BUCKEYE YARD AND GARDEN LINE 2012-07  
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This is the 7th 2012 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 (Plectranthus 'Mona Lavender'); Perennial (Allium or Ornamental Onion); Woody (Black Lace Elderberry); Vegetable (Rosemary); and Weed (Giant Hogweed).
2. HORT SHORTS: Growing Degree Days (GDD); The Many Face(t)s of Fungi (Aborted Entoloma, Honey Mushroom, and Shoestring Fungus); Interested in Birds? Consider Joining a Monitoring Program!; and Growing Blackberries in the Home Garden.
4. DISEASE DIGEST: Powdery Mildew Symptoms and Signs (Dogwood Powdery Mildew and Magnolia Powdery Mildew); and Another Year of Heavy Sycamore Anthracnose.
5. TURF TIPS: White Grubs and Billbugs.
6. INDUSTRY INSIGHTS: ALB EA is now Open for Comment; and "Get Your Green Industry Fix" Webinars.
7. WEATHERWATCH.
8. COMING ATTRACTIONS: EAB Awareness Week - Tune into a Live Webinar for the Latest EAB Info; Plant Diagnostic Dilemmas Undone Workshop; 2012 NW Ohio Summer Session; Woody Plant ID Workshop at Secrest Arboretum - Note: Date Change!!!; and 2012 Commercial New Applicator Training Scheduled.
9. BYGLOSOPHY.

APPENDIX - ADDITIONAL INTERNET RESOURCES.

1. PLANTS OF THE WEEK.

*ANNUAL - PLECTRANTHUS 'MONA LAVENDER' (Plectranthus spp.). Belonging to the mint family and having the common name SWEDISH IVY, this annual has incredible lavender blooms that show off above the plant. In Ohio gardens, it is an annual that grows with a rounded mound shape and gets around 18" tall and as wide. 'Mona Lavender' can be used in containers, bedding areas, and mixed in the perennial garden. In large containers, it makes an excellent filler plant. The rich purplish-green foliage adds color to containers; it is shiny and deep-green on top with a rich purple on the underside. The plant takes full sun or light shade and is considered deer resistant. The flower spikes have tubular lavender flowers that last for a long period of time, making deadheading almost unnecessary.

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

Ornamental *Alliums* range in size anywhere from 6" tall to 3' tall, depending upon the species and cultivar. Most bloom this time of the year in central Ohio. They prefer full sun and well-drained soil for best results. Many *Allium* are great re-seeders. This can pose a problem if one lets it get out of control. The foliage is usually non-descript except for the Turkistan onion (*Allium karataviense*) which has wider than normal leaves that are a silver-gray color and last until mid-summer. When the foliage or flower stems begin to look ragged, cut them back to ground level.

**WOODY - BLACK LACE ELDERBERRY** (*Sambucus nigra* 'Eva' Black Lace). This is definitely not your grandmother's elderberry as the dramatic contrast of purple-black, finely-cut foliage combined by mid-spring with cream pink, lemon-scented flowers is spectacular. Deep purple fruits will then provide the juice for elderberry wine, jam and as one BYGLer long ago did with his grandmother's elderberries - cookies. Small to medium-sized shrub or trained for small tree, this *Sambucus* is winter hardy for Ohio, adaptable to most soils, and wildlife-friendly. This elderberry should be planted in full sun for best flower and fruit show, and to amplify the ornamental appeal of its foliage, flowers, and fruits in combination. Relatively new on the scene, Black Lace was the 2006 Best New Plant at the NMPro ANLA New Plant Pavilion.

**VEGETABLE - ROSEMARY** (*Rosmarinus officinalis*). Rosemary, a native plant to the Mediterranean, is a fragrant herb used in cooking. It is commonly used as a flavoring for meats, breads, marinades and dressings. Rosemary is also used for scented soaps and cosmetics, and is said to have medicinal properties. Rosemary is an evergreen shrub that is hardy to temperatures of 5F. In Ohio most gardeners typically treat this plant as an annual but gardeners can over-winter plants by putting them in a container and moving them inside. Rosemary grows best in sunny, well-drained, moist sites. Plants should be planted approximately one foot apart from each other. Prune stems throughout the season as needed. Leaves can be used fresh or dried.

**WEED - GIANT HOGWEED** (*Heracleum mantegazzianum*). Giant Hogweed is a noxious weed that is most commonly found in Ohio along its border with Pennsylvania. It is just about to explode into bloom in those areas of Ohio according to Dave Goerig, a recently retired colleague in Mahoning County. This plant is on the federal and Ohio noxious weed lists, making it unlawful to propagate, sell, or transport. It has been included on these lists because of its ability to crowd out native plants and its potential human health hazard.

One giant hogweed plant can produce 20,000 seeds, allowing it to spread quickly when not managed. This plant, once found exclusively in ornamental gardens, has escaped and has become established in rich, moist soils along roadside ditches, stream banks, vacant farmland, and fence and tree lines. Giant hogweed plants form a dense canopy and displace many other plant species. Another reason that giant hogweed gets a chance to establish somewhat undetected in areas is that it has a biennial life cycle. Its first year of growth is spent as a rosette. In its second year of life, it bolts to produce its characteristic huge flower and eventually seed head. Lack of detection of the rosette stage has underscored the extent of the giant hogweed establishment in Pennsylvania and New York where it is widespread.

In addition to Giant hogweed's ecological threat, its greatest danger is the effect its sap has on humans. Furocoumarins in the sap can cause a skin reaction known as phyto-photodermatitis. This causes the skin to be highly sensitive to ultraviolet light. Swelling and blistering of the skin occurs and may lead to permanent scarring. Contact with the eyes can cause temporary and sometimes permanent blindness.

For more information on this weed, including management, refer to OSU Extension FactSheet, "Giant Hogweed" ([http://ohioline.osu.edu/anr-fact/hogweed.html](http://ohioline.osu.edu/anr-fact/hogweed.html)).
2. HORT SHORTS.

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

The range of GDD accumulations in Ohio from north to south is 458 to 769. Following is a report of GDD for several locations around Ohio as of May 16, 2012: Painesville, 458; Cleveland, 502; Toledo, 573; Canfield, 518; Findlay, 588; Van Wert, 598; Wooster, 552; Coshocton, 629; Columbus, 722; Springfield, 683; Dayton, 688; Cincinnati, 741; Ironton, 767; Portsmouth, 769; and Piketon, 737.

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 website, one can see what is taking place in the landscape.

Doublefile viburnum, full bloom, 444; black locust, first bloom, 467; common ninebark, first bloom, 478; oystershell scale, egg hatch, 497; smokebush, first bloom, 501; arrowwood viburnum, first bloom, 534; American yellowwood, first bloom, 546; bronze birch borer, adult emergence, 547; black locust, full bloom, 548; American holly, first bloom, 556; mountain laurel, first bloom, 565; potato leafhopper, adult arrival, 568; juniper scale, egg hatch, 571; common ninebark, full bloom, 596; American yellowwood, full bloom, 599; arrowwood viburnum, full bloom, 621; multiflora rose, full bloom, 643; northern catalpa, first bloom, 675; black vine weevil, first leaf notching due to adult feeding, 677; Washington hawthorn, full bloom, 731; calico scale, egg hatch, 748; and greater peach tree borer, adult emergence, 775.

B. THE MANY FACE(T)S OF FUNGI. Fungi are many things. Some are plant pathogens that parasitically plague plants and pester plant lovers. Some fungi are even human pathogens...what yonder itch doth plague my toes? Most fungi are saprophytes that thankfully decompose organic matter, without which the world would be quickly buried in organic debris. This decomposition is critical, nature's recyclers, for transforming organic debris (matter) into nutrients for plant growth. Some fungi ruin the longevity, safety and flavor of food. Yet some fungi are the essence of fine cuisine - think Penicillium roquefortii. Also think about certain truffle species in the genus Tuber, what Brillat-Savarin termed the "diamonds of the kitchen". Some fungi enter into mutually beneficial relationships with plant roots (mycorrhizae), and others with algae/cyanobacteria (lichens).

Fungi are an incredibly diverse group of organisms (over 100,000 species) that have lived on Earth for over 600 million years. Fungi are so diverse, so difficult sometimes to even see in their microscopic forms, and so difficult to classify that Linnaeus himself, the Swedish botanist who gave us the Latin binomial system for classifying organisms in the 18th century, grew to loathe fungi and their illusive nature. Linnaeus threw up his hands and declared there was only one species of fungus - Chaos fungorum! There are millions of stories in this chaotic kingdom. Here's one.

It is the strange case of the ABORTED ENTOLOMA (Entoloma abortivum). Other entolomas have gills and many are not edible or are mildly poisonous, but this one does not have gills, at least not when it is parasitized (or vice-versa) by Armillaria mellea, the HONEY MUSHROOM. Say what? The honey mushroom is well-known to horticulturists, as it is the fruiting body of the Armillaria or SHOESTRING FUNGUS that can be a serious tree root and crown rot fungus of not only woodland, but also landscape plants, especially if they are pre-disposed by environmental stresses. When Entoloma abortivum and Armillaria mellea meet, with one parasitizing the other, one result is this non-gilled aborted entoloma. The parasitizing relationship transforms the entoloma into an edible fungus that is quite tasty, at least to Jim Chatfield's palate and many others (though never eat wild mushrooms unless one is sure of the mushroom's identity and one's own sensitivity to mushroom toxins). Ain't nature grand?
One last quote, from the late, great poet, John Updike, reflecting one of the key aspects of certain fungi, dear to Jim's phytopathological perversities, and their role in rot:

*Let rot
proclaim its revolution:
the microscopic hyphae sink
their fangs of enzyme into the rosy peach
and turn its blush a yielding brown,
a mud of melting glucose:
once-staunt committees of chemicals now vote
to join the invading union,
the former monarch and constitution routed
by the riot of rhizoids,
the thalloid consensus.*

C. INTERESTED IN BIRDS? CONSIDER JOINING A MONITORING PROGRAM! May 4-13, 2012 was the Biggest Week in American Birding. Birders (bird watchers) from all over the country pulled out binoculars, field guides, and sunscreen, excitedly checking birds off their lists as they spent the 10-days observing migrating songbirds make their way north through the US. Many of the species seen during those 10 days will not be seen again until next year, making this week so significant. However, this week also signified something else - the arrival of migrating songbirds that choose to stay in Ohio for the breeding season. This is the time of year to get outside to a nearby park or backyard and go birding. It's also the time of year to attract birds to backyards, or join a bird monitoring program. Joining a monitoring program can sharpen skills as a birder, as well as contribute valuable information on Ohio's birds. Below are two programs that anyone with a professional or recreational interest in birds can join.

NestWatch ([http://www.nestwatch.org](http://www.nestwatch.org)) is a nationwide monitoring program designed to track the status and trends of birds during their nesting season. Participants are asked to identify and monitor songbird nests throughout the breeding season, such as when a nest was built, what species built it, how many eggs are laid, when and how many eggs hatched, and when and how many young birds fledged (left the nest). Join by visiting the above website and signing up for a free account. Members will then be asked to upload their data on nests in their area.

Another monitoring program, called eBird ([http://www.ebird.org](http://www.ebird.org)) requires participants to simply list the birds they have seen in any given area. eBird is an online checklist of birds observed all over the country and is one of the largest and fastest growing biodiversity data bases. In March of this year, over 3 million birds were observed by eBird participants. Much like Nestwatch, joining is free and done online.

A visit to the above sites would not be a waste of time, regardless of intent to participate. Both websites list data collected over the years, such as how many cardinal eggs were reported hatching last year in Ohio (NestWatch) or where ruby-throated hummingbirds have been seen in Ohio so far this year (eBird). NestWatch also has information on providing nest boxes for birds, general bird ID and nesting information, and live streaming nest cams!

D. GROWING BLACKBERRIES IN THE HOME GARDEN. Gary Gao reported that "Chester" and "Triple Crown" blackberries were in bloom at OSU South Centers in Piketon during the week of May 14th. Blackberries are not very difficult to grow. Gardeners should consider growing their own for garden fresh blackberries. Both "Chester" and "Triple Crown" are thornless and semi-erect blackberries. "Chester" is cold hardier than "Triple Crown." However, the fruit quality of "Triple Crown" is superior to that of "Chester." Other suggested thornless blackberry cultivars are Apache, Arapaho, Hull, Natchez, and Ouachita. Blackberries do not require two different varieties for cross pollination for a successful fruit set. Hence, a gardener can plant one blackberry plant. But, it is interesting to plant a blackberry hedge in the home landscape. Blackberries do need bees for pollination. Refer to OSU Extension Bulletin 940, "Midwest Home Fruit Production Guide" for more information. The bulletin can be ordered from OSU Extension offices or OSU Extension eStore at [http://estore.osu-extension.org/](http://estore.osu-extension.org/).
A. DOG TICKS DO NOT TRANSMIT LYME DISEASE. BYGLers discussed recent erroneous reports that the AMERICAN DOG TICK (Dermacentor variabilis) is capable of transmitting the bacterium, Borrelia burgdorferi, which is the agent for Lyme disease. According to tick expert, Dr. Glen Needham (OSU Department of Entomology), the American dog tick is NOT capable of transmitting the bacterium. Apparently the bacterium cannot move from the tick's gut to its salivary glands where it can be transferred into a host through the tick's bite.

The American dog tick is widely distributed throughout much of the eastern half of the U.S. and is common in Ohio. It can serve as a vector for a number of other serious bacterial diseases such as Rocky Mountain spotted fever and Tularemia. Localized infections can also occur if the tick's head or mouthparts are left implanted in the skin by the improper removal of attached ticks. Although the American dog tick does not transmit Lyme disease, it's still a tick to be reckoned with!

The BLACKLEGGED TICK (Ixodes scapularis) (= Deer Tick) remains the vector in the eastern U.S. that can transmit the spirochete-type of bacterium responsible for Lyme disease. This tick can also transmit the bacterium which produces the disease, human granulocytic anaplasmosis, as well as the protozoan blood parasite which causes the disease babesiosis. Until recent years, the blacklegged tick was considered rare in Ohio. Unfortunately, over the past few years, the number of submissions to the Ohio Department of Health (ODH) has increased dramatically with 2011 being a banner year.

Fortunately, submissions have not come from every county in Ohio, and it appears that the tick is currently endemic to only 26 counties in eastern Ohio. ODH Public Entomologist, Dr. Richard Gary, recently posted "Tick-borne Diseases Ohio Summary, 2011" on the ODH website. This informative summary, which includes maps, can be assessed at: [http://www.odh.ohio.gov/~media/ODH/ASSETS/Files/vector%20borne/tickar.ashx]

Always keep in mind that the risk of exposure to a specific tick-transmitted disease depends on the species of tick that's biting you. If you find a tick attached to your skin, take special care in removing it and make certain to preserve the tick in alcohol just in case it's needed to help with a diagnosis. Of course, an ounce of prevention is worth a pound of cure; a few ounces of a properly applied tick repellent can prevent "pounds" of disease treatment and worry!

B. WHAT HAPPENED TO MY ASH? Dave Shetlar reported that the depredations of EMERALD ASH BORER (Agrilus planipennis) (EAB) are becoming very evident in central Ohio with some people just now "waking up" to fact that their ash trees are not "waking up" from the winter! Several BYGLers in other areas of the state reported the same thing with frantic phone calls from homeowners who just now asking "what happened to my ash trees?"

OSU Extension and tree care professionals have spent years warning Ohio citizens through educational programs and consultations that EAB will eventually kill all unprotected North American ash trees. However, in many areas of the state, EAB remained below the collective radar while population densities followed a shallow-sloped linear rise. Now that population densities in those areas of the state are building exponentially, the time between "first infestation" of a tree and tree mortality is collapsing; some trees that appeared healthy last season are dying this season! Unfortunately, this means the only response is to start-up a chainsaw.

However, for many areas of Ohio, including some areas in the central part of the state, there remains time to develop a plan for dealing with EAB beyond simply reacting to the need to cut down dead trees. Systemic insecticides can protect ash trees against EAB. Both university research as well as "real life" experiences has clearly demonstrated that any one of three insecticides (imidacloprid, dinotefuran, and emamectin-benzoate) will maintain healthy ash canopies in midst of an EAB onslaught. However, applications must be made before the canopies are "see-through" (50% or greater reduction in canopy).

There are also other options for reacting to EAB. Not every ash tree should be considered a prime candidate for protective treatments; location, environmental impact as well as overall tree health should be evaluated. However,
where plans call for no treatment, tree replacement as well as tree removal plans should be developed. Of course, it would hardly be cost-effective or even feasible to treat all ash trees in forested areas; the loss of ash should be factored into a timber management plan. The bottom line is to recognize that EAB is becoming an ever clearer and more present danger to ash trees throughout Ohio. It's best to develop an EAB plan while the beetle remains on the horizon rather than after ash trees are dying and the public outcry is drowned out by the roar of chainsaws.

C. GRASSHOPPER REDUX. Joe Boggs provided an update on an unidentified grasshopper he observed in "outbreak" numbers a few weeks ago in southwest Ohio near the Little Miami State Park, Fort Ancient Access, along the "Rail to Trail" bike path (BYGL 2012-04, 04/26/12). Thanks to Jeff Hahn and John Luhrman (University of Minnesota, Department of Entomology) the hoppers were identified as the GREEN-LEGGED GRASSHOPPER (Melanoplus viridipes). The grasshopper is so-named because the front and middle pairs of legs are light to yellowish-green. Indeed, the specific epithet "viridipes" comes from the Latin "viridis" which means "green" and "pes" which means "foot."

The adults of this grasshopper also have very short, stubby wings that are less than half the length of the abdomen. Joe had originally assumed that the adults were late-instar nymphs; their short wings looked like the "wing pads" which are found on immature insects (nymphs) undergoing incomplete metamorphosis such as grasshoppers. Of course, he changed his mind when he saw two "nymphs" mating ... which was wrong on several levels!

Adults of this striking-looking medium-sized grasshopper measure around 3/4 - 1" in length. They have a broad black stripe that begins at the eye and runs the full length of the pronotum (first thoracic segment); the stripe appears to blend into the black, stubby wings. Their hind legs are greenish-white with mottled black markings on the outside and black bands on the inside. The grasshoppers prefer to feed on ground or low vegetation in open woods or wood edges which is exactly where Joe found them!

D. BAGWORM EGG HATCH EARLY - REALLY EARLY! Curtis Young did a quick check on overwintered COMMON BAGWORM (Thyridopteryx ephemeraeformis) eggs in NW Ohio. Somewhat to his surprise, the developing caterpillars were visible through the eggshells. The caterpillars' mandibles and eyespots on the head capsules were darkening indicating the progression of development. An equally quick email to Joe Boggs in SW Ohio prompted Joe to check bagworms in his area. On Tuesday, Joe reported that overwintered eggs there were almost completely hatched, and Dave Shetlar suspects that they have probably already hatched in Columbus and other parts of central Ohio as well. Joe observed silk strands dangling from last season's female bags as well as 1st instar bagworms widely distributed on infested host plants. A percentage of the tiny 1st instar caterpillars will produce a strand of silk upon hatching from eggs. The silk catches the wind to transport the caterpillars to new locations. This method of distribution is known as "ballooning" and it is one of the reasons bagworms often appear on hosts that were not infested last season.

It is a common misconception that bagworms only eat evergreens; in fact, the caterpillars can feed on over 130 different species of plants including a wide range of deciduous trees and shrubs. Indeed, deciduous trees and shrubs are sometimes overlooked during bagworm inspections allowing the plants to become reservoirs for reinfection of neighboring evergreens.

The 1st instar bagworm caterpillars carry their bags held upward making them look like tiny dunce caps. The 2nd instar bagworm caterpillars, as well as all the succeeding instars, carry their bags held downward like pine cones. Late instar bagworms can be highly destructive, particularly to evergreens. The best way to avoid damage is to target early instar caterpillars for control.

Early instar bagworms can be effectively controlled using the biological insecticide Bacillus thuringiensis var. kurstaki (Btk) (e.g. Dipel, Thuricide, etc.). This is considered a biorational control method since the bacterium will not kill bio-allies such as predators and parasitoids. Once eggs begin to hatch, bagworm populations should be closely monitored since egg hatch can occur over an extended period of time. Btk is a stomach poison which means it must be consumed to kill the caterpillars, and its residual activity is very short-lived. Thus, two applications may be required. The efficacy of Btk declines once bags reach 3/4". University research has also shown that a soil drench application of dinotefuran (e.g. Safari) is also effective against early instar caterpillars.
Dual formulations of systemic insecticides are also now available. These formulations include imidacloprid and clothianidin (e.g. Bayer Advanced Tree & Shrub Protect & Feed). The imidacloprid has little impact on caterpillars, but the clothianidin does. Likewise, systemic insecticides will not affect beneficial insects.

E. WINDSHIELD WIPES. BYGLers also ran into several other interesting arthropods this week including:

*Randy Zondag reported that VIBURNUM LEAF BEETLE (VLB) (*Pyrrhalta viburni*) larvae have hatched in NE Ohio and are already producing substantial amounts of defoliation on multiple species of *Viburnum*. Over the past several of years, VLB has been expanding its range in Ohio and has become more problematic to the nursery production of viburnum. Because VLB is an invasive exotic species, it is a pest problem that can complicate distribution of plant material to other areas where VLB is not yet present. Curtis Young conducted detection surveys for VLB in the early 2000’s, but has not done so for several years. He and other BYGLers would like to know where VLB has reached in 2012. If one has the opportunity to check viburnum plants for VLB activity, please send your observations and locations to Curtis at [young.2@osu.edu]. Thank you in advance for your responses to this request.

*Dave Shetlar reported that landscapers and nursery managers in central and southern Ohio should be on the lookout for the handiwork of a number of lace bugs (Hemiptera: Tingidae) including: HAWTHORN LACE BUG (*Corythucha cydoniae*); BASSWOOD LACE BUG (*Gargaphia tiliae*); OAK LACE BUG (*C. arcuata*); and CHRYSANTHEMUM LACE BUG (*C. marmorata*). Lace bugs use their piercing/sucking mouth parts to suck juices from their host plants. Their feeding produces tiny yellow or whitish leaf spots (stippling) that may coalesce to produce large, yellow-to-copper colored areas on leaves, and early leaf drop. They also deposit unsightly hard, black, varnish-like tar spots of excrement onto the leaf surface as they feed. Hawthorn and basswood lace bugs feed on the lower leaf surface while oak lace bugs are confined to the upper leaf surface and chrysanthemum lace bugs are found on both the upper and lower leaf surfaces.

*Dave Leonard (Dave Leonard Consulting Arborist, Inc., Lexington, KY) thrilled participants at this week's Southwest Ohio BYGLive! Diagnostic Walk-About held at the Cincinnati Zoo and Botanical Garden by bringing an impressive collection of lady beetle larvae and pupae to the program. A tentative identification of TWICE-STABBED LADY BEETLE (*Chilocorus stigma*) was made based on the larvae being covered in waxy, white, flocculent material and the blackish-brown pupae being covered in spiny projections. Dave noted that the immature stages were easy to collect; the larvae were crawling on a home surrounded by tuliptrees and the pupae were lining-up on the tree's twigs. Dave indicated the tuliptrees had been heavily infested last season with aphids. No doubt the tremendous aphid-buffet was responsible for the impressive lady beetle population explosion this season. A positive identification of the lady beetle will be made once adults emerge from the pupal stage ... stay tuned!

*Joe Boggs reported observing a fascinating orbweaver spider known as the TRASHLINE SPIDER (*Cyclosa turbinate*) while taking photos of 1st instar bagworms on junipers last week. Trashline spiders are relatively small measuring around 1/4-1/2" from the tips of their legs. Their legs, cephalothorax, and abdomen are covered with mottled black and white markings. As with some orbweavers, these spiders construct a vertical structure of dense, coarse silk at the center of its web known as a "stabilimentum." A close examination of the stabilimentum will reveal that the silk enshrouds the drained bodies of previous victims; the morbid structure is responsible for the "trashline" common name. The spiders rest in the middle of their trashline and their mottled coloration makes them very difficult to see among their similarly sized and colored bundles of trash. Indeed, research has shown that the trash bundles serve to confuse predators, such as birds and wasps, intent on making a meal of the spider, and the greater the number of bundles, the greater the confusion.

*Erik Draper mentioned to BYGLer's that CHERRIOPHYID (ERIOPHYID) MITES, which cause the spindle galls on cherry leaves, are easily seen and a striking red. These tiny mites, measuring less than 1/100" in length, cause the somewhat uniform, although curiously shaped galls, on cherry leaves from their feeding. Of the several hundred known and described eriophyid mites, relatively few are considered to be serious pests. This intriguing pest is considered harmless to wild cherries, although one could make an argument that it has totally transformed a few of the leaves into masses of galls, which are totally unrecognizable as cherry leaves.
Dave Shetlar reported that his peach tree in his yard in the Delaware area had weathered the frosts and freezes of April and May quite well. The tree had set an overabundance of fruit for this year and the fruit was developing without any apparent frost injury. Thinking that he needed to thin the fruit set to avoid having all the fruits developing that could result in lots of small fruits with little flesh on each fruit to eat and/or limb damage from the weight of the developing fruit load, he returned to begin the process of eliminating the excess fruit. Much to his chagrin, Dave discovered that the BROWN MARMORATED STINK BUG (BMSB) (*Halyomorpha halys*) had already beaten him to the fruit. Most of the fruit on the tree had already been "stung" by BMSB feeding, which has potentially ruined the whole crop. BMSB is going to continue to be an ever increasing problem in Ohio as its populations build and spread.

A Stink Bug Working Group has been assembled to identify research priorities. Penn State has created a stink bug website [http://ento.psu.edu/extension/factsheets/brown-marmorated-stink-bug](http://ento.psu.edu/extension/factsheets/brown-marmorated-stink-bug). Entomologists need to document the expanding range of this pest. Anyone who finds specimens that seem to be BMSB can report them to their county Extension educator or to the centralized web site at [https://njaes.rutgers.edu/stinkbug/report.asp](https://njaes.rutgers.edu/stinkbug/report.asp).

4. DISEASE DIGEST.

A. POWDERY MILDEW SYMPTOMS AND SIGNS. As noted already in BYGL 2012-05 ([http://bygl.osu.edu/content/powdery-mildew-diseases](http://bygl.osu.edu/content/powdery-mildew-diseases)), powdery mildew fungi are already evident on many plants this spring, from roses to ninebark and from apples to crab apples. Joe Boggs reports seeing DOGWOOD POWDER MILDEW and MAGNOLIA POWDER MILDEW in southwest Ohio. He is seeing both the signs of the pathogen (the white fungal growth on leaves of these plants), and symptoms of damage due to these pathogens on leaves, namely desiccation of leaf tissue and reddening of the foliage. Often these symptoms with certain powdery mildew diseases are misdiagnosed, as observers think of powdery mildew only in terms of the powdery-white growth which they see on leaves. For example, powdery mildew of lilac typically does not exhibit much reddening and desiccation, and only the white powdery growth on the surface of the leaves.

B. ANOTHER YEAR OF HEAVY SYCAMORE ANTHRACNOSE. Once again sycamore anthracnose (*Apiognomonia veneta*) has ravaged the early spring foliage of AMERICAN SYCAMORE (*Platanus occidentalis*). After driving the country roads of NW Ohio, Curtis Young reported that naked sycamores stand out like gleaming white skeletons amongst and against the other species of trees that are fully foliated. This seems to be becoming an annual event for Ohio, at least for the past several years. Not only is the foliage of sycamores being ravaged, but upon closer examination, one discovers that several inches of young twigs and stems are also being infected and killed by the anthracnose fungus. Evidence that this level of damage occurs year after year is seen in the distorted growth pattern seen in the branches of the sycamore trees. Branch tips are abruptly terminated with a multitude of branches radiating out at sharp angles from the deadened tip. This is sometimes described as "witches' brooming."

As with many fungal caused plant diseases, weather conditions influence the development of the disease and will determine the severity of the disease from year to year. Weather conditions that favor the development of sycamore anthracnose include the following: Frequent rains and cool temperatures promote the disease. If the average temperature during the two-week period following emergence of the first leaves is below 55F, the shoot-blight phase of the disease will be serious. Disease intensity decreases as the average temperature increases from 55F to 60F. Little or no anthracnose will occur if average temperatures during this susceptible stage are above 60F.

Management of sycamore anthracnose in landscapes can be accomplished through a combination of actions which could include application of fungicides, sanitation, plant health practices and planting resistant trees. Fungicides registered for the control of sycamore anthracnose include chlorothalonil (Daconil Zn, Daconil Ultrex and Daconil Weather Stik), thiophanemethyl (3336 F and 3336 WP), and copper fungicides. Sanitation practices involve gathering and destroying all fallen leaves and twigs. Pruning out all infected twigs and branches and destroying them. Cutting out cankers in large limbs to reduce reinfection. And removing the dead, cankered tissue down to healthy wood. The American sycamore is much more susceptible to anthracnose than the London (*Platanus x acerifolia*) and Oriental plane (*Platanus orientalis*), thus, planting of American sycamore in landscapes should be avoided. The Oriental plane, a shorter, less graceful tree, is highly resistant to anthracnose but rarely grown in the
US. The London plane tree (P. x acerifolia, synonyms P. x orientalis or P. hybrida) is a cross between the Oriental plane (P. orientalis) and the highly susceptible American sycamore (P. occidentalis). The London plane cultivars, 'Bloodgood', 'Columbia' and 'Liberty' are resistant to anthracnose and are good choices for planting where the sycamore anthracnose fungus is a problem.

Unfortunately, it appears that this year, even the resistance in some London plane trees was overwhelmed by the sycamore anthracnose pathogen. How can that be? One needs to remember the disease triangle. For a plant disease to occur, it requires the presence of the pathogen, a susceptible host and the right environmental conditions. It could be that this year, there could have been the "perfect storm" - lots of inoculum, optimum environmental conditions and suitable hosts. Even though London plane trees are consider relatively resistant, it is not 100% resistant, thus with the perfect storm conditions, even they are showing fairly high infection. Don't give up on London plane tree, next year will most likely be different!

5. TURF TIPS.

A. WHITE GRUBS AND BILLBUGS. BYGLers had an in-depth discussion lead by Dave Shetlar on selection and application timing of white grub (immature stage of scarab beetles) control products to turfgrass. The discussion was prompted by several BYGLers noting they are getting questions about whether or not grub control products that are applied right now will be effective in suppressing grub feeding damage. Dave noted that while white grubs are a little bit ahead of schedule for the season, they are only about 1 week ahead of their normal pace of development in central Ohio. He also reminded BYGLers that the real target for preventing grub damage is the next generation grubs, not the current generation since they already did most of their feeding damage last season and very early this spring.

Dave reported that the neonicotinoid clothianidin (e.g. Arena) can provide season long control of white grubs if applied now. However, if imidacloprid (e.g. Merit) and thiamethoxam (e.g. Meridian) products are applied now, they will most likely "run out of steam" by the time the next generation grubs appear on the scene later this summer. The best timing for the application of these neonicotinoid products for "preventative" control (preventing feeding damage later in the season) is late-June to early-July.

Dave noted that imidacloprid and thiamethoxam products can also provide "curative" control, meaning they can kill grubs once they are detected later in the season. However, there are two challenges: there is a risk that turfgrass damage may occur before grubs are killed and these products cannot be applied now and again later in the season. The combined quantity of active ingredient (a.i.) applied twice will exceed label restrictions on the amount of a.i. that can be applied to an area in a given year.

On a final note, Dave indicated that he is very concerned with the status of BLUEGRASS BILLBUG (Sphenophorus parvulus) controls since the window for making effective control applications closed about three weeks ago. Billbugs are a type of weevil (= snout beetle) and this species overwinters in the adult stage. The adults emerge in the spring to lay eggs in the turfgrass stems. The grub-like larvae first feed within the crown area of the plant and later in the lower crown and root zone. The damage causes grass plants to die and turn brown. Larval feeding activity also causes stems to easily detach; the tried-and-true "tug test" where stems are gently pulled to see if they easily break off remains an effective diagnostic aid for identifying billbug infestations. The larvae are well protected from insecticides, so the overwintered adults remain the most effective insecticide target for preventing turfgrass damage. Dave noted that billbugs are fast becoming a very significant turfgrass pest in Ohio and is often overlooked since larval feeding damage is often mistaken for the brown grass associated with summer drought stress.

6. INDUSTRY INSIGHTS.
A. ALB EA IS NOW OPEN FOR COMMENT. The USDA, APHIS, ENVIRONMENTAL ASSESSMENT (EA) document describing proposed action for eradicating ASIAN LONGHORNED BEETLE (ALB) from Clermont County, Ohio, is now available for comment. The comment period will close on July 9, 2012.

ALB is potentially the most destructive non-native pest to have ever arrived on our shores with trees in 13 genera at risk (Acer, Aesculus, Ulmus, Salix, Betula, Platanus, Populus, etc.). The ALB EA gives you the opportunity to be part of the decision-making process. You do not need to be a resident of Clermont County, or a resident of Ohio to comment. You only need to be concerned enough about ALB to act!

Here's what you need to do:
* Get a copy of the EA (see below).
* Read the 4 proposed eradication alternatives (A, B, C, and D) as well as the supporting material; it's a very informative document.
* Write down your thoughts, but keep in mind that you are not "voting" on the 4 alternatives. The goal is to seek your input so consider noting what you like and dislike about the proposed alternatives, or are there other actions that you believe should be considered; what's missing? It would be helpful to include perspectives that only you can provide such as possible impacts on you, your business, or your community.
* Send your comments to: Dr. Brendon Reardon, 4700 River Road, Unit 26, Riverdale, MD 20737.

You can get a copy of the EA document three ways:
* Access and download the document using the following web link: [http://www.aphis.usda.gov/plant_health/ea/alb.shtml]
* Contact Dr. Brendon Reardon at [Brendon.Reardon@aphis.usda.gov], or by sending a letter to Dr. Reardon at 4700 River Road, Unit 26, Riverdale, MD 20737, and requesting the document entitled "Asian Longhorned Beetle Cooperative Eradication Program in Clermont County, Ohio, May 2012."
* Visit the Ohio ALB Cooperative Eradication Program Office located at the following address: USDA-APHIS-PPQ ALB, 1761-A State Route 125, Amelia, OH 45102.

B. "GET YOUR GREEN INDUSTRY FIX" WEBINARS. The first Ohio Nursery Landscape Association (ONLA) - Ohio State University Extension (OSUE) "Get Your Green Industry Fix" Webinar occurred on Wednesday, May 9 from 7:30-8:30 a.m. But not to worry, there are still 5 more to come! The remaining 2012 schedule for the Wednesday Webinar is: June 13; July 11; August 8; September 12; and October 10.

These webinars, sponsored by ONLA, are a quick, affordable, convenient way to learn. They will help with WHAT one needs to know, WHEN one needs to know it. These 'hot topic' seminars are delivered directly to one's computer and taught by members of the OSU Extension Nursery, Landscape & Turf Team. Timely and useful information on current and emerging issues critical to your green industry businesses will be presented. Topics range from plant selection to pest management, weed control to product knowledge, invasive species to infectious diseases, and more.

These seminars are short sessions delivered directly to one's computer and will include images of pest problems and plants. Attendees will have the opportunity to ask questions before and during the class.

The price for the six-webinar series is $50.00 per computer for ONLA members and $125.00 per computer for non-ONLA members. To register, go to this link: [https://student.gototraining.com/r/8173949003090968320].

Questions can be added to the discussion for each webinar. These questions should be e-mailed to Jim Chatfield at the following email address [chatfield.1@osu.edu]. These will be worked into the Webinar when possible. Questions regarding registration should be directed to ONLA at 614-899-1195 or 800-825-5062.

7. WEATHERWATCH. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from May 1 - 16, 2012, with the exception of the soil temperatures which are readings from Wednesday, May 16, 2012 at 6:05 p.m.
Weekend rains focused on the southern portion of the state this time around. Erik Draper reported being on the receiving end of yet another frost this season in Geauga County last Friday, May 11, 2012. The prediction of summer-like temperatures is on tap for the upcoming weekend.

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<td>51.3</td>
<td>1.55&quot;</td>
<td>1.9&quot;</td>
<td>65.23/64.36</td>
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<td>52.2</td>
<td>1.64&quot;</td>
<td>1.5&quot;</td>
<td>59.88/62.17</td>
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<tr>
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<td>Central</td>
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<td>56.1</td>
<td>1.87&quot;</td>
<td>2.2&quot;</td>
<td>64.12/63.09</td>
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<td>54.6</td>
<td>5.66&quot;</td>
<td>2.4&quot;</td>
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For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm]

8. COMING ATTRACTIONS.

A. EAB AWARENESS WEEK - TUNE INTO A LIVE WEBINAR FOR THE LATEST EAB INFO. Sunday, May 20, 2012 will officially kick-off this year's Emerald Ash Borer (EAB) Awareness Week. The week-long event occurs just prior to the Memorial Day weekend, the unofficial beginning of the camping season. The purpose of the week is two-fold including raising awareness about the management of ash trees and the attacking borer, and the message to encourage people to buy firewood where they plan to burn.

On Thursday, May 24, 2012 at 11:00 a.m. (EST), Emerald Ash Borer University (EABU) has scheduled a webinar. Dr. Cliff Sadof with Purdue University will be presenting the EAB update entitled, SPRING TUNE-UP ON EAB INFORMATION.

The warmer-than-usual, earlier-than-usual spring means that not only are plants waking up earlier, so are insects. EAB is no exception. This session of the popular EAB University information webinars will bring the participant up-to-date on what's the latest on EAB, and what we can expect from this pest. Specific topics will include: EAB is flying early and what that might mean; pesticide updates; how numbers of affected trees increase during the initial invasion and why treatments can be reduced after the wave has passed; using the EAB Cost Calculator to demonstrate why replacing trees as they die is a budget busting proposition that can be avoided; and resources available for organizing communities with NABB (Neighbors Against Bad Bugs) to save trees and money.

To participate in the webinar, go to [http://connect.msu.edu/eab-university/] and login as a guest. If you've never participated in these webinars, it is a good idea to get on a day or two early to see if you can access the site. If not, you may want to contact your server administrator to seek permission to get into the webinar (usually a situation that occurs with participants from municipal and federal organizations).

B. PLANT DIAGNOSTIC DILEMMAS UNDONE WORKSHOP. On Wednesday, June 13, 2012 from 10 a.m. - 3:30 p.m. there will be a plant diagnostic workshop held at Secrest Arboretum in Wooster, Ohio. The workshop will highlight the latest and greatest plant maladies and diseases that are afflicting plants throughout Ohio. As is the tradition of our diagnostic workshops, there will be multiple plant samples to help refine critical diagnostic skills. There will be exploration of findings regarding Imprelis symptoms, discussions of new and emerging diseases in Ohio and samples, samples, samples! Jim Chatfield and Erik Draper will be the instructors for this hands-on, clinical catharsis of plant diseases workshop. Lunch, handouts, snacks and prizes are all included in the $40.00 fee for this workshop. To register for this workshop or to obtain additional information, please contact the Ohio State University Extension, Geauga County at 440-834-4656.

C. 2012 NW OHIO SUMMER SESSION. Save the date for this year's NW Ohio Summer Session for green industry professionals. The event will be held on Wednesday, August 1, 2012 at Owens Community College just
south of Toledo, Ohio. The yearly event is kicked off with lunch, followed by concurrent sessions during the afternoon. Registration materials will be available next month.

D. WOODY PLANT ID WORKSHOP AT SECREST ARBORETUM - NOTE: DATE CHANGE!!! On Wednesday, **August 8, 2012** from 10:00 a.m. - 3:30 p.m., there will be a woody plant identification class held at Secrest Arboretum in Wooster, Ohio. This workshop will highlight plant identification terms, describe and explain them, and then show these characteristics on plants and samples, common taxonomic terms used in most dichotomous plant identification keys. Jim Chatfield and Erik Draper will be the instructors for this hands-on, samples galore workshop. Lunch, handouts, snacks and prizes are all included in the $40 fee for this workshop. To register for this workshop or to obtain additional information, contact the Ohio State University Extension, Geauga County at 440-834-4656.

E. 2012 COMMERCIAL NEW APPLICATOR TRAINING SCHEDULED. The Ohio State University Extension's Pesticide Safety Education Program has scheduled four training dates for those preparing to take the commercial applicator's exams including Core, 8 (Turf), 5 (Industrial Vegetation); 6c (Ornamental Weed) and 2c (Agricultural Weed). The morning session also qualifies as Trained Serviceperson training. The dates are April 18, 2012; May 9, 2012; August 29, 2012; and September 26, 2012. Registration begins at 8:30 a.m. Additional information, including pre-registration is available on the web at [http://pested.osu.edu/commnewapp.html].

9. BYGLOSOPHY: "In every gardener there is a child who believes in The Seed Fairy." - Robert Brault

APPENDIX - ADDITIONAL INTERNET RESOURCES:

Buckeye Turf
http://buckeyeturf.osu.edu

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

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

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

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

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

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

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

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

Following were the participants in the May 15th conference call: Pam Bennett (Clark); Joe Boggs (Hamilton); Jim Chatfield (Plant Pathology); Julie Crook (Hamilton); Erik Draper (Geauga); Dave Dyke (Hamilton); Gary Gao
BYGL is available via email, contact Cheryl Fischnich [fischnich.1@cfaes.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/].

BYGL is a service of OSU Extension and is aided by support from the ONLA (Ohio Nursery and Landscape Association) [http://onla.org/; http://buckeyegardening.com/] to the OSU Extension Nursery, Landscape and Turf Team (ENLTT). Any materials in this newsletter may be reproduced for educational purposes providing the source is credited.

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

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