UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **May 16, 2025**

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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

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Disease Information: David Clement (Extension Specialist) and Ana Fulladolsa (Plant Pathologist and Director, UMD Diagnostic Lab)
Weed of the Week: Kelly Nichols, Nathan Glenn, (UME Extension Educators), and 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)
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Seminars for Extension Entomology Specialist at CMREC

The seminars for the three individuals interviewing for the Commercial Ornamental Horticultural IPM Entomologist position are open to input from the Maryland commercial ornamental horticulture community. You can register to attend in person or via Zoom.

Please mark your calendars to participate in the Commercial Ornamental Horticultural IPM Entomologist candidate presentations (position description found here). The schedule is as follows:

Wednesday, May 28th
Candidate 1: 10:00am

Thursday, May 29th
Candidate 2: 10:00 AM
Candidate 3: 1:00 PM

The presentations will take place at the CMREC Clarksville Facility, 4240 Folly Quarter Rd. Ellicott City, MD, 21042.

Please register here to attend either in person, or via Zoom by Thursday, May 22nd. A Zoom link and feedback form will be sent on Friday, May 23rd, to those who register.

Your participation and input are greatly appreciated.

Honeylocust Plant Bug

By: Paula Shrewsbury

On May 7th, Mike Blashford observed heavy damage to honeylocust foliage (leaf drop, distortion and discoloration) in Fredericksburg, VA. There are two common insects that attack honeylocust plant bug, both with piercing – sucking mouthparts. Honeylocust plant bug, *Diaphnocoris* (*Blepharidopterus*) *chlorionis* (Hemiptera: Miridae), and honeylocust leaf hopper, *Macropsis fumipennis* (Hemiptera: Cicadellidae). Honeylocust plant bug (mid-instar nymphs) were found on this honeylocust.

Honeylocust plant bug nymph (left) and adult (right). Photo: Dan Herms, Ohio State University, Bugwood.org.

Honeylocust plant bug overwinters as eggs in the twigs of honeylocust. In early spring, as honeylocust is just starting to leaf out, eggs hatch and young nymphs begin feeding on newly expanding leaves. Damage can vary from year to year and tree to tree but in general, leaves are stunted, deformed, and discolored with yellow blotches, and in some cases, leaves turn brown and drop off. The good news is that honeylocust plant bugs have one generation per year and are early season pests (done feeding by the end of June). Some of the damaged leaves remain with the tree for the duration of the growing season. Others are dropped and will be replaced with a second crop if damage is quite severe.

Recommendations: Controls for honeylocust plant bugs are usually not warranted. At this time of year, if trees are young and newly planted, and damage from honeylocust plant bug is high, consider a systemic such as dinotefuran or flupyradifurone (ex. Altus), both classified by EPA as reduced risk insecticides.

Damage to honeylocust foliage by honeylocust plant bug. Photo: Mike Blashford

Damage to honeylocust by honeylocust plant bug showing branches with no leaves. Photo: Mike Blashford

Galls on Leaves

By: Paula Shrewsbury and Mike Raupp, UMD

There are a wide variety of galls that can be found on woody plants throughout the season. Galls range from spindle galls to bullet galls to blister galls to erinineum galls and many others. Causes of galls include small wasps (usually Cynipdae, especially on oaks), psyllids, eriophyid mites, and midges (flies). **Usually leaf galls have little impact on plant health and management is not necessary.**

On May 8th, Marie Rojas (IPM Consultant) reported ocellate maple gall on Red Sunset maple (see image), and spindle galls on Tilia (Linden or Basswood) (see image). Ocellate maple gall (a.k.a. maple eyespot gall) is caused by the gall midge (fly), *Acericeci ocellaris* (Diptera: Cecidomyiidae). These are beautiful galls that appear as eyespots that have a red-purple center, encircled by yellow and then a red-purple ring as the outer ring. If you look closely, just below the leaf surface at the center of the spot, you will see a very small, sessile fly maggot. Female, mosquito-like flies, deposit eggs in the soft tissue on the underside of the young maple leaf. Upon hatching, each larva, a.k.a. maggot, attaches itself to the leaf with its mouthparts and secretes hormone-like chemicals that take over the normal development of the leaf. As the larva grows, hormones induce the leaf to develop a swelling (the gall) in which the larva feeds and develops. The larva also causes the leaf to develop bright concentric rings of yellow (carotenoids) and red (anthocyanins) pigments. After a few weeks of feeding on the tissues within the gall, the larva drops to the earth and forms a pupa in which it spends the remainder of summer, autumn, winter, and early spring, before completing its metamorphosis and emerging as a small fly next spring.

Ocellate maple gall, home of a gall making midge, on Red Sunset Maple.
Photo: Marie Rojas, IPM Consultant.

Spindle galls on *Tilia* are caused by an eriophyid mite (Eriophyidae). Feeding by the eriophyid mite secretes hormones that result in the formation of galls. They are called spindle galls because of their elongate, somewhat spindly shape. The galls are about ¼ to ½ inch in length and may be red or green or yellow in color. If you break open a gall when they are active you will see (although barely because eriophyid mites are so small) hundreds of mites living in the gall.

Spindle galls, home of gall making eriophyid mites, on *Tilia*.
Photo: Marie Rojas, IPM Consultant.

Penn State Fruit Disease Updates

By: Ana Cristina Fulladolsa

Our current weather conditions are extremely favorable for multiple apple diseases, reports Dr. Kari Peter (Penn State) in the most recent Disease Update. Spores of fungi that cause apple scab, rust, apple blotch, and cherry leaf spot are active and spreading. The article recommends fungicides and application timings for each disease.

Two bacterial diseases should also be on your radar: fire blight and bacterial spot. Fire blight affects over 70 species of trees and shrubs in the rose family and bacterial spread is favored by our current warn and wet weather. Learn more about the disease and its management here. Lastly, Dr. Peter recommends scouting for bacterial leaf spot on stone fruit trees and highlights important considerations when using copper on stone fruit trees to avoid phytotoxicity.

Continue to monitor trees and use appropriate management practices based on site history and symptoms. If you need help diagnosing the problem, reach out the UMD Plant Diagnostic Lab.

Erineum Mites on Beech

Miri Talabac, UME-HGIC, found damage from erineum mites on beech this week in Prince Georges County. These eriophyid mites are microscopic and host specific to beech trees. Their feeding causes patches of felt-like areas on the uppder side of leaves and dimpling on the lower sides of leaves. However, Joe Boggs, OSU Extension, reports finding foliage with the reverse of these symptoms on the upper and lower sides of leaves. As the symptoms progress, the damage turns reddish-brown and can look a little like a rust infection on the foliage. If you were to wipe your fingers over rust, it would leave residual on your fingers.
Control: This damage does not impact the overall health of the tree, so control measures are not necessary.

Damage from erineum mites on the top and undersides of beech leaves.
Photos: Miri Talabac, UME-HGIC

Southern Red Mite on Holly

By: Paula Shrewsbury

A sample of Japanese holly was received at the UME Plant Diagnostic Laboratory on May 6th which was determined to be infested with Southern red mite, *Oligonychus ilicis*. Southeren red mite is a cool season mite (most active in spring and fall) and has a wide host range but prefers broad-leaved evergreens in the Ericaceae and Aquifoliaceae.

Eggs (center), nymphs (right), and adult (left) of the Southern red mite, Oligonychus ilicis.
Photo: Jim Baker, NCSU; www.forestryimages.org

Recommendations: Monitor broad-leaved evergreens showing stippling damage to the foliage and fine webbing for mite activity. Since mites are very small and can be difficult to see on the underside of the foliage, a clip board with a light piece of paper should be placed under branches, and the branches should be whacked to knock mites onto the paper (beat sampling). At this time of year as weather warms, populations may be slowing down and control measures may not be necessary. However, monitor closely again in the late summer as nights begin to cool. If control is warranted, there are several products labeled for mite control including fenpyroximate (ex. Akari, EPA reduced risk classification), abamectin (ex. Avid), and spiromesifen (ex. Forbid). Mite growth regulators include hexythiazox (ex. Hexagon) and azadirachtin (ex. Aza-Direct) which is an OMRI listed product.

Dusky Birch Sawfly

Marie Rojas, IPM Scout, found dusky birch sawfly larvae feeding on Dura Heat birches this week in Montgomery County. The larvae line up around the margin of a leaf when feeding. They become s-shaped when disturbed. This sawfly has two generations per year in Maryland (April and May and then again in July through early fall).
Control: For small, easy to reach populations, infested branches/leaves can be pruned off. If populations are too high for mechanical removal, horticultural oil can be used for early instar larvae or spinosad (Conserve) can be applied. Remember that Bt works on lepidopteran caterpillars and not on sawflies.

Dusky birch sawfly larvae become s-shaped when disturbed.
Photo: Marie Rojas, IPM Scout

Red Clover Mites Seem to be Crawling Everywhere

By: Paula Shrewsbury

We have had reports over the last few weeks of tiny red mites crawling on sidewalks, outside of buildings (especially the southern exposure), and at my house on boxes delivered and left on the sidewalk. These red mites are clover mites, *Bryobia praetiosa*. Clover mites are very tiny, just visible to the naked eye (~0.75 mm) and they tend to "swarm" over surfaces in large numbers. Clover mites are active in cooler weather in the spring and fall. In the heat of the summer when temperatures are above ~80°F, clover mites go into a resting phase called aestivation. In the fall, clover mites lay eggs on vegetation or on sunny foundations of buildings (overwintering stage). The eggs hatch in the spring and they start all over again.

Clover mite (~0.75mm in length) that was running across a sidewalk. Photo: P.M. Shrewsbury, UMD

Immature clover mites tend to be bright red, whereas adult clover mites are more reddish-brown or greenish-brown in color, with pale orange legs. The front pair of legs is longer and held forward, sometimes confused for antennae. Clover mites are plant pests that feed mainly on grass, clover, and other weedy plants such as dandelions, and wild strawberries. They are commonly associated with lawns and can sometimes cause significant damage to lawns. Clover mite feeding and damage is often greater on the sunny sides of structures where the higher temperatures lead to greater mite densities. Clover mites often move indoors after heavy rain, excessive heat or a change in the season, which stimulate massive numbers to enter buildings becoming a nuisance. Do not squish or smudge them as they will leave red streaks on surfaces. The good news is clover mites do not reproduce indoors, and they dehydrate and die within a few days.

More detail on clover mite biology and management, and images can be found at:
-https://bugoftheweek.com/blog/2019/5/13/tiny-red-spots-before-my-eyes-clover-mites-bryobia-praetiosa?rq=clover%20mite
-https://edis.ifas.ufl.edu/publication/IN776

Clover mites are not to be confused with red velvet mites or concrete mites, both of which are predatory. All three mites are harmless to people.

The Raspberry Pyrausta Caterpillar - Distorted Buds on Monarda

By: Paula Shrewsbury

It's that time of year when species of Monarda, a beautiful flowering perennial, are starting to form their flower buds. Monarda favorites include scarlet bee balm, spotted beebalm, wild bergamot, and others. In addition to their beauty, Monarda species provide floral resources to an array of magnificent and beneficial insects such as butterflies including clear wing hummingbird moths, hover flies, bumble bees, and a whole host of predatory and parasitic wasps, in addition to hummingbirds. Later in the season, the seeds are favored by gold finches.

In my yard on the Monarda, I started to see deformation of the newer leaves and flower buds about a week ago. Deformation means the **raspberry pyrausta, *Pyrausta signatalis*** (Lepidoptera: Crambidae) adults (known as snout moths) are laying eggs in the buds, and the small caterpillars are feeding away in the buds, resulting in a happy caterpillar but no flower blossoms on the Monarda. Interestingly, this moth and caterpillar return every spring to wreak havoc on my Monarda plants.

The raspberry pyrausta occurs in North America from Canada and south to NC, SC, TX and AZ. Monarda is the main host plant of the caterpillar. There seems to be one generation per year and adults and caterpillars are active spring to early summer. Moths are a pretty "raspberry" and tan color and about ½" in length. Caterpillars are small and creamy tan color. Adult moths lay eggs on the leaf and flower buds of Monarda. Eggs hatch and the small caterpillars bore into the buds and actively feed on buds and developing flowers. Monitor the plants early in the season for holes in leaves, feeding damage to flower buds and flowers, and small black frass pellets in the buds and axils of the leaves and flowers. At the first sign of damage it is time to respond.

This beautiful pinkish-purple raspberry pyrausta moth, *Pyrausta signatalis*, can be observed flying around the buds of Monarda and depositing her eggs on the buds. Photo: P.M. Shrewsbury, UMD

Recommendations: The number of plants and flowers in the landscape will influence the type of control you implement. If Monarda patches are somewhat small, mechanical control is a very effective option. Search the buds that show signs of damage and frass for the small cream-colored caterpillar. Once found, squish the caterpillar(s), there can be more than one in a bud, and move on to the next flower. If there are too many plants for this method, there are OMRI (Organic Materials Review Institute) listed products with active ingredients such as *Bacillus thuringiensis kursatki* (Btk) or spinosad. When applying either of these products, focus the spray on the buds and be sure to get good coverage. When the caterpillars eat the treated plant material they will be poisoned. Use caution during application to avoid bees and other pollinators (ex. treat Monarda flower buds before they open and attract beneficial insects), or plants that might have caterpillars you want in your gardens (ex. milkweed, monarch caterpillars).

A small caterpillar of the raspberry pyrausta, *Pyrausta signatalis*, munching on a flower bud of Monarda. Note the presence of diagnostic dark colored frass pellets. Photo: M.J. Raupp, UMD

In the September 25, 2020 IPM Report, there was an article on a sister species of *P. signatalis*. The adult moth and caterpillar of *Pyrausta inornatalis* was found salvia. Larval host plants are various salvia species. As with *P. signatalis*, the adult moth is quite pretty.

Damage to the new foliage and flower buds of Monarda caused by the raspberry pryrausta, *Pyrausta signatalis*, caterpillar. Photo: M.J. Raupp, UMD

Spotted Lanternfly Update

We have received many reports of spotted lanternfly (SLF, *Lycorma delicatula*) eggs hatching and early instar nymph activity this past week. Thanks to all of you who have kept us informed of what you are seeing in the field!

Here are the dates and locations that had reports of SLF activity:

May 3 – Potomac; May 6 - Catonsville and Baltimore City; May 9 – Barnesville; May 10 – Littlestown, PA ; May 11 - Silver Spring/Cloverly; May 12 – Columbia; May 12 – Woodbine; May 13 -NJ; May 14 – Gaithersburg; May 15 – Georgetown; May 16 - Ellicott City.
Host plants included grape vines, tree of heaven, blackberry, Virginia Creeper, buttonbush, black raspberry jewel plants, rose, bittersweet, porcelain berry, thistle (likely Canada thistle), red osier dogwood, black cherry (sapling), flea bane, red maple, redbud, brown turkey fig,

Keep an eye for generalist predators such as lady beetles among populations of SLF.
Photo: Allyson Rogan, UME-HGIC

Early instar nymphs are active in landscapes this week.
Photo: Joanne Lutz

Cottony Camellia/Taxus Scale

So far, we have not received reports of egg hatch of cottony camellia/Taxus scale, but some areas have reached the predicted degree day level of egg hatch at 649 DD. Many other areas are close to this level. Look for eggs in the sacs produced by the adult females and monitor populations closely for crawlers. When crawlers are active, control options include pyriproxyfen or buprofezin.

Monitor plants for the yellow to yellowish brown crawlers of cottony camellia/Taxus scale.
Photo: Suzanne Klick, UME

Red Thread in Turf

Bill Grund, City of Rockville, found red thread infection in cool season turf on May 12 in Rockville. Cool, wet weather provides optimal conditions for red thread. This disease is known to thrive in low N-fertility areas. Supplying N-fertility during infection periods may help to alleviate some of the symptoms, but keep in mind that red thread is very persistent in the spring months.

Red thread infection in cool season turf.
Photo: Bill Grund, City of Rockville

Ambrosia Beetle Update!

It has been a rainy week and ambrosia beetle activity has been way down. Only a few beetles were trapped and none were beetles of concern. Continue to monitor for signs of borer activity and treat as needed. We will continue to run the ambrosia beetle traps and keep you informed on what we find. **If anyone finds ambrosia beetle activity in trees, please let me know (pshrewsbury@umd.edu and copy sklick@umd.edu) where, when, and on what type of tree and send pictures.**

A newly produced frass "toothpick" produced by an adult ambrosia beetle boring into the wood.
Photo: P.M. Shrewsbury, UMD

An ambrosia beetle sticking out of the hole it bored in its host tree.
Photo: P.M. Shrewsbury, UMD

Gymnosporangium Rust

The gymnosporangium rust galls on juniper continue to sporulate this week. It is still necessary to apply treatments to susceptible roseaceous plants.

Gymnosporangium rust sporulating on juniper in Severna Park.
Photo: Heather Yetzbacher, KW Landscape and Home

Elm Sack Galls

By: Paula Shrewsbury

Luke Gustafson (The Davey Tree Expert Company) found elm sac gall (also known as pouch galls or elm-grass root aphid) on an elm in Baltimore City MD on May 9th. These galls are produced on elm (9 species of elms are susceptible) by a non-native European aphid, *Tetraneura ulmi* that was introduced into the U.S. back in the 1890's. In the spring, when elm leaves are new and soft, overwintering eggs on the bark hatch and begin feeding on the elm foliage. The new nymphs develop into a form called fundatrix that then founds a new generation of aphids. Feeding on new leaves induces the elm to form a sac gall (~3/8" tall). Galls are stalked and start out shiny yellow-green and then turn reddish in color. Inside this gall the fundatrix aphid gives birth to nymphs and in June and July, a generation of winged adults is produced. The gall cracks open and the winged aphids fly to grass and crawl down to feed on roots. In the fall, some aphids fly back to elm, overwinter on the trunk of the trees, and then start the cycle again in the spring. The galls that are seen now still have fundatrix aphids inside them. Cut a gall open and you can see a group of aphids inside each one.

Recommendations: Usually sack galls are an aesthetic problem. In some cases, the galls can be severe. By the time the galls begin to form in the spring it is too late to treat. The next season consider a systemic insecticide application during the winter to prevent galls in the spring.

Elm sack gall on elm caused by an aphid.
Photo: Luke Gustafson, The Davey Tree Expert Company

An elm sack gall cut open exposing the Tetraneura ulmi aphids that use the gall as their home.
Photo: Joe Boggs, OSU Extension

A Cool Find

David Keane, Howard County Recreation and Parks, found a cardinal bird's nest in a crape myrtle this week. If there are aphids and scale present, the hatchlings will have something close by to eat.

A cardinal's nest in a crape myrtle.
Photo: David Keane, Howard County Recreation and Parks

Galls on Pignut Hickory

By: Paula Shrewsbury

Donna Anderson (Towson University) sent in pictures of a very cool looking gall on pignut hickory from Towson MD on May 14th. I have searched around to try and identify the gall and causal agent of the gall and have not found anything conclusive. Hickories get a variety of galls. My educated guess is that the gall is caused be a phylloxeran insect, which is an aphid-like insect (not an aphid but closely related. Phylloxerans on hickory and other plants often result in somewhat wild looking galls.

Gall on pignut hickory found in Towson, MD.
Photo: Sarah Grimshaw, Towson University

Same gall on pignut hickory but looks more extensive.
Photo: Sarah Grimshaw, Towson University

Potato Leafhoppers Are in Maryland

Marie Rojas, IPM Consultant, reported her first find of potato leafhopper of the season in a nursery in Bealsville, MD. Marie found them on the growing tips of Red Sunset maple. Adults migrate up from the south, riding up on the jet air streams. Interesting is that the image that Marie sent is of a potato leafhopper nymph (see image), not an adult. This suggests they have been at this nursery long enough to lay eggs and nymphs to hatch**. Adult potato leafhopper adult arrival is determined to be around 603 DD.** Nursery producers scout your susceptible plants now. 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

A potato leafhopper nymph found on the tip of a red maple.
Photo: Marie Rojas, IPM Consultant

curl over, thicken, and harden which is typically referred to as ‘hopperburn’. The distorted growth is often mistaken as herbicide damage. Multiple generations of potato leafhopper continue to damage the new tip growth that flushes out on maples. A systemic insecticide can be used for control.

For more information go to: https://extension.umd.edu/resource/potato-leafhoppers-nursery-trees/

Characteristic damage to new growth of maple by potato leafhopper.
Photo: S. Gill, UME

Beetle Mite Found on Boxwood

By: Paula Shrewsbury

On Tuesday May 15th, Miri Talabac (UME HGIC) found an interesting mite on a boxwood that had a high infestation of boxwood spider mite. This looks like a beetle mite to me. Beetle mites are in the order Oribatida. Mites in this order are usually grouped as box, moss, or beetle mites. Most of these mites are fungivores (eat fungus), detritivores (eat dead stuff, detritus), and a few are predatory. Some species also parasitize vertebrates and invertebrates. A unique characteristic of Oribatida mites is that they are sclerotized (hard exoskeleton) whereas most mites have a soft exoskeleton. I can not tell from this image what type of beetle mite or what it feeds on from the image.

To learn more about Oribatida mites go to: https://www.chaosofdelight.org/all-about-mites-oribatida

A beetle mite that was found on boxwood.
Photo: Miri Talabac, UME HGIC

Woolly Beech Aphid

By: Paula Shrewsbury

On Tuesday May 14th, Tim Marino (The Davey Tree Expert Company) found woolly beech aphid, *Phyllaphis fagi*, on beech in Wynnewood, PA. Beech is the only host for this aphid. They can be present in high numbers, but their feeding usually does not impact the overall health of the tree. However, the sap-sucking insects coat the upper leaf surface with honeydew, making the foliage sticky and then black with sooty mold. The high amount of honeydew attracts ants, yellow jackets, and other wasps. The high amount of honeydew and sooty mold may result in the need for measures to suppress the populations.

For more information on woolly beech aphid go to: https://www.nurserymag.com/article/wooly--beech-aphid/

Woolly beech aphid and their shed skins on beech in Wynnewood, PA.
Photo: Tim Marino, The Davey Tree Expert Company

Woolly beech aphid on the underside of a beech leaf. Note the "woolly" and winged indivduals, and the honeydew on the leaf.
Photo: Magnefi (CC BY-SA 30.)

Roseslug Sawfly Larvae and Damage

By: Paula Shrewsbury

Miri Talabac, UME HGIC, found roseslug sawfly, *Endelomyia aethiops* (Hymenoptera: Tenthredinidae) larvae on Knock Out rose in College Park, MD on May 15th. She reported over half of the plant was brown from roseslug sawfly feeding damage. Roseslug sawfly feed on the underside of rose foliage and the damage is referred to as etching or windowpane damage (feeding on one layer of the leaf tissue). Early instar roseslug sawfly cause the windowpane damage and as larvae get bigger, the feed through the leaf and leave holes in the foliage. There is one generation a year.

Roseslug sawfly larvae (~1/2" in size) on Knock Out rose.
Photo: Miri Talabac, UME HGIC

However, there are two other common rose sawfly species, the bristly roseslug (*Cladius difformis*) that has 5-6 generations per year, and the curled rose sawfly (*Allantus cinctus*) which is the largest and has 2 generations. Roses should be monitored for these two sawflies throughout the season.
Recommendations: Monitor leaves showing damage closely for the presence of sawfly larvae (they blend in well). Spinosad or horticultural oil are good control options.

Damage on rose leaf caused by rose slug sawfly larval feeding.
Photo: Raymond Cloyd, Kansas State University

Hyperaspis Lady Beetles

We continue to receive reports and see high levels of *Hyperaspis* lady beetles on crape myrtles. Miri Talabac, UME-HGIC, forwarded a report from an Ask Extenison submission noting that these lady beetle larvae were on a crape myrtle in Prince George's County. For more information on *Hyperaspis* lady beetles, see the May 10, 2024 IPM Report.

***Hyperaspis* lady beetle larvae are often found among scale populations on crape myrtles.**
Photo: Ask Extension submitter

Soldier Beetles

Marie Rojas, IPM Scout, found soldier beetles on flowers of *Styrax japonicus* in Montgomery County.
Adults feed on pollen, nectar, and insects. Larvae mostly feed on ground dwelling insects.

For more information on soldier beetles, see the July 16, 2021 IPM Report.

At the research center, this margined leatherwing soldier beetle was visiting the flowers of *Cornus kousa*.
Photo: Suzanne Klick, UME

Beneficial of the Week

By: Paula Shrewsbury

Florida predatory stink bug – a generalist predator on crape myrtle

On May 7th, while monitoring a crape myrtle with a heavy infestation of crape myrtle bark scale, Mike Blashford observed several red and black bugs in their nymphal stage on a crape myrtle (see image). The nymphs look like one of two predatory stinkbug species. Possibly Florida predatory stink bug, *Euthyrhynchus floridanus* or two spotted stink bug, *Perillus bioculatus* (Hemiptera: Pentatomidae). I am "pretty sure" that these are nymphs of the Florida predatory stink bug. I qualify this identification in that it is difficult to positively identify nymphs, and even more so from a photo. We will have to wait for the adults to confirm the identification. For this episode of *Beneficial of the Week* I am going to discuss the Florida predatory stink bug, and in another episode, I will address the two spotted stink bug predator.

Nymphs, likely Florida predatory stink bug, *Euthyrhynchus floridanus*, on crape myrtle infested with crape myrtle bark scale.
Photo: Mike Blashford

The Florida predatory stink bug, *E. floridanus*, is native to the southeastern U.S. and historically known to only occur in Florida and warmer southeastern states. In 2012, there were 2 confirmed sightings of the *Euthyrhynchus* in MD. Since then, *Euthyrynchus* has continued to move northward. Currently in i-Naturalist there are over 700 *Euthyrhynchus* observations in MD.

Adult *Euthyryhnchus* have the typical stink bug or shield shape to their bodies and are about 12-17 mm (approx. ½ to ¾") in length. The upper view of the body and hind wings appear an iridescent purple-black color with 3 orange-red marks on each point of their scutellum (the triangular section between the wings of the bug), while the abdomen is an orange color. There is a distinct point on each side of the pronotum ("shoulders" or area behind the head). Early instar nymphs are red in color, and mid to late instar nymphs are red and black. *Euthyrhynchus* lays clusters of 20-90 barrel-shaped eggs at a time, and are brown in color and have a ring of small spines circling the operculum (top rim of the egg). Eggs hatch in spring and there are two generations per year. They overwinter as adults in wood piles and other protected locations.

Egg mass of the Florida predatory stink bug, Euthyrhynchus floridanus. Note the barrel shape with a circle of spines around the operculum (ring at the tip of the "barrel").
Photo by L.J. Buss, UFL

Euthyrhynchus is a generalist predatory stink bug known to feed on a diverse range of soft-bodied prey items such as caterpillars, beetle larvae and adults, plant hoppers, other stink bugs (see image), earwigs (see image),

crickets, dragonflies, likely crape myrtle bark scale, and more. *Euthyrhynchus* are often found foraging on the bark of trees and have a strong tendency to aggregate. Aggregations of *Euthyrhynchus*, especially early nymphal stages, may feed together on larger insect prey. They sneak up on their prey and swing their "beaks" (piercing – sucking mouthpart) up in front of their bodies and impale the prey insect. They inject digestive enzymes into the prey that make the prey immobile and liquifies it to make it easier for the predator to suck up the contents of the prey's body.

They are considered beneficial stink bugs because many of the prey they attack are pests in ornamental and other plant systems. Although *Euthyrhynchus* alone is not likely make a huge impact on the biological control of pest insects, they are one of many generalist natural enemies that, as a complex, can provide an impactful biological control service for pest insects.

A fifth instar nymph (last immature stage) of the Florida predatory stink bug, *Euthyrhynchus floridanus*. Note the characteristic black wing buds (not fully developed wings).
Photo by L.J. Buss, UFL

Florida predatory stink bug, *Euthyryhncus floridanus*, adult with its beak impaled into a brown marmorated stink bug. Note the distinct spine on each side of the pronotum (shoulders).
Photo: Wayne Longbottom, MD Biodiversity Project

Nymphs, likely 3rd or 4th instar, of Florida predatory stink bug, *Euthyrhynchus floridanus*, feeding as a group on an earwig.
Photo by A. Ditro, NC

Weed of the Week

By: Chuck Schuster

In travels this past week I saw a great deal of poison hemlock along roadsides. Remember it is NOT giant hogweed. Poison hemlock was mentioned several weeks ago if you need to have control options.

Temperatures are warm overall, and with the soil is moist to wet, this is allowing weed growth really advance. In some landscapes this week weeds are taking over.

Figure 1 Catchweed bedstraw growing in asphalt. Photo: Chuck Schuster, UME

Catchweed bedstraw*, Galium aparine L.*, is a winter or sometimes summer annual that can be found throughout the United States. Catchweed bedstraw will produce an almost flat mat that will climb over other vegetation (photo 4), it will present with square stems, with a backwards facing prickle on the four corners of the stem and on leaves (photo 3). These prickles allow this plant to cling to other plants for support. The leaves will have hairs on the upper surface, will be lanceolate in shape, are sessile (attached directly to the stem) in whorls of six to eight and found at nodes with a rough margin (photo 3). The plant reproduces primarily by seed, which germinate over a long period of time as moisture and temperatures permit. Flowers are produced starting in late May, on a stalk with 4 petals, white in color (photo 2). The flowers are small, about 1/8 to ¼ of an inch across.

Figure 2 Catchweed bedstraw flowers are white with 4 petals. Photo: Chuck Schuster, UME

There are no know biological control methods for this plant. It seems to prefer all types of growing conditions, including out of asphalt (photo 1). In landscape settings, it is an easy to pull weed, but consideration should be given to do this before it goes to seed. In turf, it will thrive in taller mowed settings. This plant when found in an undesired setting can be controlled using the following options. Many post-emergent broadleaf products will work including oxyfluorfen (Goal), Quinclorac, carfentrazone (Quicksilver) with good results and Dicamba, and Three-way selective providing fair results. Remember to use a surfactant to get the best results. Use caution with using post emergent broadleaf products in landscapes as some of these products can move downward in the soil and be absorbed by plant roots of desired species, or can volatilize and move causing damage to desirable species of plants. In landscape and nursery settings, the use of oxyfluorfen (Goal) will be effective as a pre-emergent/ early post emergent product. Fiesta selective post emergent turf weed control can be used in an existing turf stand. Non –selective products used in landscapes will include products can include Prizefighter, which contains Ammonium Nonanoate, and is registered as organic. Horticultural vinegar (20%) is another option for annual weeds. These product works well on annual weeds but not perennial weeds. Other products will include glyphosate-based products but caution should be

considered with these products to avoid contact with any roots or suckers of desired plant species. Glufosinate is another option for control, with similar concerns about contact with roots and suckers of desired plants.

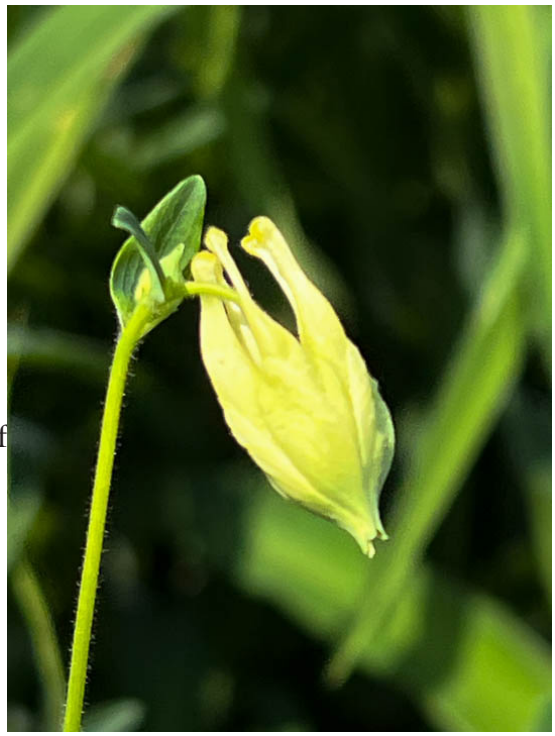
Fig 3 Whorled leaf of catchweed bedstraw.
Photo: Chuck Schuster, UME

Figure 4 Catchweed bedstraw climbs over other vegetation.
Photo: Chuck Schuster, UME

Plant of the Week

By: Ginny Rosenkranz

Aquilegia canadensis" Corbett" is a compact native plant commonly known as columbine that grows only 9-12 inches tall, thrives in light to moderate shade, preferring afternoon shade. 'Corbett' prefers organically rich, moist soils but can thrive in a wide range of soil types if there is good drainage. Like all columbines, they have arching stems holding bell-shaped flowers with spurs that seem to rocket the plants forward. And like all columbine, Corbett' self-seeds profusely to create a small pocket meadow of small nodding yellow columbine. These tiny but beautiful flowers bloom from April to May and attract pollinators like hummingbirds and bees. Columbine leaves are medium green and seem delicate as each leaf is made up of leaflet, and each leaflet is also divided into 3 more leaflets, creating 9 tender leaflets. This composition of the leaflets creates a fern-like appearance, fitting well into the woodland landscapes. Plants are cold tolerant in USDA zones 3-8, and are tolerant of rabbit and deer browsing, drought and dry soils for short periods of time. 'Corbette'



***Aquilegia canadensis* 'Corbett' flower bud close-up.**
Photos: Ginny Rosenkranz, UME

has excellent resistance to leaf miner, keeping the foliage looking lovely longer and healthier. These native plants live for 3-5 years before dying out, but the seedlings often make it look like the plants thrive forever. Plants can be planted as companions to many spring bulbs that bloom at the edges of the woods or in woodland gardens, hummingbird gardens, cottage gardens and naturalized areas.

***Aquilegia canadensis* 'Corbett' blooms in April and May. Photos: Ginny Rosenkranz, UME**

Pest Predictive Calendar "Predictions"

By: Nancy Harding and Paula Shrewsbury, UMD

In the Maryland area, the accumulated growing degree days (**DD**) this week range from about **433 DD** (Clarksville) to **823 DD** (Nat'l Arboretum/Reagan Nat'l). 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.

Spongy moth – egg hatch **(373 DD)**
Holly leafminer – adult emergence **(375 DD)**
Hemlock woolly adelgid – egg hatch (2nd gen) **(411 DD)**
Basswood lace bug – first adult activity **(415 DD)**
Emerald ash borer – adult emergence **(421 DD)**
Locust leafminer – adult emergence **(429 DD)**
Honeylocust plant bug – egg hatch, early instar **(433 DD)**
Fourlined plant bug – egg hatch, early instar **(435 DD)**
Lesser peachtree borer – adult emergence (1st gen) **(468 DD)**
Oak erricoccin scale (oak felt scale) – egg hatch / crawler **(469 DD)**
Maskell scale – egg hatch / crawler (1st gen) **(470 DD)**
Oystershell scale – egg hatch /crawler (1st gen) **(486 DD)**
Minute cypress scale – egg hatch / crawler **(511 DD)**
White prunicola scale – egg hatch / crawler (1st gen) **(513 DD)**
Euonymus scale – egg hatch / crawler (1st gen) **(522 DD)**
Bronze birch borer – adult emergence **(547 DD)**
Potato leaf hopper – adult arrival **(603 DD)**
Black vine weevil – adult emergence **(607 DD)**
Twospotted spider mite – egg hatch **(627 DD)**
Bagworm – egg hatch **(635 DD)**

Cottony camellia/Taxus scale – egg hatch / crawler **(649 DD)**
Mimosa webworm – larva, early instar (1st gen) **(674 DD)**
Juniper scale – egg hatch / crawler **(694 DD)**
San Jose scale – egg hatch / crawler (1st gen) **(723 DD)**
Crapemyrtle bark scale – egg hatch / crawler (1st gen) **(724 DD)**
Calico scale – egg hatch / crawler **(765 DD)**
Oak lecanium scale – egg hatch / crawler **(789 DD)**
Rhododendron borer – adult emergence **(815 DD)**
Japanese maple scale – egg hatch / crawler (1st gen) **(829 DD)**
Dogwood borer – adult emergence **(830 DD)**
European elm scale – egg hatch / crawler **(831 DD)**
European fruit lecanium scale – egg hatch / crawler **(904 DD)**
Cyrptomeria scale – egg hatch / crawler **(937 DD)**
Azalea bark scale – egg hatch / crawler **(957 DD)**

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

Degree Days (as of May 14, 2025)

Annapolis Naval Academy (KNAK)	572
Baltimore, MD (KBWI)	635
Belcamp (FS836)	511
Clarksville (001MD)	433
College Park (KCGS)	629
Dulles Airport (KIAD)	618
Ft. Belvoir, VA (KDA)	698
Frederick (KFDK)	542
Gaithersburg (KGAI)	595
Greater Cumberland Reg (KCBE)	510
Martinsburg, WV (KMRB)	548
Millersville (MD026)	592
Natl Arboretum/Reagan Natl (KDCA)	823
Perry Hall (C0608)	506
Salisbury/Ocean City (KSBY)	597
St. Mary's City (Patuxent NRB KNHK)	810
Westminster (KDMW)	678

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

Upcoming IPM Scouts' Diagnostic Sessions (afternoon)
June 17, 2025, July 30, 2025, and August 26, 2025
Location: CMREC, Ellicott City, MD

June 18, 2025
Eastern Shore Pesticide Recertification Conference via Zoom

June 24, 2025
Stanton Gill Symposium and Lab Dedication
Location: CMREC, Ellicott City
Co-sponsors: University of Maryland Extension and Maryland Nursery, Landscape, & Greenhouse Association

June 27, 2025
Pesticide Recertification Conference
Location: Montgomery County Extension Office, Derwood, MD
Registration information coming in a few weeks.

September 11, 2025
MNLGA Field Day
Location: Raemelton Farm, Adamstown, MD

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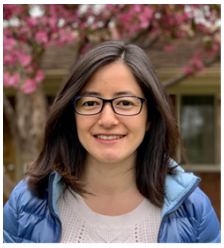
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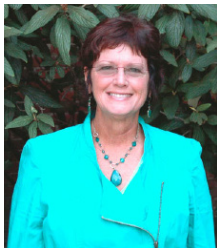
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