BUCKEYE YARD AND GARDEN LINE 2014-22
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This is the 22nd 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.

In This Issue:

1. PLANTS OF THE WEEK: Annual (Dahlia); Perennial (Ferns); Woody (Seven-Son Flower); Vegetable (Beet); and Weed (Spurge).
2. HORT SHORTS: Meet the Educator - Curtis E. Young.
3. BUGBYTES: Oak Leaf Blister Mite; Walnut Cats; Hollyhock or Hibiscus Sawfly?; Has the Boogie-Woogie Aphid Danced Off into the Sunset?; Oleander Aphids; and Bagworm Response.
4. DISEASE DIGEST: Slime Flux/Wet Wood and Moist Chamber.
5. TURF TIPS: Turf Disease Activity.
6. INDUSTRY INSIGHTS: White Pine Weevil has Left the Building; Magnolia Scale Crawls; Asian Longhorned Beetle (ALB) Awareness Month, Part 4; A Tree Story; and Latest from the 87th Ohio State University Green Industry Short Course.
7. WEATHERWATCH.
8. COMING ATTRACTIONS: Ohio Plant Diagnostic Workshop - September 5; Farm Science Review; Pesticide Safety Training - September 24; Arboreatum Feast, Part Deux: Maple Syrup Tasting Is Added To The Mix!; Wood Destroying Insect Inspection Training - October 8; The 87th Ohio State University Green Industry Short Course (Formerly the Nursery Short. Course) December 9 - 11; and Tri-State Green Industry Conference.
9. BYGLOSOPHY.

APPENDIX - Additional Website Resources.
1. PLANTS OF THE WEEK.

*ANNUAL - DAHLIA (Dahlia pinnata).* Dahlia flowers can stop people in their tracks, standing in awe of these amazing annuals. The combination of colors, sizes, and textures are amazing and can capture everyone’s attention. They are considered by many to be one of the most spectacular garden flowers. The really large flowers can be as large as a dinner plate - that is one big flower!

Plants range from about 12” - 6’ tall. The taller plants and larger flowers typically need staking. Dahlias prefer a sunny site and will perform better under this condition. The soil should be rich and well-drained; the pH should be around 6.5.

The crowns should be planted in the spring when the threat of frost has passed. The crowns should be planted just above the soil level. Dahlias tend to develop a shallow root system so care should be taken when cultivating around these plants.

In the fall, Dahlias should be lifted from the ground after the first frost or before the end of October. Foliage should be cut back. Once the tubers are dug, remove as much soil as possible. Tubers can be placed in a wooden flat, bushel basket, or cardboard box that have a few inches of peat moss, sawdust, or vermiculite, and then cover with the same material. Tubers should be checked through the winter months to be sure they aren’t shriveling up or are too damp. Believe me - it is worth it when you can enjoy the flowers the following summer.

There is a Dahlia Society of America for those that can't get enough information about these awesome annuals. The website is [http://www.dahlia.org/]. Lots of great information can be found on this site, including a photo contest, conference information, how to become a member, and dahlia related resources. Also, look locally - you might find a chapter that is right in your own backyard. There is a dedicated group at the Toledo Botanical Garden in NW Ohio who puts together a wonderful display each year. If you are in the area, be sure to check it out. You won't be disappointed.

Author: Amy Stone

*PERENNIAL - FERNS (Division Pteridophyta).* Ferns have been around for millions of years. At one time (Carboniferous Period), they were the dominant plant growth on the surface of the earth. The rich coal seams of today came from massive accumulations of species of ferns that did not completely decompose, were covered over by sedimentation, and under pressure and heat transformed into coal. Many ferns are still found today in the wetter parts of the world, but there are other species that are found in very dry or severely cold conditions as well. The majority of fern species inhabit wet, tropical forests and can be found from sea level to mountains over 15,000 feet in altitude. Ferns do not produce flowers or seeds, instead they reproduce through the production of spores.

There are a multitude of hardy ferns that can be used in outdoor plantings. Ferns come in a range of textures, colors, sizes and shapes. They add interest (somewhat of a pre-historic feeling) and a backdrop against which other plants can be highlighted. Most ferns do well in partial shade or dappled sunlight, but there are many which will do well with quite a bit of sun, provided they get enough water. Shade loving ferns appreciate an organic, evenly moist, well-drained soil. Clay or sandy soils may need to be amended with compost or peat moss to make them a bit more fern friendly. Ferns require minimal maintenance throughout the year once they are established. Ferns generally do not require to be regularly fertilized. Nutrients released
from decomposing compost mulch and/or leaf litter usually provide all that the ferns need. Unlike other perennials, ferns seldom need to be divided. Deciduous ferns can be trimmed as the fronds yellow in late fall and early winter. The fronds of evergreen ferns should be left until late winter or early spring just before the new fronds emerge so that one gets the full service of their evergreen nature through the winter. The best times to plant ferns are during the spring and fall when rain is usually plentiful.

Author: Curtis E. Young

*WOODY - SEVEN-SON FLOWER (*Heptacodium miconoides*). The first white petals are emerging on seven-son flower in northeast Ohio now, marking the beginning of the long inflorescence reign for this plant. These petals are arrayed on the namesake candelabra-like seven-pronged flower stalks. After several weeks the white will give way to a month or more of ripening ornamental salmon-pink sepals, the floral envelope just behind the petals. This large shrub to small tree will grow to 15 - 20' and even larger over time. Those flower stalks (peduncles) are also quite attractive for weeks, with their seven-armed candelabra effect. Add to this the attractive, exfoliating bark which is reminiscent of crape myrtle, and this is a very ornamental woody plant selection that is gaining in popularity. Seven-son flower is in the Caprifoliaceae family, is native to China, and does best in sunny sites and, though tolerant of many soils, does best in moist, well-drained organic soils.

Author: Jim Chatfield

*VEGETABLE - BEET (*Beta vulgaris*). This root vegetable is a must try for the vegetable gardener! Beets prefer well-drained soil with a pH between 6.5 and 7 and develop the best color and flavor when grown in full sun and cooler conditions. Beets should be propagated by seed. Seed should be planted in early spring, as soon as you can work the soil, 3/4" deep and 1" apart in rows 12 - 18" apart. Seedlings should be thinned when plants are 4 - 5" tall. The key to growing great beets is to not overcrowd plants; overcrowding will prevent roots from forming properly. Young plants should be spaced either 4" or 6" apart depending on size of roots that are desired. If larger roots are desired for winter storage, then thinning to 6" apart is needed. To keep the crop from becoming tough and leathery, keep the soil lightly watered. Beets come in a variety of root shapes (cylindrical to spherical) and colors (gold, yellow, to white). Beets typically take 55 - 60 days to mature.

Serve beets fresh, pickled or cooked; tops can also be eaten as a green. To store, cut roots and place the clean beets in a plastic bag for up to 2 weeks. If storing the tops, cut the tops off of the beets and store them in the refrigerator separately from the roots for up to 2 days.

Author: Cindy Meyer

*WEED - SPURGE (family Euphorbiaceae). Two types of spurge belonging to the genus, *Euphorbia*, may become a problem at this time of the year in landscapes and turfgrass. These are PROSTRATE SPURGE (*E. supine*) and SPOTTED SPURGE (*E. maculata*). Both are summer annuals meaning that they develop throughout the growing season and produce seeds late in late summer to early fall. Both may flourish by taking advantage of the lack of competition presented by poorly maintained turfgrass, or they may benefit from the lack of weed suppression presented by poorly mulched landscapes. Unfortunately, while these are distinct species, their common names are sometimes incorrectly used interchangeably.
As its common and scientific names indicate, prostrate spurge is an extremely low-growing plant, hugging the ground while forming large, almost perfectly round mats measuring over 2' in diameter. Individual leaves are oval, less than 1/4” in length, and may have an oval purple spot along the midrib. The spots on the leaves sometimes cause this plant to be incorrectly identified as "spotted" spurge. True spotted spurge has a more upright growth habit with stems sometimes creeping over the tops of summer dormant turfgrass plants. While the leaves are oval-shaped, they are much larger compared to prostrate spurge; the older, noticeably hairy leaves are commonly over 1/2" in length. The purplish spots are fan-shaped and appear to arise from the leaf petiole.

As with other spurge, white, milky, latex-like sap will ooze from wounded leaves or broken stems. Contact with the sap should be avoided since it contains polycyclic diterpene esters which are known to cause inflammation of the skin and severe damage to eyes. Indeed, the medical literature includes reports of permanent blindness resulting from accidental exposure to the sap.

Cultural management of spotted and prostrate spurges includes pulling and destroying plants in the summer before seeds are produced (gloves and protective eye-gear is recommend); increasing competition in lawns using good turfgrass management practices; and suppressing seed germination in landscapes by proper mulching. As with other summer annuals, these spurges may be suppressed by applying a pre-emergent herbicide in the spring prior to seed germination. Of course, an application of certain post-emergent herbicides such as glyphosate (e.g. Roundup) will kill plants and reduce year-to-year seed carry-over if the applications are made prior to seed production.

Author: Joe Boggs

2. HORT SHORTS.

A. MEET THE EDUCATOR - CURTIS E. YOUNG. Curtis Young is currently an Agriculture and Natural Resources (Ag&NR) Extension Educator and Assistant Professor with an emphasis in Entomology and Integrated Pest Management (IPM) in agronomic crops and landscapes. Curtis started his career in 1992 in the NW District Office of the Ohio Cooperative Extension Service as an Ohio State University IPM Extension Associate in agronomic crops. In 2003, Curtis was hired in Allen County. In 2010, he moved to the Miami County Office and in 2011, he moved to the Van Wert County Office where he is currently as the Ag&NR Extension Educator and County Director. Curtis’s involvement with the Buckeye Yard and Garden Line (BYGL) started in 2001 as a contributing author and starting in 2009 also became the lead editor.

Curtis’s training and background was in Entomology with an insect/plant interactions emphasis and he also worked as a nursery/landscape contractor for a period of time so he has experience with trees, shrubs, greenhouse crops and agronomic field crops production. As a member of the Extension, Nursery, Landscape, and Turf Team, Curtis has many opportunities to challenge his knowledge of plants, diseases, insects and horticulture by being involved in every aspect of plant diagnostics. Involvement with the production of the BYGL opened up the world of digital photography for Curtis where he has developed his skills to capture some very interesting subjects. One of those subjects is the macrofungi. Curtis has become fairly skilled in the identification of these fungi having to be able to name the subjects he photographs.
Curtis has enjoyed his 22+ years of employment with Ohio State University Extension and the new challenges that present themselves in county offices nearly every day.

Author: Curtis E. Young

3. BUGBYTES.

A. OAK LEAF BLISTER MITE. Participants in the OSU Master Gardener Volunteers Diagnostic Walk-About held on Monday at Cox Arboretum (Fiver Rivers MetroParks, Dayton) observed the handiwork of the oak leaf blister mite, *Aceria triplacis* (family Eriophyidae) on a burr oak. The eriophyid mite produces raised, blister-like bumps on the upper leaf surface matched with deep, pocket-like depressions on the lower leaf surface. The depressions in the lower leaf surface are filled with hairy, erineum-like growth. Joe Boggs reported that he later examined the leaf pockets under 40X magnifications and observed the white, cigar-shaped eriophyid mites wiggling around and through the "hair" in the leaf depressions. Eriophyid mites are too small to be identified using lesser magnification such as a 10X hand lens.

The symptoms produced by the eriophyid mite are almost a dead-ringer for OAK LEAF BLISTER caused by the fungus, *Taphrina caerulescens*. As with the blister mite, raised, blister-like bumps appear on the upper leaf surface matched with deep, pocket-like depressions on the lower leaf surface. However, there are some important distinctions. The depressions on the lower leaf surface that are produced by the fungus are not filled with hairy, erineum-like growth which is an almost a sure-fired symptom of eriophyid mite activity. Also, while blisters produced by both the mites and fungus eventually turn dark brown to brownish-black, this color change is occurring right now for the fungal infections. The mite induced blisters do not change color until shortly before leaf drop.

As with oak leaf blister, the oak leaf blister mite does not cause significant harm to the overall health of affected trees. Indeed, Rich Pearson, Chief Horticulturist at Cox Arboretum, noted that the leaf blistering symptoms have consistently appeared on the burr oak over the past several years with no apparent harm to the overall health of the tree.

Author: Joe Boggs

B. WALNUT CATS. Julie Crook showed BYGLers an image that had been sent to Ask a Master Gardener Volunteer for identification. The image showed a colony of late instar WALNUT CATERPILLARS (*Datana integerrima*) resting on the main stem of its namesake host. The caterpillars are general defoliators and feed in groups that may include 10 - 30 caterpillars. As their common name implies, walnut caterpillars favor walnut trees, but they will also feed on hickories, birches, oaks, and willows.

Eggs are laid by the moths in the spring on the underside of leaves. First instar caterpillars often go unnoticed because of their small size and their feeding behavior; they often confine their feeding to one or two leaflets. Damage becomes more apparent when the caterpillars reach the second instar stage and start stripping all of the leaflets from the compound leaves of walnuts. Since the caterpillars are gregarious feeders, defoliation tends to occur one branch at a time, unless populations are high and multiple groups are feeding on many branches. The caterpillars have the interesting habit of rearing their front and tail ends in unison to ward off offenders.
Walnut caterpillars have three color phases meaning that the larvae change color patterns as they mature. Newly hatched caterpillars are reddish to reddish-yellow and they remain this color through the second instar stage. During the third and fourth instar stages, the caterpillars are brick red with faint white stripes. In the final instar stage, the caterpillars are grayish black with long, soft white hairs. Walnut caterpillars practice an unusual molting behavior. When molting, they group together on the bark of their host tree and all molt at the same time, leaving behind a mass of hairy exoskeletons that looks like a patch of fur.

Walnut caterpillar has two generations per season in Ohio; however, egg hatch may occur over an extended period of time for the second generation meaning that early instars may be present at the same time as late instars. The caterpillars feed for 4 - 6 weeks until full grown (about 2" long), then they drop from the trees and pupate in underground cells. Although the damage caused by the caterpillars can be devastating to small trees in landscapes, walnut caterpillars are seldom considered a serious pest in woodlands. The caterpillars can be easily managed on small landscape trees by knocking them to the ground and performing the "caterpillar stomp dance;" so far, none have become resistant to this control method.

Author: Joe Boggs

C. HOLLYHOCK OR HIBISCUS SAWFLY? Identification challenges presented by the common names of insects are a frequent topic in BYGL reports. The aforementioned walnut caterpillars may be found on oak, hickory, or willow; wouldn't it be more accurate to call them the "sometimes walnut caterpillars?" Knowing that there are hollyhock sawflies (Neoptilia malvacearum) and hibiscus sawflies (Atomacera decepta) means that sawflies found defoliating hollyhocks must be hollyhock sawflies, and sawflies defoliating hibiscus must be hibiscus sawflies, right? Wrong. These sawflies pay no attention to what we call them, or what we write about them. They only pay attention to what they like to eat, and that's all in the family.

Hollyhock and hibiscus are members of the cotton or mallow family, Malvaceae. The family embraces 243 genera; indeed, Hibiscus is the name of one genus which in America includes Rose of Sharon (H. syriacus). So, it should come as no surprise that hibiscus sawfly may be found feeding on several members of the mallow family including hollyhocks, Rose of Sharon, and its namesake host. The hollyhock sawfly appears to have a more limited palate confining its feeding to its namesake host. Or, at least that's what the literature seems to imply about this sawfly. The fact is there appears to be a limited amount of information in the literature about this sawfly.

More challenging is that a percentage of the online literature appears to reflect ongoing cases of mistaken identities between these two sawflies; this is particularly true of online images. Presumably, the sawfly identification errors have been based on host plants rather than sawfly morphological features. At least, that's been the case with past BYGL reports. BYGLers discovered during their confab that past BYGL reports have identified the sawfly culprits feeding on hollyhocks as the hollyhock sawfly when they were actually the hibiscus sawfly.

Both sawflies belong to the same family, Argidae. Members of this family share a common feature: their antennae split at the base making it appear the adults have two pairs of antennae. Adult hollyhock sawflies have showy reddish orange bodies and jet-black heads and wings. The larvae are equally colorful with early instars having orange head capsules and greenish-yellow bodies and later instars having orangish bodies. All instars are covered in small black bumps. Hibiscus sawflies are more muted in their coloration; both as adults and larvae. Adults have black bodies with orangish-red thoraxes. The larvae are pale green and they have rings of
short spikes encircling each segment; the spikes are difficult to see without magnification. The larvae feed as leaf skeletonizers; however, heavy feeding damage eventually produces large holes in the leaves.

A head-down discussion by the newly enlightened BYGLers revealed that apparently, no one had ever actually seen the hollyhock sawfly in Ohio, or at least photographed it. However, several BYGLers had photographed the larvae and adults of the hibiscus sawfly...feeding on hollyhocks. A quick online literature search revealed a relatively healthy reservoir of information on the hibiscus sawfly including reports of its multi-species host range as well as descriptions of a life-cycle that includes multiple generations per season. Information on the hollyhock sawfly was sparse with most reports focused on the southwest U.S. which may explain why BYGLers had not yet seen it in Ohio. This does not mean that the hollyhock sawfly does not occur in Ohio. It just means that it's easy to be lead astray when the common name of a pest, and thus its identification, seems to fit so nicely with the plant that the pest is found on. It happens to the best of us.

Author: Joe Boggs

D. HAS THE BOOGIE-WOOGIE APHID DANCED OFF INTO THE SUNSET? Over the years, the late-season BEECH BLIGHT APHID (Grylloprociphilus imbricator) has waltzed through the pages of the BYGL on an annual basis. Their yearly return engagements in the BYGL have had nothing to do with harm to the namesake host since they appear to cause little damage. The aphids usually re-take the BYGL-stage because of their heavy production of honeydew ... and their entertainment value. However, these tiny dancers have been a virtual no-show thus far this season!

Beech blight aphids enshroud themselves in a profuse mass of white, wool-like filaments. Large numbers of these "woolly aphids" will gather together in prominent colonies on twigs and branches of American beech trees. When a colony is disturbed, the aphids pulse their posterior ends in unison. This peculiar behavior has been accurately described in past BYGLs as making the aphids look like "dancing dust balls doing the boogie-woogie."

Aphid colonies are usually relegated to a few branches. However, they are prolific producers of honeydew causing branches, sidewalks, parked cars, slow-moving gardeners, etc., beneath the colonies to become covered in sticky goo. Indeed, aphid colonies are often found by observing circular or semi-circular spots of sticky honeydew on hard surfaces beneath infested trees. The honeydew on leaves and branches may become heavily colonized by black sooty molds.

Indeed, the fungus (Scolias spongiosa (Ascomycete)) is exclusively associated with the aphid and is commonly called "Beech Blight Sooty Mold." It is also sometimes called the "beech blight aphid poop eater" because of its food supply and obligate relationship to the aphid; the fungus only grows on honeydew produced by the beech blight aphid. The fungus starts out behaving like most sooty mold fungi; it grows as a dense, black, "fuzzy" mat on top of the honeydew. Over time, the mat thickens into a brownish, furry mass. Then the fungus progresses into a growth phase that is unlike most sooty molds; it produces a spongy, golden-yellow heap that may rise 1 - 2" or more above the leaf or twig surface. The odd looking fungal growths look like nothing else that would commonly be associated with aphids or honeydew.

Adding to the diagnostic challenge, the fungus will grow anywhere that beech blight aphid honeydew is deposited. So, thick fungal accretions may appear on the leaves and stems of understory plants that are not hosts to the aphids.
Remnants of the black fungal accretions from last season remain evident where populations were high such as on the OSU Mansfield Campus. However, BYGLers visiting the campus this season, and elsewhere in Ohio where the aphids were very evident last season, have failed to find significant populations. Erik Draper reported that he has only seen one small, presumably lonely, colony on a small branch in the northeast part of state. Speculative reasons for the apparent crash of the aphid populations ranged from high mortality owing to harsh winter conditions to impacts from the "3-Ps": predators, parasitoids, and pathogens. Or, there could be a combination of factors at work. However, several BYGLers noted high populations of the late-season aphid may yet appear, having been delayed by unusually cool summer temperature. The fat aphid may yet sing...and dance!

Author: Joe Boggs

E. OLEANDER APHIDS. Participants in the OSU Master Gardener Volunteers Diagnostic Walk-About held at Cox Arboretum also observed high populations of oleander aphids (Aphis nerii) on common milkweed (Asclepias syriaca). Finding this non-native late-season aphid sucking juices from common milkweed as well as other members of the genus such as butterfly weed (A. tuberosa) is not surprising considering that recent taxonomic changes now place oleander (Nerium oleander) and milkweed in the same family; the dogbane family, Apocynaceae. Milkweed was previously classified in the family Asclepiadaceae, but it is now classified as belonging to the subfamily Asclepiadoideae within the dogbane family. Of course, this was apparently something the aphid knew all along!

Oleander aphids are parthenogenetic meaning that there are no males; all the aphids of this species are females. The brightly colored yellow to yellowish-orange females may be winged or wingless. The wingless form has black legs, antennae, and cornicles which are the two "stovepipes" on top of the back-end of the abdomen. The winged form is similarly colored but the wing veins and the top of the thorax are black.

The sap of oleander and milkweeds contains cardenolide glycosides (heart poisons). These are very serious toxins. As with a number of other insects that feed on plants in the dogbane family, the aphid incorporates the glycosides into their flesh as protection against predators. It is speculated that the bright coloration of the aphid warns predators against taking a taste. This is called "aposomatic" or "warning" coloration. Research has shown that predators that dine on insects protected by cardenolide glycosides suffer a range of malevolent maladies including death. Nature teaches tough lessons.

Author: Joe Boggs

F. BAGWORM RESPONSE. Many thanks go out to all who responded to our request for information about the activities of the bagworm (Thyridopteryx ephemeraeformis) and its distribution in Ohio as well as a few surrounding states. The bad news...the frigid winter temperatures of the polar vortexes of the 2013-14 winter did not totally wipeout the bagworm from its northern reaches that it has attained over the past couple of decades. Reports of bagworm activity came in from all areas of Ohio (Toledo, Cleveland, Cincinnati, Columbus, Canton, and many points in between) as well as northern Indiana (Elkhart) and northern Kentucky (Boone County). In some cases, the reporters suggested that populations were smaller and fewer, but in other cases, the reporters made note of populations being bigger than they had ever seen before. In Curtis Young's own driving through different parts of Ohio, he has been spotting more and more infestations showing up. It has taken a little longer for the
bagworm’s presence to become obvious, but they are definitely there and in many locations. Thus, our hopes have been dashed on the rocks that bagworm was going to be wiped out in much of Ohio and surrounding states by the extreme cold temperatures of this past winter.

The most frequently sited host plants that were supporting the bagworm populations were Colorado blue spruce and arborvitae. However, one should keep in mind that bagworm can grow and develop successfully on numerous different host plants, both evergreen as well as deciduous plants. All should take this as a warning to not neglect looking for bagworm this year. It is out there, it is feeding and apparently doing quite well.

Author: Curtis E. Young

4. DISEASE DIGEST.

A. SLIME FLUX/WET WOOD. Julie Crook reported receiving an Ask a Master Gardener question from a homeowner inquiring why his elm (*Ulmus* spp.) tree was oozing a watery liquid. The homeowner had included a photo of the problem that helped BYGLers identify bacterial slime flux (a.k.a. wet wood), a disease that makes its appearance from time to time in some of the trees in our landscape. Wet wood is an unsightly seepage from the trunk of shade trees. It occurs in a wide range of deciduous trees, most notably apple, birch, elm, hemlock, maple, mulberry, oak, poplar, and willow. Its odor may be foul-smelling or quite appealing (sometimes a sweet molasses smell), depending on the individual smelling it and the specific conditions under which it forms. In Ohio, slime flux appears in large, mature, landscape oaks, tulip poplar, and very commonly elms. This disease is not normally a serious problem if the tree is otherwise healthy.

The infected wood is frequently discolored or appears water soaked (wet wood). Gas (carbon dioxide) is produced by bacterial fermentation. The gas produces pressure in the wood. This pressure forces sap from the trunk through cracks in branch crotch unions, pruning wounds, lawn mower wounds, other injuries, and occasionally, unwounded bark. This oozing of sap is termed fluxing. The flux is colorless to tan at first but darkens upon exposure to the air. As fluxing continues, large areas of the bark become soaked. Many different microorganisms grow in the flux, producing a foul or alcoholic smell. There are no curative or preventive measures for slime flux except to maintain trees in a general good state of vigor and minimize wounds and injuries. More damage can be done to the tree in attempting to cure slime flux than the flux will do alone.

While slime flux is not generally considered a serious problem relative to the overall health of affected trees, the fermented sap commonly attracts a wide-range of insects which may present a serious nuisance problem. This is particularly true with the wide range of stinging insects such as paper wasps, yellowjackets, and baldfaced hornets that may show-up to imbibe the alcohol laden ooze.

Author: Julie S. Crook

B. MOIST CHAMBER. Nancy Taylor of the Plant and Pest Diagnostic Clinic and the Ohio Plant Diagnostic network reports a wide range of diseases from this past week’s samples. These include:
* BOTYROSPHAERIA TWIG AND BRANCH DIEBACK ON NORWAY MAPLE, a common problem, especially prevalent this year, and possibly associated with earlier winter injury;

* IRON CHLOROSIS ON PIN OAK with its association as well with TUBAKI LEAF SPOT, resulting in off-color foliage and speckling of affected leaves;

* VERTICILLIUM WILT ON SUNPATIENS HYBRIDS. Verticillium wilt is a disease more common on bedding impatiens, a plant that is of course not as prevalent in landscapes anymore due to impatiens downy mildew, but Sunpatiens and New Guinea impatiens, for which downy mildew is not a problem, do have some susceptibility to verticillium wilt;

* ROOT KNOT NEMATODE ON LIRIOPE, which as Nancy notes, as on other fleshy root plants with root knot nematodes, there were not prominent knots, but rather more subtle root swellings;

* ANTHRACNOSE ON TRICOLOR BEECH, with more prominent leaf blotching on the white parts of the leaf variegation;

* ANTHRACNOSE ON JAPANESE MAPLE, with symptoms that appear similar to physiological leaf scorch, until upon closer inspection and microscopy the fungus was detected;

* FLOWERING CHERRY WITH APPARENT DELAYED WINTER INJURY, which was a common problem this year on everything from cherry to oak-leaf hydrangea - vascular damage during the winter and early spring was masked by early wet, cool conditions but then was expressed once a fully functional vascular system was needed during the full stress of summer;

…and many others, from ZIMMERMAN PINE MOTH ON SCOTS PINE to OAK LEAF BLISTER with its lesions, once light green and yellow, now turning brown.

Author: Jim Chatfield

5. TURF TIPS.

A. TURF DISEASE ACTIVITY. Joe Rimelspach reported that turf pathologists are jumping for joy about the diversity of disease samples they have received, which could mean bad news for some lawn owners. The higher temperatures and humid, stormy weather has created conditions conducive to a slew of different turf diseases. The team has reported seeing dollar spot (*Sclerotinia homoeocarpa*) continuing, brown patch (*Rhizoctonia solani*), Pythium in low and wet areas of turf, and summer patch (*Magnaporthe poae*) in this week's Turf Tips found [here](http://www.youtube.com/watch?v=X4i3rgAPQpg&feature=youtu.be). Joe also advises we should be on the lookout for gray leaf spot (*Pyricularia grisea*), which typically shows up in late August to early September. As turf samples come pouring in, it is important to remember to keep an eye out, but not to jump to conclusions about what your lawn may have. Send samples to the Plant and Pest Diagnostic Clinic [http://ppdc.osu.edu] for confirmation of possible turf diseases or contact your local extension office.

Author: Ashley Kulhanek

6. INDUSTRY INSIGHTS.
A. WHITE PINE WEEVIL HAS LEFT THE BUILDING. Several BYGLers reported that new white pine weevil (Pissodes strobi) adults have emerged in most areas of the state leaving behind the symptom that makes damage by this weevil so easy to spot: reddish-brown-topped conifers. A close examination of affected terminals will reveal empty chip-cocoons and small exit holes in the bark of the trees indicating newly-minted adults have left the building. The new adults will mate and feed on bud and twig tissue; however, their damage is inconsequential. The weevils then move to the duff beneath conifers to spend the winter.

In the spring, overwintered females deposit eggs in the terminals of a wide range of conifers including: Douglas-fir; all spruces; and eastern white, Scotch, jack, red, and pitch pine. The resulting white, legless, slightly curved, grub-like larvae tunnel downward just beneath the bark, feeding on phloem tissue until pupation. The tops of weevil infested trees become wilted, turn brown, and die. Main leaders are often curved into a “shepherd’s crook.” Removing the paper-thin bark from infested leaders will reveal reddish-brown frass (insect excrement) and weevil larvae. As the larvae near pupation, they excavate tub-shaped chambers in the xylem and surround themselves in Excelsior-like wood fibers. This forms the so-called “chip-cocoon” within which the larvae pupate.

There is one generation per year and populations may be reduced by removing the infested terminals before adult weevils emerge. Wilted terminals should be pruned from trees and the cut ends closely examined to determine if the entire infestation has been removed. Infested material must be destroyed since the weevils will complete their development in cut tops left on the ground. Obviously, it is too late to manage the weevil by removing infested terminals.

However, it is not too late to cut-out damaged tops and to begin training a lateral branch to become a new terminal. It is also not too late to consider insecticide options for managing this insect. A soil drench or soil injection application of imidacloprid (e.g. Merit, Xytect, etc.) in the fall has been shown be effective in protecting trees against white pine weevil infestations the following season. This application should be reserved for conifers plantings with a history of white pine weevil activity.

Author: Joe Boggs

B. MAGNOLIA SCALE CRAWLS. Amy Stone reported that the reddish-brown first instar nymphs (= crawlers) of MAGNOLIA SCALE (Neolecanium cornuparvum) are very apparent on the stems of infested host trees in northwest Ohio. This is one of the largest “soft scales” in Ohio with mature females measuring as much as 0.5" in diameter. The helmet-shaped females are brownish-purple and can be found attached to the twigs, branches, and main stems of their namesake host as well as tuliptree. The scale uses its sucking mouthparts to extract sap from phloem vessels. Heavy infestations can kill branches, or even entire trees, or produce enough physiological stress to make trees susceptible to succumbing to other problems.

Magnolia scale is also notorious for exuding copious quantities of “honeydew.” The sticky honeydew may drip onto the leaves and stems of the host plant as well as plants beneath an infested tree, or onto sidewalks, cars, slow-moving gardeners, etc. Honeydew is often colonized by black sooty molds and while the molds do not harm plants, the sticky goo combined with the molds can produce an unsightly mess. Of course, the occurrence of honeydew and sooty molds do not necessarily mean soft scales are afoot. Many other sucking insects (aphids, planthoppers, etc.) also exude honeydew.
Magnolia scale eggs remain inside the female's body until the eggs hatch which gives the appearance that the females are "giving birth" to live young. Egg hatch may occur continuously from early August into early October. This presents a serious challenge to the traditional approach to scale management which focuses on targeting the unprotected crawlers with topical insecticide applications. The extended egg hatch means multiple applications are required to kill all of the crawlers produced this season. Neonicotinoid systemic insecticides are an effective alternative with control being achieved in a single application. A soil drench application of imidacloprid (e.g. Merit), dinotefuran (e.g. Safari), or clothianidin (e.g. Arena) from September into November will suppress this scale.

Author: Joe Boggs

C. ASIAN LONGHORNS BEETLE (ALB) AWARENESS MONTH, PART 4. As August winds down, so does ALB Awareness Month, but that should not stop people from being on the lookout for this invasive species. When looking for ALB, there are a few things to remember. And if you ever suspect that you have found ALB, contact USDA immediately at 866-702-9938. Additional contact information is also available on the web at [http://asianlonghornedbeetle.com/where-is-it/ohio/].

Know the signs and symptoms of ALB:

* In the summer, the adult beetles chew their way out of the infested tree, leaving dime-sized, 0.25" or greater, perfectly round holes.

* The adult female chews between 35 - 90 oval depressions or divots, called oviposition sites into the bark of the host tree. A single egg is laid at each site.

* Host trees can have numerous exit holes and egg laying sites, especially as the population gets larger and builds over time. It is important to find ALB early.

* Eggs hatch into white larvae that tunnel deeper into the tree, where they feed and continue to develop. This is the overwintering stage of ALB.

* As the ALB tunnels through the host tree, it often pushes sawdust-like material (frass) out of its tunnels that accumulates on the ground or on tree branches.

* Woodpeckers that find ALB larvae in infested trees create large holes to cavities in the tree as they search for the larvae.

Additional information including photos are included on the ALB website at [http://asianlonghornedbeetle.com]. Information about current infestations, look-a-likes, and a host tree list are among some of the important highlights posted on the USDA website. Help be part of the team looking for this invasive species, and spread the word to colleagues, friends, family and neighbors - everyone needs to be on the look-out!

Author: Amy Stone

D. A TREE STORY. There was a good bit of buzz recently about a tree-saving effort in Ann Arbor, Michigan where a “hundreds-of-year’s old” bur oak, 44" in diameter, was being relocated as part of a $135 million project to build a new building in the Ross School of Business complex. Concerned about the removal of this living legacy of the past, over 300 Wolverines petitioned to
have the tree relocated. The principal donor of the project (to the tune of $100 million) is Stephen Ross, the owner of the Miami Dolphins, who responded by providing funds for the cost of $400,000 to relocate the oak. As we can all imagine, it is no easy task to remove and relocate a tree and root ball weighing 700,000 lbs. or so.

Certainly this is an inspiring story in terms of people caring about this large, living time-tested tree. Jim Chatfield jumped into this story, though, communicating with our OSU Tree Campus Columbus committee and in an interview with Fox News (darn, he wanted to debate Bill O'Reilly, but no such luck). After all, the OSU Tree Campus group actually got jump-started years ago with a somewhat similar situation with historic (predating OSU's founding; along the Underground Railroad route) sycamores on campus slated for removal by construction of a temporary road on campus. "The save the sycamore campaign" helped energize our renewed tree culture on the OSU campus. We can all agree with OSU tree guru, Dr. Dan Sturve, who indicated that such trees are "masterpieces of Nature".

The power of this idea is obvious. Nevertheless, let's pose a question: "Is this the best use of $400,000?"

Granted, there is great value in mature, large-canopy trees. We are becoming more and more aware of the benefits of trees. These include environmental benefits:

According to the well-researched i-Tree model, a 44" diameter bur oak next to a building in Ann Arbor provides annual environmental services of $338 in terms of storm water remediation, energy savings, air quality benefits, carbon sequestration, and aesthetic benefits ([http://www.itreetools.org/](http://www.itreetools.org/), [http://www.treebenefits.com/calculator/](http://www.treebenefits.com/calculator/)). i-Tree was developed from a public-private partnership of the United States Forest Service, the International Society of Arboriculture, the Arbor Day Foundation and Davey Tree Expert Co. of Kent, Ohio.

There is also emerging knowledge of the significant social and the health benefits of trees, and of course, in this case it is quite obvious that many people in Ann Arbor attach great meaning to this particular tree.

However, in the tradition of the Arbo-Charettes (freewheeling convocations of multiple perspectives) we hold at OSU, consider that urban forests and tree campuses are typically underfunded relative to their importance. Also, skipping to a different conservation strategy, consider that one of the programs for wetland mitigation in the United States is that if developers build on a wetland site, they must provide economic resources to restore wetlands elsewhere.

How about a tree-land mitigation program that would provide for building projects a significant allocation of resources for tree planting and care elsewhere in an urban forest or tree campus? Perhaps every time a tree was removed for a building project the value of mitigation, though not the $400,000 for this bur oak relocation, but perhaps a value assessment at least along the lines of the i-Tree values of the tree(s) removed, perhaps multiplied by the years accumulated and projected for the life of the tree(s).

It is also important for this case study to consider that trees, as much as we love them, do have a finite life, and the relocation prospects for survival and comparable health are far from certain. As inspiring as the efforts at the University of Michigan are to save this bur oak, is it not worth considering that these efforts would be more sustainable if followed up by or re-directed toward
such a treeland mitigation program that would finally result in proper resource allocation to urban forests and tree campuses?

It is obvious that the University of Michigan has a number of Loraxes inspired to stand up and speak for this tree. In the long run, the deeper issue is growing our understanding of how trees matter so that monetary and human resources to sustain healthy urban and campus forests are provided on campuses nationwide every day of the year.

Maize and blue. Scarlet and gray. Green.

Author: Jim Chatfield

E. LATEST FROM THE 87TH OHIO STATE UNIVERSITY GREEN INDUSTRY SHORT COURSE. Last week, several ENLTTers visited this years’ site for the OSU Short Course at the Kalahari Resort in Sandusky, along with Brian Laurent and John Street of the Ohio Turfgrass Foundation. Although we had attended and enjoyed conferences there before, it was a revelation to see it in the light of preparing for this new joint effort of OTF and OSU. No parking issues or charge! Excellent rooms for the conference dates, starting at $99. Comfortable lounge chairs and eating and libation venues right in the Convention Center. A Convention Center that will be fully focused on this joint conference, warm and relaxing.

Granted, the site is not in central Ohio, but it is such a convenient venue once there. Convention goers may want to get their rooms somewhat away from the central indoor water park area where there is a good deal of resort buzz, but on the other hand, the convention is well apart from this part of the resort, and in case you can swing a day or so with the family present, there are four tickets for the water park that go with every room each day, and though all hotels have pools, this one is rather large!

As indicated earlier, this year’s event will be held in conjunction with the 48th Annual Ohio Turfgrass Foundation Conference and Show on December 9 - 11, 2014 at the Kalahari Resort and Convention Center in Sandusky, Ohio. Remember that this broad-based OSU green industry program will be coupled with the great Ohio Turfgrass Foundation Conference program that covers all aspects of the world of turfgrass and their additional partnerships with the Ohio Landscape Association and the Ohio Lawncare Association. Naturally, the programs will cover a wide range of pesticide applicator and professional certification credits.

Updates will occur throughout the summer and fall as we approach the Conference and Short Course. Look for information on the websites at [http://www.ohioturfgrass.org] and [http://www.ousshortcourse.com] and here in the Buckeye Yard and Garden Line (BYGL).

Author: Jim Chatfield

7. WEATHERWATCH. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from August 1 - 26, 2014, with the exception of the soil temperatures which are readings from Wednesday, August 26, 2014 at 5:05 p.m.

Tuesday temperatures in the Buckeye State ranged from the mid-eighties to the low nineties. Hitting the big “90” has only happened on a handful of times this year. In the Toledo area, Tuesday was the fourth day to top 90F, with the highest temperature reaching 92F in 2014. Only
one of the five weather stations listed below has recorded receiving higher than normal precipitation amounts. Each of the other stations is running a little behind in the "rainfall race" in August.

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<td>NE</td>
<td>76.4</td>
<td>57.6</td>
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<td>3.7</td>
<td>90.75/85.78</td>
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<td>NE</td>
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<td>80.99/79.29</td>
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<td>NW</td>
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<td>58.9</td>
<td>0.77</td>
<td>2.5</td>
<td>90.54/84.33</td>
</tr>
<tr>
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<td>Central</td>
<td>83.6</td>
<td>62.5</td>
<td>2.83</td>
<td>3.1</td>
<td>78.78/77.54</td>
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<td>61.7</td>
<td>1.64</td>
<td>2.0</td>
<td>83.51/80.94</td>
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For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm](http://www.oardc.ohio-state.edu/centernet/weather.htm)

**Author: Amy Stone**

8. COMING ATTRACTIONS.

A. OHIO PLANT DIAGNOSTIC WORKSHOP: FOURTH NOTICE - SEPTEMBER 5.

PESTICIDE CREDITS. The Ohio Department of Agriculture will be offering 5 hours of pesticide credits for this workshop. There are a great number of interesting samples and photographic diagnostic case studies we will be featuring this year, so don't miss the 82nd Ohio Plant Diagnostic Clinic, open to all interested plant diagnosticians.

This 10:00 a.m. - 4:00 p.m., hands-on workshop held at OSU's Secrest Arboretum in Wooster, OH includes diagnostic samples, walks and updates by OSU's Tree Amigos (Joe Boggs, Erik Draper, and Jim Chatfield), and all the assembled experts covering plant pathology, entomology, and horticulture with all the assembled attendee-experts. Two added bonuses will be identification of herbaceous plants by Cathy Herms of OARDC and updates and tours of Secrest Arboretum by Kenny Cochran, Joe Cochran and Paul Snyder. The registration fee of $40.00 includes program materials, lunch and refreshments.

B. FARM SCIENCE REVIEW. This year's Farm Science Review takes place September 16 - 18, 2014 at The Ohio State University's Molly Caren Agricultural Center outside London, OH. Participants can peruse 4,000 product lines from 600 commercial exhibitors, and capitalize on educational opportunities from Ohio State and Purdue University specialists. For in-depth information on natural resources, visit the Gwynne Conservation Area during the review or visit [http://www.gwynne.osu.edu](http://www.gwynne.osu.edu) for more information now. Farm Science Review pre-show tickets are $7.00 at all OSU Extension county offices, many local agribusinesses, and also online at [http://fsr.osu.edu/visitors/tickets](http://fsr.osu.edu/visitors/tickets). Tickets are $10.00 at the gate. Children 5 and younger are admitted free. Hours are 8:00 a.m. - 5:00 p.m., September 16 - 17 and 8:00 a.m. - 4:00 p.m. September 18, 2014.

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](http://pested.osu.edu).
D. ARBOREATUM FEAST, PART DEUX: MAPLE SYRUP TASTING IS ADDED TO THE MIX!
The 2nd annual ArborEatum edible landscape feast and sharing will be held on Wednesday,
October 8, 2014 at OSU’s Secrest Arboretum at the Ohio Agricultural Research and
Development Center in Wooster. More details to come, but start planning your menu items.
Last year’s hits were legion, from over 30 entries from Cleveland’s Lois Rose (from bitter orange
marmalade to medlar jelly) to ramps soup to controlling invasives one-bite-at-a-time Autumn
olive pate de fruits. Lambsquarter omelettes anyone?

E. 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://stoned.osu.edu].

F. THE 87th OHIO STATE UNIVERSITY GREEN INDUSTRY SHORT COURSE. Mark your
calendars! The 87th OSU Green Industry Short Course, formerly the OSU Nursery Short
Course, will be held in conjunction with the 48th Annual Ohio Turfgrass Foundation Conference
and Show on December 9 - 11, 2014 at the Kalahari Resort and Convention Center in
Sandusky, Ohio. For more information, visit the Short Course website at: [http://www.osushortcourse.com].

G. TRI-STATE GREEN INDUSTRY CONFERENCE. Save the Date - 2015 Tri-State Green
Industry Conference on February 5, 2015 at the Sharonville Convention Center, 11355 Chester
Rd., Cincinnati, OH 45246. The Tri-State Green Industry Conference is a collaborative effort
between Ohio State University Extension, Purdue Extension, Cincinnati State Technical and
Community College, and the Cincinnati Zoo and Botanical Garden. It features a variety of high
quality education and training for professionals in the areas of Annuals & Perennials, Garden
Center & Greenhouse Innovation, Tree & Shrub Care, Turfgrass Management, Green
Infrastructure and General Pest & Disease Management and also features a vendor trade show.
Pesticide recertification credits for Ohio, Indiana and Kentucky will be given, OCNT training
credit is available, ASLA CEUs are available and CEUs will be available for ISA Certified
Arborists.

For more information visit: [http://hamilton.osu.edu/topics/horticulture/2015-Tri-State-Green-
Industry-Conference].

8. BYGYLOSOPHY. "Ah, summer, what power you have to make us suffer and like it." -
Russel Baker

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
http://u.osu.edu/beelab/

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

Ohio Woodland 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 August 26th conference call: Joe Boggs (Hamilton); Jim Chatfield (Hort and Crop Science and Plant Pathology); Julie Crook (Hamilton); Erik Draper (Geauga); Ashley Kulhanek (Medina); Cindy Meyer (Butler); Joe Rimelspach (Plant Pathology); Amy Stone (Lucas); Nancy Taylor (C. Wayne Ellot Plant and Pest Diagnostic Clinic); 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 a service of the OSU Extension Nursery, Landscape, and Turf Team (ENLTT). BYGL is available online at: [http://bygl.osu.edu](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.

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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.