UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **June 23, 2023**

In This Issue...

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), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)
Weed of the Week: Chuck Schuster (Retired Extension Educator) and Kelly Nichols (Extension Educator, Montgomery County)
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)

Strange Spring – Strange Plant and Insect Responses

By: Stanton Gill

Well, spring is officially in the past with the Summer Solstice on June 21. The early spring has created interesting situations with some plants and insects. We were conducting trials at the UMD greenhouse and drove through the Silver Spring area. We saw several white and pink flowering crape myrtles in bloom. Normally, we would not see this flowering until late July to mid – August.

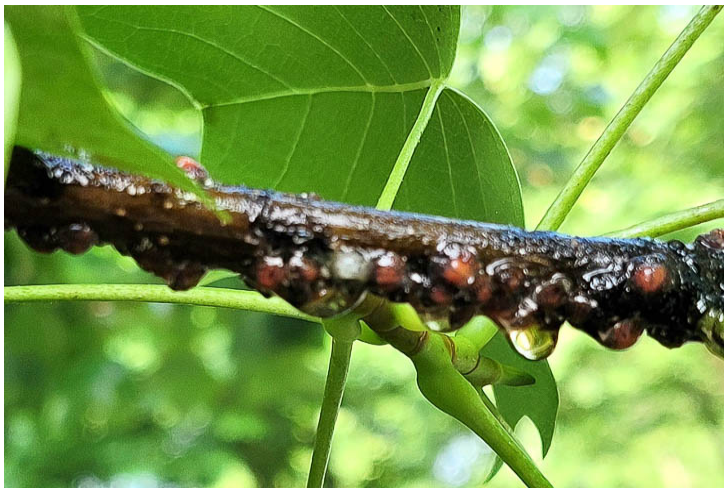
We had a flurry of activity from aphids this spring on a wide variety of plant material including herbaceous and woody plants. Activity was much, much higher than other years. Predaceous insect and parasitic wasp activity has picked up as aphid populations have been increasing.

In sites where we are looking for spotted lanternflies, we are finding an unusual high mortality among early instar nymphs. This part may just be from the dry weather during the two mini-droughts.

The combination of early spring and two mini-drought periods is resulting in out of normal sequence of events in the biological world this spring. Now that we have reached summer, let's see if this continues or self-corrects itself.

Soft Scale

Joe Estrada, SavATree, found active soft scale on tulip trees in McLean, VA. Joe noted that they had treated these trees in the spring with systemic bark and foliar applications, but are still getting heavy feeding and honeydew.



Soft scale females are producing a lot of honeydew this week. Look for crawlers soon.
Photo: Joe Estrada, SavATree

Good News on the Crapemyrtle Bark Scale

By: Stanton Gill

Several arborists, including Paul Wolfe, Luke Gustafson, and Kevin Nickle have been reporting large numbers of lady beetle larvae feeding on crapemyrtle bark scale. These predators are having a "heyday" on this introduced felted scale. Try to avoid using broad spectrum pesticides sprayed on the scale to reduce the chance of killing these beneficials.

***Hypoaspis* species of lady beetles also feed on scale insects.**
Photo: Luke Gustafson, The Davey Tree Expert Company

There are at least 15 lady beetle larvae on this crape myrtle. A few are marked with red ovals.
Photo: Kevin Nickle, Scientific Plant Service

Aphids, Honeydew, and Rain

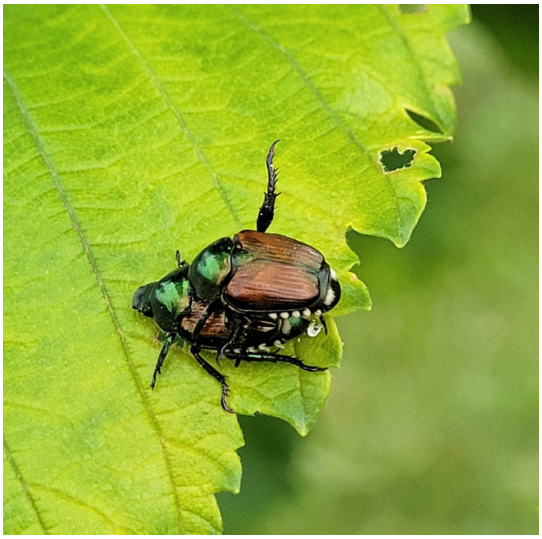
Luke Gustafson, The Davey Tree Expert Company, noted that "the rain has been a very welcome sight these past few days! It will be nice to have the rain wash off some of the honeydew from this season's high populations of aphids. On Monday, I saw these curbstrip red oaks in Baltimore City with so much honeydew that the asphalt below was darkened and sticky and the shrubs almost looked like they'd been sprayed with varnish." Predators such as lady beetles, syrphid fly larvae, and lacewings have increased in numbers along with the aphids.

Honeydew from aphids has covered foliage and dripped onto asphalt and sidewalks to make walking surfaces quite stickly
Photo: Luke Gustafson, The Davey Tree Expert Company

Also look for the pupal stages of lady beetles. The one on the left is in the process of pupating. It will darken to an orange pupa with black spots similar to the one on the right.
Photos: Suzanne Klick, UME

Japanese Beetle Adults

Marie Rojas, IPM Scout, found Japanese beetle adults this week in Gaithersburg. Activity is picking up as we move into July. Control options include Mainspring and Acelepyrn.

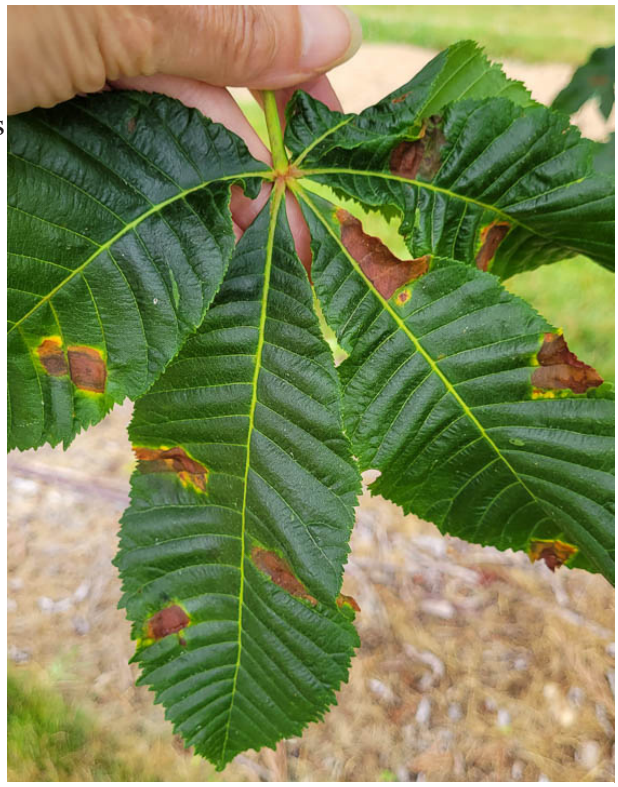


Adult Japanese beetles will be active for about the next six weeks. Photo: Marie Rojas, IPM Scout

Guignardia Leaf Blotch

Marie Rojas, IPM Scout, is reporting that Guignardia leaf blotch is starting to show up on red horsechestnut leaves. This disease is caused by the fungus *Guignardia aesculi*. This disease commonly causes browning of the leaves especially during years with wet springs. The foliar symptoms start as water-soaked areas which turn reddish-brown to brown with yellow borders. These lesions coalesce, causing large blotches which curl the leaves. By midsummer, the whole plant can appear scorched. The fungus overwinters in fallen leaves, producing spores for new infections in spring, so removal of leaves should be thorough. As with other leaf spot diseases, infection is enhanced by moist conditions. Improve air circulation to hasten leaf drying. It is usually not of concern to the health of the tree although young trees and nursery stock may suffer due to complete defoliation.

To prevent this disease, a fungicide would have to be applied at bud break and repeated through the wet period in spring which is not too practical with large trees. It requires reapplying at intervals specified on the label until conditions are no longer moist. For new plantings, select plants with resistance to Guignardia blotch such as bottlebrush buckeye (*Aesculus parvifolia*). Since it has been so dry, we have not see much acitivity of this disease this year.



Guignardia leaf blotch usually does not affect the overall health of mature trees, but young trees may be defoliated by this disease. Photo: Marie Rojas, IPM Scout

Box Tree Moth Traps

We have box tree moth traps out across the state. So far, we are not recieivng reports of acitvity.

Pine Bark Adelgids

Marie Rojas, IPM Scout, found pine bark adelgids feeding on the tips of several pine species in Montgomery County this week. Elaine Menegon, Good's Tree and Lawn Care, found them on newly planted Mugo pines in Hummelstown, PA. Jon Cholwek, Pogo Tree Experts, also found adelgids on pine branches in NW D.C. this week. They are sucking insects so they remove plant sap. Pine bark adelgid has several generations per year.

Look on the bark and larger branches of pines for fluffy white wax. It often starts at the base of needles. Black wingless adults will be within the wax along with yellow eggs. When populations are high, trunks of trees can be almost covered with white wax. Trees can generally tolerate relatively high levels of this pest.

Control: Pine bark adelgids are often kept at low populations by a number of different generalist predators (flower fly larvae, lady beetles). Horticultural oil can be applied now or at most times of the year to reduce populations of adelgids. The horticultural oil should help conserve the natural enemies to help prevent adelgid populations from returning to high levels. Wait for egg hatch if you decide to apply a chemical.

Trees can tolerate relatively high numbers of pine bark adelgids.
Photo: Marie Rojas, IPM Scout

Pine bark adelgid infestations are also found along larger branches.
Photo: Elaine Menegon, Good's Tree and Lawn Care

Slime Flux

By: Karen Rane, UMD Plant Diagnostic Lab and Dave Clement, HGIC

Slime flux (also called bacterial wet wood) is a condition where liquid sap oozes from wounds or cracks in the bark and runs down tree trunks. This problem is particularly common on oaks and elms, but is also found on maples, birches, and walnuts. The liquid may be foamy, and stains the trunk a dark color which can turn light gray when the liquid dries. The flow of liquid is caused by yeasts and bacteria that colonize wounds, and use the nutrients in tree sap for food. Gasses produced by these microorganisms will build up pressure within the wood, eventually forcing the sap through cracks in the bark. The liquid becomes colonized by additional microorganisms as it runs down the trunk or branch, often giving the material a strong odor. Some trees show slime flux every year with apparently little damage to the tree. In some cases, the presence of this material can slow callus development and delay wound closure.

There is no cure for trees with slime flux. Cultural practices to promote tree health, and proper pruning of branches to allow for rapid wound closure can help reduce the chances of slime flux development.

Fig. 1. Slime flux oozing from the trunk of a Siberian elm.
Photo: K. Rane, UMD

Fig. 2. Closeup of foaming slime flux.
Photo: UMD HGIC

Too Much Mulch

Jon Cholwek, Pogo Tree Experts, sent in a photos of two trees. They completed the work on a white oak tree on which they had to locate the root flare, remove girdlings roots, and remove excess mulch and soil. The other tree still had this work to be done around it. Overmulching continues to be done even though it causes serious problems for the trees in the landscape. For information on problems caused by overmulching and more on how to remedy the situation, see the Rutgers' University fact sheet.

The tree on the left had the excess mulch and soil removed to uncover the root flare; the work still needs to be done for the tree on the right.
Photos: Jon Cholwek, Pogo Tree Experts

Wildlife Preferences in Urban Setting

By: Stanton Gill

As an entomologist, I am used to seeing ants, wasps, and bees being attracted to soft drinks during the summer. Two weeks ago, we set out some date expired soft drink boxes with full sodas in them. They were left outside until we could empty them to put the cans in recycling. I was out of town for 2 days, and when I came back, an animal had opened the cardboard boxes with the sodas and pulled out cans of Mountain Dew, Orange soda, and Dr. Pepper. The animal chewed through the aluminum cans and evidently tasted each of the brands. For some reason, they appeared to prefer Dr. Pepper with the 6 cans with tooth puncture holes in them. Must have been a wildlife party.

Last weekend, we had a large farm party and had lots of empty soda cans. We put these out in the recycling bin the night before pick-up. An animal tipped over the large recycling container and extracted most of the empty soda cans. I put out a Hav-a-heart trap baited with a full can of Dr. Pepper, one with Orange Soda, one with Mountain Dew and one with Pepsi in the back part of the trap. In the morning I had captured a soda -junkie racoon. He had also punctured the can of Dr. Pepper. I would never had previously thought raccoons would be attracted to carbonated sugar water, but obviously sugar is a great draw for many species of wildlife beside wasps, ants, and bees. That said, make sure to tell your customers to watch out during summer picnics for wasps and bees trying to share carbonated, sugar-based soda this summer.

The next IPM Scouts' Diagnostic Session is June 28.

Go to our Conference Page for more information and to register.

Red Thread

Mark Schlossberg, ProLawn Plus, Inc. Mark noted that "It didn't take long for the red thread to kick in now that we have a few cloudy, dreary days." See the article in the June 2, 2023 issue of the IPM report.

The symptoms of the red thread disappear as temperature increases later in summer.
Photo: Mark Schlossberg, ProLawn Plus, Inc.

Brown Patch in Turf

Mike Baker, The Grounds Guys of Annapolis, found brown patch disease in a lawn in Bowie on June 20. He noted that it was the first sighting of the year for him. Brown patch also infects fine fescue, tall fescue, perennial rysegrass, and bentgrass. 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*.

Look for brown margins with tan centers on foliage infected with brown patch disease.
Photo: Mike Baker, The Ground Guys of Annapolis

Powdery Mildew

Elaine Menegon, Good's Tree and Lawn Care, reported powdery mildew infection on crape myrtles on June 20 in Hummelstown, PA. Until this week's rain, sunny days and cool nights were ideal conditions for infection. At a nursery this week, we saw powdery mildew infection occurring on fringe tree.

Powdery mildew infection on crape myrtle.
Photo: Elaine Menegon, Good's Tree and Lawn Care

MDA Announces New Option to Take Pesticide License Exams at Home

The Maryland Department of Agriculture in partnership with Everblue, an innovative technology company that specializes in digitizing and automating processes, have introduced the option of online pesticide certification exams to provide greater convenience, access, and flexibility for exam candidates.

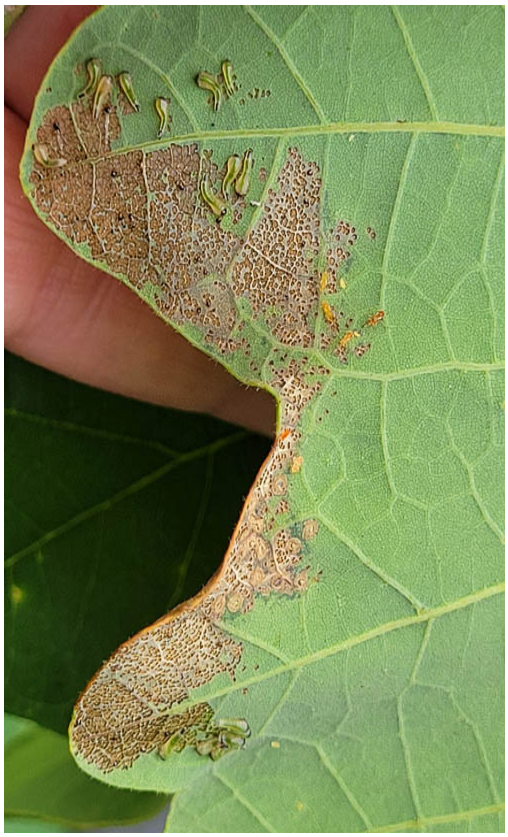
"Offering a simplified certification procedure for these exams is an important step towards improving the pesticide licensing procedure as well as customer service," said Maryland Department of Agriculture Secretary Kevin Atticks. "The department is excited to begin this partnership and offer these new tools to registrants." Using Everblue's proprietary registration and test delivery system, certification candidates will be able to register online for their state pesticide exam and will be immediately enrolled into their on-demand tests. After a systems check of their computer, registrants will be able to complete their licensure exam from home. Prior to this partnership, candidates were required to test in person and choose from scheduled test dates that occurred every other month.

Candidates will still have to apply with the state before they can register and take a test. After receiving approval from the state, a candidate will have the option to test remotely with Everblue or follow the traditional path of paper-based testing in person.

For more information about Maryland's remote pesticide certification and licensure, contact Robert Hofstetter at rob.hofstetter@maryland.gov or Alex Lehmann at alexander.lehmann1@maryland.gov.

Oak Slug Sawflies

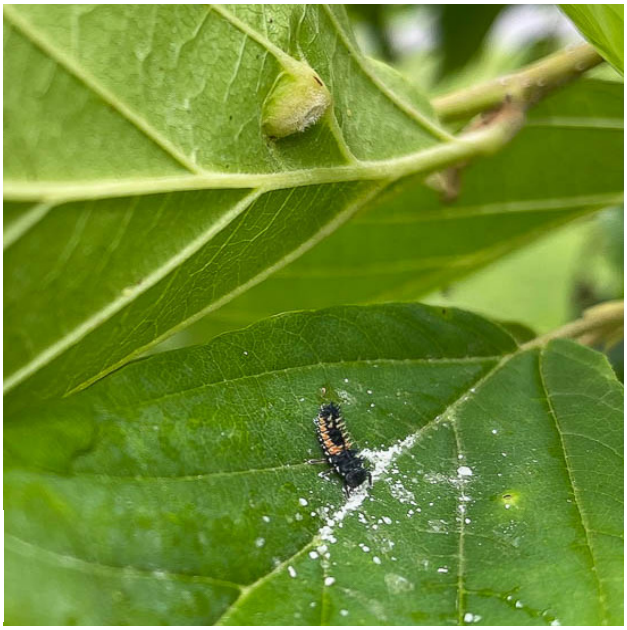
Marie Rojas, IPM Scout, found slug sawflies feeding on the leaves of several oak species in Montgomery County this week. Look on the foliage for slug sawfly larvae that are slimy, have shorter legs, and more than five pairs of prolegs. Oak slug sawfly larvae skeletonize the undersides of the leaves.
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.



There are several generations of oak slug sawfly each year.
Photo: Marie Rojas, IPM Scout

Lady Beetle Larvae on Witchhazel

Josh Warner, Antietam Tree & Turf, found a witchhazel tree covered with lady beetle larvae and pupae. Josh also found the galls of the witchhazel gall aphids. The alternate host of these aphids are beech trees. There are plenty of lady beetles present to keep the aphids in check. The lady beetle larva is feeding on sap oozing from the leaf.



Lady beetle larvae are active on this witchhazel that has an infestaion of gall aphids.
Photo: Josh Warner, Antietam Tree & Turf

Field Trials in Summer 2023

Field Research Team: Stanton Gill (entomologist) and David Clement(pathologist), University of Maryland Extension, Brian Kunkel (entomologist), University of Delaware Extension, and Kirk Floyd, Spray Drone Pilot

Late in June into July, we will be investigating two systemic fungicides from Syngenta Company, applied using a spray drone for control of powdery mildew in nurseries. We will also be looking at application of Talus, insect growth regulator, and Mainspring, systemic insecticide, using a spray drone, for control of white prunicola scale in a working nursery. Brian Kunkel, University of Delaware Extension, and I will be working with Lallemand Specialties Company, to test out their formulation of *Metarhizium bunneum*, called LALGuard M52, for potential control of spotted lanternfly in working nurseries.

Beneficial of the Week

By: Paula Shrewsbury

Weed biological control: the good and the bad of weevils and thistle

Last week, I was hiking at the Natural Bridge State Park in Virginia. The hike was along the Cedar Creek River and the scenery and biodiversity of plants and insects was impressive. There was a wildflower garden on the edge of the visitor's parking lot that caught my attention. Although the garden was abundant with flowers, it also had thistle growing in it. While thistle produces a pretty purple flower, it is an invasive weed. I believe the particular thistle I saw was the spiny plumeless thistle, *Carduus acanthoides* (see image). This thistle and others, such as the musk thistle, are introduced Eurasian weeds that invade several habitat types such as pastures, croplands, along highways, and other disturbed and managed habitats. Thistles are successful weeds due to their abundant

The spiny plumeless thistle, *Carduus acanthoides*, invading the edge of a wildflower meadow.
Photo by P.M. Shrewsbury, UMD

seed production, seed longevity, competitiveness of the plants, and the lack of natural enemies in its introduced range.

In response to the noxiousness of these thistles, the **thistle-head weevil, *Rhinocyllus conicus*,** (Coleoptera: Curculionidae), which is native to parts of Europe, North Africa, and western Asia, was introduced into North America to provide biological control of thistle. *Rhinocyllus* was first introduced into Canada in 1968, followed by introductions into California, Virginia, and Montana in 1969. Since then, populations of *Rhinocyllus* from Virginia were redistributed to other states. I had read about this biological control program and as I examined the flower heads and buds of the thistles, I found that the majority were infested with adult thistle-head weevil. Adult weevils were active and mating on the flower heads and buds, and I could see the buds had been damaged by the weevils.

A mating pair of thistle-head weevils, Rhynocyllus conicus, on thistle.
Photo by P.M. Shrewsbury, UMD

The thistle-head weevil adults are about ½" (10-15 mm) in length. They are brown with yellow hairs, appearing as spots, on their wings, and as with some weevils they have a somewhat blunt "snout (see images). The thistle-head weevil overwinters as an adult and becomes active around mid to late April. Each female oviposits from 100 to 200 eggs and the eggs are laid in the bracts of developing thistle buds. After hatching, the larva feed through the bracts into the buds. Larval feeding damages the buds and prevents the production of seeds. The larvae pupate in the bud and after about a week the adults will emerge. These new adults move off of the plants and find a protected location to spend the rest of the summer and overwinter.

An adult thistle-head weevil, *Rhynocyllus conicus*, showing its blunt snout.
Photo: P.M. Shrewsbury, UMD

The *good news* is that thistle-head weevil can be an effective biological control of introduced thistle. The *bad news* is that it has been determined that the thistle-head weevil also attacks thistles native to North America. Since the release of thistle-head weevil, social and environmental shifts in values and the greater knowledge of natural enemy / plant dynamics have led to changes in the criteria that USDA requires to approve releases of introduced biological control, including not just weed biological controls but also natural enemies of insects and diseases. In 2000, the USDA-APHIS cancelled all permits for interstate movement of the thistle-head weevil.

A flower bud of spiny plumeless thistle showing damage caused by thistle-head weevils, *Rhynocyllus conicus*.
Photo: P.M. Shrewsbury, UMD

Weed of the Week

By: Kelly Nichols, UME-Montgomery County

This week's weed is ladysthumb (*Polygonum persicaria*). Ladysthumb is a summer annual that can be found in landscape, nursery, and field settings. It prefers moist soils. Ladysthumb can grow up to three and a half feet; in some settings, it can grow laterally. Leaves are alternately arranged on the stem, are lanceolate to egg-shaped, and are two to six inches long and up to two inches wide. Leaves often have a purple spot in the middle; this spot looks like a lady's thumb, hence the name. The white to pink flowers of ladysthumb, are easily spotted during late summer into fall (Figure 1).

Figure 1. Ladysthumb's pink flowers in the landscape.
Photo: Kelly Nichols, UME Montgomery.

In the collar region (the area where the leaf meets the stem), there is an ocrea, which is a piece of tissue that wraps around the stem. There are a few stiff hairs at the top of the ocrea (Figure 2). Pennsylvania smartweed (*Polygonum pensylvanicum*) looks almost identical to ladysthumb, but does not have the stiff hairs on the ocrea. The ocrea is characteristic of plants in the buckwheat family. (Japanese knotweed [*Polygonum cuspidatum*] and prostrate knotweed [*Polygonum aviculare*] are also members of this plant family.)

Roots are fibrous with a shallow taproot. Stems are a reddish color with enlarged nodes. The flowers are grouped in spikes at the ends of stems. The fruit is a black achene (a small, dry, one-seeded fruit that does not open to release the seed).

Figure 2. The ocrea (bottom, white arrow) and stiff hairs (top, yellow arrow) on ladysthumb.
Photo: Kelly Nichols, UME Montgomery.

Figure 3. Ladysthumb foliage.
Photo: Kelly Nichols, UME Montgomery.

Cultural control can be achieved in some settings by monitoring irrigation and redirecting water such as with splash blocks. Early in the season, it pulls out very easily. As a summer annual, if caught early, organic products that contain citric acid and clove oil (Burnout) as well as some with ammoniated soaps of fatty acid (Pulverize) can work very well. Control of this weed can be achieved in landscape settings using pre-emergence materials including oryzalin (Surflan), isoxaben with trifluralin (Snapshot), and isoxaben (Gallery). Remember that it is a summer annual, so timing of application is important. In turf settings, post-emergence products for broadleaf plants containing 2,4D products will control it. In nursery settings in the row, post-emergence use of glyphosate can be used, but remember care needs to be used to prevent sucker contact and or trunk contact. Pre-emergence products are less potentially damaging to the desired species.

Plant of the Week

By: Ginny Rosenkranz

Ilex pedunculosa - longstalk holly is not a native holly, but it was introduced to me at the Cut Flower Conference this past week and I was so impressed with the soft glossy dark green evergreen leaves, I just had to share! The small trees (or tall shrubs) grow 10-20 feet tall and 10-15 feet wide and thrive in full sun to part shade and are cold tolerant in USDA zones of 5-8. Like most evergreen hollies, longstalk holly needs to be protected from strong winter winds that can pull the water out of the leaves, and if the ground is frozen the plants cannot replace the water, leading to leaf burn. The leaves are narrow and have an entire margin, which means that this is a holly with soft foliage and no spines! The dioecious female and male trees produce fragrant whitish-green flowers in June, with the pollinated female flowers maturing into ¼ inch bright glossy red berries that dangle gracefully on 1 ½ - 2-inch stalks called a peduncle. The ripe red berries last through most of the winter season giving this beautiful plant 4 seasons of interest in the landscape before they are eaten by birds. Plants also need moist but well drained soils, and can become drought tolerant once established. Plants are very tolerant of pruning, which makes them a wonderful woody cut flower and a nice addition to winter holiday wreaths. Longstalk holly needs to have at least one male within 200 feet of the females, and can be planted as an informal hedge, as a part of a tapestry hedge or as a specimen small tree. Once planted, longstalk holly is not tolerant of root disturbance, so plan before you plant this lovely evergreen tree. No serious insect or disease were listed.

***Ilex pedunculosa* (Longstalk holly) berries**
Photo: Sue Hunter, Heartwood Nursery

***Ilex pedunculosa* (Longstalk holly) foliage**
Photo: Ginny Rosenkranz, UME

Degree Days (as of June 21)

Abingdon (C1620)	1080
Annapolis Naval Academy (KNAK)	1211
Baltimore, MD (KBWI)	1266
College Park (KCGS)	1183
Dulles Airport (KIAD)	1193
Ft. Belvoir, VA (KDA)	1138
Frederick (KFDK)	1111
Gaithersburg (KGAI)	1051
Gambrils (F2488, near Bowie)	1158
Greater Cumberland Reg (KCBE)	959
Perry Hall (C0608)	1023
Martinsburg, WV (KMRB)	816
Natl Arboretum/Reagan Natl (KDCA)	1466
Salisbury/Ocean City (KSBY)	1198
St. Mary's City (Patuxent NRB KNHK)	1483
Westminster (KDMW)	1261

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 calculatorThresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

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 **816 DD** (Martinsburg, WV) to **1483 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.

Oak lecanium scale – egg hatch / crawler **(789 DD)**
Rhododendron borer – adult emergence **(815 DD)**
Japanese maple scale – egg hatch / crawler (1st gen) **(829 DD)**
Dogwood borer – adult emergence **(830 DD)**
European elm scale – egg hatch / crawler **(831 DD)**
Cottony maple scale – egg hatch / crawler **(872 DD)**
Winged euonymus scale – egg hatch / crawler **(892 DD)**
European fruit lecanium scale – egg hatch / crawler **(904 DD)**
Cryptomeria scale – egg hatch / crawler **(937 DD)**
Azalea bark scale – egg hatch / crawler **(957 DD)**
Hibiscus sawfly – larva (early instar) **(1015 DD)**
Japanese beetle – adult emergence **(1056 DD)**
Fletcher scale – egg hatch / crawler **(1105 DD)**
Spotted lantern fly – adult flight **(1112 DD)**
Fall webworm – egg hatch (1st gen) **(1142 DD)**
Indian wax scale – egg hatch / crawler **(1145 DD)**
Oriental beetle – adult emergence **(1147 DD)**
Peachtree borer – adult emergence **(1181 DD)**
Green June beetle – adult emergence **(1539 DD)**
Pine needle scale – egg hatch / crawler (2nd gen) **(1561 DD)**
White prunicola scale – egg hatch / crawler (2nd gen) **(1637 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.

Conferences: Go to the IPMnet Conference Page for links and details on these programs.

June 28, 2023 (1-3 p.m.)
IPM Scouts' Diagnostic Session
Location: CMREC, Ellicott City, MD

July 26, 2023 (1 - 3 p.m.)
IPM Scouts' Diagnostic Session
Location: CMREC, Ellicott City, MD

October 11, 2023
FALCAN Truck and Trailer Seminar
Location: Urbana Fire Hall, Urbana, MD

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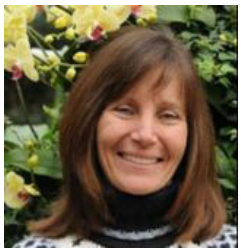

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Thank you to the Maryland Arborist Association, the Landscape Contractors Association of MD, D.C. and VA, the Maryland Nursery, Landscape, and Greenhouse Association, Professional Grounds Management Society, FALCAN and USDA NIFA EIP Award # 20217000635473 for their financial support in making these weekly reports possible.
Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.