BUCKEYE YARD AND GARDEN LINE 2012-26
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Buckeye Yard and Garden Line (BYGL) enhanced with photos and links is available online at: [http://bygl.osu.edu]. Become a fan of the BYGL on Facebook at [http://www.facebook.com/OSUEBYGL] or follow the BYGL on Twitter at [http://www.twitter.com/OSUBYGL].

****BYGL READER SURVEY FINAL NOTICE:**** We are doing a short electronic survey to learn about the impact of the BYGL, how the BYGL is used, and how we can improve the BYGL for next season. If you received special e-mail messages with a hotlink to the survey, please take a few minutes to complete the survey: the survey closes tomorrow, Friday, September 28, 2012, at 5:00 p.m. Your participation is voluntary and you will help us make the BYGL better for you and others next season.

This is the 26th 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.

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1. PLANTS OF THE WEEK.

*ANNUAL - VINCA MAJOR (*Vinca major*). This trailing vine has soft green leaves often variegated with an additional yellow to white splash of color along the leaf margins. This plant has been used traditionally in baskets, window boxes and hanging baskets along with other annuals and perennials. Although this plant is known to winter-over, many still treat it as an annual when replanting the next season.
*PERENNIAL - JAPANESE BLOOD GRASS (*Imperata cylindrica* cultivars e.g. 'Rubra' or 'Red Baron') This perennial grass is widely used and common in commercial landscapes and parking lot plantings. It grows about 18" tall with an equal spread. Leaves emerging in spring are primarily green but become red as the season progresses. The leaves continue to redden late summer through autumn. It tolerates drought and pollution, which makes it a colorful candidate for tough areas. However, this grass prefers cool moist conditions for the best growth; sunnier areas will enhance the development of the red color. There is concern that this plant may become invasive; some states prohibit shipment of Japanese blood grass. Any plants that revert to a solid green color should be destroyed.

*WOODY - ORIENTAL ARBORVITAE (*Platycladus orientalis*). Oriental arborvitae is a Zone 6 plant, so a little safer for southern Ohio and moderate areas along Lake Erie, but we are seeing more of it in Ohio. It was once classified in the genus *Thuja*, as a fellow species to our eastern arborvitae (*Thuja occidentalis*) and western or giant arborvitae (*Thuja plicata*) but is now classified in its own genus. *Platycladus* is graft-compatible with some species in other related genera in the Cupressaceae family, such as *Juniperus* and *Cupressus*.

Oriental arborvitae has cool bluish mace-like cones that eventually become brown, attractive green foliage, a densely branching somewhat cone-shaped bushy habit, and is great for windbreaks. It will grow with age and grow well beyond the usual 10 - 15'. It is tough in dry and in alkaline sites, typically planted in sunny locations.

*VEGETABLE - PIE PUMPKIN (*Cucurbita pepo*). Not always a Halloween decoration, pumpkins have been grown as a food crop for livestock and people for centuries. A New World plant, pumpkins were introduced into Europe only after the discovery of the Americas. Over the next several hundred years they provided a means of storing fodder for cattle and pigs; recipes were developed for pies, breads and even beverages. It is only within the last century that plant breeders have concentrated on ornamental characteristics of the pumpkin rather than taste and eating quality. However, most pumpkins produced in the United States are still used for processing.

Pumpkins are usually sown directly from seed each year. Pie pumpkins are usually smaller than field or carving pumpkins and require less space, 3' apart in rows with 6' between rows. Each plant should produce 3 - 4 fruits. Fruit is ripe when they achieve a clear orange color and the skin is firm (cured). Pumpkins can be stored in a cool dry area for several months. Pie pumpkins are selected for their thick, relatively dry fruit and higher sugar content. One can use carving pumpkins for pies, but the quality of the resulting puree will be poorer than that of a pie pumpkin.

*WEED - MARESTAIL (*Conyza canadensis*) Also going by the names Canada fleabane or horseweed, marestail has become a significant problem in field crops; glyphosate-resistant stands of marestail have been reported in over 10 states. Seed for this annual will germinate either in the fall or spring. Overwintering plants form a small rosette close to the ground. In spring, the plant will bolt, producing a flower stalk and reaching heights in excess of 5'. Spring-germinating plants will bolt and flower at roughly the same time.

Marestail leaves are simple, alternate and have slightly toothed margins. As the plant matures, developing leaves become smaller and lack petioles. Flowers are produced by the hundreds on panicles atop of the single tall stem. Flowers have white petals with yellow centers. Seeds have tufts of fuzz that aid in wind dispersal to new areas.

2. HORT SHORTS.

**A. MEMORIES OF 15 YEARS AS A BYGL WRITER - DAVE DYKE.** I will be retiring on September 30, 2012, but will begin this story on February 1, 1997, the day I left the North Carolina Cooperative Extension Service in Hendersonville, North Carolina, to work for OSU Extension in Geauga County, Ohio. I didn't even have a warm winter coat to cope with the constant winter cloudiness, cold, and snow that greeted me on my
arrival in the far northern reaches of our lovely state. (When I went to a mall in Lake County to purchase a coat that would somewhat protect me from the inhospitable climate, a store clerk, upon hearing my West Virginia/North Carolina accent, said, "Georgia?"). However, the shocking change in the climate was, perhaps, the least significant change of environment I encountered. That distinction would have to go to what my wonderful mentors, Jim Chatfield and Randy Zondag, described as teamwork. They said we were all part of a team … and they meant it.

That teamwork and team was embodied in the Extension, Nursery, Landscape, and Turf Team (ENLTT). Then, within the ENLTT, there was the BYGL writers' team. What a team it has been … horticultural, entomological, and pathological (the latter somewhat limited to the plant disease world) professionals dedicated to providing the most timely, accurate, and readable horticultural information available to consumers and professionals across Ohio, and the world, to enrich their lives and improve the profitability of their businesses.

That endeavor has been a labor of love for all of us. Every Tuesday morning from April through October is dedicated to participating in a conference call with our colleagues across the state (and sometimes across state borders) to discuss what we are seeing and what should be reported in that week's edition of the BYGL. Then many hours are spent to research and write those reports in time for a Wednesday evening submission deadline. However, that is just the tip of the iceberg.

Team members meet formally and informally many times a year to learn and plan in order to increase our knowledge and improve our writing skills and the BYGL. Those meetings have included study tours in many areas of the country … the Northeast, the Pacific Northwest, the Southeast, MN, and Canada, during which BYGLers both learn and teach. Funding for those, and other ENLTT/BYGL activities has been funded largely through the financial support of the ONLA. My first such tour lasted about 5 days but seemed like a month. It began in Cincinnati and ended in northern Ohio. That was 15 years ago, but unless my memory betrays me, I recall that those days were at least 38 hours long … beginning at 6:00 a.m. and ending at dinner at 11:30 p.m. at a restaurant of Jim Chatfield's choice. Jim has slowed down just a bit in the intervening years, but as our leader, he was determined to cram more educational stops than was permissible under the Geneva Convention into a day and to end it with a unique meal at some quaint eatery. My memory has been somewhat blurred by the passage of time and fatigue, but I recall that about on day 3 I told Jim I could go no further - Joe Boggs was of like mind - but Jim talked me out of quitting. Of course, like always, Jim was right.

My most poignant memory as a BYGL writer is associated with 9/11. I was the lead editor that week. Prior to our 9:00 a.m. conference call on 9/11, I turned on the TV in my living room (yes, I often worked out of my home) just moments after the first plane hit the World Trade Center. I put the TV on mute and proceeded to tell the others on the call what I was seeing on the screen as we proceeded. I watched in disbelief as the second plane hit the WTC and then relayed that information to the group. Our conference continued until the first tower collapsed. When I said, "the tower has collapsed", Jim Chatfield asked what I meant. I said, "it is gone. There is no tower." At that point, Jim said that we needed to get off the call. I asked all to get their articles to me as best they could and everyone hastily hung up. That was the first and only time that articles were submitted for publication without a writers discussion of what would be submitted and by whom.

The BYGL team is composed of unique individuals, such as the photography/entomology fanatics … Joe Boggs (my office mate and wonderful friend), Dave Shetlar, and Curtis Young … who spend countless hours learning the finer points of photography and studying and photographing insects that only a few select similarly twisted individuals really care about. Of course, they generously share their knowledge and expertise with their teammates … for hours and hours and hours and hours … and the rest of the world via the BYGL.

All the teamsters spend many, many hours photographing insects, plants, diseases, and other things that are the subject of our reports. They include other fanatics, such as Pam Bennett, Amy Stone, Erik Draper, Gary Gao, Julie Crook, Tim Malinich, Cindy Meyer, and Marne Titchenell, about other subjects of our reports, including:
annuals and perennials, animals, OSU Master Gardener Volunteers, and fruits and vegetables. While the expertise all of these folks bring to our reports and meetings is astounding, the neatest thing about being a part of this team has been the friendship. We are all friends who speak and correspond with each other continuously, often many times a day.

Finally, I would be remiss if I did not mention the impact and support of another critical component of our team … horticultural professionals and their organizations. These range from the Cincinnati Flower Growers Association, which has also been like a family to me for 11 years, to the wonderful folks at the OFA and ONLA. Again, these are friends. I will miss them all.

B. CRACKED FRUIT. Cracked fruit was a topic of discussion this week as reports of cracked apples came in from a county in north-central Ohio. One grower's apples were cracking longitudinally (top to bottom) and a significant amount of the crop was affected.

Cracked fruit is not unusual and some cultivars tend to crack more than others. The condition seems to be related to fruit being left on the tree too long. Also, absorption of water through the skin combined with uptake by the roots increases the pressure within the fruit; the relatively tough skin cracks under pressure. Though cracking is usually more prevalent in wet years it remains to be determined if our long-term and significant drought followed by copious amounts of water played a part in the reported apple problem.

C. THE EAGER BEAVER IN OHIO. Conversations on last week's BYGL call led to questions and discussion on the status of the largest rodent in North America, the beaver (Castor canadensis). When one thinks of a beaver, images of a large rodent with a large flat tail and yellow incisors likely come to mind, perhaps followed by images of chewed and felled trees or even a large dam constructed of said felled trees. Presently, beaver are doing quite well throughout Ohio with populations becoming more and more frequent in wetlands, along rivers, in ponds, and other waterways. Historically, beaver were present in Ohio at the time of settlement, however populations began to decline as the state was settled (due to trapping and loss of habitat). By 1830, beavers were no longer present in Ohio. It wasn't until 1936, when beavers showed up again in Ashtabula and Belmont counties. Over the years, enforced trapping regulations and additional forest cover brought the Ohio beaver population to where it is today; presence in every county and over 27,000 individuals.

There are many fascinating adaptations of beavers (webbed feet, clear eyelids for seeing with protected eyes underwater, valvular ear canals and nostrils, waterproof fur, effective digestion of a cellulose-rich diet), the most impressive of which is their ability to completely change and alter a landscape to their benefit. Through the construction of a dam made mostly of small sticks and mud, beavers can reroute rivers and streams or cause water to back up and flood an area, creating what is called a beaver pond. Behind the dam, beavers will construct their lodge, a home they will inhabit year-round made of twigs, logs, and mud with multiple underwater entrances. It is this natural behavior of beavers, along with missing and chewed up trees, that give land managers and homeowners such a headache. In Ohio, nuisance beaver are most often trapped and killed. There are little to no effective means of eliminating beaver damage aside from eliminating the beaver itself. Like nuisance raccoons (see BYGL Issue 2012-17 (7/26/2012), CORRECTION - OHIO IS THIRSTY AND SO IS THE WILDLIFE), beaver must either be released on site after trapping, or euthanized. They cannot be relocated.

Despite the damage beavers can cause they are integral parts of an ecosystem, creating habitat for not only themselves, but for other wildlife as well. Scientists have reported the beaver as a key stone species and an ecosystem engineer. A keystone species is one that greatly influences biodiversity and ecosystem functionality; such influences are disproportionately large relative to the species abundance. An ecosystem engineer means the beaver controls the availability of resources to other species by physically altering the ecosystem, such as providing nesting grounds for waterfowl in a beaver pond. These impressive reports can only lead this BYGL writer to one thought, "Respect Castor canadensis!" For a comprehensive report of beaver influences on ecosystem and other
species, a great resource is George Feldhamer's "Wild Mammals of North America: Biology, Management, and Conservation".

Seeing a beaver dam can be quite an experience. There are many opportunities to view beaver dams or beaver sign in various areas around the state: North Chagrin Reservation, Grand River Wildlife Area, Tinkers Creek State Nature Preserve, Cuyahoga Valley National Recreation Area, Killbuck Marsh Wildlife Area, Cooper Hollow Wildlife Area, Crooked Run Nature Preserve, Beaver Creek Wildlife Area, Hueston Woods State Park, and Mosquito Creek, Woodbury, Salt Fork, Deer Creek, and Spring Valley wildlife areas. In addition, several more state wildlife areas are home to significant beaver populations: Tycoon Lake, Highlandtown, Berlin Lake, Fallsville, and Monroe Lake. Beavers are crepuscular (active at dawn and dusk) and nocturnal, so viewing a beaver itself will be more likely at dusk or very early morning.

D. RACHEL CARSON BIOGRAPHY. There is a new incisive biography of Rachel Carson, written on the 50th anniversary of the publication of Silent Spring. The title is On a Farther Shore: The Life and Legacy of Rachel Carson by William Souder. Here are a few quotes, first from Rachel Carson:

"We live in a scientific age, yet we assume that knowledge of science is the prerogative of only a small number of human beings, isolated and priestlike in their laboratories. This is not true. The materials of science are the materials of life itself. Science is part of the reality of living; it is the what, the how, and the why in our experience. It is impossible to understand man without understanding his environment and the forces that have molded him physically and mentally."

And this paraphrased by William Souder from Rachel Carson's acceptance speech for the National Book Award for non-fiction for The Sea Around Us in 1952:

"...Carson said science was not a realm unto itself, and anyway science and literature had the same aim, which is to 'discover and illuminate truth'."

3. BUG BYTES.

A. GIANT "MUTANT MOSQUITOES" APPEAR. Joe Boggs reported encountering CRANE FLIES (Tipula spp.) rising from turfgrass in southwestern Ohio. They look like giant, mutant mosquitoes; a startling image outside of a sci-fi movie. Fortunately, crane flies do not possess mosquito-like piercing mouthparts, so they do not bite. However, large numbers of crane flies flittering above lawns can be a real nuisance, particularly when they find their way into homes.

Adults usually appear in Ohio landscapes during two peak periods. Some species produce a heavy adult emergence in the spring while other species generate adults in the fall. The larvae of most species feed on decaying organic matter in the soil, and they especially appreciate areas that are continuously moist.

Larvae of crane flies that feed beneath turfgrass are called "leatherjackets" because of their tough, leathery exoskeleton. Like the adults, these legless maggots occasionally appear en masse spilling onto driveways or sidewalks. Such a dramatic appearance may signal that the lawn has a thatch problem since the larvae are particularly fond of decaying thatch. However, the species found in Ohio cause no damage to the turfgrass.

The same cannot be said for two non-native species that have been found in the northeastern states and eastern Canada. Both were accidentally introduced from Europe. Larvae of the EUROPEAN CRANE FLY (Tipula paludosa), and the MARSH CRANE FLY (T. oleracea) feed on the crowns and blades of living grass plants. Both can cause serious damage to turfgrass. Fortunately, these species have not yet been found in Ohio.
B. LOVE IS IN THE AIR. Swarms of CHIRONOMID MIDGE FLIES (Family Chironomidae) are billowing over streams, drainage ditches, and poorly drained soils in southwestern Ohio. The cloud-like clusters of these small insects can be hauntingly beautiful as thousands of gossamer wings reflect the early morning or evening sunlight. However, the observer's enchanted perspective on the beauty of the swarms may change once they learn the sordid details of the inner workings within the swarms.

The midge masses are called "mating swarms," and for many midge species the swarm is composed of a throng of lovesick male midge flies. Swarms may be massive numbering in the thousands. Every now and then, an adventurous female midge will try to fly through the aerial mass of zooming, swooping amorous males. The males fly with their legs outstretched in the hope they will snag the female … to get acquainted. Love is in the air!

Midge flies are very small, measuring no more than 3/8" in length. They resemble mosquitoes with their delicate wings and legs and audible "buzzing" sound made when they fly. However, Chironomid midge flies (non-biting midges) do not bite and male midges flies have large, conspicuous fern-like or "feathery" (= plumose) antennae. Also, mosquitoes do not typically gather in close-flying swarms ... unless it's a Stephen King movie.

There are over 760 species of Chironomid midge flies in North America. Midge fly larvae live in many types of aquatic or semi-aquatic habitats. These habitats include water in pools, ponds, lakes, slow moving streams, drainage ditches, clogged drainage tiles, containers, clogged rain gutters, and in some cases, wet soil or seepage areas. Occasionally, over-irrigated turfgrass will provide ideal midge fly larval habitat. Most species of midge fly larvae feed on living or decaying plant matter and are an important part of aquatic food chains. Many species can survive in very stagnant or polluted water. Some of the aquatic forms live in tubes or cases composed of fine particles of the substrate cemented together with salivary secretion.

Some Chironomid midge fly larvae have hemoglobin in their blood which gives them a blood-red color, and the common name of "bloodworms." Note that the common name is spelled as a contraction to differentiate from marine "blood worms" (Glycera dibranchiata) which are "true worms" (Phylum Annelida) and are prized as fish bait. Such are the challenges with common names!

Chironomid midge flies are considered "beneficial" owing to their status as "decomposers" in aquatic ecosystems and because they serve as an important food item at the base of aquatic food chains. While their swarms may reappear in the same locations for several days, they are usually just a nuisance to joggers and bicyclists passing through. However, large numbers of mating swarms have been known to present a traffic hazard because of smashed midge bodies on windshields. Of course, some probably died with a smile on their midge faces!

C. WOOLLY BEARS ON THE MOVE. This time of the year, one can usually spot woolly bear caterpillars scampering or at least moving as quickly as a caterpillar can across the blazing hot asphalt as one drives down the road (some don't make it either, they meet their doom under a radial tire or they cook before they reach the other side). They can be exceptionally abundant on country roads bordered by soybean fields. The caterpillars look like undulating cheese puffs making their way across the roads. There are 8 or more species of woolly bears in the US. Woolly bears are the caterpillar stage of medium sized moths known as tiger moths (Family Arctiidae). The wandering caterpillars are searching for a sheltered location such as under plant debris, etc., where they will spend the winter. In the spring, they will feed briefly before spinning a cocoon into which their hairs are incorporated, pupating, and eventually becoming a moth.

Three common species in Ohio are the BANDED WOOLLY BEAR (Isia (formerly Pyrrharctia) isabella), the YELLOW WOOLLY BEAR (Spilosoma virginica), and the GIANT LEOPARD MOTH (Hypercompe (formerly Epantheria) scribonia). The course hairs of the banded woolly bear are black at both ends and reddish-brown in the middle. The adult is called the Isabella moth. The yellow woolly bears are highly variable in color. The fine hairs covering the body vary from beige or yellow to dark reddish-brown. The adult is called the Virginian tiger.
moth. There are 2 generations of caterpillars each year, the largest usually occurring in August-September. The caterpillars chew large irregular holes in the foliage and the extent of the damage depends on the number of larvae and the size and aesthetic value of the plants (e.g., defoliation of soybeans is never an issue, while a few woolly bears on young canna lily plants can make plants look quite unsightly). The giant leopard moth caterpillar is the largest of the three some being as big as 4’ long. The bristles on this caterpillar are jet black projecting outward from black bands on the skin with red bands of hairless skin between the black bands. The adult moth of the same name is white with multiple black rings on the front wings.

The banded woolly bear is the species mentioned in winter-prediction folklore, which claims the longer the black is at the ends of the body, the more severe will be the coming winter. Research has debunked this legend by showing the amount of black varies with the age of the caterpillar and the moisture levels in the area where it developed.

For those who wish to celebrate the winter prognostications of the banded woolly bear like the resident of Punxsutawney, Pennsylvania celebrate the prognostications of Punxsutawney Phil Sowerby, the groundhog, there is the Woollybear Festival of Vermilion, Ohio. This year's festival is to take place on Sunday, September 30, 2012. And this year is also the 40th anniversary of the festival. For details on the schedule of events for this special day, visit the festivals web page at: [https://sites.google.com/site/vermilionohiochamberofcommerce/woollybear-festival-parade].

D. WINDSHIELD WIPES. BYGLers ran into a few other plant pests this week including:

* SPOTTED CUCUMBER BEETLE SAGA CONTINUES. Regular readers may be having a Ground Hog Day experience when they see this Spotted Cucumber Beetle (SCB) (Diabrotica undeciminctata) article. The small yellow and black beetle has made the BYGL for the third week in a row, as casual observations of this beetle have been numerous across the buckeye state.

Last week, many BYGLers spent some time at Farm Science Review [http://fsr.osu.edu] in London, Ohio, between Columbus and Springfield. Colorful chrysanthemums added a special touch to the tents over at the Gwynne Conservation Area. As the tear-down was taking place, several of the chrysanthemums "migrated" to vehicles to travel to their forever homes or gardens. In addition to the potted plants, these gardeners ended up getting a car-full of SCB too.

While the feeding damage to the flowers wasn't overly obvious at first glance as gardeners picked out the plants, population numbers became evident as they took flight in the vehicles, especially gathering near windows in high numbers.

Information from Oklahoma State University indicates that the SCB feeds on over 100 different plants. Readers can email their SCB observations to Amy Stone at [stone.91@osu.edu]. Be sure to include a list of plants that you are noticed beetle activity and your location.

* Curtis Young reported having identified a TIGER BEE FLY (Xenox tigrinus) for a client on Ask an Expert. Tiger bee flies look similar to and can be mistaken for horse flies. However, the tiger bee fly is not a livestock pest. It is a parasite of the CARPENTER BEE (Xylocopa virginica). When a female tiger bee fly locates a carpenter bee nest, she may lay eggs at the entrance of the carpenter bee's tunnel. The eggs hatch into larvae (maggots) that find the carpenter bee brood within the tunnel. Tiger bee fly larvae attack their prey once they pupate.

4. DISEASE DIGEST.
A. KANUGA ORNAMENTAL DISEASE AND INSECT WORKSHOP. This 18th meeting of ornamental entomologists and plant pathologists was meeting in Kanuga, NC this week, hosted by North Carolina State University. Several BYGLers were there. There were some unusual diseases out in the woods, including Cephaleuros algal leaf spot (Cephaleuros virescens) on rhododendron, a rare algal plant disease. There was a tremendous keynote address from OSU’s Dan Herms looking at the matrix of plant and pest interactions and how origins matter, from the relative stability of native plants interacting with native pests to the flipside issues associated with "no evolutionary natural selection history/no or low resistance" with many native pest, non-native plant combinations (think bronze birch borer and European and Asian birches) and native plant, non-native pest combinations (think emerald ash borer).

There was discussion of the major problems of rose rosette disease on Knockout roses. There was discussion of the potential problems with bedding impatiens (Impatiens walleriana) and downy mildew of impatiens and the importance of quickly cleaning up and removing affected plants from the landscape to limit oospores of the pathogen from overwintering. These issues and more will be shared in future BYGLs, including as we start up with BYGL next April, and at upcoming winter meetings.

5. TURF TIPS.

A. ARMILLARIA 'SHROOMS. Curtis Young reported that he is seeing multiple mounds of Armillaria spp. mushrooms sprouting up through the grasses of many landscapes in northwest Ohio. The appearance of the mushrooms, which are sometimes called "honey mushrooms" due to their amber color, provide evidence that nearby trees are possibly being colonized by an Armillaria root rotting fungus. In some cases, the infected tree is long gone, but remnants of the tree (i.e. parts of the stump a few inches below the soil surface and roots that extend out into the landscape from where the tree once stood) are still playing host to the fungus feeding it well into the future.

The Armillaria genus includes the notoriously pathogenic species, A. mellea, which was once thought to be the most malevolent form of this fungus, and the species most commonly associated with the disease "Armillaria root rot." However, in recent years, pathologists have determined that there are a number of other species of Armillaria that may also infect woody plants. In their book "Diseases of Trees and Shrub, 2nd Edition," Sinclair and Lyon indicate that there are 10 known species of Armillaria that occur in North America. Some, like A. calvescens, and A. cepistipes, are only mildly plant pathogenic, while others like A. mellea and A. ostoyae are aggressive plant pathogens.

The Armillaria fungi are collectively referred to as "shoestring" fungi for their black shoestring-like structures (called rhizomorphs) found under the bark and around roots of infected trees, or in the soil where the fungus lives. The fungi may also appear as white, fan-shaped mycelial mats beneath the bark. The rhizomorphs grow freely through the soil and penetrate roots, causing new infections. They are the principal means for the tree-to-tree spread of the pathogenic species of Armillaria fungi.

The outward symptoms of infection include: thinning foliage that becomes discolored, turning yellow, then brown; reduced shoot and foliar growth; and branch decline and dieback. The pace of symptom development varies with trees' vigor. Trees that are stressed by other factors, such as drought or pest infestations, may rapidly decline and die. Lesions or cankers may form at the base of infected trees, and removal of the bark over the affected areas will reveal the mycelial mats and/or rhizomorphs. Since the fungi spread through the soil, tree decline may occur simultaneously to groups of trees.

Identifying different species of Armillaria in the field is difficult. All will produce rhizomorphs. An odd characteristic of Armillaria is that they are bioluminescent. Indeed, the eerie greenish-blue glow seen in forests after dark, commonly called "foxfire," may indicate the presence of Armillaria. However, this characteristic will
not illuminate the exact species, nor is it a sure-fire identifier of *Armillaria* since there are other glow-in-the-dark fungi. Mushrooms, which are the "fruiting structures" of the fungi, do provide a more reliable identification feature, with the honey mushrooms most often being associated with *A. mellea*.

The presence of the sometimes massive mounds of mushrooms in turfgrass causes concern and discontent in many homeowners that have the mushrooms in their yards. Not only do the homeowners have these somewhat unsightly mounds of mushrooms in their yards, but over time they become infested with fungus-eating insects that eventually cause the mushrooms to melt away into gooey masses of dark-brown yuk. After the mushrooms collapse, they look more like a cow paddy than a pile of mushrooms. Common questions presented to Extension offices in reference to these mushrooms are, "What are they, why are they there, how does one get rid of them, and isn't there a chemical that can be sprayed on them to get rid of them?" Unfortunately, there is no "magic bullet" to make them disappear. One has to remember that these "fruiting structures" represent a small fraction of the overall fungus that lives beneath the soil. The unseen portion of the fungus is feeding on the roots of living and dead trees. Until this food resource is removed or is completely decomposed, the mushroom production will be repeated year after year. Short of digging up the whole yard to remove the food resources of the fungus, about all one can do is hand remove the mushrooms and dispose of them whenever they appear.

A word of caution: *Armillaria* mushrooms are considered edible; however, eating wild mushrooms should be viewed as a high-risk endeavor. Their harvest should be left to cautious, well-trained experts. Remember the quote, "There are old mushroom hunters, and bold mushroom hunters, but no old, bold mushroom hunters!"

6. INDUSTRY INSIGHTS.

A. ASH TREE REMOVAL ASSISTANCE. Extension professionals are continuing to receive questions about assistance availability for the removal of dead and dying ash trees. The Ohio Department of Natural Resources (ODNR), Division of Forestry, has issued a last chance for residents to get help with removing ash trees from their properties. Deadline to apply for this assistance is November 30, 2012 and the program has been expanded to include Sandusky, Ottawa, Huron and Lorain counties in addition to Erie, Wood, and Lucas counties.

The program will pay up to 40% of the cost of removing two trees per private property owner, and there is no income requirement. However, one of the requirements is that the homeowner must provide copies of three estimates of the tree removal costs from companies that employ ISA certified arborists. Original copies are not required. A list of these arborists is provided with the application form.

Before tree removal takes place, approval of applications and all completed requirements must be received. Past recipients who had had only one tree removed may apply for a second tree to be removed. Applications are available at any public library; all township, village and city offices; county offices of the Soil and Water Conservation Districts; and the Ohio State University Extension offices. They are also online to download at the WSOS website.

Applications will be accepted if they are postmarked, faxed, or emailed by November 30. Funded by ODNR, Division of Forestry, and operated by WSOS Community Action Commission, Inc., this program provides assistance to help stem the widespread infestation of the ash trees in Northwest Ohio. It was developed through the efforts of US Rep. Marcy Kaptur, D-Toledo, and named the Western Lake Erie Basin Residential Ash Tree Removal Program.

More information and applications are available by calling Cindy Brookes at 419-334-5016, or by visiting [http://www.wsos.org](http://www.wsos.org).
7. WEATHERWATCH. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from September 1 - 26, 2012, with the exception of the soil temperatures which are readings from Wednesday, September 26, 2012 at 6:05 p.m.

While several BYGLers reported receiving a light frost, Tim Malinich in Erie county is still frost free in the NE Ohio thanks to in part to Lake Erie. Fall rains continue to be a welcome sight, especially after the very dry spring and summer. Amy Stone reported being on the receiving end of heavy rain and hail on Saturday, September 22, 2012.

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<tbody>
<tr>
<td>Ashtabula</td>
<td>NE</td>
<td>73.1</td>
<td>54.3</td>
<td>4.2&quot;</td>
<td>4.2&quot;</td>
<td>61.42/62.15</td>
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<tr>
<td>Wooster</td>
<td>NE</td>
<td>75.1</td>
<td>51.3</td>
<td>3.91&quot;</td>
<td>2.7&quot;</td>
<td>62.54/61.86</td>
</tr>
<tr>
<td>Hoytville</td>
<td>NW</td>
<td>75.2</td>
<td>51.1</td>
<td>3.11&quot;</td>
<td>2.4&quot;</td>
<td>63.98/61.86</td>
</tr>
<tr>
<td>Columbus</td>
<td>Central</td>
<td>78.6</td>
<td>53.7</td>
<td>2.61&quot;</td>
<td>2.4&quot;</td>
<td>64.57/64.03</td>
</tr>
<tr>
<td>Piketon</td>
<td>South</td>
<td>79.2</td>
<td>52.1</td>
<td>1.36&quot;</td>
<td>1.7&quot;</td>
<td>70.87/69.72</td>
</tr>
</tbody>
</table>

For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm].

8. COMING ATTRACTIONS.

A. OHIO INDEPENDENT ARBORIST ASSOCIATION FALL PROGRAM is this Saturday, September 29 from 9:00 a.m. - 2:30 p.m. at Schoepfle Garden, 11106 Market St (SR 113) in Birmingham. Topics covered include pesticide modes of action, invasive insects, plant disease and diagnostics. ODA, ISA credits available. For registration, location and credit information contact Al Shauck, [alshauck@hotmail.com], 216-854-0508. The event is free but RSVP is required!

B. WHY TREES MATTER FORUM: CANCELLED FOR 2012. The Forum scheduled for Wednesday, October 17, 2012 in Wooster is cancelled for this year due to scheduling difficulties. Look for its return in 2013.

C. EMERALD ASH BORER (EAB) RISK MANAGEMENT WORKSHOP TO BE HELD IN ST. LOUIS PARK, MN. This program is schedule for October 22, 2012 and the target audience is municipal administrators, elected officials, planners, risk managers, and allied professionals. Employees of non-profit entities managing large numbers of trees that affect public safety are also encouraged to attend (i.e. colleges, nature centers, etc.). Registration is available online at [http://tinyurl.com/RSVP-4-EAB-RM]. Session topics include: EAB Myths and FAQs; Memo from Forester to City Manager: Don’t Wait; Considerations for the City Attorney; What Can You Get For Your Money? Budgeting for EAB; Your Management Options vs. the Death Curve; and Getting the Word Out. This is the fifth program, with previous workshop’s held in Ohio, Pennsylvania, and Wisconsin. Missed the session in Ohio? It might be time for a road trip!

D. YOUR WOODS, WATER AND WILDLIFE. The Ohio Woodland Stewards Program is offering this all day session on Saturday, November 10, 2012. We all own our woodlands for a variety of reasons. Spend the day with OSU Extension educators to learn more about what you have and what you can have. We will explore what you need to know about keeping your woodland healthy, what you can do to improve it for wildlife and timber and how to manage the other natural areas on your land. Check out the link to the brochure with a listing of the day’s program - [http://woodlandstewards.osu.edu/sites/drupal-owoods.web/files/brochures/landowner%20workshop.pdf]. Session topics include: Want Wildlife?; Non-Native Invasives; Got Trees? Tip for Woodland Owners; Farm Uses of Wood; Attracting Non-Game Wildlife;
Controlling Non-Native Invasive Plants; Algae, Plants and Fish in Ponds; Thinking About Selling Timber; and What You Need to Know About Ticks.

E. SAVE THE DATE - 2013 TRI-STATE GREEN INDUSTRY CONFERENCE on February 7, 2013 at the Sharonville Convention Center, 11355 Chester Rd., Cincinnati, OH 45236. The Tri-State Green Industry Conference is a collaborative effort between the Extension Services of Ohio State University and Purdue, and the Cincinnati Flower Growers Association (CFGA). It features a variety of high quality education and training for professionals in the areas of Annuals & Perennials, Greenhouse Management, 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/2012-tri-state-green-industry-conference].

9. BYGLOSOPHY: "Tree planting is always a utopian enterprise, it seems to me, a wager on a future the planter doesn't necessarily expect to witness." - Michael Pollan

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 September 25th conference call: Joe Boggs (Hamilton); Jim Chatfield (Hort and Crop Science); Julie Crook (Hamilton); Dave Dyke (Hamilton); Tim Malinich (Erie), Amy Stone (Lucas); and Curtis Young (Van Wert).
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.

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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