

Commercial Horticulture

October 4, 2024

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Beneficial of the Week:

Ground beetles

Weed of the Week: Field bindweed

Plant of the Week:

Sporobolus heterolepis
(prairie dropseed)

Conferences

Pest Predictive Calendar

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: David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)

Weed of the Week: Chuck Schuster (Retired Extension Educator), Kelly Nichols, Nathan Glenn, and Mark Townsend (UME Extension Educators)

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)

Dr. Ana Cristina Fulladolsa
Director of the UME Plant Diagnostic Lab

We are pleased to welcome **Dr. Ana Cristina Fulladolsa** as the new Director of the Plant Diagnostic Laboratory! Ana Cristina comes to us with over 15 years of experience in plant diagnostics, applied plant pathology research, and Extension education. Most recently, she was the Director of the Plant Diagnostic Clinic at Colorado State University. Ana Cristina's skill set and experience will be a great asset to the UMD / UME programs and the stakeholders of Maryland.

Ana Cristina will have a joint appointment between the Departments of Entomology and Plant Science and Landscape Architecture and aims to start in mid-November.

Welcome, Ana Cristina!

October 16, 2024 Cut Flower Program

Location: CMREC, 4240 Folly Quarter Road, Ellicott City, MD 21042

Go to our [IPMnet Conferences page](#) for a link to register.

Redhumped Caterpillars

Marie Rojas, IPM Scout, is still finding redhumped caterpillars on *Cercis canadensis* this week. They overwinter as last instar larvae in cocoons (prepupal larvae) in the ground. These caterpillars feed on a wide variety of woody plants.



Redhumped caterpillars tend to become solitary as they mature.
Photo: Marie Rojas, IPM Scout

SLF Survey and/or Research Participants Needed

Drs. Paula Shrewsbury and Emily Russavage (University of Maryland, Department of Entomology) are seeking nursery managers to participate in a quick survey about spotted lanternfly activity, damage, and management. We appreciate your contributions to our survey! [Here](#) is a link to take the survey, which concludes **October 14th**.

We are also seeking participants for a future research project aimed at advancing sustainable spotted lanternfly management practices. This exciting project offers a unique opportunity for you to collaborate on demonstration research conducted directly on your farms/nurseries, helping to develop and showcase innovative pest management solutions.

We also encourage those who identify as BIPOC (Black, Indigenous, and People of Color), women, or beginning growers to participate. Your valuable insights and experiences are crucial to ensuring that our research is inclusive and addresses the diverse challenges faced by nurseries in our region.

By participating in this project, you will have the chance to:

- Collaborate with UMD entomologists researching biopesticides and their non-target effects.
- Provide valuable input on the project's methodology.
- Contribute to the broader goal of promoting sustainable practices in nurseries.

If you are interested in participating or would like more information, please reach out to Emily at [\[erussava@umd.edu\]](mailto:erussava@umd.edu). We look forward to the opportunity to work with you and support the success of your nursery!

Fringetree Problems

By: Stanton Gill

We had an interesting call last week from a nursery owner that had a larval borer taking out fringetree (*Chionanthus spp.*) in the nursery rows. They had a small problem with this over the last 3 years, but this year several trees were being taken down with this pest. Pictures of the larvae and damage were sent in to CMREC to try to try to ID the pest. The larva was white with a reddish-brown head capsule. When I magnified the picture, you could see two parallel rows of crockets on the prolegs. Frass was being expelled from the holes on the tree trunk. In the one picture, it was sawdust being pushed out of the galleries and piling up at the base of the trees.

Searching for information on potential borers, Marie Rojas, IPM Scout, found this link on fringetree borers from Mississippi University Extension at: <https://extension.msstate.edu/sites/default/files/publications/publications/p3107.pdf>. I also found a University of Massachusetts Extension [fact sheet on lilac borers](#) that lists the fringetree is susceptible to damage from lilac borer.



Frass coming out of the trunk of a fringetree indicates a possible borer problem.

Photo: Nursery grower



A lilac borer larva was extracted from the tree.

Photo: Marie Rojas, IPM Scout

Boxwood Blight Threat Remains High

By: D.L. Clement, Specialist Plant Pathology and Karen Rane Retired Plant Disease Clinic Director

Just a reminder that during the rainy period we've had since hurricane Helene the threat of infection from the predictive boxwood blight model has been very high. You should monitor all boxwoods very closely for symptoms and apply appropriate management strategies. Please, refer back to our previous [August 23 newsletter article on boxwood blight](#). The [boxwood blight risk model](#) is also available online.

Gloomy Scale and a Fungus

Marie Rojas, IPM Scout, found gloomy scale, along with that orange scale fungus that Paula Shrewsbury wrote about in the [June 14, 2024 IPM Report](#). In the article, Paula discusses the varying amount of control this entomopathogenic fungus provides. There is one generation of gloomy scale in Maryland in June. Overwintering females can be controlled by making a dormant oil application in the late winter or early spring when temperatures are above freezing for several days.



More research needs to be done to determine if nectria fungi can be used to effectively manage gloomy scale.

Photo: Marie Rojas, IPM Scout

Help! Too Much Rain

By: D.L. Clement, Extension Specialist, Plant Pathology

Although rain fall totals varied most of the state received substantial rainfall from the remnants of hurricane Helene last week. We've received pictures of collapsed herbaceous ground covers and assorted bedding plants. Causes for collapse and melting out are usually fungal or bacterial. Unfortunately, not much can be done at this time except pruning out dead areas and removal of dead plants. Depending on the extent of the damage some of these infections may only affect the above ground plant parts and the roots may recover next season.



Plant collapse of artemisia in the landscape bed is likely due to fungi or bacteria at this time of year, especially after the recent rain.
Photo: Carmen Chlada, Design With Nature, Designer/Horticulturist

To promote better drying and air circulation remove excess mulch from plant stems and surrounding soil. Avoid walking on wet soil to prevent soil compaction. Assess planting beds and areas that did flood, or that are poorly drained to better amend, and restructure low areas to improve drainage. Select plants better suited to wet areas as well. Consider rain gardens in low areas. Avoid fertilization since this won't help plant recover any faster and may even harm damaged roots. Monitor for plant regrowth later this fall, or next season to determine if replacement is necessary.

Redheaded Pine Sawfly

Kleason Martin, Sunny Meadows Garden Center, is reporting redheaded pine sawfly activity on Mugo pine this week. This native sawfly feeds on pines including jack, red, shortleaf, loblolly, Japanese black, and mugo. Other hosts include deodar cedar and Norway spruce. The larvae feed gregariously on the growth tips. A group of larvae can defoliate whole sections of a pine very rapidly in late August to early September.

Control: Prune off tip growth on which they are feeding and destroy. Conserve insecticide will also give control.



Redheaded pine sawfly can cause significant damage.
Photo: Kleason Martin, Sunny Meadows Garden Center

Roseslug Sawflies

Kleason Martin, Sunny Meadows Garden Center, found curled roseslug sawflies on roses this week. Bristly roseslug sawfly is another species that is active through the growing season. Both species overwinter in the pupal stage. Spinosad, Mainspring, Acelepyrn, and horticultural oil are all good control options.

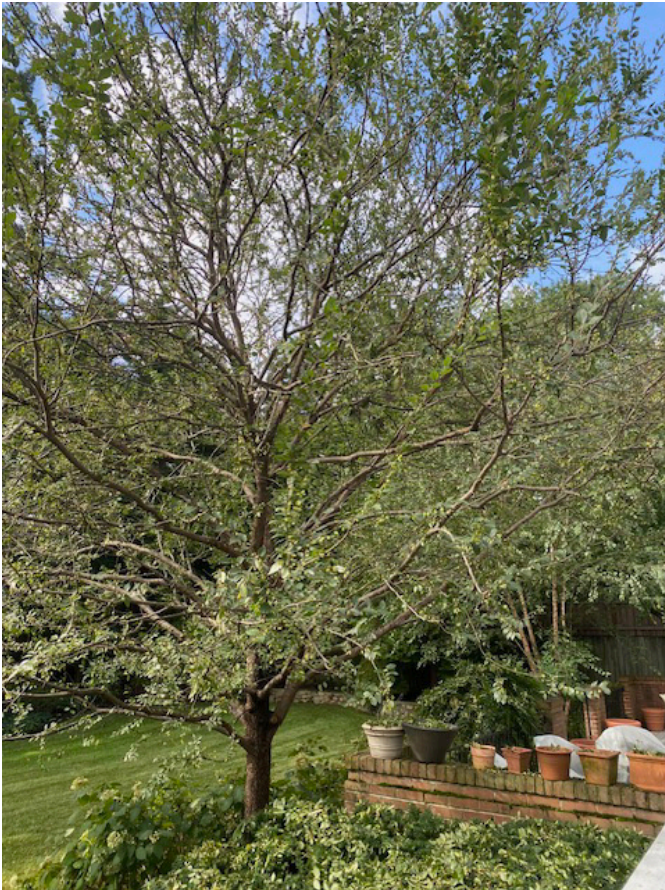


Curled roseslug sawfly larvae are still feeding at this time of year.

Photo: Kleason Martin, Sunny Meadows Garden Center

Squirrels Are Active

Bernie Mihm, Fine Earth Landscape, received photos from a customer reporting heavy damage to a Chinese elm from squirrels clipping the tips of branches. The damage was so extensive that it reduced the canopy by about 50%. The customer noted there had been as many as 7 squirrels in the tree at a time.



Extensive damage and debris on a Chinese elm from squirrels clipping branch tips.
Photo: Judith Walter

Spotted Lanternfly Adults

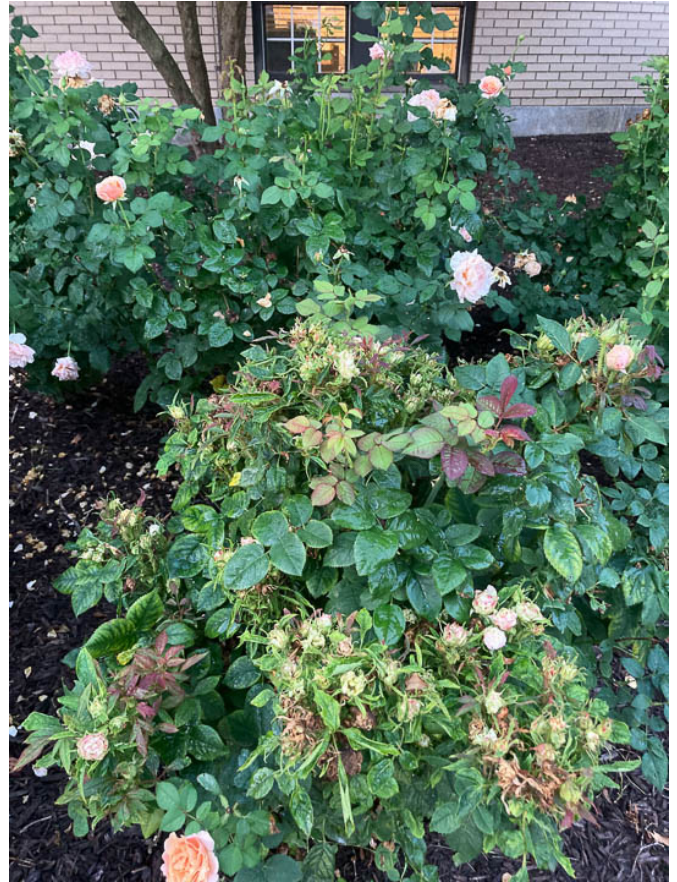
Marie Rojas, IPM Scout, is seeing spotted lanternfly adults congregating on red maple this week. She has also seen adults on styrax, and *Salix* species. They do feed on these plants, but we have not heard of any significant damage being caused. Here at the research center, we are seeing them on maple trees around our building. Females with eggs are present, but so far we have not found any egg masses here.



Look for females laying egg masses this fall.
Photo: Marie Rojas, IPM Scout

Rose Rosette Disease

Elaine Menegon, Good's Tree and Lawn Care, is reporting rose rosette disease on roses in Hershey, PA this week. Elaine noted that the client had added new roses this year and now some of them are infected. Symptoms at this time of year include red, distorted, witches broom type new growth. If you have this disease, the best thing to do is to destroy the plant.



Rose rosette symptoms.

Photo: Elaine Menegon, Good's Tree and Lawn Care

Beneficial of the Week

By: Paula Shrewsbury

Ground beetles provide insect and weed biological control

With the onset of cooler weather, there are greater numbers of ground beetles (family Carabidae) running around. Ground beetles are common and abundant in our landscapes and nurseries in addition to many other managed and natural environments. Ground beetles get their name because most species forage and live at the ground level ([click here to see video](#)). However, there are a few species, such as the fiery hunter beetle (*Calosoma* sp.), that are arboreal predators. There are over 40,000 known species world-wide of ground beetles and they are diverse in their appearance. Some species of ground beetles can be quite small as adults at less than 1/16" in size, and others large at over 1.5" in size. Most are shiny black (ex. *Scarites subterraneus*, *Harpalus pensylvanicus*) or metallic (ex. tiger beetles and fiery hunters) in color and have noticeable ridges or lines on their hard, leathery front wings. Their feeding habits and what food items they feed on are also diverse. Some species of ground beetles are carnivorous feeding mainly on prey such as caterpillars, grubs, other species of beetles, fly maggots and pupae, aphids, weevils, earthworms, slugs, snails and other soft-bodied creatures hanging around the soil, and of these many are generalists that feed on a diverse range of prey items. Other species of ground beetles are omnivores, which can feed on both prey and plant material. Many species of ground beetles are granivores, which mainly feed on seeds (often weed seeds) but may also eat insects when seeds are not abundant. Some species even partake in pollinivory – feeding on pollen – for nutritional resources.

In particular, I have seen *Scarites subterraneus* (big-headed ground beetle), a mainly carnivorous ground beetle (predator), is active and being found not only in outdoor environments, but also making their way into homes about this time. They are shiny black, about ¾" long, and have large mandibles that look a little intimidating.

Fortunately, they are not very aggressive to humans. I have picked up many to bring back outside and have yet to be pinched. In nature, *S. subterraneus* feed on ground dwelling caterpillars (ex. cutworms, armyworms), wireworms, fly larvae, ants, aphids, snails and slugs.

Because ground beetles are good biological control agents of potential pest insects and weeds, and they have diverse diet preferences, a number of studies have examined methods to enhance ground beetle populations by modifying managed environments to be more favorable for ground beetles – an approach referred to as conservation biological control. Studies have shown that installing “beetle banks” (rows of bunch type grasses between crop rows) in agricultural fields enhances populations of ground beetles, with the grasses providing refuge and overwintering habitat. Production nurseries often install grass allies between plant rows, which should favor ground beetles. Container plant producers can put hard wood mulch over weed cloth beds. Our research has shown that this will increase prey item abundance (ex. collembola breaking down the mulch), provide habitat (nooks and crannies from the mulch) and increase ground beetle activity. It would be hard to go wrong trying to encourage a diverse and abundant population of ground beetles with their potential for providing pest insect and weed suppression. These practices will also increase the abundance and diversity of numerous natural enemies, especially those that are generalist feeders.



Big-headed ground beetle (*Scarites subterraneus*) adults feed on a diversity of other insects, snails, and slugs, and some plant material providing biological control services.
Photo: Frank Roylance

Weed of the Week

By: Kelly Nichols, Montgomery County Extension

Field bindweed (*Convolvulus arvensis*) is a perennial plant which reproduces from seed or rhizomes. A native of Europe, it is now found worldwide. The plant has bell-shaped leaves (Figure 1) and produces a white flower (Figure 2). On rare occasions, it may have a pink flower. This weed can produce stems that can grow several feet in length growing horizontally or climbing into and covering shrubs and trees. A new plant can produce roots that can grow downward to five feet in the first year and have a circumference of ten feet. Over time this plant, soil type-dependent, can sink roots to greater than fifteen feet (some reports of up to thirty feet) where it is stealing both moisture and nutrients from desired species of plant material.



Figure 1. Field bindweed leaves.
Photo: Bruce Ackley, The Ohio State University, Bugwood.org

Field bindweed can be confused with morningglory species (*Ipomoea sp.*). However, our common morningglories are an annual, have heart-shaped or deeply lobed leaves (Figure 3), do not produce rhizomes,

and are much easier to control. The root system on morningglory is not as deep or problematic as with bindweed. Morningglory is actually planted by some as an annual flower.

Mechanical control of field bindweed is difficult due to the rhizomes and low growth habit. In some studies it has been shown the regular cultivation, up to 25 times in a growing season, can be helpful in stopping field bindweed from development. Less rigorous cultivation can actually help spread the plant as breaking the roots acts as one method of spread. Freezing and thawing of the soil helps to break seed dormancy. Seeds can remain viable for up to 30 years. Burying the seed to depth of greater than 12 inches prevents germination, but only until brought to the surface later. Herbicides for suppression include glyphosate, and 2,4-D products depending on location. Neither chemical application is considered a single application control method. Timing of applications should be mid to late summer and early fall, with close monitoring of the site for return growth. Care needs to be used with the use of these products to prevent damage to the desired species of plants in the landscape near this weed.



Figure 2. Field bindweed's flowers.

Photo: David Cappaert, Bugwood.org



Figure 3. Leaves of various morningglory species; From Left to Right: red (*Ipomoea coccinea*), pitted (*Ipomoea lacunosa*), entireleaf (*Ipomoea hederacea* var. *integriuscula*), and ivyleaf (*Ipomoea hederacea*).

Photo: Theodore Webster, USDA Agricultural Research Service, Bugwood.org.

Plant of the Week

By: Ginny Rosenkranz

Sporobolus heterolepis or prairie dropseed is often considered one of the most handsome of the native prairie grasses. It thrives in average to dry, well drained soils, needs full sun, and is cold tolerant in USDA zones 3-9. Although it prefers to grow in dry rocky soils, it will tolerate a wide range soils from heavy clay to sandy loams. These fine textured warm season grasses can be slow to establish and are slow growing, but the plants can thrive as a ground cover in hot and dry areas, as a foundation planting, in a rain garden, a meadow, native plant garden, and as a border planting. With their deep fibrous root system, this grasses helps reduce erosion on a sunny slope. This clump-forming perennial grass will grow 2-3 feet tall and wide and has hair-like, fine textured, and medium green leaves that grow 1/16" wide and 20 inches long. The foliage creates a mound with the arching stems, and the summers green turns golden in the autumn, then fades to a light bronze in the winter. In August to October, the pink and brown tinted flower panicles bloom, filling the air with the fragrance of a combination of coriander, honey, popcorn, sunflower seeds, and/or melted wax. The open branched, airy flowering panicles are set on

slender stems that rise above the foliage, and when mature become tiny rounded seeds that drop to the soil from their hulls. Plants can provide four seasons of interest. After mowing down the foliage in the spring, the new growth has decorative arching stems; in summer, the green mounds need no maintenance; in the autumn, the foliage turns to gold with airy seed heads dancing in the breezes, and winter brings a sturdy bronze colored mound of grass that even snow can not beat down. Birds enjoy the seeds and the plants are tolerant of drought, erosion, deer, air pollution and black walnut trees.



Prairie dropseed provides four seasons of interest in the landscape.
Photo: Ginny Rosenkranz, UME



Close-up of the seed head that will be present in the fall.
Photo: Suzanne Klick, UME

Degree Days (as of October 2)

Annapolis Naval Academy (KNAK)	4116
Baltimore, MD (KBWI)	4100
College Park (KCGS)	4095
Dulles Airport (KIAD)	4125
Ft. Belvoir, VA (KDA)	4148
Frederick (KFDK)	4004
Gaithersburg (KGAI)	3832
Greater Cumberland Reg (KCBE)	3667
Martinsburg, WV (KMRB)	3429
Millersville (MD026)	3909
Natl Arboretum/Reagan Natl (KDCA)	4589
Perry Hall (C0608)	3748
Salisbury/Ocean City (KSBY)	3832
St. Mary’s City (Patuxent NRB KNHK)	4655
Susquehanna State Park (SSQM2)	3826
Westminster (KDMW)	4227

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

2025 Advanced Landscape IPM PHC Short Course

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 held over four days at the University of Maryland, College Park, MD. In addition, there will be a hands-on lab following lecture (available to a limited number of course attendees). Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture dates: Monday, January 6 - Thursday, January 9, 2025 from 8:00 am – 3:00 pm

Lab dates: Monday, January 6 - Thursday, January 9, 2025 (space limited) from 3:30 pm – 5:30 pm

Course and registration information: <https://landscapeipmphc.weebly.com/>

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

Conferences

October 16, 2024

[Cut Flower Program](#)

Location: Central Maryland Research and Education Center, Ellicott City, MD

December 5, 2024

Tech Day: Focus on Solar

Location: CMREC, Ellicott City

December 12, 2024

2024 Cultivating Innovation in Maryland's Agriculture and Technology Conference

Location: Crowne Plaza, Annapolis, MD ([Program and registration information](#))

Charles County Government is offering a FREE one-day workshop for landscaping companies that maintain stormwater BMPs.

This hands-on training is designed for landscape and green infrastructure professionals who maintain sustainable stormwater Best Management Practices (BMPs) such as rain gardens, bioretention areas, and bioswales.

The workshop includes classroom and field activities, with a certificate of completion from the Chesapeake Bay Landscape Professional Certification program. It's sponsored by Charles County Government, the Chesapeake Bay Trust, the University of Maryland, and the Chesapeake Conservation Landscaping Council.

The workshop is October 22, 2024, at the Fieldside Neighborhood Community Center, 11850 St. Linus Drive, Waldorf, MD, from 9:00 AM-3:00 PM and registration is required. Please see the flyer for registration links and instructions. <https://certified.cblpro.org/product/charles-county-sustainable-stormwater-bmp-management-for-crews-certificate/>

Commercial Ornamental IPM Information

<http://extension.umd.edu/ipm>

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