BYGL July 22, 2010

Thursday, 22 July 2010 18:01

This is the 16th 2010 edition of the Buckeye Yard and Garden Line (BYGL). BYGL is developed from a Tuesday morning conference call of Ohio State University Extension (OSUE) Educators, Specialists, and other contributors in Ohio.

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1. WEATHERWATCH.

The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from July 1-21, 2010, with the exception of the soil temperatures which are readings from Wednesday, July 21, 2010 at 6:05 p.m.
It is summer, and it feels like it too! While temperatures have remained on the high side throughout the state, precipitation amounts have varied. There are areas, primarily in the southern and central portion of the state, that have received recent rains. Other areas have missed out and are dry.

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<th>Ave. High Temp F</th>
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<th>Total Precip.&quot;</th>
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For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm](http://www.oardc.ohio-state.edu/centernet/weather.htm)

For more information, see:
- Weather Station Link

2. PLANTS OF THE WEEK.

**ANNUAL - ZINNIA 'ZAHARA' (Zinnia marylandica).** Many gardeners tend to stay away from zinnias due to the plants' susceptibility to leaf spot and powdery mildew diseases. However, many of the new cultivars of zinnia make them worth having in the garden. The 'Zahara' series is one that has shown superior disease tolerance. In addition, it's covered with an abundance of large flowers all summer long. Flower colors are red, orange-red, yellow, and white with a pink star center. Another great feature of this plant is that it doesn't require deadheading - a task that all gardeners dislike!

'Zahara' grows in a bushy, rounded mound approximately 1' tall by 1' wide. Gardeners can mass them together in a bed or plant in containers. They tolerate summer heat and have low water needs. The only drawback noted in the Gateway Learning Gardens Field Trials at the OSUE Clark County office is that since they are grown from seed, there tends to be a plant here or there that might not have the same growth habit in regards to height. These can be trimmed to match the others or removed.

For more information, see:
- PanAmerican Seed Product Information

**PERENNIAL - HIBISCUS, ROSE MALLOW (Hibiscus moscheutos).** This stunning summer-blooming plant is an excellent plant for damp or moist areas in the perennial garden. In full bloom in central Ohio at this time, hibiscus is one of those bold garden plants that one can't help but to notice. Flower colors, heights, and foliage vary according to the cultivar. They prefer full sun but also tolerate light shade. Some varieties tend to get so tall that they flop over; cut these back by half in the early summer in order to encourage branching.

The flowers open for about a day and then die; however, blooms keep coming all season long once
they start. Be sure to give them space in the garden as some cultivars are huge. For instance, 'Lord Baltimore' is 5' tall with beautiful crimson red 10" diameter flowers. The compact series, 'Luna' is an outstanding cultivar as it is around 3' tall with very sturdy stems that don't flop. Flower colors in the 'Luna' series include red, rose, pink, and white. A note of caution: if Japanese beetle populations are high, consider spraying to prevent damage as these pests love hibiscus!

For more information, see:
Missouri Botanical Garden Kemper Center for Home Gardening fact sheet on Hibiscus

*WOODY - BALD CYPRESS (Taxodium distichum).* This deciduous conifer can reach heights of 80' to nearly 30' wide. Cones of bald cypress are small and round, and release seed during fall and winter. The bark has a stringy appearance that is similar to ARBOVITAE and is a red-brown color. It is a member of the Cupressaceae family, which also includes DAWN REDWOOD and GIANT REDWOOD. Bald cypress trees prefer sandy loam soils with moderately good drainage that are moist and slightly acidic. Bald cypress also adapts to really wet or flooded areas. In wet sites, this tree forms basal flares or "woody knees" that rise up above the water surface and provide a visual interest. Bald cypress also adapt to dry soils if good to average soil composition exists.

For more information, see:
ODNR - Division of Forestry, Ohio Index Trees Index
United States Department of Agriculture, NRCS Plant Fact Sheet - Bald cypress

*VEGETABLE - POTATO (Solanum tuberosum).* Potatoes are fairly easy to grow in most Ohio gardens; however, one must pay close attention to the specific soil requirements. Potatoes grow best in a fine, sandy loam soil that is high in organic matter. Therefore, most of Ohio gardeners that have clay soil need to add organic matter in order to improve the soil and drainage. In addition, potatoes also prefer a pH around 5.5-6; in soils with higher pH, the potential for a fungal disease, potato scab, to develop increases. Check the pH before planting and either amend if possible, or plant scab resistant varieties.

Potatoes are planted in the early spring and tolerate light frosts. Potatoes develop underground and are actually a tuber or modified stem. The part that is eaten is the swollen stem. Some gardeners are surprised when the flowers turn into a tomato-like fruit on top of the stem! This is the true fruit of potato that should not be eaten as it contains solanine, a poisonous alkaloid. Most flowers tend to dry up and fall off; however, a few flowers produce fruit. The variety 'Yukon Gold' has a tendency to do this more than others.

Dig potatoes 2 weeks after the foliage has naturally died down. This allows the skins to set and reduces skin peeling, rot in storage, and bruising. Store tubers in a cool (40-45F), dark place with high humidity; under these conditions, they may store for 4-6 weeks. Do not
refrigerate potatoes as cold temperatures convert the starch to sugars which leads to an off-flavor during cooking.

For more information, see:

- Cornell University Fact Sheet on Potato Scab
- University of Illinois Extension Factsheet in Potatoes

*WEED - TREE-OF-HEAVEN (*Ailanthus altissima*). Ailanthus, also known as tree-of-heaven, is a moderate sized (60-80’ in height), deciduous tree first introduced into the US from Asia in the late 1700's for use as an urban landscape tree and in strip mine reclamation in eastern US. In many ways, Ailanthus is an ideal invasive because it grows rapidly (sprouts can attain a height of 6-12’ the first year and grow 3’ or more per year), is a prolific seeder, a persistent stump and root sprouter, and an aggressive competitor that thrives in full sunlight. It also produces an allelopathic compound that suppresses the growth of many native woody and herbaceous species. It will grow in relatively infertile, shallow soils of varying pH, and is highly tolerant of poor air quality.

The leaves are pinnately compound, and can be 12-36” long, with 11-27 leaflets. The twigs are stout, light chestnut brown, and are smooth to velvety with large tan bumps or lenticels. The bark is pale gray and smooth with vertical streaking and with age, fissures develop. Tree-of-heaven flowers are borne in large terminal clusters and can be up to 20” long. Male and female flowers are commonly on separate trees. The fruit, which is currently very evident, are samaras and range in color form yellow green to reddish brown. All parts of the plant have a strong offensive odor, particularly the male flowers. Male flowers are often described as smelling like rotting peanuts or cat urine.

Control options are described in OSU Extension Forestry FactSheet F-65-09, "Controlling Non-Native Invasive Plants in Ohio Forests: Ailanthus" which can be found on the web at [http://ohioline.osu.edu/for-fact/pdf/0065.pdf](http://ohioline.osu.edu/for-fact/pdf/0065.pdf) or is available at your local Extension office.

For more Information, see:

- OSU Extension Forestry FactSheet on Controlling Non-Native Invasive Plants in Ohio Forests: Ailanthus

3. HORT SHORTS.

A. WHITE SPOTS ON TOMATO LEAVES. Say what? Is this a new disease? No, it's what can happen when glyphosate (e.g., Roundup)is used around tomato plants. Dave Dyke learned that lesson this past week when a home vegetable gardener called him to say that he was afraid he had a disease on his tomatoes because parts of some of the lower leaves on one of his tomato plants had turned white. The gardener went on to say that the exact same thing had happened the year before. Upon visiting the gardener, Dave noticed that weeds directly under the plant of concern had been treated with an herbicide. It was then that the gardener confessed that the weeds had been killed with glyphosate. Dave's suspicion that the problem was glyphosate injury was confirmed by Sally Miller, Department of Plant Pathology, OARDC, who referred Dave to a site that contained a photo of that problem: [http://www.pestid.msu.edu/HerbicidePesticideInjury/GlyphosateInjuryonTomatoes/tabid/219/Default.aspx](http://www.pestid.msu.edu/HerbicidePesticideInjury/GlyphosateInjuryonTomatoes/tabid/219/Default.aspx). Tomatoes are very sensitive to glyphosate and should not be used around these plants. The gardener thought that things would be okay as long as he kept the glyphosate away from the leaves and stems of the tomatoes. However, he failed to recognize the fact that glyphosate can volatilize, especially when temperatures are high, like 80-90+F.

For more information, see:

- Michigan State University FactSheet on Herbicide Injury to Tomatoes

B. POORLY DEVELOPED FRUITS IN BRAMBLES AND STRAWBERRIES. Nancy Taylor reported receiving phone calls about poorly developed fruits on strawberries and brambles (raspberries and blackberries). This is a common problem with brambles and strawberries in both commercial plantings and backyard gardens. Many factors can cause this problem. Some of these problems are poor pollination due to lack of bee activity, drought, low soil fertility, and insect feeding on flowers and fruits. Other possible causes can be fungal diseases or viral diseases. It is very important to identify what the causes are so that gardeners and growers can correct them.

According a fact sheet by Dr. John Hartman, a professor emeritus with the University of Kentucky, general good management practices are: "Following good cultural practices is an essential aspect of any disease management program. Providing brambles with good growing conditions helps to promote the health and vigor of the planting."
• Provide a sunny, fertile site with good soil drainage.
• Plant blackberries and raspberries in an open environment with good air circulation.
• Control anthracnose through sanitation and the application of approved fungicides.
• Keep insects under control. While insecticides may also reduce the number of insect vectors, this is generally not an effective method of managing virus diseases.
• Avoid excessive fertilization and water brambles during dry periods.
• Practice good weed control. Weeds not only harbor viruses and their vectors, but weedy growth provides an environment conducive to the development of various other diseases.


For more information, see:

• University of Kentucky Fact Sheet: "Poor Fruit Set in Brambles"
• OSU Extension Bulletin 780: "Controlling Insects and Diseases in Home Fruit Plantings"

C. OBSERVE PRE-HARVEST INTERVAL. Gary Gao received a phone call from a gardener who had applied a multipurpose fruit spray on her peach tree 14 days ago. She checked the pesticide label and found out that the "pre-harvest interval" (PHI) was 21 days. Since her peaches are ripe now, she asked Gary whether "the peaches can be stored in a refrigerator for 7 more days" to satisfy that 21-day PHI. The answer is definitely not since PHI means before the crop is picked and the pesticide label is law, thus one must follow the label instruction. Storing the fruit in a refrigerator does not do anything to reduce her potential pesticide exposure. There might still be enough pesticide residue left to make the fruit unsafe for human consumption. BYGLers would like to remind all gardeners to check the pesticide for PHI before applying pesticides. PHI simply means, "The time between the last pesticide application and harvest of the treated crops." If the PHI is 21 days for a pesticide, whatever was treated with that pesticide cannot be harvested before 21 days has passed. Thus, before one uses a pesticide, estimate how soon a crop will be ready for harvesting and if there is too short of a period between application and harvest, don't use the pesticide.

For more information, see:

• Colorado Environmental Pesticide Education Program Pesticide Factsheet # 427, "Harvest is..."

4. GREEN SHORTS.

A. TRICK OR TREAT: MUSHROOM IDENTIFICATION. This past Saturday, Jim Chatfield got a call from an excited landowner eager to feast on the flowery flavors and apricot aromas of golden chanterelle mushrooms (Cantharellus cibarius). She had found a big patch of mushrooms on her property in Wayne County and before eating, wisely wanted confirmation of her hopes. Alas, instead of exceptionally tasty treats the mushrooms turned out to be a total trick, specifically JACK-O-LANTERN MUSHROOMS (Omphalatus sp.), a mushroom that causes serious gastric distress to those who partake. It was yet another reminder that you really need to get a positive identification before taking a chance on nature gone wild.

What were a few tell-tales in this case of the "Mistaken Mushroom?" Golden chanterelles are more yellow than the bright orange mushrooms brought to Wooster for identification. Secondly, and more fundamentally, jack o'lantern and another look-alike, FALSE CHANTERELLES (Hygroporopsis aurantiaca) have true blade-like gills that can be detached from the cap. Chanterelles have false gills, forked wrinkles that descend the stem of the mushroom and which do not detach without tearing from the cap. Chanterelles also occur singly or in small clusters with single stems rather than in large groups with stems attached to each other for jack o'lanterns.

Tricky, but something you can eventually learn. Foray with fungal aficionados and check out the many good published mushroom guides, such as the Audubon guide and many of the materials on the fungal web. Take your time. And if you want to learn still more about mushrooms and other fleshy woodland fungi join the Ohio Mushroom Society (http://www.ohiomushroom.org). Or, sign up for Plant Pathology 300 at Ohio State University this Fall. The course will be taught for the second year by BYGLer Jim Chatfield, the most excellent molecular mycologist Tom Mitchell, and the incredibly organized and talented Sarah Ellis, with more than a little help from long-time professor, Lanny Rhodes.

For more information, see:

• OSU Extension FactSheet on Wild Mushrooms
A $3.5 BILLION FIX. That is the title of an article in the Cincinnati Enquirer Newspaper on July 18, 2010. The article provides a comprehensive summary of the efforts of the Metropolitan Sewer District of Greater Cincinnati (MSD) to use "green" stormwater management strategies. These strategies include rain gardens, and separation of sewer and stormwater systems to come into compliance with a "consent decree" with the USEPA that requires it "to capture, treat, or remove 85% of the discharge from combined sewer overflow pipes" (about 14 billion gallons/year) from the Cincinnati Metropolitan Sewer District service area. Anyone interested in landscape storm water management should check out this article at http://news.cincinnati.com/article/20100719/NEWS0108/7180358/1055/NEWS/A-3-5-billion-sewer-fix.

For more information, see:

- Cincinnati.com Website on the fix

5. CLINIC CLIPS.

The Clinic continues to be busy! On blue spruce we saw Stigmina needlecast, on Norway spruce a sample with Rhizosphaera needlecast was the reason for the tree's needle drop, but we also observed spruce bud scale and adelgid galls on the sample.

The clinic continue to receive oak samples with jumping oak gall and spangle gall. These insects have been discussed in earlier BYGL issues and occurred this year across a large area of the state. Another oak sample showed evidence of Botryosphaeria canker/dieback which was affecting branches up to about 1" in diameter.

London planetree samples were infected with powdery mildew. We have observed that when London planetree drops its leaves during dry conditions in mid-late summer, the fallen leaves are often infected with powdery mildew. On another London planetree sample, we observed dieback caused by Phomopsis, a fungus which tends to infect trees that are already under stress. The landscaper who submitted the sample described trees planted in a limited area between a building and a street.

Physiological leaf scorch has been observed in maple samples.

On fruit, we looked at a black raspberry plant sample with anthracnose and meadow vole feeding damage, red raspberry with Phytophthora root rot, and we continue to receive grape samples with black rot.

Larvae and damage of the Zimmerman pine moth caterpillar was noted in trunk sections of ponderosa pine, and damage from weevil larvae was noted on the roots of a seedling pine. Rudbeckia stems had been tunneled by the larvae of the European corn boer, and both a bed bug and booklice were submitted from homeowners. Most exciting however was a live stripe-tailed scorpion Vaejovis spp which was found in a machine shop in Central Ohio. The company imports crates from Mexico, however this species which although it rears a painful sting, is not considered to be poisonous, is also found in Arizona. Interestingly the receiving bay is at one end of the building, yet the scorpion was found in the conference room which is at the far opposite end of the building… no doubt it was planning to attend the next meeting. The company had no provisions for containing exotic pests, but may develop one now.

6. BUGBYTES.

A. UNUSUAL MENACING INSECT FOUND.

Joe Boggs reported finding an unusual biting insect in southwest Ohio. This insect is the BLOODSUCCING CONENOSE (Triatoma sanguisuga) and while its common name sounds like a derogatory epithet, it accurately describes what the insect does and what it looks like. The bug uses its piercing-sucking mouthparts that are attached to a cone-shaped nose-like structure at the front of its head to bite and suck blood from people; thus the common name and the specific epithet "sanguisuga" which means "blood sucker." The conenose has an alternate common name of "kissing bug" because it tends to bite near a person's mouth. The bug gets away with this highly personal behavior by biting people while they sleep. Bites are sometimes painless, but may eventually cause a severe reaction.

The bloodsucking conenose belongs to the "assassin bugs" family (Reduviidae) and shares many characteristics with other family members. Their elongated, flattened bodies cause them to sometimes be mistaken for other assassin bugs, and vice-versa. Adult conenose bugs are around 3/4" long. Their bodies are dark-gray to black and mottled with reddish-pink or reddish-orange markings. One of the most distinguishing characteristics is six equally spaced reddish-orange spots on each side of the abdomen, above and below. The bug's large eyes are located on an elongated head and their piercing-sucking beak is kept folded back between the front legs when not used.

The reason Joe was surprised to find this insect is because the bloodsucking conenose is known to vector the parasitic protozoan Trypanosoma cruzi that causes the potentially deadly Chagas disease. However, Ohioans shouldn't lose sleep over contracting Chagas disease unless they travel to more southern climes. The highest concentration of the disease is in central and South America with some
cases reported in southern Texas. The Centers for Disease Control (CDC) does not list Ohio among the geographical areas where Chagas disease has been confirmed. Joe's find simply means the conenose isn't confined to areas where the disease occurs. Indeed, in his scientific paper titled, "Arthropods of Medical Importance in Ohio," published in the Ohio Journal of Science (60 (6): 332, November, 1960), Charles Masters reported that *Triatoma sanguisuga* is known to occur in southern Ohio. Perhaps the saying, "sleep tight and don't let the bed bugs bite" should be amended.

For more information, see:

- Texas A&M University Fact Sheet
- OSU Extension Fact Sheet

### B. MILKWEED BUG LOOK-A-LIKE.

Curtis Young and Joe Boggs reported finding a HELIOPSIS BUG (*Lygaeus turcicus*) feeding on the seed heads of its namesake host in a planting in Yellow Springs, OH. What makes this bug so interesting is that it is a dead-ringer for the SMALL EASTERN MILKWEED BUGS (*L. kalmii*). Although both insects are seed bugs (Order Hemiptera; Family Lygaeidae), and both are in the same genus, they are specialized feeders targeting totally unrelated plants.

Both bugs are similar sized, both have black eyes, and both sport orangish-red "X" markings. However, the small milkweed bug has a very broad triangle in the top part of the "X" while the Heliopsis bug has the triangle broken into two smaller arrow-shaped markings. Also, the orangish-red cross-marking on the "shoulders" of the small milkweed bug has two distinct black spots which are less distinct on the Heliopsis bug. Finally, the host plants tell the rest of the story. Milkweed bugs are confined to feeding plants in the milkweed family (Asclepiadaceae) and have adapted to handling the alkaloid toxins found in the sap of its host plants. Heliopsis bugs are specialized in feeding on plants in the genus *Helioptis*. They would be "caught" dead if they fed on milkweed.

The identification challenge between these two bugs has apparently been going on for many years and it continues to be a problem. James Slater attempted to clarify the issue in a scientific paper published in 1983 in the Journal of the New York Entomological Society (91(1), pp. 48-56) titled, "On the Biology and Food Plants of *Lygaeus turcicus* (Fabr.) (Hemiptera: Lygaeidae)." He compared and contrasted both the host preferences and morphological features between the two bugs. Unfortunately, web searches may still yield erroneous reports, such as small milkweed bugs being found feeding on false sunflower and *turcicus* is the specific epithet for the small milkweed bug. While the web offers great help in insect identification, let the searcher beware!

### C. DANCING WHITE PUFFBALLS ON ALDER.

Kathy Smith (OSU Department of Natural Resources) treated participants in last week's diagnostic workshop in Champaign County to a specimen of WOOLLY ALDER APHIDS (*Paraprociphilus tessellates*) collected from an alder in Morrow County. The woolly aphids gather together in prominent colonies on twigs and branches and enshroud themselves in a profuse mass of white, wool-like filaments. When a colony is disturbed, they pulse their posterior ends in unison. Readers may recognize that this aphid's woolly appearance and peculiar defense behavior is almost identical to BEECH BLIGHT APHID (*Grylloprociphilus imbricator*), the so-called "boogie-woogie aphid" that has danced its way through the BYGL on numerous occasions.

However, similarities between the two aphids end with the woolly two-step. Beech blight aphids are only found on beech. The woolly alder aphid also infests silver maple. Indeed, the alternate common name for this aphid is MAPLE BLIGHT APHID. On maple, the aphid spends the winter as eggs in bark cracks and crevices. The nymphs hatch in the spring and migrate to the midveins on the underside of maple leaves where they cover themselves in a mass of white, woolly filaments. Their plant sucking damage may cause leaves to become curled and puckered. In mid-summer, white fluff-covered adults fly to alders where they establish colonies described above. Flights of these "flying puff-balls" can be dramatic.

On alder, two types of aphids arise from the colonies at the end of the season. One type will fly to
maple and lay overwintering eggs. The other type will remain on alder spending the winter in hibernation under leaf litter beneath the tree. In the spring, these adults move back to the branches and establish colonies.

The aphids are prolific producers of honeydew, both on maple and alder. Branches and leaves beneath the colonies may become glazed in sticky goo. The honeydew is often heavily colonized by black sooty molds. Indeed, Kathy reported that she observed significant accretions associated with these aphids. However, the aphids appear to cause no approachable harm to the overall health of infested alder or silver maple trees. Heavy populations usually collapse from predation and parasitism after a few seasons. So, no controls are recommended.

For more information, see:

- N.C. State Turf and Ornamental Entomology Notes
- Iowa State University Extension Horticulture Home Pest News

D. BALD CYPRESS TWIG GALL.

BYGLers reported that the galling handiwork of *Taxodiomyia cupressiananassa*, a tiny midge fly with a large scientific name, is becoming evident on bald cypress in southwest Ohio. The spongy, elongate, 1/8-1/2" long galls produced by the fly appear white due to a covering of fine, powdery material. Rubbing the powder off the galls reveals their true light green color. The galls arise from the base of leaflets. Needle growth extends through the galls with the needles protruding beyond the surface of the galls. A portion of this season's growth usually extends beyond the tips of the galls.

Opening the galls will reveal the tiny, orangish-yellow midge fly larvae (maggots) that directed gall formation. Each maggot is individually housed in its own tiny compartment. Once the maggots pupate, and a new set of adults emerge, the galls will eventually shrivel and detach from the trees. At this time, the leaflet growth extending beyond the gall will sometimes die and turn reddish brown producing an unsightly appearance. Adult flies emerge from the fallen galls on the ground.

The flies may have two generations per year with a second set of galls appearing in late-July or August. The second generation gall-makers spend the winter on the ground as pupae in fallen galls. Although the galls and browned-tipped foliage may reduce the aesthetic appeal of infested trees, the flies appear to cause no appreciable harm to the health of the tree. Populations are often regulated by a wide range of parasitoids that target the maggots. Therefore, insecticide applications are not recommended. Pruning and destroying galls now on small trees will reduce the number of future galls.

For more information, see:

- University of Florida Creature Feature

E. OAK PLUM GALLS DROPPING.

Joe Boggs reported that the annual dropping of oak plum galls has commenced in southwest Ohio. The galls arise from acorn caps and are produced by the cynipid wasp, *Amphibolips prunus*. Each gall contains a single wasp larva housed in a seed-like cell at the center of the gall. The rounded to plum-shaped galls range in size from 1/4-3/4" in diameter and they exhibit a striking color pattern. Their tannish-brown surface is shot-through with vibrant blood-red or purplish-red streaks and blotches. They have been described by some as looking like "blood-shot eyeballs."

Once the wasp larvae complete their development, the "mature" galls detach from the acorns and drop to the ground. Since the galls grow from acorn caps, they cause no appreciable harm to the health of their oak hosts. However, "blood-shot eyeballs" dropping from oak trees may generate calls from concerned homeowners to Extension offices.

When the galls are cut open with a steel knife, the inner flesh is at first yellow to tan in color, but after several minutes, the flesh turns a deep purplish-red and eventually brownish-black. This color change illustrates an important feature of many oak galls which is connected to both the name given to these plant structures as well as ink used in the middle ages. As with many oak galls, the acorn plum gall contains gallic acid (3,4,5-trihydroxybenzoic acid). This bitter tasting acid is responsible for the name “gall.” When gallic acid mixes with iron from the knife, a dye reaction occurs forming a brownish-black liquid that has been used for centuries as ink. The Magna Carta, the U.S. Bill of Rights, and the first drafts of the U.S. Constitution were written with gall ink.

For more information, see:

- Michigan Entomological Society, Entomology Notes

F. PYGMY HUMMINGBIRDS?

Curtis Young and Joe Boggs reported observing hummingbird moths drinking nectar from a number of different types of flowers. Several species of day-flying moths in the family Sphingidae (Sphinx moths) are commonly called hummingbird moths. They buzz and hover exactly like miniature hummingbirds, and they share with their avian namesake a fondness for deep-throated pink and red flowers. However, the moths lap nectar using a long, coiled proboscis rather than a long, pointed beak.

The largest of these fast-flying moths is the HUMMINGBIRD CLEARWING, *Hemaris thysbe*. This moth has a greenish body and a dark reddish-brown band near the back of the body. Its wing-span is nearly 2" and the wings are almost devoid of scales, thus the common name. A less common species is the SLENDER CLEARING, *Hemaris gracilus*, which is slightly smaller than the hummingbird clearwing. This moth also has a more yellow body and a gold ring between the yellow portion and the dark band near the abdomen.

Another Sphinx moth that looks like something that it is not, is the SNOWBERRY CLEARWING, *Hemaris diffinis*. The moth has the size and coloring of a bumble bee, and a wing-span of 1 1/4". Although they don't land on a flower like bees, most people are not willing to get close enough to notice the difference! Like all Sphinx moths, the caterpillars of these moths are called "hornworms" because of a horn-like projection on top of their posterior end. However, none of these species are considered pests since they feed on such things as honeysuckle, Virginia creeper, and other plants that are generally considered weeds.

For more information, see:

- Butterflies and Moths of North America, USGS Web Site

G. HORSEFLIES SUCKING HORSES DRY.

A couple of weeks ago it was DEER FLIES (*Chrysops* spp.) (BYGL Issue 2010-13), now it is the monstrous HORSE FLIES (*Tabanus* spp.) that are problematic. Curtis Young reported that these large biting flies are sucking the life out of several horses that he is currently watching. Despite being treated on a regular basis with a horse formulation of fly repellent, the giant blood sucking menaces are still attacking with a vengeance! Curtis personally killed several in a very short span of time just to give a short period of relief to the horses. Although it took quite an effort to kill them - smack them down with a hand and then grind them into the ground to finish them off.

These flies range in size from 3/8-1 1/8" in length. Female horse flies require blood meals to be able to produce eggs to initiate the next generation, thus they search for large mammals from which to obtain their blood. When the female finds a host, she uses her sharp mandibles to slash a wound in the skin into which she injects saliva that prevents the blood from coagulating, then she laps up the free-flowing blood. The bite is extremely painful. After the fly finishes or is interrupted while feeding, the blood will continue to flow from the wound.

Horse flies are adept at locating warm-blooded animals, including people near swimming pools, streams, ponds, marshy areas and in the woods. According to Missouri University entomologists, the flies apparently are sensitive to parts of the electromagnetic spectrum--their sight may be like "thermal vision" cameras used to detect heat leaks in houses. They are also attracted to large moving objects which give off heat, like cars and trucks and more savory targets such as cows, horses, deer and humans.

Like with the deer flies there isn't much that can be done to prevent the horse flies from biting.
Suggestions include: avoid areas where horse flies are most active; since the horse flies are active during the day, stay inside during daylight hours (this is not very practical when we have so many activities outside during the day to attend); stay alert while outside because unlike most other flies, the some horse flies' flight is nearly silent, and they are known for landing stealthily on exposed skin then delivering a painful bite; wear light colored clothing that is presumably less attractive than dark colors (although the one horse that was being bitten the most was a light colored horse) when outdoors to help reduce the annoyance from biting flies; in extreme cases, hats with mesh face and neck veils and neckerchiefs may add some protection; and use an insect repellent containing DEET or picaridin. However, the repellents don't seem to hold much promise since the treated horses are still being bitten and Curtis' daughter drenched one horse fly directly with the repellent and it simply shook it off and went about it business. Traps may help reduce horse fly populations. One such trap mentioned in the earlier deer fly article was the Manning trap. The Manning Trap is a large stationary area trap. For more information on the Manning trap, see the University of Wisconsin Garden Facts on deer flies and horse flies at: [http://wihort.uwex.edu/gardenfacts/XHT1049.pdf].

For More Information, see:
- OSU FactSheet on Biting Flies
- University of Kentucky FactSheet on Biting Flies
- University of Kentucky FactSheet on Horse Flies

7. DISEASE DIGEST.

A. A NEEDLING BANDED BLIGHT.

Erik Draper reported receiving a sample of a RED PINE (Pinus resinosa) with a curious appearance. The sample had been carefully preserved in a highly specialized moist chamber, commonly known as a zip-lock bag with a slightly moist paper towel! Upon close examination, the dead areas of the needles appeared to have areas of black, spore-like structures (stroma) rupturing the tissue, much like Diplodia tip blight; however, the keen distinction being the basal 1-1/2" of each infected needle was green and healthy. After a discussion of the subtle differences between the two fungal diseases, Nancy Taylor, head of the C. Wayne Ellett Plant and Pest Diagnostic Clinic, identified the symptoms as very characteristic of DOHISTROMA NEEDLE BLIGHT caused by the fungus, Mycosphaerella pini.

Also known as the "red band disease," this fungus attacks both the current and past season's needles. On infected needles, black fungal structures called stroma, disperse the spores via wind and rain. These spores will germinate under moist conditions and then penetrate into the needle through the stomata. Interestingly enough, a toxin called dothistromin, diffuses into the leaf tissue ahead of the fungus, causing the death of cells. New infections appear as chlorotic spots on needles in the fall and winter. The spots gradually spread, turning red-brown, and eventually girdle the needles. The girdling causes the death of the needle tip, while forming a distinct red-brown band, separating the dead tissue from the needle base, which remains a healthy green.

Several cultural practices, such as watering, fertilizing, mulching, and proper site selection, may reduce the severity of Dothistroma infections. When planting groupings of susceptible trees, adequately space them apart to ensure good air movement around them; thereby, reducing the environmental conditions favoring possible needle infections. This disease flourishes under wet conditions and high relative humidity. Do not stress trees by planting in low areas with poor air circulation and poor soil drainage and removing the lower whorl of branches may possibly help increase air circulation.

For more information, see:

B. TAR SPOT OF MAPLE. These dramatic but inconsequential diseases of numerous maple species cause small to almost one-inch diameter tar-like spots on leaves, and plant lovers statewide are starting to see the beginning of this disease now. The fungus overwinters on fallen leaves, then infects the upper surfaces of leaves in spring during moist conditions. Leaf spots are first a yellowish green but by mid to late summer a tar-like mesh of fungal and leaf tissue develops inside the yellowed area. Occasionally some leaf withering and drop occurs but this is not generally serious and fungicide sprays are not typically recommended. If fungicides are required, use a labeled product containing, for example, mancozeb or triadimefon.

For more information, see:

- OSU Extension FactSheet on Leaf Diseases on Ornamental Trees and Shrubs

C. PEACH PROBLEM DIAGNOSIS. Dave Dyke received a call about the peaches on a tree rotting, drying, wrinkling, and turning brown. The diagnosis of that problem, BROWN ROT OF PEACH, has to be one of the easiest BYGL’ers have to make. This is a very common and destructive disease of stone fruits (peaches, nectarines, plums, apricots, and cherries) caused by the fungus Monilinia fructicola.

The first indication of the disease in the spring is the rapid death of blossoms which, as they turn brown, often become affixed to the twig in a gummy mass, later becoming covered with a grayish to tan spore mass. Frequently, following colonization of the blossom, the fungus enters the shoot where it causes a canker on which spores are also produced. Shoot blight symptoms will occur if the fungus girdles the shoot. Leaves on such shoots turn tan to brown and may remain attached for several weeks. Cankers formed following blossom or fruit infection appear as brownish, sunken areas that are often covered with gum. These cankers support the formation of conidia in wet weather and harbor the fungus over the winter.

Following spring and summer rainy periods, mummified fruit still hanging in a tree become covered with masses of conidia that may result in twig blight or fruit rot. Brown rot on ripening or mature fruit typically develops as a rapidly spreading brown necrosis. Under optimum conditions for the fungus, entire fruit may be rotted within 48 hours of infection. For more information on this disease, refer to OSU FactSheet HYG-3009-08, "Brown Rot of Stone Fruit" http://ohioline.osu.edu/hyg-fact/3000/pdf/HYG_3009_08.pdf and WVU Kearneysville Tree Fruit Research and Education Center Fact Sheet, "Brown Rot", http://www.caf.wvu.edu/kearneysville/disease_descriptions/ombrownr.html.

For more information, see:

- OSU FactSheet HYG-3009-08 on "Brown Rot of Stone Fruit"
- WVU Kearneysville Tree Fruit Research and Education Center Fact Sheet on "Brown Rot"

8. TURF TIPS: No Report.

9. INDUSTRY INSIGHTS.

A. GYPSY MOTH EGG MASSES EVIDENT. Now is the time to search for eggs! BYGLers aren’t suggesting an Easter egg hunt, but rather scouting for egg masses laid by the female gypsy moth (Lymantria dispar). Egg masses are buff to tan in color, and are about the size of a quarter, although are often more oval shaped than round. Egg masses can be laid nearly anywhere, including tree trunk and branches; under house eaves; inside woodsheds, dog houses, and bird houses; under decorative art hung outdoors; and on campers, trailers, or vehicles. They will remain in this stage, until the caterpillars hatch next spring, around the same time redbuds are blooming.

Egg masses found now, are an indication of what may happen next spring. The Ohio Department of Agriculture (ODA) is currently accepting Gypsy Moth Suppression Treatment Applications until September 1, 2010 for next year's program. Minimum requirements must be met for identified areas to be treated in the spring of 2011. Detailed information about the application process and the state's gypsy moth program can be found at the ODA website at [http://www.agri.ohio.gov/divs/plant/gypsy/gypsy-index.aspx].

For more information, see:
10. COMING ATTRACTIONS.

A. LANDSCAPE INDUSTRY TWILIGHT MEETING AND NURSERY TOUR.

OSU Extension in Delaware County is proud to present the 2010 Landscape Industry Twilight Meeting and Nursery Tour at 6:30-9:00 p.m. on July 29, 2010 at Smith’s Gardens, 7520 Home Road, Delaware, Ohio 43015-8598. Target audiences are landscape installers, designers, and maintenance professionals. This is a wonderful opportunity to get the latest information on weed control in the landscape, network with landscape professionals, and tour a wholesale nursery to learn about new woody plants and perennials. Continuing education credits include OCNT (Ohio Nursery & Landscape Association): 1 Credit; and ODA Pesticide: 1 Hour, Commercial 6c, Ornamental Weeds.

Dr. Hannah Mathers, Associate Professor and Extension Landscape and Nursery Specialist, Department of Horticulture and Crop Science, The Ohio State University and OSU Extension, will give a talk on “Weed Control in the Landscape.” Dr. Elton Smith, CEO, Smith’s Gardens and Professor Emeritus, The Ohio State University, will lead a walking tour of the Smith’s Gardens and a discussion of new woody plants and perennials. Smith Gardens is a family owned wholesale container nursery specializing in perennials, vines, and unique woody plants http://www.smithgardensinc.com.

The registration fee is $20 per person. This fee includes the program, a guided tour of the nursery, and a sandwich, chips and a soft drink. Please email Cindy Kaelber at Kaelber.1@cfaes.osu.edu or call OSU Extension - Delaware County at 740-833-2030 for a program flyer. To register, send your registration form with a check payable to OSU Extension to: OSU Extension - Delaware County, Attn. Cindy Kaelber, 149 North Sandusky Street, Delaware, OH 43015. Registration deadline is July 27, 2010. Space is limited; registration will be accepted on a first come, first served basis. Late or on-site registration is subject to a $10.00 late fee. Register today!

For more information, see:

• OSU Extension - Delaware County

B. DIAGNOSTIC WALK-ABOUT FOR THE GREEN INDUSTRY

OSU Extension and Master Gardener Volunteers of Clark County present their first Diagnostic Walk-About for the Green Industry, and much more. The gardens are easy to access from Interstate 70 and are a “best-kept” secret that the MGVs would love for people to discover! For more details, refer to:

http://clark.osu.edu/topics/horticulture/special-events

For questions or additional information contact OSU Extension, Green Industry Center (419-354-6916), or check out http://abe.osu.edu/.

C. GREEN INDUSTRY PROFESSIONALS, MASTER GARDENERS AND GARDENING ENTHUSIASTS.

The 13th annual Green Industry Summer Session will be held on Wednesday, August 4, 2010, at Owens Community College, Audio Visual Classroom Center, from 11:00 a.m.-4:30 p.m. This is a joint project of The Ohio State University Extension, Owens Community College and Green Industry Education Committee of Northwest Ohio.

The Keynote Speaker will be Dr. Dan Herms from The Ohio State University, Ohio Agricultural Research Development Center, will speak on “Climate Change - What Science Tells Us.” Following Dr. Herms, eleven speakers will present sessions in four concurrent educational tracks: Plants, Pests, Diagnostics and Water Management. Continuing Education Credits will be available for ONCT, ASLA, ISA, Pesticide Applicators, and/or Master Gardeners. Program registration is available on site, the day of event for $25.00 which includes lunch with a separate fee for Pesticide Applicator Credits of $15.00 per hour.

For questions or additional information contact OSU Extension, Green Industry Center (419-354-6916), or check out http://abe.osu.edu/.

D. GATEWAY GARDEN JUBILEE SPONSORED BY OSUE AND MASTER GARDENER VOLUNTEERS OF CLARK COUNTY.

Join these 2 groups as they host the annual Gateway Garden Jubilee from 9:00 a.m.-1:00 p.m. on August 6, 2010 in Springfield, Ohio. The family event is free and showcases the Gateway Learning Gardens. Enjoy the gardens, food, artisans and vendor, presentations, music and much more. The gardens are easy to access from Interstate 70 and are a “best-kept” secret that the MGVs would love for people to discover! For more details, refer to: http://clark.osu.edu/topics/horticulture/special-events.

E. 70th OHIO PLANT DIAGNOSTIC WORKSHOP.

OSUE Plant Diagnostic workshops abound during the growing season, and in many forms, from the Hamilton County/southwest Ohio BYGLlive! Walkabouts each month and Master Gardener 20 Questions programs to workshops in other states, such as at the International Society of Arboriculture Conference in Chicago July 24, 2010. For decades one of the favorite venues for the workshop is at Secrest Arboretum and the Ohio Agricultural Research and Development Center in Wooster (OARDC). Secrest will host the 70th Ohio Plant Diagnostic Workshop late this summer. The date: Friday, September 10, 2010. Join us for a full day of Clinic Catharsis and DiagMoshTics, both inside and out in the Arboretum at the new TreeTopia building at Secrest adjacent to the Streeter Amphitheater. Registration details coming soon.

F. 5th WHY TREES MATTER FORUM.

This is the first notice for the 5th Annual OSU Extension Why Trees Matter Forum. The date: October 20, 2010 at Fisher Auditorium and Secrest Arboretum at the OSU OARDC in Wooster. Keynoter speakers this year include David Nowack and Donna Murphy of the United States Forest Service. Dan Herms of OARDC, Drew Todd of the Ohio Department of...
Natural Resources, and speakers from the OSUE Why Trees Matter team with updates on programs throughout Ohio will also present. We will feature the trees in the Arboretum at the end of the afternoon session. Look forward for program flyers and content summaries as this event gets closer. For now, in anticipation of great fall foliage and for a reminder that Every Day is Arbor Day at OSU, reserve October 20, 2010 on your calendar for the Why Trees Matter Forum.

11. BYGLOSOPHY

"My green thumb came only as a result of the mistakes I made while learning to see things from the plant's point of view." - H. Fred Dale

Following are the participants in the July 20, 2010 conference call: Pam Bennett (Clark); Barb Bloetscher (ODA); Joe Boggs (Hamilton); Jim Chatfield (Horticulture and Crop Science); Dave Dyke (Hamilton); Erik Draper (Geauga); Gary Gao (Delaware); Amy Stone (Lucas); Nancy Taylor (CWEPPDC); Curtis Young (Miami); 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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Website designed by Dr. Tim Rhodus. Direct comments or questions to Webmaster