UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **September 22, 2023**

In This Issue...

IPMnet
Integrated Pest Management for Commercial Horticulture

extension.umd.edu/ipm

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

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

Regular Contributors:
Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant
Disease Information: Karen Rane (Plant Pathologist), 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)

Hawaiian Beet Webworm Active on the Eastern Shore

By: Stanton Gill and Jerry Brust

Heather Zindash, The Soulful Gardener, sent in pictures of an interesting caterpillar which is defoliating and webbing leaves together on several species of herbaceous plants. She found this activity on the Eastern Shore of Maryland. It is the beet webworm moth, also commonly called the Hawaiian beet webworm moth, which is a species of moth of the family Crambidae. Caterpillars feed on a wide variety of herbaceous plants and, unfortunately, several species grown as cut flowers.

Hawaiian beet webworm moth caterpillars feed on a variety of herbaceous plants.
Photo: Heather Zindash, The Soulful Gardener

It is found worldwide, but mainly in the tropics. It is much more common in southern states such as Florida and Georgia. The webworm

does not overwinter in Maryland and can only survive the winter in Florida. It then slowly makes its way up North through mid-summer into fall which is why we usually only see problems with it in late summer and through the fall. Once we get a freeze, it will be done. The moths that came up in July and early August can have another generation, those that arrived in September will not have another generation.

If you are seeing activity of this caterpillar, please send in photos and what plant material it was on to Sgill@umd.edu. Monitor plants in high tunnels and greenhouses to determine if it is overwintering in these structures.

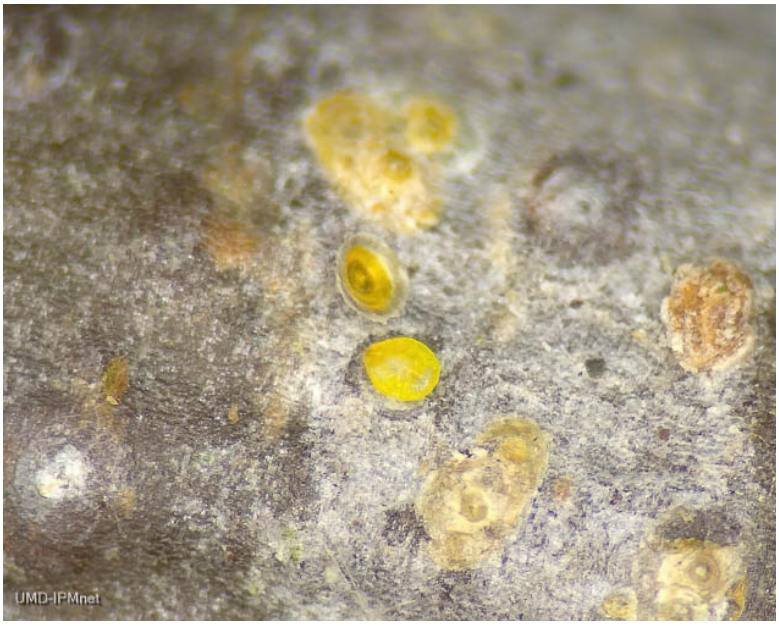
What Heather found is a later instar larva which are generally harder to control. Fortunately, one of the amide compounds, Mainspring, is very effective on this later instar stage.

Hawaiian beet webworm moths do not overwinter outside in Maryland. Photo: Heather Zindash, The Soulful Gardener

Elms Are Getting Popular But They Do Get Scale Problems

By: Stanton Gill

Elms are a wonderful tree for urban environments, tolerating poor quality soils and having a great shape for street plantings. Several years ago, plant breeders developed elms that are resistant to Dutch elm disease. A couple of these cultivars are being grown in Maryland nurseries with great success. Everything seems to develop a problem with scales, and elms have several species of scale which prey upon them. We had an interesting armored scale sent in that was found infesting Princeton elms. The armored scale on the Princeton elm is *Clavaspis ulmi*, family Diaspididae. One of the common names is elm clavaspis scale. It usually has crawlers in late May to early June, depending on the number of degree days accumulated. If you are growing elms, check the branches for this small armored scale. They tend to accumulate at branch junctures and at wounds sites on branches.



An armored scale, *Clavaspis ulmi*, with the cover flipped over to show yellow female body underneath. Photo: Suzanne Klick, UME

When we move into early November and leaves begin to drop on elms, it would be a good time to apply a 3% horticultural oil to control this scale.

Tuliptree Scale

Josh Warner, Antietam Tree & Turf, found hatched tuliptree scale crawlers under covers on September 20 in Leitersburg (NW of Hagerstown). He noted that he did not see any that had emerged out onto the branches. Marie Rojas, IPM Scout, also found tuliptree crawlers under female covers on Royal Star magnolias in Beallsville this week. Talus or Distance can be used to treat the crawlers when they emerge from under the covers.

Tuliptree scalecrawlers are being found under the female crawlers, but not out on the plant in several areas.
Photo: Josh Warner, Antietam Tree & Turf

Problems With Mulch Volcanoes

Jake Hendee sent in this photo noting that "it shows that even if we pull down the height of our mulch volcanoes, they're still doing what mulch volcanoes do if they're over the root flare of the tree at all."
Photo: Jake Hendee, Smithsonian Gardens

Conks and Mushrooms on Living Trees

By: David L. Clement and Karen K. Rane

Autumn is the time of year when many fungi produce spore structures on wood that are visible to the unaided eye – mushrooms and conks. Although these structures can be quite large, most of the body of the fungus is actually in the form of microscopic thread-like hyphae that grow into the wood and produce enzymes that break down various components of wood resulting in decay. The process of wood decay is essential for "recycling" fallen trees and wood debris. But when conks or mushrooms are present on living trees, especially at the base of the trunk or on buttress roots, it's an important signal that should not be ignored. Wood decay in living trees can make the tree structurally unstable and a potential hazard to people and property. Common wood decay fungi that are found on living hardwood trees include *Armillaria, Ganoderma, Inonotus* and *Laetiporus*. Trees with conks or mushrooms near the base of the trunk or on large branches should be inspected for structural integrity by a certified arborist.

For more information on wood decay fungi that can occur on living oaks, refer to this publication from the University of Massachusetts: https://ag.umass.edu/landscape/fact-sheets/root-butt-rot-pathogens-of-oak-quercus-spp

Ganoderma fungus
Photos: David Clement, UME

Inonotus fungus
Photo: David Clement, UME

Armillaria fungi
Photos: David Clement, UME

Spotted Lanternfly Update

Marie Rojas, IPM Scout, reported finding spotted lanternfly on *Ailanthu*s in Beallsville this week. She noted that it is the first that she has seen them in this area. Josh Warner, Antietam Tree & Turf, reports the following: "Like lots of others I've talked to in our area, I'm not seeing near the numbers I did last year. A few pockets where they were just appearing last year have some significant populations, but overall they're down. They do seem to be more widespread, but not in nuisance numbers."

Spider Mites

Spider mite populations continue to be high in Central Maryland and on the Eastern Shore. Monitor plants susceptible to spider mites at this time.

Sweetbay Magnolia With Armored Scale

By: Stanton Gill

I love the native sweetbay magnolia with its fragrant white flowers. I rarely see any major disease or insect problems with sweetbay. Heather Zindash and Adelaide Figurskey, The Soulful Gardener, recently found an armored scale on the leaves of sweetbay magnolia. It is magnolia white scale, aka false oleander scale, which is another Diaspididae species - *Pseudaulacaspis cockerelli* (Cooley).

Sweetbay is semi-deciduous to completely deciduous in some winters. This scale overwinters on woody branches. The distinctly white 2nd and 3rd instar cover of this scale really makes it stand out on the sweetbay magnolia foliage. This one has a more elongated body in 3rd instar females. When Suzanne Klick removed the covers, we found a lot of crawlers. These crawlers are very mobile and will move back to the small branches and trunk of the tree. Once they are sessile, they will stay put until they mature next season and produce new crawlers which migrate out onto the foliage.

The insect growth regulators Distance or Talus can be applied at this time of year to kill the crawler stage.

Various stages, including crawlers, of white magnolia scale were present on Magnolia 'Little Gem' this week. Photos: Suzanne Klick, UME

Scale on Cherry Laurel

Luke Gustafson, The Davey Tree Expert Company, found white prunicola scale, sometimes also with wax scale, on cherry laurel over the last few weeks in Baltimore City. White prunicola scale is finishing the third generation of crawlers a this time. Indian wax scale produces crawlers in June.

Indian wax scale has been found on cherry laurels, along with the more common scale on this plant - white prunicola scale
Photo: Luke Gustafson, The Davey Tree Expert Company

Pawpaw Season and Some of Its Pests

By: Stanton Gill

Pawpaws are ripening and people are going crazy for this native fruit. With the increase in popularity of this tree species, we are seeing a rising incidence of a pyralid moth damaging tip growth on pawpaws. The pest is called Asimina webworm moth, *Omphalocera munroei* (Martin, 1956). Heather Zindash, The Soulful Gardener, sent in pictures this week from a walk on the C&O canal towpath. Several years ago, Marie Rojas, IPM Scout, sent pictures of this caterpillar rolling leaves in a nursery growing pawpaws. The caterpillar folds the leaves together and hides in there eating the leaves and twigs, usually on the tips of branches.

If you caught this pest back in August, you could have used either Bt or spinosad to safely kill this caterpillar before it did serious damage to a pawpaw tree.

Asimina webworm caterpillars fold over foliage with silk.
Photo: Heather Zindash, The IPM Scout

Beneficial of the Week

By: Paula Shrewsbury

European hornets are busy this time of year!

In last week's IPM Newsletter there were reports of European hornets, *Vespa crabro* (Hymenoptera: Vespidae), attacking a dragonfly and a digger wasp. Clearly, they are predacious. European hornets are native to Europe and Asia. They were first detected in the U.S. around the 1840's in the New York area. The European hornet is the largest and, technically, the only, true hornet commonly found in the United States, with the exception of the large northern giant hornet that was recently found in Washington state and Canada. European hornets are currently found throughout most of the eastern U.S. reaching as far east as the Dakotas and Louisiana. European hornet workers are about 1" in length and queens are a little larger. They can be distinguished from other wasps by their color pattern – head is red and yellow, thorax is black with red, and the first few abdominal segments are black while the back half of the abdomen is yellow with rows of black "teardrops" (see image).

European hornet, *Vespa crabo*, adult showing characteristic color patterns.
Photo: M. Talabac, UMD

European hornets build communal paper nests, by chewing wood to make a papery pulp. Their nests are built in protected aerial areas such as the hollow of a large tree or wall voids in houses (see image). These are different from bald-faced hornets that build exposed paper nests in trees or yellow jackets that usually build paper nests in the ground. European hornets are social wasps, and like other social wasps, their nests are annual. This means that the workers, and therefore the nest, die out in the fall usually following a hard frost. Only the new fertilized queens survive and are tasked with making a new nest in the spring. Abandoned nests are not reused in following years. The fertilized queens overwinter in protected locations such as under the bark of fall trees or logs, or in wall voids of structures. Sometimes in the fall you find queens in your home looking for a place to overwinter, or in the spring you see them in your home as they are trying to get outside to start a new nest. Sometimes you have to help them get outside (carefully). European hornets are nocturnal and are sometimes attracted to entryway lights, although you can also see them active during the daytime hours too. European hornets are not aggressive, but can sting if they feel threatened or the nest is threatened. It is always a good idea to leave a respectful distance between yourself and the nest of a stinging insect.

A large European hornet nest that was removed from a wall void in someone's house.
Photo: M.J. Raupp, UMD

A fallen pear provides a source of carbohydrates in the fall for European hornets.
Photo: M.J. Raupp, UMD

As we already mentioned, European hornets are predacious and most of the year, hunt other insects providing biological control services. These include grasshoppers, dragonflies, flies, stink bugs, bees and wasps including yellow jackets, moths, mantids, caterpillars, and many other insects. Hornets use their stingers and mandibles to kill their prey, which it masticates and brings back to the nest to feed the brood. In the fall months, European hornets often integrate sugar and carbohydrates into their menu. They often are seen feeding on fallen ripe fruit such as apples and pears (see image). As with many insects, European hornets are not only beneficial. There is a bad side to go with the good. European hornets strip the bark off twigs and branches of certain trees and shrubs (ex. lilac, birch) to feed on nutritious plant sap. Stripping of the bark, if extensive enough, can girdle twigs and branches and cause dieback. I have also been seeing quite a bit of European hornet activity in the landscapes, especially where there is an abundance of spotted lanternfly (SLF) and their honeydew. Honeydew is an excellent source of sugar for European hornets and a number of other stinging insects. Be cautious when working outdoors and try not to unexcitingly disturb the nest of European hornets or other stinging insects.

Weed of the Week

By: Chuck Schuster, UME-Retired

Is it Common Ragweed or Goldenrod?

Common ragweed
Photo: Virginia Tech

Common ragweed, *Ambrosia artemisiifolia*, or goldenrod, *Solidago* species is at this time of year is an important question. Common ragweed is a summer annual found in most areas of the United States. Goldenrod is a perennial and is also found in many areas of the United States. Ragweed is of great interest to many of us as the pollen is a common cause of "hay fever" for many. Pollen from Ragweed is very small and light in weight, and relies on wind to spread it. This pollen can reportedly travel up to 400 miles. While both are typically found in more rural areas including farm pastures, roadside ditches and waste areas, it will also be found in many landscape beds, and turf areas. Common ragweed prefers poor soils, soils that have not been tilled and with low fertility levels. In landscape and turf areas maintain soil fertility to promote good plant growth. Goldenrod has nectar and attracts pollinators that will gather the heavy pollen grains. Goldenrod is tolerant to many different soil conditions. Both are members of the Asteraceae family

Goldenrod in flower
Photo: Chuck Schuster, UME-Retired

Ragweed as a summer annual can grow from several inches in height to more than 3 feet in total height. The plant has a shallow taproot, leaves that show hairs on the upper surface. Male and female flowers are found in separate heads on the same plant. Female flowers are in the upper leaves and bases of leaves, while the male flowers are found at the top of the plant. Pollen production stops as temperatures drop below 60 degrees F. Common Ragweed seed can remain viable in the soil for many years, and in one study was found to germinate more than 20 years after harvest. Preventing seed formation is a critical part of both the allergy issue and the next several years plants. A single ragweed plant can produce up to 1 million grains of pollen per year.

Goldenrod seed responds well to stratification. It is a perennial and can be identified by the typical single stemmed and branched top of the plant. Goldenrod can grow to heights of up to 6 feet. It presents with green stems, where ragweed will most often have purple timed stems with lobed fernlike leaves. Goldenrod leaves will not be divided. Goldenrod is not the source of most allergy issues.

Ragweed can be confused with goldenrod. Goldenrod with its large clusters of small yellow flowers is similar to Common Ragweed, but it is not the source of many of our allergic hay fever problems. These flowers will appear from the end of summer until frost.

Cultural control of common ragweed can be obtained in turf settings using regular mowing. Ragweed will not thrive when mowed closer than four inches. Control of Common Ragweed can be obtained with post emergent use of glyphosate products, but broadleaf pre-emergent materials may not give the desired control, as timing of germination often comes after pre-emergent products are less effective. Use of broadleaf weed post emergent materials including 2,4-D have provided adequate control for turf settings, especially when used early in the season when the plant is actively growing and the leaf tissue is soft to aid in chemical uptake. Goldenrod is grown as a cut flower, and is used to provide pollinator habitat in the later part of summer.

Plant of the Week

By: Ginny Rosenkranz

Conoclinium coelestinum or blue mistflower is a native herbaceous perennial that blooms late in the summer, growing 1 ½ feet to 3 feet tall and 1 ½ to 2 ½ feet wide. They prefer to grow in full sun to partial shade and moist to wet soils. The plants are in the aster family, and like the fall blooming asters, are very lovely flowering plants that provide color in the gardens for up to 8 weeks or until the frost kills back the foliage and flowers. The flowers are very similar in color and shape to the annual ageratum, but unlike ageratum, this native plant spreads very strongly by seed and rhizomes. The soft blue-purple flowers are created with lots of small, tubular ½ petals that from a distance look fluffy. The clusters of flowers are gathered up on a flat-topped cluster, and are prized for their nectar by many butterflies and other pollinators, while the native birds enjoy the seeds in the very late fall and winter. The green 3-inch long deltoid or triangular shaped leaves have coarsely toothed margins and are arranged in an opposite fashion on purple stems. Blue mistflowers can be planted in naturalized areas, native gardens and wildflower gardens. Plants have no serious insect or disease problems, and deer damage is limited, but the extreme spreading habit of the plants from seeds and rhizomes can be problematic.

Blue mistflower grows in sun to partial shade and moist to wet soils.
Photos: Ginny Rosenkranz, UME

Degree Days (as of September 20)

Abingdon (C1620)	3417
Annapolis Naval Academy (KNAK)	3713
Baltimore, MD (KBWI)	3764
College Park (KCGS)	3594
Dulles Airport (KIAD)	3658
Ft. Belvoir, VA (KDA)	3478
Frederick (KFDK)	3479
Gaithersburg (KGAI)	3311
Gambrils (F2488, near Bowie)	3532
Greater Cumberland Reg (KCBE)	3111
Perry Hall (C0608)	3323
Martinsburg, WV (KMRB)	2820
Natl Arboretum/Reagan Natl (KDCA)	4091
Salisbury/Ocean City (KSBY)	3685
St. Mary's City (Patuxent NRB KNHK)	4150
Westminster (KDMW)	3765

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

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 **2820 DD** (Martinsburg, WV) to **4150 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.

Fern scale – egg hatch / crawler 2nd gen **(2813 DD)**
White prunicola scale – egg hatch / crawler 3rd gen **(3238 DD)**
Banded Ash clearwing borer – adult emergence **(3357 DD)**
Tuliptree scale – egg hatch / crawler **(3472 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.

Conferences: Go to the IPMnet Conference Page for links and details on these programs.

October 11, 2023
FALCAN Truck and Trailer Seminar
Location: Urbana Fire Hall, Urbana, MD
Details and Registration Info

December 8, 2023
Advanced IPM Conference
Location: Carroll Community College, Westminster, MD
Details coming in late October

December 12, 2023
Maryland Turfgrass Council Conference and Tradeshow
Location: Turf Valley Country Club, Ellicott City, MD

2024 Advanced Landscape IPM PHC Short Course
This is a recertification short course for arborists, landscapers, IPM consultants, horticulturalists, professional gardeners, and others responsible for urban plant management. The course lectures will be held over four days at the University of Maryland, College Park, MD. In addition, there will be a hands-on lab following lecture (available to a limited number of course attendees).
Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture dates: Monday, January 8 - Thursday, January 11, 2024 from 8:00 am – 3:00 pm
Lab dates: Monday, January 8 - Thursday, January 11, 2024 (space limited) from 3:30 pm – 5:30 pm
Course and registration information: https://landscapeipmphc.weebly.com/
Questions contact: Amy Yaich, 301-405-3911, umdentomology@umd.edu

Natural Areas Management Services Webinar Series - Expanding Business Opportunities for Green Industry Professionals (October 3, 10, & 17, 2023; 6:30-8:00 p.m.)

Developed by The *Woods in Your Backyard Partnership*, this program aims to inform and equip landscapers, arborists, landscape architects, horticulturalists, land managers, foresters, and other green industry professionals with knowledge and skills to provide additional services to clientele while improving ecosystem health. Small-scale *Natural Area Management Services* include wildlife habitat enhancement, forestry practices such as reforestation, invasive control, and more. A resource manual and specialized checklist tool complement the training and help Green Industry professionals determine which enhancement practices suit a given property.

This 3-part series provides in-depth instruction related to the management of a small-acreage property from start to finish through our case-study scenario. We start with an assessment of the client's property with a standard checklist and proceed with plan development, and finish with the implementation of various land care practices, creating wildlife habitat, managing invasive plants, tree planting, and reforesting a property. This series will increase your knowledge and skills so you can gain an edge over the competition and grow your business. Each participant will receive a copy of the Woodland Health Practices Field Guide, a $7.50 value.

All “live” session attendees receive a certificate of attendance to obtain professional development credits. Continuing Education Units approvals are pending for: International Society of Arboriculture (ISA); Maryland Licensed Tree Experts; Chesapeake Bay Landscape Professionals (CBLP); Landscape Architects; PLNA Certified Horticulturalist; VNLA Certified Horticulturalist; and Society of American Foresters.

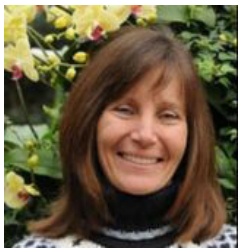
Register by **October 3, 2023** and receive the link to access the webinar. Registrants will also receive access to the webinar recordings. Go to: https://extension.psu.edu/natural-areas-management-services-expanding-business-opportunities-for-green-industry-professionals

This webinar series is provided by *The Woods in Your Backyard Partnership*; a collaboration of the University of Maryland Extension, Penn State Extension, Virginia Cooperative Extension, Virginia Department of Forestry, the Alliance for the Chesapeake Bay/Forests for the Bay, Maryland Department of Natural Resources Forest Service.

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

CONTRIBUTORS:

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



Paula Shrewsbury
Extension Specialist
pshrewsb@umd.edu

Karen Rane
Plant Pathologist
rane@umd.edu

Chuck Schuster
Retired, Exten-
sion Educator
cfs@umd.edu

David Clement
Plant Pathologist
clement@umd.edu

Andrew Ristvey
Extension Specialist
aristvey@umd.edu

Ginny Rosenkranz
Extension Educator
rosnkrnz@umd.edu

Nancy Harding
Faculty Research
Assistant

Fereshteh Shahoveisi
Assistant Professor
fsh@umd.edu

Kelly Nichols
Extension Educator
kellyn@umd.edu

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