BUCKEYE YARD AND GARDEN LINE 2012-12
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This is the 12th 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 (Lantana); Perennial (Stachys or Wood Betony); Woody (Tiger Eye Sumac); Vegetable (Squash); and Weed (Birdsfoot Trefoil).
2. HORT SHORTS: The Beauty of Bottlebrush Buckeye; All Hail Hydrangeas; Gardening for Birds: Feeding the Birds vs. 'Feeding' the Birds; Ssssssssnakes and More Snakes.
3. BUG BYTES: "FlyingTicks" - Not! (Yellow Poplar Weevil); Oak Aphids: Timing is Everything; Eriophyid Mite Erineum Patches; Black Locust Beetles and Bugs; Jumping Oak Galls Dropping from Trees; Antlions on the Wing; and Windshield Wipes (Annual Cicada (Dogday Cicada)).
4. DISEASE DIGEST: Disease Ditties (Cedar Quince Rust, Oak Leaf Blister, and Powdery Mildew Diseases).
5. TURF TIPS: Bluegrass Billbug Alert!
6. INDUSTRY INSIGHTS: "Green Industry Fix" Webinar III.
7. WEATHERWATCH.
8. COMING ATTRACTIONS: Diagnostic Walkabout for the Green Industry; Diseases & Other Dilemmas Affecting Fruits & Vegetables - Diagnostics for Master Gardeners 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 - LANTANA (Lantana spp.). This drought-tolerant plant likes the kind of weather that Ohioans are experiencing this year! Lantana is tolerant of full sun, all well-drained soil types, and is relatively pest-free (though not completely - see below for details.) Recent introductions to the market give gardeners a plethora of bright, multi-colored flowers to use in the landscape. Lantana blooms profusely all summer with the flowers lasting right up to a hard frost. The flowers are attractive to butterflies and hummingbirds as well. Colors include red, pink, orange, creamy yellow and blends of these colors.

The foliage is quite tough, coarse and rough to the touch. The leaves have a pungent smell when crushed. Most cultivars have green leaves but there are several with variegated yellow and green leaves. When purchasing cultivars of lantana for the garden, make sure to read the label and find out the mature size. Some of the cultivars are quite large, growing up to 4’ tall and as wide. Other cultivars are smaller, more compact and grow close to the ground.
Lantanas are quite attractive to whiteflies. However, in trials in the Gateway Learning Gardens in Clark County, very little damage is noted on the plants. A reminder, however, for anyone thinking about overwintering these in a greenhouse: Do not take these into the greenhouse to overwinter unless one wants to battle whitefly forever! This pest is very difficult to manage in a greenhouse so don't bring on trouble. Otherwise, lantanas are a great landscape plant for the flower bed, perennial garden, or in containers suitable to their size.

*PERENNIAL - STACHYS or WOOD BETONY (*Stachys officinalis* 'Hummelo'). This tried and true perennial is in full bloom in central Ohio gardens at this time. Most *Stachys* species are known for their silvery foliage but this one is known for its wonderful flowers. In June they begin to bloom by sending up dense spikes with purplish-pink flowers at the top. The flowers resemble those of *Agastache* or the perennial *Salvia*. These can last as long as a month.

The foliage is dark-green and has sort of a scalloped edge, lending to an overall good appearance even when not in bloom. The plants grow in clumps that get around 1 1/2 - 2' tall. As the plants grow, they spread by underground stems (stolons) and can form a nice ground cover effect in the landscape. 'Hummelo' is extremely easy to grow and will be drought tolerant once established; water more often in the early stages. They don't have any major insect or disease issues. This plant has been around for a while and in one BYGL writer's opinion, is greatly underused!

*WOODY - TIGER EYE SUMAC (*Rhus typhina* 'Tiger Eye'). This beautiful, deciduous, multi-stemmed shrub can add a touch of drama to the landscape. New growth is chartreuse-green, which quickly changes to yellow. The pink stems offer a nice contrast with the foliage. The pinnately compound leaves turn orange in the fall. Tiger eye sumac can reach 6 - 8' in height and 6 - 8' in width. This plant prefers sun to part-shade and tolerates most soil. Tiger eye sumac grows well in zones 4 - 8 and is highly tolerant of urban environments.

*VEGETABLE - SQUASH (*Cucurbita* spp.). Although both summer and winter squashes are called vegetables, in reality they are fruits. Botanically speaking, squash are a fruit because the edible parts are really ripened ovaries, which arise and develop from a pollinated flower. In addition to the fruit itself, other parts of the squash plant are edible. Squash seeds can be roasted and eaten directly or ground into paste or meal to create a type of "seed" butter, and even be used as flour. Certain cultivars, such as hulless pumpkin seed types, can be processed to create a type of vegetable oil. If harvested very young and tender, the leaves, shoots and tendrils can be eaten as greens; however, squash blossoms are the part most often consumed. Both the male and female blossoms can be harvested before they open, or just about mid-flower, before the bloom tissue begins to dry up or break down.

Squashes are lumped into two groups corresponding to when we typically eat them; namely, either summer or winter squash. Summer squashes are best when harvested as small, immature fruit to keep both seeds and flesh extremely tender, and cook easily and rapidly. Keep those summer squashes (green and yellow zucchini, crookneck, patty pan, etc.) tender by picking them small (4 - 6’); incidentally, this means harvesting them almost daily. Of course, there is an occasional desire to make from "the forgotten squash", stuffed zucchini boats, where the mature zucchini fruit actually becomes an edible serving dish, 2 - 3’ in length! Winter squash is allowed to fully mature and develops big seeds, firm flesh and a hard rind or skin. Consequently, the preparation of winter squashes takes much longer and is much more involved in order to make them edible. Regardless of the type, squashes are both eye-pleasing and edible, so squash that urge to say "yuck" and squash those taste buds with a Cucurbit treat soon!

*WEED - BIRDSFOOT TREFOIL (*Lotus corniculatus*). Both Curtis Young and Dave Dyke noted that large bright yellow mats of Birdsfoot trefoil flowers were adding a very intense dose of color to turf in lawns and the landscape in parks and along roadways. This plant is a perennial, and often invasive, weed in many landscapes, where it tolerates drought and poor soil. It is a low growing plant that is often confused with white clover (*Trifolium repens*) or black medic (*Medicago lupulina*). However, unlike white clover, birdsfoot trefoil has yellow flowers. And, whereas black medic has 3 leaflets per compound leaf, birdsfoot trefoil has 3 leaflets at the
tip of the leaf and 2 stipules near the base of the petiole making it look like it has 5 leaflets. Also, the plant gets its name from the very distinctive arrangement of seed pods; they resemble the foot of a bird.

This weed spreads via rhizomes and stolons to form large, low mats in lawns and gardens. Seeds produced during summer months germinate the following spring. Birdsfoot trefoil can be controlled with broadleaf herbicides, but applications may have to be repeated to catch any regrowth from rhizomes or stolons. Thick, tall, healthy turf should keep birdsfoot trefoil from becoming established.

For more information on this weed, including control measures, refer to USDA/NRCS Plant Fact Sheet, Birdsfoot Trefoil [http://plants.usda.gov/factsheet/pdf/fs_loco6.pdf].

2. HORT SHORTS.

A. THE BEAUTY OF BOTTLEBRUSH BUCKEYE. Aesculus parviflora is not our state tree or our state shrub, but the past week is proof that this is one beauteous buckeye. In southwest Ohio and in central Ohio outside the windows of OSU Extension Director Keith Smith's OSU's Ag Administration building office - wow. This is one H.O.T. shrub, as in a shrub admired by a class of vocational agriculture teachers from around Ohio who last week attended the plant diagnostic section of OSU's Hands-On-Training workshops. Creamy white 4-petaled flowers with red stamens in lovely panicles, layered tiers of branches with 5 - 7 leaflet palmate leaves. As Michael Dirr quotes W.J. Bean in Dirr's Manual of Woody Landscape Plants: "No better plant could be recommended as a lawn shrub." As Dirr adds, it is a great plant even without the June flowers, but enjoy the blooms while they last; coming soon in fullness to northern Ohio.

B. ALL HAIL HYDRANGEAS. The past weeks have also seen a fine show of landscape hydrangeas, from lacecaps to mopheads, from the wonderful climbing hydrangea (Hydrangea anomola petiolaris to the 'Annabelle' smooth hydrangea (H. arborescens 'Annabelle'), as well as the multitude of bigleaf hydrangeas (H. macrophylla) such as the cultivar 'Glowing Embers', and the great elongate flowers of the many cultivars of oakleaf hydrangea (Hydrangea quercifolia). Check them out in all their glory on your garden, neighborhood and arboretum walks and in books such as Michael Dirr's Hydrangeas for American Gardens.

C. GARDENING FOR BIRDS: FEEDING THE BIRDS VS. 'FEEDING' THE BIRDS. While the intention is to feed a variety of songbirds with seeds, plants, and other food items, one may inadvertently be feeding birds of prey. The Cooper's hawk and slightly smaller Sharp-shinned hawk are two species that on occasion will visit bird feeders for a meal…and not a meal of sunflower seeds. These two highly maneuverable species have no trouble navigating backyard landscapes, trees, and other obstacles to swoop in on an unsuspecting bird. When this happens, the bird gardener is left with 2 options: 1) to sit back and watch nature's food chain unfold, or 2) take down all bird feeders for a period of 1 - 2 weeks to encourage the preying hawk to search for other hunting grounds.

On a slightly related and impressive note, some birds, like the blue jay, have learned to mimic the calls of hawks in order to scatter birds from a feeder - to the victor the spoils! Happy Bird Gardening!

D. SSSSSSSSNakes AND MORE SNAKES. It is not uncommon this time of year to encounter slithery visitors in gardens, landscapes, and backyards. There are several species of snakes happy to live their lives in backyards, but the most common is likely the garter snake. Named for the 3 light stripes that run along the length of its black, brown, gray, or olive body, the garter snake is sometimes nicknamed the 'garden' snake because that is where unsuspecting gardeners often encounter them. The stripes running vertically along the length of the snake's body resemble the once stylish sock garters worn by men. While it can be startling to encounter a snake while weeding or planting, if their presence can be tolerated, garter snakes are doing the constant gardener a favor. They feed on worms, slugs, insects, and small mammals that may otherwise be feasting on garden plants and flowers.
Garter snakes are most active during the day and on sunny summer days are often found basking on rocks, sidewalks, decks, or patios. On hot days and when sleeping, they retreat to sheltered areas such as under foundations, rocks, logs, stumps, or porches. There are no repellents that effectively work to keep snakes away. The best approach is to eliminate denning and sleeping sites and shoo them away from basking areas. They are rarely aggressive and habituate to humans easily.

The common watersnake, on the other hand, is not a snake that should be picked up without the expectation of a strong bite. The coloration of this snake, which prefers streams, creeks, and other bodies of water, can sometimes cause it to be mistaken for a northern copperhead, one of Ohio's 3 venomous snakes (the other 2 are the timber rattlesnake and eastern massasauga). The northern copperhead has a distinct triangular head that the watersnake lacks, and is not common among well-settled areas. Because of the common watersnake's preference for water, it is also often mistaken for a water moccasin, a venomous snake that does NOT occur in Ohio.

While it would be rare to encounter a venomous snake while gardening, never disturb or handle a snake without first determining the species and if it is venomous. For help identifying Ohio snakes, see the Division of Wildlife Reptiles of Ohio Field Guide.

3. BUG BYTES.

A. "FLYING TICKS" - NOT! Curtis Young reported receiving several inquiries about an explosion of "ticks" in central Ohio. One caller described seeing numerous ticks suddenly appearing in yards and around a swimming pool at a country club. They were reported to be crawling on the cement sidewalks and falling into the pool. This sounded very untick-like. An image was requested and the true identity was discovered. The ticks were weevils, specifically the YELLOW POPLAR WEEVIL (*Odontopus calceatus*).

These weevils at first glance look like ticks, however there are several distinct differences between ticks (an arachnid) and weevils, a type of beetle (a true insect). A tick has 4 pairs of legs, no antennae, and no wings. And without wings, ticks cannot fly. Weevils on the other hand, only have 3 pairs of legs, 1 pair of antennae, a prolonged snout (thus the weevil is also called a snout beetle), and wings. It has been reported, and it is not surprising that people have been nipped by the little snout beetle; however, not for blood, just a little taste to see if thee tastes like a tree.

Some have asked whether this is a new species of insect in the area. It is not. Yellow poplar weevil populations are cyclic and will occasionally become abundant in localized areas. This year, it appears to be central Ohio. A quick look at questions submitted on eXtension "Ask an Expert" (a link to Ask an Expert can be found on OSU Extension county webpages) revealed several questions in regards to the beetle that looks like a tick.

Yellow poplar weevils feed on the foliage of yellow poplar (a.k.a. tuliptree), sassafras, and magnolia as adults, and are leafminers in the leaves of poplar and sassafras as larvae. There is 1 generation a year. The weevil overwinters as an adult. In the spring, overwintered adults emerge from hiding places to return to hosts to feed, mate and lay eggs. Larval development begins soon afterwards. When larval development is complete, the mature larva spins a silken cocoon inside of the mine in which it pupates. New adults emerge, feed for a period of time, then drop to the duff or leaf litter to settle in for the rest of the year, only to return again the following year.

Insecticides such as acephate (Orthene) or carbaryl (Sevin) may be used to reduce damage to the foliage of landscape trees. Treat when feeding damage is seen on about 10% of the branches and repeat as necessary. Retreating may be necessary because the weevils will arrive at trees over an extended period. Damage is largely aesthetic and for most trees, the damage will do little harm to the health of the tree.
Weevils that land on and bite humans are strictly a painful nuisance. Management of the weevil on humans is limited to picking them off by hand. Repellents might have little effect, but it couldn't hurt to try. Remember to use all products according to their labels.

B. OAK APHIDS: TIMING IS EVERYTHING. Joe Boggs reported observing oak aphids (Myzocallis spp.) on mature white and red oaks. The aphids on the red oak arrived on a sample from an arborist. Symptoms included obvious leaf cupping, as well as leaves that were covered in sticky, sugary, "honeydew"; a by-product of the aphid's sap-sucking feeding activity. The white oak had virtually all leaves blackened by sooty molds with only a moderate amount of leaf cupping.

Leaf cupping is a symptom that may be connected to herbicide exposure; however, it may also be caused by aphid leaf feeding activity. Black sooty molds are a secondary problem usually associated with honeydew exuded by a sucking insect such as aphids, soft scales, planthopper and treehopper nymphs, etc. The sooty mold fungi colonize the honeydew that falls onto leaf and stem surfaces. Since the fungi do not infect plant tissue, the leaf discoloration is normally considered an aesthetics issue rather than a plant health issue.

Aphids are certainly not a rare find on trees; however, the populations of many species tend to peak early in the season. They often disappear later in the season, leaving only symptoms to support a diagnosis. Indeed, aphid predators were found on both oaks and the aphid population on the white oak was already sparse. Joe noted that the true size of the original aphid population could be extrapolated from the heavy covering of black sooty molds on the leaves. His report highlights the diagnostic axiom that timing is everything; without the culprit present, a diagnosis may be speculative, which can lead diagnostoids onto shaky ground.

C. ERIOPHYID MITE ERINEUM PATCHES. Joe also reported that eriophyid mite erineum patches are becoming evident on a number of landscape trees in Ohio, including beech, birch, linden, and maple. There is a debate as to whether the felt-like erineum patches are "true galls." They appear to arise like scar tissue from leaf cell damage caused by mite feeding activity rather than by a gall-maker exuding chemicals to direct plant growth. Regardless, as the patches turn colors from green to red, gold, or silver, then to brown, they become very noticeable and are often mistaken for leaf spot or rust diseases. Fortunately, the erineum patches are not known to cause serious harm to the host tree.

The eriophyid mite Acalitus fagerinea produces erineum patches on American beech. Although the patches are located on the upper leaf surface, they cause a dimpling of the lower leaf surface beneath the patch. Joe noted that the patches in southwest Ohio are currently turning from light green to a brilliant yellow; they will eventually become golden then rusty red to reddish brown later in the season. The mite A. brevitarsus generates pinkish-red erineum patches on the upper leaf surface of birch leaves. These patches in the southwest part of the state are currently silvery-white with slight overtones of pink.

Two different eriophyid mites produce erineum patches on sugar maple. Eriophyes elongatus generates patches on the upper leaf surface that are deep crimson red; they are currently greenish-white. E. modestus produces silvery colored patches in the forks in the leaf veins on the lower leaf surface of sugar maple leaves. The eriophyid E. tiliae generates a very similar looking silvery erineum patch on the lower leaf surface of lindens.

Eriophyid mites (family Eriophyidae) are unique among other mites both in their size and anatomy. Most mites can be clearly seen with a 10x hand-lens; however, a 40x magnification is required to clearly see eriophyid mites. Most mites are round to oblong in their body shape and they have four pairs of legs that extend laterally from the sides of their body. Eriophyid mites are cigar-shaped and they only have two pairs of legs that extend from the front of their body. No other mite has only two pairs of legs at any stage in their development.

D. BLACK LOCUST BEETLES AND BUGS. Two leaf-feeding pests on black locust were observed by BYGLers this week: the LOCUST LEAFMINER BEETLE (Odontota dorsalis) and the BLACK LOCUST BUG (Lopidea robiniae). Damage caused by the beetle is often a familiar sight to travelers motoring on Ohio's
interstate highways. Larval and especially adult feeding activity produces a captivating reddish-brown leaf coloration that highlights infested trees allowing black locusts to be positively identified at highway speeds! "Flamed" trees will not become apparent until later in the season.

The adult beetles are less than 1/4" long. They have a flattened appearance and are orangish-red with a median black line down the center of the back. Overwintered beetles emerge in the spring to feed as skeletonizers on the leaves of their namesake host as well as several other tree species including beech, cherry, crabapple, dogwood, elm, hawthorn, and yellowwood. They may also be found on a number of herbaceous plants such as soybeans. The early season feeding activity of the overwintered adults usually causes little obvious damage.

Eventually, the beetles begin laying eggs. While black locust is the preferred larval host, the beetles will also select yellowwood. Eggs are laid in clusters of three to five in late May or early June on the undersides of leaves. The larvae hatching from these eggs work their way into the leaf through one entrance hole and live in common blotch mines. Later, they go to other leaves and make separate mines. Larvae feed for about three weeks, pupation takes place in the mine, and beetles emerge a week or 10 days later. Larval leafmines, coupled with the leaf-feeding activity of beetles that emerge from this season's mines, produces the most obvious damage caused by this insect - the flame-orange black locusts.

BYGL readers are probably less familiar with the black locust bug. The locust bug is slightly larger than the leafmining beetle, but both share similar color patterns. The adult bugs are elongate in shape and have a median longitudinal black line down the center of the back that is flanked by two longitudinal orangish-yellow lines. Their legs and antennae are black. The nymphs are orangish-yellow with black legs, antennae, and wing pads. Both the adults and nymphs use their piercing-sucking mouthparts to extract juices from black locust leaves and their feeding activity produces small, yellow leaf spots.

Research conducted at Illinois State University and published in 2004 revealed that black locust bugs secrete chemical compounds that were implicated in defending the bugs against bird predation. When attacked, the bugs discharged liquid from metathoracic glands that contained a chemical brew that gave the bugs a strong and distinct odor. Birds were observed ejecting the bugs out of their mouth after biting them . . . suggesting the chemical discharge served as a feeding deterrent. One can only imagine the birds making a "pa-toowie" sound.

E. JUMPING OAK GALLS DROPPING FROM TREES. Jim Chatfield and Joe Boggs reported that jumping oak galls are beginning to detach from host trees in central and southern Ohio, respectively. The globular galls are tan to dark-brown and about the size of a sesame seed. They are partially imbedded into the lower leaf surface and blister-like spots appear on the upper leaf that correspond to the points of attachment of these galls. The spots on the upper leaf turn from yellow to brown. Heavily galled leaves may drop from the trees.

The galls drop to the ground once the wasp larvae have completed their development within the galls. The larvae can cause the galls to jump around like Mexican jumping beans, thus the common name. It is assumed this behavior helps the galls to drop into cracks in the soil where the larvae can safely pupate inside them.

Jumping oak galls have been long attributed to one gall-wasp (family Cynipidae), Neuroterus saltatorius. However, there is now some debate as to whether or not jumping oak galls are produced by a single gall-wasp species or by several species of gall-wasps. The question centers on the occurrence of jumping oak galls on a wide range of oak hosts; from chinkapin oak (Quercus muehlenbergii) in Ohio to valley oak (a.k.a. California white oak, Q. lobata) in California. Such a wide host range over a large geographical area is very unusual for gall-making insects; gall-makers are normally highly specific to their plant host. Thus far, entomologist appear to agree that jumping oak galls are produced by wasps in a single genus, so some reports refer to the gall-maker as, Neuroterus spp.

Reports in the literature regarding Neuroterus saltatorius describe the wasp as a non-native invasive species and the galls have been reported as far back as the 1870's in the eastern U.S. Serious outbreaks with significant leaf
damage have been reported in past years in the forests of Wisconsin, Indiana, Kentucky, and Ohio. The wasp has two generations. The first generation is comprised entirely of parthenogenetic females (there are no males) which emerge from overwintered galls to lay eggs in early spring on swelling leaf buds. The resulting pinhead-sized blister galls mature rapidly and release the second generation, which has males and female wasps. The mated females lay eggs on expanding leaves to give rise to the galls that are currently being found.

Although this gall may cause serious injury to its oak hosts, there has been little research on effective controls. Research has shown that white oaks that leaf-out later in the spring tend to be less affected presumably because the first generation females are unable to effectively target the new leaves. Anecdotal reports indicate that some neonicotinoid insecticides such as dinotefuran (e.g. Safari) applied as a soil drench early in the spring may help to suppress gall formation; however, there has been no research to confirm this control option.

F. ANTLIONS ON THE WING. Curtis Young reported finding antlion adults (*Myrmeleon* spp.) in sticky traps used to monitor insects in northwest Ohio. Antlions belong to the insect order Neuroptera (neuro = nerve, optera = wing). Adults have long, thin bodies that measure around 1" in length. They superficially resemble damselflies; however, antlions have conspicuous antennae that are clubbed at the front and about as long as the combined length of their head and thorax. Their finely veined wings ("nerve wings"), which are held tent-like over their body, are transparent with a dappling of black markings. Damselflies have very short, bristle-like antennae and their wings are held vertically, almost flag-like above their body.

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 dining 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 U.S., 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!

G. WINDSHIELD WIPES. BYGLers also ran into a few other arthropods this week including:

* It's hard to believe, but Curtis Young reported hearing the first ANNUAL CICADA (DOGDAY CICADA) singing in NW Ohio on June 17, 2012. Typically annual cicadas are not heard singing until closer to the 4th of July. This is just another example of the accelerated season of 2012.

4. DISEASE DIGEST.

A. DISEASE DITTIES. Though dry weather often leads to lower incidence of foliar diseases, such as the very low incidence of apple scab in the Crablandia plots reported in last week's BYGL, infectious plant diseases are out there. Also, the stress of dry conditions can lead to plants' tendency toward certain stress-related diseases such as with Botryosphaeria dieback or "Bot rot" on many woody plants, such as doublefile viburnum. Additionally, as
Randy Zondag pointed out, people often overcompensate during dry conditions. They also do this with herbaceous and young woody plants . . . tending to overwater by excessive daily irrigations, paradoxically leading to increased fungal root rot diseases. So, keep things in perspective.

Some diseases that BYGLers reported as rearing their ugly heads this week include: CEDAR QUINCE RUST, which Joe Boggs described as occurring on virtually every hawthorn haw fruit seem during some walkabouts in the Cincinnati area recently, OAK LEAF BLISTER, a cosmetic disease which Curtis Young reported as unusually common during a visit to Pennsylvania last week, and copious amounts of POWDERY MILDEW DISEASES on phlox, magnolia, roses, and a number of otheramentals. One note from Joe Boggs on the cedar quince rust was that, in addition to the orange fungal masses emerging from hawthorn fruits, the other manifestation of this disease on hawthorn, twig cankers, has resulted in some twig dieback on these trees.

5. TURF TIPS.

A. BLUEGRASS BILLBUG ALERT! This season continues to catch the BugDoc (Dave Shetlar) off guard! Shortly after he had sent out the last P.E.S.T. newsletter, he got an "emergency" call from the diagnostic clinic that a golf course superintendent in south Dayton had detected considerable damage on his fairways and around some of his greens due to a "strange" little white grub. Dave initially thought the culprit was the black turfgrass ataenius as it would be time for their larvae to be causing damage, especially in the Dayton area.

The next day a plastic water bottle arrived by courier with a half dozen, nearly mature, billbug larvae … still squirming. Dave's thoughts then were, "Good grief!" Dave does not normally think about seeing billbug damage until the end of June and first week of July.

Again, Dave had to recalibrate his brain for this season. Dave called the superintendent and found out that they had already applied Dylox. When turf is being lost, golf course superintendents don't fool around. Anyway, Dave confirmed that Dylox would be one of the curative treatments to control billbug larvae. However, if the treatment didn't kill the larvae in two to three days, they may want to consider using a product that contains clothianidin (Arena or Aloft) or dinotefuran (Zylam). These are the fast acting of the neonicotinoids and field studies have shown that both insecticides have pretty good billbug curative action.

Just because this was found on a golf course, don't forget that billbugs do major damage to home lawns and commercial grounds, especially when early dry periods occur. Dave has been checking around campus and about half of the turf that is turning straw color is from drought stress, but the other turf is obviously being hit by billbugs. Remember that the test for this critter is to do the "tug test." Simply grab some of the stems that are turning straw colored and tug. If they break easily and one sees fine, sawdust-like material in the broken stem, think billbugs!

6. INDUSTRY INSIGHTS.

A. "GREEN INDUSTRY FIX" WEBINAR III. The next monthly Green Industry Fix Webinar partnership between the Ohio Nursery Landscape Association and the Ohio State University Extension Nursery Landscape and Turf Team will be Wednesday, July 11 from 7:30-8:20 Am. The full schedule is: July 11, August 8, September 12, and October 10.

These webinars offered by ONLA are a quick, affordable, convenient way to learn...helping with WHAT you need to know, WHEN you need to know it. These are 'hot topic' seminars delivered to your computer and hosted by speakers from the Ohio State University Extension Nursery, Landscape & Turf Team. You will be given timely and useful information on current and emerging issues critical to your green industry business: from plant selection to pest management, from weed control to product knowledge, from invasive species to infectious
diseases. It's a short course class delivered to your office! Webinars are visual and will include many images of pests and plants.

For registration information for the Get Your Green Industry Fix webinars: contact 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 June 1 - 20, 2012, with the exception of the soil temperatures which are readings from Wednesday, June 20, 2012 at 6:05 p.m.

While many BYGLers reported recent rainfalls, they are mentioned that the precipitation totals varied even within a county, city, village, or a smaller area. Amounts varied from 0 - 4". While no one would have given back Mother Nature's gift to our gardens, the general consensus is that more rain is needed.

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<tbody>
<tr>
<td>Ashtabula</td>
<td>NE</td>
<td>77.2</td>
<td>57.0</td>
<td>2.1&quot;</td>
<td>3.1&quot;</td>
<td>87.34/88.41</td>
</tr>
<tr>
<td>Wooster</td>
<td>NE</td>
<td>79.2</td>
<td>55.4</td>
<td>2.16&quot;</td>
<td>2.6&quot;</td>
<td>81.06/78.80</td>
</tr>
<tr>
<td>Hoytville</td>
<td>NW</td>
<td>81.1</td>
<td>56.6</td>
<td>0.9&quot;</td>
<td>2.3&quot;</td>
<td>88.58/81.26</td>
</tr>
<tr>
<td>Columbus</td>
<td>Central</td>
<td>82.7</td>
<td>59.0</td>
<td>1.77&quot;</td>
<td>2.9&quot;</td>
<td>79.65/77.60</td>
</tr>
<tr>
<td>Piketon</td>
<td>South</td>
<td>80.8</td>
<td>55.1</td>
<td>2.12&quot;</td>
<td>2.0&quot;</td>
<td>88.06/86.46</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. DIAGNOSTIC WALKABOUT FOR THE GREEN INDUSTRY will be held at the Erie County Fairgrounds, 7:30 - 9:00 a.m., on June 28. Pre-registration is required and class size is limited to 30 per class. ODA, ISA and OCNT credits are available. For registration, location and pesticide credit information see: [http://www.onla.org].

B. DISEASES & OTHER DILEMMAS AFFECTING FRUITS & VEGETABLES - DIAGNOSTICS FOR MASTER GARDENERS WORKSHOP. On Friday, July 20, 2012, from 10:00 a.m. - 4:00 p.m., there will be a hands-on class at the OSU Extension, Geauga County office in Burton, Ohio. This workshop will be an opportunity to reacquaint, re-learn, and improve those disease identification and diagnostic skills regarding fruit and vegetable problems. This advanced Master Gardener educational workshop will offer the opportunity to see, learn, and experience how to correctly identify problems from plant samples. Bring any and all baffling samples and tough questions for Erik Draper and Jim Chatfield! This class will count for 5 hours of advanced Master Gardener training credits. The fee for the program is $35.00. Lunch, handouts, snacks, samples galore, and prizes are all included in the fee for this workshop. Register for this workshop by July 16 or to obtain additional information, contact the OSU 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 will be reviewed. 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 two 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 and pre-registration are available on the web at [http://sted.osu.edu/commnewapp.html].

9. BYGLOSOPHY: "The human brain starts working the moment you are born and never stops until you stand up to speak in public." - George Jessel

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 June 19th conference call: Pam Bennett (Clark); Brad Bergefurd (OSU South Centers); Joe Boggs (Hamilton); Jim Chatfield (Horticulture and Crop Science); Erik Draper (Geauga); Dave Dyke (Hamilton); Amy Stone (Lucas); Marne Titchenell (School of Natural Resources); Curtis Young (Van Wert); and Randy Zondag (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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