

Commercial Horticulture

June 28, 2024

In This Issue...

- [Weather update](#)
- [Solar Tech Day](#)
- [Elm zigzag sawfly](#)
- [Purple-spotted lily aphid](#)
- [Earwigs](#)
- [Armored scale on black gum](#)
- [Tick Risk Assessment Survey](#)
- [Horticulture field trials](#)
- [Japanese beetle adults](#)
- [Lightning bug comments](#)
- [Dogday cicada](#)
- [Cottony maple leaf scale](#)
- [Cottony camellia/Taxus scale](#)
- [Spotted lanternfly](#)
- [Biocontrol conference lectures](#)
- [Spotted lanternflies needed for research](#)
- [Parasitic wasps](#)
- [Bagworms in skip laurel](#)
- [Praying mantids](#)
- [Perplexing bumble bee](#)

Beneficial of the Week:

Fireflies

Weed of the Week:

Johnsongrass (*Sorghum halepense*)

Plant of the Week:

Coreopsis auriculata 'Nana'

Pest Predictive Calendar

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 sgill@umd.edu

Coordinator Weekly IPM Report:

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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), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)

Weed of the Week: Chuck Schuster (Retired Extension Educator), Kelly Nichols, Nathan Glenn, and Mark Townsend (UME Extension Educators)

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)

Hot, Hot, Hot

By: Stanton Gill

What a way to start summer- incredible heat wave across the US with record temperatures for this early in the season. The ground is powder dry with the bright sunshine pulling up much of the moisture from plants and the ground over the last 10 days. Plants are going to start showing scorching and dieback as we move into June. If you see scorching, send in the pictures to me at sgill@umd.edu.

Next Tech Day Set for December 5, 2024

By: Stanton Gill

For our next Tech Day for the commercial horticulture industry, we will emphasize solar systems. Since many of the newer tools and large equipment is moving heavily toward electric and battery usage, there will be a high demand on electric supply systems. This can only mean higher kilowatt charges coming down the road. If you are thinking ahead of the crowd, then a solar system would be worth your while to consider. We will visit 3 -4 commercial horticulture operations using solar systems and have the owners explain the costs and pros and cons of each system. You can ask all the questions you need to help guide you. We will set up the complete schedule and registration this fall. Stay tuned.

Fourth of July Holiday - No Report Next Week
The next report will be July 12, 2024

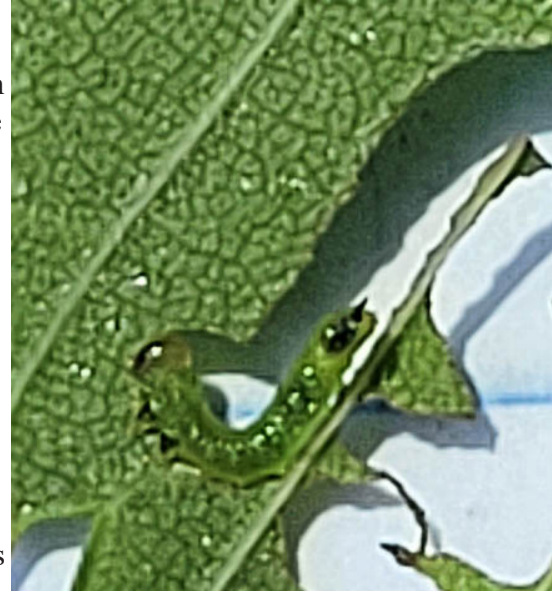
Elm Zigzag Sawfly - Bad News for Hybrid Elms

By: Stanton Gill

Well, another new pest shows up in Maryland, the elm zigzag sawfly. Marie Rojas, IPM Scout, sent in photos from damage on a hybrid elm in central Maryland. We visited the site on Wednesday, and the larvae and damage are elm zigzag sawfly. This insect was initially listed as a quarantine pest, but when I exchanged emails with Kimberly Rice of MDA she said "USDA has taken this pest off of the quarantine list and it is not under a state quarantine, so we treat it like any other pest issue in the nursery." Meanwhile, if you find elms with damage like the pictures, please let us know where in the state you are seeing the damage and the amount of damage. Let me know at sgill@umd.edu. We are very interested if any damage is being found on zelkova.

The elm zigzag sawfly (*Aproceros leucopoda*) is another pest from China and Japan that has found its way to Maryland. In Europe, it has caused extensive damage with its multiple generations per year. We have yet to see how bad it will be for hybrid elms here in the United States. It can reproduce parthenogenically. More bad news - elm zigzag sawflies are strong fliers and can travel up to 90 km per year, which is a major contributing factor to their invasive potential (Blank et al. 2014).

Elm zigzag sawfly was first reported in North America in July of 2020 in Sainte-Martine Quebec, the pathway of introduction to North America as well as the amount of time it has been present is currently unknown. It was identified by citizen scientists on the application iNaturalist, and later confirmed by the Canadian Food Inspection Agency (CFIA). The EZS was first discovered in the US in 2021. It has since been spotted in five Eastern states, including North Carolina, Vermont, and Massachusetts.



Elm zigzag sawfly larvae are active in MD.
Photo: Marie Rojas, IPM Scout



Views of elm zigzag sawfly damage on leaves.
Photos: Marie Rojas, IPM Scout

Purple-Spotted Lily Aphid Active in June

By: Stanton Gill

Miri Talabac, UME-HGIC, found aphids on hybrid lilies this week in Laurel. This is the purplespotted lily aphid, *Macrosiphum lilii*. It is a relatively large, pale yellowish to yellowish-orange aphid with long, black antennae (except the bases); long, black cornicles (structures that resemble dual exhaust pipes on a hotrod); and black "knees" and "feet". The cauda ("tail") is the same pale color of the abdomen. A conspicuous, purple spot occurs on the top of the abdomen. On some specimens, the spot forms a triangle with an apex toward the head. This is one of the "coolest" aphids you will see. Unfortunately, it does damage hybrid lilies and should be controlled if populations build up. Endeavor insecticide is a good material that is an insect stylet blocker, which jams up the feeding of the aphid, which then dies of starvation.



Note the distinct purple spot on these lily aphids.
Photo: Miri Talabac, UME-HGIC

Biological Control

In summer, parasitic wasps, lady beetles, syrphid fly maggots, lacewings and other predaceous insects may feed on aphids so that aphid populations may decrease rapidly. Aphid populations are sometimes devastated by *Cephalosporium lecanii*, a fungus that infects aphids.

Earwigs Very Active This Summer

By: Miri Talabac, UME-HGIC

We have a notable uptick in Ask Extension clients asking about earwig abundance this year, especially when they've been wandering into homes. Chatter on social media among other Marylanders is the same... folks are noticing earwig abundance (indoors and out) this year. I find this surprising, just like the firefly abundance I'm hearing about, since last year was pretty dry overall, and only this spring was on the damp side, which I would think wasn't enough time to raise the population significantly.

Response from Stanton: Earwigs are omnivorous scavengers that eat decaying plant material, pollen, and other insects, including small pests like aphids. This said, earwigs can chew irregular holes in the leaves, buds, flowers, and fruits of many plants, including vegetables, fruits, and tender young plants.



More reports than usual are coming into the UME-HGIC Ask Extension website this year. The photo is an earwig nymph.

Photo: Suzanne Klick, UME

Something about the spring weather has been conducive to earwigs increasing in numbers. With the hot weather, they are making a nuisance of themselves in migrating into people's house. The good news is, they are harmless.

Armored Scale on Black Gum

Marie Rojas, IPM Scout, found the armored black gum scale, *Chionaspis nyssae*, on *Nyssa sylvatica* 'Wildfire' this week in Montgomery County. Monitoring a population last year, Marie found eggs in early July, crawlers active toward the end of the month, and egg hatch ending by mid August. This scale is difficult to spot on foliage and tree trunks, so monitor plants closely. When crawlers are active, use Talus or Distance for control. When it is found feeding on the the foliage, materials such as Dinotefuran or Altus should work well.



Monitor black gum trees closely for the armored scale, *Chionaspis nyssae*. It is found on tree trunks and foliage.
Photo: Marie Rojas, IPM Scout

Tick Risk Assessment Survey

From: Racheal Slattery, UME

Previous research done by the Midwest and Northeast Centers of Excellence for Vector-borne Disease (NEVBD) would suggest the most efficient way to get information related to perceived risk and preventative measures concerning ticks and tick-borne illnesses in both the rural and urban population in Maryland is via survey. My colleague Dr. Megan Fritz and I are currently collaborating on a survey project with NEVBD that has been designed to tell us: perceived exposure risk through their occupation and/or recreation, level of concern for themselves and their animals, as well as preventative measures they may be taking to protect themselves. This information will allow us to understand and develop tickborne disease educational materials based on community-described needs, as well as create statewide extension programming that will meet the current and future needs of all our clientele - both rural and urban. The survey is confidential, and participants' rights will be protected.

Completing the survey should take **no more than 5 minutes**. All data collected will be stored on a secure server with access restricted to members of the research team. Participation is voluntary and in no way will affect a participant's ability to take advantage of UME programs. All participants must be 18 years of age or older and residents of the state of Maryland. This research has been approved by the University of Maryland Institutional Review Board (IRB #205598-1).

You can complete the survey through our survey link: <https://go.umd.edu/tick-risk-survey>

If you need any further information on the survey or how the results will be used, please contact either Racheal Slattery, Principal Investigator (rslatt@umd.edu, 301-405-1392) or Dr. Megan Fritz, Co-PI (mfritz13@umd.edu, 301-405-3945)

Horticulture Field Trials and Research at Wye Research and Education Center (WyeREC)

By: Andrew Ristvey, UME

There are quite a few horticulture research and trial programs at WyeREC. They include fruit and vegetable research along with some ornamental crop studies. My research includes many studies and trials on specialty crops, primarily focused on precision agriculture including irrigation management.

My portion of the UMD Extension Ornamental IPM Team's Unpiloted Aerial Systems (UAS) or drone research is focused on the use of multi-spectral imaging to determine water and nutrient stress in two model crops; geranium and chrysanthemum. By applying different fertilizer and irrigation treatments, we are looking to see if multi-spectrum cameras can help us tell the difference between water and nutrient stressed plants compared to non-stressed plants and to what degree. The outcome, we hope, is that labor saving scouting can be done automatically, and if potential problems are found, they can be addressed immediately. So, to what degree can automated aerial systems help make the ornamental industry more efficient and increase profits? Already, a colleague from South Carolina, Dr. Joe Maja, who presented his research on radio frequency identification systems during the MNLGA/UMD Extension Ag Tech Field Day at Ruppert's Nursery, has performed water stress imaging research with hyperspectral imaging and he will have a paper coming out in a few months on the results. My question is if multi-spectrum imaging (less resolute) can perform that function also. Funding for this research is from the Horticultural Research Institute and The Extension Foundation's New Technology in Agriculture and Extension Program.

This past week, Kirk Floyd owner and operator of K-Drone LLC, flew a few sorties over our research plot and we have some data to look over. With the help of our new UMD Extension Agriculture Engineer, Dr. Hemendra Kumar, I hope we can learn more about this technology and the benefits.



Figure 1. An Ag-Zoom data logger/control unit monitoring and controlling irrigation for tulsi-basil at WyeREC.



Figure 2. The dashboard interface of Ag-Zoom. Soil Volumetric Water Content (VWC) measured by four capacitance sensors is depicted by different color horizontal lines. Rainfall and irrigation events with volumes are represented by vertical lines (different colors). Each irrigation event increases soil volumetric water content as depicted by the peaks in VWC. Drainage through the soil profile in the raised bed indicates soil moisture at capacity.

Additional precision technology research at WyeRECis focused on the use of irrigation control to manage irrigation and soil moisture content for five different specialty crops, including aronia, tulsi-basil, ginger, haskap and elderberry. The crop being studied in Figure 1 is tulsi-basil (*Ocimum tenuiflorum*). Three different irrigation rates controlled by measuring soil volumetric water content (VWC), are being applied to replicate plots. Figure 2 shows the data signature of soil moisture content from a cloud-based Ag-Zoom user-interface. The target volumetric soil moisture content (VWC) is 22% (on set-point) in this particular treatment. The graphic shows the variation in moisture content over a 15-day period from June 13th to June 27th, 2024, with the peaks in the graph showing irrigation events automatically controlled by the designated set point. An irrigation event is triggered by the data logger/controller from an averaged measurement of soil VWC from four soil moisture sensors (capacitance). This system has been replicated with ginger and aronia. At the end of the growing season the harvested material will be tested by students of Dr. Victoria Volkis, a polymer and phytochemist at the University of Maryland Eastern Shore. We will compare the effects of irrigation treatment and related water stress to plant phytochemical production. Much of this research is being funded through Department of Defense and the National Institute of Food and Agriculture program Research and Extension Experiences for Undergraduates.

Japanese Beetle Adults

Elaine Menegon, Good's Tree and Lawn Care, found Japanese beetles on June 26 in Lititz PA. Elaine noted that it looked like they had only been feeding for a day or two. We also received a report from Frederick County that there is a big emergence in that area. At a nursery, the beetles are preferring flowering almonds. Control options include Mainspring and Acelepryn.



Activity of Japanese beetle adults continues to increase this week.

Photo: Elaine Menegon, Good's Tree Lawn and Care

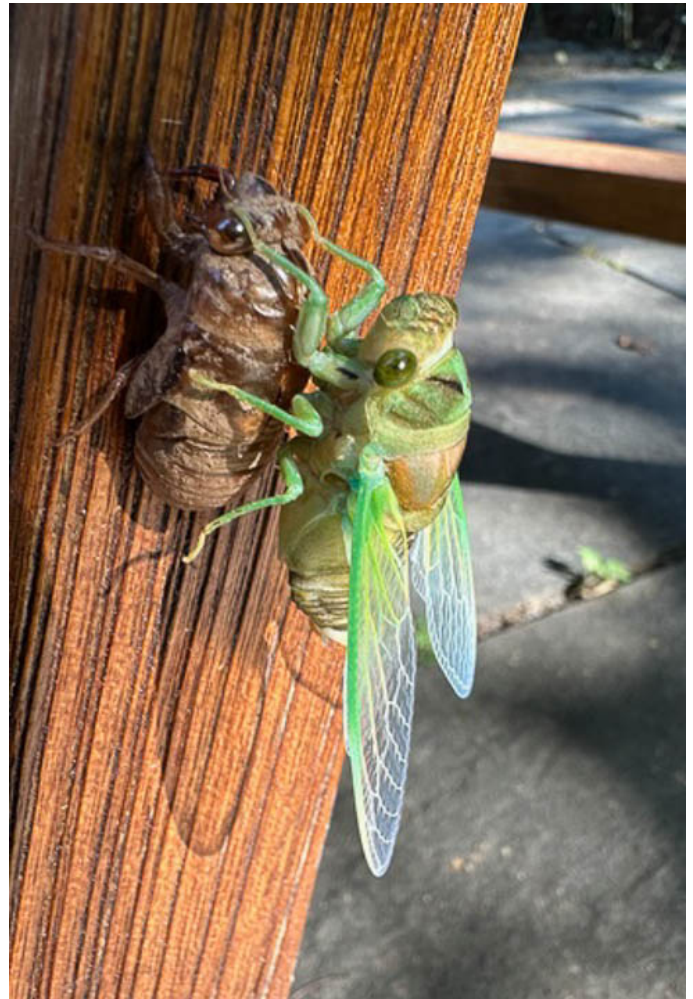
Comments on Lightning Bugs

Jim Metler: The lightning bugs have been the most I have seen in Croom MD in the 40 yrs we have been here. This is also the second year with a large population of tiger beetles in the spring.

Anne Hairston-Strang, Maryland DNR: Regarding lightning bugs, we are seeing many more than usual on Tilghman Island. Our loblolly stand looks like it has twinkle lights. I was assuming it had something to do with soil moisture at the right time helping the larvae thrive.

Dog Day Cicada Adult Emergence

Dave Freeman, Oaktree Property Care, found a dogday cicada emerging in the morning of June 25 in McLean, VA. The life cycles of dogday cicadas is about 2-3 years. Since there are overlapping populations, we always see some emerging each year in the summertime. As we move into July, we will hear the buzzing of the male dogday cicadas. No control is necessary for these insects. During the summer, cicada killer wasps will show up and prey on these cicadas.

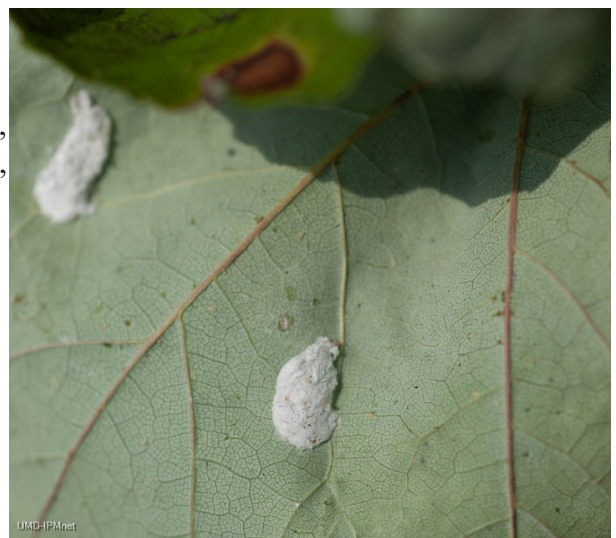


An adult dogday cicada emerging from its pupal case.
Photo: Dave Freeman, Oaktree Property Care

Cottony Maple Leaf Scale

Elaine Menegon, Good's Tree and Lawn Care, found cottony maple leaf scale on a red maple in Lancaster, PA on June 28. There is a similar scale, cottony maple scale, which produces these egg sacs on stems. Cottony maple leaf scale prefers maples, but can also be found on andromeda, flowering dogwood, hollies, and black gum. Look to see if crawlers are present. There is one generation each year and we are reaching the end of the crawler period for this scale.

Control: Natural enemies usually keep this soft scale in check providing biological control. However, if honeydew/sooty mold is abundant, control measures may be warranted. For best control, target the crawler stage (recently hatched eggs) of the scale. Talus or Distance can be used.



Cottony maple leaf scale is finishing up its crawler period as we move into July.
Photo: Suzanne Klick, UME

Cottony Camellia Taxus Scale

Bill Miller, The Azalea Works, found cottony camellia/Taxus scale on *Camellia* 'Magnoliaeflora'. When populations are light, look for beneficials to help determine if a control measure is necessary. If crawlers are still active on leaves, you can treat with Talus on Distance.

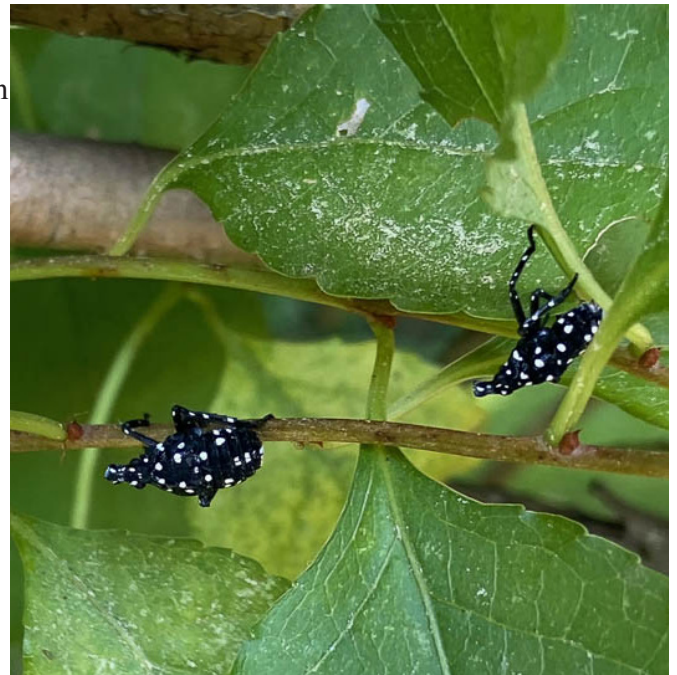


Monitor cottony camellia/Taxus scale populations for crawler and beneficial insect activity.

Photo: Bill Miller, The Azalea Works

Spotted Lanternfly

Peter Adams is finding late second and third instar nymphs in Glenwood this week. We also received a report of spotted lanternfly nymphs found on *Franklinia alatamaha* in Church Hill this week.



First to third instar spotted lanternfly nymphs are black with white spots. The fourth instars are red, black, and white. We should be seeing many more late instars now.

Photo: Peter Adams

Lectures from the June 5 and 6, 2024 Biocontrol Conference

Some of the speakers provided us with their presentations from the biocontrol conference. These files can be found on our conference list page at <https://extension.umd.edu/programs/agriculture-food-systems/program-areas/ornamental-horticulture/ipmnet/conferences/>

SPOTTED LANTERNFLY NEEDED FOR RESEARCH!

The Shrewsbury Lab is conducting research on spotted lanternfly (SLF) and need to collect large numbers of SLF (~300 or more). We need 4th instar SFL (red, white, and black bugs) and adults (when they become active). We will collect the SLF and bring the to our research site.

Email Emily Russavage (post doc in Shrewsbury Lab) if you have sites with large numbers of SLF that we can collect (erussava@umd.edu). THANKS!



**Spotted lanternfly (mostly 4th instar) nymphs.
Photo: P.M. Shrewsbury, UMD**

Parasitic Wasps

Bob Kestell, National Zoo Horticulture, found parasitic wasp pupae (likely braconid wasps) on a caterpillar that was feeding on porcelain berry at the zoo. A female wasps lays eggs inside the caterpillar, When finished feeding, the larvae will chew their way out of the inside of the caterpillar and pupate.



**Parasitic wasp pupae are on this caterpillar.
Photo: Bob Kestell, National Zoo Horticulture**

Bagworms on Skip Laurel

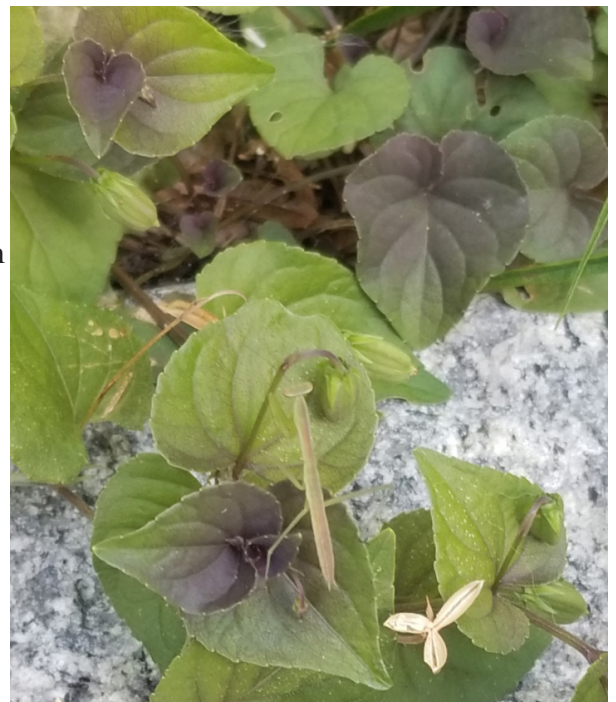
Nicolas Tardif, Ruppert Landscape, found a heavy infestation of bagworms on skip laurel on June 21 in North Bethesda. Nicolas noted that this is the "first time I've seen them on this plant variety. In the past, I saw them in yew, juniper, white cedar, blueberry, and redbuds." Bagworms are generalist feeders, but skip laurels are usually not a preferred plant host. In previous years, we have had seen them feeding heavily on hawthorn and European beech. Bt (Dipel, Caterpillar Attack), Spinosad (Conserve) or Acelepyrn will all give good control of young larvae.



**This group of skip laurel has a heavy infestation of bagworms.
Photos: Nicolas Tardif, Ruppert Landscape**

Praying Mantids

Andrew Miller, Estate Manager, found a praying mantid this week in Fairfax Station, VA. We are also seeing mid instar mantids here at the research center in Ellicott City. Mantids are generalist predators that do not help much to keep pest insect numbers low. They are often used as indicators of a healthy ecosystem. We find the non native, Chinese mantid and European mantid, and the native Carolina mantid in this area.



**This mid instar Chinese praying mantid nymph is active in a Virginia landscape this week.
Photo: Andrew Miller**



Perplexing Bumble Bee

There are a variety of bumble bee species in our area. One is the brightly colored, perplexing bumble bee (*Bombus perplexus*). The brightness of their yellow color fades with age due to exposure to the sun. Dave Freeman Oaktree Property Care, found this bumble bee in Fairfax, Virginia this week.

Perplexing Bumble Bee

Photo: Dave Freeman, Oaktree Property Care

Beneficial of the Week

By: Paula Shrewsbury

Fireflies are busy flashing for mates!

Fireflies have been lighting up my neighborhood (Howard Co. MD) since the first week of June. It looks like a good year for fireflies based on the amazing display of flashing lights I see every night. Usually around 8:00 p.m., just before my 3-year-old grandson's bedtime, the flashing begins. It has become a ritual that before bed, we go outside and catch fireflies. Most of us have fond memories of catching fireflies as a kid and putting them in glass jars, which were kept by the bed to watch during the night.

Fireflies, also known as **lightning bugs**, are really neither bugs nor flies. They are characterized as soft-winged beetles in the order Coleoptera and the family Lampyridae. There are over 2,200 known species of fireflies, of which about 165 species have been reported in the U.S. and Canada. Fireflies are found in temperate



An adult of the common eastern firefly, *Photinus pyralis*. In this picture, the head is sticking out from underneath the shield-like projection of the thorax.

Photo: M.J. Raupp, UMD

and tropical regions and in the humid regions of the Americas, Asia, and Europe. In the U.S., the abundance of fireflies is greater east of the Great Plains than in western states. Interestingly, fireflies that produce light are uncommon in western North America. Some firefly species are diurnal, and therefore have no need to create light. These species are known as daytime dark fireflies and they use chemical pheromones for mate attraction. Although the adults do not light, the larvae do glow at night, similar to eastern species.

Most flashing species occur east of the Mississippi River, are about ¾" in length and are active at dusk and night. Adults and larvae of many firefly species exhibit bioluminescent – they glow in the dark! Many organisms such as bacteria, fungi, jellyfish, algae, fish, clams, snails, crustaceans, and of course insects exhibit bioluminescence. Firefly species have special light organs that make the underside of their abdomens light up. **How do fireflies make light?** The light emitted by a firefly is actually a chemical reaction in the beetle's

abdomen. The light organ has special cells that contain a chemical called luciferin. An enzyme called luciferase combines oxygen with luciferin in these cells to create light. Scientists actually do not know how fireflies regulate their lights to turn them on and off. You might have also noticed how “cold” the light looks. This is because no infrared (or heat) or ultraviolet frequencies of light are emitted. Among the light-producing fireflies, lights are yellow, green, or pale red.

The purpose of this bioluminescence varies. It is believed that the flashes are part of a signaling system for attracting mates. Both males and females emit light intermittently or in specific flash patterns. The rhythmic flash patterns produced are specific for each species of firefly and vary by sex within a species. The flashes that we see are from the males that are attempting to attract a mate. For example, males of the common eastern firefly (*Photinus pyralis*) flash every six seconds. Females watch the light “show” and if a display from a specific male is particularly attractive, she will flash a response but only if it is from the male of the same species. The male descends to that location to mate with her. In addition to transferring sperm to the female during copulation, the male offers a nuptial gift of rich protein, which the female uses to provision the eggs that will soon start to develop in her ovaries.

[Click here to see a video of fireflies flashing and mating](#) – watching insect behavior is really interesting. Interestingly, in one species of firefly, *Photuris pensylvanica*, the female mimics the flash pattern of another species, *Photinus pyralis*, to attract the male of the other species to her. When the male of the other species arrives thinking, he has found his mate - she eats it to obtain defensive compounds used to protect her eggs. A bad surprise for that male.

For the common eastern firefly, eggs are laid in moist soil and hatch about a month later. All immature fireflies (or larvae) are called **glow-worms** (see image). The larvae emit light too, though it is a low intensity glow rather than flashing like adults. The larvae of our eastern firefly develop over two summers, so they overwinter twice, before pupating and emerging as adults this time of the year. Most firefly are reported to pupate in rotting logs or the furrows in the bark of tree trunks.



Underside view of an adult firefly showing the abdomen where the light organ is located (white segments).

Photo: M.J. Raupp, UMD



Glow-worms, larvae of fireflies, are predators that live in the soil and search for prey.

Photo: M.J. Raupp, UMD

Why are fireflies considered beneficial? Well, the soil active firefly larvae or glow worms are voracious predators of soft-bodied invertebrates and known to feed on slugs, snails, worms, and other soil-dwelling insects. Glow worms use their mandibles to inject prey with a paralyzing neurotoxin, making it defenseless, and then secrete digestive enzymes that liquify the prey making it easier to consume. Firefly larvae or glow-worms are believed to glow as a warning signal telling predators not to eat them as they are mildly toxic and taste nasty. It is not well known what all adult fireflies feed on but some feed on pollen and nectar and some are reported not to feed at all.

Although the larvae of fireflies are referred to as glow-worms, technically this is not quite correct. Glow-worms are a type of firefly where the adult female is flightless and maintains the appearance of a larva and she emits a long-lasting glow, similar to larvae. The males have the appearance of an adult firefly. To make it more confusing, other insect larvae that glow, are sometimes called glow-worms too.

Since most fireflies that produce light are in the Eastern U.S., it makes the nightly light shows we encounter here something special to behold for a few weeks during spring and early summer. Be sure to help young people you know, and others, enjoy the experience of observing and collecting fireflies. Be certain to release the little lights when you are done!

Weed of the Week

By: Solomon Hutchins, UME 2024 Workforce Development Summer Intern

Johnsongrass, or *Sorghum halepense*, is considered one of the most troublesome of perennial and is a warm season grass, appearing in mid to late spring. Johnsongrass can be found in most parts of the world and is especially common in Maryland. When fully grown, the noxious weed can extend to 6 to 7 feet tall and can be found in orchards, vineyards, ditch banks, disturbed sites, roadsides, fields, agronomic and vegetable crop fields.

Johnsongrass can be easily identified by its characteristic panicle seed head. It also contains a white midrib in the middle of the blade and a fringed membranous ligule. Johnsongrass is deeply rooted providing it drought resistance during periods of time that induce water stress in other plants. This provides johnsongrass a competitive edge during drought, making it even more prevalent at times. Additionally, johnsongrass develops robust rhizomes that allow it to spread and form dense patches.

Shattercane can be easily confused with Johnsongrass. Both plant's seeds are similar in shape but Johnsongrass seeds are much smaller than shattercane seeds. The seed heads of both plants are also different. Johnsongrass has a more open panicle seed head while Shattercane has a tight cluster.



Johnsongrass seed head.

Photo: Forest and Kim Starr, Starr Environmental, Bugwood.org
<https://www.weedimages.org/browse/detail.cfm?imgnum=5160059>

In controlling small patches of johnsongrass, hand-pulling can be an option. However, ensure that all the roots have been removed to inhibit rhizome regrowth. When dealing with larger areas using chemical weed control is advised as the most effective way to kill Johnsongrass. Make sure to spray the entire plant, including the leaves and stems. Some effective herbicides include products containing the active ingredients clethodim, sethoxydim, imazamox, and imazapic, and glyphosate. Be sure to always be sure to follow label instructions and use appropriate personal protective equipment. Importantly, Johnsongrass is on the Maryland Noxious Weed List; therefore, it is required to be controlled.

UC-IMP, <https://ipm.ucanr.edu/PMG/WEEDS/johnsongrass.html#:~:text=Mature%20johnsongrass%20grows%20in%20spreading,hairy%2C%20especially%20near%20the%20ligules.>

Weeds of the Northeast - The book

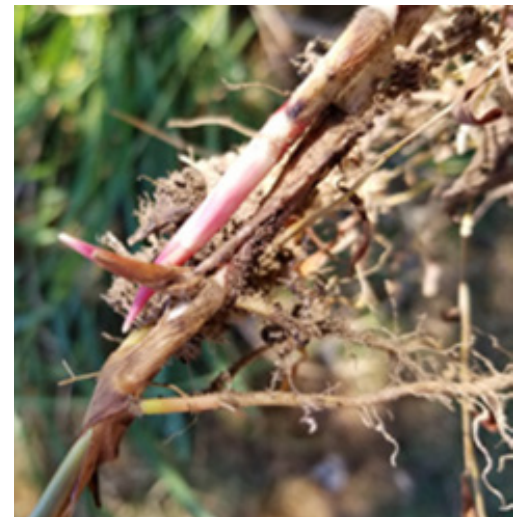
True Green-<https://mytrugreenlawn.com/resources/how-to-get-rid-of-johnson-grass/#:~:text=Using%20a%20post%2Demergent%20herbicide,includng%20the%20leaves%20and%20stems.>



Johnsongrass rhizomes.
Photo: Steve Dewey, Utah State University, Bugwood.org
<https://www.weedimages.org/browse/detail.cfm?imgnum=1459242>



The fuzzy collar of johnsongrass.
Photo: Theodore Webster, USDA Agricultural Research Service, Bugwood.org
<https://www.weedimages.org/browse/detail.cfm?imgnum=1556482>



Johnsongrass has a dense rhizome
Photos: Chuck Schuster, UME



Johnsongrass has a prominent, white mid-vein
 Photo Credit: Chuck Schuster, UME

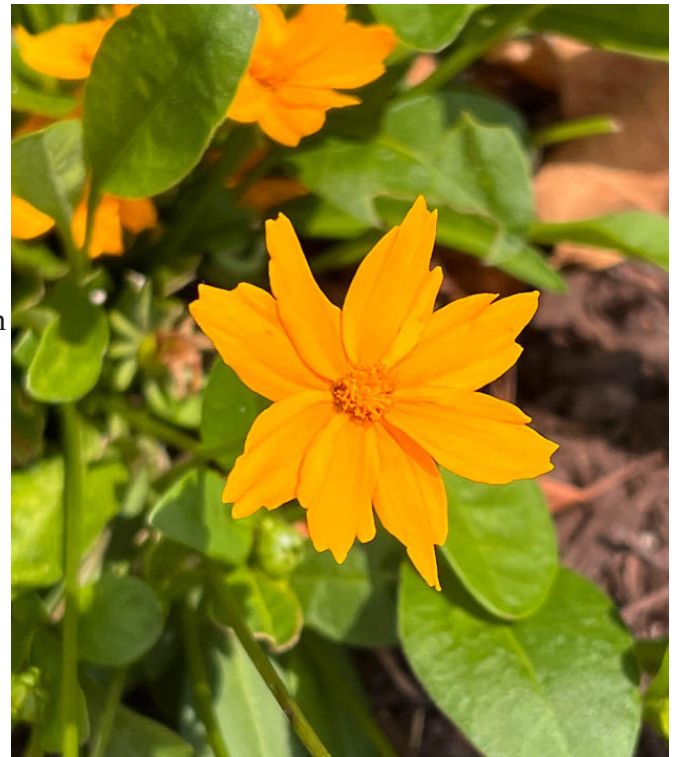


Photo 4: Shattercane
 Photo: Joseph M. DiTomaso, University of California - Davis, Bugwood.org
<https://www.weedimages.org/browse/detail.cfm?imgnum=5386294#>

Plant of the Week

By: Ginny Rosenkranz

Coreopsis auriculata ‘Nana’ is a wonderful but short-lived native evergreen perennial lasting about 3 years. It has 2 creative names, tickseed because the seed looks like a tick and mouse ear because the leaves look like they could belong to a mouse. These beautiful plants thrive in full sun and moist but well drained soils. They spread slowly by stolons, growing in a dense clump 6-9 inches tall and wide. Plants are cold tolerant in USDA zones 4-9, and are also tolerant of both heat and humidity. The leaves are dark green 1-2 inch long, growing in a dense clump with spoon shaped basal leaves that have a smooth margin. The golden yellow star shaped flowers grow 1-3 inches across with 7-20 ray petals that are notched with 3 lobes at the end, and surround a bright yellow center disk. Flowers can bloom from April to Jun on thin sturdy flower stalks that can grow up to 18 inches. If flowers are deadheaded, a second set of flowers can bloom in the summer into autumn. ‘Nana’ is the perfect size to plant in front of taller perennials in a mass or as a border. They can also be planted as an edger along walks or paths, or in a pollinator, butterfly, or cottage garden as they attract butterflies and other pollinators. There are no serious insect or disease problems, although ‘Nana’ is not as drought tolerant as other *Coreopsis* but does have resistance to pythium root rot. Both deer and rabbits tend to leave *Coreopsis auriculata* ‘Nana’ alone.



Coreopsis auriculata 'Nana'
 Photo: 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 **1258 DD** (Martinsburg) to **1850 DD** (St. Mary’s City). 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.

- Peachtree borer – adult emergence (**1181 DD**)
- Catalpa sphinx – egg hatch (1st gen) (**1365 DD**)
- Green June Bug – adult emergence (**1539 DD**)
- Scarlet oak slug sawfly – larva / early instar (**1544 DD**)
- Pine needle scale – egg hatch / crawler (2nd gen) (**1561 DD**)
- White prunicola scale – egg hatch / crawler (2nd gen) (**1637 DD**)
- Obscure scale – egg hatch / crawler (**1774 DD**)
- Spotted lanternfly – egg laying (**1825 DD**)
- Orangestriped oakworm – egg hatch / early instar (**1917 DD**)
- Magnolia scale – crawler (**1938 DD**)
- Fall webworm – egg hatch / early instar (2nd gen) (**1962 DD**)
- Maskell scale – egg hatch / crawler (2nd gen) (**2035 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 June 26)

Annapolis Naval Academy (KNAK)	1598
Baltimore, MD (KBWI)	1579
College Park (KCGS)	1563
Dulles Airport (KIAD)	1644
Ft. Belvoir, VA (KDA)	1597
Frederick (KFDK)	1568
Gaithersburg (KGAI)	1451
Greater Cumberland Reg (KCBE)	1394
Martinsburg, WV (KMRB)	1258
Millersville (MD026)	1489
Natl Arboretum/Reagan Natl (KDCA)	1836
Perry Hall (C0608)	1420
Salisbury/Ocean City (KSBY)	1446
St. Mary’s City (Patuxent NRB KNHK)	1850
Susquehanna State Park (SSQM2)	1461
Westminster (KDMW)	1697

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 calculator Thresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

Conferences

August 13, 2024

IPM Diagnostic Session

Location: CMREC, Ellicott City, MD

August 5-8, 2024

Drone School

Location: CMREC, Ellicott City, MD

September 17 and 18, 2024

Cut Flower Program

Locations: Central Maryland Research and Education Center, Ellicott City, MD and locations in Howard Co.

October 9, 2024

MNLGA Retail Day

Location: Homestead Gardens, Davidsonville, MD

December 5, 2024

Tech Day: Focus on Solar

Location: CMREC, Ellicott City

December 12, 2024

2024 Cultivating Innovation in Maryland's Agriculture and Technology Conference

Location: Crowne Plaza, Annapolis, MD

[Program and registration information](#)

Go to the [IPMnet Conference Page](#) for links and details on these programs.

Commercial Ornamental IPM Information
<http://extension.umd.edu/ipm>

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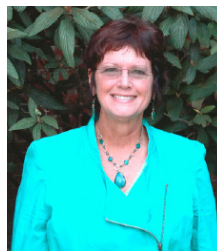
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