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Beneficial of the Week:

Paper wasps and fall webworm

Weed of the Week: Poison hemlock

Plant of the Week: *Liriope muscari* 'Variegata'

Degree Days

Pest Predictions

Conferences

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

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Weed of the Week: Chuck Schuster (Retired Extension Educator)

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Elm Zig Zag Sawfly Damage

By: Stanton Gill

If you see an elm tree leaf with an odd, zigzag-shaped missing section, we want to hear about it. It could be evidence of a new and potentially destructive insect pest called the elm zigzag sawfly, *Aproceros leucopoda*. The sawfly is from Asia and was found in Europe in 2003 and rapidly spread to 15 countries in Europe causing extensive damage to elms. It was found in Quebec in 2019 and in Maine in 2020.

Suzanne Wainwright-Evans, The Buglady Consulting, is finding damage in several locations including PA. Suzanne is seeing it on a prince elm she planted about 11 years ago. Eric Day, Virginia Extension, is seeing activity of this sawfly in VA.



©BugladyConsulting

Send your picture of an elm leaf with this zigzag damage to Sgill@umd.edu with the location where the damage is being found.

Photo: Suzanne Wainwright, Buglady Consulting

Stop Use Order for Some Organic Products

By: Jerry Brust, UME

For our organic vegetable growers in the Mid-Atlantic the California Department of Food and Agriculture's State Organic Program issued a STOP USE notice for W.O.W. (WHACK OUT WEEDS!) and ECOMIGHT-PRO products, manufactured by EcoMight LLC.

W.O.W. (WHACK OUT WEEDS!) and ECOMIGHT-PRO product samples have **tested positive for the presence of synthetic chemical compounds Glyphosate; Bifenthrin; and Permethrin**. Additionally, the W.O.W. (WHACK OUT WEEDS!) product samples tested positive for the presence of synthetic chemical compounds **Cypermethrin and Carbaryl**. These identified synthetic chemical compounds are prohibited for use in organic production by the U.S. Department of Agriculture's National Organic Program.

Dogwood Sawfly

Ron Muir, FirstEnergy, found dogwood sawfly larvae on red twig dogwood this week in Martinsburg, WV. Dogwood sawflies will eat all but the midrib of the leaf. These sawflies overwinter in the last instar stage. After the second molt, the bodies of the larvae become covered with a white powder-like material to mimic bird droppings which helps to protect them from their enemies. At their final molt they have a spotted pattern to camouflage them as they crawl over leaf litter. There is only one generation per year.

Control: The sawflies have done most of their damage for the year. Next year, scout for this sawfly and control early with materials such as Conserve, horticultural oil, and synthetic pyrethroids.

This second instar of dogwood sawfly has a white waxy coating and will curl up in a ball to resemble bird droppings
Photo: Ron Muir, FirstEnergy



Inflation is Setting in on Agriculture Food

By: Stanton Gill

Last spring, I was buying a 50 lb bag of chicken feed for \$11.99. Two months ago, I was paying \$15.99 for this same amount. Last week, I paid \$20.99 for a 50 lb bag. It is not only chicken feed prices that have gone sky high. Sunflower seeds for bird feeders went from \$14.00 last year to \$29.99 for this same weight bag. The drought and high temperatures in cattle areas of the country caused many ranchers to cut back their herds. It is predicted that meat prices will be spiking this fall.

July 23rd Report Correction

Under the bagworm section, the rate for Mainspring should have been 4 oz/100 gal, not per 1000 gallons.

Rain Check Common on Tomato Fruit This Season

Jerry Brust, UME

Over the last few weeks, I have seen a great deal of scarred tomato fruit on its shoulder, which is called rain check (fig. 1). Rain check is the many, tiny concentric cracks that form on the shoulder of the fruit and these small cracks can expand over time into unsightly scabs. The cracks feel rough to the touch and affected fruit do not develop proper color as it ripens. Damage will be most visible on exposed, mature green fruit after rains; but at times even small, immature green fruit can be affected. Rain check is mostly observed on large, fresh-market tomatoes, rather than on smaller cultivars. The exact cause is not known, but appears to be related to exposure of the fruit to rain. An example of this can be seen on tomato fruit that is not covered by foliage and is exposed to rain that often will have rain check but the underside of the same fruit will not (fig. 2). The problem is more severe when heavy rains occur after a long dry period with high humidity. The rain might alter the fruit temperature or water uptake, which may impede the development of the shoulder epidermis.



Fig. 1 Exposed tomato fruit with rain check, other fruit with foliage cover has none
Photo: Jerry Brust, UME

Cultivars can vary in their susceptibility to rain check. Those tomato cultivars that have good leaf coverage that protect the fruit and good epidermal characteristics seem to be more tolerant of rain check. Glossy fruit tends to have less of a problem with rain check than dull fruit. I have mentioned this before about using a 30% shade cloth to reduce quality problems with tomato fruit, and in my studies not a single fruit under any of the shade canopies developed rain check while the uncovered tomatoes (same cultivars) had 15-20% rain check.



Fig. 2 Exposed to rain side of fruit (left photo) and the underside of same fruit (right photo)
Photos: Jerry Brust, UME

Crapemyrtle Bark Scale

By: Stanton Gill

Thanks to each of you who have sent in crapemyrtle scale sightings in D.C. and Maryland. It appears this scale is spreading rather rapidly in landscapes, which is not great news. Hopefully, you will check your customers' crape myrtles and jump on controlling this scale before it builds up, which it evidently does very rapidly.

Sam Fisher, Bartlett Tree Experts, wins for sending the heaviest infestation picture of this scale that he found on a crape myrtle in Washington, D.C.

Control: Erfan Vafaie, Bioworks Company, formerly of Texas A and M, conducted trials on container grown crape myrtles heavily infested with crapemyrtle bark scale and published the results in 2020. He found Dinotefuran as trunk drench or spray gave excellent control. Here are some of his other material he tested with their rating:

Fulcrum (Pyriproxyfen)	7C	Bark spray	2	Good
Talus (Buprofezin)	16	Barks spray	2	Good
Altus (Flupyradifurone)	4D	Bark spray	2	Moderate
Mainspring (Cyantraniliprole)	28	Drench	1	Moderate



**A heavy infestation of crapemyrtle bark scale in Washington D.C.
Photo: Sam Fisher, Bartlett Tree Experts**

Japanese Maple Scale

By: Stanton Gill

We are seeing crawlers just starting this week in central Maryland. In the next week or so, apply Distance or Talus to control the 1st instar stage.



Look for purple crawlers on trees with Japanese maple scale infestations

European Hornets Active

By: Stanton Gill

Steve Clancy called in to report that Asian pears in his home orchard in Carroll County were being decimated by the feeding activity of European hornets. This is one of the larger hornets that is very active in August in landscapes. They do love to feed on Asian pears and ripe apples. Crystal Chevront, BGE, found a European hornet feeding on the honeydew from a bad case of scale on magnolia. Crystal noted that there were 20 or more hornets and some other wasps flying around the plant.

One easy way to avoid this damage is to use insect netting to cover the fruit or cover the whole tree to block out the hornets. I use the pictured insect netting from OESCO Company on my seedless grapes to keep hornets, bees, yellow jackets, and birds from feeding on the seedless grapes. I have been using this netting for the last two years, and it works well.



Netting can be used to keep European hornets away from grapes and small trees

Photo: Stanton Gill, UME



European hornets stripping the bark of buddleia and feeding on the sap; several flies are feeding on the sap as well

Sycamores Dropping Bark in Large Quantities

By: Stanton Gill

In the July 23rd IPM alert, we asked if people were seeing heavy bark drop on London plane and sycamore trees. **Below are some of the responses:**

Melissa Sharifi, The Colonial Williamsburg Foundation: “We are seeing it here in Williamsburg VA on both young and old trees. We have had a lot of rain and I assumed it was due to the tree increasing trunk diameter.

Cathy Carr, GreenHeart, LLC: “I’ve lived near downtown Silver Spring for more than 25 years and have never before seen as much bark defoliation as this year. And (not related) my old Beech had so much cicada flagging I fear for its survival.”

Bill, Teel Landscape Services, LLC: “I have noticed quite a bit of Sycamore exfoliation at a few of my clients’ properties. I did not notice that much in the previous couple of years. There were more small branches everywhere and the flowers. Last year we had a cold snap in the spring and the Sycamores dropped everything. They leafed-out again in late spring.”

Beth Propps, Maryland Master Gardener: “At the Demo Garden here in Frederick, our sycamore has lost a huge amount of bark - far beyond any other recent year. We were wondering if it was ok- overall, it seems to be doing well. It is fascinating that others are noticing the same thing.”

Melvin Detweiler: “I wanted to confirm that I have also seen sycamores in the Wilmington, DE area dropping more bark, etc. than usual this month.”

Report from Easton: "Yes, we seem to have an excessive amount of shedding in Easton Village, Easton MD."

Spotted Lanternfly Update

By: Kenton Sumpter, MDA

It's been a few months since the last spotted lanternfly update, and there have been some changes. First, residents can now report their lanternfly sightings online! Due to the high volume of emails and calls from concerned citizens, the MD Department of Agriculture felt the need to implement a system that could better suit the needs of the public. Folks can follow this link to the [MD Online Spotted Lanternfly Survey](#). Here, they can input all their pertinent information. The MDA can then assess each report and decide if a response is needed. A person can make multiple submissions if they happen to find lanternfly in different locations in Maryland, however; they don't need to post more than once for a given area. Reporting is entirely confidential, and no members of the public nor any private company will be able to access this information.

Second, treatments are ongoing in the region of Chestertown. Through trapping, MDA determined that a small, satellite population of lanternfly had established along the roads and in the farm fields of southern Kent County. It is our hope that through swift action we can blunt the advance of spotted lanternfly through Kent and into Queen Anne's County. Future treatments are planned as well for northern Kent County and for commercial shipping centers in Cecil County. The primary goal of the MDA is to slow the spread of spotted lanternfly through Maryland and into neighboring states. Understandably, residents are not pleased to learn that the MDA cannot offer to individually treat homes.

This is as much of a frustration for us as it is for you! What we can offer is the best information available for control options. Please call us at (410) 841-5920 or email us at dontbug.md@maryland.gov, and we'll try to help as much as we can.

Lastly, MDA is always concerned about the spread of spotted lanternfly into non-quarantined counties. Specifically, Hagerstown, MD is at high risk of spreading spotted lanternfly to the rest of Washington County. We ask residents to be on high alert for signs of spotted lanternfly. Tree of heaven that has sap leaking from the top of its branches, or that has wet honeydew drops around its base, is a good indicator that lanternfly is present. We also encourage residents of Baltimore and Queen Anne's counties to be vigilant. If we can establish the presence of spotted lanternfly in small areas, we can hopefully treat those areas before they get out of control.

The staff at the MDA would like to extend our ever-present gratitude to Maryland residents for weathering the lanternfly storm with such character and stoicism. We rely on the reporting of everyday people to help us find out where we can be the most helpful. We know it isn't easy dealing with an insect quite as gross as spotted lanternfly can be, however; we thank you for doing it none the less.



A lot of spotted lanternfly adults are congregating on these *Ailanthus* tree trunks in Palmyra, PA

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

Chokeberry Pest

By: Stanton Gill

Many people have been planting chokeberry (*Aronia*) over the last 15 years. I received an email from an Extension specialist, Alex Wenninger, Forest Health and Integrated Pest Management, UAF Cooperative Extension Service in Alaska, where they are growing more and more chokeberries. Alex inquired if we had a pest in Maryland that was being found in Alaska. I have seen this insect in chokeberry in Maryland, but was curious if it is widespread in chokeberry plantings in Maryland. The walls of the fruit are formed into fleshy, expanded hollow galls and within those fruits are several small, orange larvae. The family is the Cecidomyiidae. Commonly called the chokecherry gall midge, *Contarinia virginiana*.



Take a look at the pictures of the larvae and fruit damage. If you are seeing this please send me an email with picture of your damage to Sgill@umd.edu
Photos: Alex Wenninger, UAF Cooperative Extension in Alaska

Asian Longhorned Borers

From: Rhonda Santos, USDA (Rhonda.J.Santos@usda.gov), and Suzanne Bond, USDA (Suzanne.M.Bond@usda.gov)

August is Tree Check Month for Invasive Beetle

WASHINGTON, August 3, 2020 —August is the most critical time of year to spot the Asian longhorned beetle (ALB) as adult activity peaks. That’s why the U.S. Department of Agriculture (USDA) is declaring August as “Tree Check Month” for this invasive pest. Checking trees for the beetle and the damage it causes is how residents can help USDA and its partners eliminate the beetle from the United States, and protect more trees. USDA and its partners are working to eradicate the tree-killing beetle in Massachusetts, New York, Ohio and South Carolina. However, residents in all states should keep an eye out for any new incursions.

“We’re asking for the public’s help to find Asian longhorned beetle and any tree damage it causes, because the sooner we know where the insect is, the sooner we can stop its spread,” said Josie Ryan, APHIS’ National Operations Manager for the ALB Eradication Program. “Just last year, a homeowner in South Carolina reported

finding a beetle in their backyard, which led us to discover an active infestation in the state where we didn't know the beetle was.”

The ALB is an invasive wood-boring beetle that attacks 12 types of hardwood trees in North America, such as maples, elms, buckeyes, birches, and willows. Infested trees do not recover and eventually die. Infested trees also become safety hazards since branches can drop and trees can fall over, especially during storms. In its larval stage, the insect feeds inside tree trunks and branches, creating tunnels as it feeds, then adults chew their way out in the warmer months, leaving about 3/4-inch round exit holes.

The adult beetle has distinctive markings that are easy to recognize:

- A shiny black body with white spots that is about 1” to 1 1/2” long.
- Black and white antennae that are longer than the insect’s body.
- Six legs and feet that can appear bluish in color.

Signs that a tree might be infested include:

- Round exit holes in tree trunks and branches about the size of a dime or smaller.
- Egg sites that are shallow, oval or round wounds in the bark where sap might weep.
- Sawdust-like material called frass found on the ground around the tree or on the branches.
- Branches or limbs falling from an otherwise healthy-looking tree.

HOW YOU CAN HELP:

The public has a vital role in helping to stop the spread of the ALB and eliminating it from infested areas. Report it: If you think you found a beetle or tree damage, report it by calling the ALB hotline at 1-866-702-9938 or submitting an online report at www.AsianLonghornedBeetle.com. Try to photograph the ALB or tree damage. If you can, capture the beetle in a durable container and freeze it, which helps preserve the insect for identification. Then report it.

Reduce spread: If you live in an ALB quarantine area, please keep the tree-killing pest from spreading. Follow state and federal laws, which restrict the movement of woody material and untreated firewood that could be infested. It is possible to eradicate the pest. USDA and its partners eradicated the insect from Illinois, Boston in Massachusetts, New Jersey and portions of New York and Ohio.

For more information about the ALB and the eradication efforts, visit www.AsianLonghornedBeetle.com. For local inquiries or to speak to your USDA State Plant Health Director, call 1-866-702-9938.



Adult Asian longhorned beetle
Photo: Linda Haugen, USDA Forest Service,
Bugwood.org

Stinging Caterpillars Are Out

By: Stanton Gill

It is August and time for stinging caterpillar activity. Heather Zindash, The Soulful Gardener, sent in pictures of the white flannel moth caterpillar (*Norape ovina*) that she found on redbuds on August 1, 2021. Jon Wardrick, Pope Farm, found saddleback caterpillars on a buttonbush on August 11.



White flannel moth feeding on redbud
Photo: Heather Zindash, The Soulful Gardener

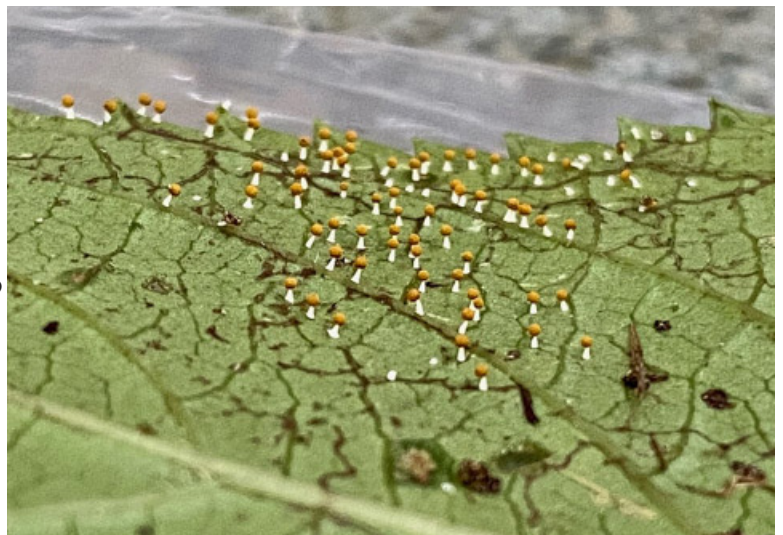


Saddleback caterpillars feeding on buttonbush
Photo: Jon Wardrick

Cool Slime Mold on Leaves

By: Stanton Gill

Katie Grant sent this in an email: “I found these little guys on the back of a hydrangea leaf in West Ocean City today. I know some bugs (like lacewings) lay eggs on a “stem” but I’ve only ever seen those eggs singularly. These almost look like little mushrooms!” Karen Rane identified them as slime mold. She commented that this is common on leaves in times of high moisture. There is nothing to worry about.



Slime mold is common on leaves during high moisture periods
Photo: Katie Grant

Oak Itch Mite

By: Stanton Gill

Carol Allen sent us an email inquiry about oak itch mite on July 25th. We sent out emails to fellow entomologists in other states to see if they had experienced this mite biting people. Two different entomologists reported that the oak itch mite is abundant in Midwest states when periodical cicadas are active. The cicadas girdle small branches of oaks on which the mites reside, causing them to drop to the ground. The mites often then make contact with humans and use their chelicerae to pierce the skin causing an irritation. *The Washington Post* just put out an article on Oak Itch Mite on July 30, 2021.

The Latin name for oak itch mite is *Pyemotes herfsi*, also known as the oak leaf gall mite, besides the common name of oak itch mite. The mite is an ectoparasitic mite, so it may pierce the skin, but does not remain at the site and drops free of the host. The mite was identified in Western Canada in 1923 and subsequently found in India, Asia, and the United States. Most of the states reporting activity of this mite have been in Kansas, Illinois and Ohio. Kansas Extension has put out a fact sheet on the oak itch mite that is worth downloading: <https://bookstore.ksre.ksu.edu/pubs/MF2806.pdf>.

In the *Journal of Medical Entomology* (2006), the authors state: "*Pyemotes herfsi* (Acari: Pyemotidae), a mite new to North America as the cause of bite outbreaks, authored by Alberto B. Boce et.al. In their abstract they say: High incidences of red, itching, and painful welts on people in the midwestern United States led to the discovery of a European species of mite, *Pyemotes herfsi* (Oudemans) (Acari: Pyemotidae), preying on gall-making midge larvae on oak leaves. The mites' great reproductive potential, small size, and high capacity for dispersal by wind make them difficult to control or avoid." It is easy to say "do not scratch the area", but most people probably will since it is itchy. Applying moisturizing lotions is the best bet. The itch subsides in a couple of days. We do not suggest getting overly alarmed about this mite, since it is not well documented that it is even present on Maryland oaks.

In attempt to establish if this mite is even found in Maryland, we collected oak branches girdled by cicada ovipositing. Oak branch samples were collected from Olney, Brookeville, Westminster, Catonsville, and Manor, MD. These 25 samples were examined under a dissecting microscope at 40 x magnification at our University of Maryland CMREC lab. Many arthropods were found including lady bird beetle larvae, lacewings, several spiders, and oak lace bugs. No *Pyemotes herfi* mite were found on any of the samples.

In Virginia, the Insect ID Lab Virginia Tech took in a sample of a suspected oak itch mites but as of yet has not confirmed if the mite was found. We do not have evidence that the mite is even found in Maryland. Even if the mite was present, treating the trees for the mites is not really practical.

L. Hanks, et.al, (1992) conducted trials to control the oak itch mite using sulfur, in rearing chambers, with some positive results, but nothing that is practical that can be sprayed on a tree in summer. The periodical cicada emergence in the Midwest increased the mite populations and activity in Ohio and Kansas. There is a reported association with periodical cicada and the mites, which are reported to feed on cicada eggs. If the mite were found in Maryland, then it might be active in the next 17-year cycle of periodical cicada brood X, but we would not suggest losing sleep worrying about this mite.

Sources:

Boce, A. et.al, 2006 May issue of the *Journal of Med entomology*.

Pyemotes herfsi (Acari: Pyemotidae), a mite new to North America as the cause of bite outbreaks (43(3):610-3. doi: 10.1603/0022-2585(2006)43[610:phapam]2.0.co;2.)

L. Hanks et.al, 1992. *J Econ Entomology*. 1992 Jun;85(3):683-6. doi: 10.1093/jee/85.3.683. Control of the straw itch mite (Acari: Pyemotidae) with sulfur in an insect rearing facility.

Oak Leaf Itch Mites and Periodical Cicada Eggs

By: Paula Shrewsbury

In late July an article about oak itch mite bites and cicadas ran in the [Washington Post](#) in response to numerous reports of people in the DMV with red, itchy bites on their upper bodies.. Several of us who work in Extension in this area have received numerous inquiries about these bites and their relation to Brood X periodical cicadas. I have researched what is known about this phenomenon and summarize the information here with a list of resources for more detailed information.

There is a mite known as the oak leaf itch mite, *Pyemotes herfsi*. The mite is most commonly known to feed on larvae of a midge (fly), *Macrodiplosis erubescens*, that forms galls on the edges of pin oak (*Quercus palustris*) leaves. Once the mites complete their development they drop from the tree, usually late July through early fall for mites associated with the oak gall midge, and can be carried by wind for large distances. The mites land on animals and humans that they then bite. For more detailed information on this mite and midge go to the [Kansas State fact sheet](#) listed below. The bite causes a reaction that is rash like and itchy. In the mid-west (Missouri, Nebraska), *P. herfsi* was first detected in 2004 and since has been reported associated with the oak gall midge to cause itching bites in humans from 2014-2017. Note that in addition to the oak gall midge, *P. herfsi* has been reported to feed on insects from at least 5 different orders with reports dating back as far as 1885 (ex. pine tip moth larvae, hackberry nipple gall).

The [first confirmed \(ex. mites found in egg nests\) report of *P. herfsi* attacking eggs in periodical cicada egg nests](#) (Brood XIII), and as the cause of an outbreak of bite rashes on humans, was in the Chicago area of Illinois during August – September in 2007. Although not directly found in periodical cicada egg nests, a species of *Pyemotes*, likely *P. herfsi*, was reported to be “the mite most commonly found” with periodical cicada egg nests among samples collected in 1885 in Michigan, Virginia and the District of Columbia. In the DMV area, to my knowledge, no one has actually found *P. herfsi* mites in cicada egg nests. However, given the historical association of periodical cicadas and the mite, it is likely that the billions of Brood X periodical cicada eggs serve as a food source for the mites, and has resulted in an increase in mite densities and the occurrence of mite bites to humans.

FAQ's:

- *What is causing the red, itchy bites that many people in our area are encountering?*
 - It is likely an itch mite known as *Pyemotes herfsi* which feeds on certain insects in trees and then drops to the ground, landing on people on the way, which then bites them.
- *Are the itch mites coming out of periodical cicada egg nests?*
 - To my knowledge, no one has actually found *P. herfsi* mites in cicada egg nests in this area. However, given the historical association of the two, it is likely that the abundance of Brood X periodical cicada eggs as potential food for the mites has resulted in an increase in mite densities and the occurrence of mite bites to humans.
- *How did I get itch mite bites?*
 - The most likely exposure is when hiking, walking, sitting, etc. under trees infested with insects that the mites feed on (ex. trees, such as oaks, with periodical cicada egg nests or galls caused by insects)
 - Raking or leaf blowing leaves (for mites coming from leaf galling insects)
 - Itch mites dropping from trees can be carried by wind and may land on you
- *How do you tell the difference between *P. herfsi* itch mite and chigger mite bites?*
 - Itch mite bites usually occur in the upper body around the neck, shoulders, and chest; Chigger

bites usually occur in “tight” places on the lower parts of the body like under belt or waste lines, underwear, socks, or other places clothing is tight against skin.

- *How long after being bitten do bites start to itch?*
 - Symptoms start to appear 10-16 hours after exposure
- *What do the itch mite bites look like?*
 - Bites may look like raised, red areas with a small central blister on the skin; the bites are itchy and may be painful if scratched; bites occur on the upper body around the neck, shoulders, and chest
- *What can I do for itch mite bites?*
 - Do NOT scratch as this may lead to secondary bacterial infections
 - Use products labeled to provide relief from itching and other symptoms
 - Consult a doctor if symptoms are bad or infections appear
- *How can I prevent itch mite bites?*
 - Reduce exposure to trees with cicada egg nests or galls (ex. oaks)
 - Bathe shortly after spending time in areas where you may have been exposed to itch mites
 - Wear protective clothing when in areas of potential exposure or raking / leaf blowing leaves (ex. long sleeves, a hat, gloves)
 - Repellents used to prevent bites from mosquitoes, ticks, etc. have not been effective against itch mites
- *Can I apply pesticides to trees with cicada egg nests to kill the itch mites?*
 - Application of miticide sprays to trees with cicada egg nests are not likely effective since mites are protected from exposure within the cicada egg nests
- *When will the itch mites go away?*
 - Cicada eggs take 6-10 weeks to hatch. Egg hatch for most Brood X periodical cicada eggs should be completed by the end of August in this area. Once the food source for the itch mite is gone, their densities should go down.

Resources for more detailed information on itch mites (*Pyemotes herfsi*):

Itch Mite Update, Illinois Dept of Public Health (2008)

http://www.idph.state.il.us/envhealth/pcitchmites_update5-23-08.htm

Kansas State Fact Sheet

Oak Leaf Itch Mite by Ray Cloyd (2019)

<https://bookstore.ksre.ksu.edu/pubs/MF2806.pdf>

Research article: *Pyemotes herfsi* (Acari: Pyemotidae), a Mite New to North America as the Cause of Bite Outbreaks. J. Med. Entomol. 43(3): 610-613 (2006).

https://www.srs.fs.usda.gov/pubs/ja/ja_moser050.pdf

Beneficial of the Week

By: Paula Shrewsbury

What attacks fall webworm?

Fall webworm, *Hyphantria cunea*, caterpillars seem to be having a good year. I am seeing an abundance of fall webworm caterpillars, and their webbed nests and defoliation damage. I recall 2019 was also a year with high fall webworm activity in MD. Fall webworms are native to North America and have two generations in our area. They feed on over 90 species of trees, but their most common hosts in the eastern U.S. include black walnut, American elm, pecan, hickory, crab apples, persimmon, box elder, some maples, sweetgum, and fruit trees. Their feeding does not usually cause long term damage to trees. Most of their feeding is done later in the season when trees have already had time to photosynthesize and produce the energy they need. It is largely a nuisance pest due to its unsightly nests. Although, fall webworm is a pest in fruit tree orchards.

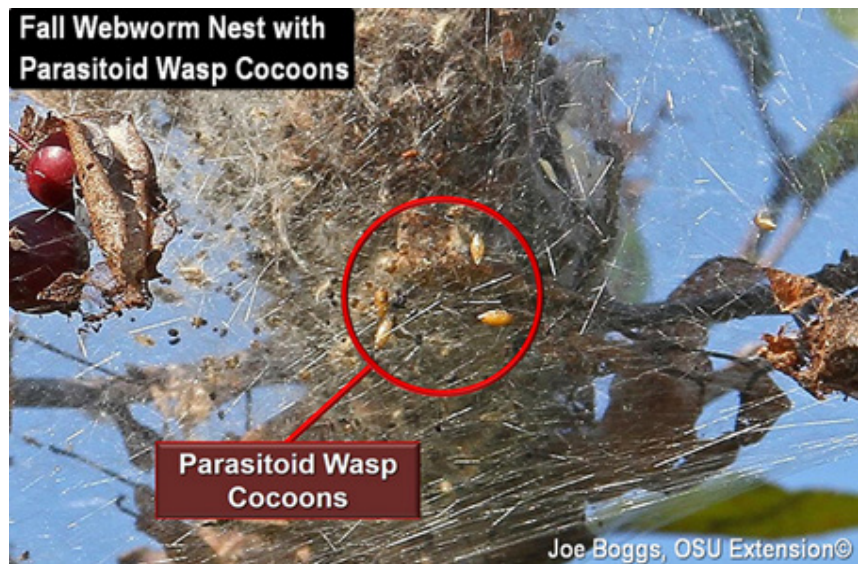
So what eats fall webworms? Over 86 species of dipteran (fly) and hymenopteran (wasp) parasitoids, predators, and pathogens are reported to feed on fall webworm, including birds, parasitic tachinid flies, wasp parasitoids, stink bugs, beetles, and social wasps such as yellow jackets and paper wasps. Some of these natural enemies attack the larval stage (caterpillars), while others attack the pupal stage. Fall webworms also serve as a host insect for several biological control agents introduced to control gypsy moth. For example, fall webworm populations are affected by baculovirus (NPV), granulovirus (GV), and *Bacillus thuringiensis* (Bt).

In 2019, I was fortunate enough to see a *Polistes* (paper) wasp attacking fall webworm. I was observing a webbed nest of fall webworm and after a few minutes I noticed many of the caterpillars in the nest were “twitching” in unison, which is believed to be a defensive response. Within seconds I saw why the caterpillars were twitching. A **paper wasp (*Polistes* sp.)** walked from the underside of the webbed nest to the top where I could closely observe it and take pictures. As I observed, the wasp began pulling at the webbing with her front legs and mandibles (see image). After about 15 seconds the wasp was able to get through the webbing and grab a caterpillar with her mandibles (jaws). The wasp, with its newly caught prey, walked to the upper edge of the webbed nest where it proceeded to macerate the caterpillar (see image)



This *Polistes* (paper) wasp is macerating its prey, a fall webworm caterpillar that the wasp pulled out of its webbed nest. The wasp will bring the macerated prey back to its nest to feed to wasp larvae.

Photo: P.M. Shrewsbury, UMD



A fall webworm nest with cocoons of a wasp that parasitized caterpillars

Photo: Joe Boggs, OSU Extension

and [click here to see a video](#) (Bug of the Week, M.J. Raupp) of this wasp “processing” the caterpillar with its mandibles. Note how the prey starts off looking like a caterpillar and ends up as a macerated ball of food. Also notice the webworm caterpillars still in the nest twitching. Because paper wasps consume large numbers of caterpillars (not just fall webworm) they are our beneficial allies. They help reduce populations of caterpillars that feed on and damage ornamental plants. Their nests should be left alone if they do not threaten humans. In the spring, nests being formed in locations near lots of human activity where they might pose a threat (ex. doorways), can be destroyed by using a strong water stream or a broom to knock them down. Later in the season, larger nests should be approached more cautiously, perhaps with a wasp spray used according to label directions.

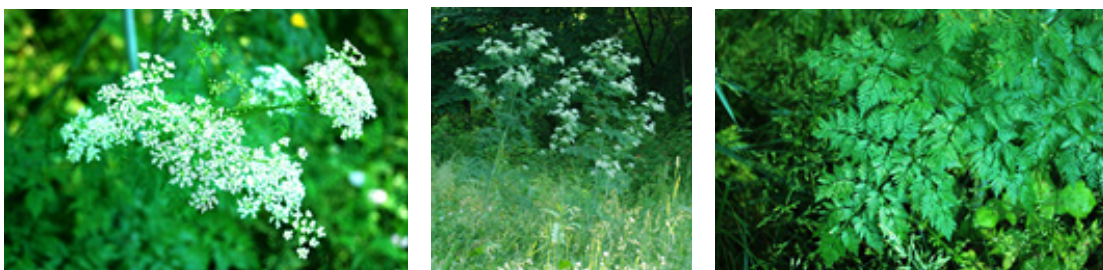
Even with all the natural enemies that attack fall webworm there are years when there are still high densities. This is not surprising since other factors such as host tree abundance and quality, and environmental factors (drought, heavy rain) have been shown to influence fall webworm populations. In years when densities are high, the best control for fall webworm is to prune out the webbed tents (if in reach) or use a long stick to rip open the tent and knock out all the caterpillars. Most caterpillars will not make it back into the tree. Pesticides usually don't work well because the webbed tents are difficult to penetrate, reducing the effectiveness of sprays.

Weed of the Week

By: Chuck Schuster

A recent USA Today article has caused some correspondence on the plant that is currently being seen around the state. Poison hemlock, *Conium maculatum*, is a biennial plant, with a tall erect growth habit. In the first year, poison hemlock will form a basal rosette, and the following year a flower stalk that is what becomes most noticeable. This stalk can reach ten feet in height. This plant is found throughout the United States and is very poisonous to livestock. It should be noted that this plant can be toxic to anything that consumes it. The leaves are alternate, with a basic triangular outline, five to fifteen inches in length, occurring on a petiole, and pinnately compound. Each of the individual leaflets are lanceolate in outline and one eighth to one quarter in length. The flowering stalk is hollow and ridged with purple spots. White flowers will be one and one half inches to two and one half inches in diameter, arising from flower stalks. These flowers are made up of a cluster of smaller flowers all arising from a common point. This plant is capable of producing up to 30,000 seeds per year per plant. The root system is a white, solid thick taproot. This plant is very similar to giant hogweed. Poison hemlock can out-compete and displace native species. All parts of the plant are poisonous including its seeds and the sap. Some doctors disagree that the sap of this plant can cause any reaction. Others claim that if the sap from poison hemlock comes into contact with skin, it can react with the sun and cause blisters and welts, similar to that of giant hogweed. Some have used this plant with its hollow stem as a whistle, which can cause poisoning. Either way, be careful around it.

Control of poison hemlock may be achieved in turf using 2 4D compounds. In landscape and nursery settings, glyphosate will provide control. Remember to be cautious when using glyphosate close to the stems of landscape shrubs and trees.



Poison hemlock can outcompete and displace native species
Photos: Chuck Schuster, UME

Plant of the Week

By: Ginny Rosenkranz

Liriope muscari 'Variegata' is an evergreen, shade loving, perennial groundcover that brightens up the shade gardens with its green and creamy white foliage. Like many shade lovers, *Liriope muscari* 'Variegata' prefers to grow in moist but well drained soils. Also called lily turf or monkey grass, the plants can tolerate full sun and full shade, but will grow slower and produce longer leaves and fewer flowers in full shade. Although this plant is common in the south where it is heat, drought and high humidity tolerant, it is also cold hardy in USDA zones 5-10. *Liriope* has grass-like leaves, but the roots are tuberous and expand with short stolons. *Liriope spicata* can become an aggressive groundcover, while *Liriope muscari* 'Variegata' grows in fountain-like clumps. The glossy green 1-inch arching leaves are bordered by creamy white. It grows 12-18 inches tall and the clumps grow about 1-foot wide. In August, the plants produce thin stalks of flower spikes that are covered with whorls of bright purple flowers which mature into black-purple berries that can stay on the stalks into winter. The plants can be used as accents, or used to line a walkway or shady pathway.



Liriope muscari 'Variegata' flowers mature into black-purple berries that can persist through winter

Photo: Ginny Rosenkranz, UME

Liriope muscari 'Variegata' is susceptible to anthracnose which causes reddish brown spots along the leaf margin and the tips of the leaves. Leaf and crown rot can be a problem if the soil is too wet. *Liriope* scale will cause reddish or yellow spotting on the leaves, slowly killing them. Trimming down the foliage in late winter will remove both the disease and scale insects and the new foliage will fill in quickly. Neither rabbits nor deer browse on the foliage or flowers.

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 **2285 DD** (Martinsburg WV) to **2982 DD** (Reagan National Airport). 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.

- Euonymus scale – egg hatch / crawlers – (2nd gen) (2235 DD)
- Japanese maple scale – egg hatch / crawlers – (2nd gen) (2508 DD)
- Fall webworm – egg hatch / early instar (2nd gen) (2793 DD)
- Fern scale – egg hatch / crawlers (2nd gen) (2813 DD)
- White prunicola scale – egg hatch / crawlers (3rd gen) (3270 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 August 11)

Aberdeen (KAPG)	2300
Annapolis Naval Academy (KNAK)	2661
Baltimore, MD (KBWI)	2761
Bowie, MD	2777
College Park (KCGS)	2520
Dulles Airport (KIAD)	2597
Ft. Belvoir, VA (KDA)	2630
Frederick (KFDK)	2507
Gaithersburg (KGAI)	2484
Greater Cumberland Reg (KCBE)	2305
Martinsburg, WV (KMRB)	2285
Natl Arboretum/Reagan Natl (KDCA)	2982
Salisbury/Ocean City (KSBY)	2690
St. Mary's City (Patuxent NRB KNHK)	2845
Westminster (KDMW)	2818

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

Diagnostic Sessions

We will be holding two more plant diagnostic sessions for nutrient problems, diseases, and insects on **August 18th and September 22nd** at the Central Maryland Research and Education Center (11975 Homewood Road, Ellicott City, MD 21042) from 12:30 – 3:30 p.m. We encourage participants to bring samples of nutrient disorders and insect and disease problems for diagnosis by David Clement, Karen Rane, Stanton Gill, and Andrew Ristvey, University of Maryland Extension.

Urban Tree Summit

Dates: September 8,9,16 and 23, 2021

Montgomery County Parks and Casey Trees, Washington D.C., present the tenth annual conference — Urban Tree Summit. Presentations will focus on the health and welfare of trees in our increasingly developed landscapes. Learn from some of the country's leading experts about innovative efforts to plant, protect, and preserve trees in urban and suburban settings.

Registration Link: <https://www.eventbrite.com/e/urban-tree-summit-tickets-155804456323>

Cut Flower Tour

September 14, 2021

Locations: Castlebridge Cut Flower Farm, Ellicott City, and Rolling Ridge Horse and Cut Flower Farm, Laytonsville, MD

[For more information and to register](#)

MNLGA Nursery Field Day

September 16, 2021

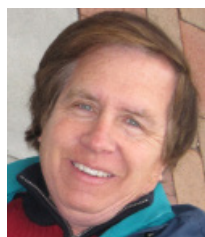
Location: Fieldstone Nursery, Parkton, MD

Go to the MNLGA website for [program and registration information](#)

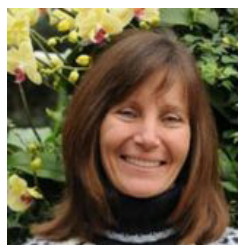
IPMnet
Integrated Pest Management for
Commercial Horticulture

extension.umd.edu/ipm

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

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