UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **September 20, 2019**

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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 sklick@umd.edu

Coordinator Weekly IPM Report:
Stanton Gill, Extension Specialist, IPM and Entomlogy 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 (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)

Camphor Beetles (*Cnestus mutilatus*) in Sassafras

By: Stanton Gill

Heather Zindash, IPM Scout, brought in a sample of sassafras to our IPM diagnostic session on Wednesday. I found pupae and adults of camphor beetles in the sample. This ambrosia beetle has been very active in the south and we picked up the first samples in Washington D.C. two years ago. Last year, we received a sample with this beetle in a landscape setting. This damaged sassafras that Heather brought in was from a landscape in the Rockville area.

Camphor shot borers are active in Maryland this week
Photo: Doug Stone, Mississippi State University, Bugwood.org

Problems With Oak Trees

By: Stanton Gill

Thank you to all who responded about the problems on oak trees. I have pulled parts of some of the emails I received in the last 4 days. I stopped with Wednesday morning since I was getting so many emails on this subject. If I left your report out, it is because I was overwhelmed with the response. As in reports we have put out since 2018, we think the super saturated soils resulted in death of roots of a lot of trees. White oak is one of the most impacted species reported so far.

From Craig Greco: I live in central Loudoun county and there are grouping of white and some large red oaks suddenly dying or died out incredibly fast. Common factors are along a slope with water (stream, swamp, etc) within the critical root zone of the trees. Not adequate drainage. 2017 fall was very wet if I recall. It's a shame, the larger the tree, the faster it died.

From Todd McCreight: We lost a 18" dbh white oak in Rockville, MD last month, with signs of ambrosia beetle "sawdust" and frass. Diagnosed as ambrosia beetle damage by our Barlett technician. The tree had been suffering progressive death of leaf canopy over the past year, starting at the top, but I didn't have any idea what could be causing it. I'm now seeing a number of oaks (at least three) in our suburban neighborhood that appear to be dying (mostly brown leaves, especially in the crowns), some with evidence of "sawdust" and frass at their base. Our neighborhood has generally well drained soil. Canopy cover is at least 50%.

From Mark Kieffer: I'm a Fairfax County Master Gardener (Adria Bordas is our extension agent) and receive your weekly newsletter (very helpful!). I read about dying White Oaks in the 13 September Nursery IPM. They are not on my lot but while walking the dog I noticed two very large white oaks dying on a residential lot on Westmorland Drive in Falls Church, near the intersection with Fisher in the Falls Church area of Fairfax County.

From Paula C Goldberg: I am the Tree Supervisor for the Village of Martins Additions and the next door neighbor to Chevy Chase residents who had two old white oaks die very suddenly over the past few weeks. The trees are going to be taken down tomorrow. The property itself is stable, but there was a significant construction of a new home that took place on higher ground behind them about 5+ years ago. The new construction negatively impacted the storm water flow on my neighbors' property and my property, as we live in a virtual "bowl" at the easternmost part of Bradley Lane. After consulting with an arborist for _____Trees about root rot issues with an old yew and American holly in my yard, he commented on this sad turn-of-events for white oaks as we unknowingly watched the very rapid demise of these treasured trees.

The soil in the area of the dead White Oaks may be compacted. It certainly is in my yard. In an area close to one of the oaks, we failed a perc test prior to the installment of a conservation garden. A few years ago, I had the soil formally tested on our property and it was acidic, though not significantly. The oaks trees are located in a wet area and seemed to take the hardest hit last year when it virtually rained from January through July. They were treated for root rot by ---------- Tree Service.

From Lewis Bloch, Consulting arborist with 40 years of experience: I have seen quite a few in Takoma Park and other areas that have completely turned brown and have concerns as the leaves stay on the tree rather than drop. I also suspect drainage problems. However, and I am not a scientist, but from the ground, with binoculars and a 10 time zoom camera, the twigs and buds appear viable. I would like some feedback from others including maybe some who have actually climbed into the canopy for further inspections, are these trees actually dead???

From Bobbie Levine, Excel Tree Experts: We have the National Arboretum contract. Many dead white oaks.

From Bryan Lilly, professional arborist: Just thought that I would touch base about white oak deaths that was mentioned in the weekly IPM report. I have a property that I work at in Middleburg that has 6-8 large (>36" dbh) white oaks that have died in the past 3-4 weeks. I attributed the deaths to the overly saturated soils followed by the dry conditions that we've had lately. Most of the trees are growing in an area that has fairly compacted soils with low organic matter. Let me know if there is any additional info that you need.

From Ken Shumaker: We have three Wye oaks planted as bare root seedlings in 1996. They have grown and prospered since that time. All three trees were pruned aggressively in the winter of 2018-2019. I have not fertilized any of the trees and they have never been sprayed. They are mulched in a 10-foot diameter cycle with un-dyed hardwood mulch.

The 51 acre property was originally part of a farm and the soil is pretty good. I have not done a soil analysis for many years but there was nothing notable in the soil analysis at that time. This Spring (2019) two of the Wye oaks leafed out and are healthy. The third tree made a feeble attempt to leaf out but soon dropped all the tiny leaves and looks totally dead. The pictures below were taken on the same day in June 2019.

Defoliated white oak in September 2019
Photo: Ken Shumaker

But the BIG mystery is what suddenly took out this single beautiful 23 year old white oak specimen tree. Of all the trees we have planted, this is probably the last one I would want to lose. I don't see any evidence of insects or vandalism.

From: Dick Franklin: We are losing many white and others, all in a rural setting of woods in Beallsville Md. it started about 4 years ago but this year it looks like about 8 trees have died. It looks like they are very close to each other so could be from root grafts.

From Scott Brinitzer PLA, ASLA: We are seeing huge stands of oaks die in Arlington, VA. The trees are usually in clusters, either trees next to one another, or separated but clustered in certain neighborhoods.The trees are all large old oaks. Trees are not suffering die back; the entire tree dies almost overnight. Many of the areas impacted on are 'high ground'; neighborhoods with steeply sloping terrain. The trees tend to be on the top of the hill, although I have seen a few in low spots, in ravines leading to stream beds.

Our area of central Arlington has missed out on many rainstorms over the past 2 months. Storms have passed to the north and south since the massive flooding of July 8th. Only older oaks are impacted. Red oaks are showing signs of leaf scorch. Those not watered during the summer are stressed. I cannot tell you how many oaks are dying, but it is not an insignificant number.Thank you for covering this issue; many people are alarmed.

From Tolbert Feather, Feather and Associates: Doug Sievers the arborist for WSSC and I were discussing this situation this spring. He said he had a mature silver maple in his front yard 40" or more in diameter that suddenly died the fall before. Doug had the same insight that the record rains of 2016-2017 has changed the soil moisture killing roots and advantaging soil borne fungi and water borne fungi. I think it makes sense. I have many street trees of all types and sizes that have died for no reason the past 6 months. Especially when we had the second heat waved last month. In the Town of Chevy Chase Tulip Poplar 16" on flat ground, Elm 20" in a ravine red oak 40" between the street and a house that died. Several white oaks 30" or more in private yards either on flat ground or low areas.

Dragonfly Swarms

By: Stanton Gill

I mentioned the dragonfly swarms in the report last week and received the following responses this week:

From Laura Matherly: I know this is a bit out of the area, but we were visiting family in the mountains near Beckley, WV this weekend and experienced one of the swarms on Saturday. They were low flying over a large garden area, and there is a large pond nearby. We thought it was odd, but didn't think much more about it until I read the weekly report this morning. This swarm didn't darken the sky, but it was plentiful and hovered low so that we joked about catching them and making a pie.

From Lincoln Cruz: I wanted to chime in and say that I have noticed an increased number of dragonflies down here in Albemarle county, VA. Multiple people have commented about this in our area, and my wife and I were talking about it just last night. Seems to be a pretty interesting phenomenon to say the least.

From Mary Reisch: Up here in the Catoctin Mountains, the dragonflies are an annual event at this time of the year. They fly in the fields in the late afternoon sun. No, they don't darken the skies, but they arrive by the thousands. They seem to be around for a couple of weeks, but perhaps there are different migrations. Today, I'm seeing the common green darners. I love standing in the middle and watching them.

From Scott Geasey, Frederick, MD: Per your request in the Weekly IPM Report, I also noticed a dragonfly swarm. It was actually at my home in Myersville, Maryland last weekend over two days, September 7th and 8th. We don't have any large, open water nearby so I thought it was especially unusual to see more than the occasional one or two passing-by. Both afternoons there were enough dragonflies buzzing around to notice them over our yard and hayfield in front of the house. Most seemed to be flying in a circular pattern at various elevations. That was the only instance I noticed them but it was also one of the few chances I've been home and outside for any length of time recently. Nowhere near enough to "black out the sky" but over a two or three acre field they must have been in the thousands.

From Lauren Hubbard: I just read the IPM report and have also noticed swarming dragonflies over my ~ 1 acre pasture area, this is directly adjacent to a lawn on one side and wooded parkland on the other, they tend to stay over the pasture with the tall grass. I'd say maybe between 30-100 at any one time. They mostly stay low, less than 20' from the grass. I consider this to be a fantastic natural mosquito control!

From Jane Smith: We saw hundreds of dragonflies from 4th floor ocean front balcony for 2 weeks in mid September, 2018 on Amelia Island, FL. The wind was generally westerly so we thought they may have followed insects blown in from the marshes. It was an extraordinary sight.

From Barbara Fakoury, Fairfax County certified Master Gardener: About 10 days ago I had dragonflies swarming in my Fairfax, Virginia front yard. I don't have a dragonfly pond or any other reason to have them. It was really unusual.

Correction from September 6, 2019 IPM Report

Gaye Williams, MDA, noted that the mating flies in the picture listed as snipe flies in the September 6th IPM report are march flies (Bibionidae, *Plecia nearctica*), a southern species which has both spring and fall flights.

Out of Season Flowering

Last week, we reported that *Cercis* was blooming out of season. A few others have noted plants blooming now out of season.

From Barbara Fakoury, Fairfax County certified Master Gardener: I planted a hedge of 20 skip laurels (made from cuttings - about 3-4' high) and a couple weeks ago, I noticed that three of them were blooming! So weird.

From Linda Barker, Halcyon: Here are *Syringa vulgaris* in sporadic bloom. I have never, ever seen this before. However, these flowers made local hummingbirds happy—as they provide the pollen that the Hummers usually find in Spring. I hope this doesn't confuse them!

***Syringa vulgaris* is one of the plants blooming out of season this fall**
Photo: Linda Barker, Halcyon

Brown Marmorated Stink Bugs

Marie Rojas, IPM Scout, reported that brown marmorated stink bugs started to congregate on her house in Montgomery County on September 15.

Bagworms

Bagworms are finished up their feeding activity several weeks ago. Males are emerging from the bags in search of females with which to mate. Females are wingless and remain in the bag. They die after laying eggs.

Males are emerging from the bags in search of females with which to mate
Photo: Tyler Mathis, Bartlett Tree Experts

Giant Swallowtail

Nancy Woods, McCrillis Gardens found this giant swallowtail butterfly, *Papilio cresphontes*, at McCrillis sipping from lantana flowers. She thinks it is a female, whiter, and she saw another yellower one that she thought was a male. On the marylandbiodiversity.com website, giant swallowtail is listed as uncommon in Maryland overall, but most common in Montgomery and Frederick counties.

This giant swallowtail butterfly was seen at McCrillis Gardens in Montgomery Count last week
Photo: Nancy Woods, McCrillis Gardens

Request for Rust Infected Yellow Nutsedge Plants

D.L. Clement

Yellow nutsedge, *Cyperus esculentus*, is a very difficult to control weed worldwide despite several chemical management options. So, I'm requesting help in finding yellow nutsedge populations that are infected with a host specific rust fungus, *Puccinia canaliculata*, (see photograph). A collection of some infected leaves will be used in researching the pathogen's effectiveness with organic weed management. I would appreciate any sightings or collections that you could send my way at clement@umd.edu.

Rust infection on yellow nutsedge
Photograph: Howard Schwartz, Colorado State University

Grub Damage in Turf

Mark Schlossberg, ProLawn Plus, Inc., found grub damage in turf at a site in Reisterstown. If you are making any treatments, now would be the time to apply. If using a product such as Mach II, an insect growth regulator, be sure to water it in since it has been so dry.

Grub damage is showing up in turf areas
Photo: Mark Schlossberg, ProLawn Plus, Inc.

Spotted Lanternfly

Elaine Menegon, Good's Tree and Lawn Care, found active spotted lanternfly on a property in Lancaster, PA on September 19. She noted that the groundcover under the walnuts and hackberries was coated with honeydew and sooty mold.

If you observe any egg masses or insects which you suspect are spotted lanternfly, please try to collect them, and inform the Maryland Department of Agriculture at (410) 841-5920 or DontBug.MD@maryland.gov as soon as possible.
Photo: Elaine Menegon, Good's Tree and Lawn Care

Praying Mantids

In response to the article on praying mantids, Treble Herb sent in this article in which a praying mantis is shown to be a fairly advanced predator. It also mentions that they do prey upon hummingbirds and other songbirds besides feasting on insects. Fair enough. They still are not as destructive to birds as cats. Here is the online article: https://www.nytimes.com/2017/09/22/science/praying-mantis-eating-birds.html

Beneficial of the Week

By: Paula Shrewsbury

Minute Pirate Bugs are abundant in flowers

Minute pirate bugs are predaceous true bugs (*Orius tristicolor*; order Hemiptera; family Anthocoridae). This past week I was out "hunting" for insects and plant damage with my IPM class (a class full of great and enthusiastic students). UMD has created a magnificent Pollinator Garden that was just buzzing (literally) with not only pollinators but also natural enemies (and a few herbivores). We were examining flower heads of various flower species for thrips or other insects. I was excited when we found adult minute pirate bugs in the flower heads of Jerusalem artichoke (*Helianthus tuberosus*), and even more enthusiastic when we found several flowers with pirate bugs!

This adult minute pirate bug is in the head of a flower searching for prey and/ or feeding on pollen. Note this is a close up shot.
Photo: M.J. Raupp, UMD

Minute pirate bugs have needle-like piercing-sucking mouthparts that they impale into their prey. They then suck out the prey's insides, ultimately killing it. Adult pirate bugs are quite small (< 1/8"), oval, and black with white markings at the base and ends of the wings (see image). Minute pirate bugs undergo incomplete metamorphosis so nymphs and adults usually occur in the same location / plant and both stages are predacious and feed on similar prey items. Nymphs and adults are similar

in shape but nymphs are usually yellowish-orange with red eyes (see image). Minute pirate bugs overwinter as adults and begin activity early in the season. Tiny eggs are laid into plant material and it takes about 3 weeks to develop from egg to adult. There are multiple generations of minute pirate bugs per year and they remain active until day length becomes short later in the season. Another common and related predatory bug is the insidious flower bug, *Orius insidiosus*. Species of *Orius* are found in diverse habitats including landscape and nursery ornamentals, greenhouses, and agricultural crops (corn, cotton, peanuts, alfalfa, strawberries, and more). It has been noted that when a pirate bug lands on a person they may "probe", or some people say "bite", you to figure out what they are on (ex. plant of prey, or neither).

Minute pirate bugs are generalist predators that feed as adults and nymphs on a wide range of prey items. They are commonly found in association with thrips, spider mites, aphids, small caterpillars, psyllids, leafhopper nymphs, whiteflies, chinch bugs (in turf), and insect eggs of many species. One minute pirate bug can consume (and kill) about 30 spider mites in one day. Pirate bugs are also omnivorous in that they feed on pollen from many flowering plant species and plant juices when prey is not available. I frequently see minute pirate bugs on marigolds feeding on pollen and in roses feeding on thrips. As I mentioned they were also abundant in Jerusalem artichoke. This suggests planting marigolds near rose beds, and integrating Jerusalem artichoke into the beds may help to encourage predatory pirate bugs and suppress plant-feeding thrips. This goes along with research based information that shows increasing plant diversity, especially plants that flower, can enhance natural enemies. Some *Orius* species are commercially available and used in greenhouse and conservatory biological control programs to control thrips and other common pests.

An adult *Orius* bug with its piercing-sucking mouthpart inserted into what used to be a whitefly nymph. Photo from http://www.ars.usda.gov; by Jack Dykinga

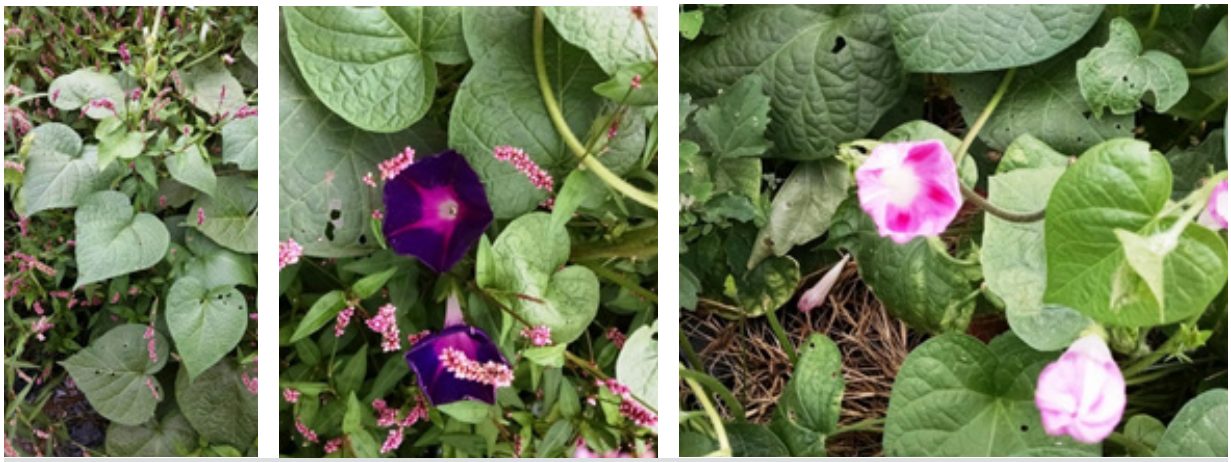
A minute pirate bug nymph feeding on an aphid. Note the piercing-sucking mouthpart inserted into the aphid as it feeds. Also note the wing buds (not fully developed wings) on the abdomen of the bug.
Photo from http://extension.entm.purdue.edu/

Weed of the Week

By: Chuck Schuster

Tall morning glory*, Ipomoea purpurea*, is visible now in many landscapes. This member of the morning glory family, native to Central America, is a trailing and climbing vine and an annual. It can climb to heights exceeding six feet. It has heart-shaped leaves that are alternate, and older leaves will overlap at the base. Found throughout the Eastern portion of the United States, it is often located in nurseries, landscapes, and noncrop areas. Once established, it becomes difficult to control. Leaves are alternate on the stem, with hairs that lay flat. The leaves occur on a petiole and can be several inches across. The stem is capable of climbing easily. The flowers will be white to purple, usually occurring in groups of three. They are large, being from 1.75 to 3.5 inches in length with sepals at the base. Seeds are a dark brown to black in color and are found in a dark capsule which will have four to six individual seeds. Seeds can be viable for several years in the soil. It reproduces by seed; one plant can produce up to 26,000 seeds. Seeds can be buried to 4 inches and will germinate. It is similar to ivyleaf morning glory, but with leaves that are always heart-shaped and never lobed.

Cultural control starts with a mulched landscape. Landscape fabric below the mulch is very useful. Early season pulling can work well. Remember that this plant can have seeds placed deep in the soil and they will or can still germinate. Weed barrier is useful. Chemical control of tall morning glory in open areas can be obtained using post emergent selective materials that contain 2, 4D or dicamba (Banvel D), and glyphosate products. Use extreme caution with these products as movement post application is possible in some conditions. Never use these near desired ornamentals as damage can occur. Pre-emergent control can be obtained using Flumioxazin (Sureguard) but with limited success.



Foliage and flowers of tall morning glory
Photos- Chuck Schuster

Plant of the Week

By: Ginny Rosenkranz

Schizachyrium scoparium 'The Blues' is one of our native prairie little bluestem grasses that grows in many different soils including clay through gravel and sandy soils. Once established, 'The Blues' is very tolerant to drought, high heat and humidity, air pollution. This plant is moderately tolerant to salt, so this could be a good choice to plant by roads and parking lots. Full sun is necessary for healthy growth, and plants are cold tolerant from USDA zones 3-9. 'The Blues' grows 2-4 feet tall and 18 inches wide with clumps of long slender flat leaves that are tinged with blue. The young stems are powder blue with deep purple highlights with pinkish tinged stems. In late summer, three inches of branched rose-pink to purple bronze flowers appear and are held above the foliage. In the autumn, the flowers mature to fluffy silver white seed heads and the narrow blades of grass matures to a burgundy russet. The attractive seeds may persist through the winter. Winter plants maintain the fall color and vertical broom-like habit, but often fans out into a graceful open habit and more of a bronze

umber color. Like all warm season grasses, ‘The Blues’ should be trimmed to the ground in late winter or early spring. Plants can be used in the landscape in sunny borders, meadow or prairie gardens, in groups. and cottage gardens. ‘The Blues’ can also be used in container gardens as well. No serious pests have been listed.

Schizachyrium scoparium ‘The Blues’ is moderately tolerant to sal
Photo: Ginny Rosenkranz

Degree Days (as of September 18)

Abingdon (C1620)	3618
Annapolis Naval Academy (KNAK)	4382
Baltimore, MD (KBWI)	3938
College Park (KCGS)	3632
Dulles Airport (KIAD)	3729
Frederick (KFDK)	3751
Ft. Belvoir, VA (KDA)	3899
Gaithersburg (KGAI)	3579
Greater Cumberland Reg (KCBE)	3272
Martinsburg, WV (KMRB)	3452
Natl Arboretum/Reagan Natl (KDCA)	4314
Salisbury/Ocean City (KSBY)	3875
St. Mary’s City (Patuxent NRB KNHK)	4139
Westminster (KDMW)	4004

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: 95Calculation type: simple average/growing dds Start: Jan 1

CONFERENCES

December 4, 2019
Trees Matter Presents: Green Cities Summit
Location: Kellog Conference Center, 800 Florida Ave NE
For more information

December 6, 2019
Pest Management Conference
Location: Carroll Community College, Westminster,

December 17, 2019
Biocontrol Conference
Location: Maritime Insitute, Linthicum Heights, MD

Advanced IPM PHC Short Course
Monday, January 6 - Thursday, January 9, 2020
Location: University of Maryland, College Park, MD
Contact: Amy Yaich, Admin. Assist. II, 301-405-3911, umdentomology@umd.edu
Registration Information: https://landscapeipmphc.weebly.com/
Recertification credits will be posted on the website

January 17, 2020
FALCAN Pest Management Conference
Location: Frederick Community College, Frederick, MD

January 20 and 21, 2020
MAA Safety and Pesticide Recertification Seminar
Location: Turf Valley, Ellicott City, MD

February 13, 2020
2020 Pesticide and Fertilizer Recertification Conference
Location: Rockville, Maryland
Organized by and registration through LCA

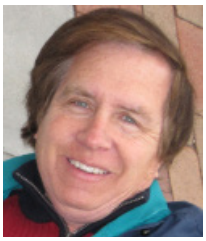
February 19 and 20, 2020
Chesapeake Green: A Horticulture Symposium
Location: Maritime Institute, Linthicum Heights, MD
Organized by and registration through MNLGA

University of Maryland Extension Job Announcement

The University of Maryland Extension seeks a part-time Horticulture Consultant to join the Ask an Expert Team at the Home & Garden Information Center located at the Central Maryland Research & Education Center in Ellicott City. Answer gardening, lawn, insect, and plant problem questions of MD residents via a web-based service. Must have horticulture knowledge and experience and be adept with computer software. Hours are flexible (up to 20 hrs./week). Pay is $19.66 per hour. Health ins. not available. Supportive, collegial work environment; on-going training provided. Full job announcement and position description.

For best consideration, submit resume by Friday, October 18, 2019 to Jon Traunfeld (jont@umd.edu), Center Director; jont@umd.edu.

CONTRIBUTORS:



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