BUCKEYE YARD AND GARDEN LINE 2012-19
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This is the 19th 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 - FAN FLOWER (Scaevola aemula). The showy flowers of this annual are aptly named as the petals spread out into the shape of a Victorian lady's fan. It is a low growing, ground cover plant that spreads around 1 - 2' and can be used in beds or looks fantastic in hanging baskets and containers as a "spiller." Common flower colors are white, pink, and blue, and minor variations of blue available in cultivars. Fan flower does best in full sun (will take part shade) with adequate water; it thrives in hot humid weather and has looked outstanding in trials in Ohio this year. Watch out in the early spring, however, when it's young and tender - the rabbits really like it! If it's in the ground, protect with a fence until it's a little tougher and the rabbits don't like it as much.

*PERENNIAL - FEATHER REED GRASS (Calamagrostis acutiflora). This medium-sized perennial provides a beautiful upright structure in the landscape and can be massed for a great effect. It grows 3 - 5' tall and is around 1 - 1 1/2' wide and very upright and columnar. It performs best in full sun and well-drained soils. However, it will tolerate a range of conditions including dry soils, heat and drought, and wet and clay soils. A light breeze causes the foliage to sway, giving the garden perpetual motion and additional interest.

The grass blades are narrow (about 1/2" wide) and grow to around 1 - 2' tall. The blooms appear in June and last the duration of the season. They start out light green and then change to pinkish-purple. In the fall, the golden color of the flowers is outstanding when the sun hits them. 'Karl Foerster' is a cultivar with pinkish flowers that turn a golden wheat
color in the fall. It was also the Perennial Plant Association's Perennial Plant of the Year in 2001. 'Overdam' has variegate foliage with gold flowers.

Because they have such an upright and tight growth habit, they tend to look good through most of the winter. In the early spring, before new growth resumes, cut back to just above the crown. Mulching is not necessary for the winter as they are extremely hardy. Divide in the early spring if needed.

*WOODY - NOOTKA FALSE CYPRESS (*Xanthocyparis nootkatensis*). The Nootka false cypress is a medium growing evergreen tree. This tree does best in full sun to partial shade and reaches an average of 60 - 80' tall and approximately 20 - 30' in width at maturity. The Nootka false cypress has reddish brown, shredding bark and prefers deep, moist soil that is well-drained. In the landscape, it makes a great focal point in the garden due to its long, pendulous branches that give it an overall weeping look. This tree is native from coastal Alaska to Washington, east to Oregon. The cultivar 'Jubilee' has dark green foliage with pendulous branches on a narrow frame.

*VEGETABLE - CELERY (*Apium graveolens*). Very few gardeners attempt to grow celery. Perhaps that is because it is a very difficult vegetable to grow. However, it is sometimes nice to attempt new things. This crunchy veggie can be planted in the late summer for fall harvest if one is up for a bit of a challenge and a new learning experience. For information on how to grow this plant in the home garden, refer to Cornell Cooperative Extension of Oneida County Fact Sheet "Growing Celery" [http://counties.cce.cornell.edu/oneida/home%20garden/VEGETABLES/Celery.pdf] or the Ohio Vegetable Production Guide, Bulletin 672-10 [http://ohioline.osu.edu/b672/index.html].

*WEED - DODDER (*Cuscuta* spp.). Dodder is a parasitic vining plant that lacks chlorophyll, so it must extract food and nutrients from a host plant. Initially, seeds germinate and produce a temporary root system to support a thread-like stalk. If the stalk makes contact with a susceptible host, modified roots called "haustoria" penetrate the host plant. The red, orange, or yellow stalks continue to entwine the plant, often covering it under a mat of dodder stems. There are many species of dodder found in the U.S. and each may attach to a wide range of host plants. All species of dodder are annuals. An ounce of prevention is worth a pound (ton?) of dodder. Dodder lacks a specific seed dispersal mechanism, so movement to new areas usually occurs through movement of infested plants or contaminated soil, or by seeds hitchhiking on shoes or equipment. Closely inspect transplants for dodder and avoid using soil taken from areas with a dodder infestation. Thoroughly clean shoes and equipment after working in or around a dodder infestation. Dodder infestations may be effectively managed through a combination of hand-pulling and applications of pre-emergent herbicides. It is very important to pull the dodder before the plants produce seed because dodder seed may remain viable for years.

2. HORT SHORTS.

A. HOW CAN I TELL IF MY APPLES ARE RIPE? Gary Gao reported that a few apple cultivars are getting very close to being ripe. This is a good time for gardeners to learn how to tell if an apple is completely ripe. Apples are known to reach maturity at different times, depending on variety and climate. Many fruits, including apples, are ripening earlier this year than in the last few years. Gardeners can observe apples as they grow and inspect the fruit for certain changes that indicate maturity. The "ground" or base skin color of the apple changes from green to yellow as the fruit matures. Flesh color also loses its greenish tint and turns yellow or white. Some apple cultivars, such as Golden Delicious, Gala, and Honey Crisp are very tasty when they are ripened on the tree. Other cultivars, such as Red Delicious, may benefit from a couple weeks of cold storage. Starch in those apples is converted to sugar, thus making them taste sweet. With most apple cultivars, a taste test is as good as any instrument for determining ripeness. When one is convinced that the apples look mature, take a bite! A mature fruit will be crisp, juicy, and sweet with a little tartness. A pleasing taste is the final indicator of fruit maturity.

3. BUG BYTES.

A. PITCH MASS BORER ON BLUE SPRUCE. Curtis Young and Joe Boggs reported observing pitch mass borer (*Synanthedon pini*) symptoms on Colorado blue spruce last week in central Ohio. Caterpillars of this clearwing moth
Family Sesiidae) bore through the bark and phloem, causing trees to ooze copious quantities of sap that forms sticky masses of pitch on the bark. The caterpillars then feed on the resin within these pitch masses. The oozing, dripping sap creates an unsightly, sticky mess, and large numbers of caterpillars coupled with repeated infestations can kill trees.

The pitch masses are flecked with reddish frass (excrement) making them appear very similar to pitch nodules produced by ZIMMERMANN PINE MOTH (Dioryctria zimmermani). However, as the common name implies, the pine moth attacks pines including Austrian, Scotch, red, and white pine. The pitch mass borer will attack the same pine hosts as well as Norway and Colorado blue spruces. Of course, making a positive identification between the two moths on pines may be challenging, particularly if caterpillars can't be found to aid in the identification. Curtis and Joe noted that the pitch mass borers appeared to produce an almost continuous flow of low viscosity sap that dripped from the pitch masses. The pitch that contributes to Zimmerman pine moth resin nodules tends to have a higher viscosity with little dripping from the nodules.

Pitch mass borer caterpillars require 2 - 3 years to complete their development. Adult moths emerge in early to mid-summer and females target stressed trees, wounded trees, and trees that have been previously infested. Indeed, the moths will frequently lay eggs on pitch masses produced by older caterpillars, meaning that pitch masses may contain caterpillars of multiple ages. Management should focus on keeping trees healthy and avoiding mechanical injury. Pruning should be avoided during June and July when moths are laying eggs. While insecticide bark sprays may kill adult moths, caterpillars feeding within the pitch masses will not be killed. Manually removing pitch masses and crushing the caterpillars will reduce populations and aid in wound closure by the tree.

B. ANOTHER NEW ARRIVAL IN OHIO!? A bit of a diagnostic puzzler presented itself to BYGL diagnosticians beginning in late spring 2012. Both Curtis Young and Pam Bennett received complaints and samples of a small caterpillar that was chewing up and webbing over Baptisia or false indigo. This was a bit of a surprise since Baptisia in Ohio appeared to be relatively pest free, and now had a caterpillar that was doing a real number on its foliage. Identification eluded Curtis at this time. Then, just a week ago, Tim Malinich received a photo of the exact same caterpillar, this time however, it was feeding on lupine. And to top it all off, several BYGLers observed webbing and fairly heavy defoliation on a pair of shrubby trees in Dawes Arboretum in Licking County. The shrubby trees belong to the genus Maackia. The culprit was the very same caterpillar. This time, an identification had to be found.

So what do these plants have in common, other than the caterpillar? They all belong to the pea family (Family Fabacea a.k.a. Leguminosae). With this list of plants, a new search was undertaken and an identity found. The caterpillar was the larval stage of the GENISTA BROOM MOTH (Uresiphita reversalis). The genista broom moth is the only member of its genus known to occur in North America. None of the BYGLers on the Tuesday BYGL conference call had before dealt with this caterpillar in Ohio although, according to research reports about the genista broom moth, its distribution in the US is quite wide. Based on museum specimens and research reports, the genista broom moth's distribution extends from Nova Scotia, Canada, into parts of Mexico. Specimens of the moth have been collected from nearly all of the contiguous 48 states in the US, except from those states surrounding and directly west of the Great Lakes. Apparently, that has changed this year!

Plants reported as hosts for this caterpillar include Baptisia, lupine, sophora, crape myrtle, honeysuckle, Maackia spp. and several brooms (e.g. French broom (Genista monspessulana) and scotch broom). Genista broom caterpillars are yellow to green to brown in color with white spots and short, black tubercles sprouting white hairs and have a black head capsule. The adult moth is a typical delta shaped pyralid. They have dark brown forewings and light orange hindwings with brown markings along the outer margins. Adults are active at night. There appears to be 2 generations of the moth per year.

If management is warranted: pick caterpillars off by hand and discard; spray with a Bacillus thuringiensis product (e.g. Dipel) or spinosad (e.g. Conserve) while caterpillars are small; or spray with a general garden insecticide such as carbaryl (i.e. Sevin) or permethrin or bifenthrin.

C. PREDATORY BUG PARADISE. Joe Boggs reported observing several different species of predatory bugs (Order = Hemiptera) committing insecticidal acts in southwest Ohio. There are a number of Hemipteran families that are populated by insects that suck the life out of other insects. These bugs are equipped with piercing-sucking mouthparts that are used to inject paralyzing and pre-digestive enzymes into their prey. They then use their mouthparts like soda straws to suck the essence-of-insect from their hapless victims.
The bugs in the family Reduviidae are collectively known as assassin or ambush bugs. Both names clearly convey how these insect killers make a living. This is a large group with more than 160 North American species, and both the adults and nymphs are predators. The descriptively named WHEEL BUG (*Arilus cristatus*) has been a frequent subject of past BYGL reports on predatory bugs. The bug's name comes from the peculiar cog-wheel-like structure that rises from the top of the bug's thorax; the gear teeth are clearly visible. Wheel bugs are big, measuring over 1 1/4" long, and their color varies from light gray to bluish-gray to grayish-brown. They may be found lurking among the leaves of trees and shrubs in search of their favorite table fare which includes caterpillars and sawfly larvae.

The small, slender members of the Nabidae family (DAMSEL BUGS) will stalk and nab any insect that comes within reach of their long, spindly legs. Joe found several prowling within a mimosa webworm nest. The sneaky members of the Anthocoridae family are collectively known as MINUTE PIRATE BUGS, and many species loiter on flower heads waiting to snap unsuspecting insect visitors. They lack a patch over one eye, but with a little imagination observers may hear an "AAARrrrrrr" as these bugs skewer their insect victims. STINK BUGS (Family Pentatomidae) are generally vilified as plant suckers, but a few species, such as the SPINED SOLDIER BUG (*Podisus maculiventris*) are villainous to insects, particularly caterpillars and sawfly larvae.

Pest populations can be diminished by the assaults of these lions of the insect world. However, their effectiveness can be dramatically reduced by applications of insecticides. Look closely before spraying; don't kill the bio-allies.

D. ANTLIONS ROAR! Joe Boggs reported that the handiworks of "pitfall-type" antlions (*Myrmeleon* spp.) are becoming evident in southwest Ohio. Antlions are the larval stage of insects that belong to the order Neuroptera (neuro = nerve, optera = wing). Adults have finely veined wings that they hold tent-like over their bodies. Females of the "pitfall-type" antlions insert their eggs into dry, powdery soil. Favored locations include loose soil near building foundations or around the base of trees.

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

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

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

E. OAK GALL MADNESS. Curtis Young and Joe Boggs reported that a number of insect galls are now apparent on oaks in Ohio. Most galls on oaks are produced under the direction of either gnat-like wasps in the family Cynipidae, or by tiny midge flies in the family Cecidomyiidae. The vast majority cause no appreciable harm to their hosts.

During an OSU ENLT Team meeting in central Ohio last week, Curtis and Joe encountered the odd looking saucer-shaped OAK SPANGLE GALLS that were produced by the tiny midge fly, *Cecidomyia poculum*. As their name implies, the galls resemble the spangles sown onto costumes. They form on the underside of white oak leaves and are attached in the center by a tiny, post-like structure. The overall affect makes the leaves look like they are sprouting octopus suction cups! Immature galls are white to whitish-green. Mature galls are approximately 3/16" in diameter and as they mature, the galls turn pinkish-white and eventually purplish-brown. Mature galls detach from the tree carrying the fly pupae to the ground where they overwinter.

Some notable galls currently appearing on oaks that are produced under the direction of cynipid wasps include: the bristly, descriptively named SPINY OAK GALLS formed on the upper leaf surface by *Acraspis prinoides*; the shaggy-
looking HAIRY OAK GALLS produced on the upper leaf surface by *A. villosa*; the grape-like CLUSTERED MIDRIB GALLS formed on the lower leaf midrib by *Cynips dimorphus*; and the rounded, reddish-brown OAK BUD GALL formed by the cynipid wasp, *Neuroterus vesicular*, hijacking a normal oak bud.

OAK BULLET GALLS are found attached to the bark of stems and branches and are produced under the direction of several species of cynipid wasps in the genus *Disholcaspis*. The galls measure around 1/2" in diameter and vary in color from light green, to reddish-green, to light brown. Some bullet galls are covered in very fine, short hairs, while others are completely smooth. Many types of bullet galls have secretory cells on their surface and the cells ooze sugary substances similar to "honeydew" produced by aphids. Indeed, galls may become covered with black sooty molds, giving the galls a mottled grayish-black coloration. The sugary material is highly attractive to ants as well as other Hymenoptera, including those with stingers such as wasps, yellowjackets, and hornets. As a result, the biting and stinging insects serve as "gall protectors;" bribed by a little sugar, they apparently prevent the helpless gall-making wasp larvae located within the galls from receiving the unwanted attention of predators and parasitoids.

F. WINDSHIELD WIPES. BYGLers also ran into several other insect and mite plant pests this week including:

* Dave Shetlar reported that he is seeing crawlers of several scale insects in central Ohio including EUONYMOUS SCALE (*Unaspis euonymi*) and OYSTERSHELL SCALE (*Lepidosaphes ulmi*). The appearance of crawlers this late in the season means these armored scales are most likely producing a third generation.

* Dave also reported that he is seeing extended adult activity for TWO-LINED CHESTNUT BORER (*Agrilus bilineatus*) and FLATHEADED APPLETREE BORER (*Chrysobothris femorata*). The chestnut borer primarily infests oaks. The flatheaded appletree borer has a much wider host range. Indeed, Dave often refers to this beetle as the "bores into any stressed deciduous tree borer." Hosts include maple, oak, dogwood, elm, beech, hickory, willow, sycamore, tuliptree, as well as a number of fruit trees and shrubs. Both of these borers target stressed trees, including newly planted trees - particularly where after-planting watering has been poorly maintained.

4. DISEASE DIGEST.

A. YOU DON'T KNOW WHAT YOU'VE GOT UNTIL IT'S GONE...TO A DIAGNOSTIC FACILITY. A horticulturist recently asked Dave Dyke to investigate some problems with herbaceous plant dieback in the landscape of a local institution. Simply put, some of his BLACK-EYED SUSANS (*Rudbeckia hirta 'Tiger eye gold') were starting to wilt and die back, as were some of his LOBELIA (*Lobelia erinus 'Techno White Heat'). He naturally wanted to know what was causing the problems.

Many things cause those symptoms, from a lack of water to several diseases. The only way to be certain in such situations is to send samples to a diagnostic facility in this case, the C. Wayne Ellet Plant and Pest Diagnostic Clinic (CWEPPDC). The results? The Lobelia tested positive for PHYTOPHTHORA. The black-eyed Susan tested positive for both FUSARIUM and RHIZOCTONIA.

The following information on Phytophthora was included by Nancy Taylor in her report on the results of her diagnosis. It illustrates that one will get far more than a simple diagnosis when a sample is submitted to the CWEPPDC.

Phytophthora root rot and/or collar rot is a common landscape disease in Ohio. Many plants both annuals, herbaceous perennials, and woody plants can be infected by Phytophthora. Among the woody plants most commonly seen in the CWEPPDC are plants in the ericaceous family (rhododendron, azalea and Andromeda), yew (*Taxus*), boxwood, forsythia and lilac. There are a number of other woody ornamentals that can be infected as well as perennials and annuals.

The organisms that cause Phytophthora root rot and collar rot are soil-borne pathogens. They can survive in the soil for long periods (years). Development of the disease is favored by wet soil conditions with prolonged episodes of soil saturation, and warm weather. Wet soils can occur when sites are poorly drained, when sites are over-irrigated, or when sites experience excessive rainfall, or any combination of these factors.

The best approach to dealing with Phytophthora is to prevent the disease from occurring. Preventive actions include:
* If planning to install plants known to be prone to Phytophthora problems, ensure that the site or planting bed is well-drained before planting. If the area is poorly drained, install drain tiles or use raised beds.
* Amend heavy soils in planting beds to improve internal drainage.
* If improvements to drainage are not possible, install plants that tolerate wet sites, avoid Phytophthora-prone plants.
* Install only healthy plants. Carefully inspect roots or root balls to be sure that roots are not discolored or blackened.
* Do not set plants deeper than originally grown. Collar rot can be a particular problem when the collar is buried.
* Mulch carefully using coarse mulch. Do not pile mulch against the plant's collar. Excessive mulch against the collar can hold moisture which in turn contributes to the development of collar rot.
* Monitor irrigation to ensure that plants receive adequate irrigation; soils should not be saturated and there should be no puddling or standing water.

Remedial actions to attempt if Phytophthora has been diagnosed include:

* Curing plants which have already been infected by Phytophthora is not likely to be successful.
* Remove obviously diseased plants and as much of the root system as possible.
* Do not replant back into the same planting hole. If replanting is necessary, dig a new planting hole.
* Fungicide treatment is not generally recommended for the landscape and cannot be used as a substitute for careful planning to prevent development of the disease. In a site where Phytophthora has been diagnosed, fungicide use would be required on a continuing basis which is not economical for most property owners. However, there are occasional cases where fungicide treatment may be considered for various reasons. In these situations, treat the affected area according to the label directions of the product selected after having implemented all possible cultural and environmental modifications. Some fungicides which can be considered are Aluminum tris (O-ethyl phosphonate) (e.g. Aliette) or mefenoxam (e.g. Subdue).
* If complete site replanting is necessary, select plants that can tolerate wet conditions.
* In a few situations, complete renovation which includes removal of the existing soil may be considered. If so, following soil removal, adopt the suggested preventive actions listed above.


5. TURF TIPS.

A. CHINCH BUGS ARISE. Dave Shetlar reported that while HAIRY CHINCH BUGS (Blissus leucopterus) populations appear to be "down" this year in Ohio, the second generation should be appearing soon and turfgrass that is now recovering from drought/heat stress would be a great target! Chinch bug damage usually appears as browned turf occurring in irregular patterns and the symptoms may be mistaken for high temperature dormancy, drought stress, or even certain turfgrass diseases.

Chinch bug infestations cannot be identified using drive-by diagnostics. A proper identification requires an up-close and personal inspection on bended knee. Parting the grass will reveal the chinch bug adults and nymphs darting about among the turfgrass stems. If the grass is becoming off-colored, look closely at the exact color. Chinch bugs inject toxins into stems as they feed causing the blades to first turn a purplish color rather than the straw-brown color associated with drought stress.

Chinch bug management strategies may include short-term suppression using insecticide applications or long-term suppression through plant selection. Effective curative insecticides include: bifenthrin (e.g. Talstar); lambda-cyhalothrin (e.g. Scimitar); and deltamethrin (e.g. DeltaGard). For clients who desire a more "organic" approach, university research studies have shown that azadirachtin (e.g. Azatrol) provides about 80% control with one application and nearly 100% control with two applications made 10 - 14 days apart.

Lawns with a long history of chinch bug outbreaks are good candidates for using turfgrass selection to suppress chinch bug populations. Certain cultivars of turf-type tall fescue and perennial ryegrass are known to harbor endophytic fungi. These fungi reside between plant cells within the turfgrass blades (= endo) where they enjoy a symbiotic relationship with
the turfgrass plants. The fungi live off waste products exuded by plant cells. In return, the fungi protect turf plants by producing alkaloid compounds that are toxic to top-feeding insects, including chinch bugs. Over-seeding with "endophyte enhanced" turfgrass cultivars will provide a long-term solution to chinch bug problems.

B. BILLBUG DAMAGE REMAINS. Dave Shetlar also noted that turfgrass managers should be determining whether brown grass is drought dormant or permanently dormant (= dead!) due to BLUEGRASS BILLBUG (Sphenophorus parvulus) damage. 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. IMPATIENS GOING DOWN? During the past winter and spring, concern arose regarding impatiens downy mildew which is caused by Peronospora obuscens on Impatiens walleriana and I. walleriana hybrids. This disease causes impatiens to defoliate and eventually collapse. In the fall of 2011, it was widespread on the East Coast and with late season sightings in the Midwest, but not Ohio. Landscapers in Ohio may now be observing impatiens downy mildew; the CWEPPDC at Ohio State University has confirmed one case and has received verbal reports of two others.

Downy mildew may be overlooked in the early stages. Leaves show minor stippling and may curl downward slightly. The initial symptoms can resemble spider mite injury or environmental stress and the disease can be misdiagnosed. If the plants are growing under humid conditions, the underside of the leaves may show a white coating of the pathogen's spore structures, but this is not always be readily observed if conditions are not humid. Plants can be stunted and appear to be growing poorly. In the late stages of the disease, plants will defoliate and the stems will collapse.

The disease's extent in Ohio in 2012 is unclear. In order to get a handle on the extent of the problem the CWEPPDC will examine impatiens samples for downy mildew through the end of the 2012 season at no charge. Because impatiens deteriorate rapidly, samples should be shipped Monday - Wednesday using overnight delivery services. Although suspect stems can be submitted for evaluation, properly packaged whole plant samples will arrive in the best condition for evaluation. Dig the suspect plant(s) and wrap the roots in foil or plastic wrap to prevent soil from contaminating the foliage. The sample plant(s) can then be gently wrapped in newspaper or paper towels placed in a plastic bag and packed in a box so that the plants are not crushed in transit. Clinic specimen forms can be downloaded from the Clinic's web site: [http://ppdc.osu.edu/submit-sample]. Note on the form that the sample is being submitted for downy mildew evaluation. It would be helpful to know the disease incidence which is the size of the planting and the percentage of plants in the planting showing symptoms. The regular fee will apply if impatiens are submitted for a full diagnostic procedure.

More information about this disease can be found at the American Floral Endowment web site: [http://www.endowment.org/].

B. MAGNOLIA SCALE CRAWLS. BYGLers in southern and northern Ohio reported that the reddish-brown first instar nymphs (= crawlers) of MAGNOLIA SCALE (Neolecanium cornuparvum) are appearing on the stems of infested host trees. This is one of the largest "soft scales" in Ohio with mature females measuring as much as 1/2" in diameter. The helmet-shaped females are brownish-purple and can be found attached to the twigs, branches, and main stems of their namesake host as well as tuliptree. The scale uses its sucking mouthparts to extract sap from phloem vessels. Heavy infestations can kill branches, or even entire trees, or produce enough physiological stress to make trees susceptible to succumbing to other problems.

Magnolia scale is also notorious for exuding copious quantities of "honeydew." The sticky honeydew may drip onto the leaves and stems of the host plant as well as plants beneath an infested tree, or onto sidewalks, cars, slow-moving
gardeners, etc. Honeydew is often colonized by black sooty molds. However, while the molds do not harm plants, the sticky goo combined with the molds can produce an unsightly mess. Of course, the occurrence of honeydew and sooty molds do not necessarily mean soft scales are afoot. Many other sucking insects (aphids, planthoppers, etc.) also exude honeydew.

Magnolia scale eggs remain inside the female's body until the eggs hatch, which gives the appearance that the females are "giving birth" to live young. Egg hatch may occur continuously from early August into early October. This presents a serious challenge to the traditional approach to scale management, which focuses on targeting the unprotected crawlers with topical insecticide applications. The extended egg hatch means multiple applications are required to kill all of the crawlers produced in a season. Neonicotinoid systemic insecticides are an effective alternative with control being achieved in a single application. A soil drench application of imidacloprid (e.g. Merit), dinofuran (e.g. Safari), or clothianidin (e.g. Arena) from September into November will suppress this scale.

7. WEATHERWATCH. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from August 1 - 8, 2012, with the exception of the soil temperatures which are readings from Wednesday, August 8, 2012 at 6:30 a.m.

During BYGL this week, Curtis Young reported receiving 3+" of rain over the weekend in NW Ohio. Joe Boggs received 1/4" on Sunday. Randy Zondag was jealous - receiving nothing!

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</tr>
</thead>
<tbody>
<tr>
<td>Ashtabula</td>
<td>NE</td>
<td>84.9</td>
<td>63.3</td>
<td>0.17&quot;</td>
<td>1.1&quot;</td>
<td>91.07/82.71</td>
</tr>
<tr>
<td>Wooster</td>
<td>NE</td>
<td>88.4</td>
<td>61.6</td>
<td>0.78&quot;</td>
<td>1.0&quot;</td>
<td>77.16/74.64</td>
</tr>
<tr>
<td>Hoytville</td>
<td>NW</td>
<td>88.7</td>
<td>60.4</td>
<td>1.89&quot;</td>
<td>0.9&quot;</td>
<td>80.88/75.32</td>
</tr>
<tr>
<td>Columbus</td>
<td>Central</td>
<td>92.4</td>
<td>66.2</td>
<td>0.06&quot;</td>
<td>1.0&quot;</td>
<td>81.06/80.55</td>
</tr>
<tr>
<td>Piketon</td>
<td>South</td>
<td>89.3</td>
<td>64.7</td>
<td>0.71&quot;</td>
<td>0.4&quot;</td>
<td>83.83/79.49</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. SOUTHWEST OHIO BYGLIVE! The August Southwest Ohio BYGLive! Diagnostic Walk-About will be held this coming Monday, August 13, 2012 at Spring Grove Cemetery and Arboretum from 12:00 - 3:00 p.m. This monthly hands-on training series for Green Industry professionals focuses on diagnosing plant pest, disease, and physiological problems. ISA Certified Arborist CEU's and Landscape Architecture Continuing Education System (LA CES) CEU's for Landscape Architects will be available. Visit the following website for registration information as well as driving directions: [http://hamilton.osu.edu/topics/horticulture/byglive-diagnostic-walk-about]. You can also e-mail Joe Boggs [boggs.47@cfaes.osu.edu] to learn more about this diagnostic training series.

B. DIAGNOSTIC WALKABOUT FOR THE GREEN INDUSTRY will be held at Inniswood Metro Gardens in Westerville, 7:30 - 9:00 a.m., on Thursday August 16, 2012. Pre-registration is required and class size is limited to 30 per class. ODA, ISA and OCNT credits available. For registration, location and pesticide credit information see: [http://www.onla.org].

C. ALB CERTIFICATION TRAINING PROGRAM. Don't miss this first-of-its-kind Asian longhorned beetle (ALB) Certification Training Program for Green Industry Professionals: Thursday, August 16, 2012, 1:00 - 4:00 p.m. at Maple Ridge Lodge, Mount Airy Forest, Cincinnati Parks, 3040 Westwood Northern Blvd., Cincinnati, Ohio 45211. Registration fee is $15.00; registration is limited!

This in-depth program will present up-to-date information on ALB biology and management, safety issues, tree selection, and arm participants with the knowledge of what to look for with ALB. The program also includes ODA/USDA APHIS ALB Compliance Agreement training! A Compliance Agreement is required for tree care work within the ALB regulated area; this includes non-ALB related tree work such as the removal of ash trees killed by emerald ash borer (EAB).
Participants will also receive a Certificate of Training; the program is recognized by USDA APHIS, and CEUs for ISA Certified Arborist; TCIA Certified Treecare Safety Professional (CTSP); and ONLA OCNT. The program's curriculum team includes: USDA APHIS; ODA; ODNR; ONLA; Ohio Chapter of the ISA; TCIA; Sentinel Plant Network, American Public Gardens Association; Cincinnati Park Board; Cincinnati Zoo and Botanical Gardens; Phipps Conservatory and Botanical Gardens; Ohio State University Department of Entomology; and OSU Extension.

For questions, contact Joe Boggs [boggs.47@cfaes.osu.edu]. For more information and to register online, visit the following website: [http://hamilton.osu.edu/topics/horticulture/asian-longhorned-beetle-alb-certification-training-program-for-green-industry-professionals].

D. WHAT IS THAT WOOD? - WOOD ID WORKSHOP, AUGUST 17, 2012. Is a hardwood really "harder" than a softwood? What does it mean for a hardwood to be diffuse porous, ring porous, or semi-ring porous? Thinking about remodeling and deciding between several woods? This class will help you answer those questions and learn the basics of wood identification. It could also real handy if you are dealing with the demise of the ash as a result of EAB.

Eric McConnell, Forest Products Specialist with OSU's School of Environment and Natural Resources will explore the skills needed to identify various wood structural characteristics, including rays, tyloses, resin canals, and more. The historical benefits of these woods, as well as their current uses will be discussed.

The program will be held at the Toledo Botanical Garden in Toledo, Ohio. The class fee is $35, which covers educational materials and lunch. Class participants can also purchase their very own wood ID kit to take home for $25. The kit has 24 different wood species, (samples are 0.75"x0.75"x3.0").

Registration can be done online at the Ohio Woodland Stewards website – [http://woodlandstewards.osu.edu/classes/events/whats-wood-0] Class size is limited to the first 30 registrants.

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 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].

F. 72nd OHIO PLANT DIAGNOSTIC WORKSHOP. Friday, September 7, 2012 (9:30 a.m. - 3:30 p.m. or later) will be the next edition of the Ohio Plant Diagnostic Workshop for dedicated green industry, university, and other plant problem diagnosticians. The program at Secrest Arboretum on OSU's Ohio Agricultural Research and Development Center in Wooster will feature everything from Death and Taxus (a tale of two seasons) to Honeylocust Not (correct spelling), from perspectives on invasive plants, pests, and pathogens to clinic catharsis and diagmoshtics. A Secrest Arboretum update and tour will also be a key program component. Registration is $40 for a fine day of food, fundamentals, frustrations finally filed away, and fun. Contact Cheryl Fischnich at [fischnich.1@osu.edu], 330-263-3831, or OSU Extension Northeast Regional Office, 1680 Madison Avenue, Wooster, Ohio 44691.

G. WHY TREES MATTER FORUM: SAVE THE DATE. Wednesday, October 17, 2012 will be the next Forum, to be held in Wooster Ohio at the Hilton Garden Inn adjacent to the Ohio Agricultural Research and Development Center campus. There is a full slate of programs ranging from keynoters Scott Maco of Davey Tree Expert in Seattle speaking on the most recent i-Tree applications (including air quality and human health aspects) and Kelaine Vargas from San Francisco speaking on the Urban Forest Map project and community participation in mapping projects, as well as the Ohio Why Trees Matter projects, including Ohio Tree Campus USA advancements at the College of Wooster and Ohio State University. More details coming soon.

9. BYGLOSOPHY: "All gardeners know better than other gardeners." - Chinese Proverb

APPENDIX - ADDITIONAL INTERNET RESOURCES:
Following were the participants in the August 7th conference call:  Joe Boggs (Hamilton); Dave Dyke (Hamilton); Dave Shetlar (Entomology); Nancy Taylor (C. Wayne Ellet Plant and Pest Diagnostic Clinic); Curtis Young (Van Wert); and Randy Zonday (Lake).

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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