UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **May 29, 2020**

In This Issue...

IPMnet
Integrated Pest Management for Commercial Horticulture

extension.umd.edu/ipm

If you work for a commercial horticultural business in the area, you can report insect, disease, weed or cultural plant problems **(include location and insect stage)** found in the landscape or nursery to sklick@umd.edu

Coordinator Weekly IPM Report:
Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Greenhouse and Managed Landscapes, sgill@umd.edu. 410-868-9400 (cell)

Regular Contributors:
Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant
Disease Information: Karen Rane (Plant Pathologist) and David Clement (Extension Specialist)
Weed of the Week: Chuck Schuster (Retired Extension Educator)
Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/Somerset Counties)
Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)
Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

A Special Guest Has Arrived Early - Periodical Cicada

By: Stanton Gill

Todd Armstrong, The Davey Tree Expert Company, sent in a picture this week that caught my attention. It was periodical cicada emergence in his lawn in Jarrettsville, MD. Brood X of periodical cicadas are not supposed to arrive until 2021 in our area, but some do get out of cycle. This is just more good news for 2020 - Covid-19, wet cool spring, and now rogue periodical cicadas. This is sure to make the news if it is wider than just Jarrettsville seeing this emergence.

An early appearance of a few periodical cicadas
Photo: Todd Armstrong, The Davey Tree Expert Company

Brood X's most recent appearance was in the spring and early summer of 2004 throughout much of Maryland and several other states. The next regular appearance of Brood X will be next year. It is interesting that a significant number of periodical cicadas, believed to be Brood X emergents that were four years early, appeared throughout the brood's range in 2000 and in the Baltimore and Washington area in May 2017. If you see emergence in your neighborhood please take a clear electronic picture and send it with the location to me at Sgill@umd.edu.

Oak Leaf Blister

By: Karen Rane and David Clement

We received photos of an odd leaf symptom on oak from Ron Rubin at Savatree. Yellow, raised spots were scattered over the leaf surface. This is oak leaf blister, a disease caused by the fungus *Taphrina caerulescens*. Infection occurs in early spring as buds open, and light green, blisterlike areas develop on leaves as they expand. The yellow "blisters" develop a whitish spore layer on the underside, and spores are spread to bark and bud scales by rainfall, where they remain until next spring. As the growing season progresses, the blistered areas become dark brown. Control is usually not warranted for landscape oaks with leaf blister because the impact on the health of the tree is minimal. In nurseries, an application of a protectant fungicide such as mancozeb prior to bud break (late dormancy) may help reduce leaf blister. Once symptoms are observed, fungicides are ineffective.

Oak leaf blister symptoms
Photo: Ron Rubin, SavaTree

Potato Leafhoppers

Marie Rojas, IPM Scout, found potato leafhopper nymphs on the newest leaves of *Acer rubrum* 'Red Sunset' in Laytonsville on May 27. This pest usually arrives from the south, riding up on the jet streams. Look for leafhoppers on plants such as redbud, zelkova, river birch, maple, goldenrain tree, elm, honeylocust, sycamore, and London plane trees. Potato leafhoppers tend to be a problem on nursery trees and are not as likely to be found in high numbers on landscape trees. Potato leafhopper feeding by adults and nymphs causes the tip growth on maples to curl over and harden which is typically referred to as 'hopperburn'. The distorted growth is often mistaken as herbicide damage. Multiple generations continue to damage the new tip growth that flushes out on maples. A systemic insecticide can be used for control.

Potato leafhopper adults are arriving in the area on the jet stream at this time
Photo: Steve L. Brown, University of Georgia, Bugwood.org

Lecanium Scale

By: Stanton Gill

Doug Sheredos, Maxalea Inc.sent me this email: "Last week I noticed scales covering branches throughout the entire canopy of several redbuds and blackgum on my property in Middle River, MD. I've identified them as Lecanium scale.

https://content.ces.ncsu.edu/oak-lecanium-scale: According to this article, *Lecanium scales often become abundant in landscapes that participate in mosquito abatement programs or near areas treated with insecticides for other pests. Such spraying eliminates predators and parasites that usually keep lecanium scale populations unnoticeably low.*

A heavy outbreak of lecanium scale on trees adjacent to properties being spraying for mosquitoes
Photo: Doug Sheredos, Maxalea, Inc.

Neighbors on both sides of me have their yards sprayed for mosquitos every year. I've tried talking to them about it but it falls on deaf ears. I have 1/4 acre and plant mostly natives, and do not spray herbicides or pesticides, garden for bird and pollinator habitat. I hope I can still maintain some level of beneficial insect populations in my yard despite their spraying but it's looking like maybe that's not the case given this scale outbreak. See attached photos of the scale."

We are seeing an increase in the numbers of reported problems with lecanium scale on honeylocusts, oaks, sweet gums, black gums, and several other species in Maryland. Spraying for mosquitoes is necessary in some neighborhoods, but the broad spectrum materials being used also have consequences such as taking out large numbers of beneficial organisms. This scale is probably a good indicator of a problem with this method of dealing with one pest and causing other pest outbreaks.

Oak Treehoppers

Marie Rojas, IPM Scout, found oak treehoppers on *Quercus bicolor* in Laytonsville on May 27. They cluster on tree branches. Females guard their eggs and nymphs from predators. These treehoppers usually do warrant control treatments. There are two generations per year.

Oak treehopper nymphs are active on *Quercus bicolor*
Photo: Marie Rojas, IPM Scout

Ash Dieback

By: Stanton Gill

The emerald ash borer is still number one for killing ash trees, but we received an email this week of ash with a pest that has been around, but often forgotten – the banded ash clearwing borer. Laura Deason, Greener Vision Landscape, sent in a picture of a green ash tree with branch dieback but not the typical epicormic growth at the base of the tree you usually see with emerald ash borer. She noted there were no D-shaped exits holes associated that are usually associated with emerald ash borer activity. She sent a close-up picture of the mines and it was damage from the banded ash clearwing. The larvae have a one-year lifecycle and adults are flying right now and mating. Protective sprays should be applied now, if you are trying to keep an ash around. One of the materials used for emerald ash borer is the systemic Triage or TreeMec, emamectin benzoate, which not only kills emerald ash borer, but also kills banded ash clearwing borer. A systemic like this one works best if less than 1/3 of the canopy is damaged, since a lot of canopy damage usually indicates more cambial damage and less likelihood that a systemic is uptaken sufficiently.

Branch dieback on this green ash is from a banded ash clearing borer infestation; note the clearwing borer mine in the trunk on the right.
Photos: Laura Deason, Greener Vision Landscape

Luna Moth

Nancy Woods, McCrillis Gardens, found this beautiful luna moth and her mate on yarrow this week. She noted that the male flew off. The caterpillar, a giant silkworm, of this moth feeds on a variety of woody plants. There are multiple generations per year.

Luna moths have multiple generations per year
Photo: Nancy Woods, McCrillis Gardens

Four-lined Plant Bugs

Marie Rojas, IPM Scout, found four-lined plant bugs feeding on black-eyed susans in a landscape in Gaithersburg on May 26. These plant bugs feed on a variety of herbaceous and woody plants. As they feed, the insects inject a toxin into the plant tissue that causes the tissue to collapse and go necrotic. You end up with a series of small roundish dead spots on the foliage. Once the damage is present, there is not a lot to do about it. There is one generation per year early in the season.

Four-lined plant bugs have one generation per year early in the season; new foliage will cover up these old damaged leaves as the season progresses.
Photo: Marie Rojas, IPM Scout

Imported Willow Leaf Beetle

By: Stanton Gill

Bob Mead, Mead Tree and Turf, sent in photos of adult imported willow leaf beetles, *Plagiodera versicolora*, that were active on willow in Gaithersburg on May 27. The larvae do most of the feeding, but adults do chew leaves and do further damage to willows. Larvae skeletonize the foliage and in heavy infestation can defoliate a willow tree.

Imported willow leaf beetles are feeding on willow foliage at this time; larvae do most of the damage
Photo: Bob Mead, Mead Tree and Turf

Dobsonfly

By: Stanton Gill

Karen Murtagh found a dobsonfly larva on the C&O Canal towpath on May 23. The larvae are aquatic, living in streams, and the adults are often found along streams as well. Larvae are probably looking for a place to pupate at this time of year. Fishermen (persons) use them for fish bait. They will bite if handled.

Dobsonfly larvae travel over land to find pupation sites
Photo: Karen Murtagh

Exobasidium Galls on Azaleas and Camellias

By: Karen Rane

Exobasdium leaf galls are showing up on azaleas and camellias this week. Chad Tipton, Maxalea, Inc., found the galls on azaleas in Baltimore County. Brian Scheck, Maxalea, Inc., found them in Timonium. S. Drew found the galls on camellia on the Eastern Shore. The extended cool, wet weather this spring has been favorable for the development of Exobasidium galls. On camellia, these galls are caused by the fungus *Exobasidium camelliae*. A related fungus, *Exobasidium vaccinia*, causes similar galls on azalea. Symptoms begin as puffy, light green or pinkish swollen shoot, bud or leaf tissue. Infection occurs on emerging tissue, so most infections occur in the spring when new growth is developing. The galls eventually develop a white spore-bearing surface, so removing galls before they turn white is one way to reduce infection. Older gall tissue eventually turns brown and hardens. The disease does not affect the overall health of infected camellias or azaleas, and usually does not warrant chemical management.

Exobasium galls on camellia
Photo: S. Drew

Exobasium galls on azalea
Photo: Chad Tipton, Maxalea, Inc.

Psocids on Holly Foliage

By: Stanton Gill

We received two emails this week of the undersides of holly foliage with psocids present. The regular rainfall has been ideal for these insects to build up on foliage. They are basically harmless to the plants and control is not needed.

Cottony Camellia/Taxus Scale

Marie Rojas, IPM Scout, is still only finding eggs of cottony camellia/Taxus scale on Holly 'Dragon Lady' in Laytonsville this week. Continue to monitor infested plants for egg hatch to treat with Talus or Distance.

Insects on Roses

Bill Miller, The Azalea Works, found aphids, most likely rose aphids, on *Rosa* 'Nacogdoches' in Bethesda on May 24. Check for beneficial insects on plants. Monitor plants to see if populations continue to increase to determine whether control is necessary.

Bill Miller also found bristly roseslug sawflies this week. Larry Hurley found the same species on Knockout roses in Chevy Chase causing extensive damage. Roseslug sawflies are a continuing problem on roses throughout the season. Bristly roseslug sawfly and curled roseslug sawfly have multiple generations per year. Early instar roseslug sawlfies cause the "windowpane" damage on foliage because they do not feed all of the way through the leaf. Later instar larvae cause skeletonization damage to foliage.
Control: Spinosad, Mainspring, Acelepyrn, and horticultural oil all work very well on this pest.

Monitor roses closely for the build-up of aphid populations
Photo: Bill Miller, The Azalea Works

Bristly roseslug sawflies can do major damage to roses
Photo: Larry Hurley

March Fly

By: Stanton Gill

Bill Miller, The Azalea Works, sent in a great picture of an adult male March fly. It is somewhat similar to a mallow sawfly adult, but it has short antennae, a rounded pronotum, and large eyes.

An adult male March fly
Photo: Bill Miller, The Azalea Works

Landscape Plant Injury: Diagnosing the Difficult

By: Andrew Ristvey

Oakleaf hydrange with cold damage (left) and new foliage that is normal (right)
Photos: Steve Black, Raemelton Farm

This spring, one of the most common problems seen in the landscape has been frost injury. By now, most landscape plants have been growing through the problem and the new growth should be looking normal. The difficulty of diagnosing these injuries is how easily they can be misconstrued with other injuries or nutrient deficiencies. The pictures to the right show an oakleaf hydrangea about 1 month ago. The symptoms remind me of a nutrient deficiency. If I had seen these now, I would have asked for a soil analyses and would have expected a pH problem. However, as Steve Black (owner of Raemelton Farm in Frederick County) commented; "…buds will break and the new growth will look normal." One just has to be patient. The picture to the extreme right shows the plant about 20 days after. New growth is green and normal looking. Sometimes patience pays.

Troubleshooting problems to determine the cause of plant injury can often times be, well…troublesome

Photo A: Broschat, IFAS, 2008

Photo B: Milan Zubrik, Forest Research Institute - Slovakia, Bugwood.org

Photo C: Ristvey, UME, 2020

Photo D: Koetter and Grabowski, U of Minnesota Extension

Can you tell what is going on with the above leaves? From left to right:
A) Boron deficiency in *Hibiscus*, B) Eriophyid mite on *Carpinus,* C) Phenoxy damage to *Cercis*, and D) Oak anthracnose on *Quercus*

One interesting spring-growth malformation is from phenoxy acid herbicides and others that act like plant growth regulators. These herbicides are typically used in agriculture for spring pre-plant weed burn down. They are also used for broad-leaf weed control in landscaping. They behave like auxins, an important plant hormone that controls growth and cell elongation. The herbicides disrupt photosynthesis and formation of vascular tissue, eventually killing the target plant. They force epinastic growth in the leaves and stems where one side grows faster than the other, causing a bend in the tissue. They can also affect root tissue (if applied around the plant drip-line). These herbicides can also vaporize after application and drift easily, sometimes over a mile. This is what makes the diagnosis difficult because sometimes there is no visible cause. The symptoms in susceptible plants vary depending on the plant species. In *Cercis* and *Vitis*, leaves typically cup upward (although I have seen downward cupping in *Cercis*), leaf margins wrinkle, and an odd discoloration occurs in the leaf. This can be seen from the *Cercis* in the picture which is exhibiting multiple symptoms. In oak, leaves cup down and

petioles twist. Interestingly, oak anthracnose disease has similar symptoms, appearing as if the leaves are cupped down.

Multiple symptoms of phenoxy herbicide drift damage in Cercis
Photo C: Ristvey, UME, 2020

Regardless if you have frost or phenoxy injury, what can be done? In the case of frost, damaged plant tissue can be pruned out with proper pruning techniques once you determine what tissue has been affected. For herbicides, plants should be washed thoroughly, immediately after direct contact if possible. If soil was drenched, irrigation water is needed to dilute and leach herbicide. Activated charcoal is an extreme option, but I have read an effective quantity is approximately 150 times the weight of the product applied. For drift, which seems to be the most common cause, have patience again. It will take some time for the growth-regulator effects to wear off. I have observed *Cercis* with irregular growth two months after the beginning of symptoms. Damaged oak will sometimes grow another set of leaves. This is unusual for oaks because typically they only have one spring flush to hold them over the summer. The additional flush may be stressful. Should you fertilize in this case? Many different opinions exist. Increasing the vigor of plant growth during the affected period may not decrease the time the plants are affected. Therefore, fertilization may only add more growth with the same symptoms. In my opinion, a fall nitrogen application fertilization, could be considered, but not during the affected time period.

If you have questions, feet free to contact me at aristvey@umd.edu

Suspected phenoxy herbicide drift damage in Quercus with regrowth
Photo C: Ristvey, UME, 2020

White Prunicola Scale Activity

By: Stanton Gill

It has been one cold spring and degree days are accumulating slowly this season. When we reach 590 degree days, we should see hatch of white prunicola scale. I have been observing this scale in Westminster and only gravid females are present right now. Southern Maryland should be reaching the right number of degree days and should be in the crawler stage very soon.

Bumble Bees and Pollination

By: Stanton Gill

For the last 8 years, I have been buying a Quad of native bumble bee colonies from Koppert and Biobest companies to pollinate my orchard. They have done a wonderful job of pollinating the diverse variety of fruit we grow in the orchard. Researchers are finding interesting interactions between bumblebees and flowering plants. Take a look at this online article:
https://www.scientificamerican.com/article/bumblebees-bite-plants-to-force-them-to-flower-seriously/?amp&utm_source=Nature+Briefing&utm_campaign=1adfc8e604-briefing-dy-20200522&utm_medium=email&utm_term=0_c9dfd39373-1adfc8e604-43621801

More on Cold Damage

Late frost damage on Douglas firs
Photo: Marie Rojas, IPM Scout

Cold damage on *Picea abies*
Photo: Ella Dayton, Ruppert Nurseries

Slow Recovery for Ginkgo Trees

By: Stanton Gill

We are getting a number of emails reporting ginkgo trees that were hit by the April 18 and May 7 and 8 frosts are really slow to recover this year. New growth is breaking this week, but it is slow to show recovery from the cold injury. Ginkgo is one of my favorite species, and I hate to see it looking so bad this spring, but it will eventually leaf out as the warming trend continues.

Ginkgo trees are starting to leaf out this week after the late frosts in April and May
Photo: Stanton Gill

Novel Catch With Alcohol Bolts This Week

By: Stanton Gill

Brian Dahl, MNCPPC, reports several hits on his alcohol baited bolts this week in Gaithersburg, but the novel thing is they are hitting the top of the bolts now, not just the sides.

Michael Moran sent an alcohol baited bolt with a beetle on it. It is the redheaded ash borer adult, *Neoclytus acuminatus*. It hits weakened ash trees and is an alcohol fan like the ambrosia beetles.

Ambrosia beetles are now going into the ends of alcohol baited wood bolts, and not just the sides
Photo: Brian Dahl, MNCPPC

Alcohol baited wood bolts for ambrosia beetles also attracted this redheaded ash borer adult
Photo: Michael Moran

Emerald Ash Borer

By: Stanton Gill

Black locusts have been in bloom this week in central Maryland and are finished blooming in other areas. Emerald ash borers start flying and mating when this plant is in full bloom. Also, plenty of pollen in the air for hay fever fans.

Leaf Spot on Oakleaf Hydrangea

By: Karen Rane

Examine your oakleaf hydrangeas (*Hydrangea quercifolia*) for the early symptoms of bacterial leaf spot. This disease, caused by the bacterium *Xanthomonas campestris*, commonly occurs during mild, wet weather in late spring and early summer. Other hydrangea species, such as *H. arborescens* and *H. macrophylla*, are also susceptible, but the disease seems to be most severe on oakleaf hydrangeas. The dark, angular leaf spots are usually first observed on the lower leaves, but the pathogen moves upward in the plant canopy through rainsplash or overhead irrigation. Later in the season, the lesions appear as purple, angular spots. In the landscape, removing lower leaves as soon as leaf spots are first observed can help slow disease spread (that's what I did with the spotted leaves in the photos!). Overhead irrigation of hydrangeas should be avoided, or timed to keep leaf wetness periods to a minimum. In nurseries, increased plant spacing can help increase air circulation and keeps the foliage as dry as possible to reduce disease.

Lower leaves of oakleaf hydrangea showing symptoms of bacterial leaf spot
Photo: K. Rane, UMD

Close-up of leaf spots caused by *Xanthomonas* on oakleaf hydrangea
Photo: K. Rane, UMD

Predators of White Grubs and Something Else Come a Digging

Jerry Brust, UME

A homeowner complained that they kept seeing 3-4 inch round holes shaped like funnels and about 3 inches deep in their lawn and their landscaped areas over the last several weeks (figs. 1 and 2). This damage looks to be either racoons, which the homeowners have seen around their house late at night at times or possibly skunks. While the homeowners have not seen any skunks, they have on occasion smelled their distinctive calling card at times around their home. My guess is that it was probably both.

Racoons and skunks will eat almost anything whether plant or animal, but insects and especially white grubs (which this property has an abundance of) are some of their favorite foods. In their search for grubs in lawns and gardens they can cause some trouble by tearing up the ground. They also dig cone-shaped holes 3 inches across and about 3 inches deep in search of grubs. While they are usually not a threat to landscape plants they

may become a nuisance when their digging and nesting activities are too close to houses and rabies is always a concern especially with skunks. In most cases, the occasional visit of skunks and racoons in the landscape can be tolerated and no control measures are needed.

However, just a week ago the homeowners found large excavations of soil in their planting beds around a young Japanese maple tree (fig. 3). One hole was almost 2 ft deep and 2 ft wide. We are not sure what caused these holes or exactly what it was looking for. It almost looks like a dog was doing the work of burying a very large bone or looking for one, but the homeowners said there is no dog big enough to do this type of damage in the neighborhood. They have seen foxes around the house at night at times. If anyone has an idea about what could do this type of damage, please send me an email: jbrust@umd.edu.

Figs. 1 and 2 Damage to lawn and landscape areas due to skunk and racoon digging
Photos: G. Brust, UME

Fig. 3 Large and small holes being dug around a Japanese maple tree by an unknown digger
Photo: G. Brust, UME

Beneficial of the Week

By: Paula Shrewsbury

Bess beetles and their log homes.

During the last week or two, I have had several people send me images, explain to me about "this really big beetle" they have seen, and come across several myself on walking trails – all of which turn out to be adult bess beetles (*Odontotaenius disjunctus*, Family Passalidae). Bess beetles are beneficial because they are prime decomposers and recyclers of wood from fallen or dead trees, an important ecosystem service. Bess beetles make their homes in decomposing logs where they live, breed, and feed. Over 500 Passalid beetle species have been described, but only a few occur within the U.S. with *O. disjunctus* being the most common passalid beetle on the eastern half of the U.S.

Adult bess beetle, *Odontotaenius disjunctus*, checking out a rotting log.
Photo: M.J. Raupp, UMD

Adult bess beetles are large and cylindrical in shape (~1.2" – 1.6" long), are very shiny dark brown to black in color, and they have deep grooves going down their front wings (elytra) and a single groove down the midline of the pronotum (section behind the head). They have very distinct, powerful looking jaws (mandibles) and quite an impressive curved horn on their head just above their eyes. Based on their appearance it is not surprising that bess beetles are also known as patent leather beetles or the horned passalus beetle. Bess beetle larvae are white grubs, similar to scarab white grubs but larger. However, one identifying characteristic is that the bess beetle grubs appear to have only two pairs of legs because the third pair is greatly reduced (see image).

Close up of an adult bess beetle, *Odontotaenius disjunctus*. Note the diagnostic shape and shiny dark color of the body, deep grooves on the elytra (front wings), and the fringe of orange hairs on the second pair of legs and around the pronotum (section behind the head).
Photo: M.J. Raupp, UMD

Adult bess beetles use their powerful mandibles to chew into fallen logs where they form galleries in which they feed and care for young. Wood is composed of very strong polymers, lignin and cellulose, making it very difficult to digest by most organisms. Bess beetles however can accomplish this feat due to the microbe biome contained in their digestive system that allows them to break down these tough polymers. The beetles use their strong jaws to chew up and ingest the wood. The wood ingested by adults move through the beetle's digestive system where it picks up digestive microbes, resulting in microbe-filled frass (excrement). Other microbes in the rotting wood help to further break down the sawdust-like frass, making nutrients more available to the adult beetles and their offspring that they need to develop and survive.

Adult bess beetles aggregate and sometimes compete for sections of a log. Clutches of eggs are laid throughout the frass –filled galleries made by the adults. These beetles have a subsocial relationship where both male and

female parents provide cooperative care for the larvae. Adults may lay multiple broods of larvae over time and the young adults from a previous brood will help care for their siblings. Adults will move eggs through their galleries to find the optimal food source. Adults live about one year, are territorial and protect their galleries from invaders. Depending on environmental conditions, development to adult may take from one season up to 16 months. Once adults are fully matured (turn from light brown to black color) they leave the log of their parents to find their own log and start their own families.

Larva of a bess beetle with close up of legs. Leg pairs 1 and 2 are normal sized, and pair 3 legs (inside white circle) are reduced in size. Legs 2 and reduced legs 3 have special structures which when rubbed together (stridulation) produce sound used for communication. Photo: Lyle J.Buss, University of Florida

Bess beetles are known for acoustic signals that they produce when they are disturbed by a process called stridulation (click here for an audio file of the defensive sounds). Stridulation which produces sound by rubbing two body segments or limbs together, is found in other groups of insects such as crickets, katydids, grasshoppers, and cicadas. Stridulation is a form of communication within a species. In bess beetles, both adults and larvae can produce sound via stridulation. Research has discovered 17 sound signals of the bess beetle, *Odontotaenius disjunctus*, among adults and larvae (Reyes-Castillo and Jarman, 1980). All signals are used for communication relating to defense, group communication, and management of larvae, representing the most developed system of sound communication known in arthropods.

When you are out and about take the time to flip over a rotting log or peel back bark of a fallen tree. You might come across a family of bess beetles doing their bess beetle thing. Be sure to leave everything the way you found it so these beetles can keep on recycling.

For more detailed information on bess beetles go to:
Bug of the Week (by M.J. Raupp, UMD) http://bugoftheweek.com/blog/2013/1/17/recyclers-in-the-circle-of-life-bess-beetles-iodontotaenius-disjunctusi?rq=bess
Featured Creatures (UF/IFAS) http://entnemdept.ufl.edu/creatures/misc/beetles/horned_passalus.htm

Weed of the Week

By: Chuck Schuster

This article is our third installment of weeds in the mint family. This week's weed of the week is henbit. Henbit, *Lamium amplexicaule,* is a winter annual. Henbit is preparing to go to seed or has started the process already. This weed can be found throughout the United States and is prolific in the eastern United States.

Henbit is a sparsely hairy winter annual with greenish to purplish, tender, square stems. Henbit has square stems, and a pink to purple flower. The leaves are round to heart-shaped with a rounded tooth leaf margin. The leaves on the upper part of the plant are sessile (directly attached to the stem) and lower leaves have petioles. The leaves have hairs on the upper surface and along the veins on the underside. Leaves are opposite. Henbit can develop stems up to sixteen inches in length. Flowers occur in whorls on the upper leaves and will be without petioles. Henbit has a fibrous root system and can develop roots at nodes on the square stems.

To prevent henbit from being able to complete the seeding cycle, one has several products which can be used. Look for products which include Speedzone, or a 2,4-D. The ester formulation is generally avoided as it volatilizes in warm temperatures. Fiesta will help control this plant but will take several applications. In landscape areas, consider the use of Prizefighter, Burnout, and other organic non selective products.

The leaves on the upper portion of a henbit stem are sessile (no petioles)

Plant of the Week

By: Ginny Rosenkranz

Rosa 'Ausbord' Gertrude Jekyll is a David Austin shrub rose that grows 4 to 6 feet tall and wide and is cold tolerant in USDA zones 5-9. Like all roses, Gertrude Jekyll thrives in full sun locations with medium moist, slightly acidic, well drained garden loams. For best blooming, the plants like regular deep watering in the mornings. Avoid overhead watering to limit foliar diseases. A light covering of mulch helps control weeds, retain soil moisture, and keep roots cool. Gertrude Jekyll is usually grown for the beautiful flowers with an intense fragrance. The plant has clusters of large 4-inch double blooms that start as a dark pink bud then mature to a bright pink flower. As it matures, the petals soften to a light pink before scattering to the ground. This is a very fragrant rose with the lovely old rose fragrance that can continue to bloom until frost. To encourage flowering, prune or deadhead the spent flower. The foliage is a dark green with 5-9 leaflets which have a toothed margin. Roses are prone to black spot, powdery mildew, rust, and rose rosette. Insect pests include aphids, beetles, borers, scale insects, rose midges, sawflies, and spider mites. Pruning to create an open airy plant helps reduce disease infections.

***Rosa* 'Ausbord' Gertrude Jekyll has an intense fragrance**
Photo: Ginny Rosenkranz

Pest Predictive Calendar "Predictions"

By: Nancy Harding and Paula Shrewsbury

In the Maryland area, the accumulated growing degree days (DD) this week range from about **374 DD** (Aberdeen) to **684 DD** (Reagan National). The Pest Predictive Calendar tells us when susceptible stages of pest insects are active based on their DD. Therefore, this week you should be monitoring for the following pests. The estimated start degree days of the targeted life stage are in parentheses.

- Spirea aphid - adult/nymph (326 DD)
- Lilac borer - adult emergence (350 DD)
- Emerald ash borer – adult emergence (421 DD)
- Four-lined plant bug - egg hatch/early instar (435 DD)
- Basswood lace bug – nymph (462 DD)
- Lesser peachtree borer – adult emergence (468 DD)
- Maskell scale – egg hatch 1st gen (470 DD)
- Oystershell scale – egg hatch 1st gen (486 DD)
- Gypsy moth – egg hatch (507 DD)
- Cottony camellia/taxus scale – egg hatch (520 DD)
- Euonymus scale – egg hatch (522 DD)
- White prunicola scale – egg hatch (594 DD)
- Bagworm – egg hatch (602 DD)
- Juniper scale – egg hatch (694 DD)
- Oak lecanium scale – egg hatch (789 DD)

See the Pest Predictive Calendar for more information on DD and plant phenological indicators (PPI) to help you better monitor and manage pests.

Degree Days (as of May 27)

Aberdeen (KAPG)	374
Annapolis Naval Academy (KNAK)	483
Baltimore, MD (KBWI)	541
Bowie, MD	599
College Park (KCGS)	506
Dulles Airport (KIAD)	527
Frederick (KFDK)	492
Ft. Belvoir, VA (KDA)	584
Gaithersburg (KGAI)	574
Greater Cumberland Reg (KCBE)	417
Martinsburg, WV (KMRB)	410
Natl Arboretum/Reagan Natl (KDCA)	684
Salisbury/Ocean City (KSBY)	570
St. Mary's City (Patuxent NRB KNHK)	661
Westminster (KDMW)	510

Important Note: We are using the Online Phenology and Degree-Day Models site. Use the following information to calculate GDD for your site: Select your location from the map Model Category: All models Select Degree-day calculatorThresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

CONFERENCES

June 3, 2020 (8 a.m. to 12 p.m. EDT)
Eastern Shore Pesticide Recertification Program
Location: This program will be conducted on-line.

Program Recertification:
Maryland - 2 (Forestry), 3A, 3B, 3C (Turf, Ornamental interior, Ornamental exterior), 5 (Aquatics) 6 (Right of Way), 7 (general pest), 10 (Research and Demonstration), 13 (Arial) and Private Applicator
Delaware - 2, 3A, 3C, 5, 6, 10

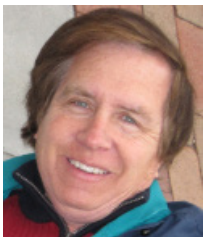
To register, go to:
https://2020esprocrastinator.eventbrite.com

June 12, 2020 (8 a.m. to 2 p.m. EDT)
25th Annual Procrastinator's Pesticide and Urban Nutrient Management **Virtual** Conference
University of Maryland Extension - Montgomery County
Location: This program will be conducted on-line.

Program Recertification (as of 5/22/20):
Maryland - CORE, 3A, 3B, 3C, 6, 7A and 10
Maryland Turf NM Credits - 2 CEU's

For more information and to register

CONTRIBUTORS:



Stanton Gill
Extension Specialist
sgill@umd.edu
410-868-9400 (cell)

Paula Shrewsbury
Extension Specialist
pshrewsb@umd.edu

Karen Rane
Plant Pathologist
rane@umd.edu

Chuck Schuster
Retired, Extension Educator
cfs@umd.edu

David Clement
Plant Pathologist
clement@umd.edu

Andrew Ristvey
Extension Specialist
aristvey@umd.edu

Ginny Rosenkranz
Extension Educator
rosnkrnz@umd.edu

Nancy Harding
Faculty Research Assistant

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.