

Commercial Horticulture

August 28, 2020

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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)

Velvet Ant

Marie Rojas, IPM Scout, found a velvet ant (which is actually a wasp) in Frederick County. The females are wingless; only the males have wings. Velvet ants are not aggressive, but the sting is quite painful so it is best to avoid handling the females. A female velvet ant oviposits one of her eggs near a larva or pupa in the nest of its prey (ground nesting bees and wasps). Adults will be active through September. Paula Shrewsbury has details in the [October 3, 2014 IPM Report](#).



Avoid handling adult female velvet ants because they can sting
Photo: Marie Rojas, IPM Scout

Boxwood Blight

By: Karen Rane

We are starting to get increased reports of boxwood blight symptoms on shrubs in the landscape. While hot summer temperatures slow the development of the boxwood blight pathogen, our recent moderate weather and frequent rainfall events have created conditions favorable for infection. Symptoms to look for include dark lesions on the leaves, dark cankers on green stems and leaf drop. When in doubt, send a sample to a diagnostic lab for confirmation of the disease. For more detailed information on boxwood blight management, including best management practices for landscapers caring for properties with boxwood blight, check out the Virginia Boxwood Blight Task Force website: <https://ext.vt.edu/agriculture/commercial-horticulture/boxwood-blight.html>

The Boxwood Blight Risk Model app for iPhone and iPad is available through the App store or online at https://uspest.org/risk/boxwood_app. This risk model helps determine when environmental conditions are favorable for infection in an area, using established weather station data.



Leaf symptoms of boxwood blight, caused by *Calonectria pseudonaviculata*
Photo: D. Clement, UME



Dark stem cankers due to boxwood blight.
Photo: K. Rane, UMD

UMD Plant Diagnostic Laboratory Now Open

By: Karen Rane and Rachel Ross

The UMD Plant Diagnostic Lab is now open to receive samples shipped from commercial clients. Due to the university's COVID-19 restrictions, we cannot accept unscheduled walk-in sample submissions. We encourage clients to send digital images to my email address (rane@umd.edu) prior to sending physical samples. Images should include an overall photo of the site or crop as well as close-up photos of the symptom of concern. For the lab address, submission form and additional information, please refer to the lab website: <https://extension.umd.edu/plantdiagnosticlab>

Home gardeners can submit photos and gardening questions to the UMD Home and Garden Information Center website <https://extension.umd.edu/hgic>.



Photos most useful for diagnosis of plant problems: A picture of the entire plant and surrounding site (left) which helps to identify potential site stress factors, and a close-up of symptoms (right, showing white growth of powdery mildew).

Photos: Rachel Ross, UMD

Oak Slug Caterpillars

Marie Rojas, IPM Scout, found oak slug caterpillars feeding on *Quercus rubra* on August 25 in Frederick County. Look on the foliage for slug sawfly larvae that are slimy, have shorter legs, and more than five pairs of prolegs.

Control: Usually not necessary to control this sawfly, but Conserve would kill the caterpillars if control is needed. There are parasites and diseases that help keep the numbers of this pest down.



Oak slug sawflies skeletonize the undersides of the leaves

Photo: Marie Rojas, IPM Scout

Caterpillar on Pawpaw

By: Stanton Gill

Many people started growing pawpaw trees over the last 15 years as a native local fruit source. Heather Zindash, IPM Scout, found leaves webbed together on a pawpaw this week. On Wednesday, Marie Rojas sent in pictures of the same caterpillar damaging pawpaw in a nursery site. This caterpillar is *Omphalocera munroei*, the asimina webworm moth, which is in the family Pyralidae. They feed on the leaves, buds, and twigs of pawpaw species. The larvae create a leaf shelter from within they feed.



Asimina webworm moth caterpillar in webbing on leaves
Photos: Heather Zindash, IPM Scout



Close-up of Asimina webworm moth caterpillar and the damage it causes
Photos: Marie Rojas, IPM Scout

Crapemyrtle Bark Scale

By: Stanton Gill

This week, I visited two sites with crape myrtles that were showing copious amounts of honeydew and sooty mold coating the foliage. Crapemyrtle bark scale (CMBS) was accidentally introduced into these two landscape sites. One site was in New Market (Frederick County), near Lake Linganore, and the second site was in Sykesville (Carroll County). For the last 25 years, crape myrtles have increased in Maryland nurseries and they are being used heavily in Maryland landscapes.

The site in New Market had one very heavily infested crape myrtle and three other crape myrtle plants with lower numbers present. It was rather obvious that the one plant was likely the plant that was installed with the scale present and it was spreading to the adjacent plants. We examined branch samples at the CMREC lab and found many females that were loaded with eggs and some crawlers were present. We contacted the nursery that sold the plants to the owner. The crape myrtle had been shipped in from a southern nursery supplier. The heavily infested plant was destroyed this week and the other adjacent plants will be treated with systemic insecticides. Crawlers were also active on the sample from Sykesville.

When crawlers are present, you could use Distance or Talus to control them if you catch them now before they cover their body with white wax. This pest is new in Maryland and we have not worked out the life cycle in our state at this point. I know we are seeing crawlers now in late August. Based on reports from Texas, where it was first found in the U.S. in 2004, Arkansas, and China, there are likely multiple, overlapping generations. It has been confirmed on other hosts including apples, *Malus domestica* Borkh (Ma, J. H. 2011. Occurrence and biological characteristics of *Eriococcus lagerstroemiae* Kuwana in Panxi District. South China Fruits. 5: 3).

Please be on the look out for this scale and let us know if and where you find it active. Again, the primary host is crape myrtle, but with all of the planting of apple trees in the Covid-19 rush for homeowners to install fruit trees, we want to make sure this does not start showing up on apples.

Control: Erfan Vafaie, Texas A&M, has summarized all of the products they have tested for control up to 2019 at <https://stopcmbs.com/2020/03/19/containerized-crapemyrtle-bark-scale-trial/>. They are still collecting and summarizing data from the current year.

More details on the insect are available in [Crapemyrtle Bark Scale: Now in Maryland \(2020\)](#).



The stage commonly seen during the winter in Texas, but it has yet to be confirmed officially as the overwintering stage
Photo: Erfan Vafaie, Texas A&M University

New Ambrosia Beetle in Oak?

By: Stanton Gill

One of the arborists from The Davey Tree Expert Company, Tim Walsh, released a Facebook report of Mediterranean oak borer, *Xyleborus monographus*, hitting oaks on Wednesday. It was found by USDA to be active in three counties in California in 2019. It spread to another county in California this year.

If you find an ambrosia beetle that you think fits the description, certainly contact us and save whole specimens in alcohol in a plastic vial. Photos are available in this [University of California Pest Alert](#).

Dog Day Cicada

By: Stanton Gill

Earlier this summer, we reported that several locations in Maryland had premature emergence or “rogue” periodical cicadas sightings. Their activity died down in July. In this area, we are now waiting on the main event of periodical cicada emergence in 2021. Wow- something to look forward to for 2021 other than the hopeful end of Covid-19. This noisy emergence will seem a small event compared to the impact of rogue emergence in 2020, but certainly noisier with wider areas impacted.

This week, I walked by a tree with a male dog day cicada singing its mating call. These cicadas, *Neotibicen canicularis*, are distinctly different from the periodical cicada. They are green colored with darker colored eyes, not red eyes seen on periodical cicadas. The common name, dog day cicada, comes from the fact that this species exhibits peak singing during the time of the year when the star Sirius, of the constellation Canis Major (the big *dog*), is prominent in the night sky.



This dog day cicada emerged on August 13; its pupal case was nearby on another stem of the goldenrod

Watch Out for Deer in the Roadways

By: Stanton Gill

This week, in the morning hours, I have seen several fawns feeding next to roadways. Driving about to nurseries and greenhouses, I am seeing several that have had run in with cars and trucks and are laying dead on the side of the road. I spoke with one of the DNR officials. Deer mating season starts in the next couple of weeks. Females kick the young fawns out from their maternal care and these young inexperienced fawns often wander out into the roadways. So watch out, especially in the morning and evening hours.

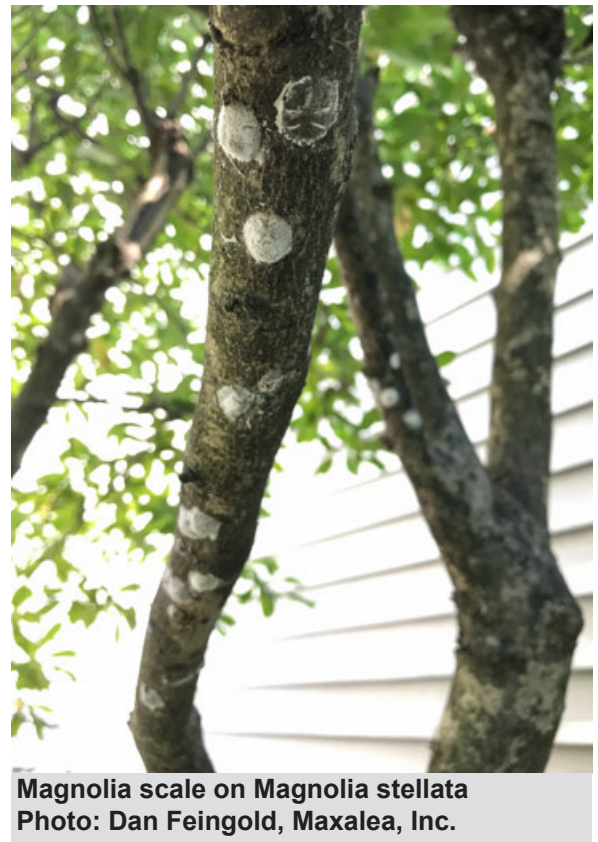
In September when mating season starts, it gets really wild and you will find does being chased by crazy males with both running out into the roadway. I had the unfortunate experience of these gallivanting deer in 2018 and had three different family cars hit in one season. Be on the lookout for the little guys over the next 2 weeks then after that watch out for the adults running into the roadway.

Tuliptree Scale on Deciduous Magnolia

By: Stanton Gill

We have a deciduous magnolia growing in 15-gallon pot at CMREC. A nursery owner gave us the infested plant back in spring. Suzanne was pulling foliage off the tree on Monday and she found that some of the eggs had hatched and settled 1st instar crawlers were present on some of the foliage. Realize this pot is located on a black top parking lot so the crawlers may be a little earlier than if the plant was located in a landscape. The bottom line is crawlers are starting to show up. If you customers or your nursery have magnolia trees infested with tuliptree scale, then check for crawlers and this is a good time to apply with either Talus or Distance.

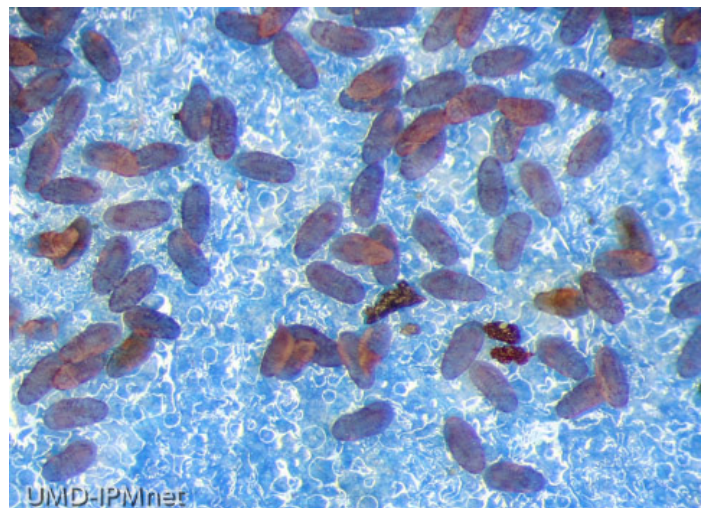
Magnolia scale is another scale that infests magnolia. Dan Feingold, Maxalea, Inc., found it on *Magnolia stellata* in Lutherville-Timonium on August 25. He mentioned that he noticed the sooty mold on the leaves first.



Japanese Maple Scale

By: Stanton Gill

The second generation of Japanese maple scale started around 2500 degree days. We reached 2700 degree days last Friday in the Frederick area. Check for crawlers now and consider making a Talus or Distance treatment soon.



Japanese maple scale crawlers caught on blue tape on trunk of tree

Puss Caterpillar

We are continuing to have reports of the stinging caterpillar, the puss moth caterpillar. Nancy Harding, UMD, found it in her landscape in Bowie on August 22. She noted that it is the first one she has ever seen. Of course, remember to not touch it.



Puss caterpillars are cool-looking, but don't touch them since they have stinging hairs
Photo: Nancy Harding, UMD

Spotted Lanternfly

John Smithmyer, Bartlett Tree Experts, found an adult spotted lanternfly in North East (Zip code 21091). If you find spotted lantern fly nymphs in MD be sure to report them to MDA at their online site at DontBug.MD@maryland.gov. We have two counties in quarantine status right now – Harford County and Cecil County.



Continue to keep an out for spotted lanternflies in your area
Photo: John Smithmyer, Bartlett Tree Experts

Predator Sightings



This praying mantid that Marie found blends in quite well with bark on this tree
Photo: Marie Rojas, IPM Scout



Marie found this wheel bug feeding on a spider
Photo: Marie Rojas, IPM Scout

Keeping Crows Away

Melissa Sharifi, The Colonial Williamsburg Foundation, sent us this email: I know someone with a semi-tame crow and the photo attached contains a few of the items his little crow's nightmares consist of. The cinnamon toast crunch box is absolutely the most terrifying to the bird. There does seem to be something to the stripes and gaping mouth theme."



These are several items to keep a semi-tame crow away
Photo: Melissa Sharifi

Beneficial of the Week

By: Paula Shrewsbury

Robber flies catch prey “on the wing”

In the last week or so there have been multiple reports of robber fly activity; I have also been seeing robber fly activity. Robber flies are true flies (Diptera) in the family Asilidae. There are many species of these predatory flies and they occur in diverse types of habitats. Robber flies occur world-wide in their distribution and there are about 7,000 species. The greatest diversity in robber fly species is in arid, sunny habitats. I commonly see them at wood edges and in landscapes and nurseries. Like all true flies, robber flies have one pair of wings as

adults. Adults have large eyes, an elongate body with a tapered abdomen, and are relatively hairy. Most characteristic are their long, raptorial legs, which have strong bristles of hair to help them in capturing and holding their prey. Robber flies range in size from about 1/8" to almost 2". Most robber flies have a "bearded" appearance having hairs that cover their long, sharp piercing mouthparts used to consume their prey. Some robber flies are stout and hairy, mimicking bees, while others are slender and less hairy. Most robber flies are yellow/brown, gray, and black in coloration, some mimic bees. Adult females lay whitish colored eggs on low foliage or in the crevices of soil or bark. Larvae of robber flies are also predacious, live in the soil or decaying wood, and seldom seen. They are legless and have long worm-like soft bodies, and their size varies with species. Robber flies overwinter as larvae and pupation occurs in the soil. Mating in robber flies is interesting. Some species practice a mating behavior known as thanatosis, aka feigning death. The male begins the mating practice by grasping a female. If the female decides the male is not "the one" for her, she goes limp pretending to be dead. If this happens, the male drops the female and flies away.

Robber fly hunting behavior is quite interesting and given the opportunity, you should definitely watch these skilled hunters ([click here](#)). Adult robber flies are ambush predators and capture their prey in flight! Robber flies establish a "perching" location in open sunny areas (much like a hawk). They will sit on the tip of a piece of vegetation and watch for potential prey to fly by. Once prey is spotted, robber flies will take flight and capture the prey item in its long legs. At that point, there is no hope for the prey. The robber fly immediately injects its prey with saliva that contains enzymes that are neurotoxic (immobilizing the prey) and proteolytic (liquefying the prey).

The robber fly returns to its perch where it [feasts on its liquefied meal](#). Yum! Consumption usually takes 5-15 minutes and longer for larger prey. Robber flies are generalist predators feeding on wide diversity of arthropods including those that are pests and others that may be beneficial. Robber fly adults are quite voracious and are known to attack beetles, bugs (including stink bugs), wasps, bees, moths, dragonflies, grasshoppers, flies,



A robber fly that captured and is consuming a brown marmorated stink bug adult – yeah!
Photo: D. Makowski



***Laphria flavicollis*, a species of robber fly, eating a box-elder bug.**
Photo: Rbreidbrown - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=72430073>



A robber fly with its bumble bee prey grasped between its legs while it sucks the fluid out.
Photo: M.J. Raupp, UMD

and other arthropods. Robber fly larvae live in soil and decaying wood where they feed on white grubs, worms, grasshopper eggs, and other soil insects.

Robber flies are opportunistic predators known to consume not only pest insects but also beneficials (ex. bees). Robber flies are abundant and voraciously feed on many arthropods, contributing to biological control of many plant feeding insects. Robber flies make up part of the diverse complex of natural enemies that all work together towards preventing herbivores from becoming pests.

Weed of the Week

By: Chuck Schuster

Soil temperatures remain warm. This week the average low soil temperature in central Maryland was 73 °F. As temperatures start to decline, be ready for the start of fall germinating weed season. Remember when using pre-emergent herbicides to consider the requirement to have the product applied prior to the germination of the weed seed, not just as the seed germinates.

Here is a review of some of the weeds that are generally considered fall germinating. Annual bluegrass is one plant that can be prevented from germinating starting in the late summer. When soil temperatures drop below 70° F, annual bluegrass will start to germinate. This plant will have seeds continue to germinate throughout the milder part of fall and winter and will flourish then in the spring. Each plant can produce up to 100 seeds each year.

Chickweed can germinate when soils go below 68 °F and have the proper soil moisture. One study indicates that the optimum soil temperature is 54 to 68 °F.

Hairy bittercress is another weed that will germinate in the late summer as soil temperatures drop below 68 °F.

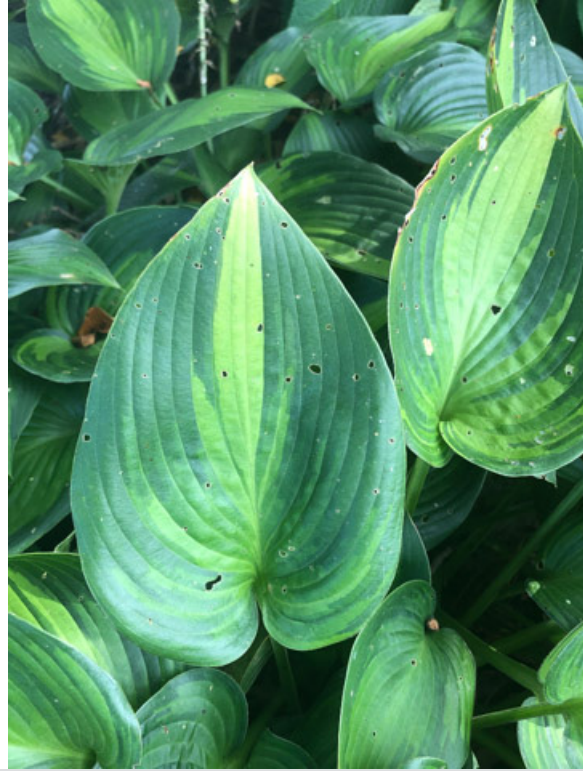
As one considers fall germinating weeds, consider the soil temperature trends. Currently the trend is stable, but day length is shortening each day. Soil temperatures vary greatly across the state of Maryland. Don't just consider the area around your home or office, consider the many sites you travel to and the effects of the micro climates in those areas. Brick buildings will reflect heat back to the soil keeping it warmer longer. Also remember that for granular pre-emergent products to work, they must be activated by moisture. This moisture can be rainfall or irrigation. Some areas have received adequate moisture, and in other areas, the soils are extremely dry. Timing is critical. Pre-emergent products only work when applied and activated prior to germination. Some products are pre and early post emergent, but that is more the exception and not the rule. With moisture predicted again this weekend, start watching what soil temperatures are in your area. It will vary by location.

Plant of the Week

By: Ginny Rosenkranz

Hosta 'June' is an herbaceous perennial that thrives in moist, organically rich, well drained soils and needs afternoon shade. Like all hosta, 'June' can handle some drought, but as the soil dries up, the roots dry up as well. If not watered, the plants will emerge the next spring as smaller and weaker plants. These compact plants form clumps of foliage from a central crown and grow up to 1 foot tall and 2 ½ feet wide. They are cold tolerant from USDA zones 3-8. The variegated leaves on 'June' are thick, making them almost slug resistant but not deer resistant. They are pale gold in the center with irregular blue-green colors on the outside margins. The elongated trumpet-shaped flowers bloom July through August on 20-inch scapes and are a very pale lavender, attracting hummingbirds and butterflies to the garden. 'June' is in the Tardiana group of hostas that characteristically have blue-green foliage that result from breeding crosses between *H. tardiflora* and *H. sieboldiana* var *elegans*. 'June' can live happily in a large container or in the moist shady gardens with ferns, coral bells, and foam

flowers. Pests include deer, foliar nematodes, Hosta Virus X, tobacco rattle virus or ring spot virus. All plants with virus symptoms should be removed from the garden as soon as the virus is detected.



Hosta 'June' are compact plants that need afternoon shade
Photos: Ginny Rosenkranz

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 2552 DD (Cumberland) to 3405 DD (Reagan National). 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.

- Fall webworm - active caterpillar tents 2nd gen (2793 DD)
- White prunicola scale – egg hatch 3rd gen (3270 DD)
- Banded ash clearwing borer - adult emergence (3357 DD)
- 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 pests.

Degree Days (as of August 26)

Aberdeen (KAPG)	2697
Annapolis Naval Academy (KNAK)	3016
Baltimore, MD (KBWI)	3142
Bowie, MD	3206
College Park (KCGS)	2933
Dulles Airport (KIAD)	3007
Frederick (KFDK)	2956
Ft. Belvoir, VA (KDA)	3104
Gaithersburg (KGAI)	2859
Greater Cumberland Reg (KCBE)	2552
Martinsburg, WV (KMRB)	2722
Natl Arboretum/Reagan Natl (KDCA)	3405
Salisbury/Ocean City (KSBY)	2104
St. Mary's City (Patuxent NRB KNHK)	3283
Westminster (KDMW)	3113

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

Cut Flower Tour

September 14, 2020

Cut Flower Tour in Howard County and Montgomery County

Locations: Plant Masters at Endless Rows Farm, Woodbine, MD and and Plant Masters in Gaithersburg, MD. Coronavirus Covid-19 will impact this program by limiting the number of participants and requiring physical distancing and masks. See the announcement for details.

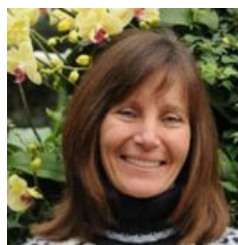
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CONTRIBUTORS:



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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