft scales, calico scale adults and nymphs (crawlers) feed by inserting their piercing-sucking mouthparts into phloem vessels to extract amino acids that are dissolved in the sugary plant sap flowing through the vessels. They discharge excess sap from their anus in the form of sticky, sugary "honeydew" that drips onto the leaves, stems, and branches of scale infested trees as well as understory plants, parked cars, sidewalks, lawn furniture, and slow-moving entomologists. Indeed, Joe Boggs reported that both he and his cameras quickly became speckled with the sticky scale poo goo while he was recently photographing a heavy infestation.

Calico scale has one generation per year and overwinters on twigs as partially developed nymphs. As spring progresses, the nymphs feed, molt, and mature into globular adults. Eggs are laid in late spring to early summer, and the hatching 1st instar nymphs migrate to the undersides of leaves where they attach themselves to veins to suck fluid from phloem vesicles. Like the adults, the nymphs also exude sugary, sticky honeydew, although in lower quantities compared to the adults. As fall approaches, the crawlers move back to stems where they overwinter.
Calico scale can infest a wide variety of deciduous trees including dogwood, honeylocust, magnolia, ornamental fruit trees, sweetgum, and witchhazel. One of most obvious symptoms of a heavy infestation is blackened branches created by honeydew deposits becoming colonized by black sooty molds. Although sooty molds cause no harm, they do give infested trees an unsightly appearance. Calico scale is seldom a direct killer of established landscape trees; however, heavily infested trees may suffer branch dieback and the accumulated stress caused by substantial sap loss may cause them to succumb to other stress-related factors.

Unlike many other soft scales, calico scale is not controlled with either dormant oil or summer oil applications. A 2006 insecticide efficacy trial conducted by Dan Potter (University of Kentucky) showed that calico scale populations could be suppressed with a topical application of Talstar (bifenthrin) in early spring targeting overwintered crawlers. Last season, Dan Herms conducted an efficacy trial in southwest Ohio targeting summer crawlers attached to the underside of leaves; applications were made on July 25. Data collected 53 days after treatment showed Onyx (bifenthrin) provided the best suppression with 0.8% survival of the nymphs compared to 63% on the untreated trees.

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 - 6, 2015, with the exception of the soil temperatures which are readings from Wednesday, May 7, 2015 at 5:20 a.m.

Cooler temperatures, frosts and freezes reported last week are a thing of the past. Temperatures have been on the rise and late week and weekend predictions are summer-like in the 80s.

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<td>48.2</td>
<td>0.16&quot;</td>
<td>0.7&quot;</td>
<td>64.32/62.17</td>
</tr>
<tr>
<td>Piketon</td>
<td>South</td>
<td>78.3</td>
<td>46.1</td>
<td>0.00&quot;</td>
<td>0.9&quot;</td>
<td>68.04/68.78</td>
</tr>
</tbody>
</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 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 166 to 337. Following is a report of GDD for several locations around Ohio as of end of the day of May 6, 2015: Painesville, 166; Cleveland, 183; Toledo, 193; Canfield, 189; Findlay, 194; Van Wert, 202; Wooster, 204; Coshocton, 256; Columbus, 285; Springfield, 278; Dayton, 283; Cincinnati, 319; Ironton, 336; Portsmouth, 337; and Piketon, 327.

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.

**Inkberry leafminer, adult emergence, 150**; sargent cherry, full bloom, 151; star magnolia, full bloom, 151; Allegheny serviceberry, first bloom, 153; Manchu cherry, full bloom, 155; spring snow crabapple, first bloom, 155; apple serviceberry, first bloom, 159; *spruce spider mite, egg hatch, 162*; Bradford callery pear, full bloom, 164; Allegheny serviceberry, full bloom, 169; saucer magnolia, full bloom, 174; P.J.M. rhododendron, full bloom, 178; *boxwood psyllid, egg hatch, 179*; weeping Higan cherry, full bloom, 179; Koreanspice viburnum, first bloom, 185; regent serviceberry, first bloom, 186; Japanese flowering crabapple, first bloom, 189; eastern redbud, first bloom, 191; *gypsy moth, egg hatch, 192*; Koreanspice viburnum, full bloom, 205; *azalea lace bug, egg hatch, 206*; 'Spring Snow' crabapple, full bloom, 209; common flowering quince, full bloom, 214; *birch leafminer, adult emergence, 215*; 'Coralburst' crabapple, first bloom, 217; *elm leafminer, adult emergence, 219*; common chokecherry, full bloom, 221; *alder leafminer, adult emergence, 224*; *honeylocust plant bug, egg hatch, 230*; sargent crabapple, first bloom, 230; common lilac, first bloom, 234; Ohio buckeye, first bloom, 245; common horsechestnut, first bloom, 251; *hawthorn lace bug, adult emergence, 253*; *hawthorn leafminer, adult emergence, 260*; flowering dogwood, first bloom, 263; red buckeye, first bloom, 265; blackhaw viburnum, first bloom, 269; *imported willow leaf beetle, adult emergence, 274*; Sargent crabapple, full bloom, 298; red horsechestnut, first bloom, 304; *pine needle scale, egg hatch - 1st generation, 305*; *cooley spruce gall adelgid, egg hatch, 308*; eastern spruce gall adelgid, egg hatch, 308; Vanhoutte spirea, first bloom, 309; common lilac, full bloom, 315; 'Pink Princess' weigela, first bloom, 316; blackhaw viburnum, full bloom, 322; redosier dogwood, first bloom, 323; dwarf fothergilla, full bloom, 325; 'Winter King' hawthorn, first bloom, 328; *illic borer, adult emergence, 330*; slender deutzia, first bloom, 338; Japanese kerria, full bloom, 342; common horsechestnut, full bloom, 344; red chokeberry, full bloom, 351; and doublefile viburnum, first bloom, 353.

**Author: Curtis E. Young**

8. COMING ATTRACTIONS.

A. POND SCHOOL MAY 27, 2015. Pond School is a 3-hour workshop on pond care and management. There will be 8 different presentations to choose from taking place across 3 concurrent tracks of 1-hour sessions. There will be lectures, hands-on, and outdoor sessions on a variety of aquatic topics including algae control, aggressive vegetation, managing wildlife around the pond, fish management, aerating, water testing and more. Pre-registration is required and space is limited. The event is May 27, 2015 at Wolf Creek Environmental Center, 6100 Ridge Rd., Sharon Center, OH in Medina County. Program starts at 5:30 p.m. and goes to 8:30 p.m. Registration Deadline is May 11, 2015. For more information visit: [http://go.osu.edu/pond](http://go.osu.edu/pond).

B. BUCKEYE LADY BEETLE BLITZ & GOOD GARDEN BUGS WORKSHOP. The Ag-Urban Landscape Ecology Lab is hosting three sessions of a workshop this year in May to kick off The Buckeye Lady Beetle Blitz 2015! This workshop will focus on training for our Buckeye Lady Beetle Blitz citizen science project. We will provide a review of lady beetle identification and sampling procedures, and distribute the 2015 toolkits. Dr. Mary Gardiner will also cover information from her new book, "Good Garden Bugs," due out May 2015. Participants will learn about the diversity of beneficial arthropods that inhabit their garden. A flyer is attached with additional information, and even more can found on our website: [http://www.ladybeetles.osu.edu](http://www.ladybeetles.osu.edu). Please direct any questions towards Chelsea Smith ([smith.7231@osu.edu](mailto:smith.7231@osu.edu)) or call 330-202-3555, ext 2583).

We have three locations for this workshop:

* WOOSTER: May 14, 2015 at OARDC’s Fisher Auditorium, 1680 Madison Ave, Wooster, OH
CLEVELAND: May 21, 2015 at the OSU Cuyahoga County Extension Office, 5320 Stanard Ave., Cleveland, OH

DAYTON: May 27, 2015 at the Montgomery County Fairgrounds, 1001 South Main Street, Dayton, OH

PRE-REGISTRATION IS REQUIRED. Please send your registration form in at least 3 days before the workshop you are attending. The cost for the workshop is $20.00. Checks should be written out to "Ohio State University". Lunch will NOT be provided. Participants can bring a brown bag lunch or visit a local restaurant (a list of local options will be provided). The registration fee includes workshop attendance, beverages, and BLBB sampling kits. Follow this link for a registration form: [http://ale.cfaes.ohio-state.edu/sites/gardinerlab/files/imce/Events/2015%20registration%20form_workshop_ALL-fillable_0.pdf] and send it by email* to Chelsea Smith [smith.7231@osu.edu] or US mail to:

Chelsea Smith
1680 Madison Ave
Thorne Hall
Wooster, OH 44691

* If you are emailing the form in please follow these steps: 1) Fill out the PDF; 2) Save the PDF as a file on your computer; 3) Open the file to confirm that your entries were saved; and 4) Attach the saved completed PDF file to an email and send it to [smith.7231@osu.edu].

THE OSU GREEN INDUSTRY SHORT COURSE, THE OHIO TURFGRASS FOUNDATION CONFERENCE AND SHOW, AND TREES ON TAP PROGRAMS. Mark your calendars now, as these shows will be here sooner than you think. The event will be moving back to the Columbus Convention Center in 2015 and will be held on December 8 - 10, 2015, with the addition of a special tree program on Monday, December 7, 2015. Details on over 100 educational programs and a wide array of certification credits will be coming throughout the BYGL season. We are happy to acknowledge the robust support of the Ohio Turfgrass Foundation for their financial and other aid of the educational efforts of the OSU Extension Nursery Landscape and Turf (ENLT) Team, a group of Extension Educators and OSU Specialists that brings to you a range of programs including field diagnostic walkabouts (such as BYGLive! in southwest Ohio) and diagnostic workshops as well as help with horticulture problem troubleshooting, numerous publications, and of course, the BYGL.

A key speaker for both the Trees on Tap program and the tree care track of the Green Industry Short Course will be Dr. Ed Gilman of the University of Florida Environmental Horticulture program. Ed is Professor of Urban Trees and Landscape Plants and his research and educational efforts focus on tree care practices such as the effect of tree pruning on tree biology, production practices and landscape establishment, root pruning, and irrigation and fertilization practices. He is reason enough alone to attend the conference.

BYGLOSOPHY. "Bees are black, with gilt surcingles - Bucaneers of buzz." - Emily Dickinson

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
http://www.HungryPests.com

Ohio Pesticide Safety Education Program
http://pested.osu.edu/

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

Ohio State University Extension Bee Lab
beelab.osu.edu

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

Ohio Woodlands Stewards Program
http://woodlandstewards.osu.edu

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

USDA APHIS Beetle Buster Website (Asian Longhorned Beetle)
http://www.beetlebusters.info/

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

Following are the participants in the May 5th conference call: Amanda Bennett (Miami); Joe Boggs (Hamilton); Erik Draper (Geauga), Denise Johnson (Master Gardener Volunteer program); Ashley Kulhanek (Medina); Cindy Meyer (Butler); Nancy Taylor (C. Wayne Ellett Plant and Pest Diagnostic Clinic (CWEPPDC)), 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.

Where trade names are used, no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete,
timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions.

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: [http://go.osu.edu/cfaesdiversity].