

Commercial Horticulture

September 30, 2022

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IPMnet  
Integrated Pest  
Management for  
Commercial Horticulture  
[extension.umd.edu/ipm](http://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](mailto:sgill@umd.edu)

### Coordinator Weekly IPM Report:

Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Greenhouse and Managed Landscapes, [sgill@umd.edu](mailto: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) and David Clement (Extension Specialist)

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)

### Great Flowering Tree That Helps Out Pollinators

By: Stanton Gill

Of the flowering trees out there, one that stands out as a winner at this time of year is seven-son flower, *Heptacodium miconioides*. The trees at my orchard have been in bloom since September 12 and continued to bloom until this week. It is highly attractive to honey bees, bumble bees, syrphid flies, several species of native bees, and even hummingbirds visit the flowers. I went out on the morning of September 17 and heard a loud chorus of humming coming from the 23 seven-son trees on the edge of my orchard. It was only 8:00 a.m., and the trees were full of activity with hundreds and hundreds of pollinators visiting the white, fragrant blooms. I reached up to one of the branches to pull it closer for inspection. The pollinators were so enthralled with the flowers they barely gave me notice.

I looked up seven-son flower online, and there is a cultivar appropriately named 'Temple of Bloom', What a great marketing name for such a heavily blooming plant.

As we move into October, the white flower petals are falling, but the green sepals remain. As it cools down in mid-October, the sepals will turn red.

If you grow this in your nursery, realize it normally grows as a multi-trunk shrub. You can grow it for the first year and let the plant branch heavily. In the second year, select one main leader and prune everything else back. Train

this to a nursery pole to keep the trunk straight. After that, pick the height you want it to branch at for a small tree. My trees have topped off at about 25 ft heights. The slightly exfoliating bark is very attractive as the tree matures.



The sepals of *Heptacodium* flowers will become pink as we move into fall.  
Photo: Stanton Gill, UME

## Spotted Lanternfly

By: Stanton Gill

We had the first report of female SLF laying an egg mass in the Hagerstown area on September 20, 2022, from Josh Warner, Antietam Tree and Turf Company.

On September 20, we ended our field trials for spotted lanternfly control. As we were taking out the marking flags at the site, we noted several behavior changes. Earlier in September, we were finding mainly females feeding actively on the ailanthus trees. By September 20<sup>th</sup>, we were finding 70 – 75% males feeding on the stems and 25% females. We examined maple and callery pear trees near the test site and found females laying eggs on the trunks.

We can say with certainty that adult spotted lanternflies are incredible leapers. We tried to capture several on trunks of ailanthus, and they rapidly moved to the other side of the trunk when we moved closer. When we tried to tease them into our capture containers, they leaped vigorously and alighted 3 - 4 ft away from the original site.

Spotted lanternflies were continuing to produce copious amounts of honeydew by our last observation of September 20<sup>th</sup>. Another interesting observation is that this was the third year of spotted lanternfly at this site. In this third year, we are not seeing the huge swarming on trunks of adjacent trees that was seen in 2021.



General predators, such as spiders, continue to feed on spotted lanternflies.

Photo: Todd Armstrong, The Davey Tree Expert Company

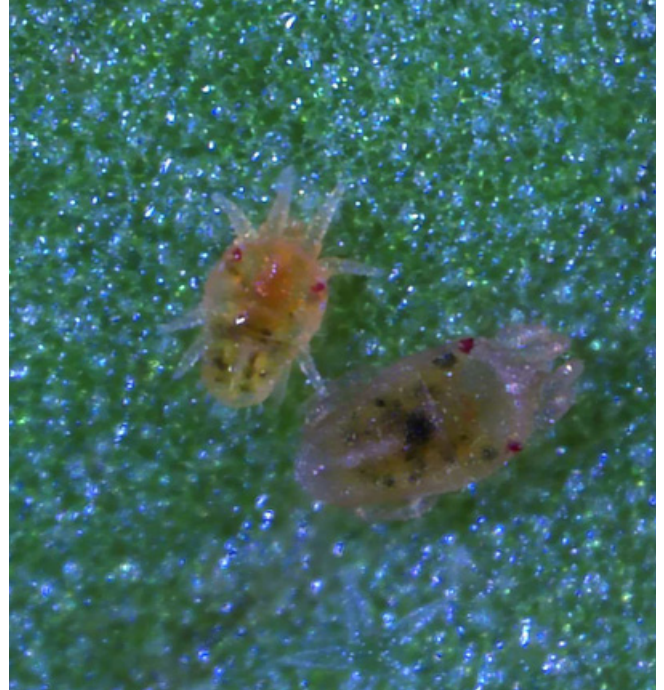
## Flat Mite in the Nursery and Landscape?

By: Stanton Gill

Heather Zindash, The Soulful Gardener, sent in an interesting mite she found on *Deutzia* plants. Richard Cowles of Connecticut University helped me out with the ID. It is a family of mites called the flat mites (family Tenuipalpidae). The genus and species of the mite is *Brevipalpus obovatus*. It has a lot of common names such as scarlet tea mite, privet mite, and many other common names in Spanish and French. Matt Bertone, North Carolina State University, reported finding it on *Ilex verticillata*, winterberry.

The family Tenuipalpidae is very large and has over 622 species in 30 genera described worldwide. A total of 928 plant species in 513 genera within 139 families are recorded hosts. Several mites in this family have been associated with virus transmission.

We are interested in finding out if this mite is hitting nursery plants in Maryland. If you observe a mite that looks like these pictures that Heather submitted to CMREC, then please send them to us at [sgill@umd.edu](mailto:sgill@umd.edu) and tell us on which plants you are finding them causing damage.



If you see mites that look like these photos, please let us know at [sgill@umd.edu](mailto:sgill@umd.edu).

Photos: Heather Zindash, The Soulful Gardener

## Soft Scale on Maple Leaves

By: Stanton Gill

Miri Talabac, UME-HGIC, brought over a red maple leaf that had a soft scale, *Pulvinaria innumerabilis* Rathvo, on the leaf surface. This scale feeds on red and silver maples, but can be found on other maple species, in addition to feeding on boxelder, basswood, birch, elm, and linden. Cottony maple scales spend the winter in an immature stage on twigs or branches. Females complete their development in June and will start to produce egg sacs at that time as well. Eggs hatch during June and July, and crawlers move to the lower surface of leaves where they settle to feed on sap for the rest of the summer. What Miri was seeing is the females feeding on the undersides of the foliage in late September. Males have completed their development by the end of the summer and mate with females before dying. In late October, after foliage starts to color and just before leaf drop, the small, fertilized females will move back to twigs and branches to spend the winter.

**Control:** In November if the temperatures remain above 55 °F, then it will be a good time to apply a 2 -3 % rate of horticultural oil to control the overwintering females.

## Two-marked Treehoppers

Todd Armstrong, The Dave Tree Expert Company, sent in photos of a redbud with white, waxy areas on the trunk. Female two-marked treehoppers leave these white waxy plugs over the spots where they deposit their eggs. The wax will break down over a short period of time



**These wax plugs cover the area where female two-marked treehoppers lay eggs.**

**Photo: Todd Armstrong, The Davey Tree Expert Company**

## Below is a Link to an Aquaponic Method Interest Questionnaire

We are inviting farmers to complete the survey. This survey is aimed at assessing interest areas in future aquaponic method education and training. The deadline for responses is Oct. 7th. Responses are confidential and will support research and future training. Thank you for your support.

<https://go.umd.edu/aquaponics>

Andrea Franchini, University of Maryland Extension--Baltimore City

## Crapemyrtle Bark Scale

By: Stanton Gill

Crapemyrtle bark scale is roaring through the nursery and landscape industry in Maryland. I am receiving many e-mails reporting its activity through Central Maryland, Southern Maryland, and the Eastern Shore of Maryland. I contacted Erfan Valaie. Erfan had tested several insecticides for control of crapemyrtle bark scale which he was working on while at Texas A&M University Extension. Erfan has now moved to BioWorks Company. He shared the results of his field trial in Texas on this pest.

**From Erfan Valaie:** In Overton, Texas, we're about done tying up crapemyrtles, getting them on drip irrigation, and starting pre-assessments. We have a total of 100 standard (Queen's Lace) and 100 dwarf (Pocomoke) cultivars, all highly infested with crapemyrtle bark scale, for our research trial. Before deciding what insecticides and timing of applications we would try, we had to summarize some of our past results. All of our past work on crapemyrtle bark scale insecticide trials are available through Arthropod Management Tests (<https://academic.oup.com/amt> and search for "crapemyrtle bark scale"). If you're feeling a bit intimidated by the papers in Arthropod Management Tests, I made a [short video tutorial](#) walking through some of the jargon used in insecticide efficacy work. The following table is based on data from our Overton Center:



**A population of crapemyrtle bark scale found earlier this week in Fairfax, VA.**

**Photo: Dave Freeman, Oaktree Property Care**

Product	a.i.	MoA	Applicaton Method	Frequency	Efficacy
Safari	Dinotefuran	4A	Drench	1	Great
Talstar +	Bifenthrin + Dinotefuran	3A +	Bark Spray +	2 & 1	Great
Safari	Dinotefuran	4A	Drench	1	Good
Safari	Dinotefuran	4A	Bark Spray	1	Good
Fulcrum	Pyriproxyfen	7C	Bark Spray	2	Good
Talus	Buprofezin	16	Bark Spray	2	Good
Altus	Flupyradifurone	4D	Bark Spray	2	Moderate
Mainspring	Cyantraniliprole	28	Drench	1	Moderate
Mallet	Imidacloprid	4A	Drench	1	Moderate -
					Good
Grandevo & Venerate	Chromobacterium subtsugae strain PRAA4-1 & Burkholderia spp. strain A396	N/A	Bark Spray	2 & 2	Poor
Acelepryn	Chlorantraniliprole	28	Bark Spray	2	Poor
AzaGuard	Azadirachtin	UN	Bark Spray	2	Poor
Acephate	Acephate	1B	Bark Spray	2	Poor
SuffOil-X +	Mineral oil + Azadirachtin	UNE	Bark Spray	2	Poor
Molt-X	Beauveria bassiana PPRI 5339	+ UN	Bark Spray	2	Poor
Velifer	Beauveria bassiana PPRI 5339	UNF	Bark Spray	2	In Progress
Xxpire	Spinetoram & Sulfoxaflor	5 + 4C	Bark Spray	2	In Progress
Ventigra	Afidopyopen	9D	Bark Spray	2	In Progress
		28 +			
Pradia	Cyclaniliprole + Flonicamid	29	Bark Spray	2	Inconclusive
Sarisa	Cyclaniliprole	28	Bark Spray	2	Inconclusive

Table last update July 8, 2020.

## Botryosphaeria Cankers and Dieback on Red and Yellow Stemmed Dogwoods

By: Sheena O'Donnell and D.L. Clement

Important fungal canker diseases on many landscape woody plants are commonly labelled Botryosphaeria cankers. These fungal canker diseases are caused by several *Botryosphaeria* species. Since fungal species identification is difficult in the field the cankers on *Cornus sericea* and *C. alba* are usually identified as being caused by a *Botryosphaeria dothidea*-*B. ribis* complex.

This complex causes severe symptoms on stressed plants damaged by drought, freeze damage, and bark wounding. In late spring to early summer, these fungi sporulate during moist and moderate temperatures, and are spread by wind, rain, and contaminated tools. They enter the plant through natural openings such as lenticels and growth cracks in the bark. The most important predisposing factor for infection in the landscape is usually drought stress.

Infected plants may have wilting foliage that remains attached on scattered dying branches. Cankers under the bark turns the killed cambium black, or brown. Dead bark can become roughened and cracked as the fungal fruiting bodies emerge. Cankers can enlarge during the growing season and girdle entire branches, or trunks. Prevent infection by minimizing drought stress and by choosing appropriate planting sites. Prevent pathogen spread by sanitizing tools between uses, refraining from operating heavy equipment close to trunks such as lawnmowers, and removing diseased branches. Remove diseased branches at least 6-8 inches below visible cankers and sanitize pruners between cuts.



Cankers on red and yellow stemmed dogwoods can girdle branches and trunks.

Photo: David Clement, UME

### University of Maryland Extension Job Opening

UME's Home & Garden Information Center has an opening for a part-time Horticulture Consultant to answer gardening, landscaping, and pest questions from Maryland and D.C. residents using the web-based "Ask Extension" platform. Bachelor's degree required. Location is the Central MD Research & education Center in Clarksville, MD. \$20.86/hr. **Send resume or questions to Jon Traunfeld; [jont@umd.edu](mailto:jont@umd.edu)**

## Article From Irrigation and Technology Magazine

Here is an article on the Inflation Reduction Act (IRA) and its provision for tax credits for environmental changes: <https://irrigationandlighting.org/news/ira-to-provide-tax-credits-for-environmental-changes/>

### Beech Blight Aphids

Bobbie Levine reports that beech blight aphids were active in Laurel on September 27. They move in unison when disturbed. They can completely cover stems on beech trees. Because of the copious amounts of honeydew produced by this aphid, the production of sooty mold can become severe. Control is usually not needed.



Beech blight aphids can completely cover stems on beech trees.  
Photo: Bobbie Levine



### Fall Predators

This spider was found under a hydrangea's flower sepals. Look for spiders and other predators to be active through early fall.

Photo: Rebecca McWilliams, Maxalea, Inc.

## Beneficial of the Week

By: Paula Shrewsbury

### Monitor for the predatory caterpillar *Laetilia coccidivora* on fall active soft scales

In the previous IPM newsletter, crawler activity of tulip tree scale was reported. Most species of soft scale have crawlers that are active in late spring through early summer. However, two species of soft scale that we commonly see on ornamental trees have crawlers that are active in late summer and early fall. They are tulip tree scale which feeds mainly on tulip tree and magnolia, and occasionally on linden; and magnolia scale which feeds on magnolia. As with many plant-feeding insects, there are species of natural enemies that are commonly associated with specific pests or pest groups and are referred to as specialists, versus generalist predators that feed on a diversity of insects. Soft scales, such as magnolia and tulip tree scales, have a specialist predacious caterpillar that commonly feeds on them. In general, caterpillars feed on plants. However, some species (less than 1% of caterpillars) are predators of other insects.



Magnolia branch with tulip tree scale (see reddish “bump”) covered in silk produced by the predatory caterpillar, *Laetilia coccidivora*.

Photo: P.M. Shrewsbury, UMD

The predacious caterpillar commonly associated with soft scale is the larvae of a snout moth (Family Pyralidae) *Laetilia coccidivora* referred to as a scale feeding snout moth. It is found in southern states and northward up into Maryland and Pennsylvania. The larvae are [predacious](#) on [Coccidae \(soft scale\)](#) species such as tulip tree scale, magnolia scale, wax scale, pine tortoise scale, and other soft scales. They feed on the eggs and immature stages of soft scales. You can find *Laetilia* in the spring / early summer feeding on many soft scale species when they are laying eggs and there is an abundance of crawlers and early instars. They are also active in late summer / early fall when they feed on the eggs and young stages of tulip tree and magnolia soft scale. These predacious caterpillars forage on the branches of plants with soft scale and produce webbing that appears to “coat” or encircle the branch while encompassing the scales (see image). When monitoring, you will notice the branches have a dusty, messy appearance to them. When you look closely you should see the webbing. If you tease the webbing apart you may get lucky and find the predacious caterpillar (see image).



Close up of the predacious caterpillar, *Laetilia coccidivora*, that was under the silk feeding on soft scale eggs and crawlers.

Photo: P.M. Shrewsbury, UMD

Interestingly, some soft scales produce a chemical called carminic acid for defense. This chemical deters many predators from feeding on soft scale. *Laetilia*, however, is not affected or deterred by carminic acid and they just munch away on the scales. Moreover, as *Laetilia* feeds on the scales, it sequesters and uses [carminic acid produced by its prey](#), as a defense against its own predators - very cool!



In addition to *Laetilia*, a number of other natural enemies' attack tulip tree and other soft scales such as the lady beetles *Hyperaspis species*, *Chilocorus stigma*, and *Adalia bipunctata* (L.) (Coleoptera: Coccinellidae); a syrphid fly, *Pelecinoaccha costata* (Diptera: Syrphidae); and the parasitic wasps, *Anicetus toumeyella*, *Metaphycus flavus* (Hymenoptera: Encyrtidae), *Coccophagus flavifrons* and *Coccophagus lycimnia* (Hymenoptera: Aphelinidae). *Laetilia*, in combination with other natural enemies, have been recorded to provide good levels of biological control and suppress soft scale populations. When you are monitoring scale activity on your trees and shrubs, be sure to look closely for signs of this voracious caterpillar feasting on the scales along with other natural enemies. If natural enemies are present, you may not need to apply any control measures; if you do, be sure to use a product that does NOT harm caterpillars or other beneficials.



***Laetilia coccidivora* adult, scale feeding snout moth.**

**Photo: <https://commons.wikimedia.org/>**

Another important aspect of soft scale control, and the conservation of natural enemies, is to control ants. Numerous species of ants form mutualistic relationships with scales that facilitate scale outbreaks. Soft scales produce food (honeydew) for the ants; ants protect soft scales from parasitoids and predators. A study showed that ants tending a scale population increased the scales survival by 50% compared to a population where ants were excluded (Burns and Donley 1970). Remember that ant activity on plants is a great indicator you have soft scales, or some other honeydew producing insect on the tree, usually way before you even see the insect or honeydew / sooty mold. When you see ants, follow their foraging trail on the tree and you will find the pest insect.

## **Weed of the Week**

By: Chuck Schuster

With the recent rainfall in some areas, we are seeing flowers bloom. In areas that remain damp, this plant has been showing its flowers in recent weeks. New York ironweed, *Vernonia noveboracensis*, is a perennial in the aster family that sometimes can be a problem in nurseries or landscapes. This weed grows with a stiff stem and can reach six feet or more in height. It is found in many agricultural settings, as well as in meadows and lower management areas, throughout much of the southeastern United States. New York ironweed produces a basal crown from which the stems arise each year. The leaves along the erect stem are lance-shaped and range up to ten inches in length, and one- and one-half inch wide. These leaves have soft white hairs on the underside, with many teeth along the margin. The flowers are on the ends of the tall erect stems and are purple in color. These flowers occur in clusters and on a peduncle or flower stalk at the ends of flowering stems. Each plant may produce thirty to fifty flowers every year.



**New York ironweed**

**Photo: Chuck Schuster**

Control of New York ironweed can be obtained using post emergent herbicides containing glyphosate. Where it is safe to use, 2,4D and dicamba products will provide good control of this plant. This being a perennial weed, prevention of flower clusters and seed is part of the cultural control methods that need to be considered.

## Plant of the Week

By: Ginny Rosenkranz

*Quercus phellos* or willow oak is a native deciduous tree that has dark green leaves without the usual nodes and sinuses that most oaks have. Instead, the willow oak has smooth edged narrow leaves tipped with a bristle that can grow 2-5 inches long and 1/3 to 1 inch wide. Trees usually grow 40-75 feet tall with a strong central leader and 30-40 feet wide. When young, the trees are pyramidal but create a dense rounded crown as they mature. *Quercus phellos* Hightower® is a wonderful cultivar with very dark green leaves and good mite resistance. They are cold hardy in USDA zones 5-9 and are often considered one of the best oaks to plant in the landscape from USDA zones 6-9. It is also a very fast-growing tree with a fibrous root system that helps them to establish after transplanting quickly in acidic, moist but well drained soils in full sun locations. It is also very tolerant of urban conditions. In early spring, the yellow green male and female catkins are produced that are wind pollinated. Small, rounded half-inch acorns are arranged either in pair or in singular on the stems and are produced once the tree matures to 15-20 years old. The bark is gray to dark brown and becomes ridged and furrowed with age. Oaks can have many insect and disease pests but the *Quercus phellos* 'Hightower' is considered very pest resistant.



***Quercus phellos* Hightower® are pyramidal when young, but produce a dense rounded crown when mature.  
Photos: Ginny Rosenkranz, UME**

## Degree Days (as of September 28)

Aberdeen (KAPG)	no data
Annapolis Naval Academy (KNAK)	3911
Baltimore, MD (KBWI)	3964
College Park (KCGS)	3650
Dulles Airport (KIAD)	3747
Ft. Belvoir, VA (KDA)	3744
Frederick (KFDK)	3521
Gaithersburg (KGAI)	3537
Gambrils (F2488, near Bowie)	3766
Greater Cumberland Reg (KCBE)	3394
Martinsburg, WV (KMRB)	3317
Natl Arboretum/Reagan Natl (KDCA)	4285
Salisbury/Ocean City (KSBY)	3934
St. Mary's City (Patuxent NRB KNHK)	4331
Westminster (KDMW)	4064

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

## 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 **3317 DD** (Martinsburg, WV) to **4331 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.

- Banded ash clearwing borer – adult emergence (**3357 DD**)
- Tuliptree scale – egg hatch / crawler (**3519 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.

## 2023 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 VIRTUAL (online). In addition, there will be an IN-PERSON LAB held over two days (available to a limited number of course attendees) at the UMD, College Park, MD. Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture (virtual) Dates:

Tuesday, Wednesday, Thursday mornings; January 3, 4 and 5 AND January 10, 11, and 12

Lab (in-person) dates: Tuesday and Wednesday January 17 and 18

Course and Registration Information: <https://landscapeipmphc.weebly.com/>

Questions contact: Amy Yaich, 301-405-3911, [umdentomology@umd.edu](mailto:umdentomology@umd.edu)

## **Conferences**

### **October 19, 2022**

FALCAN's Truck & Trailer Safety Seminar

Location: Urbana Fire Hall

[For details and to register](#)

### **December 8, 2022 (Morning session)**

Turf Nutrient Management Conference

Location: Carroll Community College

### **December 15, 2022**

Advanced Integrated Pest Management Conference

Location: Carroll Community College

Program will be submitted for ISA CEUs and Pesticide recertification credits.

### **January 11-13, 2023**

MANTS

Location: Baltimore Convention Center

### **January 3, 4 and 5 AND January 10, 11, and 12, 2023**

UMD IPM Short Course

Lecture times: 7:45 am – 11:30 am Eastern Standard Time

Location: Virtual via Zoom

2 day in-person lab (8:00AM - 3:00PM)

Lab dates: Tuesday and Wednesday January 17 and 18 (8:00AM - 3:00PM)

Location: In person at University of Maryland Campus, College Park, MD

Course and Registration Information: <https://landscapeipmphc.weebly.com/>

Questions contact: Amy Yaich, 301-405-3911, [umdentomology@umd.edu](mailto:umdentomology@umd.edu)

### **January 17 and 18, 2023**

MAA Winter Conference

Location: Turf Valley, Ellicott City, MD

### **January 27, 2023**

FALCAN Conference

Location: Frederick Community College

### **February 6, 2023**

Western Maryland Pest Management Conference

Location: Allegany Fairgrounds, Cumberland, MD

### **February 15, 2023**

2023 Eastern Shore Pest Management Conference

Location: Salisbury, MD

### **February 16 and 17, 2023**

Chesapeake Green Horticultural Symposium

Location: Maritime Institute, Linthicum Heights, MD

## September and October Solar Workshops

Registration is required for these free workshops  
[go.umd.edu/Solar2022](http://go.umd.edu/Solar2022)

**Commercial Ornamental IPM Information**  
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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.

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