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This is the 3rd 2013 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 - PANSIES AND VIOLAS (Viola spp.). These harbingers of spring are enjoying this spring weather compared to last year's growing season. Pansies and violas like it cool and last spring, they really didn't have a chance to show off. This year they are in full glory right now in most Ohio gardens and garden centers.

There are numerous cultivars on the market with a wide variety of flower colors and color combinations. Don't forget to stop and smell the flowers as many of them have a nice fragrance. Pansies take full sun and shade. However, keep in mind that they will last a bit longer in the shade. They also do quite well in a container garden. In this situation, when they start looking a bit straggly and have hit the end of their season, dig them out of the container and plant them in the flower beds. They just might come back next season, giving you more than one year of display.

*PERENNIAL - LARGE FLOWERED TRILLIUM (Trillium grandiflorum). Pam Bennett selected this plant as the perennial of the week in honor of its glorious bloom showing off right now in Clifton Gorge Nature Preserve.
Dubbed Ohio's official state wildflower in 1986, large-flowered trillium at one time was found in every county in the state. The 3-petaled flowers are held erectly atop a 1/2 - 1' stem, right above the 3 leaves. If you look down on a plant from the top, you will see the 3-petaled flower surrounded by 3 sepals, on top of 3 leaves. They thrive in fertile woodland soils and bloom in the early spring.

A reminder to all who enjoy our woodland flowers - DO NOT DIG THEM AND TAKE THEM HOME! First of all, spring ephemerals dug at this time don't usually survive transplanting; more importantly, if everyone did this, we wouldn't have anything left to enjoy in our natural areas. Trillium can be purchased in pots or bare-root in garden centers and can be planted now. Ohio is blessed with incredible natural areas and BYGLers encourage you to get out and enjoy them during the spring wildflower season. For a list of nature preserves and to find the one nearest you, go to: http://www.ohiodnr.com/tabid/860/Default.aspx

*WOODY - SAUCER MAGNOLIA (Magnolia soulangiana). Central and southern Ohioans have had the opportunity to really enjoy the splendor of this plant in bloom this season. Periodically we see a hard frost knock off the flowers when they are at their peak, destroying the bloom season. Saucer magnolia (and cultivars) is a great medium-sized flowering tree that provides early spring color and also looks good during the summer. They get to around 25' tall and just as wide and have a white bloom with a pinkish-purple blush. They grow in full sun to part shade and are very tolerant of clay soils. The plant grows either as a low-branched tree or a multi-stemmed shrub depending upon how it was started in the nursery. Summer leaves are a medium-green and winter branching structure adds to the landscape. Give it ample room to grow in the landscape and it provides years of beauty.

*VEGETABLE - ASPARAGUS (Asparagus officinalis). Asparagus is one of the earliest vegetables that can be harvested from the garden. A member of the lily family, this perennial produces pounds of edible spears from a crown planted 5 - 6" below the soil surface. Each crown will eventually produce about 1/2 lb. of spears every year.

Since a one-time planting of asparagus will bear for many years (even decades) care should be taken in its installation. Asparagus plants are usually sold as roots. The recommended planting method is to dig a trench 6" deep, working in copious amounts of compost. Asparagus grows best in soils with a pH between 6.5 - 7.5 so add lime if needed. Place the roots 18" apart in the bottom of the trench, fertilize and cover with soil.

To allow the crown and roots to develop do not harvest asparagus spears for the first season. One can make a light harvest (over a few weeks) the second season. A full harvest will normally begin the third year after planting.

Fresh asparagus spears will emerge daily and can be harvested over a 6 or 7 week period. When spear diameter begins to decrease significantly, the harvest should cease and the plant allowed to produce mature ferns. The ferns spend the remainder of the year preparing for next year's harvest.

*WEED - HAIRY BITTERCRESS (Cardamine hirsuta). Hairy bittercress is an annual weed that usually germinates spring and summer but can also proliferate as a winter annual as well. This weed has been a problem in greenhouses and nurseries as well as in the landscape.

Even though the name suggests a hirsute appearance (fuzzy or hairy), this weed actually looks glossy. When first emerging, the cotyledons and first true leaves are, in fact, covered with hairs. As the plant develops the hairy characteristic becomes less apparent. This weed will top off at about 12'', forming a close tuft of erect stems with alternate leaves. The stems are topped by a cluster of white flowers, followed by long seed pods called siliques. These pods dry and explosively expel the seeds, propelling them to other parts of the nursery, greenhouse or landscape.

Control is achieved through well-timed pulling, cultivation or the use of pre-emergent herbicides. Broadleaf or non-selective herbicides will also work on hairy bittercress. However, any control must be done prior to
flowering or fruiting, or the rapidly developing pods will quickly reach maturity, putting out seed for next season's crop.

2. HORT SHORTS.

A. WOODLOT INVASIVES. As a sea of green begins blanketing the forest floor and the mid-story comes alive with color, you might be relieved that spring has finally arrived. After months of seeing nothing but grey, the first glimpse of green in the spring can be a refreshing sight. What you might not realize, however, is that some of the plants that provide early season color in the forest are invasive.

As a general rule, plant invaders are the first plants to leaf out in the spring and the last to lose their leaves in the fall. A longer growing season is one of many characteristics that allow these plants to outcompete their native counterparts. Woodlot owners should make a point to explore their property in these early weeks of spring and identify the plants that are beginning to show color to determine whether they may be invasive.

AMUR HONEYSUCKLE (*Lonicera maackii*), MULTIFLORA ROSE (*Rosa multiflora*), and EUROPEAN PRIVET (*Ligustrum vulgare*) are three common invasive plants beginning to leaf out in forest mid-stories this time of year.

Amur honeysuckle is an upright deciduous shrub with long arching branches. White flowers that turn yellow with age are produced in pairs in spring and early summer. Bright red fruits appear in the fall and are eaten by birds (which aids in the spread). This plant is a common invader of forest edges, interiors of open woodlands, old fields, and roadsides.

European privet is also a deciduous shrub. This invader produces small white flowers in clusters at the end of branches in early summer. Small, purple to black fruits are produced in the fall and persist throughout the winter. This plant is a common invader of forests and riparian areas.

Multiflora rose is a thorny shrub with long arching canes. Flowers are white to pink, five-petaled, and appear in late spring and early summer. Red rose hips form in summer, turn leathery, and persist into the winter. This plant is a common invader of fields, forests, and riparian areas.

B. VORACIOUS VOLES. Joe Boggs reported receiving phone calls concerning MEADOW VOLE damage to woody plants. Marne Titchenell also reported similar damage, as well as turf damage caused by voles creating surface tunnels beneath the snow this past winter. Voles are active year-round, constructing runs, or surface tunnels, through the grass to and from feeding areas or areas of cover (such as tall grasses). Once winter is over, the snow melted and gone, homeowners are often surprised to see an intricate array of surface tunnels winding through their lawns. Closer inspection may turn up feeding damage to woody landscape plants, such as junipers. Voles typically focus their winter feeding to main stems near the crowns of the plants. Damage includes large areas of bark stripped down to the white wood which eventually causes attached branches to turn brown. Small, parallel teeth marks that looked like they were made by tiny chisels are usually very evident, the calling-card of voles. However, voles usually do not feed on every main stem. Consequently, browned branches are made more obvious when surrounded by healthy, green, unaffected foliage. Symptoms produced on juniper may look similar to damage caused by exposure to glyphosate (e.g. Roundup) where branch tips were sprayed during edging applications of the herbicide.

Voles are small, stout-bodied rodents with partially hidden ears, small beady eyes, short legs, and a short tail that is covered in fur. They range in size from 5 - 7" in length. Voles have a number of common names including "meadow mice," and "field mice;" however, they belong to the genus *Microtus*, not the genus *Mus* which includes the HOUSE MOUSE (*Mus musculus*). There are three species of voles in Ohio. The MEADOW VOLE (*Microtus pennsylvanicus*), PINE VOLE (*Microtus pinetorum*), and PRAIRIE VOLE (*Microtus ochrogaster*) are all brownish-gray in color, with more auburn tones in the pine vole, and brownish-yellow tipped fur in the prairie
Voles are herbivores, feeding on grasses and other green vegetation, seeds, grains, tubers, and roots. Pine and prairie voles aren't common across Ohio; therefore damage by voles in landscapes and lawns is likely due to meadow voles.

Voles live both above and below ground (semi-fossorial). In addition to constructing runs, or surface tunnels, they will also construct below ground tunnels, which are marked by a 1 1/2 - 2" diameter hole. Voles are sometimes mistaken for mice, moles, or other rodents. Mice are surface dwellers and will reside in buildings. They also have long tails that extend nearly half the length of their body, whereas voles have short tails. Moles live below ground (fossorial) and have large paddle-like front paws. Also, moles are meat eaters while voles and mice are plant eaters. Their feeding behavior allows voles to be controlled with poisoned baits. Extreme care should be taken in deploying baits to avoid killing non-target animals; read and follow label directions! Voles can also be trapped with standard mouse traps; however, this method is most effective when populations are low, not during "outbreak" years when vole populations are extremely high.

C. BUT I'M NOT AN ORPHAN! Spring to early summer is the time of year when one may stumble upon a nest or den of young wildlife babies. Perhaps it's a tightly woven grass nest filled with tiny, newly hatched birds or possibly a small depression under a bush lined with fur and filled with 4 - 5 young and fuzzy rabbit kits (baby rabbits are called kits, which is short for kitten). Many times, the parents are absent when wildlife young are stumbled upon, and unless something is amiss, for example a nest knocked out of a tree or wounds/bleeding present on the young, the best thing you can do is leave the babies alone.

Many times, the parent or parents will leave their young alone to search for food. For example, female cottontail rabbits will often leave their kits alone yet concealed while she feeds during the day, only returning at night to care for them. Female deer also employ this same strategy, which also serves to protect the young from being found by predators.

Sometimes wildlife babies appear incapable, but are in fact self-sufficient. Rabbit kits mature very quickly, leaving the nest after 3 weeks as small (and very cute) versions of their parents. A small baby rabbit with erect ears and open eyes does not need assistance. Neither does a young bird with feathers fully covering their body.

Wildlife parents are generally very committed to their young and will usually only abandon them if there is an injury or death. Be sure to give the parents plenty of time to recover their young. If the young animal is not recovered, or if there are injuries present, contact a wildlife rehabilitator. A list of country rehabilitators is available on the Ohio Division of Wildlife's website (see link below). Always think before you act - even a young animal can bite or scratch, and in the process potentially spread a disease or parasite. Leave the capturing and caring for injured or truly abandoned animals to the trained rehabilitators. If you have any questions, call the Ohio Division of Wildlife before taking action at 1-800-WILDLIFE.

3. BUG BYTES.

A. FIREWOOD BEETLES FLARE-UP. This is the time of the year when a number of beetles can emerge from firewood stored in or around homes to the surprise and consternation of homeowners! Curtis Young reported that BANDED ASH BORERS (Neoclytus caprea) are emerging from firewood in northwest Ohio and Joe Boggs noted that he has received e-mail images of PAINTED HICKORY BORERS (Megacyllene caryae) that have emerged from firewood in the southwest part of the state. Both beetles are native to North America and belong to the beetle family Cerambycidae. Members of this family are referred to as "longhorned beetles" because of their unusually long antennae; however, the antennae of banded ash borer and painted hickory borer are not particularly long.
Both beetles have tapering, cylindrical, 3/4 - 1" long black bodies covered by yellow to light-yellow or cream-colored markings. The wing covers (elytra) on the banded ash borer have two distinct white circles at the front, which look like shoulder-pads, followed by two thin, white transverse bands. The band closest to the circles looks like a flattened "M." The underside of the abdomen sports yellow and black bands, thus the common name.

The painted hickory borer has rows of horizontal yellow bands on the upper surfaces of the head and thorax. The first marking from front-to-back on the elytra is also a yellow horizontal band; however, the second marking appears as a distinct "W" that is light yellow to cream-colored. The remaining markings are yellow and appear as broken W-shaped bands. The beetles look very similar to LOCUST BORERS (M. robiniae); however, painted hickory borers emerge from cut wood in the spring and locust borers emerge from live trees in late summer to early fall.

Despite their common names, both beetles infest a wide range of hardwoods. Banded ash borers target ash, hickory, elm, and occasionally, white oak. Painted hickory borer infests hickory as well as ash, black locust, hackberry, honeylocust, oak, Osage orange, walnut, and butternut. Fortunately, painted hickory borers only infest dead wood that has been cut for less than one year and banded ash borers infest dying or recently dead trees. In fact, both beetles are considered forest products pests since they often target fresh-cut logs to be used for lumber or firewood. The beetles will not infest older dead wood; they will not infest wood that has been dried or processed into home furnishings, or used as structural wood. So, beetles that emerge from infested firewood in or around a home are only nuisance pests.

B. IT'S SPRINGTIME AND IT'S TICK TIME. Curtis Young reported that he was reminded the hard way that with the warm temperatures of spring comes the renewed activity of ticks. While taking pictures of spring blooming squill in an abandoned farmstead's overgrown yard, he had apparently picked up some uninvited hitch hikers that were looking for a blood meal. As he left the premises, he felt a slight tickling sensation on the nape of his neck and when he reacted to the tickle, he felt something in his hair...IT WAS A TICK! YUK! Even though Curtis is an entomologist and enjoys working with most things in the insect world, he hates ticks! By the time he left the area, he had a second one in his hair AND the next day, after putting on the same jacket he had been wearing, a third tick that hadn't quite made it to its target area the day before, found its way to his head as well. All 3 ticks were removed before they had a chance to embed their mouth parts into a feeding site, but it was still a rude reminder that on warm moist days, the blood-thirsty ticks are up and actively questing for an unsuspecting potential host to latch onto.

The uninvited passengers on Curtis were AMERICAN DOG TICKS (Dermacentor variabilis) which is the most frequently encountered tick in Ohio. Although, there are over 12 different species of ticks that have been reported to occur in Ohio. The American dog tick can be easily identified by the light and dark brown mottled color patterns on its body. Ticks possess harpoon-like barbs along their mouths and eight crablike legs along their one-piece, oval bodies that help them to adhere to a host once they have grabbed onto the host. American dog ticks are three-host feeders. Specifically, each developmental stage feeds on a different host. As soon as the eggs hatch, usually in the early spring, the small six-legged larvae attach and feed on small mammals, such as the white-footed mouse and the meadow vole. After less than a week's time, they dislodge from their host, shed their skin, and develop another pair of legs. The second host is another small rodent which will give the tick enough nourishment to grow to an adult size. Adult ticks mate and feed on larger mammals, including dogs and humans. Adults are most abundant from mid-April to mid-July. Female ticks are known to be prolific egg producers.

American dog ticks prefer overgrown vacant lots, waste farm fields, hiking trails, and other habitats with tall herbaceous plant material. They wait on these plants for a suitable host to brush against them. At that point they use their barbs and claws to latch on. Once on a suitable host, they crawl upward and take a blood meal. Ticks are known vectors of diseases and should be removed promptly from humans and pets. One can manage tick populations by simply eliminating their habitat. This can be accomplished through trimming with weed-wackers and/or mowing tall herbaceous plants. If mechanical controls are not practical, chemical controls are available as well. For personal protection, there are a number of effective repellents that can be applied to clothing.
C. PLANNING TO PROTECT ASH TREES FROM EAB - TIMING IS IMPORTANT. The EMERALD ASH BORER (EAB) has killed millions and millions of ash trees in urban, rural, and forested settings. The beetle was first discovered in 2002 in SE Michigan, and Windsor, Ontario. Almost 13 years later, EAB has been found in 19 states. Over the years, scientists have learned much about this non-native insect and methods to protect ash trees.

There are several options available and research has shown that treatments can be effective. To answer questions that homeowners, communities, and tree care professionals have, researchers from Ohio State University, Michigan State University, Purdue University, University of Wisconsin, and University of Illinois co-authored a bulletin, Insecticide Options for Protecting Ash Trees From Emerald Ash Borer. Additional treatment related resources include: Emerald Ash Borer Management Statement; and Potential Side Effects of EAB Insecticide FAQs. These resources are available on the OSU AshAlert website at [http://ashalert.osu.edu](http://ashalert.osu.edu) or on the regional EAB website at [http://emeraldashborer.info](http://emeraldashborer.info).

While there isn't a single treatment plan or one application method that works best under all circumstances, the timing of the treatments can make or break effectiveness and ultimately the results. Studies have also shown that it is best to begin using insecticides while ash trees are still relatively healthy. Trees exhibiting more than 50% die-back, are probably too far gone and treatments are usually not recommended.

Researchers have learned that if the canopy of an ash tree is already declining when insecticide treatments are initiated, the condition of the tree may continue to deteriorate during the first year of treatment. In many cases, scientists observed that the canopy will begin to improve the second year of treatment. This lag in the reversal of canopy decline probably reflects the time needed for the tree to repair its vascular system after the EAB infestation has been reduced.

Methods of applications include soil injection, soil drench, trunk injection, systemic bark sprays, and preventive bark and foliage cover sprays. Recommended timing for soil injections and soil drenches is mid to late spring. Trunk injections are typically made beginning in May - mid June, as it doesn't take as long for the product to be moved through the tree. Preventative bark and foliage cover sprays are usually made in 2 applications at 4 week intervals. The first of the treatments should occur when black locust is blooming. This is typically in early May in southern Ohio, and late May in northern Ohio.

Homeowners may want to treat their trees themselves using an over-the-counter soil drench product. Trees greater in size than 15" diameter at breast height (DBH) should be treated by a licensed pesticide applicator.

Last month, Dr. Dan Herms presented a web-based session as part of Emerald Ash Borer University (EABU) - A Research Update on Insecticide Options. This session, and other hour long EAB related sessions can be viewed from the Regional EAB website at [http://emeraldashborer.info](http://emeraldashborer.info).

D. DIGGING DEEPER DISCUSSION: GETTING ALL OILED UP: DORMANT OIL VS HORTICULTURAL OIL. At this time of the year, many calls come into the Extension offices asking if it is too late to "put on a dormant oil spray." The first important aspect to understand about oils used as insecticides on plants, is that not all oils are created equal. There is a huge difference between using a heavyweight, less-refined true dormant oil, which is intended for use in late winter/early spring, often termed "volck oil" and applying varying rates of lightweight, highly distilled superior oils often called horticultural or summer oils.

True dormant oils (e.g. Volck oil) have a high distillation temperature, which means they evaporate more slowly, thereby persisting for a much longer period of time on plants, than do oils with lower distillation temperatures (i.e. horticultural oil). Consequently, these thicker or more viscous dormant oils are most beneficial when applied during the "dormant season" or before new leaf tissues emerge from swollen buds. These persistent, heavyweight oils can be phytotoxic, meaning they'll actually damage and kill plant tissues, especially if they come in contact with or are applied to young, succulent leaf tissue.
Horticultural or summer oils, being highly refined with low distillation temperatures, are more volatile and for this reason, may be used on plants in the summer and also as a dormant season oil application. These lightweight summer oils rapidly volatilize and dry up, thus they are far less likely to cause damage to leaves. To appropriately apply these highly volatile oils, the dilution rate may be adjusted from 3 - 6% horticultural oil for dormant applications to 1 - 2% horticultural oil for summer applications.

The timing of oil applications is dependent upon many factors, such as the type of fruit tree, the stage of development of the fruit tree, and the life cycle of the targeted insect pest. If a true "dormant spray" application is desired, then the dilute oil mixture would be applied before bud break; specifically before the emergence of any leaf tissue begins. If a "delayed-dormant spray" is desired, then the dilute oil mixture should be applied after bud break and right up until flowering.

The last aspect of oils to discuss in order to understand them better is the question, "How do oils act as insecticides?" First and foremost, these highly refined oils will function best when they achieve direct contact with the insect. Oils provide no residual control, so the insects must be present and must be "contacted" by the product for an oil application to be effective. Application of oil sprays are most effective against many soft-bodied pests including aphids, adelgids, certain caterpillars, greenhouse whiteflies, lacebugs, mealybugs, psyllids, plant bugs, spider mites and certain scale insects. The primary mode of action for insect control is suffocation. Suffocation occurs when a coating of oil covers the insect's body, effectively blocking the spiracles or breathing openings of an insect. These spiracles typically are found along the sides of the abdomens of both the adult and larvae of most pests.

Horticultural oils may also affect insect metabolism, disrupt the alignment of fatty acids in cellular membranes, or disrupts insect feeding. Efficacy of an oil application is contingent mainly upon the pest's own life cycle and development. When horticultural oils are applied to egg masses, they can inhibit oxygen uptake and decrease hatching success; however, a key component of that success is that those eggs must be at a developmentally susceptible stage for the oil affect them.

Bear in mind that oxygen uptake demands, during each phase of an insect's life cycle varies and actually decreases as ambient air temperatures decrease below 50F; consequently, late winter or dormant oil applications must be applied at a higher rate than those of summer oils to ensure a thorough coverage of both eggs and any overwintering adults or larvae. Some research conducted on horticultural oils indicated a preventative role in deterring some insects from laying eggs, especially if plants were sprayed while females are actively seeking egg-laying territory. Furthermore, a few studies found horticultural oils to act as feeding deterrents to some insects and the best news of all, with over 100 years of documented use of these oils, researchers have recorded only one example of an insect developing resistance to its insecticidal properties!

E. WINDSHIELD WIPES. BYGLers ran into a number of other insects this week including:

*Joe Boggs reported that the overwintered EASTERN TENT CATERPILLAR (Malacosoma americanum) eggs have hatched in southwest Ohio. First instar caterpillars begin to construct their characteristic silk nests in the forks of branches immediately after hatching from eggs. The caterpillars hide in the nests during the day and leave the nests to feed on leaves at night. The caterpillars prefer to feed on trees in the family Rosaceae, particularly those in the genus Prunus, such as cherries. They also occasionally feed on ash, birch, maple, and oaks.

*Joe also noted that the overwintered eggs of EUROPEAN PINE SAWFLY (Neodiprion sertifer) have hatched in his part of the state and first instar larval feeding damage is becoming evident. The first instar larvae are too small to consume entire needles. Instead, they feed along the needle's edges producing clusters of dead, curled, straw-colored needles. Later instars consume entire needles. The caterpillar-like sawfly larvae have bulbous, shiny-black head capsules and grayish-green bodies with faint grayish-white longitudinal lines. Their coloration makes them difficult to spot among the conifer needles. Hosts include Scotch, mugo, red, jack, Table Mountain and Swiss mountain pine. White and Austrian pines are occasional hosts. All instars feed in colonies making them

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easy to control by knocking them off into a bucket of soapy water or onto the ground to be dispatched using the "sawfly two-step dance."

4. DISEASE DIGEST.

A. DANG SCAB-IT.  This is the time of year that will determine how Venturia inaequalis, the fungus commonly known as APPLE SCAB, will perform this year. This fungus survives year to year inside diseased leaves, which remained on the ground under the tree from last year's episode. In the spring, millions of spores are released into the air by periods of rain during April, May and June. These spores are blown around and land on succulent, susceptible, plant tissues like young leaves, flower parts and fruits. This fungus needs a film of water within which the spores germinate and then penetrate into the tissues of the plant, which is called "infection".

Because the apple scab fungus requires free standing water on the leaf surface for infection to occur, it is a simple equation to predict this disease. The drier the weather conditions and therefore the crabapple leaf surface, the lower the number of infection periods, which results a lower incidence of the apple scab disease. The greater the number of hours of leaf wetness, the greater the number of infection periods, which leads to higher/greater incidence of disease. Most of the primary infections by the apple scab fungus can be mitigated by the use of fungicides. Recommendations typically given are to apply a total of 3 total applications of either a sterol-inhibitor, strobilurin, triazole or thiophanate type of fungicide. Application of the first fungicide spray should occur just before the first bloom emerges and depending upon which fungicide was used, followed 7 - 14 days later by another application and then again 7 - 14 days later. This routine will not entirely eliminate apple scab but it will help to slow its impact later in the season.

5. TURF TIPS.

A. SPOTTED LAWNS?  Erik Draper mentioned to the group that he had received a turfgrass sample from a homeowner's lawn that hadn't greened up yet. With the lawns just beginning to green up in Northeast Ohio, these scattered, straw-colored spots are quite evident. It turned out to be the grass-like weed known as NIMBLEWILL (Muhlenbergia schreberi). Nimblewill appears as circular straw-colored patches now but they will rapidly turn a bluish-green and those small and round patches will continually spread and may eventually encompass most of the lawn.

Nimblewill is a native, warm-season perennial grass that tolerates a wide range of soil and site conditions. It can be found in soils with low or high fertility, soils that have been compacted or are friable, growing out in the full sun or in dense shade and it thrives under wet to dry conditions. In other words, it is a true survivor and these plants are often called weeds! In order to control nimblewill, wait until it totally greens up and is actively growing, then apply a glyphosate-containing herbicide (e.g. Round-up). The best control is generally achieved with at least two applications at 10 - 14 days apart. Nimblewill may have stoloniferous runners out a considerable distance beyond the infested area; therefore, applications should include a zone of 2 - 3' outside of the densely concentrated areas. Reseed the desirable turfgrass 7 - 10 days after the last application of herbicide. Late August is also another great time to control nimblewill and reseed desirable turf; however, being that late in the growing season - it's just a little bit harder to "spot"!

B. HOLEY MOLEY. Moles were one of the top turf concerns this week as people were calling to complain and query about the mounds of dirt and raised ridges running through the lawn. The EASTERN MOLE (Scalopus aquaticus) is the mole most commonly found in Ohio. Homeowners still want to use control techniques that just don't work such as gassing and poisoning. Poison peanuts (and other baits) are still marketed for mole control but it is generally accepted that they don't work. Moles are insectivores eating worms and insects; peanuts are not part of their normal diet.
Moles follow the food supply. During the wet weather of spring and fall, their food supply is near the surface so the moles are tunneling at the surface. As the ground begins to dry the mole food and moles will go deeper spending their time in more permanent tunnels - the moles don't disappear they just literally go underground. This gives the impression that ineffective control measures - gassing or poisoning, for instance - actually worked.

Harpoon or scissors traps have proven effective at reducing mole population. However, they must be used consistently and be properly placed. Moles have a series of main tunnels they use to get from place to place. They use other tunnels for feeding, like a railroad with short lines off of the main track. Traps must be placed on tunnels that are actually being used by the mole. To test a mole tunnel, press down slightly on a portion of the ridge of soil. If the tunnel is being used, the mole will push it back up within a day or two - this is the tunnel in which to place the trap.

The good thing about traps is that they tend to leave the body in the ground when removed. If you need to inspect your handiwork, lift out the soil beneath the trap when you remove it.

6. INDUSTRY INSIGHTS.

A. BE ON THE LOOKOUT FOR AMBROSIA BEETLES. Ambrosia beetles (family Scolytidae) were a frequent topic in last season's BYGL with high populations on landscape trees reported in several areas of Ohio (BYGL 2012-01, 04/05/12; 2012-08, 05/24/12; 2012-17, 07/26/12). These beetles can be serious nursery pests; however, in landscapes, the beetles do not infest healthy trees. Some species infest stressed or dying trees while others prefer recently killed trees. Most of the reports last season noted that beetles were infesting newly planted trees.

Ambrosia beetles are very small, measuring only 1/8 - 2/8" long, and they produce tiny shot-sized holes in the bark. Old holes may be mistaken for those produced by bark beetles which belong to the same insect family. However, the hole-making behavior and larval feeding activity of ambrosia beetles is very different from bark beetles. Bark beetles are phloem feeders, both in the adult and larval stages. Adults make holes through the bark on their way into trees to lay eggs and new adults produce new holes through the bark when they emerge.

Ambrosia beetles bore through the bark and straight into the xylem (white wood). Female beetles push a mixture of excrement (frass) and wood particles backwards as they tunnel forward in the xylem to lay their eggs. The sticky mixture clings together as it is extruded from the entrance holes and has been commonly described as looking like "frass toothpicks". Seeing frass toothpicks emerging from the bark is a sure sign that its ambrosia beetles, and not bark beetles, that have initiated an attack!

As the female beetles bore through the xylem, they release fungi from specialized oral structures called mycangia and the fungi colonize the wood. Ambrosia beetle larvae do not eat wood; instead, they eat the fungal "ambrosia" that grows from the walls of the tunnels created by the adults. Some types of ambrosia fungi will stain wood producing distinctive dark blue to black streaks in the wood. The beetle's tunneling activity coupled with the fungal wood staining can seriously degrade lumber quality. Once the larvae complete their development, which occurs deep within the xylem, the new crop of beetles make their way out of trees using the same tunnels and holes created by their parents; they do not produce more shot-holes through the bark.

Unfortunately, ambrosia beetles tend to attack trees en masse and nothing can be done to save a tree once it becomes festooned with frass toothpicks. Ambrosia beetle management strategies include addressing tree stress-inducing issues, particularly on newly planted trees, such as poor site preparation, improper installation, and poor watering practices. Heavily infested trees should be removed and destroyed and newly planted trees located nearby should be protected with bark applications of insecticides formulated as long-residual borer sprays, such as Onyx (bifenthrin) or Astro (permethrin). Applications must be made to trunks and branches at 4-week intervals throughout the growing season.
B. POSSIBLE AVOIDANCE OF OAK WILT - CEASE PRUNING. Oak wilt is a serious and often deadly vascular disease of oaks. While all oaks are susceptible to this disease, those trees in the red-black oak group are extremely susceptible. That group includes the following oaks: black, blackjack, pin, northern and southern red, scarlet, shingle, and shumard. Oaks in the white group are more tolerant and may even survive infections.

Do you live or work in an area that is known to have oak wilt? Remember, oak wilt can be spread in two ways - overland and underground. Overland spread can be avoided by ensuring that trees are never wounded between April 15 and July 1. An even more stringent approach is to avoid wounding oaks throughout the growing season, April 15 - October 1. If pruning is absolutely necessary during the growing season, covering the wounds with a latex paint is recommended. This will deter the Nitidulid beetles that are known to spread the disease from tree to tree.

For additional information about oak wilt, check out HYG FactSheet, 3306-09, Oak Wilt at [http://ohioline.osu.edu/hyg-fact/3000/pdf/HYG_3306_09.pdf].

7. WEATHERWATCH.

A. WEATHER UPDATE. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from April 1 - April 16, 2013, with the exception of the soil temperatures which are readings from Tuesday, April 16, 2013 at 6:05 p.m.

Will April rains continue to bring May flowers? While nearly every BYGLer included a rainfall summary in their report on Tuesday, April 16, 2013, precipitation totals were greater in the north, than in the south. The three northern weather stations have received more than the average precipitation to date in April. The remaining two stations, central and south, each have received less than the average precipitation total to date this month.

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<td>1.7</td>
<td>55.16/52.02</td>
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<td>37.1</td>
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For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm].

B. 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 80 to 194. Following is a report of GDD for several locations around Ohio as of April 10, 2013: Painesville, 80; Cleveland, 86; Toledo, 82; Canfield, 95; Findlay, 85; Van Wert, 89; Wooster, 110; Coshocton, 145; Columbus, 156; Springfield, 147; Dayton, 152; Cincinnati, 181; Ironton, 193; Portsmouth, 194; and Piketon, 193.

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.
Northern lights forsythia, first bloom, 58; Japanese pieris, first bloom, 60; red maple, full bloom, 75; star magnolia, first bloom, 83; border forsythia, first bloom, 86; eastern tent caterpillar, egg hatch, 92; Manchu cherry, first bloom, 93; northern lights forsythia, full bloom, 94; Norway maple, first bloom, 116; border forsythia, full bloom, 116; chanticleer callery pear, first bloom, 123; sargent cherry, first bloom, 127; larch casebearer, egg hatch, 128; Japanese pieris, full bloom, 129; saucer magnolia, first bloom, 133; common flowering quince, first bloom, 137; Bradford callery pear, first bloom, 142; European pine sawfly, egg hatch, 144; weeping Higan cherry, first bloom, 145; P.J.M. rhododendron, first bloom, 147; chanticleer callery pear, full bloom, 149; Norway maple, full bloom, 149; inkberry leafminer, adult emergence, 150; sargent cherry, full bloom, 151; star magnolia, full bloom, 151; Allegheny serviceberry, first bloom, 153; Manchu cherry, full bloom, 155; spring snow crabapple, first bloom, 155; apple serviceberry, first bloom, 159; spruce spider mite, egg hatch, 162; Bradford callery pear, full bloom, 164; Allegheny serviceberry, full bloom, 169; saucer magnolia, full bloom, 174; P.J.M. rhododendron, full bloom, 178; boxwood psyllid, egg hatch, 179; weeping Higan cherry, full bloom, 179; Koreanspice viburnum, first bloom, 185; regent serviceberry, first bloom, 186; Japanese flowering crabapple, first bloom, 189; eastern redbud, first bloom, 191; gypsy moth, egg hatch, 192; Koreanspice viburnum, full bloom, 205; azalea lace bug, egg hatch, 206; 'Spring Snow' crabapple, full bloom, 209; common flowering quince, full bloom, 214; birch leafminer, adult emergence, 215; 'Coralburst' crabapple, first bloom, 217; and elm leafminer, adult emergence, 219.

8. COMING ATTRACTIONS.

A. WILDLIFE CONFLICTS WORKSHOP. The Ohio Woodland Stewards Program is offering an all-day program on Wildlife Conflicts at the Upper Valley Career Center (UVCC), Room 600, 8901 Looney Road, Piqua, Ohio, April 26, 2013, 9:00 a.m. - 3:00 p.m. Information can be found on the website at [http://woodlandstewards.osu.edu]. Registration deadline is April 19, 2013.

B. NEW APPLICATOR TRAINING, FULTON COUNTY. The OSU Extension Office in Fulton County will be hosting an Ohio Commercial New Applicator Class on Tuesday, April 30, 2013 from 9:00 a.m. - 3:00 p.m. at the OSUE Office in the Robert Fulton Agriculture Center, 8770 State Route 108, Wauseon, Ohio. This class will be geared to municipalities, school maintenance, lawn/landscape companies, property managers, and other government entities.

The morning sessions will review Commercial Core material including but not limited to Ohio pesticide laws and regulations, personal safety and environmental issues, and pesticide formulas and label reading. In the afternoon, the class will be split in two to provide an overview of the weeds, insects, diseases and problem solving that accompanies each of the Industrial Vegetation (Category 5) or Turfgrass (Category 8) tests.

Pre-register with the Extension office by downloading the registration form from [http://www.fulton.osu.edu], calling 419-337-9210 or emailing [richer.5@osu.edu]. Cost for the morning session is $30 and afternoon session is $30, or $60 for both and lunch. The workshop is limited to 30. Registration deadline is April 26.

C. OHIO'S NON-NATIVE INVASIVES. The Ohio Woodland Stewards Program is offering an all day workshop on Ohio's Non-Native Invasives at the Ohio State University, Mansfield Campus, 229 Riedl Hall, 1760 University Drive, Mansfield, Ohio, May 17, 2013, 8:15 a.m. - 4:00 p.m. Information can be found on the website at [http://woodlandstewards.osu.edu]. Registration deadline is May 10, 2013.

D. TREE SCHOOL. The Ohio Woodland Stewards Program is offering an all-day Tree School at the Ohio State University, Mansfield Campus, 229 Riedl Hall, 1760 University Drive, Mansfield, Ohio, May 18, 2013. Information can be found on the website at [http://woodlandstewards.osu.edu]. Registration deadline is May 10, 2013.
E. OHIO'S INVASIVE SPECIES SERIES, JUNE 2013, OSU MANSFIELD CAMPUS. Invasive species come in all shapes and sizes. Whether a plant, insect, fungus or vertebrate, each invasive species impacts their segment of the ecosystem in different ways. This seminar series focuses on some of the key issues associated with non-native, as well as how to identify them and deal with them in your own backyard. *June 4 - This evenings topic will cover two non-native invasive insects impacting Ohio's trees. Learn how to identify emerald ash borer (EAB) and Asian longhorned beetle (ALB) and understand their impact on your trees.

*June 11 - While EAB and ALB have gotten a lot of attention lately, there are still other non-native pests that you should be aware of. This seminar will cover gypsy moth, thousand canker disease on black walnut, viburnum leaf beetle and hemlock wooly adelgid.

*June 18 - Non-native invasives don't impact just our trees. This evening seminar will focus on the impacts non-native invasives have on wildlife and the wood products our woodland produce.

*June 25 - The last seminar session will focus on specific non-native invasive plants. Characteristics for identification will be covered along with control options.

Registration for each seminar is $15 OR register for all 4 seminars for $45. Information can be found on the website at [http://woodlandstewards.osu.edu].

9. BYGLOSOPHY. "Flowers seem intended for the solace of ordinary humanity." - John Ruskin

APPENDIX - ADDITIONAL WEBSITE RESOURCES:

Ask a Master Gardener Volunteer (Consumer Gardening Questions)
http://mastergardener.osu.edu/ask

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 are the participants in the April 16th conference call: Pam Bennett (Clark); Joe Boggs (Hamilton); Julie Crook (Hamilton); Denise Johnson (Master Gardener Volunteer program); Tim Malinich (Erie); Paul Snyder
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/web].

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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Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension and Gist Chair in Extension Education and Leadership. TDD No. 800-589-8292 (Ohio only) or 614-292-6181.