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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:

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Disease Information: Karen Rane (Plant Pathologist), David Clement (Extension Specialist), and Joe Roberts (Plant Pathologist for Turf)

Weed of the Week: Chuck Schuster (Extension Educator, Montgomery County)

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

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Wow – We Thought the Rain Would Let Up

By: Stanton Gill

On Sunday, September 9, it was almost ridiculous how much rain consistently came down all day. It was wave after wave of pouring rain all day. The rivers were flowing strongly and there were many overflowed road bridges. There is a chance that the remnants of Florence will bring rain and wind gusts to the area early next week.



The chance of rain continues into the weekend. The extended rainy periods this summer is having an impact on the health of many trees in landscapes and nurseries.

Last week, I wrote an article on how earlier excessive rain was damaging root systems of many landscape plants. It certainly is not getting any better with this week's rain. Expect more root damage on plants in your customers' landscapes.

Crapemyrtle Aphid

By: Stanton Gill

Steve Clancy, Town Creek Landscaping, brought in a sample to CMREC lab this week. The foliage was covered in sooty mold with many, many cast skins of crapemyrtle aphid. With increasing numbers of crape myrtle samples coming into our CMREC lab over the last couple of years, I would say that one of the biggest pests of crape myrtles in Maryland is the crapemyrtle aphid, *Sarucallis kahawaluokalani*. In the U.S., crapemyrtle aphids are monophagous and only feed on crape myrtle. This aphid produces a lot of honeydew on which sooty mold grows, reducing the visual aesthetics of the plants.

This is not your typical aphid. Most aphid species only produce winged stages (alates) when they want to disseminate the populations or there is environmental stress on the plant on which it is feeding. Not so with the crapemyrtle aphid. All adult crapemyrtle aphids have wings so they can take flight whenever they want and spread to a new plant.

Nymphal stages of the crapemyrtle aphid are pale to bright yellow with black spike or hair-like projections on their abdomen. Adults are also yellow in color but differ from nymphs in having black spots and two large black tubercles on the dorsal surface of the abdomen. Eggs overwinter on the stems. Some dormant applications of oil are an option for controlling crapemyrtle aphids. Since crape myrtles leaf out late, you have plenty of time in the spring to apply dormant rates of oil. When the eggs hatch in early spring (at leaf bud break), only females are produced. Throughout the summer, adult females give live birth to female nymphs through asexual reproduction called parthenogenesis.

When photoperiod and temperature decrease in the October, there is a generation of aphids that produces both male and female aphids. Males and females of this generation mate and the females lay eggs in crevices located on the bark of crape myrtle stems. Overwintering eggs will hatch the following spring in response to temperature and photoperiod stimuli. If populations are heavy, sooty mold will be very noticeable. Black sooty molds are fungi that grow on honeydew produced by the aphids. Black sooty mold can turn the entire plant and unsightly black color detracting from the visual aesthetics of crape myrtle. Thick amounts of black sooty mold interfere with photosynthesis and may cause early leaf drop or complete defoliation of affected plants.



This crape myrtle leaf is completely covered in sooty mold as a result of the honeydew produced by crapemyrtle aphids; photosynthesis is significantly reduced



There are multiple overlapping generations of crapemyrtle aphids each year

Euonymus Scale

By; Stanton Gill

Heather Zindash brought in a sample of *Euonymus japonica* that was loaded with euonymus scale to an IPM Scout diagnostic session this week. We found a lot of males ready to pupate and several males that had emerged earlier. The interesting thing is that we found 1st instar settled crawlers in small numbers. It appears the 3rd generation has started with euonymus scale. Since there are still males pupating, this activity tells me that we may see a fairly long mating and crawler emergence period with this last generation of the season.

Control: Use Talus or Distance for control of crawlers. You can try Altus or Mainspring. We have not done any trials with these materials yet on this scale.



Pachysandra is another host for euonymus scale

Tuliptree Scale

Marie Rojas, IPM Scout, found tuliptree crawlers on *Liriodendron* in Montgomery County on September 13. The tuliptree scale is one of the largest soft scale insects that you will find in the nursery or landscape. It is often misidentified as magnolia scale that is larger and has a similar life cycle, but only attacks magnolias. Tuliptree can also be found feeding on magnolias. Second instar nymphs overwinter.

Control: Use Talus or Distance this week for control.



Now is the time to scout tuliptrees and magnolias for dark red crawlers of tuliptree scale
Photo: Marie Rojas, IPM Scout

Flyspeck on Apple

Annette Cormany, UME, sent in a photo of flyspeck on apples. Annette noted that flyspeck is caused by a fungus and that the damage is cosmetic and the apples are still edible. A slightly abrasive sponge can be used to brush off the fungi from the apples.



Flyspeck is unsightly, but the apples are still edible
Photo: Annette Cormany, UME

Summer Annual Grass Control Issues in Maryland

By: Dr. Joe Roberts, and Dr. Tom Turner, University of Maryland

Many would consider the Maryland region one of the toughest areas to grow amenity turfgrasses. Weather conditions in the region can support both cool and warm season grasses at different times of the year, yet neither are known to thrive year around, making turfgrass establishment and maintenance difficult for managers. While turfgrass managers know to expect the unexpected, 2018 has been particularly difficult due to environmental extremes observed on both the cold and hot ends of the spectrum. To begin, the National Weather Service reported the first week of January in Baltimore to be one of the coldest starts in over 140 years. Though many will recall the warm days in February and March offering a glimpse of spring, others will focus on the persistent cold temperatures and snow events extending into April. Encouragement of turfgrass growth during the extended low temperatures of April and May was difficult, as many turfgrasses prefer soil temperatures above 50 °F for shoot production. The cold transitioned to heat relatively quickly in late May and early June and, along with the summer heat, frequent rains have pummeled areas throughout Maryland generating one of the wettest years on record. Needless to say, turfgrasses have struggled this year contributing to pest issues that have been consistent throughout the season and we have received multiple inquiries regarding annual grass weed control.



Photo 1
Photo: Joe Roberts, UMD

Why are so many weeds in my lawn this year?

Close examination of the weather patterns can be indicative of the weed pressure we have observed this year. Going back to the extended winter-like conditions, the slow start to turfgrass growth for both cool and warm season turfgrasses in 2018 translated to lower density at the early stages of the season. Turfgrass density and vigor is one of the first lines of defense in reducing competition for weeds. Some of our most common annual grass weeds in the region, crabgrass (*Digitaria* spp.), goosegrass (*Eleusine* sp.), and foxtail (*Setaria* sp.) are known to emerge when soil temperatures are consistently between 60 and 70 °F. Frequent rainfall, like that observed throughout much of the growing season this year, can also encourage weed seed germination or sprouting allowing weeds to colonize voids in areas where desirable turfgrasses are less competitive (Photo 1).

My lawn has weeds even though I used a preemergent herbicide!

When applied properly, preemergent herbicides are an effective method to limit weed populations and multiple chemistries are widely available. Herbicide activity is contingent on the concentration of the herbicide necessary to limit the target weed activity. The length of control achieved given the recommended application information set forth on the product label involves multiple factors, one of which is directly related to the persistence of the herbicide. Different chemistries have variable persistence related to the chemical make-up of the product and it is important to consider that environmental conditions also play a significant role in the degradation process of the herbicides. Herbicide persistence declines rapidly as temperature and soil moisture increase and these two factors were constant in 2018. As a result, even though preemergent herbicides were properly applied, many locations suffered from herbicide breakthrough much sooner than in a typical year as a result of extreme environmental conditions that favored weed encroachment over herbicide persistence (Photo 2.)

What can I do now that weeds are readily apparent in my turf?

Crabgrass, goosegrass, and foxtail plant growth will slow down as cooler weather prevails in the coming weeks before going dormant after the first frost. Post emergent herbicide control of these weeds at this time would be ineffective and not cost effective. The most important practice at this time is to encourage the improvement of turfgrass density, primarily through proper nitrogen fertilization (see University of Maryland Turfgrass Technical Update TT-115 “Fertilizer Recommendations for Commercially Maintained Lawns and Turfgrass in Maryland” for current recommendations). In some cases, overseeding existing turfgrass with recommended cultivars will also improve turfgrass density and aid in preventing annual grass encroachment in the future (see University of Maryland Turfgrass Technical Update TT-77 “Recommended Turfgrass Cultivars for Certified Sod Production & Seed Mixtures in Maryland” for current recommendations).



Photo 2 and Photo 3 - Annual grass encroachment and different mowing heights
Photo: Tom Turner, UMD

Should I adjust my program for 2019?

The unusual weather conditions that were conducive to both annual weedy grass growth and faster than typical preemergent herbicide breakdown will hopefully not be repeated in 2019. Changes in current preemergent herbicide programs should generally not be needed as long as current recommendations for these products are followed. However, the performance of some products may be enhanced by split applications 6 to 8 weeks apart versus a single application in late March through mid-April.

As previously noted, that the most important factor in minimizing the encroachment of crabgrass, goosegrass, and/or foxtail into existing turfgrass is maintaining a dense turfgrass stand. Maximum density can be achieved by using recommended turfgrass cultivars, maintaining soil pH in the range of 6.0 -6.5, implementing a sound nitrogen fertility program, and employing a mowing height of 3.0 to 4.0 inches for tall fescue, Kentucky bluegrass, and fine fescue turf. Mowing grass too low can increase weed encroachment as shown in Photo 3.

Water Chestnut Problem in Ponds

Tyler Maly, Surrounds Landscaping, reported on site with a 3/4 acre pond in Virginia with a problem with water chestnut. This invasive species from Asia reproduces prolifically. Water chestnuts produce seeds with four, hard half-inch long spines that can penetrate the bottom of shoes.

Don Webster, UME, responded with the following information:

Yes, hard plant to control and, as they found, glyphosate won't do much to it. I'm attaching a [report](#) that MD

DNR did a number of years ago when we had infestations in some of our rivers. It has a lot of good biological info in it and does discuss control options and how they fared. Since local residents had reservations about using herbicides, the state went in the direction of mechanical control - using underwater cutters and people who pulled and raked it. Hard job and one that takes a while.

If it's possible to lower the pond level during winter, desiccation and freezing of the roots could help in control, although depending on the depth of the pond, likely won't affect all of the plants.

Grass carp are a nice option that, unfortunately, is not available to us in MD. They should have an effect on the plants and will eat water chestnut, although they may initially graze on other plants that they like more. It normally takes about 12 grass carp per acre to control vegetation, so the permitted limit of 3 would seem rather low - but they may be useful if they work and, if they are not bringing about control quickly or effectively enough, perhaps the permit could be modified to allow more to be stocked. That would be a question for VA state authorities.

The only herbicide I know of that has been used with strong effectiveness is 2,4D. It is a granular systemic product that is broadcast throughout the pond and should clear the plants but will also take out others that may be there and it is toxic to fish so that needs to be taken into account. Some brands are Navigate and Weedar 64.

Ambrosia Beetles

Dan Cannaday, Greenlink Inc., found some ambrosia beetle frass tubes on a large 35" hickory in Silver Spring on September 14. Greg Dionne, Hometown Tree Experts, found ambrosia beetles on a sugar maple in Ellicott City on September 7. It is too late in the season for control measures to be effective. Next year, look on trunks of trees for wet areas and the frass tubes to determine when to treat.



Water chestnut is a difficult aquatic plant to control



Ambrosia beetle activity is continuing late in the season this year

Photo: Greg Dionne, Hometown Tree Experts

Brown Patch

Mark Schlossberg, ProLawn Plus, Inc., is finding brown patch disease in lawns in Pikesville this week. The hot, humid weather and periods of rain this summer have been very favorable for this disease. Brown patch starts as circular spots and spreads out to turn whole areas brown. You may see grass blades with foliar mycelium in the early morning if it is warm and humid in the early stages of the infection process. Look for brown margins with tan centers on infected foliage. Although lawns turn brown they do recoup when the weather cools down. To reduce the incidence of brown patch in tall fescue lawns avoid applying nitrogen in the spring. Nitrogen promotes soft, succulent growth that is more susceptible to infection by the brown patch fungal pathogen, *Rhizoctonia solani*.



Turf infected with brown patch recoup will recoup as the weather cools down
Photos: Mark Schlossberg, ProLawn Plus, Inc.

Dollar Spot

Mark Schlossberg, ProLawn Plus, Inc., is reporting dollar spot in turf in Owings Mills this week. Dollar spot generally occurs during periods of warm days and cool nights. It tends to be most damaging in poorly nourished turfs, particularly when soils are dry, when humidity is high or a heavy dew is present. Cultural approaches to minimize injury include avoiding drought stress, controlling thatch and soil compaction, maintaining adequate fertility, returning clippings to lawns, and over seeding with resistant cultivars. Fungicides can also be used to manage this disease.



Dollar spot starts out as small yellow spots on leaf blades
Photo: Mark Schlossberg, ProLawn Plus, Inc.

Beneficial of the Week

By: Paula Shrewsbury, University of Maryland

Big webs with big spiders: Watch where you are walking!

There are a group of spiders referred to as Orbweavers. Orbweavers are cosmopolitan in their distribution and they are in the family Araneidae, which is the 3rd largest family of spiders with over 3,500 named species worldwide. Orbweavers are the guys that make quite large “orb” or round shaped webs (2’ or greater in diameter) that we see commonly in the late summer / early fall. They have spent most of the season devouring prey and are now large and mature spiders. Over the next month or so these spiders will be making egg sacs loaded with hundreds of eggs which are how they overwinter. Two of the most common orbweavers seen in landscapes, nurseries, and natural habitats are the spotted orbweaver, *Neoscona crucifera*, and the black and yellow garden spider, *Argiope aurantia*. These two orbweavers have many similar behaviors with the major difference being that the spotted orbweaver is active at night in its web, hiding in a silken refuge it builds near the web, while the black and yellow garden spider can be seen in its web in the day and night.

The black and yellow garden spider, *Argiope aurantia*, is quite noticeable, although some individuals may be unpleasantly surprised if they walk into a web unexpectedly. *Argiope* garden spiders have distinctive yellow and black markings on their abdomens and are mostly white on their cephalothorax (the head – thorax area). The body of the female ranges in size from about $\frac{3}{4}$ – 1 $\frac{1}{8}$ ” but they seem much larger due to her long legs. Females are larger and often more colorful than males. Garden spiders often build their webs 2 – 8’ off the ground and span them between structures (ex. tree branches or a house and tree or shrub) where they can attach the ends of their web. The webs are circular in shape and up to 2’ in diameter. Female webs are usually larger than male webs.

These webs are often found near night time light sources since lights attract many insects. High insect traffic increases the likelihood of catching prey in your web. Pretty good adaptation! Somewhat unique to day active spiders is a zig-zag pattern of thick webbing in the center area of the web called a stabilimentum. The purpose of the stabilimentum is somewhat debated. It may function to camouflage the spider in the web from its predators, it may attract prey, or it may warn birds (and people) that a web is present by making it easier to see - all good hypotheses. The garden spider has many



A fine morning mist reveals the beautiful web of a spotted orbweaver
Photo: M.J. Raupp, UMD



A spotted orbweaver spider hanging head down in her web
Photo: M.J. Raupp, UMD

interesting behaviors. When a prey item lands in the female spider's web she begins to rhythmically flex and extend her abdomen and legs which gets the large web swaying, almost like a child on a swing. This common behavior of orb weavers is referred to as web-flexing and is believed to cause prey to become further entangled in the web. This behavior likely has other purposes too. The spider then touches several stands of her web with her legs which seems to help her locate the prey. These spiders are known to eat prey, often insects, which can be up to twice their size. When a prey item is caught up in the web the spider very swiftly approaches it, kills it by injecting its venom, and then quickly spins the dead prey wrapping it in silk. The silk comes from spinnerets at the end of the spider's abdomen and the spider uses its legs to maneuver the silk and neatly wrap its dinner. This all happens amazingly fast and is quite exciting to watch! For those of you who are Lord of the Rings fans you should recall the wicked spider that captured and wrapped Frodo as he was on his journey. The spider may devour the prey immediately following wrapping or wait and eat it later. Prey includes a range of insects such as aphids, flies, bees and wasps, moths, or other flying insects. Also interesting, the spider consumes the circular part of its web nightly and rebuilds it with new silk every morning. Wow! That seems like a lot of work. The male spider "courts" the female by approaching her web and plucking strands of silk to attract her. Once mating occurs, the male dies and is sometimes eaten by the female. You have to get nutrition where you can! A female may lay 1-4 egg sacs which are 5/8 – 1" in diameter, attached to her web, and may produce over a thousand spiderlings each. The egg sacs are often kept near the center of the female's nest where she protects it until she dies. Females die with the first hard frost. Spiderlings hatch in the spring.

Be careful as you are walking along paths between rows of nursery trees or among landscape trees and shrubs. It is a little disturbing to get the black and yellow garden spider's web in your face, and the spider has worked pretty hard to make that web!

See a [video](#) of a female black and yellow garden spider attacking and spinning a brown marmorated stink bug. You can see the silk coming out of her spinnerets at the tip of her abdomen.

See a [video](#) of the female spotted orbweaver spinning her prey in silk.



A black and yellow garden spider in her web waiting for lunch to come along. Note the stabilimentum (zig-zag pattern of thick webbing). Photo: P.M. Shrewsbury, UMD



An egg sac of the black and yellow garden spider is about the size of a ping pong ball Photo: Jerry Armstrong, from <http://bugguide.net>

Weed of the Week

Chuck Schuster, University of Maryland Extension

American burnweed, *Erechtites hieraciifolius*, is a member of the aster family, can be found in landscape areas, disturbed roadsides, and areas that receive little management. Found throughout much of the United States, it will grow to heights of eight feet, and is on occasion, improperly identified as a tall dandelion. It has a fibrous root system that is shallow in nature and a short taproot may also be found. The leaves are alternate. This annual produces a basal set of leaves that are larger than the leaves found on the upright stem, which are stalkless and partially clasping the stem. The leaves on the upright stem are ovate to lanceolate in shape, occurring with lobes and pointed teeth on the lobes. The leaves may be entire. The upper leaf surface may have fine hairs, but is usually smooth. It is similar in shape to prickly lettuce, but lacks the sharp prickly edges on the leaf and under the midvein. The stem is very fibrous, has dark green vertical lines and can have a whitish hair. The plant produces a floral array at a terminal panicle and may have additional axillary panicles from the upper leaf axils. The flower buds are cylindrical in shape, .25 inches wide and .75 inches tall. A disk shape flower is white to a pale yellow in color. The seed is found on a plume of fine bristles that will blow in the wind.

Control of American burnweed can be obtained using mowing or mechanical removal. Pre emergent materials that have worked well included simazine and indaziflam (Margeno) have shown control for greater than twenty weeks. Post emergent control includes combinations of sulfentrazone + metsulfuron, garlon, glyphosate. Use caution to not leave large bare areas as this will promote this early succession plant in gaining ground for the next year



American burnweed has a shallow, fibrous root system sometimes with a taproot
Photo: Chuck Schuster, UME



American burnweed can grow to heights of of 8 feet
Photos: Chuck Schuster, UME

Degree Days (As of September 12)

Aberdeen, MD (KAPG)	3258	Annapolis Naval Academy (KNAK)	3945
Baltimore, MD (KBWI)	3564	College Park (KCGS)	3470
Dulles Airport (KIAD)	3490	Frederick (KFDK)	3471
Ft. Belvoir, VA (KDAA)	3625	Greater Cumberland Reg (KCBE)	3241
Gaithersburg (KGAI)	3395	Martinsburg, WV (KMRB)	3234
Natl Arboretum.Reagan Natl (KDCA)	4027	Salisbury/Ocean City (KSBY)	3646
St. Mary's City (St. Inigoes, MD-KNUI)	3800	Westminster (KDMW)	3568

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

Improve Your Diagnostic Skills

By; Stanton Gill

We are working cooperatively with MAC–ISA in conducting a hands-on diagnostic skill building session for arborists and landscapers. The session will be held at Hood College in Frederick, MD. Contact Nancy Herwig, Executive Director, at exdirector@macisa.org for schedules and registration information.

CONFERENCES

New Plants for Nursery Growers

October 25, 2018

Location: Country Springs Nursery, Woodbine, MD
Details will be available later in the summer

Trees Matter Symposium

November 14, 2018

Location: Silver Spring Civic Center, Silver Spring, MD

[Registration Information](#)

Turf Nutrient Management Conference

December 6, 2018

Location: Carroll Community College, Westminster, MD

December Pest Management Conference

December 18, 2018

Location: Carroll Community College, Westminster, MD

Advanced IPM PHC Short Course

January 7-10, 2019

Location: University of Maryland, College Park, MD
Contact: Amy Yaich, Admin. Assist. II, 301-405-3911

Email: umdentomology@umd.edu

Information: <https://landscapeipmphc.weebly.com/>
Recertification credits will be posted on the website
Recertification page listing participating states.

Mid-Atlantic Horticulture Short Course

January 15-17, 2019

Location: The Founders Inn, Virginia Beach, VA

FALCAN Conference

January 18, 2019

Location: Frederick Community College, Frederick, MD

MAA Winter Conference

January 22-23, 2019

Location: Turf Valley, Ellicott City, MD

Eastern Shore Pest Management Conference

February 6, 2019

Location: Fountains Conference Center, Salisbury, MD

Contact: Ginny Rosenkranz, 410-749-6141

LCA Winter Conference

February 14, 2019

Chesapeake Green Horticulture Symposium

February 20 - 21, 2019

Location: Maritime Institute, Linthicum Heights, MD

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

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