

Commercial Horticulture

September 29, 2023

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IPMnet
Integrated Pest
Management for
Commercial Horticulture
extension.umd.edu/ipm

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

Coordinator Weekly IPM Report:

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Regular Contributors:

Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant

Disease Information: Karen Rane (Plant Pathologist), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)

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

Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/Somerset Counties)

Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)

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Glorious Rain, Finally

By: Stanton Gill

After 15 weeks of drought in many parts of central Maryland, the tropical storm, Ophelia, brought in much needed rains on September 23 and 24. We did have rain in various parts of Maryland this summer, but it was extremely spotty with some areas receiving rain and many other receiving none at all. The lack of rain over the last 15 weeks made mowing of lawns, in many cases, not necessary, since many lawns were brown most of the summer. The exceptions were the few lucky areas that received the spotty rain or customers with irrigation systems. Many lawns are recouping quickly with the abundance of rain this weekend. For the last month, Karen, Dave, and I have written articles on how the extended drought was impacting trees. The rain we just received helps but does not negate the impact of this summer's 'California-like weather' with sunny days, relatively low humidity, and lack of rain.

We just had a planning meeting with the Maryland Arborists Association and several of the arborists brought up that oaks continue to die in large numbers in 2023. Their customers are obviously upset and want to know why the trees are collapsing. It would be easy if this situation could be blamed on a biotic disease. In reality, mature old oaks are not doing well with the 2023 summer drought, and are dying from abiotic problems. They are losing water so rapidly from the foliage that many leaves have scorched and dropped over the last two months. One thing is guaranteed, your customers will quickly forget about this extended drought of 2023 and will continue to ask you why their oaks and other trees are dying.

Porcelain Berry – Is the Problem Growing?

By: Stanton Gill

During a meeting with Rockville Parks last week the following request came in from Jessica Corazza, City of Rockville – Parks and Facilities:

“Attached is the photo I showed you of the King Farm Stream Valley area, this is what we are observing all over the City. The porcelain berry has become very difficult for us to control here, in both wooded and landscape areas.

We were wondering if anyone else is experiencing this, or if this is something that is currently isolated in Rockville.”

Please let me know at sgill@umd.edu.



Large area covered by porcelain berry.

Photo: Jessica Corazza, City of Rockville Parks and Facilities

Spruce Spider Mite

By: Stanton Gill

Spruce spider mites have been very active in September. They injure the foliage of spruce, arborvitae, juniper, hemlock, pine, Douglas-fir, and occasionally other conifers. Dwarf Alberta spruce, *Picea glauca* 'Conica', is one of this pest's preferred host plants.

Horticulture oil at 1% gives a fair level of control. Females start laying eggs on needles in October. In early November, you can use a 3% oil on the eggs. Do not apply to blue spruce or Douglas fir. On blue spruce, it takes out the blue color on the needles since the blue is from a wax layer covering the needles. With Douglas firs we have seen phytotoxic damage with oil applications at the 3% rate.



Heavy stippling damage on hemlock caused by spruce spider mites.

Photo: Suzanne Klick, UME

Crapemyrtle Bark Scale

Sheena O'Donnell, UME, checked the crape myrtle plants and was still finding crawlers of crape myrtle bark scale this week at CMREC. When crawlers are active, you can apply Talus or Distance.

Magnolia Scale

Shane Wagoner, Bartlett Tree Experts, found magnolia scale with crawlers and a lady beetle larva feeding on the crawlers in Winchester, VA. Talus or Distance can be used at this time to control crawlers.



A white, waxy lady beetle larva is on this stem searching for magnolia scale crawlers.
Photo: Shane Wagoner, Bartlett Tree Experts

New Apple Cultivar Coming Out from Minnesota University

By: Stanton Gill

Well, my sister-in-law, Laurel, in Iowa, just notified me of a new apple release. The University of Minnesota, home of the Honeycrisp apple, just announced it is releasing a new apple cultivar that is a cross between Honeycrisp and Zestar!®. They describe it as a tropical fruit flavor party in your mouth. It will be sold under the name 'Kudos' and will be in the tree availability market within 3 years. This is the 29th apple cultivar the University of Minnesota has released.

I have been growing Zestar!® for the last 11 years, and it is a great early apple that ripens at the end of August and is a great apple into mid-September. The original Honeycrisp apples were developed and released from the University of Minnesota back in the 1960s. Honeycrisp continues to be one of the most popular apples on the market and we grow 3 different strains including Premier™ Honeycrisp (Early season Honeycrisp, Straight cultivar Honeycrisp, and Roseland Red™ Honeycrisp). The original Honeycrisp apple was a cross between a 'Macoun' apple and a 'Honeygold' apple with the work being done at the University of Minnesota. They are still working out which is the best understock on which to grow this new cultivar for best growth. We have 113 apple cultivars in our family orchard. Guess I will need to make room for one more.

Montgomery County Bans Gas-powered Leaf Blowers

In Montgomery County, MD, the sale of gas-powered leaf blowers will be illegal starting July 1, 2024 and their use will be illegal starting July 1, 2025. The law also applied to gas-powered leaf vacuums. A [WAMU-NPR article](#) is available online with more details on the new law.

MAC-ISA Meetings in Morgantown, West Virginia

By: Stanton Gill

At the MAC-ISA meetings on October 1-3 in Morgantown West Virginia. Kirk Floyd, Kdrone Services, and I will be presenting on Monday on our spray trials using drones for scale, spotted lanternfly, and work by Dave Clement on powdery mildew and needle cast using drones to apply systemic fungicides.

Florida Predatory Stink Bugs

Rebecca McWilliams, Maxalea, Inc., found predatory stink bug nymphs in a garden at CCBC Dundalk Campus on September 22. They are a generalist predator of soft-bodied insects. Nymphs are often found in clusters and attack larger prey as a group. This predator is also often found foraging on the bark of trees.



These Florida predatory stink bug nymphs will overwinter in the adult stage in sheltered locations.
Photo: Rebecca McWilliams, Maxalea, Inc.

Powdery Mildew

By: David Clement and Stanton Gill

This week, we initiated a trial to evaluate MilStop (Potassium bicarbonate) for prevention of powdery mildew. We are working with BioWorks Company on this trial. Three applications will be made over the next 3 weeks. We will let you know the impacts of these trials during the winter IPM conferences in various parts of the state.

Mushrooms

Mark Schlossberg, ProLawn Plus, Inc., found this "nice crop of mushrooms" this week. After last weekend's steady rain, look for mushrooms throughout area landscapes.



Many mushrooms are covering the ground under the shade of a small tree.
Photo: Mark Schlossberg, ProLawn Plus, Inc.

Native Pest of a Native Plant

By: Stanton Gill

Steve Clancy sent in photos of a bug attacking the native plant, yucca. Yucca is a native northward to the coastal lowlands and dry beach scrub of the coastal areas of the southeastern United States, along the Gulf of Mexico and South Atlantic States from coastal Texas to Maryland. In the Appalachian area, they call yucca the ghost plant because the long spear with white flowers looks ghostly.

We have a native pest that attacks this plant called the yucca bug, *Halticotoma valida*. The bugs can cause serious harm to their namesake host by using their piercing-sucking mouthparts to extract the essence of yucca. I have not seen this bug for years, since the yucca plant kind of went out of favor. Now it is back as a popular native plant.

Systemic insecticides such as Altus and dinotefuran control this bug. If you find this bug damaging yucca, please send me an email at Sgill@umd.edu and let me know where you saw it.



A heavy infestation of yucca bug on a yucca plant in a home landscape.
Photo: Steve Clancy



A close-up of a yucca bug.
Photo: Jim Baker, North Carolina State University, Bugwood.org

Indian Wax Scale

Greg Kenel, Creative Landscapes by Gregory, first noticed Indian wax scale in early July. He noted: "There were scales on multiple leaves of the holly with few on the stems at that time. There was very little sooty mold. The scale shows very little growth in size, but has proliferated by many times the number I first saw 3 months ago. My experience with wax scale has been that the numbers are fewer and their size larger by this time of year."

Look for this scale on holly, Japanese maple, winterberry, pyracantha, and camellia. Crawler activity starts in early June and goes into July in Maryland. At this time of year, you can apply a dinotefuran drench.



Indian wax scale covering a stem of Foster holly.
Photo: Greg Kenel, Creative Landscapes by Gregory

Pawpaws

By: Stanton Gill

Last week, we covered an emerging pest of pawpaws. Several people sent in emails alerting me to the pawpaw festival that is held every year in Snowden Lake, Albany, Ohio on Sept 15-17, 2023. You missed it for this year but you can put it on the calendar for 2024. Here is the information they sent to me this week: “The Ohio Pawpaw Festival is a fun-filled, educational community event celebrating one of America’s largest native tree fruits, the pawpaw (*Asimina triloba*). This all-weekend event highlights the rich history and future possibilities of the pawpaw through delectable food and beverages, and a full line-up of presentations and activities that cover pawpaw growing, cooking, genetics, medical use and other topics related to sustainability. Special events at the festival include competitions for the best and biggest pawpaw, a pawpaw cook-off, a best pawpaw-related work of art and the ever-popular pawpaw-eating contest.”

Cornell Cooperative Extension of Oswego County and Cornell Cooperative Extension Harvest NY, had scheduled a state-wide conference on pawpaw (*Asimina triloba*), at the historic Kallet Theater in Pulaski, NY last weekend, Sept 23 and 24. Unfortunately, the tropical storm, Ophelia, served up torrents of rain which canceled the event. A similar event was planned in York, PA last weekend. The rains flooded this one out, too.

Casebearer Larvae

Brandon Allison, Brightview, found the larvae of casebearers on the trunk of a red maple in Fulton. The larvae remove some bark and create a bag-like casing. They are basically harmless to the health of the tree.



Casebearer moth larvae on the trunk of a red maple



Spotted Lanternfly Reports

Cody McTaggart and Al Fowler, The Davey Tree Expert Company, found spotted lanternfly adults this week. Cody saw them in Ellicott City and Al found them in Chestertown. Pete Adams found them in Washington County.

Two spotted lanternfly adults in Washington County enjoying the view.
Photo: Pete Adams

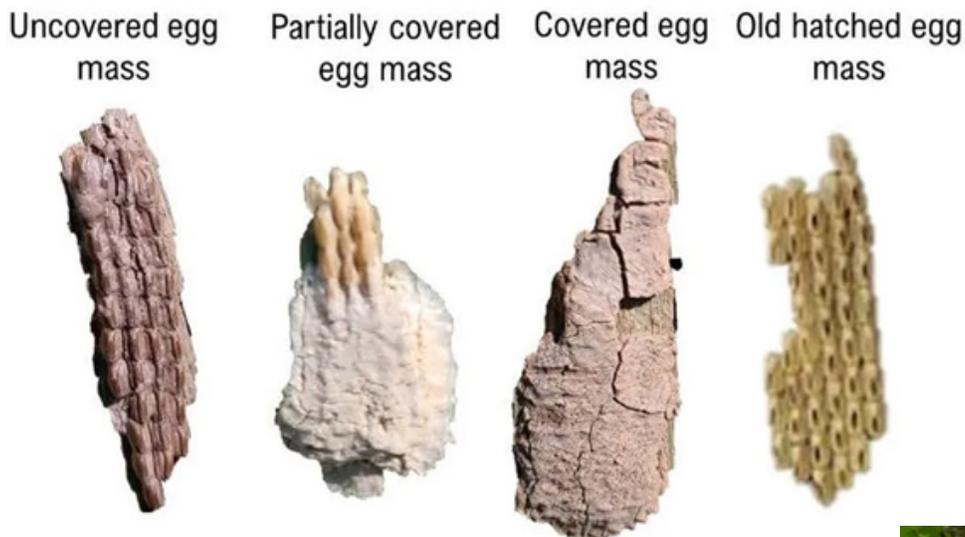
Spotted Lanternfly (SLF) Update

By: Paula Shrewsbury, UMD

SLF egg masses are being laid

We have had lots of reports of spotted lanternfly adult activity in many locations in Maryland and nearby states. In the last few weeks, I have found many adult females with expanded abdomens as indicated by the larger size of the abdomen and the noticeable yellow color between the segments on the abdomen. Mating has been happening and females are making eggs. This week, Mike Raupp (UMD), found the **first egg masses of spotted lanternfly in Columbia, MD.**

Egg masses are covered with a gray-brown substance, flat, and laid on many surfaces, most commonly trees but also structures, stone, wood, and other locations in the landscape and nursery. On trees, egg masses are usually laid on the underside of tree branches, where abundant numbers of egg masses can be found on numerous branches. SLF female adults will be active and laying eggs until the first hard frost (usually December) which should kill the adult SLF. In future reports we will discuss targeting the egg stage for SLF management.



Variations in spotted lanternfly egg masses including color (yellow, gray, brown) and their covering.
Photo: Heather Leach, Penn State Extension



Spotted lanternfly egg masses on a red maple in a residential landscape.
Photo: Josh Warner, Antietam Tree and Turf

Beneficial of the Week

By: Paula Shrewsbury

Funnel weaving spiders are abundant at this time of year!

Fall is the time of year we notice more webs from web-making spiders. With the cool temperatures, the morning dew collects on the strands of a spider's web highlighting their beauty and abundance. For about two weeks now, an orb-weaver black and yellow garden spider has made her home, a magnificent circular web, in front of my picture window. I wrote about the [black and yellow garden spider in the Oct 7, 2022 IPM Newsletter](#). The timing is appropriate with Halloween right around the corner.



P. M. Shrewsbury

Today I will discuss **funnel weaving spiders** which are particularly noticeable due

to the abundance of webs that occur nearby each other. I have seen hundreds of funnel webs, and their spiders, on a single planting of yews (see image). The common species of funnel weaving spider (also known as grass spiders) that make this type of web around here is *Agelenopsis pennsylvanica* (family: Agelenidae) known as the Pennsylvania grass spider.

Sheet webs with “funnels” made by *Agelenopsis* spiders are particularly noticeable when they pick up the morning dew.

Photo: P.M. Shrewsbury, UMD

Agelenopsis pennsylvanicus are about 9-17 mm (~0.4”-0.7”) in body length with females being larger than males. The abdomen is long and tapered and their coloration is a mottled pattern of black-tan-gray. *Agelenopsis* are found in a variety of habitats but mainly near the ground on grasses and foliage of other plants. At this time of year these spiders are thinking about mating. The males will often wander from their webs at night in search of females. You may see them “wondering” on buildings and occasionally inside a home. *Agelenopsis* live about 1 year. Eggs are laid in late summer and early fall following mating. A female can produce more than one egg sac which she attaches to a substrate such as under a rock, on a piece of old wood, or rolled up in a leaf. A single egg sac can contain 50-200 eggs. The females are good parents and guard their egg sacs until the onset of winter when they die. In the spring, hundreds of spiderlings emerge from the egg sacs.

Each web looks like a sheet of webbing that is about 20-25 cm (8-10”) in diameter and has a “funnel” weaved within its web (see image). It is in the opening of the funnel where you will see a *Agelenopsis* spider. You need to move slowly towards the web to catch the spider staking out the opening of the “funnel”. If you startle the funnel weaving spider, it very rapidly retreats down into the funnel ([see video by M. Raupp, UMD](#)). *Agelenopsis* spiders spin webs that are dense and non-sticky that allow potential prey to walk on the web and get close to the funnel opening. An *Agelenopsis* spider sits and waits in the funnel opening for an unsuspecting prey item to wander onto its web. In feeling the vibration on its web, *Agelenopsis* then pounces onto the prey pulling it down into its web to enjoy a tasty meal. *Agelenopsis* are opportunistic predators and

will eat any insect, spider, or other arthropod that wanders too close. Based on the number of funnel webs in a given landscape, imagine the number of prey items consumed, providing biological control services. Clients should be aware of the biological control service provided by funnel weaving spiders, and that they are not aggressive spiders and retreat when disturbed.



***Agelenopsis pennsylvanica* spiders sit at the funnel opening of their web waiting for an unsuspecting victim to come by where it then is pounced upon and consumed!**

Photo: P.M. Shrewsbury, UMD

Weed of the Week

By: Mark Townsend, UME-Frederick County

Virginia creeper, *Parthenocissus quinquefolia*, is a perennial plant, sometimes used as an ornamental, that has a vining growth habit. It can be found throughout the eastern United States in landscapes, fruit crops, and in fencerows. Virginia creeper will grow along the ground or on other objects including plants. Leaves occur in groups of usually five leaflets, but can vary from three to seven and are palmately compound (all originating from a common location of the stem; reddish in color). Leaflets can be up to five inches long, have a toothed margin and turn a maroon color in the fall. The apparent oily leaf coating and odd number of leaves can often give the false impression of poison ivy to a new onlooker. However, the old adage, “leaves of three, let it be; leaves of five, let it thrive” can be a helpful reminder.

The root structure is fibrous, and stems can root at nodes when they touch the ground. The flowers are small, pale green to white in color, with a blue-black colored fruit in late spring. The flowers will mature to a small purple hard berry that is about one quarter of an inch in diameter. The berries contain a toxic oxalic acid and have been known to cause health issues including death in humans. The berries are not toxic to birds and provide an important winter food source for many bird species.

The plant climbs by way of small disc pads, attaching to objects including masonry walls. These pads do not damage brick and block structures and will deteriorate from the surface over time if one severs the plant at the base. This plant may cause slight skin irritation to some.

Control of this weed can be obtained using glyphosate type products applied in the late summer or early fall, and other herbicides labeled for woody perennial weed control. In areas not near desired landscape plantings, good results can be obtained using products that contain 2,4-D products where they can be used safely. When found climbing on desired plant species, do not apply herbicides as a foliar spray to both the climbing vine and

the desired plant as they may be absorbed through the bark of the desired plant causing damage. Cut back and pull off the landscape planting. Careful application of a glyphosate product using a small brush can be used on the cut end of Virginia creeper.



Virginia creeper

Photos: Chuck Schuster, UME-Retired

Plant of the Week

By: Ginny Rosenkranz

Ilex opaca ‘Maryland Dwarf’ is a native American holly cultivar dwarf female that grows only 3 feet tall and up to 10 feet wide. Like all American hollies, ‘Maryland Dwarf’ prefers to grow in full sun to partial afternoon shade with acidic, moist but well drained soils. ‘Maryland Dwarf’ blooms in May with fragrant whitish-green flowers that mature to bright red berries in the fall which last through the winter. The birds prefer to enjoy the berries after they ferment in late winter. The 2-4-inch deep green leaves are thick and leathery in texture, with a toothed margin decorated with sharp spines. Leaves are evergreen, with the oldest leaves that are 2-4 years old turning yellow as they get shaded out. These plants are cold tolerant in USDA zones 5-9, and are tolerant of air pollution, clay soils and deer browsing, but not at all tolerant of poorly drained soils. ‘Maryland Dwarf’ is a cultivar bred by Mr. Charles Anderson of Owings Mills, Maryland who also bred *Ilex opaca* ‘Charlie’s Church’ which has a very heavy berry set and *Ilex cornuta* ‘Charlie’s China Doll’. Pests can include holly leafminer, scale, spider mites and whitefly. Diseases can include leaf rot, leaf spot, powdery mildew and tar spot. Abiotic problems can include chlorosis (high pH soils cause yellowing of the leaves), leaf drop and leaf scorch.



Ilex opaca ‘Maryland Dwarf’ in the landscape.
Photo: Ginny Rosenkranz, UME

Degree Days (as of September 27)

Abingdon (C1620)	3506
Annapolis Naval Academy (KNAK)	3817
Baltimore, MD (KBWI)	3860
College Park (KCGS)	3685
Dulles Airport (KIAD)	3752
Ft. Belvoir, VA (KDA)	3570
Frederick (KFDK)	3565
Gaithersburg (KGAI)	3391
Gambrils (F2488, near Bowie)	3622
Greater Cumberland Reg (KCBE)	3184
Perry Hall (C0608)	3400
Martinsburg, WV (KMRB)	2882
Natl Arboretum/Reagan Natl (KDCA)	4196
Salisbury/Ocean City (KSBY)	3802
St. Mary's City (Patuxent NRB KNHK)	4275
Westminster (KDMW)	3852

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 **2882 DD** (Martinsburg, WV) to **4275 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.

February 8, 2024

25th Anniversary - Manor View Farm & The Perennial Farm Education Seminar

Location: Valley Mansion, Coxkeysville MD

Speakers: John Stanley (Green Industry International Business Consultant), Vinnie Simone (Planting Fields Arboretum, NY), Janet Draper (Smithsonian Gardens) & Stanton Gill (UMD Extension)

Registration information available soon.

Position Available at the Home and Garden Information Center

UME-HGIC is hiring a Faculty Specialist for Entomology & IPM. A full job description and how to apply is available on the [UMD Jobs website](http://umd.edu/jobs).

Commercial Ornamental IPM Information

<http://extension.umd.edu/ipm>

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