UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report
for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **April 28, 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:
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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) and Kelly Nichols (Extension Educator, Montgomery County)
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)

Diagnostic IPM Session – May 10, 2023

By: Stanton Gill

The Maryland Arborist Association and the University of Maryland Extension are working together to offer a diagnostic evening session to be held at the Howard Community College, Columbia, Maryland from 5:00 p.m. until dark.

Karen Rane, Andrew Ristvey, and Stanton Gill will walk you through diagnosing plant disease, nutrient, water, and insect and mite problems on plant material. Steve Dubik will cover the ID of some of the plant material on the campus.

A catered dinner will be served for all attendees.

Go to https://hccpestwalk23.eventbrite.com
to register for this pest walk.

May 24, 2023
IPM Scouts' Diagnostic Session
Location: CMREC, Ellicott City, MD
(limited space available)

Red Buds –Long Term?

By: Stanton Gill

Red buds are being grown in the majority of the Maryland nurseries and the plant is cropping up in native plantings throughout Maryland.

First, the benefits of redbuds are incredible:

Redbud trees are an important source of nectar for bees and butterflies in early spring when there are few other plants blooming. Several species of moth and butterfly larvae use the redbud as a host plant. Bobwhite quail and chickadees will eat redbud seeds. People report that is make a great redbud jam they spread on their toast.

They are tolerant of many urban soil types. They are a great flowering tree for early in the season. Redbud trees are members of the Fabaceae or pea family (legume) family, but they do not fix nitrogen. Keep in mind this plant is not a long-lived species. In many circles, it is called a pioneer species. If you get 20 – 30 years out of this species, you are doing well. The redbud trees are extremely susceptible to several trunk canker diseases.

Redbuds are a great early season flowering tree, but they are susceptible to several trunk canker diseases.
Photos: Stanton Gill, UME

Elm Leaf Beetle Hatch

Paul Wolfe, Integrated Plant Care, reported that elm leaf beetles have hatched in Bethesda. Look for this beetle on most elm species and zelkova. This native beetle has two generations per year in Maryland. Adults produce shot hole damage on leaves. The larvae etch leaf surfaces between the fine veins. If control is necessary, look on insecticide labels for systemic materials for control of this beetle.

Recently hatched elm leaf beetle larvae
Photo: Whitney Cranshaw, Colorado State University, Bugwood.org

Gymnosporangium Rust

By: Stanton Gill

Marie Rojas, IPM Scout, is reporting that rust is just starting to infect fruit of serviceberry. Rust pressure continues to be strong this week. Hopefully, you have put on preventative fungicides. You should continue to treat this week. Manzate has been a strong material for rust disease.

Gymnosporangium rust infection on serviceberry
Photo: Marie Rojas, IPM Scout

Sapsucker Damage Continues on Woody Plants

Dave Young, Fisher and Son Company, reported that George Howes at AW Landscapes, Inc., found yellow-bellied sapsucker damage this week. They feed on many woody plants, but we regularly receive reports of this damage on plants such as viburnum, holly, maple, and magnolia.

Yellow-bellied sapsucker damage
Photo: George Howes, AW Landscapes, Inc.

Lilac Borer

By: Stanton Gill

An adult lilac borer, which is a clearwing borer (family Sesiidae), will be flying very shortly, since we are reaching the degree day totals for several parts of Southern Maryland and the Eastern Shore of Maryland. We have clearwing moth borer traps placed at CMREC and are not yet seeing activity of males in the traps, but it is getting close.

Horticultural Oil – What is Happening

By: Stanton Gill

We had an interesting call last week on horticulture oil damaging and killing several nursery trees. The nursery owner applied a 3% horticultural oil in early November on several of his trees. This spring, he applied the oil from the same supplier in March. They are now seeing large scale death on a wide range of nursery trees. The owner said he applied in the same manner he has in other years a and made sure he was applying a 3% horticultural oil rate.

If you are seeing damage from 3% horticulture applications this year, please send me the date of application, rate you used, and dates you applied. We are trying to figure out if this was an isolated event or if it more widespread. Send me reports (and pictures if you have them), of the damage, to Sgill@um.edu

Ambrosia Beetle Activity

By: Stanton Gill

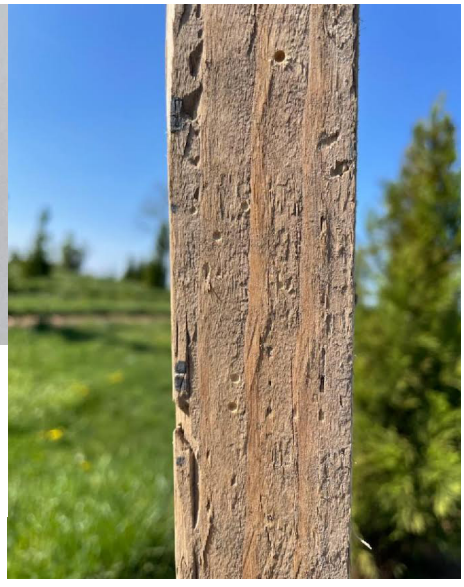
I spoke with two different nursery managers last week and each were reporting activity of ambrosia beetle activity. One said he lost several paperbark maples to the beetles in 2023. Even though both are seeing activity they each commented that so far, the adult activity has been light. This is consistent with what we are seeing in our baited traps this season. Usually after a heavy rainfall followed by warm temperatures we see the most flight activity of *Xylosansdrus* species of ambrosia beetles.

In our trap at CMREC in Ellicott City this week, we had one *Xylosandrus* species. Ginny Rosenkranz, UME, had 7 *X. crassiusculus* beetles in her trap in Salisbury, so we are seeing more activity on the Eastern Shore.

Camphor Beetle

By: Stanton Gill

Will Behner, Manor View Nursery , sent in pictures of an ambrosia beetle he picked up this week in the Baltimore County. It is camphor shoot borer beetle, *Cnestus mutilates*. The camphor shoot borer was picked up for the first time in our alcohol baited traps network in Maryland when Richard Uva found them in his alcohol traps in Federalsburg, MD 4 year ago. We have found a couple of these camphor beetles in our baited alcohol Lindgren traps at the Central Maryland Research and Education Center over the last 2 seasons. The camphor beetle looks like a robust ambrosia beetle.



A camphor beetle and its borer holes in a wood post. Photos: Will Behner, Manor View Nursery

Plum Curculio

By: Stanton Gill

We continue to see plum curculio adult flight into pears, apples, plums, and cherries this week. Avuant insecticide is a good control material.

Crapemyrtle Bark Scale

New growth is starting to come out this week on crapemyrtles, so monitor plants closely for crawlers. Mark Kieffer, VA Master Gardener, reported that crawlers were active in Falls Church, Virginia on April 19. Mark was able to see the white/pinkish crawlers with a magnifying glass. If anyone else is seeing crawlers, please let us know the date and location. Sam Bahr, UMD, is also finding this scale on campus.

Monitor heavily infested crape myrtles to see if they leaf out.
Photo: Sam Bahr, UMD

Elms in Trouble

By: Stanton Gill

Matthew J. Morrison, National Park Service, sent in pictures of European elm scale, *Eriococcus spurius*, member of the family called Eriococcidae, or commonly called felted scale. This Eriococcid scale is infesting some very old and historical elms growing in Washington, D.C. The treatment for this scale would best include a March application of a 3% horticultural oil when temperatures are above 55 °F for several days. But, obviously, this point in time is in the past. At this time of year, a Safari basal trunk treatment should control the scale. The Histories of the Mall website includes more about the Jefferson elms planted on the mall at https://mallhistory.org/explorations/show/trees/item/362.

Dieback on elm from European elm scale infestation and the scale along the trunk of the tree.
Photos: Matthew Morrison, National Park Service

Close-up microscope photo of European elm scale
Photo: Karen Rane, UMD

Aphid Activity

Sam Bahr, UMD, found parasitized aphids on *Blephilia ciliata* (Ohio horsemint) on campus. We didn't get a sample in, but most likely it is one of the *Aphidius* species. It is a good example of biological control working in the landscape.
Photo: Sam Bahr, UMD

Marie Rojas, IPM Scout, found woolly aphids on 'Winter King' Hawthorn. Beneficial insects do well keeping populations of this aphid under control.
Photo: Marie Rojas, IPM Scout

Luke Gustafson, The Davey Tree Expert Company, found spiny witchhazel aphids feeding on river birch this week in Baltimore City. A lady bird beetle was feeding on some of the many aphids on the birch foliage. This aphid causes spindle galls on its alternate host, witchhazel.
Photo: Luke Gustafson, The Davey Tree Expert Company

Looking for Redheaded Flea Beetles

By: Stanton Gill

Redheaded flea beetle has become a very big deal in the nursery industry. We are working as an East Coast team trying to solve problem with this pest and come up with good solutions. Shimat Joseph is leading the charge on this project.

He sent me this email this week: "My post-doc is doing a genetic work of redheaded flea beetle. We need some beetles from various locations of MD nurseries/garden centers, etc in ethanol with location clearly marked. Could you please help us?"

Thanks-Shimat Joseph, Associate Professor, Turfgrass and Ornamentals
Department of Entomology, University of Georgia, 1109 Experiment Street, Griffin, GA 30223

If any of you are willing to send samples of flea beetles to us, we will relay them along to Shimat. Your help in this will help us in developing control strategies. Send samples to CMREC, Univ of MD Extension, 11975 Homewood Road, Ellicott City, MD 21042.

2023 – Dodging the Bullet of Fire Blight

By: Stanton Gill

The rains came on April 22, but the temperatures during the day, after the rains, did not reach the critical temperatures for fire blight in most parts of central Maryland. The cool weather persisted through most of this week, which was not ideal for fire blight infection. Pear blossoms had pretty much all dropped before the rains, and apples blooms had peaked on most apple cultivars, at least on the 112 cultivars I grow in our orchard, so most of us managed to pass through the danger zone of fireblight for 2023. This in not to say some isolated spots with susceptible cultivars still in bloom when rains and warmer temperatures showed up later in the week might have had conditions favorable for infection.

Fruit Disease Management

By: Kari Peter, Penn State Experiment Station

The significant rain forecasted for April 28–May 1 will be an extended wetting period favored for many fungal diseases, especially apple scab, Marssonina blotch, as well as cherry leaf spot. There is no fire blight risk due to the cooler temperatures. Trees will need to be protected prior to the weekend to prevent disease.

Apple Scab: All overwintering spores will be matured by this point. We most likely saw the biggest scab spore release on April 15 and April 22; however, available spore numbers are still high enough to make this a significant infection event this weekend

Marssonina Blotch: The primary infection period for Marssonina Blotch is underway, and April 28–May 1 will probably be an important infection event. Consequently, control is critical to disrupt the disease cycle now to limit premature defoliation later in the season. Marssonina has become pervasive throughout Eastern apple orchards. Everyone has Marssonina blotch in their orchard, whether they realize it or not, so don't let up off the gas pedal right now. We might be on the downside for apple scab, but Marssonina is picking up speed right behind it.

Fire Blight: There is no fire blight infection risk this weekend (April 28–May 1) because conditions have been too chilly this week. The southern part of PA had fire blight infection events occurring April 14 – 16 and April 21 – 22. It is important to begin scouting orchards for infections.

For Diseases on Stone Fruit: Growers should be thinking about their cherries, peaches, and nectarines. Cherry leaf spot is like apple scab when it comes to infection conditions. Rusty spot is powdery mildew on peaches and nectarines. Captan or sulfur is sufficient to keep brown rot in check right now. Current conditions are too cool for the disease to be problematic for bacterial spot.

Cottony Camellia/Taxus Scale

Marie Rojas, IPM Scout, found cottony camellia/Taxus scale on variegated English holly as well as a red holly hybrid in Chevy Chase on April 26. Marie noted that some of the female scales have already produced egg sacs. Over the next few weeks, look for the females to produce the white, waxy egg sacs. Crawlers hatch in this area in late May/early June. Cottony camellia/Taxus scale tends to be limited to camellia, Taxus, Chinese holly, and jasmine, although it can infest English ivy, euonymus, hydrangea, maple, mulberry, pittosporum, and rhododendron. Wait until crawlers are active to treat for this scale.

Overwintering females of cottony camellia/Taxus scale (left) are starting to produce waxy egg sacs (right) this week.
Photo: Marie Rojas, IPM Scout

Cottony Maple Leaf Scale

Marie Rojas, IPM Scout, found cottony maple leaf scale on *Pieris japonica* on April 26 in Chevy Chase. There were yellow eggs within fluffy white egg sacs on the undersides of leaves. Common hosts of the cottony maple leaf scale are maples and dogwoods, but it can also infest hollies, Andromeda, and others. Natural enemies usually keep this scale in check. If control is necessary, wait to treat when crawlers are active in May.

Eggs of cottony maple leaf scale are present in Chevy Chase this week.
Photo: Marie Rojas, IPM Scout

Spotted Lanternfly (SLF) Updates

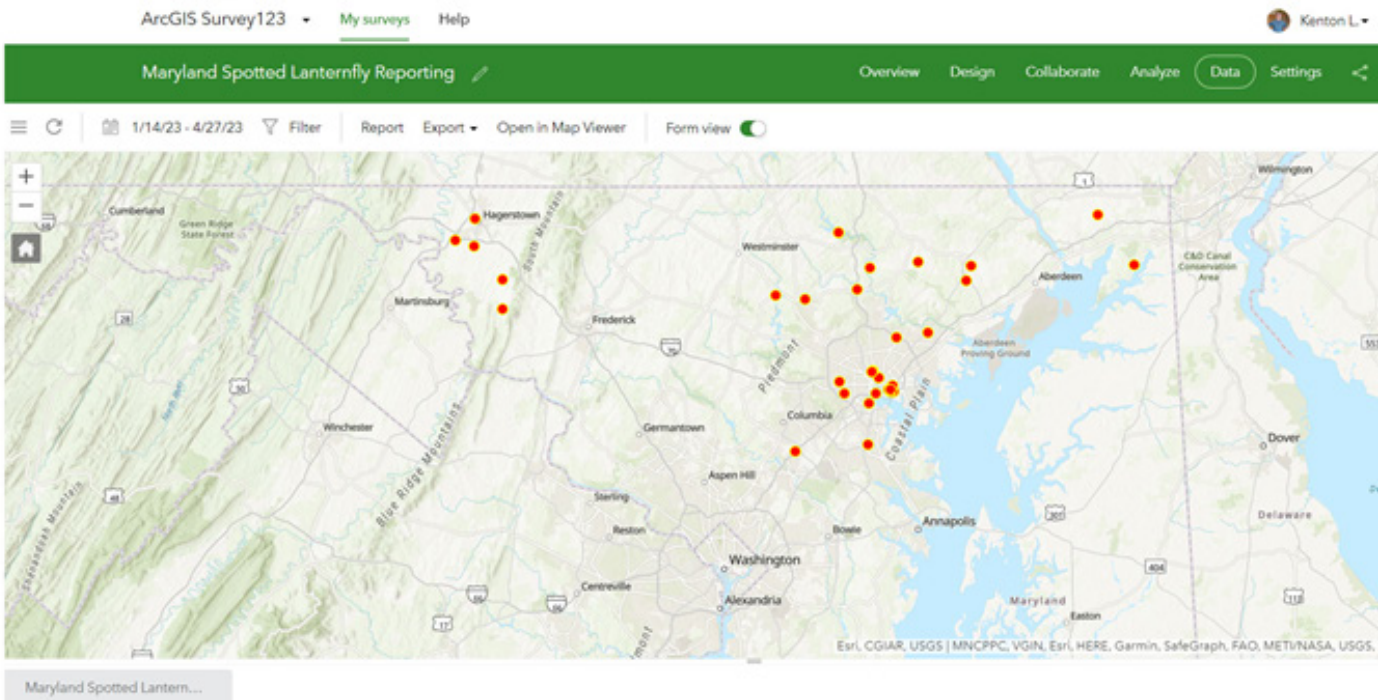
By: Paula Shrewsbury, UMD; and Kenton Sumpter, MDA

Last week we reported the first reports of **SLF nymphs hatching** from their overwintering eggs in Howard County and Baltimore City, MD. This week (April 26th) I found SLF emerging from eggs (see image) and nymphs on leaves in Hagerstown MD (Washington Co.), along with already hatched and unhatched egg masses. Spotted lanternfly nymphs have also been reported in several other locations in MD as indicated on the orange dots on the MDA map. Please report SLF egg hatch / early nymph to MDA.

SLF egg hatch begins around 240 degree days (DD) and continues until around 1100 DD (usually late June / early July). This week in the MD area, DD are ranging from 222 DD to 501 DD depending on area (see DD report at the end of this newsletter). Many areas could see the beginning of egg hatch soon, so monitor plants closely. If you find SLF eggs or nymphs in high numbers you should consider implementing management tactics such as traps (circle or sticky), cultural (removing preferred hosts such as tree of heaven), and/or contact insecticides.

If you are considering insecticides to manage SLF nymphs there are a few things to take into account. First, be conscious of bloom times and select pesticides with the least likelihood of non-target impacts. Also remember that SLF early instar nymphs will likely move from the tree / location they hatched on to other host plants such as roses (both cultivated and multi-flora), many perennial plants, and possibly grapes, tree-of-heaven, and walnuts (see below reference); while later 4th instar nymphs and adults move onto a wider range of tree species later in the season. At this time to target the early instar nymphs (1st – 3rds) you should use contact insecticides such as insecticidal soap, neem oil, horticultural oil, or natural pyrethrins. Synthetic pyrethroids have been shown to work but they will have negative impacts on pollinators and natural enemies so those are not recommended.

A comprehensive resource for SLF management is "Spotted Lanternfly Management for Landscape Professionals" by Penn State Extension. There is detailed information with images on all of the management tactics I just listed, including insecticide options and their optimal timing.



Map indicating locations where spotted lanternfly nymphs have been reported (orange dots) in Maryland this year to date. (from K. Sumpter, MDA)

Spotted lanternfly nymphs emerging from their overwintering egg mass on the trunk of tree-of-heaven in Hagerstown, MD on April 26, 2023. It took about 1 hour from when the first nymph popped its head out until most of the nymphs were able to crawl away from the egg mass. In a short period of time the white nymphs will harden (melanize) and become black in color with white dots.
Photo: P.M. Shrewsbury, UMD

Spotted lanternfly first instar nymphs on the underside of foliage (cherry). You should be monitoring host plants for egg hatch and activity of these first instars.
Photo: P.M. Shrewsbury, UMD

Spotted Lanternfly Activity

By: Stanton Gill

As nymphs are active at this point, look for them feeding on tip growth on maples and any new growth on most plants in the landscape. You find them even feeding on vegetable transplants at this time of year. Last year, we found that sunflower stalks were very attractive to first and second instar nymphs, but no damage was detected on these plants. We have not observed any measurable damage on most plants from these early instar nymphs feeding. The exception is grape vines and hops plants on which feeding does injure these plants.

Tarnished Plant Bug

Nicolas Tardif, Ruppert Landscape, found a tarnished plant bug on an *Eunonymus* 'Manhantan' leaf in the middle of an apartment complex in Rockville on April 25. They feed on the developing leaves, fruits, and flowers of many woody and herbaceous plants. If populations are high enough, tarnished plant bugs can damage plants. They cause stippling and necrotic spots on foliage and deformed foliage, flowers, and fruit.

Tarnished plant bugs overwinter as adults.
Photo: Nicolas Tardif, Ruppert Landscape

Winter Impact or Arborvitae

Nicolas Tardif, Ruppert Landscape, found black flagging on arborvitaes in Chevy Chase. Nicolas noted that they were new trees that had been planted last fall. He pointed out that the "trees didn't have it easy this winter due to warm and dry winter".

Flagging of a recently planted arborvitae after a dry and warm winter.
Photo: Nicolas Tardif, Ruppert Landscape

Boxwood Psyllid and Boxwood Leafminer Activity Continues

Luke Gustafson, The Davey Tree Expert Company, is seeing boxwood psyllids on a lot of different properties in Baltimore City right now. Luke is also seeing boxwood leaf miner adults flying.

The nymph stage of boxwood psyllids produce a waxy material.
Photo: Luke Gustafson, The Davey Tree Expert Company

Peach Leaf Curl

Marie Rojas, IPM Scout, is reporting that peach leaf curl is just starting on peaches in Frederick County. It is too late to apply any control measures now. Kari Peter, Penn State University, provided control options in last year's IPM report on May 6.

Maple Petiole Borer

Marie Rojas, IPM Scout, is finding damage from maple petiole borer on Maple 'Red Sunset' in Frederick County this week. The damage usually occurs in the spring on new tip growth on 1 to 2 year old maples. Look for flagging tips and prune out damaged branches.

Look for maple petiole borer larvae in the growing tips of maples if you see plants flagging.
Photos: Marie Rojas, IPM Scout

Elder Shoot Borer

Marie Rojas, IPM Scout, found elder shoot borer damaging black lace elderberry in Frederick County this week. This borer overwinters in the egg stage and caterpillars hatch in the spring and bore into new shoots. In winter, remove dead canes to reduce pupation. Be sure to remove prunings from the area.

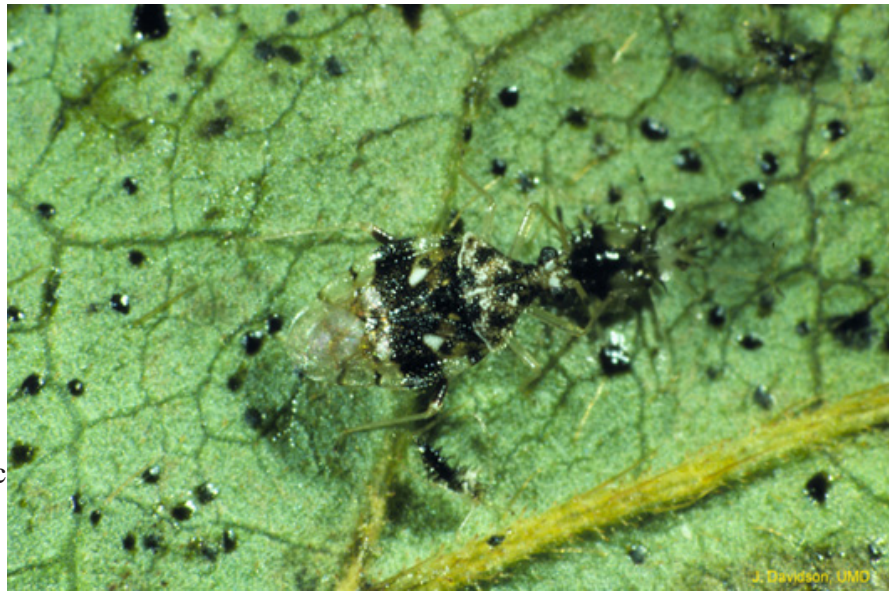
Elder shoot borer causes a shepherd's crook sympton on elderberry.
Photos: Marie Rojas, IPM Scout

Beneficial of the Week

By: Paula Shrewsbury

Japanese plant bug – a predator that specializes on lace bugs

Azaleas are blooming. That means it is time to start monitoring for egg hatch of azalea and other lace bug species. Azalea lace bug overwinter as eggs inserted into leave tissue. First instar nymphs should be hatching out around 280 degree days (DD) or just after azaleas are start to bloom in your location. Azalea lace bug, *Stephanitis pyrioides* (Hemiptera: Heteroptera: Tingidae), is considered a key pest of azaleas because it is frequently found in landscapes and nurseries at densities that cause significant aesthetic and/or economic damage to azaleas. When you monitor for lace bugs, like with all pests, you should also monitor for natural enemies. Several species of natural enemy's attack azalea lace bug.



Adult predacious Japanese plant bug, *Stethoconus japonicus*, (left) feeding on an azalea lace bug nymph (right). Note how well *Stethoconus* camouflages on the underside of the azalea leaf infested with lace bugs.
Photo: J.A. Davidson, UMD

Today, I would like to discuss a **Japanese plant bug, *Stethoconus japonicus*** (Hemiptera: Heteroptera: Miridae), a predator that specializes on azalea lace bug and other *Stephanitis* lace bug species. *Stethoconus japonicus* is the first host specific lace bug predator reported in the Western Hemisphere based on collections in MD in 1985, where established populations of adults and nymphs were found attacking azalea lace bugs. *Stethoconus japonicus* is a non-native predator that was accidently introduced into the U.S. as was its prey, the azalea lace bug. Previously *S. japonicus* was only know from Japan. There are 8 known species of *Stethoconus* worldwide and most are predators of lace bugs (Family: Tingidae). Studies by John Neal (USDA) and colleagues in 1991 showed that *S. japonicus* had high biological control potential for species of *Stephanitis* lace bugs, like azalea lace bug. I personally have spent many hours of my life examining azaleas with azalea lace bug and its natural enemies (my Ph.D. study system). I frequently observed *Stethoconus* on azaleas with lace bug but almost always only when there were high densities of lace bugs.

Immature predacious Japanese plant bug, *Stethoconus japonicus*, (left) stalking an azalea lace bug nymph (right).
Photo: J.A. Davidson, UMD

Some natural enemies like *Stethoconus* "numerically respond" to prey populations. When prey populations are high, the predator more readily find the prey and is able to quickly build up its densities. Whereas other natural enemies may be better at detecting prey when they are at low numbers. I would see adult and nymph *Stethoconus* feeding on azalea lace bug adults and nymphs. *Stethoconus* have piercing-sucking mouthparts that are inserted into its lace bug prey. Paralysis and death of the lace bug occurs quickly. *Stethoconus* overwinter as eggs inserted into the leaf petioles or leaf scars on stems. *Stethoconus* eggs hatch in the spring as do azalea lace bug eggs. These two insects coevolved in Asia and have continued their relationship in their introduced range in the U.S.

Stethoconus japonicus adults are mottled black and white with front wings half "leathery" and half membranous. Adults camouflage well on the underside of azalea leaves that are infested with lace bugs (also black and white) and speckled with lace bug fecal spots (see image). *Stethoconus* nymphs are white and gray with some red coloring (see image). As you are monitoring your azaleas and other plants for lace bugs be sure to be on the lookout for the predatory *Stethoconus*. If natural enemies are present take that into account when deciding on your treatment plan.

Plant of the Week

By: Ginny Rosenkranz

Photinia serrulata or Chinese photinia is winter hardy in USDA zones 6-9, thriving in full sun to partial shade and well-drained soils. It will grow in many soil pH, as long as the soil is not wet. This small tree grows 12-20 feet tall and 9-16 feet wide with 4-8 inch-long, dark evergreen leaves. Each leathery leaf begins with rose-bronze tones before turning dark green and has a finely toothed margin with a prominent mid-rib. Leaves in the fall turn a reddish color and remain on the tree over the winter. The white, 5-petal flowers are held in a flattened bouquet called a corymbose panicle that can grow 4-7 inches wide full of flowers. The flowers do not have a nice fragrance but are attractive, and mature into berries that turn from green to red then purple-brown. The malodorous flowers smell like hawthorn flowers, which gives the plant the other common name of Chinese hawthorn. It should be planted away from foundations and patios. This Photinia is resistant to photinia leaf spot disease, but fire blight and powdery mildew can become problematic. Insect pests can include aphids and scale.

Chinese photinia has attractive flowers that do not have a pleasant odor.
Photos: Ginny Rosenkranz, UME

Degree Days (as of April 26)

Abingdon (C1620)	285
Annapolis Naval Academy (KNAK)	347
Baltimore, MD (KBWI)	390
College Park (KCGS)	376
Dulles Airport (KIAD)	377
Ft. Belvoir, VA (KDA)	352
Frederick (KFDK)	314
Gaithersburg (KGAI)	333
Gambrils (F2488, near Bowie)	362
Greater Cumberland Reg (KCBE)	254
Perry Hall (C0608)	270
Martinsburg, WV (KMRB)	222
Natl Arboretum/Reagan Natl (KDCA)	478
Salisbury/Ocean City (KSBY)	389
St. Mary's City (Patuxent NRB KNHK)	501
Westminster (KDMW)	376

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 **222 DD** (Martinsburg, WV) to **501 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.

Viburnum leaf beetle – first egg hatch **(210 DD)**
Azalea lace bug – egg hatch (1st gen) **(214 DD)**
Birch leafminer – adult emergence **(215 DD)**
Elm leafminer – adult emergence **(219 DD)**
Roseslug sawfly – egg hatch / early instar **(230 DD)**
Honeylocust plant bug – egg hatch **(230 DD)**
Elongate hemlock scale – egg hatch / crawler (1st gen) **(232 DD)**
Hemlock woolly adelgid – egg hatch (1st gen) **(235 DD)**
Boxwood leafminer – adult emergence **(249 DD)**
Hawthorn lace bug – first adult activity **(265 DD)**
Spotted lanternfly – egg hatch **(270 DD)**
Bristly roseslug sawfly – larva, early instar **(284 DD)**
Imported willow leaf beetle – adult emergence **(290 DD)**
Hawthorn leafminer – adult emergence **(292 DD)**
Andromeda lace bug – egg hatch **(305 DD)**
Pine needle scale – egg hatch / crawler **(307 DD)**
Cooley spruce gall adelgid – egg hatch **(308 DD)**
Eastern spruce gall adelgid – egg hatch **(308 DD)**
Spirea aphid – adult/nymph **(326 DD)**
Lilac borer – adult emergence **(350 DD)**
Spongy moth (formerly gypsy moth) – egg hatch **(373 DD)**
Holly leafminer – adult emergence **(375 DD)**

Hemlock woolly adelgid – egg hatch (2nd gen) **(411 DD)**
Basswood lace bug – 1st adult activity **(415 DD)**
Emerald ash borer – adult emergence **(421 DD)**
Locust leafminer – adult emergence **(429 DD)**
Honeylocust plant bug – egg hatch, early instar **(433 DD)**
Fourlined plant bug – egg hatch, early instar **(435 DD)**
Lesser peachtree borer – adult emergence (1st gen) **(468 DD)**
Oak erricoccin scale – egg hatch / crawler **(469 DD)**
Maskell scale – egg hatch / crawler (1st gen) **(470 DD)**
Oystershell scale – egg hatch / crawler (1st gen) **(486 DD)**
Minute cypress scale – egg hatch / crawler **(511 DD)**
White prunicola scale – egg hatch / crawler (1st gen) **(513 DD)**
Euonymus scale – egg hatch / crawler (1st gen) **(522 DD)**
Bronze birch borer – adult emergence **(547 DD)**

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.

May 10, 2023
MAA Arborist Walk
Contact: Danielle Bauer Farace

May 24, 2023
IPM Scouts' Diagnostic Session
Location: CMREC, Ellicott City, MD

June 16, 2023
Montgomery County Procrastinator's Conference
Location: Montgomery County Extension Office

June 20, 2023
Cut Flower Program
Location: Castlebridge Farm, Ellicott City, MD

Commercial Ornamental IPM Information
extension.umd.edu/ipm

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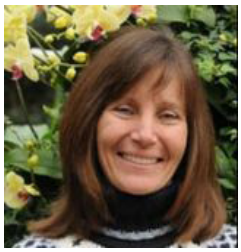

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.