

Commercial Horticulture

October 29, 2021

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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:

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) and David Clement (Extension Specialist)

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

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)

Bad Weather and A Shortage of Trees for Christmas

By: Stanton Gill

Last week I visited a Christmas tree grower in central Maryland. In 2020, many Maryland Christmas tree growers had record sales of Christmas trees and they had to buy in some supplemental trees from North Carolina and Pennsylvania. They made it through 2020, but many were sold out at the end of the season. This was great.

One Christmas tree grower said they have 900 available trees in their planting in Maryland but need another 500 – 600 trees to meet their demand. The grower called over 34 growers in North Carolina and several in Pennsylvania, and everyone says there is a shortage of Christmas trees. There are going to be higher prices with this shortage of trees.

What is going on?

In 2018 and 2019, we were deluged with heavy and regular rainfalls. In 2018, a new record was set from rainfall. Needle cast disease showed up on many conifers including the popular Douglas firs, which is one of the Christmas tree species that fetches a premium price. Spruce is another top seller and it is high susceptible to needle cast disease.

Dave Clement, Karen Rane, and I have visited several Maryland Christmas tree growers in 2019 and 2020 and many had firs that were heavily infected with needle cast. A combination of heavy disease pressure combined with a big demand for live Christmas trees has created a bit of a tree shortage situation for 2021.

Last of the Weekly IPM Reports for 2021

By: Stanton Gill

This report will be the last weekly IPM Alert for the 2021 season. I will continue to write short articles for you through November and this winter on a monthly basis until we return with our full team of IPM and Nutrient Management authors with the regular IPM Alerts in mid-March of 2022.

I will be speaking at the national Entomological Society meetings in Denver, Colorado this next week, presenting our drone field research projects we conducted in 2021. I will try to send out an abbreviated IPM Alert in the middle to end of November, before Thanksgiving. See you then.

Keep an eye out for the annual IPM report survey that will be sent out in November. We appreciate your feedback.

Interesting Idea of Using Banker Plants for Dealing with Spotted Lanternfly in a Nursery

By: Stanton Gill

A nursery sales manager in New Jersey sent in this novel way of using trap plants to deal with spotted lanternfly at his nursery. Here is what he sent in:

"Hey Stanton, just wanted to give you an update on SLF up here in New Jersey. We have found that SLF is just as crazy about *Phellodendron amurense* as they are *Ailanthus altissima*. There are a few *Phellodendron* seedlings scattered on the woods edge around our farm and they are absolutely loaded with SLF to the point that all of the understory under the trees are black with sooty mold. Because of the pressure we started getting from SLF at the farm starting last year we actually found a grower of *Ailanthus* and bought a bunch of liners from him to grow on in #65 cans to place around the perimeter of our farm as trap plants. We applied a bark application of Safari back in June when the adults were starting to move around and it has really worked wonders for us reducing the population of SLF in our hoop houses. There are literal mountains of dead SLF at the base of each of our trees we used as bait and very few adults actually cruising our 17 acre container nursery."



**A spotted lanternfly adult found in Parkton, north Baltimore County on October 13
Photo: Tom Woolfolk**

I looked up *Phellodendron amurense* and it is a species of tree in the family Rutaceae, commonly called the Amur cork tree. *P. amurense*, is a deciduous tree with a rounded, broad-spreading crown. It is noted for its attractive shape, bark and foliage. It is indigenous to moist soils in the valley of the Amur River, which serves as the boundary between Siberia and China. It is a major source of huáng bò, one of the 50 fundamental herbs used in traditional Chinese medicine. The Ainu people used this plant, called shikerebe-ni, as a painkiller.

Tyler Hagerty, University of Delaware, is investigating what trees are most attractive to spotted lanternfly other than ailanthus, which we already know is highly attractive to this pest. **If you are a nursery owner in the quarantine area of Maryland and want to try out this technique in 2022 or 2023, contact me at Sgill@umd.edu, and we will work with you in evaluating this method.**

In Maryland outside of Cecil and Harford Counties, if you see spotted lanternflies, please report them to MDA via [MD Spotted Lanternfly Online Survey](#).

Marigold Story Follow-up

By: Stanton Gill

I received several email commenting on the marigold story of last week. The best was one from Will Healy of Ball Company. Here is what he said:

“The Garland Marigolds is an interesting story. Burpee (a Ball company) had the first Garland type marigold (big head that lasts when not in water so it can be used in creating garlands). The [garland marigolds](#) are a really BIG deal in India to Vietnam. The markets in Thailand and India have large number of stands with these available for sale in bags and in necklaces or ropes. They are used in religious and other ceremonial events (weddings).

We stopped breeding these a long time ago and the breeding was continued by a couple of companies in Thailand and India. The leading breeder is Aga-Agro (Ball Partner in Thailand, <https://www.ballhort.com/Companies/AGAAgro/>). Very interesting company and people who run this company. Although they can use a number of different garden types for garlands, they just don't hold up like the garland breeding”.

Talk about niche market when MILLIONS of flowers are sold every day is an understatement! If there is an Hindu & Buddhist population, there might be a market.”

Cryptomeria Scale on Fir and Spruce

By: Stanton Gill

I am seeing an increase in incidences of cryptomeria scale in nurseries and Christmas tree operations in Maryland. This armored scale is found mainly on Fraser, Canaan, and balsam firs, cryptomeria, and occasionally hemlocks. The scale feeds on the undersides of the needles making detection difficult. The damage shows up on the upper surface of the foliage as yellow circles but can coalesce in larger patches of yellow foliage. Females deposit approximately 40 yellowish eggs beneath the cover before dying by late May or early June. Second instar immatures overwinter and the mature males and females occur in May of next year.



Look closely at host plants that have large yellow areas on needles for cryptomeria scale

Control: Since it is still warm enough in late October this year, you could squeeze in an application of Distance or Talus on the 2nd instars to prevent them from going to the next life stage. In mid-November, you could apply a 2 – 3% horticultural oil.

San Jose Scale

By: Stanton Gill

An email was sent on Wednesday of an apple with spots on the fruit. The spots are San Jose scale. Early in the year, I wrote articles about this armored scale that is increasing in numbers. With all of the planting of fruit trees during the Covid-19 outbreak, many infested trees were planted. In the second generation, the scale migrate out onto the fruit itself. As the female feeds on the fruit, it creates a ring of dying cells around the insect's cover. If someone eats the scale, they will be fine and will have consumed a little extra protein.

As the apple trees drop their foliage in mid-November, apply a 2 – 3% horticultural oil to try and reduce the populations. Next spring, watch our IPM alerts, and when crawlers are active in May, you can apply an insect growth regulator to bring this scale under control. The oil will reduce the population, but it really takes a timed insect growth regulator to knock this population down.



The second generation of San Jose scale migrate to the fruit
Photo: Chelsey MacBridge-Gill

Pine Bark Adelgid

By: Stanton Gill

Every couple of years we see outbreaks of pine bark adelgid on white pine, and 2021 looks like a good year for this insect. In most years, the multicolored Asian lady beetle keeps this insect down. Elaine Menegon, Good's Tree and Lawn Care, sent in a photo of a white pine with a fairly heavy infestation of pine bark adelgid. If you removed the white wax, you will find yellow to purple colored insects that resembles an aphid. Adelgids and aphids are closely related. In the spring, you will see nymphs with white wax feeding on branches and at the base of needles, but rarely in large numbers or clusters like you see in fall.

Control of white pine adelgid: For the least negative impact on beneficial predators that are present, use insecticidal soap or horticultural oil. Dormant oil applications can be made during the fall and early spring. Be sure to completely cover the trunk and branches to kill overwintering nymphs. Only apply oil when temperatures are above freezing.



When pine bark adelgid populations are high, trunks of trees can be almost covered with white wax
Photo: Elaine Menegon, Good's Tree and Lawn Care

Tree Decline Associated with Wood Decay and Root Rot Pathogens

David L. Clement

The fall and early winter are a good time to evaluate landscape shade trees that have reduced vigor for wood decay fungi. Many of these fungi will produce reproductive structures such as mushrooms and conks. Most of these fungal pathogens need adequate rainfall to produce reproductive structures. So dry fall weather can sometimes give false negative diagnoses. Also, be aware of old dried up mushrooms, or conks that may be weathered in appearance. Separating declining trees with fungal decay from those with more treatable problems such as soil compaction, or nutrition issues will help Green Industry professionals prioritize their landscape maintenance tasks.



Symptoms of landscape trees in decline associated with wood decay and root rot pathogens can range from very subtle symptoms to more dramatic uprooting, or stem failure during strong winds.

Also, be aware of extreme weather conditions such as extended drought and flooding that often compromise tree roots and allow pathogens to invade stressed trees. The early symptoms of tree decline from these pathogens include progressive canopy dieback, reduced seasonal growth, undersized leaves, pale-colored to chlorotic foliage, and early fall color. Other more obvious symptoms are open cavities at the base of the tree, dead limbs, or exposed roots with fungal fruiting structures, and trunk cracks. Many wood-decaying fungi invade trees through wounds on the roots or lower trunk. Additionally, they directly parasitize small feeder roots and gradually progress into larger roots until finally reaching the lower trunk. Once established many of these fungi decay the heartwood and sapwood causing structural integrity issues creating hazard trees.

Scouting from mid-summer through fall will often reveal potential pathogens. Lawn mowing may destroy fruiting bodies growing from nearby roots before they can mature and be properly identified. In addition, there are numerous beneficial mycorrhizal fungi that may produce annual fruiting bodies at the base of trees that may cause confusion.

Management

Early intervention is the only way to head off potential tree decline from wood decay pathogens. Minimizing mechanical wounds that serve as potential infection points are essential to limit the introduction of these fungi. Often these wounds are caused by lawnmowers and weed trimmers, and heavy equipment traffic. Maintaining a large mulch ring around the base of landscape trees can help protect them from basal wounding. Irrigate trees during extended dry weather and protect tree roots from soil compaction.

The presence of fruiting bodies from certain pathogens does not always indicate extensive decay is present, whereas others often signify extensive decay has taken place. Correct identification is crucial to management decisions. Pictures, or samples of fungi that are present can often help with identification. Fungicides are ineffective against wood-decaying fungi because the pathogens are inside the roots, or lower trunk, and are often in the heartwood, making it very difficult to contact. Hazard tree evaluations should be conducted to assess whether removal is the safe choice.

When mushrooms appear at the base of trees, or on tree trunks take a closer look to be sure they are not just in the mulch.

Photo: David Clement

Two-marked Treehoppers

Miri Talabac, UME-HGIC, identified an interesting looking residue on a *Cercis canadensis* trunk as caused by the egg laying activity of female two-marked treehoppers (*Enchenopa binotata*). Female two-marked treehoppers leave these white waxy plugs over the spots where they deposit their eggs. The white wax will break down over time.

Miri reported: "What caught my attention was how scale-like the white patches were in appearance, at least from a distance. Both the white-covered lesions and the bare lesions on the bark are sticky to the touch, and I did not find any identifiable insect underneath when I tried scraping away the white residue. I also used clear packing tape, pressed onto the bark, to try to pick-up crawlers that might have been on the surface, but this didn't capture any insects. There is a small vertical fissure in the bark under the white patches I scraped, where the cambium is discolored and dark brown. Given what I've read about this treehopper, this seems consistent with localized oviposition injury.

The tree is one which was part of a native sapling giveaway from Howard County to county residents, and was planted about one or two years ago. The residues were on the middle third of the trunk and major branch bases, and the tree had been covered with tulle earlier this year for the periodical cicada emergence. I only noticed these scale-like residues recently, so I don't know how long they've been present. The tree's foliage looks normal so far."



Photo: Miri Talabac, UME-HGIC



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Photo: Stephen Talabac

In the above photos, the white spots on the trunk of this redbud tree are wax "plugs" left by female two-marked treehoppers to cover where they lay eggs

Incredible Fig Growth in 2021

By: Stanton Gill

The last two winters have been mild compared to the polar vortex and polar express winter we experienced in the last decade. With these two relatively mild winters, I am getting reports from several people that their fig plantings have produced like crazy in 2021 and grown leaps and bounds. The Adams (Master Gardeners) sent this picture a fig they pruned back to 6 ft height in March. It rebounded with tremendous growth. They reported record harvest of figs over the last 6 weeks. I grow figs at our orchard in Westminster and saw similar results in 2021. Remember this year as a good fig growing year. It may not show up again for a while.



A lot of growth on figs this year
Photo: Pete Adams

Beneficial of the Week

By: Paula Shrewsbury

Orange and Black – Predators for Halloween!

Halloween is upon us and I am seeing lots of orange and black as I look around. Not just in decorations or clothes people are wearing but also in the insects that are active. In the last week or so I have noticed lots of **multi-colored Asian lady beetles (*Harmonia axyridis*) (Coccinellidae)** crawling around. It seems like the color patterns of the multi-colored Asian lady beetle were made for this time of year. Individual adults vary in coloration from orange-brown wings with no black spots to those with several black spots (see the images). Even though the multi-colored Asian lady beetles are actively feeding on insects and floral resources throughout the season, I am noticing them more now than I usually do. It is that time of year when insects that “hibernate” in protected locations for the winter invade our homes and become a nuisance pest. The multi-colored Asian lady beetle has a dual personality, a nuisance pest in the fall and a beneficial in the spring and summer. The [multi-colored Asian lady beetle finds its way into homes in the fall](#), where they aggregate sometimes by the hundreds or even thousands, in search of overwintering habitat. Some may even say they are “haunting” our homes! In the spring these lady beetles will find an escape route to continue life outdoors. It is outdoors where they become our friend providing us with a free service – biological control of many plant feeding insects. This lady beetle is a generalist predator that feeds as adults and larvae on many species of aphids, scales, psyllids and even pollen from plants.



Note the variation in color and pattern of the Multi-colored Asian lady beetle.

Photo: Bill Ree, Texas A&M University; Bugwood.org



Orange assassin bug female laying a cluster of eggs.

Photo: P.M. Shrewsbury, UMD

Orange assassin bug, *Pselliopus barberi*, (Reduviidae) is one of many predacious assassins in the insect world. Orange assassin bug is common in the eastern U.S. They are commonly found in the spring or fall on flowers or foliage. They overwinter as adults in sheltered locations (under bark, rotting wood, etc.). Adults are about ½” long. They are orange with striped black markings on their legs, antennae, and the outer edge of their abdomen. Most assassin bugs can be recognized by their elongate head and “neck”, and their long thin antennae and legs. Most importantly, both adults and nymphs have a long, dangerous looking proboscis (mouthpart) that they use to suck the life out of their prey - literally. Assassin bugs are very important predators of a diverse array of pest insects found feeding on ornamental plants and in other natural and managed plant systems. Most assassin bugs are [ambush predators and hang out on foliage and flowers in search of prey such as caterpillars](#), flies, beetles, aphids, hoppers, and more. [Click here to see a milkweed assassin bug nymph foraging](#). They

approach their prey slowly, quickly grab the prey with their front legs, and then impale the insect with its beak. Through its beak, the assassin bug injects digestive enzymes that liquefy the body tissues of the prey making it possible for the predator to suck up its newly captured food. Both the nymphs and adults are predacious. If you are fortunate enough to come across one of these assassin bugs, watch it carefully and you may see it “assassinate” its lunch.

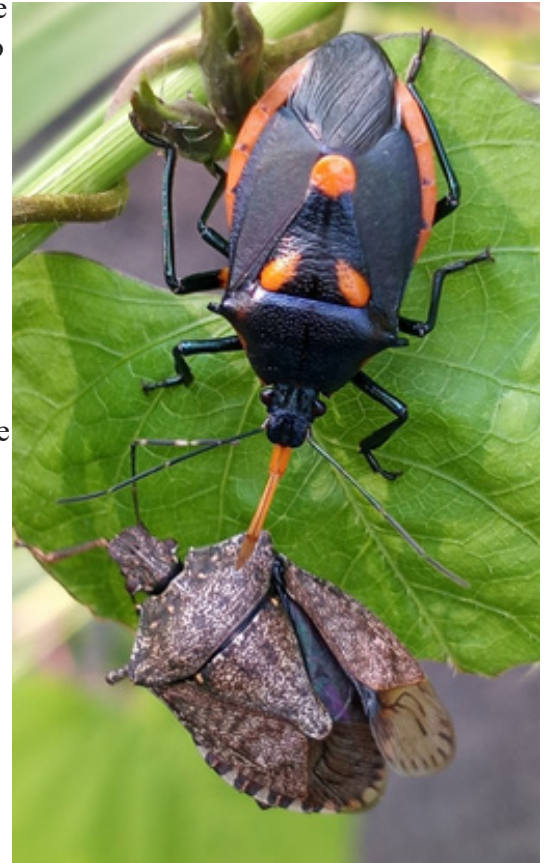
Another orange and black predator is the **Florida predatory stink bug, *Euthyrhynchus floridanus* (Pentatomidae)**. Historically, this predatory stink bug was known to occur in Florida and warmer southeastern states. In 2012, there were 2 confirmed sightings of *Euthyrhynchus* in MD. Since then there are numerous reports of *Euthyrhynchus* in MD.

Euthyrhynchus is likely expanding its range, a consequence of global warming that has been documented for multiple insect species. *Euthyrhynchus* is a predatory stink bug that is known to feed on a diverse range of soft-bodied prey items such as caterpillars, beetle larvae, plant hoppers and other stink bugs, many of which are pest insects in our ornamental systems. They are often found foraging on the bark of trees. Adult *Euthyrhynchus* have the typical stink bug or shield shape to their bodies and are about 12-17 mm in length. The bodies are black with 3 orange-red marks on their pronotum (the triangular section between the wings of the bug). Early instar nymphs are red in color, and mid-late instar nymphs are red and black.

Keep your eyes open for the many kinds of orange and black, and have a fun and spooky Halloween!



**An orange assassin bug with its leafhopper prey. Go biological control!
Photo: M.J.Raupp, UMD**



Florida predatory stink bug (top) with its beak impaled into a brown marmorated stink bug. (image by Wayne Longbottom, MD Biodiversity Project)

Weed of the Week

By: Chuck Schuster

While the current weed of the week is found most often in our forest areas or even in forest fringe areas, it was noted recently in a landscape. Greenbrier, *Smilax spp*, is a difficult to control woody weed of landscapes, nurseries, and forests. This plant is found throughout the United States and is a native. Greenbrier has an extensive root system made up of rhizomes and a stem with spines. It is a dioecious plant, meaning that there are male and female plants. The females bear fruit that ranges in color from a deep black, blue, and red when

ripe. Birds love this plant and thus help spread it. It is an important plant in the balance of the ecosystem, but as a climbing vine can create havoc in a landscape or nursery setting. This plant has the ability to grow upright to heights of 5 feet. Leaves are heart or oval in shape, can grow to five inches long, and are leathery to the touch. The tendrils are modified stems that will start green and pliable but as they wrap around a branch or twig of a nearby woody plant, they mature and harden. Tendrils help support the climbing growth habit, which is what makes this plant useful for wildlife habitat. Seeds can remain viable for several years.

Chemical control can be a challenge as they have an extensive root system, which can regenerate new vines, and the waxy foliage resists the uptake of herbicides. Control of greenbrier is best done as early after emergence as possible. Remove mechanically, taking all the root system. If the plant develops a dense root system, mechanical methods are less than satisfactory. One useful method of control involves cutting the plant and allowing the new young tender shoots to regrow, then applying post emergent products. Post emergent herbicides labeled for greenbrier are Campaign, a mixture of 2, 4D and glyphosate, and Finale (glufosinate). Use caution as 2,4D can be a problem in landscape settings. Do not apply either of these products to greenbrier growing around stems, trunks, or branches of desirable landscape plant materials. If necessary, cut the vine of greenbrier as close to the ground as possible, and immediately apply concentrated solution of glyphosate to the cut stem. Use a 41% concentration when possible.



Greenbrier vine growing up a fence
Photo courtesy of University of Georgia College of Agricultural and Environmental Sciences

Plant of the Week

By: Ginny Rosenkranz

Abies koreana 'Horstmann's Silberlocke' or 'Horstmann's Silberlocke' Korean fir is an evergreen conifer that grows in a compact pyramid. The plants prefer to grow in slightly acidic, consistently moist, rich, well-drained soils. Like most firs, 'Horstmann's Silberlocke' Korean Fir grows best in cool locations in full sun and afternoon shade. This fir does not like urban air pollution, wet soils, or heat and high humidity, preferring the cooler countryside in the north and western Maryland. The branches are



densely packed with shiny green, broad, short recurved needles that are frosted silver on the underside. Plants grow slowly the first 10 years, growing up to 8 feet, but over time they can reach 20-30 feet tall and 18-20 feet wide. This fir will produce purple 3-inch cones that grow upright on the top of the branches. Cold hardy in USDA zones 5-7, this fir can be planted as an accent plant or as a part of a screen. Although there are no serious pests, they can have occasional pests that include aphids, balsam woolly adelgids, bagworms, bark beetles, and scale and diseases include root rot, needle rust and twig blight.

Photos of *Abies koreana* 'Horstmann's Silberlocke' by Ginny Rosenkranz.

Degree Days (as of October 27)

| | |
|-------------------------------------|------|
| Aberdeen (KAPG) | 3772 |
| Annapolis Naval Academy (KNAK) | 4368 |
| Baltimore, MD (KBWI) | 4448 |
| Bowie, MD | 4422 |
| College Park (KCGS) | 4057 |
| Dulles Airport (KIAD) | 4191 |
| Ft. Belvoir, VA (KDA) | 4245 |
| Frederick (KFDK) | 4039 |
| Gaithersburg (KGAI) | 3990 |
| Greater Cumberland Reg (KCBE) | 3710 |
| Martinsburg, WV (KMRB) | 3686 |
| Natl Arboretum/Reagan Natl (KDCA) | 4788 |
| Salisbury/Ocean City (KSBY) | 4364 |
| St. Mary's City (Patuxent NRB KNHK) | 4676 |
| Westminster (KDMW) | 4499 |

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

Montgomery College Landscape Technology Program-Winter Break Online Class!

LNTP 190 Pesticide Use and Safety* (CRN 60166)

Prepare for the pesticide application certification exam through a thorough understanding of the principles of pest control, including pesticide labeling, state and county regulations and proper handling. 2 semester hours. Class meets all online and runs from 12/21/21 to 01/06/22. Meets Tuesdays and Thursdays from 9:00 - 2:00 p.m.

Students can take this class for credit or audit

*LNTP 190 and other select courses in the Program, have been approved by the MD Department of Agriculture to prepare Greens Industry professionals for pesticide application certification in Category III.

For further information about the program or courses, contact Stephen Dubik (240) 567-7803 steve.dubik@montgomerycollege.edu or Chuck Schuster Charles.Schuster@montgomerycollege.edu

- In-county tuition rates available for Business/Industry employees
- Web registration: www.montgomerycollege.edu

Register Your Business for Natural Area Management Services Directory

The University of Maryland Extension (UME) is offering green industry businesses who offer Natural Area Management Services (NAMS) the opportunity to be included in a new web directory posted on our website at www.extension.umd.edu/woodland. The Woods In Your Backyard program sponsored by UME has educated thousands of small acreage woodland owners since 2006 about how to create and enhance natural areas on their property. However, few service providers are available to provide the land care services for those landowners seeking professional assistance. Owners of small acreage properties, typically defined as those with 1-9 acres, make up 85% of the woodland owners in Maryland. Green industry businesses include landscape contractors, landscape architect companies, arborists, foresters, and other related businesses. Land care practices considered as natural area management services include invasive plant control, tree planting, forest health improvement, wildlife habitat, trail constructions, as well as portable sawmill services and firewood.

Why Should I Be Listed In This Directory? NAMS provide an opportunity to expand services to existing small acreage clients and to develop new clients. Many of the practices can be done in the off-season and provide income streams not previously available. This is a new area and the actual demand for these services is still unknown. The directory will be provided to thousands of small acreage owners who have participated in Woods In Your Backyard educational programs. To submit your company's information, please visit https://go.umd.edu/NAMS_directory.

How Can I Learn More About NAMS and the Land Care Practices Included? The original The Woods In Your Backyard guide was published in 2006 to help landowners learn how to develop sustainable outcomes for their properties. However, many of the land care practices suggested are difficult for landowners to implement, which encouraged the need for training service providers. The Woods In Your Backyard Partnership developed a training program targeted to interested green industry professionals on NAMS in 2020-21. It included the Woodland Health Practices Handbook, that provides detailed instruction on clientele and land care practices and the Woodland Health Assessment Checklist that providers can use with clientele to help identify areas of concern regarding forest health and appropriate management actions.

How Can I Get Copies of These Publications? They are available at a reasonable cost at the links below:

- The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around Your Home <https://extension.psu.edu/woods-in-your-backyard>
- Woodland Health Practices Handbook: A Practitioner's Guide for Creating, Enhancing, and Maintaining Natural Areas. <https://extension.psu.edu/new-woodland-health-practices-handbook-available>
- The Woodland Health Assessment Checklist is available as a free download: <https://extension.umd.edu/resource/woodland-health-assessment-checklist-management-actions>

The NAMS training program included two webinars series targeted to green industry professionals: one in fall, 2020 and another in spring, 2021. All of the webinars are available free of charge for viewing at: <https://extension.umd.edu/resource/natural-area-management-services-webinar-series>.

What is the Woods In Your Backyard Partnership? The partnership is composed of university extension organizations from Maryland, Pennsylvania, and Virginia, Alliance for the Chesapeake Bay, and Virginia Dept. of Forestry. The Partnership's activities are supported by other state forestry agencies and green industry associations and organizations.

To register for the Directory, please go to https://go.umd.edu/NAMS_directory and fill out the online form. Each submission will be reviewed before added to the directory. If you have any questions, please contact Jonathan Kays, jkays@umd.edu or 301-432-2767 x323.

**Fall 2021 Advanced Nursery/Greenhouse/Controlled Environment Nutrient Applicator
Continuing Education
Tuesday, November 16th**

WHO SHOULD ATTEND?

This is an advanced session for nursery growers who need Applicator Voucher Credits (necessary for 10+ acre nurseries that do not have an in-house certified Nutrient Consultant or Operator) or to those that need nutrient management credits to maintain Consultant or Operator (FTC) certification. Attendance at this workshop awards 3 continuing education hours for Nutrient Applicator Voucher renewal or Maryland Nutrient Management Certification. The program will be from 9:00 AM to 12:00 PM at the University of MD, Wye Research and Education Center

Subjects: Managing Water Content in Substrates, Controlled Release Fertilizer Use, and Managing pH with Lime: Understanding Quality and Quantity

COST & REGISTRATION

The program is free, but advanced registration is required. To register, click on this Eventbrite registration [link](#). For more information contact **Andrew Ristvey**, 410-827-8056 X113, aristvey@umd.edu.

For more information about Maryland's Nutrient Management Law, follow the Maryland Department of Agriculture Nutrient Management Program link on the Web at www.mda.state.md or call 410-841-5959.

Conferences

November 9, 2021

Operator Certification (FTC) for Writing Nursery Nutrient Management Plans for Nursery, Greenhouses and Controlled Environments

Location: Wye Research and Education Center, 124 Wye Narrows Drive, Queenstown, MD

[Eventbrite registration](#)

December 3, 2021

Integrated Pest Management Conference (details will be posted when available)

Location: Carroll Community College, Westminster, MD

December 9, 2021

Turf Nutrient Management Program (half day)

Location: Carroll Community College, Westminster, MD

December 16, 2021

Biological Control Conference

Location: Maritime Institute, Linthicum Heights, MD

2022 Advanced Landscape IPM PHC Short Course – Registration is open!

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). Coordinators: Drs.

Paula Shrewsbury and Mike Raupp, Dept. of Entomology, Univ. of MD

Lecture (virtual) Dates: Tuesday, Wednesday, Thursday; January 4, 5 and 6 AND January 11, 12, and 13

Lab (in-person) dates: Tuesday and Wednesday January 18 and 19

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

Questions contact: Amy Yaich, 301-405-3911, umdentomology@umd.edu

January 5 - 7, 2022

[MANTS](#)

Location: Baltimore Convention Center

January 21, 2022

FALCAN Pest Management Conference (currently in person)

Location: Frederick Community College, Frederick, MD

*Snow date is March 11, 2022

LCA Pesticide & Fertilizer Recertification (Virtual Program, February 2022)

The Pesticide & Fertilizer Recertification will return in 2022 with great speakers and new topics.

February 17 and 18, 2022

Chesapeake Green Horticulture Symposium

Location: Maritime Institute, Linthicum Heights, MD

March 15 and 16, 2021

MAA Pest Conference

Location: Turf Valley, Ellicott City, MD

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, Extension 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

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