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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:**

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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) 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)

**Trials for Downy Mildew Resistant Basil**

By: Stanton Gill and David Clement

This summer, we had trial plots in four locations to evaluate several basil cultivars that are reported to be resistant to downy mildew. We planted a highly susceptible cultivar called 'Aroma'. In August, we had ideal weather for downy mildew infection and the 'Aroma' basil cultivar was hit



**Downy mildew infecting basil in trial**

with the disease. The resistant cultivars held up pretty well in August. This changed in mid to late September when temperatures, humidity, and rainfall were perfect for downy mildew infection. The 'Aroma' plants were hammered in late September continuing into mid-October. The interesting thing is some of the resistant basil cultivars held up, but at least three cultivars did become infected. We will summarize our trial result in late fall to early winter and share it with you. This should be valuable information for greenhouse operations starting basil plants for 2022.

## Turf Pests

By: Stanton Gill

I have called around to several turf companies to see if there is any reported damage from the fall generation of fall armyworms. Mark Schlossberg, ProLawn Plus, Inc., reported seeing one lawn with fall armyworm larvae active a couple of weeks ago. Oscar Peña, Wray Brothers Landscapes, sent in pictures of damage and a close-up of later instar larvae in a residential lawn in Bethesda. I received a call on Thursday about a lawn in Anne Arundel County that was being decimated by fall armyworms in the last week.

Mark commented that he is seeing a lot of white grubs in lawns in Baltimore and Howard Counties. You can still treat for white grubs, but the window will be closing very soon. If you are seeing activity, please let me know at [Sgill@umd.edu](mailto:Sgill@umd.edu).



**Grub damage in turf in Lutherville**  
Photo: Mark Schlossberg, ProLawn Plus, Inc.



**Fall armyworm activity in Bethesda on October 12**  
Photos: Oscar Peña, Wray Brothers Landscapes



## Ambrosia Beetles

Kevin Nickle, Scientific Plant Service, found frass from ambrosia beetles on October 12 in Sparks, MD. We suspect the frass might be caused by camphor beetles. We will see if we can get a sample to identify the beetle.



**We are still receiving reports of ambrosia beetle activity this fall**

**Photos: Kevin Nickle, ProLawn Plus, Inc.**

## Rotting Pumpkins for 2021

By: Stanton Gill

September of 2020 was a rough month for pumpkin production in Maryland. We had frequent heavy downpours and a lot of hot humid weather with rapid cool down periods, then spikes of heat again. Pumpkins are very much tied into the garden center industry, since it is a big sale item in October. In 2020, there was a shortage of pumpkins since many people staying at home and working bought pumpkins to decorate their houses. Pumpkin growers planted a lot of pumpkins in 2021 anticipating a boom market for fall of 2021. Several planted early, so pumpkins ripened in September for early sales. The problem is the weather was terrible for pumpkin production this year. Many growers sprayed fungicides repeatedly in August and September, and still many of the pumpkins rotted in the field. If you are an East Coast pumpkin grower, 2021 is not a great year.

Pumpkins is a type of squash. Archaeologists discovered the oldest domesticated pumpkin seeds in the Oaxaca Highlands of Mexico. Pumpkins are believed to have originated in Central America and southern parts of the United States over 7,500 years ago. Native Americans spread the plants throughout the United States. They even introduced the early European settlers to pumpkins. Pumpkins were used as food that could be stored through the winter. Older pumpkins were fed to livestock in late winter to early spring.

Later in North American history, pumpkins became a symbol of abundance and wealth. Portuguese sailors took pumpkins to the Philippines. From the Philippines, the pumpkins were transported to Japan where the Japanese gave it the name that translated into "Philippine". They named it for the place they thought it originated from, not knowing that it originated from parts of Mexico and North America.

So, how did pumpkins end up associated with Halloween? Well, it is tied into our Irish ancestors, at least in part. Carving out pumpkins came from the Irish who would set out carved turnips or potatoes by their doors and windows in hopes that they would protect them from evil spirits. When the Irish came to America, they found

that the pumpkin was perfect for carving out and putting a light inside. If you look up Jack in Irish legends, you will find a story about an Irish guy who tricks the devil. The devil punishes Jack in the end. Jack puts a piece of coal into a carved-out turnip and has been roaming the Earth with it ever since. The Irish began to refer to this ghostly figure as “Jack of the Lantern,” and then, simply “Jack O’Lantern”.

### **Adult Assassin Bugs – Abundant in October**

By: Stanton Gill

We received several e-mails with electronic pictures of assassin bugs. Assassin bugs (family Reduviidae) are predatory insects that are of great benefit to nursery operators, arborists, and landscapers. They are proficient at puncturing other insect prey and feeding on a wide array of beetles and caterpillars. When it finally gets cold later this month, the females will start laying round, circular egg masses on tree trunks about the size of a fifty-cent piece. They seem to prefer laying eggs on smooth barked trees such as birches, redbuds, and maples, to name a few.

We are mainly receiving pictures of adult females (larger than males) that are alighting on people’s clothing, cars, and on outdoor furniture. Tell your customers that these are beneficial and to leave them to do their thing in the landscape.



**Adult wheel bugs are laying eggs on small trunks and branches of trees at this time of year**



## On the Move in the Fall



Velvet worms have been crossing our driveway here at the research center this week looking for a place to pupate. Velvet worms are the larval stage of soldier beetles. They are predaceous in the larval stage.



Brian Scheck, Maxalea, Inc. found this woolly bear caterpillar moving along the pavement in Cockeysville this week. They are a common sight in the fall as they look for a place to overwinter. Photo: Brian Scheck, Maxalea, Inc.

## Beneficial of the Week

By: Paula Shrewsbury

### Why are there so many wolf spiders in my house lately?

In the last 3 weeks or so, I (and others) have had numerous wolf spiders (Family Lycosidae) in my house. While many spiders build webs to trap their food, wolf spiders hunt and stalk their prey like wolves do in the mammal world. They are ground dwelling, generalist predators that commonly inhabit and hunt in lawns, leaf litter, around buildings, and similar habitats in urban and natural areas. When my colleague, Dr. Shultz, who is a spider expert was asked why this happens he proposed a very feasible hypothesis. Throughout the summer, there is an abundance of prey (food) in the environment for wolf spiders to consume. Populations of wolf spiders can become quite large in areas with abundant prey. However, as fall begins and environmental conditions change, the abundance of potential prey items (ex. insects) for the spiders dramatically decreases. This likely results in many wolf spiders foraging more rambunctiously to find food. Ultimately [more wolf spiders make it into homes](#) and other structures.

Hence, there has been an increase in wolf spider activity in homes these last few weeks. Remember that wolf spiders are not aggressive and they would prefer not to interact with humans. They are not going to harm you, but they will continue to eat insects they find outside. So, I suggest you keep a tall plastic cup on the kitchen counter or somewhere else handy. As you see wolf spiders



Wolf spider along the edge of a floor in the house. Photo: P.M. Shrewsbury, UMD

inside, herd them into the cup (I use my hand but you could use a tissue or other tool). Once caught bring the spider outside and release it in the lawn or a landscape bed where food will be more abundant for them.

Everyone will be happier! Also, be sure the weather stripping on your doors is in good shape to reduce the number of spiders (and other critters) from getting in.

Wolf spiders are hairy and large (1/2" – 2"), robust, and brown to black to gray in color. The wolf spiders in my home vary in size from about 1/2" to an inch or so. Like most spiders they have 2 body segments consisting of a fused head and thorax (cephalothorax), and an abdomen. Their 8 long legs are covered with hairs that help detect air movement by potential prey or predators. They have fang-like mouthparts (chelicerae) and venom glands. At the tip of the abdomen there are several small silk producing appendages called spinnerets. However, wolf spiders do not use silk to make webs, but they construct burrows in the ground and use silk to line their shelter. Wolf spider females also use silk when creating egg sacs in the spring and summer. An interesting behavior of wolf spiders is that the females are maternal and will care for their young. A female lays ~100 eggs that she encases in a silk sac. She carries the egg sac under her body, protecting it, for several weeks (see image). When the eggs are ready to hatch the female tears open the silk sac and the spiderlings crawl out and onto the mother covering her abdomen. The spiderlings will hang on "mom" for several days where they benefit from her care (food and protection), then they drop off and become independent foraging for their own food.

Wolf spiders are mainly nocturnal hunting spiders. They have excellent vision that leads to their success as hunters. They may ambush or run down their prey, which includes insects such as caterpillars, earwigs, ants, beetles, grasshoppers, crickets, roaches, and other spiders. Wolf spiders use their legs to seize their prey and their jaws to hold and crush their victim. The fang-like mouthparts are used to inject venom and enzymes that start the digestion process and make the prey nice and liquidly for easier consumption. Wolf spiders hunt actively from late spring to fall. An individual



**Wolf spider at the bottom of a plastic cup used to catch it in the house. Next step is to release it in the lawn or a landscape bed.**

**Photo: P.M. Shrewsbury, UMD**



**A female wolf spider carrying a white egg sac under her body.**

**Photo: Mike Raupp, UMD**



**Hundreds of newly hatched spiderlings cover the abdomen of their mother.**

**Photo: Mike Raupp, UMD**



wolf spider can live for 3-4 years. Wolf, and other, spiders are a fundamental part of healthy ecosystems and are major contributors to biological control in lawns, landscapes, nurseries, and natural habitats.

For an interesting video on wolf spiders go to: <http://www.wikihow.com/Identify-a-Wolf-Spider> (scroll down to the YouTube video)

## Plant of the Week

By: Ginny Rosenkranz

*Muhlenbergia capillaris* or pink muhly grass is a beautiful native grass that steals the spotlight in the landscapes from September to November with its airy plumes of dark pink flower panicles that billow over the dark glossy green thread-like foliage. The masses of loosely branched foot long inflorescences hold the delicate dark pink flowers over the foliage which later mature into purple seeds that fade to tan and persist all winter long. Pink muhly grass is a clump forming grass that grows 2-3 feet tall and wide and doesn't spread with rhizomes, but can spread by seeds. The plants prefer to grow in full sun and well drained soils and are very tolerant of high heat, humidity, salt and drought once established, although they do grow taller with more moisture. Like a lot of grasses, pink muhly grass can live a long time with little insect or disease pressure, and deer usually don't graze on grasses. The salt tolerance makes this native grass a good choice for planting near roadways where salt is used as a deicer in the winter as well as a good grass to plant by the salt water of the Bay and ocean. Cold hardy in USDA zones 5-9, pink muhly grass can be used in the landscape in native plant gardens, as a mass planting in poor soils, in a cottage garden or in a perennial border. No serious insects or diseases were listed.



**Pink muhly grass provides late fall and winter in the landscape**  
Photo: Ginny Rosenkranz, UME

## Pest Predictive Calendar “Predictions”

By: Nancy Harding and Paula Shrewsbury

In the Maryland area, the accumulated growing degree days (DD) this week range from about **3565 DD** (Martinsburg WV) to **4587 DD** (Reagan National Airport). 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.

- Tuliptree scale – egg hatch / crawlers (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.

## Degree Days (as of October 13)

Aberdeen (KAPG)	3650
Annapolis Naval Academy (KNAK)	4183
Baltimore, MD (KBWI)	4279
Bowie, MD	4254
College Park (KCGS)	3911
Dulles Airport (KIAD)	4033
Ft. Belvoir, VA (KDA)	4085
Frederick (KFDK)	3880
Gaithersburg (KGAI)	3851
Greater Cumberland Reg (KCBE)	3598
Martinsburg, WV (KMRB)	3565
Natl Arboretum/Reagan Natl (KDCA)	4587
Salisbury/Ocean City (KSBY)	4195
St. Mary's City (Patuxent NRB KNHK)	4465
Westminster (KDMW)	4324

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

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

**Tuesday, November 9th, 2021**

**9 to 3:30 PM**

**Location:**

**Wye Research and Education Center, 124 Wye Narrows Drive, Queenstown, MD 21658**

Nursery Operator Certification (FTC) for writing nursery nutrient management plans will be offered to growers who are interested in attaining Farmer Training Certification for writing nutrient management plans. This training program will assist you in writing a nutrient management plan for your nursery or greenhouse operation or Controlled Environment. You must write a nursery nutrient management plan if you use fertilizers and you gross \$2500 or more per year in sales. With this certification, you will be able to sign-off and submit your own plan and annual implementation reports.

Each program consists of a Training Day and an Exam/Signoff Day. The Training Day, **Tuesday, November 9th, 2021** will consist of learning the plan-writing process. After the Training Day you will have about 5 weeks, during which time you will study the Nursery Nutrient Management Training Manual and develop your plan. The Exam/Signoff Day will be at a location and on a date **“to be announced”**. This date will also be for going over your newly developed plan (or renewing your old plan).

The process is relatively simple for small (or low-risk) operations, so if your operation size is less than 5 acres, we would strongly encourage you to think about becoming a certified operator. If your operation is larger than 5 acres or you run a controlled environment, we would still encourage you to become a certified operator, even though the nutrient management process may be a little more complicated. For nutrient management consultants who wish to learn more about the process for developing nutrient management plans for greenhouses and container crop production, this workshop will offer 6 hours of continuing education credits.

The cost for this program is **\$35.00** and covers program costs and the MDA exam fee. For consultants not taking the exam, the cost is \$15. Payment will be required at the beginning of the program. A check can be made out to **University of Maryland**. A receipt will be available.

If you wish to register, please do so by **November 1<sup>st</sup>**. An Event Brite registration page has been created and is



linked [here](#). If you have questions please send an email to me ([aristvey@umd.edu](mailto:aristvey@umd.edu)) or call me at 410-827-8056 x113.

Wye Research and Education Center is located on the Eastern Shore of Maryland, about 20 minutes from the Bay Bridge. A map to WyeREC can be found [here](#).

At present, this is a face to face meeting. Face masks are presently recommended. However the situation with COVID-19 is fluid and we may decide to run a virtual program. Since WyeREC is located in Queen Anne's County it will depend on the County Health Department directives. If this occurs, the registered attendees will receive a link to an online virtual program.

## Conferences

### **FALCAN Truck and Trailer Safety Seminar**

October 20, 2021

Location: Urbana Fire Hall, Urbana, MD

For more information

[falcantruckandtrailer21.eventbrite.com](https://falcantruckandtrailer21.eventbrite.com)

### **December 3, 2021**

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

Location: Carroll Community College, Westminster, MD

### **December 9, 2021** (date change for last week's listing)

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](mailto: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

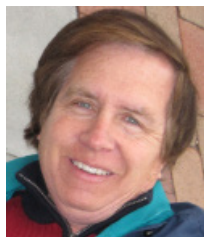
### March 15 and 16, 2021

MAA Pest Conference

Location: Turf Valley, Ellicott City, MD

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