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Beneficial of the Week: What eats slugs

Weed of the Week: Roughstalk bluegrass (*Poa trivialis*)

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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

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Tree and Grass Pollen Counts High This Week

By: Stanton Gill

You and your customers may have itchy eyes and runny noses this week since oak tree and black locust pollen counts are very high. Additionally, grass pollen counts are also high. Here is the web-based predictions from the web-based [Watson pollen predictor](#):

Pollen Breakdown: Do

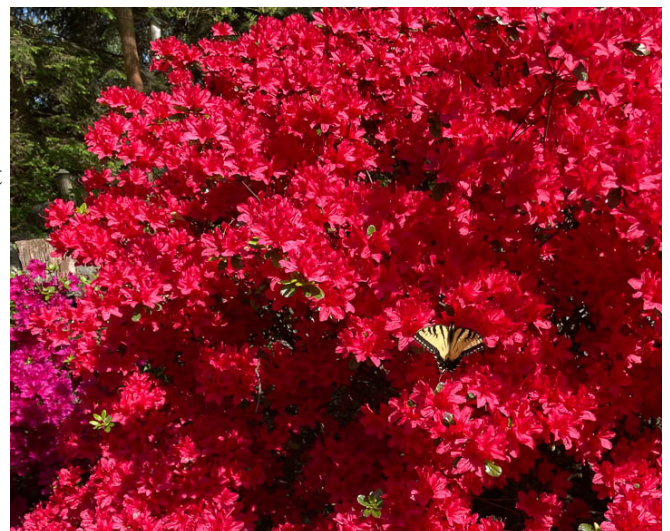
you know which kinds of pollen aggravate your symptoms? Here is the 3-day outlook for the worst offenders.

Tree Pollen

Today (Friday): High
Tomorrow: Low
Sunday: None

Grass Pollen

Today (Friday): High
Tomorrow: Low
Sunday: None



An eastern tiger swallowtail butterfly is at azalea flowers in Lebanon, PA this week.

Photo: Elaine Menegon Good's Tree and Lawn Care

Ambrosia Beetle Activity is Continuing

This week, Heather Zindash, The Soulful Gardener, brought us some fresh beetle samples including one with some camphor beetles, *Cnestus mutilatus*, found in a hawthorn. This beetle bores holes in the small-diameter branches or trunks of stressed plants, inoculates the plant with a fungus, and feeds on the fungus itself rather than the actual plant. Even though the insect is not technically feeding on the plant, the galleries and boring activity in general still results in damage to the plant. Camphor beetle's preferred host is stressed sweetgum but can be found on any plant that is stressed/dying since it is attracted to the ethanol produced therein. Control for this insect would be the same for any beetle in the ambrosia family; preventative trunk applications of permethrin or bifenthrin.

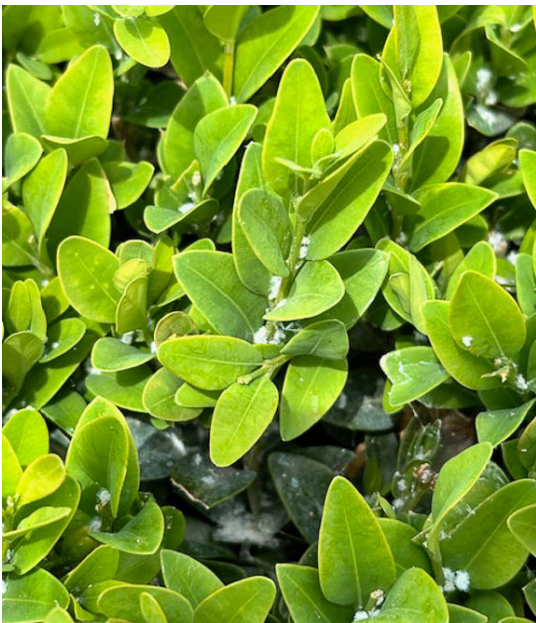
Marie Rojas, IPM Scout, reports that she continues to find ambrosia beetle activity in nurseries. This week, Marie found them hitting yellow-wood, styrax, and *Tilia tomentosa* in a nursery in Frederick County.



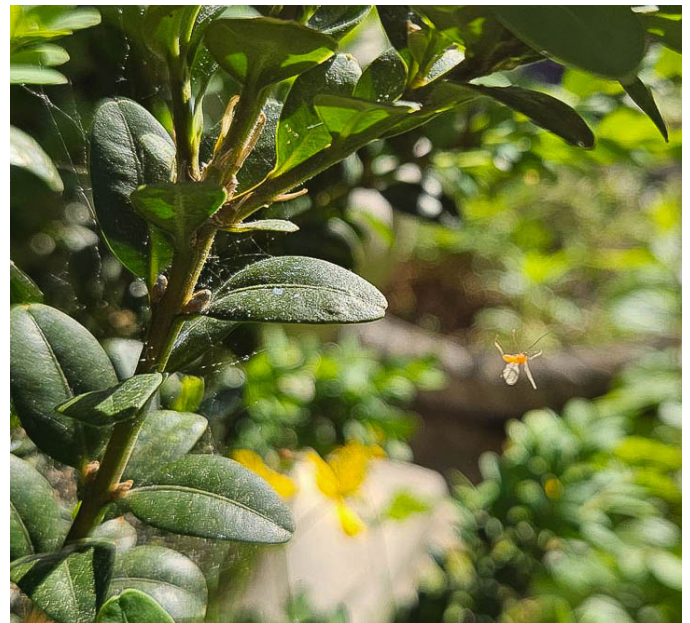
A camphor beetle found in a hawthorn.
Photo: Sheena O'Donnell, UME

Boxwood Leafminer and Boxwood Psyllid

Luke Gustafson, The Davey Tree Expert Company, reports, "Earlier this week I was seeing a lot of adult boxwood leafminers flying and psyllids were still pretty active on boxwood in Baltimore City. Where these pictures were taken the leafminers were swarming the boxwoods like hungry mosquitoes at a picnic!" Jason Hipp, Deeply Rooted Tree Care, is reporting boxwood psyllid activity in Mt. Airy. Psyllid control is usually not necessary. Wait until early instar boxwood leafminers are active before treating.



Boxwood psyllid infestation.
Photo: Jason Hipp, Deeply Rooted Tree Care



Adult boxwood leafminers are active now. With their bright orange bodies, they are easy to spot.
Photo: Luke Gustafson, The Davey Tree Expert Co.

Spotted Lanternfly

By: Stanton Gill

We are getting reports of hatch of spotted lanternfly from several locations in central Maryland, northern Maryland, and one from Southern Maryland this week. The nymphs are hyperactive at this life stage and they will be moving up to tip growth on some of their favorite feeding hosts such as red maple and black walnut trees.

We have mentioned repeatedly, even though they feed on trees early in the season, the damage is really not significant. They also do not produce copious amounts of honeydew this early in the season. This honeydew production will build up in later instar stages.

Crapemyrtle Bark Scale Update

By: Sheena O'Donnell, UME

Many growers have been asking whether the crapemyrtle bark scale will kill plants. Well, the small (2 feet tall) plants that we were using for last year's monitoring made it through the winter, but apparently just barely. Some buds are swelling but also a lot of the smaller branches have died back and the plants are struggling. These trees had a pretty heavy population going so your answer is potentially yes - CMBS will cause dieback on smaller branches and potentially kill young plants. Stay tuned this season to see any further updates.

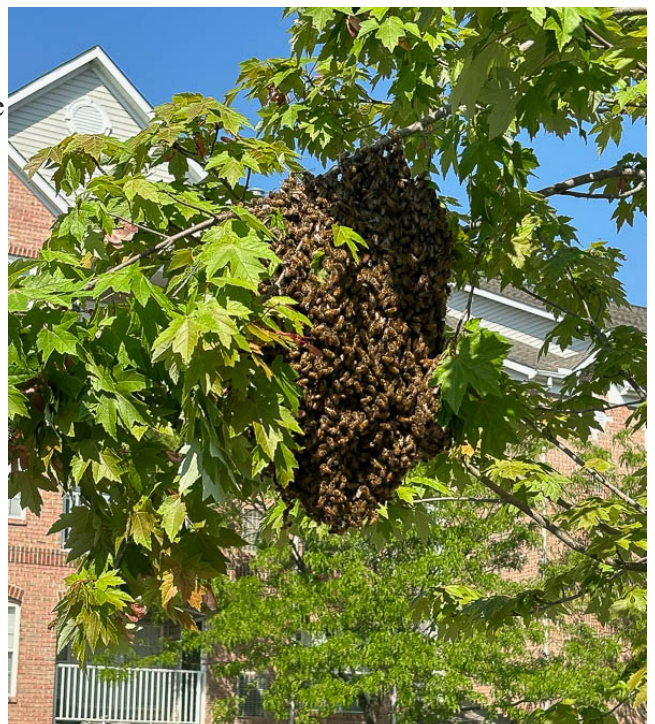
New Public Garden for Howard County

By: Stanton Gill

Well, Howard County is the 4th highest income county in the United States (Behind two in New Jersey counties and one in Colorado), so it was just a matter of time until they proposed a public garden to be opened in Howard County. Well, past due. It was announced that they are proposing a new public garden to be constructed in the Glenwood Area, just off Rt. 97. This will be a very exciting development, but we have not heard the proposed timeline yet.

Honey Bee Swarm

Todd Armstrong, The Davey Tree Expert Company, found a honey bee swarm in Perry Hall this week. If a hive gets too big, half of the bees will leave with a queen to start a new hive somewhere else. Look for swarming honey bees in early to mid spring.



**Here is a swarm of honey bees that is active this week.
Photo: Todd Armstrong, The Davey Tree Expert Company**

A Lot of Aphids Are Active

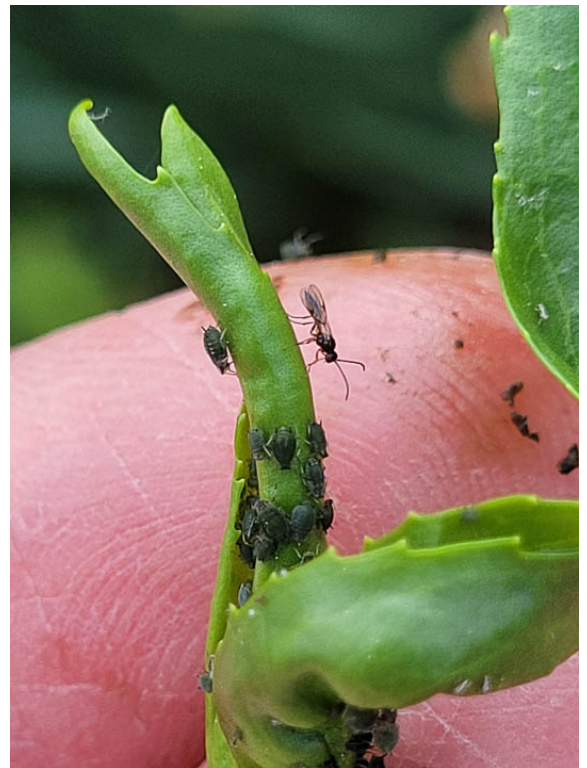
Spirea Aphids

By: Stanton Gill

Spirea is in full bloom in many parts of Maryland this week. We are getting in the first reports of build-up of spirea aphids on the tip growth. You can leave this one aphid alone since several species of lady beetles will collapse the spirea aphid population rapidly in May.



Scott Brown, Damascus Enterprises, reports aphids on Knock out roses in Damascus. There is one that is upside down shortly after the treatment.
Photo: Velvet Touch Rose Care

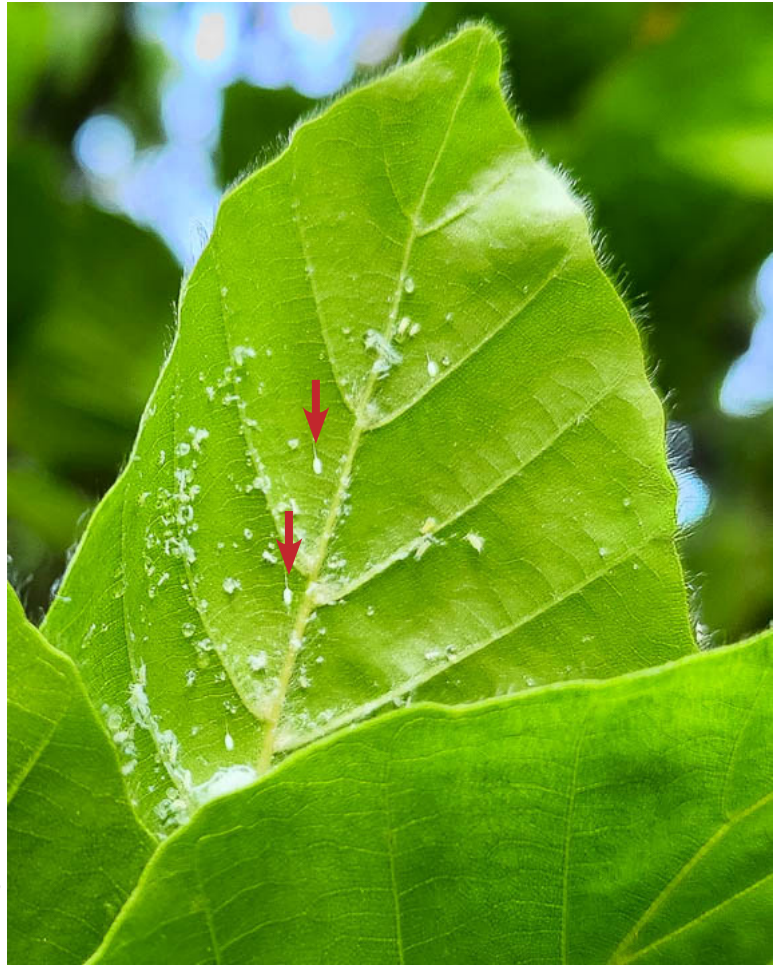


In a landscape in Montgomery County, Marie Rojas found black aphids on *Physostegia virginiana*. She sent the above photo of a tiny aphid parasitic wasp to Paula Shrewsbury who said it looks like an *Aphidius* wasp species.
Photo: Marie Rojas, IPM Scout

Marie Rojas found an exploding population of Hellebore aphids in Chevy Chase. These aphids have become a consistent problem over the years.
Photo: Marie Rojas, IPM Scout

Woolly Oak Aphids and Predators

Sam Fisher, Bartlett Tree Experts, saw woolly oak aphids, lacewing eggs, and lady beetle eggs on English oaks at a client's property in DC. The aphids cause oak leaves to curl and then they feed and reproduce within the covered area. They usually do not impact the overall health of the tree, so control measures are not necessary.



On an English oak with a woolly oak aphid infestation, predators such as lady beetles (orange eggs in photo above) and aphids with lacewing eggs (shown at red arrows to the right).

Photos: Sam Fisher, Bartlett Tree Experts



Mike Baker found crapemyrtle aphids on crape myrtle this week in Bowie. Check aphid population levels regularly. Also look for predators and parasitoids to determine if control measures, such as horticultural oil or Endeavor, are necessary. This aphid can increase in numbers quickly.

Photo: Mike Baker, D&D Lawn and Pest

Fruit Disease Activity This Week

By: Kari Peter, Penn State University

Disease conditions for apple scab, Marssonina blotch, and cherry leaf spot will be favorable April 30–May 1 and May 4–5. Conditions are also favorable for bacterial spots on peaches and nectarine. Growers will need to monitor the weather closely at their location. Diseases on stone fruit to be aware of include cherry leaf spot, rusty spot, and brown rot. This article discusses disease management for this time period. For more information, see the full [Penn State Fruit Diseases Report](#).

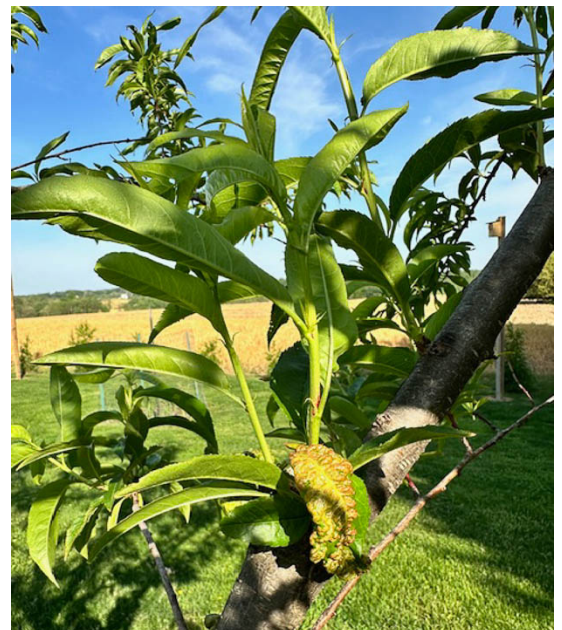
Rust on Susceptible Trees

By: Stanton Gill

Our University Extension pathologist have been reporting for the last 4 weeks that rust is very active this spring. We are now getting in emails with symptoms showing up on amelanchier and crabapples this week. The spore counts are still high this week for rust disease, so if you have susceptible tree species, keep the cover fungicide applications on this week.

Peach Leaf Curl

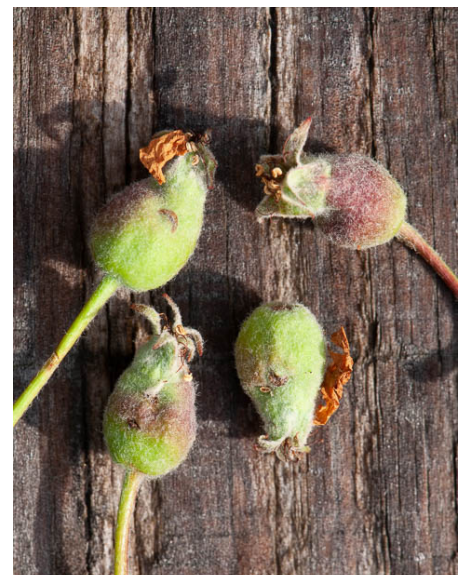
Jason Hipp, Deeply Rooted Tree Care, reports that he has been noticing peach leaf curl in Westminster on a client's fruit trees. It is too late to apply any control measures now. Kari Peter, Penn State University, provided control options in the [May 6, 2022 IPM report](#).



Peach leaf curl damage
Photo: Jason Hipp, Deeply Rooted Tree Care

Plum Curculio

Plum curculio is damaging pears this week. Avuant insecticide is a good control material.



This photo shows plum curculio damage on plums.
Photo: Suzanne Klick, UME

Removing Honeydew and Sooty Mold off Foliage

By: Stanton Gill

I received a request from an arborist who had a customer that had sooty mold growing on the trunk of crape myrtles that were heavily infested with crapemyrtle aphid in 2023. The stems were so heavily coated that they were black in color. Actually, a similar question came up 2 years ago with an arborist asking with the increase in crapemyrtle bark scale and copious amounts of honeydew being produced and sooty mold growing on the honeydew – what can you do for your customer to try to remove the honeydew.

The logical and easier answer is to control the crapemyrtle aphid and crapemyrtle bark scale before they build up and stop the honeydew production before it builds up. Once the honeydew is coating the leaves and bark and sooty mold starts to grow, what are the options? I put an email out to fellow entomologists in southern states that had been dealing with these two pests for longer periods of time and asked if anyone investigated ways to remove honeydew. The answer that came back was to use a power washer with a soap product on hardscapes, patio furniture, and other yard objects to remove honeydew. One researcher had played with using a power washer on a couple of species of plants including crape myrtle using a labeled insecticidal soap. He commented it worked well on trunks and large branches, but he did have to play with the pressure setting on the power washer to avoid shredding foliage on the plant. If any of you have found effective ways to get honeydew off foliage without heavy damage to foliage, please share it with us.

Fire Blight on Ornamentals

By: David L. Clement, Extension Specialist Plant Pathology

With the high probability of rain this weekend and into next week there will be a good chance for fire blight occurrence. Although most blooms have passed the pathogen can still infect through natural openings such as stomates, or hydathodes, and through wounds. Fire blight is a bacterial disease, caused by *Erwinia amylovora*, that begins in the spring on over 75 species of susceptible plants in the rose family. In the landscape plants often infected include crabapple, Bradford pear, hawthorn, cotoneaster and serviceberry. The spring infections come from overwintered cankers on twigs and branches. The ideal conditions are temperatures between 70-80F with high humidity, or rainfall. Any young green tissue is quickly killed and turns black. The bacteria then move into the older woody tissue before girdling and causing branch death. There is usually a dark line that develops between infected and healthy tissue. The classic symptom is that of a “shepherd’s crook” where the infected tissue dies quickly and bends over at the end, turns dark, and retains the dead leaves.

Management:

Look for resistant cultivars (see PSU, <http://extension.psu.edu/plants/green-industry/news/2015/fire-blight>, website). Proactively prune during the dormant season. Stop pruning during the active growing season to avoid spreading the disease. After new growth has stopped and during dry weather prune back to 4-5 stubs that will be pruned out later during the dormant season. Manage fertilization carefully to avoid overproduction of succulent green growth.



Fire blight damage on crabapple.
Photo: Suzanne Klick, UME

Tuliptree Scale

By: Sheena O'Donnell, UME

Tuliptree scale (*Toumeyella liriodendri*) is a common pest of tulip poplar trees in Maryland. Among the samples submitted by Heather this week there were some healthy sized female covers of this insect, but with no live insects inside the covers because they overwinter as settled first instars/crawlers. This insect prefers Tulip poplar. It is very commonly seen on the deciduous magnolias planted in our area, and can also sometimes be found on linden, basswood, hickory, walnut, red bay, and buttonbush to name a few. But hang tight for treatment - even though this insect overwinters as first instar crawlers, they don't become active until fall. Side note - there is a native moth (*Laetilia coccidivora*) in our area that normally keeps populations of this (also native) scale insect in check when in forest settings. The moth lays eggs next to the scale insect and the caterpillars invade the female cover and feed while inside. Check out the photo to see this moth's pupa hiding out undercover.



A pupa of the predaceous, *Laetilia coccidivora* moth species found among a population of tuliptree scale.

Photo: Sheena O'Donnell, UME

Euonymus Leaf-notcher Caterpillar

Dave Norden found a hedge of *Euonymus k.* 'Manhattan' at his office in Tysons. *Euonymus* leaf-notcher caterpillars had been devouring this plant. Dave noted that "a twenty foot section was completely defoliated with lots of what appeared to be frass on the walk below". The plants will recover quickly and the caterpillar only has one generation per season. Caterpillar feeding is coming to an end at this time. No control is necessary.



Late instar euonymus leaf-notcher caterpillars are finishing up their feeding for the season.
Photo: Dave Norden

Roseslug Sawflies

Rachel Rhodes, UME-Queen Anne's County, found the first signs of roseslugs sawfly larvae in Wye Mills this week. Miri Talabac, UME-HGIC, brought in a sample of larvae from the Greenbelt area. Early instars cause the windowpane damage. As the larvae get bigger, they feed through the leaf and leave holes. We will continue to see two sawfly species (curled roseslug sawfly and bristly roseslug sawfly) active throughout the season. Both species have multiple overlapping generations through this spring and summer. Conserve and horticultural oil are good control options.



Roseslug sawfly larvae window pane damage; the arrow is pointing to a small larva.
Photo: Rachel Rhodes, UME-Queen Anne's County



A cluster of roseslug sawfly larvae feeding on rose foliage.
Photo: David Clement, UME-HGIC

Eastern Tent Caterpillar

Shawn Walker, Trees 101, found several tents of eastern tent caterpillars in a crabapple in Shepherdstown WV. Manual removal of tents is one control option. Bt can be used for early instars. There is only one generation per year.



Look for the silk nests of eastern tent caterpillars.
Photo: Shawn Walker, Trees 101

May 22 2024 - Evening Plant Diagnostic Clinic of Trees and Shrubs for Arborist and Landscapers

By: Stanton Gill

In partnership with the Maryland Arborist Association, the University of Maryland Extension IPM team will be conducting an evening diagnostic clinic for improving your IPM skills on May 22, 2024. This will be held at our Central Maryland Research and Education Center as an outside event. Our experts will update attendees on relevant insect and disease issues. Afterwards, we will lead attendees on a walk of the facility to identify problems in the landscape, and demonstrate how drone technology can help address these issues. Dinner is included in the registration cost. Maryland Pesticide credits have been approved, and Maryland Licensed Tree Expert, International Society of Arboriculture, and DC Pesticide credits have been requested for full attendance of the program. Registration is being handled by the Maryland Arborist Association, and may be found here: <https://pestwalk24.eventbrite.com>. The program starts at 5:00 p.m. and ends at dark. It will be at 4240 Folly Quarter Road, Ellicott City, MD.

Biological Control Conference in June 2024

By: Stanton Gill

We released the announcement this week that the two-day Biological Control conference for the commercial horticulture industry has been set for June 5 and 6, 2024. Originally, we had planned to hold this conference in our NEW Central Maryland Research and Education building in Clarksville with our brand-new Entomology and Pathology Lab. Unfortunately, there are building flaws that still need to be corrected.

Fortunately, we were able to contract with Carroll Community College in Westminster, Maryland to obtain a large conference room and lab room to conduct this conference. The University of Maryland Extension is working closely with MNLGA and University of Delaware Extension in conducting this 2-day event. We are bringing in experts from Canada and across the United States to share their knowledge in practical biological control in nurseries, greenhouses and landscapes.

We are very excited about this conference and we have been planning this event for over a year. The lecture day will be limited to the first 128 people to sign up. The same lab session will be offered on the first day – once in the morning and once in the afternoon. Each lab is limited to 30 people. We look forward to seeing you at this event.

Hatch of Predators

Look for hatching of several different predators at this time of year. Marie Rojas, IPM Scout, found assassin bugs hatching this week in Frederick County. Here at the research center, we have seen a few early instar nymphs of praying mantids.



Wheel bug nymphs that have just hatched from the egg mass.

Photo: Marie Rojas, IPM Scout

Beneficial of the Week

By: Paula Shrewsbury and Mike Raupp

Slugs - What eats those slimy gastropods?

We are getting reports of slug activity and damage to plants. Slugs, along with the snails, are in the phylum Mollusca and the class of invertebrates called Gastropoda. Any mollusk without a shell is referred to as a slug, though there are many kinds of slugs.

Biologically, slugs are somewhat interesting organisms. For example, they use muscular contractions for locomotion which is pretty fascinating to watch as the slug moves contractions. They are also hermaphrodites, which means each individual slug has both male and female reproductive parts. However, two individual slugs will exchange sperm with each other and both produce eggs. Slugs are not usually thought of fondly by many. First because they eat and damage plants, followed by the fact that they produce slimy mucus – which can be somewhat repulsive to some. When controlling slugs, the use of baits is the more common tactic.

However, it is important to know that other organisms eat slugs and provide some level of biological control. For example, some frogs, toads, snakes, hedgehogs, salamanders, turtles, rats, and birds consume slugs. Some slugs are even carnivorous and are predators of other slugs and snails. Carnivorous slugs will follow the slime trail of another slug as part of its hunting strategy. Beneficial nematodes, such as *Phasmarhabditis hermaphrodita*, are commercially available in several European countries and used in biological control programs targeting several common slug species. *Phasmarhabditis hermaphrodita* is not commercially available in North America and its presence has not yet been confirmed. Juvenile stages of the nematodes actively search for slugs. Nematodes enter the slug through its breathing pore (pneumostome) in the slug's mantle (section on the dorsal side of the slug just behind the head). Nematodes release bacteria into the slug, the bacteria attack the slug which stops the slug from feeding and eventually kills it, and the nematodes feed on the bacteria. This is a nice mutualistic relationship that benefits everyone, but the slug of course. There are a few entomologists conducting research on nematodes as biological controls for slugs. Hopefully in the near future, using nematodes will be viable control option. There are flies known as marsh flies (family Sciomyzidae) whose larvae are active in soil and are predators or parasites of snails, snail eggs, and slugs. The larvae of some species of ground beetles (family Carabidae), rove beetles (family Staphylinidae), and lightning bugs (Lampyridae) are carnivorous and actively hunt slugs, worms and other insects. These beetles are frequently found under logs or stones, in soil, and other habitats that also favor slugs. Lady beetles have also been seen feeding on slugs see (YouTube link below). As we discuss repeatedly in IPM, biodiversity at all levels of the food chain is important for healthy and functioning ecosystems. Encourage these predators by providing favorable habitat (ex. ponds to attract frogs), combined with other non-chemical tactics such as sanitation, handpicking, traps, barriers such as sawdust or diatomaceous earth, and baits for slug control.



A violet ground beetle feeding on a slug.
Photo: Nigel Cattlin; from: <http://www.sciencephoto.com>



Convergent lady beetles feed on a slug.
Photo: <http://www.garden-heaven.com>

[Click here for a YouTube of a ground beetle eating a slug.](#)

Weed of the Week

By: Mark Townsend, UME-Frederick County

The last month's early wet weather paired with a switch back to drier and warmer temps have brought on a flush of new growth. In short, the weeds are loving it.

This week brought in some calls dealing with roughstalk bluegrass, *Poa trivialis*. This perennial grass being found in turf has been showing itself in some of our well managed turf this spring. Others have found it an untimely guest in their strawberry fields. It is classified as a fine textured, cool season grass with a prostrate spreading growth habit. Roughstalk Bluegrass will spread quickly by way of stolons which can be a problem for the desirable turf species. It will appear at times to be a clumping growing habit but that is not the reality of it once one starts to manually remove from a turf site. Reaching a total height of up to three feet, it will produce a panicle seed head, this being typical of other bluegrass species. This bluegrass can form a dense mat that can make it harder for other desired turfgrass species to grow. It does well in wet areas, and sites that have irrigation promote the growth of this weed turf. As weather gets hotter it will go into a dormant stage, returning to active growth when the temperature moderates and will grow through the cooler months.



Roughstalk bluegrass in a turf area.
Photo: Mark Schlossberg, Pro Lawn Plus, Inc.

The stems will have bands of purple at each node, and the stems will be found with small hairs. Leaves will have the boat shaped tip found in most bluegrass species, have a shiny light green color, and may discolor to a bronze when stressed by heat or drought. Each leaf blade can be found up to seven inches in length, and one quarter inch wide. Leaf blades are covered with small hairs. The presence of very small, scabrous hairs give the leaf margins and leaf surface a rough texture, whereas it received its common name 'roughstalk bluegrass'. It will also present with a large ligule that is membranous and occurs with a hook near the top. This weed will be affected by dollar spot and brown patch disease.

One of the most common perennial grass weeds in turf is roughstalk bluegrass. In most cases, the only control is to hand weed the turf or spot treat with a nonselective herbicide that contains glyphosate or glufosinate. Control of this weed is difficult in established turf. Bispyribac-sodium (Velocity)- sod and golf course only and amicarbazone (Xonerate) –residential turf herbicides are labeled for Roughstalk Bluegrass and Annual Bluegrass. Warmer temperatures are really needed for these chemicals to be effective. Post emergent, non-selective products can be used for small areas in a lawn, they would include glyphosate and glufosinate.

Plant of the Week

By: Ginny Rosenkranz

Hydrangea arborescens 'Annabelle' is a cultivar of the smooth hydrangea, a native shrub that is cold hardy in USDA zones 3-9. Plants grow in a mound 3-5 feet tall and 4-6 feet wide and prefer moist, well drained soils and afternoon shade. Smooth hydrangea bloom on new growth so they can be pruned back in late winter to encourage vigorous growth and a pleasant shape. These shrubs have deciduous leaves that are attached to gray brown stems in an opposite fashion. Each dark green 3-8-inch-long leaf is round to egg shaped with a sharply toothed margin. The underside of the leaves is a pale green, and in the autumn the leaves turn yellow. Strong

straight stems hold ‘Annabelle’s’ large clusters of flowers which are larger than the species, growing 8-12 inch across rounded heads or corymbs. If the spent blooms are pruned off, the plants can produce a second late summer bloom. The plants can bloom up to 2 months, starting as lime green balls that mature into bright white flowers, then fading into a pale green and last a soft tan in the autumn. As beautiful the flowers are, they are self-fertile or mostly sterile, and will not create seeds or appeal to pollinators. Because ‘Annabelle’ is a naturally occurring cultivar, it can still be called a native. The flowers of *Hydrangea arborescens* are in the lace cap design, with very tiny white fertile flowers in the center, surrounded by larger sterile flowers around the edges of the cap. These fertile flowers attract butterflies and other pollinators while the birds will enjoy the seeds. Diseases can include bacterial wilt, bud blight, leaf spots, mold, powdery mildew and rust. Insect pests can include aphids, mites, scale and nematodes. Plants tolerate dry or wet soils, rabbits and black walnuts.



Hydrangea arborescens ‘Annabelle’ can bloom up to two months.
Photos: Ginny Rosenkranz, UME

Pest Predictive Calendar “Predictions”

By: Nancy Harding and Paula Shrewsbury, UMD

In the Maryland area, the accumulated growing degree days (DD) this week range from about **271 DD** (Martinsburg) to **515 DD** (St. Mary’s City). 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.

- Viburnum leaf beetle – first egg hatch (**210 DD**)
- Azalea lace bug – egg hatch (1st gen) (**214 DD**)
- Birch leafminer – adult emergence (**215 DD**)
- Elm leafminer – adult emergence (**219 DD**)
- Roseslug sawfly – egg hatch / early instar (**230 DD**)
- Honeylocust plant bug – egg hatch (**230 DD**)
- Elongate hemlock scale – egg hatch / crawler (1st gen) (**232 DD**)
- Boxwood leafminer – adult emergence (**249 DD**)
- Hawthorn lace bug – first adult activity (**259 DD**)
- Spotted lanternfly – egg hatch (**270 DD**)
- Bristly roseslug sawfly – larva, early instar (**284 DD**)
- Imported willow leaf beetle – adult emergence (**290 DD**)

Hawthorn leafminer – adult emergence **(292 DD)**
 Andromeda lace bug – egg hatch **(305 DD)**
 Pine needle scale – egg hatch / crawler **(307 DD)**
 Cooley spruce gall adelgid – egg hatch **(308 DD)**
 Eastern spruce gall adelgid – **(308 DD)**
 Spirea aphid – adult / nymph **(326 DD)**
 Lilac borer – adult emergence **(350 DD)**
 Melon aphid – adult / nymph **(351 DD)**
 Spongy moth (formerly gypsy moth) – egg hatch **(373 DD)**
 Holly leafminer – adult emergence **(375 DD)**
 Hemlock woolly adelgid – egg hatch (2nd gen) **(411 DD)**
 Basswood lace bug – first adult activity **(415 DD)**
 Emerald ash borer – adult emergence **(421 DD)**
 Locust leafminer – adult emergence **(429 DD)**
 Honeylocust plant bug – egg hatch, early instar **(433 DD)**
 Fourlined plant bug – egg hatch, early instar **(435 DD)**
 Lesser peachtree borer – adult emergence (1st gen) **(468 DD)**
 Oak erricoccin scale (oak felt scale) – egg hatch / crawler **(469 DD)**
 Maskell scale – egg hatch / crawler (1st gen) **(470 DD)**
 Oystershell scale – egg hatch / crawler (1st gen) **(486 DD)**
 Minute cypress scale – egg hatch / crawler **(511 DD)**
 White prunicola scale – egg hatch / crawler (1st gen) **(513 DD)**
 Euonymus scale – egg hatch / crawler (1st gen) **(522 DD)**
 Bronze birch borer – adult emergence **(547 DD)**
 Potato leafhopper – adult arrival **(603 DD)**
 Black vine weevil – adult emergence **(607 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 May 1)

Annapolis Naval Academy (KNAK)	376
Baltimore, MD (KBWI)	388
College Park (KCGS)	379
Dulles Airport (KIAD)	434
Ft. Belvoir, VA (KDA)	430
Frederick (KFDK)	382
Gaithersburg (KGAI)	344
Greater Cumberland Reg (KCBE)	339
Martinsburg, WV (KMRB)	271
Millersville (MD026)	372
Natl Arboretum/Reagan Natl (KDCA)	503
Perry Hall (C0608)	316
Salisbury/Ocean City (KSBY)	365
St. Mary's City (Patuxent NRB KNHK)	515
Susquehanna State Park (SSQM2)	334
Westminster (KDMW)	422

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

Conferences

May 22, 2024

MAA Pest Walk

Location: CMREC, Ellicott City, MD

[Registration Information](#)

June 4, 2024

MNLGA Program: Focus on Garden Centers

Location: Ladew Gardens, Monkton, MD

June 5 and 6, 2024

Biological Control Conference for Greenhouses, Nurseries, and Landscapes

Location: Carroll Community College, Westminster, MD

[Registration via Eventbrite](#)

June 14, 2023

Eastern Shore Pesticide Recertification Conference

Location: via Zoom

[For more information and to register.](#)

After you register, you will be emailed the Zoom link.

June 20, 2024

UMD Extension and MNLGA Technology Field Day for Nurseries

Location: Ruppert Nurseries, Laytonsville, MD

June 28, 2024

Procrastinator's Pesticide Recertification Conference

Location: Montgomery County Extension Office, Derwood, MD

[Registration information](#)

September 17 and 18, 2024

Cut Flower Program

Locations: Central Maryland Research and Education Center, Ellicott City, MD and locations in Howard Co.

October 9, 2024

MNLGA Retail Day

Location: Homestead Gardens, Davidsonville, MD

Go to the [IPMnet Conference Page](#) for links and details on these programs.

Commercial Ornamental IPM Information

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

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Thank you to the Maryland Arborist Association, the Maryland Nursery, Landscape, and Greenhouse Association, Professional Grounds Management Society, NIFA, and FALCAN for their financial support in making these weekly reports possible.

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