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This is the 4th 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 (Stocks); Perennial (Japanese Tree Peony); Woody (Black Locust); Vegetable (Cabbage); and Weed (Field Horsetail).
2. HORT SHORTS: Growing Degree Days (GDD); Frozen Food (Frost Damage to Fruit Crop); Need Help Identifying Ohio's Wildlife?; Removing a Bat from your Home; Impacts of White-Tailed Deer on Forests; and Think about Cross Pollination when Purchasing Fruit Trees.
3. BUG BYTES: Grasshoppers Abound; Hawthorn Horrors (Hawthorn Leafminer, Hawthorn Pod Galls, and Hawthorn Cockscomb Galls); Calico Scale Puffing-Up; Strange Beehavior (Honey Bees); Gypsy Moth Treatments Began this Week; Lots of Mouths to Feed - Hungry Pests PSA Unveiled; and Windshield Wipes (Euonymus Scale, Pine Needle Scale, and Japanese Beetle).
4. DISEASE DIGEST: Beech Anthracnose; and Oak Leaf Blister.
5. TURF TIPS: High Numbers of Common Armyworm Moths.
6. INDUSTRY INSIGHTS: Weather Playing Havoc with Herbicides; and US Forest Service and Ohio's Davey Tree Expert Recognized this Arbor Day.
7. WEATHERWATCH.
8. COMING ATTRACTIONS: 19th Annual Plant Discovery Day; and 2012 Commercial New Applicator Training Scheduled.
9. BYGLOSOPHY.

APPENDIX - ADDITIONAL WEBSITE RESOURCES.

1. PLANTS OF THE WEEK.

*ANNUAL - STOCKS (Matthiola incana). Stocks have been around a long time and were quite popular bedding plants in the early 80's. However, they lost popularity and haven't been used much in gardens - but they should be! The good news is that BYGL writers have seen several new cultivars available in garden centers recently. Stocks are a wonderful annual for early spring as they thrive in cool weather. Their spicy, sweet clove fragrance is heavenly and not overpowering. This makes them a very unusual member of the mustard family (most plants in this family don't have the best smell!).

Dwarf plants grow around 1' tall and taller varieties grow around 2' tall. Plants also tolerate a light frost but should be covered if a freeze is possible. Flower colors include white, red, pink, purple, lavender, crimson, and yellow. Well-known in the florist industry, stocks are a great and long-lasting cut flower. Grow in full sun for best flowering results.

*PERENNIAL - JAPANESE TREE PEONY (Paeonia suffruticosa). "Oh my goodness, what is that plant??" This, or something very close to it, is what people usually exclaim when they happen to see this incredible plant in
bloom for the first time. The Japanese tree peony normally starts to bloom in mid to late spring (mid-May in central Ohio); however, this year it's blooming right now. It puts on an incredible show with white, pink, red, or yellow flowers, depending upon the cultivar. The flowers are papery thin and appear delicate but are quite tough. They can get as big as 1' in diameter and last for several days. Flowers can also be cut and put in a vase indoors; however, they won't last more than a couple of days.

The plant itself is very nice as well. It is a slow-growing deciduous shrub with glossy leaves that are slightly larger than hybrid peony leaves. The stems are woody and do not die back to the ground in winter; they can grow to around 2-4' tall. For best flowering, plant in full sun to part shade and in fertile, well-drained soil. Remove spent flowers after bloom and if the plant gets a little leggy, give it a light pruning in the fall. Place it in the garden where it can be left for many years as like most peonies, it doesn't like to be disturbed.

*WOODY - BLACK LOCUST (*Robinia pseudoacacia*). The white blossoms of black locust can now be seen in southern Ohio. These trees are aggressive invaders into disturbed areas and typically are found growing in large pockets throughout Ohio. Black locust can grow up to 50' tall and nearly 25’ wide. Logs from black locust are valued and typically are made into fence posts and railroad ties. This tree grows well in full to part sun and well-drained soil. Black locust has several pests and diseases, such as locust borer and bark canker, which can cause trees to look unsightly and sometimes even cause death.

*VEGETABLE - CABBAGE (*Brassica oleracea* var. *capitata*). Cabbage can be easy to grow if you choose suitable varieties and carry out good cultural practices and insect management. It is very cold tolerant and will withstand temperatures down to 20F. Cabbage grows best in fertile, well-drained soil with lots of added organic matter. Full sun is needed for the best yield but cabbage will tolerate light shade.

Sow seeds indoors 4-6 weeks prior to the last frost date. For a fall crop you can plant seeds outdoors 10-12 weeks before the first frost. There are many varieties available; by choosing ones with varying maturity dates you can prolong your harvesting period. Plants can be spaced 12-18” apart in rows depending on the variety and the head size desired. The closer the plants, the smaller the cabbage head. A liquid starter fertilizer applied at the time of transplanting is recommended. Adequate soil moisture is necessary throughout the growing season to produce good cabbage. Watering is especially important in fall plantings to help the young plants withstand the heat of summer and to supply the developing heads with ample water to develop quickly. Cabbage has a shallow root system so roots can be easily damaged by cultivation. Adding an organic mulch will help to keep the soil cool and moist, protect the roots and help with weed control.

Harvest when the heads become firm, the size will vary with variety and spacing. When heads are mature they are prone to splitting in response to any stress or a sudden heavy rain. To avoid splitting you can space plants closer together, choose varieties that resist splitting, or wait until the heads are firm, then twist the plant to break some of the roots. To help reduce disease, do not plant cabbage or other cole crops in the same location more than once every 3 years.

*WEED - FIELD HORSE TAIL (*Equisetum* spp.). This primitive plant is generally considered a weed when found in yards and gardens. Horsetails are especially unwelcome in pastures because they are toxic to ruminant animals. Horsetails reproduce by spores and rhizomes. Short, thick stems appear in the spring, which then form a cone-like structure on the top of each stem. These cone-like structures called strobilus mature and burst open releasing spores. The stems then die and are replaced by a hollow, sterile stems that last until the first hard frost. The underground rhizome systems of these plants make it very difficult to eradicate this plant from areas where it is not wanted. Even the smallest piece of rhizome can form a new plant. Horsetails contain a high amount of silica in their tissue. This silica was very useful to Native Americans and pioneers when cleaning their cooking utensils.

2. HORT SHORTS.

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

The range of GDD accumulations in Ohio from north to south is 273 to 478. Following is a report of GDD for several locations around Ohio as of April 25, 2012: Painesville, 273; Cleveland, 287; Toledo, 349; Canfield, 306; Findlay, 347; Van Wert, 354; Wooster, 322; Coshocton, 372; Columbus, 426; Springfield, 405; Dayton, 410; Cincinnati, 456; Ironton, 477; Portsmouth, 478; and Piketon, 459.

To put these GDD accumulations into perspective, the following is an abbreviated listing of plant and insect species with their respective phenological event and average GDD accumulations at which these events occur. Due to variations in weather, temperature, humidity, etc., these events may occur a few days earlier or later than predicted by the average GDD. By looking at a city, town, or village nearby on the above list, or visiting the above website, one can see what is taking place in the landscape.

Red buckeye, first bloom, 265; blackhaw viburnum, first bloom, 269; imported willow leaf beetle, adult emergence, 274; Sargent crabapple, full bloom, 298; red horsechestnut, full bloom, 304; pine needle scale, egg hatch - 1st generation, 305; cooley spruce gall adelgid, egg hatch, 308; eastern spruce gall adelgid, egg hatch, 308; common lilac, full bloom, 315; 'Pink Princess' weigela, first bloom, 316; blackhaw viburnum, full bloom, 322; redosier dogwood, first bloom, 323; dwarf fothergilla, full bloom, 325; 'Winter King' hawthorn, first bloom, 328; lilac borer, adult emergence, 330; slender deutzia, first bloom, 338; Japanese kerria, full bloom, 342; common horsechestnut, full bloom, 344; red chokeberry, full bloom, 351; doublefile viburnum, first bloom, 353; Pagoda dogwood, first bloom, 363; red Java weigela, first bloom, 365; black cherry, first bloom, 368; common sweetshrub, first bloom, 371; lesser peach tree borer, adult emergence, 372; Ohio buckeye, full bloom, 374; holly leafminer, adult emergence, 375; Vanhoutte spirea, full bloom, 406; euonymus scale (first generation), egg hatch, 406; black cherry, full bloom, 419; Miss Kim Manchurian lilac, first bloom, 422; locust leafminer, adult emergence, 437; doublefile viburnum, full bloom, 444; black locust, first bloom, 467; common ninebark, first bloom, 478; oystershell scale, egg hatch, 497; and smokebush, first bloom, 501.

B. FROZEN FOOD. Frozen fruit is on the menu across Ohio this season. Repeated frost and freeze events have taken their toll on fruit crops - with crops seemingly getting through one event but continuing to decline with each subsequent freeze or hard frost. Peach crops in some areas are showing significant losses.

Rhubarb was a particular concern during this week's BYGL. Oxalic acid crystals, normally present in the inedible rhubarb leaves, can migrate down into the petiole (the stalk) in response to cold or freeze damage. Leaves of damaged rhubarb will have necrotic areas and the petiole will be soft or have dead areas. If there is any doubt as to the safety of harvesting rhubarb, discard the potentially damaged stalks and let new stalks develop.

C. NEED HELP IDENTIFYING OHIO'S WILDLIFE? As Ohio's wildlife rustles, shakes, slithers, or crawls its way into the warmer spring season, questions may arise on the identification of certain species of snake, salamander, bird, or butterfly. The Ohio Division of Wildlife has created many different field guides on Ohio's wildlife. These Identification Guides are available for free download at [http://www.wildohio.org] (scroll down and click on Publications), or contact 1-800-WILDLIFE to get free hard copies of the guides.

D. REMOVING A BAT FROM YOUR HOME. Occasionally, a bat will lose its way and end up in a living room, dining room, or bedroom. What are the steps to take to remove the bat? First of all, bats are generally not aggressive. However, it's important to remember that bats are wild animals and will bite defensively when handled. In addition, bats are mammals, and mammals can contract rabies. While rabies prevalence is rare in bats (less than 1% of bats have rabies), you should never handle a bat without gloves. For detailed instructions on how to remove a bat from a home, as well as removing a colony of bats, see [http://batcon.org/index.php/bats-a-people/bats-in-buildings.html].

E. IMPACTS OF WHITE-TAILED DEER ON FORESTS. The white-tailed deer has quite the history in Ohio, from extirpation in the early 1900's to a very successful reintroduction in the 1920's to population increases in much of the state over the past decades. In some areas of the state, populations are significantly higher than historic
levels, leading to substantial impacts on various ecosystems. Some of these impacts can have long-term ecological
effects, such as loss of diversity and ecosystem integrity.

A good deal of research concerning the impacts of white-tailed deer on ecosystems has occurred in forested areas,
as it is their preferred habitat. The effects deer can inflict on a forest are directly influenced by the number of deer
present; a high deer population means more hungry mouths and more browsing, a low deer population means less
browsing. To determine population numbers of deer, there are several indicators that give clues to the amount of
browsing occurring. One indicator is the diversity and presence of wildflowers, particularly species preferred by
deer, such as trillium. Trillium and other members of the lily family seem to disappear when there is an
overabundance of deer. The number of tree seedlings, stump sprouts, and saplings will also decrease as deer
increase. Finally, a browse line (the absence of plants from the ground up to 6-8') will become more obvious as
deer number increase. For an interactive tool for determining the level of deer impact in a forest, visit [http://www.deerandforests.org/home/habitat].

The loss of plants and plant diversity due to over browsing by deer can reverberate up through the food chain,
especially to insects and birds. The loss of plants and diversity can have adverse effects on the diversity and
abundance of insects, which serve as prey for many forest songbirds. The loss of plants can also mean loss of
shelter for small mammals, reptiles, and amphibians, and nesting sites for songbirds. Finally, a loss of native
vegetation can open the forest up to colonization by invasive species, such as garlic mustard and honeysuckle.

It's important to note that while too many deer can be a problem, so can too few deer. Eastern forests have evolved
with white-tailed deer and depend on their browsing as a disturbance, which can lead to an increased diversity of
plant species. In Pennsylvania, researchers found an overabundance of pin cherry in areas of the forest with low
deer numbers (10 deer per square mile). Pin cherry has the ability to outcompete other tree seedlings when highly
abundant, and deer browsing can effectively keep such species under control, allowing for more diversity.

So what is the magic number of deer to avoid negative ecological effects? Researchers from the US Forest Service
(USFS) have reported just-right populations of deer to be anywhere between 15-28 deer per square mile. Managing
and providing habitat can increase deer populations, and hunting can effectively reduce deer populations. When
deer were extirpated from Ohio, their top predators, mountain lion and wolves, where also extirpated, leaving
humans in the top predator position. Deer populations maintained at a stable level can lead to a healthy forest as
well as a healthy deer herd. Contact the Ohio Division of Wildlife (1-800-WILDLIFE) for questions and guidance
on deer management, including hunting licenses and permits.

F. THINK ABOUT CROSS POLLINATION WHEN PURCHASING FRUIT TREES. Spring is the perfect time
to plant fruit trees. When selecting fruit trees, it is important to think about cross pollination. Cross-pollination is
the transfer of pollen from one cultivar to the flower of a different cultivar. Many fruit trees are not self-fertile. For
example, the pollen from one "Jonathan" apple tree will not successfully fertilize flowers of another "Jonathan"
tree. Two compatible apple cultivars that bloom at the same time are needed for successful pollination and fruit set.
Hence, it is important to purchase and plant two trees of different cultivars. This is not always possible due to
space limitations. One way to get around this incompatibility is to by a tree that has been grafted with different
cultivars. Gary Gao noted that several garden centers in Central Ohio carry "3 in 1," which means three different
cultivars are grafted on the same tree. This is an excellent way to ensure cross pollination.

Sweet cherries and many pear cultivars also require cross pollination. Sour cherries, peaches and nectarines do not
require cross pollination. Northern highbush blueberries do not require cross pollination. However, cross
pollination is highly beneficial. It is also important to remember that pollinators are still needed to carry pollen
from one flower to next. Most of our fruit crops are pollinated by bees. Do not apply insecticides during bloom.

For more information on home fruit production, please refer to OSU Extension Bulletin 940, "Midwest Home Fruit
Production Guide." This bulletin can be purchased from OSU Extension offices or the OSU Extension eStore at
http://estore.osu-extension.org/
3. BUG BYTES.

A. GRASSHOPPERS ABOUND. Joe Boggs reported observing a localized population outbreak of grasshoppers in southwest Ohio near the Little Miami State Park, Fort Ancient Access, along the "Rail to Trail" bike path. The grasshoppers were all mid-to-late instar nymphs making a positive identification problematic; however, they appear to be a type of "spurthroated grasshopper" (subfamily Cyrtacanthacridinae) belonging to the genus *Melanoplus*. Grasshopper numbers were high enough to cause bicyclists to stop to investigate what was causing the rustling sounds coming from the brush along the bike path.

Although the numbers were dramatic, they were not unheard of. Grasshopper populations typically fluctuate widely in cycles. High populations may be present for two to four years followed by low to moderate populations for several years. Grasshoppers are mostly a nuisance during normal years with low populations; however, in outbreak years, grasshoppers can destroy unprotected gardens and threaten small trees and shrubs. Indeed, Joe noted that the grasshopper nymphs were producing heavy feeding damage on mayapple as well as small trees and shrubs. Oddly, he could find no feeding damage on grasses.

Unfortunately, the potential for heavy grasshopper damage increases as summer progresses. Adults are more prone to move into yards and gardens in September and October. Severe problems may arise when adjacent agricultural crops or grasslands mature or are harvested and grasshoppers move to find new food sources. Defoliation is the primary injury to plants, but fruit and ripening kernels of grain will also serve as food. Indeed, grasshoppers will feed on just about anything as long as they do not detect a feeding deterrent. Reports are common of grasshoppers eating paper, paint, window screen, window or caulking, fence posts, hoe handles, etc. during population outbreaks. Heavy infestations of grasshoppers may require chemical treatment to reduce or prevent serious damage to sensitive plants.

B. HAWTHORN HORRORS. Dave Shetlar and Joe Boggs reported that "blotch" mines produced by the HAWTHORN LEAFMINER (*Profenusa canadensis*) are now very evident in central and southwest Ohio, respectively. Joe Boggs also noted that HAWTHORN POD GALLS produced under the direction of a midge fly (*Trishormomyia crataegifolia*) are now almost fully expanded and turning from green to red in his part of the state.

Larvae of the leafmining sawflies live between the upper and lower leaf surfaces where they consume leaf parenchyma producing large, reddish-brown, blister-like blotch mines. The mines usually extend from the leaf margin toward the midvein and may be mistaken for freeze/frost damage. The sawfly has one generation per year and larvae appear to be relatively far along in their development meaning that most of the damage for this season has already occurred. Imidacloprid (e.g. Merit, Xytect, etc.) has proven effective in controlling this sawfly leafminer when applied as a soil drench in October or November.

Hawthorn pod galls arise from veins on the underside of the leaves of their namesake host. The elongated galls typically measure around 1/2-3/4" in length. Mature galls become crimson red and this coloration coupled with the gall's sometimes irregular surfaces gives rise to the alternate common name of HAWTHORN COCKSCOMB GALLS. Opening the hollow galls will reveal the tiny white, semi-transparent midge fly maggots that are responsible for directing plant gall formation. The galls do not disrupt vascular flow in the leaf veins, so infested leaves remain functional. Although the galls cause little harm to the health of the tree, heavily galled leaves become deformed and detract of the aesthetic value of infested trees.

C. CALICO SCALE PUFFING-UP. Calico scale (*Eulecanium cerasorum*) females are now "puffed-up" and pumping out honeydew in southwest Ohio. The clear, sugary honeydew drips onto the leaves, stems, and branches of scale infested trees. Understory plants, parked cars, sidewalks, lawn furniture and slow-moving gardeners beneath infested trees may also become coated with the sticky honeydew. The scale is capable of excreting copious quantities of honeydew, and this "scale poo" may be colonized by black sooty molds producing an unsightly, black appearance. Calico scale is a globular soft scale that is about 1/4" in diameter. It has distinct white patches on a black background making the scale easy to recognize, particularly on bark and branches that are blackened by sooty mold.
Calico scale has one generation per year and overwinters on twigs as partially developed nymphs. As spring progresses, the nymphs feed, molt, and mature into globular adults. Eggs are laid in late spring to early summer, and the hatching 1st instar nymphs migrate to the undersides of leaves where they attach themselves to veins to suck fluid from phloem vesicles. Like the adults, the nymphs also exude sugary, sticky honeydew, although in lower quantities compared to the adults. As fall approaches, the crawlers move back to stems where they overwinter.

Calico scale can infest a wide variety of deciduous trees including dogwood, honeylocust, magnolia, ornamental fruit trees, sweetgum, and witchhazel. The scale is seldom a direct killer of established landscape trees; however, heavily infested trees may lose enough sap to cause them to succumb to other stress related factors. In past years, high populations of calico scale crawlers produced visible damage to honeylocust leaflets in central and southern Ohio. Their feeding activity caused leaflets to turn yellow and then brown with heavy damage producing noticeable defoliation. The leaf discoloration and defoliation were sometimes mistaken for moisture stress.

Trials in Ohio have indicated calico scale can be managed using soil drenches of neonicotinoid systemic insecticides such as imidacloprid (e.g. Merit, Marathon, Xytect, etc.), clothianidin (e.g. Arena), and dinotefuran (e.g. Safari) made from September into November. There is anecdotal evidence that soil drench application of imidacloprid made now or a soil drench application of dinotefuran made later this spring may provide effective suppression of the crawlers.

D. STRANGE BEHAVIOR. Strange behavior summarizes some of the observations reported from beeyards throughout the state. The very warm weather followed by several weeks of more seasonable temperatures may be the cause of at least some of these odd observations. Colonies of honeybees (Apis mellifera) got an early start to the year, taking advantage of the heat and nectar flows that occurred in late March. This buildup of bees and brood, however, comes at a cost. Egg laying and brood rearing requires either adequate honey and pollen stores or a continuous incoming supply of both.

The weeks of cold weather inhibited the flight of field bees, leaving some colonies without a sufficient food supply. As a result, there have been incidences of late spring hive loss due to insufficient stores in hives that were doing well as recently as late winter. This led to a question regarding late spring feeding. In cases where large colonies of bees are stranded without stores or incoming resources, it may be necessary to feed hives to keep them going until good flying weather and nectar flows resume.

E. GYPSY MOTH TREATMENTS BEGAN THIS WEEK. The Ohio Department of Agriculture (ODA) began treating for the gypsy moth in southern Ohio this week. Gypsy moths are invasive insects that attack more than 300 different types of trees and shrubs, with oak being the preferred species. In its caterpillar stage, the moth feeds heavily on the leaves of trees and shrubs limiting their ability to photosynthesize. A healthy tree can usually withstand only two years of defoliation before it is permanently damaged or dies.

Currently in Ohio there are 51 counties under gypsy moth quarantine, limiting the movement of regulated articles out of those counties. To combat this problem, the department uses different types of treatment strategies to slow the spread of gypsy moth in Ohio. Officials have three programs aimed to manage the pest, including:

* The "Suppression" program, which occurs in counties where the pest is already established. Landowner(s) must voluntarily request treatment to help suppress populations.
* The "Slow-the-Spread" program, which occurs in counties in front of the larger, advancing gypsy moth population. In these counties, officials work to detect and control isolated populations in an effort to slow the overall advancing gypsy moth infestation.
* The "Eradication" program, which occurs in uninfested areas where an isolated population occurs due to the import of infested firewood or outdoor equipment. Department officials use aggressive eradication efforts to eliminate gypsy moth from these areas.

Treatments used for gypsy moth control include:
*Foray (Btk), a compound derived from a naturally occurring bacteria found in the soil that is effective in gypsy larvae control
*Mating disruption product, flakes or liquid that disrupt the male moth's ability to locate females during mating season
*Dimilin, an insecticide that attacks gypsy moth larvae
*Gypchek, a bio-insecticide specifically used for control of gypsy moth

The department uses different types of treatments, depending on the location and extent of the infestation. All treatments require an aerial application. Foray, Dimilin and Gypchek treatments are beginning now, and mating disruption treatments will begin in June. The treatments are not toxic to humans, pets, birds or fish.

F. LOTS OF MOUTHS TO FEED - HUNGRY PESTS PSA UNVEILED. The new Hungry Pests public service announcement (PSA) introduces America to a nefarious drifter made entirely of invasive insects and pests who's trying to eat his way through your state. The PSA dramatizes how these pests can spread by hitchhiking on the things people move and pack and reminds us all to "Leave Hungry Pests Behind."

Check out this USDA APHIS website which allows viewers to track pests by state and encourages everyone to become involved in stopping hungry pests in the United States.

G. WINDSHIELD WIPES. BYGLers also ran into a few other insect and mite pests this week including:

*First generation EUONYMUS SCALE (Unaspis euonymi) nymphs (crawlers) are appearing on their namesake host in southwest Ohio. The crawlers of this armored scale appear as tiny tannish-yellow flecks on upper and lower leaf surfaces and can be easily seen with a 10X hand-lens. The crawlers have not yet settled and produced their hard, waxy coverings (tests) meaning that they remain susceptible to topical, contact insecticide applications. This scale can also be suppressed by using dinotefuran (e.g. Safari) which is a systemic insecticide. Systemic insecticides have a lower impact on beneficial insects such as the very tiny lady beetles in the genus Sethorus that are commonly observed lurking among the scale; like wolves among sheep.

*Dave Shetlar reported that first generation PINE NEEDLE SCALE (Chionaspis pinifoliae) crawlers, which is another armored scale, are now appearing on conifer hosts in Central Ohio. The tiny, mobile, rusty-red crawlers can be detected with a hand-lens. Crawler populations can be reduced using a contact insecticide including soaps, oils, or standard insecticides labeled for use on the infested conifer species. Infested trees should be closely monitored because eggs may hatch over an extended period time requiring a second insecticide application to kill the late arrivers. There are two generations per season in Ohio.

*In a late-breaking report, Dave also reported that he and his entomology students found a very cold, and presumably lonely, JAPANESE BEETLE (Popillia japonica) in central Ohio. Dave noted that he has found adult beetles in mid-May in Ohio, but the last week of April is the earliest that he has ever found an adult out-and-about in the state. Such an early appearance is highly unusual since peak adult emergence does not typically occur until late-June to early-July in the central part of the state. The early appearance of the beetle is most likely just a life cycle anomaly. It does not represent a general shift in the timing of beetle emergence, nor does it necessarily represent a portent of bad things to come!

4. DISEASE DIGEST.

A. BEECH ANTHRACNOSE. Beech anthracnose was very evident last season in southwest Ohio as well as parts of Kentucky and Indiana owing no doubt to record-setting April rainfall in the region. We reported in BYGL 2011-07 (05/19/11) that the fungal disease caused significant defoliation on American beech. Joe Boggs reported that he is seeing the disease again this season on trees that were heavily infected last year. He noted that while leaf infections are very evident, the overall levels of infection for entire trees is much less than last season. This fungal
disease is not commonly seen in Ohio. BYGLers speculated that although environmental conditions have been starkly different this spring compared to last season, the noticeable infections this season may be partially due to warm, wet March conditions coupled with the heavy inoculum produced last season.

Beech anthracnose is caused by the fungus, *Discula umbrinella*. Early symptoms are marked by the appearance of irregular brown leaf spots that are usually positioned on or near leaf veins; it almost looks like the dead (necrotic) tissue is spreading from the veins. As the symptoms progress, the dark brown necrotic tissue expands to include large sections of the leaf. Eventually, infected leaves will drop from the tree. Anthracnose symptoms are very different from leaf browning caused by physiological leaf scorch. With anthracnose, the necrotic tissue expands from the inner portions of the leaf outward. With leaf scorch, the browning first appears along the leaf edges and expands inward.

B. OAK LEAF BLISTER. Joe also reported that early oak leaf blister symptoms are becoming evident in southwest Ohio on the namesake host of this fungal disease. The leaf disease is caused by the fungus, *Taphrina caerulescens*. Readers may recognize that this is the same genus as the fungus (*T. deformans*) that causes peach leaf curl.

The oak leaf blister fungus overwinters in infested buds and twigs. Leaf infections occur during moist periods in the spring as leaves emerge. Early symptoms appear as raised, blister-like, light-green to yellowish-green spots on the upper leaf surface matched with deep depressions on the lower leaf surface. Eventually, the leaf "blisters" become very apparent as they turn dark brown to brownish-black. The blisters can be evenly distributed across the leaf and are distinct from the more angular, vein-based symptoms produced by oak anthracnose.

Although the obvious blisters may reduce the aesthetic appeal of heavily infected trees, the disease typically causes little harm to the overall health of the trees. Even leaves with a relatively large number of infections will retain a significant percentage of functional tissue for photosynthesis. Thus, control measures are generally not required.

5. TURF TIPS.

A. HIGH NUMBERS OF COMMON ARMYWORM MOTHS. Dave Shetlar reported that high numbers of common armyworm (*Pseudaletia unipuncta*) moths are currently being captured in black light traps. Curtis Young also reported observing numerous adults at porch lights at least when the night temperatures were above 50F. The caterpillars of these moths feed on grasses. Sometimes these grasses are agricultural field crops (e.g. wheat and corn), and sometimes these grasses are turf-type grasses. This is especially significant to golf course superintendents, athletic field managers and home owners with turf adjacent to fields of wheat. Another aspect of this alert is there is little or no corn emerged in fields in many parts of the state and there is less winter wheat growing than in many preceding years, thus turfgrass may be more highly targeted this year.

When common armyworm caterpillars are young and tiny, they go unnoticed, but as they grew, they consume greater and greater quantities of food. As food supplies dwindle, an infestation of common armyworms may move across turfgrass en mass, thus the name armyworm, eating everything in their path. Turfgrasses should be monitored closely so as not to miss an infestation. Insecticides may need to be applied as a rescue treatment to limit injury. There have been cases where lawns disappeared overnight leaving nothing behind except bare soil. Curtis Young has also been called in on a case where huge numbers of common armyworms were chased out of a hay field by mowing. As they marched, they encountered an in-ground swimming pool. Like lemmings marching to the sea, hundreds of armyworms committed mass suicide by dropping into the pool. Their little carcasses clogged the pool filters for days.

6. INDUSTRY INSIGHTS.

A. WEATHER PLAYING HAVOC WITH HERBICIDES. Randy Zondag expressed concerns that landscapers and nursery growers may be disappointed with the performance of a number of their herbicides this spring. This is
not to say that there is anything wrong with the herbicides, rather it is the radically changing weather that Ohio and surrounding states are experiencing. The record setting high temperatures that occurred in March boosted a number of weed species into high gear. Winter annuals that survived the mild winter of 2011-12 were more than impressive this spring. Massive patches of CHICKWEED, YELLOW ROCKET, FIELD PENNYCRESS, HAIRY BITTERCRESS, HENBIT and PURPLE DEADNETTLE to name a few of the winter annuals, blanketed agricultural fields and any open disturbed area that had no other plant material growing on the soil. Most if not all of these weeds flourished in the heat of March and in the process produce voluminous quantities of seeds. This occurred before anyone even thought about getting out into the fields to apply herbicides…what a mess!

Then, when it was time to apply herbicides, it quit raining and turned cold. Producers may be disappointed with their pre-emergent herbicides, not because they aren't good herbicides, but because there has been little to no rain to activate these herbicides. These products could still be sitting on the surface of the soil in their original form. Until the rains return, they will not be effective. In the meantime, weeds are emerging unaffected by the presence of the herbicides. Contact and translocated herbicides may not be faring much better. Part of the problem in their case is the colder temperatures that have moved into Ohio over the past couple of weeks including frost and snow flurries. Under these conditions, plant functions have slowed, tender leaves have been frosted off and translocation within the plants has slowed, none of which is good for herbicide activity. There are going to be herbicide challenges out in the fields this year and weed control may be a bigger problem this year than in previous years, not to mention the buildup of huge seed banks.

B. US FOREST SERVICE AND OHIO'S DAVEY TREE EXPERT RECOGNIZED THIS ARBOR DAY. The Arbor Day Foundation has recently announced that 16 individuals and organizations will receive a 2012 Arbor Day Award in honor of their outstanding contribution to tree planting, conservation and stewardship.

The US Forest Service will receive A Legacy of Partnership Award, the highest honor bestowed by the Foundation this year, and Governor Martin O'Malley will receive the first-ever Vision Award in honor of his contribution to urban and forestland tree planting in the State of Maryland.

From its inception, a legacy of partnership has been central to the mission of the US Forest Service, and that same legacy extends to its work with the Arbor Day Foundation. With the Foundation and the National Association of State Foresters, the Forest Service in 1976 launched Tree City USA to provide resources and recognition to communities for sustained investments in tree management and care. Today, more than 140 million Americans in 3,500 communities live in a Tree City USA.

The US Forest Service has supported the planting of 24 million trees in more than 60 of our national forests, in partnership with the Foundation. The support of the Forest Service was also instrumental in the construction of Lied Lodge and Conference Center at Arbor Day Farm, where many of the Foundation's core principles come to life.

Another recipient of a special honor is The Davey Tree Expert Company, which will be presented with a Beacon Award. With US and Canadian operations in more than 45 states and five provinces, Davey Tree provides a variety of tree care, grounds maintenance and consulting services for the residential, commercial, utility and government markets. Founded in 1880, Davey Tree is employee-owned and has more than 7,000 employees. The company has also played a critical role in developing the i-Tree software suite to provide scientific analysis and benefits assessment for urban forestry advocates and managers.

7. WEATHERWATCH. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from April 1-25, 2012, with the exception of the soil temperatures which are readings from Wednesday, April 25, 2012 at 6:05 p.m.

Many of the BYGLers reported being on the receiving end of frosts this past week. In fact, earlier in the week, a winter storm warning was issued for the eastern sea-board, reaching as far west as northeast Ohio. The warning was lifted and the buckeye state dodged the bullet.
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<tbody>
<tr>
<td>Ashtabula</td>
<td>NE</td>
<td>56.4</td>
<td>36.9</td>
<td>0.53</td>
<td>2.9</td>
<td>60.01/59.84</td>
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<td>Wooster</td>
<td>NE</td>
<td>60.0</td>
<td>37.7</td>
<td>0.74</td>
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<td>55.63/54.23</td>
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<tr>
<td>Hoytville</td>
<td>NW</td>
<td>62.8</td>
<td>37.4</td>
<td>0.48</td>
<td>2.8</td>
<td>55.83/55.39</td>
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<tr>
<td>Columbus</td>
<td>Central</td>
<td>64.3</td>
<td>40.9</td>
<td>1.29</td>
<td>3.2</td>
<td>53.64/53.35</td>
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<tr>
<td>Piketon</td>
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<td>39.3</td>
<td>0.61</td>
<td>2.5</td>
<td>59.73/57.87</td>
</tr>
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For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm].

8. COMING ATTRACTIONS.

A. 19TH ANNUAL PLANT DISCOVERY DAY - SATURDAY, MAY 5, 2012. Plant Discovery Day is a premier plant and art sale featuring hard-to-find annuals and perennials, herbs, woody plants and art for the home and landscape on the OARDC campus in Wooster, Ohio. The Bug Zoo and lunch will also available. Proceeds support arboretum programs and internships.

Schedule of Events: 9:00 a.m.-12:30 p.m., Silent Plant & Art Auction; 10:00-11:00 a.m., Guided Walk; 11:00 a.m.-12:00 p.m., Oral Plant & Art Auction; 11:00 a.m.-12:00 p.m., Guided Walk; and 1:30-2:30 p.m., Guided Walk. Additional information can be found on the Secrest Arboretum website at [http://secrest.osu.edu/].

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

9. BYGLOSOPHY: "Of all the wonders of nature, a tree in summer is perhaps the most remarkable; with the possible exception of a moose singing "Embraceable You" in spats." - Woody Allen

APPENDIX - ADDITIONAL WEBSITE 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/
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 April 24th conference call: Barb Bloetscher (Ohio Department of Agriculture State Bee Specialist); Joe Boggs (Hamilton); Julie Crook (Hamilton); Tim Malinich (Erie); Cindy Meyer (Butler); Nancy Taylor (C. Wayne Ellet Plant and Pest Diagnostic Clinic (CWEPPDC)); Dave Shetlar (Entomology); Amy Stone (Lucas); Marne Titchenell (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.

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