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IPMnet
Integrated Pest
Management for
Commercial Horticulture
extension.umd.edu/ipm

If you work for a commercial horticultural business in the area, you can report insect, disease, weed or cultural plant problems (**include location and insect stage**) found in the landscape or nursery to sgill@umd.edu

Coordinator Weekly IPM Report:

Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Greenhouse and Managed Landscapes, sgill@umd.edu. 410-868-9400 (cell)

Regular Contributors:

Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant

Disease Information: Karen Rane (Plant Pathologist) and David Clement (Extension Specialist)

Weed of the Week: Chuck Schuster (Retired Extension Educator)

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

Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)

Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

Ambrosia Beetle Activity

By: Stanton Gill

Like the stock market, everything is heating up this week and with this heat, we are seeing a big increase in ambrosia beetle activity from *Xylosandrus germanus* and *Xylosandrus crassiusculus* this week. On April 7, Marie Rojas, IPM Scout, did not find any beetles at a site in Frederick County. She did find a lot of beetles in a trap (that had been emptied on Monday) in Gaithersburg on April 8.

At CMREC on April 7, there were 12 *Xylosandrus germanus*, 2 *Xylosandrus crassiusculus*, and 6 *Xyleborinus saxesenii*. There were 4 *Xylosandrus germanus* and 3 *Xyleborinus saxesenii* in the trap in Brookeville.

Today, there were two *Xylosandrus germanus* ambrosia beetles in the trap here at CMREC and none in the trap in Brookville.

Monitor trunks of trees for wet areas to indicate beetles are getting into the trees. Then, apply bifenthrin or permethrin to the trunks of trees. Cool periods will slow down the activity of ambrosia beetles and give more time to apply treatments.

Cold Injury to Fruit Trees and Pollinators Are Very Active This Week

By: Stanton Gill

On Sunday, April 4, I was examining some of the oriental plum flowers to assess the amount of damage from the 25 – 26 °F weather on April 1 and April 2. In Westminster, I saw very little damage, but since it is slightly colder at the 980 ft elevation of my orchard the blooms were under 5 % open during the cold period. Peaches were still tight in the bud so little injury occurred. The warmth of April 4 made many of the oriental plum blooms open and fortunately, there was very little damage. This may not be the case if your customers have oriental plums and peaches that were wide open in Howard County, Montgomery County, Baltimore City and County, Anne Arundel County, Prince George's County and the southern part of Frederick County. You will want to note this damage because your customers will come back to you in June and ask why there is no fruit on their oriental plum and peach trees. The cold front will long be forgotten. European plums and beach plums open their blooms after oriental plums, so many of these flowers may not have been damaged by the cold front.

On Sunday, it was in the 60s, and pollinators were very active at mid-day. I saw several syrphid flies pollinating blooms on oriental plums. Native bees were extremely active. Native bee pollinators are often overlooked with most people focusing on the non-native honey bee that is cultivated by many bee keepers. Nationwide there are upwards of 4,000 native bee species in North America, including about 50 different bumble bee species. Native bees are generally docile, *go-about-my-business* bees. Many native bees do not have a stinger or very rarely use their stingers because they are not defending a collective hive filled with honey, where such drastic life-threatening defense strategies make sense. Their pollination services, however, are critical for trees, flowers, and shrubs. On Sunday, I saw mason bees and native bumbles very active on the flowers in the orchard.

Native bees, such as bumble bees, mason bees, and carpenter bees are very effective pollinators and will visit flowers just as efficiently regardless of flower density. Over the years, I have noted that native species appear to specialize on trees blooming earlier or later than the primary bloom period. Some people have reported that native bees will avoid the areas honey bees gravitate toward, possibly because honey bees can be more aggressive and territorial than native bees. The presence of both, however, is a winning combination for maximizing pollination services. It is a nice activity on a sunny day to watch these pollinators working away and ensuring a well formed fruit from complete pollination.

Cold Injury to Landscape and Nursery Plants

By: Stanton Gill

April 1 and April 2 were two very cold nights with the temperatures hovering in the mid-twenties. Flowers on saucer and star magnolias were damaged during this cold snap. We would like input if you have photos of cold damage. Please send them to Dave Clement at clement@umd.edu.



Flowers of saucer magnolias were damaged during the recent cold period

Photo: Mark Schlossberg, ProLawn Plus, Inc.

Diplodia Tip Blight

By: D.L. Clement and K.K. Rane

This disease caused by the fungus *Diplodia sapinea* most commonly attacks two and three needle pines and in Maryland is most severe on Austrian pine, *Pinus nigra*. The pathogen overwinters in dead needles, infected stems and cones on trees and on the ground. Spring infections that lead to tip blight and dieback start on terminal buds and newly elongating shoots (candles). Wounded stems and second year cones may be infected later in spring and summer. The fungus causes the most damage to pines in urban sites that are stressed by drought, compacted soil, shade, insect attack, hail damage and sometimes late frost injury.

Symptoms on chronically infected pines include clusters of dead branches with attached straw colored needles and lower branch dieback progressing up the tree. Spore structures appear as black dots on the bases of dead needles, sometimes hidden under the fascicle, and on second year and older cones. Cones serve as a main source of infection because they remain on branches, dispersing spores during rainfall to infect newly developing shoots.

Avoid planting highly susceptible trees, like Austrian pine. Cultural practices to maintain tree health (like irrigation applied to the roots during dry weather) may help reduce damage from this disease. Older diseased trees that have extensive dieback will not re-gain ornamental value and should be removed. On high value young trees, fungicides applied in spring by landscape professionals may help manage this disease, but is usually not a long-term solution. Timing of fungicide application is critical to protect new shoots starting at bud swell through maturation of the new growth.



Figure 1. Diplodia tip blight on Austrian pine. Spores from dead shoot and infected cone (yellow arrows) will be splash-dispersed to bud (blue arrow) during spring rainfall, infecting newly emerging shoots.

Photo: Karen Rane, UME



Figure 2. Black spore structures (pycnidia) of Diplodia sapinea on an infected cone.

Photo: David Clement, UME-HGIC

Boxwood Leafminer

By: Stanton Gill, Nancy Harding, and Paula Shrewsbury

We are getting in emails and calls about boxwood “looking terrible”, foliage wise, at this time of year. Much of this awful looking foliage is tied into boxwood leafminer, *Monarthropalpus flavus*, damage. In Bowie on April 8, pupae of the boxwood leafminer were found in leaf blisters on a boxwood (*Buxus sempervirens* ‘Pyramidalis’). The accumulated growing degree days in Bowie on 4/8 was 164 DD and based on our Pest Predictive Calendar, boxwood leafminer adult emergence can occur when the growing degree days are near or at 249 DD.

We examined several branches of boxwood at CMREC this week. Several people have reported that the larvae feed throughout the summer and fully develop into pupae by the winter at which point they tend to go dormant within the leaf tissue. We examined boxwood foliage from boxwood from a site in Woodbine of Maryland on Tuesday, April 6th. We dissected open several leaves to see what stage the boxwood leafminer was in presently. We found both pupae and many late instar larvae of the boxwood leafminer. Larvae are still active in April but should be pupating fairly soon. The question has come up is it worth trying to kill them at this time of year.



Boxwood leafminer larvae feeding damage on boxwood
Photo: Nancy Harding, UMD



Boxwood leafminer larvae are still present in some leaves
Photo: Steve Clancy, Town Creek Landscaping



Boxwood larvae are starting to pupate (the orange pupa is on the left and the yellow larva is on the right)

Adults emerge in the spring as temperatures warm and the spring flush of boxwood leaves emerge. This is still about 3 to 4 weeks out. Since they are late instar larvae and pupae at this point, you are not going to obtain control with a pesticide application in April. When the adults emerge and mate, the females will lay about 20 eggs each, per leaf. After 14 to 21 days, these eggs will hatch into legless maggots or larvae and begin feeding on leaf tissue from within the leaf.

I asked Dave Shetlar, retired from OSU to comment on boxwood leafminer control. Here are his comments:

“In Ohio, the boxwood leafminer larva hatches and feeds for a couple of weeks, then goes into a summer aestivation period. It then resumes feeding in mid- to late September and feeds until regular freezing temperatures arrive. In early spring, it was mid-March this year, the larvae begin to finish their feeding and greatly enlarge the blisters. They then pupate (I saw some yesterday that looked like prepupae) in mid-April to emerge as adults in early May. There are several studies that have been publicized where imidacloprid, applied in February through April gets into the new foliage and kills the newly hatched larvae before they go into aestivation. Likewise, the same application made in August into September gets the oversummered larvae as they begin the fall feeding. I’m not a fan of the really early applications as this can be a risk to pollinators, but I’ve seen excellent control of the larvae when imidacloprid is applied after spring bloom. Better yet, we know that some of Ohio’s landscape managers are giving high marks to Safari applied in late April through May to control the newly hatched larvae.

In short, I wouldn’t try to target the overwintered larvae or pupae as they have already done the damage they are going to do to last year’s leaves. The idea is to protect the new flush of growth.”

Mike Raupp, UMD - Professor Emeritus, added these comments:

“We also found that applications of Avid would provide control equal to Merit when applied at early in the season just after oviposition. The added benefit with Avid is suppression of spider mites and reduced concerns with pollinators and neonics.”

**Kevin Chase,
Bartlett Tree Research Laboratory sent these comments:**

“In late September of 2018, I applied a foliar treatment of imidacloprid and got almost total knockdown and didn’t have any spider mite problems the following year. I much prefer this treatment over a pre-bloom treatment. We encourage our arborists to conduct this treatment over a systemic treatment when possible now.”

Other Control Measures: Encourage natural enemies such as green lacewings and spiders. Use boxwood cultivars that are more resistant to boxwood leafminer. Mechanical controls can reduce populations. Prune the foliage before adults emerge, or if they have already emerged wait until adults are done laying eggs in the leaves to prune.

For more information go to:

<http://bugoftheweek.com/blog/tag/Boxwood+leafminer>
<https://extension.umd.edu/resource/boxwood-leafminer-shrubs>

Aphids on Japanese Maple

Ross Fornaro, Naturalawn of America, reported that a Japanese maple tree is covered with aphids this week. Aphids are active on maples when the leaves start to emerge. There usually is not too much damage. If populations are high enough that treatments are necessary, insecticidal soap or Endeavor (a stylet blocker) have less impact on beneficials.



Aphids are covering this Japanese maple tip as the leaves are getting ready to emerge

Photo: Ross Fornaro, Naturalawn of America

Indian Wax Scale

Chris Ward, sent in a photo of Indian wax scale on China Girl holly in Lafayette Hill, PA. Chris also saw a bad infestation of wax scale this spring on inkberry holly and quince. Chris noted that it was somewhat interesting because wax scale is considered to be more of a Southern problem and the winter was pretty cold this year.



Indian wax scale was found on a holly this week in PA

Photo: Chris Ward

Gymnosporangium Rust Alert

The warm weather of the last couple of days combined with the rain last night made conditions just right for the development of orange jelly-like structures (telia) of the Gymnosporangium rusts, that David Clement and Karen Rane wrote about in last week's IPM Alert. Doug Stagmer, Shorb Landscape Company, saw activity this morning on junipers in a landscape in NW Washington, D.C. and Dave Clement, UME-HGIC, is also seeing this development in Carroll County today.

Spores from these junipers will infect nearby susceptible broadleaf cultivars/varieties of hosts like apple, crabapple, hawthorn, and amelanchier. If you haven't planted cultivars that are resistant to rust diseases, it's time to begin applying protectant fungicides to suppress infection on high value susceptible broadleaf plants.

Expect to see telial galls on junipers throughout the state over the next week or so if we continue to get rainy weather with moderate temperatures.



Gymnosporangium rust is becoming active this week throughout the area

Photo: Doug Stagmer, Shorb Landscape Company

Scale Insects

There have been quite a few reports of scale this week. We will let you know when various scale insects are in the crawler stage so you can time insecticide applications appropriately.

Pine Needle Scale

David Freeman, Oaktree Property Care, found pine needle scale this week. Pine is the main host, but it has been observed on *Abies* (Spruce), *Pseudotsuga*, and *Tsuga* (hemlock). First generation crawlers are active in early May at about 307 degree days.

Obscure Scale

Marie Rojas, IPM Scout, is finding obscure scale on *Quercus rubra* and *Q. coccinea* in Montgomery County and Frederick County. Obscure scale is an armored scale found on many pin oaks in the landscape, but is also found on a few other species of oak such as white oak. It has been reported on grape, dogwood, walnut, *Prunus* spp, pecan, and hickory. Obscure scale has an extended crawler period starting in July (at about 1774 degree days). Marie is also seeing twice-stabbed lady bird beetles at both sites.



Twice-stabbed lady bird beetles feed on various scale species

Photo: Marie Rojas, IPM Scout

Gloomy scale

Marie Rojas, IPM Scout, is finding gloomy scale on *Acer rubrum* in Gaithersburg this week. Look for crawlers in June to early July.

Japanese Maple Scale

Marie Rojas, IPM Scout, is seeing a lot of Japanese maple scale at all the sites she is scouting in Montgomery County and Frederick County. Marie noted that they seem to like the trunks that are also covered with lichen. Egg hatch for the first generation is late May/early June at about 829 degree days. Marie is also seeing lady bird beetles feeding on them.



**Gloomy scale is difficult to detect against the light-colored maple bark
Photo: Marie Rojas, IPM Scout**



**Japanese maple scale covering the trunk (left) and lady bird beetles feeding on them (right)
Photo: Marie Rojas, IPM Scout**

White Peach Scale

Ross Fornaro, Naturalawn of America, found white peach scale on a potted mulberry tree in Hanover, PA this week. This scale is a general feeder and can be found on several species of plants including holly, privet, cherry laurel, skimmia, mulberry, catalpa, and chinaberry. The first generation of crawlers occurs in early to mid May.



**White peach scale is coating the trunk of this potted mulberry tree
Photo: Ross Fornaro, Naturalawn of America**

Damage on Cherry Laurel

David Freeman, Oaktree Property Care, sent in photos of cherry laurels with what looks like damage from deer feeding. Is anyone seeing feeding damage on this plant? As David noted in his email, "If the deer are going to eat this we are all going to be in trouble."



Feeding damage on cherry laurel
Photo: David Freeman, Oaktree Property Care

Do Cicadas Do Anything Good and What are Brood X Periodical Cicadas Doing This Week?

By: Paula Shrewsbury

In the past IPM newsletters, Stanton Gill and I have been providing you with information about Brood X Periodical Cicada life cycle, what to expect, and measures to protect small, newly planted trees from oviposition (egg laying) damage. We will continue to provide additional cicada information and updates on their activity. Today I want to focus on the ecological benefits of periodical cicadas and what cicada activity we are seeing to date.

I am often asked “*Do periodical cicadas do anything good?*” The short answer is “yes”. Cicadas play an important role in the food chain. They provide significant nutrient contributions to both plants and the animals that eat them. As trillions of Brood X nymphs emerge in 15 states in the eastern U.S., they will molt (shed their skins) and become adults. This means trillions of cicada shed skins (exoskeletons) will be on the ground where they will break down and return nutrients back to the trees from which they came. Similarly, later in June when trillions of adult cicadas have completed their life cycle and die, their bodies also decompose and return nutrients back to the soil. In addition, as cicada nymphs work their way up to the soil surface to escape after 17 years underground, they burrow holes (trillions again) to the surface. Cicada exit holes aerate the soil beneath trees and improve rainwater infiltration. Some people collect the cicada shed skins and adult bodies and add them to their compost facilitating the recycling of nutrients from the cicadas.

Periodical cicadas also provide an abundant food resource for lots of animals the year they emerge. Many small mammals like skunks, raccoons, squirrels, and rodents eat cicadas as do amphibians, reptiles, birds, and fish -- even humans, and other insects eat cicadas! You would think with so many animals eating cicadas that their populations would crash. This does not happen with periodical cicadas. The major form of defense for

periodical cicadas is **predator satiation**. Cicadas emerge synchronously in extremely large numbers. There are so many cicadas that every predator that wants to eat a cicada can fill their belly until they can eat no more, and there will still be enough cicadas to carry on the species.

What are Brood X Periodical Cicadas doing this week?

This week there have been several sightings of cicada holes under trees. Peak emergence of cicada nymphs (immatures) is about 5 weeks (give or take) away. About a month or so prior to emergence, the nymphs begin burrowing to the soil surface in preparation for emergence. It seem as if the nymphs burrow a gallery up to the surface, check things out, and then go back down to wait for the soil temperature to reach 64 °F – their cue it is time to emerge! The earliest holes we know of this year were found in College Park, MD around March 10th. This past week there have been several sightings of holes in Columbia and Rockville MD, and additional holes in College Park. I have also seen a few more locations where animals have dug up turf or soil to feed on the nymphs that are only about 10-12” deep. I believe a fox was digging in my back yard for nymphs.

For more information on Brood X periodical cicadas see:

YouTube on “*How to net a small tree to exclude cicadas*” can be found at:

<https://www.youtube.com/watch?v=X4vjvdfnMM>

The Department of Entomology and its Cicada Crew (Drs. Shrewsbury and Raupp, and a group of graduate students) have created a [Cicada Crew UMD website](#) that answers questions about Periodical Cicadas and will help everyone learn more about these amazing insects. Please explore this website and join in the excitement about the upcoming Brood X Cicada emergence! The site has FAQ and additional Resources sections that will help Green Industry professionals and Master Gardeners and Extension people address questions from the public. To access the website go to: <https://CicadaCrewUMD.weebly.com> OR Google Cicada Crew UMD.



As periodical cicada shed skins and bodies decompose, they return significant nutrients back to the trees from which they came.

Photo: M. J. Raupp, UMD



Cicada emergence holes over a square foot of ground.
Photo: M.J. Raupp, UMD



Cicada emergence hole with a mud turret on top of it. Mud turrets often are found in wet soils.
Photo: from CicadaMania.com



Digging damage from an animal searching for periodical cicada nymphs in the soil.
Photo: P.M. Shrewsbury, UMD

Plum Curculio

By: Stanton Gill

With many of the plums, pears, apples and peaches in bloom this week we are finding plum curculio, *Conotrachelus nenuphar* (type of native weevil) on yellow sticky cards in the canopy of the plants. For the last two weeks, we have found them hanging out under the fruit trees before bloom. When bloom occurs, most of them are found in the canopy of the tree. The females will start ovipositing into the fruit in the next week or so. Avault insecticide is labeled on fruit trees and very effective if your timing is right. You might need to reapply 10 days to 14 days after the first application, depending on how long they are active. This weevil will hit small, newly developing fruit.

Ground Nesting Bees Active this week

Bob Mead, Mead Tree and Turf Company, sent in pictures of a hundred or so holes in his nursery fields. These are holes from ground nesting bees, which Paula Shrewsbury mentioned in last week's IPM alert. Bob said they were very busy flying over the nursery on Tuesday.



Ground nesting bees are active in turf this week
Photos: Bob Mead, Mead Tree and Turf Company

Damage Continues in Turf Areas

Kevin Nickle sent in photos of damage to turf. Raccoons, skunks, and other animals are digging to get to food sources such as cicada nymphs.



Animals searching for food are still damaging turf areas
Photo: Kevin Nickle

Farmland Being Preserved

By: Stanton Gill

Here is an interesting story about farmland and the third richest man in the USA. Bill Gates is now being called “Bill the Farmer”. He and his wife Melinda purchased a large hunk of farmland in the Yakima Valley of Washington State. In January of 2021, US magazine. The Land Report published that Bill and Melinda Gates have amassed the [largest portfolio of private farmland in the US](#), comprising an estimated 242,000 acres. It is good that farmland is being preserved and recognized for its importance. Wise people are buying farmland and recognizing the importance of agriculture to the USA economy.

Beneficial of the Week

By: Paula Shrewsbury

Multi-colored Asian Lady Beetles are moving out of their overwintering sites (ex. your homes)

As the weather warms, insects that have adapted to urbanized environments and found our homes nice places to spend the winter, now want to get outside. One of which is the multi-colored Asian lady beetle (a.k.a. harlequin lady beetle) (*Harmonia axyridis*). In natural environments, they overwinter in rocky outcroppings on the sides of mountains. Here in urban areas, many of you have seen them on your walls and windows as they move into your home for the winter and out for spring. Individual adults vary in coloration from orange-brown wings with no black spots to those with several black spots (see the images). No matter what color pattern they have, multi-colored Asian lady beetles always have a characteristic “M” pattern on their pronotum (area behind the head) (see image).



Color and spot pattern varies in the multi-colored Asian lady beetle.
(image from: Bill Ree, Texas A&M University; Bugwood.org)

The multi-colored Asian lady beetle was introduced into the U.S. from Asia purposefully for use in classical biological control programs against arthropod pests starting in the early 1900's by USDA, and accidentally numerous other times. It became well established in the late 1980's and quickly dispersed throughout the U.S. in the 1990's. The multi-colored Asian lady beetle has quickly invaded most of North America and Europe, and is now spreading in South America and South Africa.



Note the characteristic black “M” pattern (or a “W” depending on how you look at) on the pronotum (area behind the head).
Photo by M.J. Raupp, UMD

Multi-colored Asian lady beetles are one of those insects that has a dual personality or a good side and a bad side. The bad side of multi-colored Asian lady beetle is they overwinter, in sometimes very significant numbers, in people's homes and other structures becoming a nuisance pest. Multi-colored Asian lady beetles have recently been designated as a pest species in fruit such as apples, pears, and grapes. In the fall, they aggregate on these plants and feed on the fruit. In addition, in their introduced range, populations increase quickly and they become the dominant lady beetle in a wide range of habitats. From an ecological perspective, the multi-colored Asian lady beetle is considered a potential threat to native lady beetle species and other aphid eating insects.

The good side is that multi-colored Asian lady beetles are also beneficial in the spring and summer as predators of pest insects and mites. At this time of year, these lady beetles find an escape route to continue life outdoors. It is outdoors where they become our friend providing us with a free service – biological control of

many plant-feeding insects. This lady beetle is a generalist predator that feeds as adults and larvae on many species of aphids, adelgids, scales, psyllids, thrips, mites, and other insects providing biological control. A [single beetle adult or larva can eat more than 1,200 aphids](#) in its lifetime and lay over 700 eggs. Because of its abundance and voraciousness the multi-colored Asian lady beetle can significantly reduce herbivore populations preventing them from reaching damaging levels. In addition, they feed on pollen from plants providing pollination services. They quickly build up large numbers in a diversity of crops and landscapes reducing pests below damaging levels and the need for control measures. Therefore, when these lady beetles are driving you nuts in the fall and spring in your home, try to remember the benefits they will provide in your landscapes and nurseries during the growing season.

For more information on multi-colored Asian lady beetles, including how to reduce home invasions, go to: http://entnemdept.ufl.edu/creatures/beneficial/multicolored_asian_lady_beetle.htm
<http://bugoftheweek.com/blog/2015/10/26/bugs-in-orange-and-black-part-ii-halloween-lady-beetle-the-multicolored-asian-lady-beetle-i-harmonia-axyridisi?rq=Harmonia>

Weed of the Week

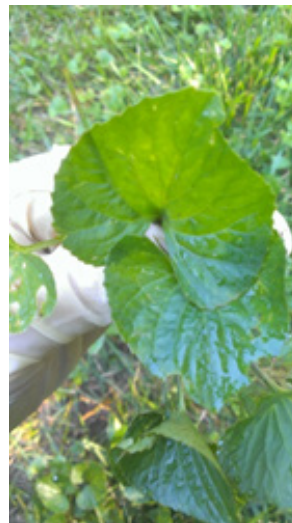
By: Chuck Schuster

It's time to shift gears. Crabgrass is now germinating in warmer areas near our bigger metro centers. Dandelions are in bloom. Mulch is being applied. Many weed control products are being applied, some without the needed moisture to activate them in a timely fashion.

Wild violets (*Viola pratincola*), are starting to show up in both turf and landscape settings this week. The wild violet is a winter perennial found in ornamental beds and turf throughout most of the United States. It will grow 2 to 5 inches in height and reproduces through stolons and rhizomes. Wild violet may also have a taproot or fibrous root system. The flowers of the wild violet can range from white to purple and are appearing at this time through June.

Cultural control of wild violet includes proper soil fertility. Wild violets thrive in the high nitrogen settings of turf. Remember that clippings can return up to one pound of nitrogen per 1,000 square feet annually. Well established turfgrass does not require as much nitrogen as new young turf lawns. In turf, frequent mowing seems to help. Strong dense turfgrass is always the best in suppressing weeds. In landscape and other turf settings, the use of mechanical removal is difficult. Burnout can gain control with several applications.

Organic control in landscape does have a few options. Post emergent products will include Scythe (pelargonic acid), Prizefighter (Ammonium Nonanoate) as well as Eugenol (clove oil) and acetic acid products including Burnout. These are non-selective products and will not work well in turf. In turf one could use the active ingredient iron being sold as HEDTA (FeHEDTA). Multiple applications of this product are required for control. FeHEDTA containing products injure turf less (can actually make turf darker green), and research has shown these products can work.



Wild violets

Photos: Chuck Schuster, UME-Retired

Non organic control in turf will require the use of a post-emergent broadleaf herbicide but may require more than one application. Product mixes that include 2, 4D and Quinclorac with dicamba (Quincept), Turflon Ester Ultra and Triclopyr, have worked well. The product T Zone SE, which is a combination of triclopyr, sulfentrazone, 2, 4D and Dicamba. Be cautious with these mixes as some will potentially volatilize under some conditions. Control in ornamental beds will require the use of glyphosate products and may require more than one application.

Plant of the Week

By: Ginny Rosenkranz

Matteuccia struthiopteris is a native fern with a lovely common name of ostrich fern. They grow in large clumps composed of upright arching fronds growing 3-4 feet tall and possibly spread up to 5 feet wide. The fronds are bright green in color and are made up of alternately placed leaflets or pinnae which are finely dissected giving them a very lacy decorative and feathery look similar to ostrich feathers. These are sterile fronds and they surround the plainer dark brown, spike-like, fertile fronds that emerge in the center of the plant. In the early spring, the feathery sterile fronds emerge from dormancy as tightly curled fiddleheads, and as they grow, they uncurl to grow in height, then in mid-summer the fertile fronds emerge and persist through the winter. The decorative fronds fade in late summer into fall when they go dormant for the winter. Ostrich ferns spread by underground rhizomes and spores from the fertile frond. These ferns need full to part shade, shelter from strong winds, and rich moist soils that are constantly wet, so they can be planted beside a stream, a pond, in a bog or in a rain garden. They thrive from USDA zone 3-7, and can be planted with the earliest spring flowers such as bloodroot, Dutchman's breeches, trilliums, and trout lilies that will be starting to go into their dormancy before the ferns reach their full height. There is a native ostrich fern borer moth whose caterpillars bore into the fronds of the plants through the rhizome. Other than that native moth, there are no other pests listed to bother the ostrich fern.



Ostrich ferns need to full to part shade and shelter from strong winds
Photo: Ginny Rosenkranz, UME

Pest Predictive Calendar “Predictions”

By: Nancy Harding and Paula Shrewsbury

In the Maryland area, the accumulated growing degree days (DD) this week range from about 91 DD (Aberdeen) to 197 DD (Reagan National Airport). 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.

- Eastern tent caterpillar - egg hatch/early instar larva (86 DD)
- Woolly elm aphid – egg hatch (163 DD)
- Spiny witchhazel gall aphid – adult/nymph (171 DD)
- Azalea lace bug – egg hatch 1st gen (214 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 April 7)

Aberdeen (KAPG)	91
Annapolis Naval Academy (KNAK)	126
Baltimore, MD (KBWI)	145
Bowie, MD	164
College Park (KCGS)	124
Dulles Airport (KIAD)	135
Ft. Belvoir, VA (KDA)	145
Frederick (KFDK)	114
Gaithersburg (KGAI)	135
Greater Cumberland Reg (KCBE)	106
Martinsburg, WV (KMRB)	96
Natl Arboretum/Reagan Natl (KDCA)	197
Salisbury/Ocean City (KSBY)	168
St. Mary's City (Patuxent NRB KNHK)	148
Westminster (KDMW)	162

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

Phenology

PLANT	PLANT STAGE (Bud with color, First bloom, Full bloom, First leaf)	LOCATION
Cutleaf toothwort (<i>Cardamine concatenata</i>)	First bloom	Clarksville (April 4)
<i>Sassafras albidum</i>	First bloom	Columbia (April 6)

Conferences

CDC guidelines for Covid-19 may cause changes to the programs below.

Maryland Arborist Association Pesticide Recertification Program

(limited in-person and on-line program)

May 11, 2021

Registration opens on March 30.

Location: Turf Valley, Ellicott City, MD

More information is available at http://www.mdarborist.com/calendar_day.asp?date=5/11/2021&event=315

Pest Management Recertification Program (limited in-person program)

June 3, 2021

Location: Carroll Community College, Westminster, MD

Details will be available at a later date

Greenhouse Program (limited in-person program)

July 8, 2021

Location: Catoctin Mountain Growers, Keymar, MD

Details will be available at a later date

New IPM Website

The new website for Extension went live this week so our urls for IPMnet have changed. To quickly get to the new site, use <https://go.umd.edu/ipmnet>. It has links to the IPM alerts and conferences etc. It's still a work in progress at the moment and more information will be added throughout the spring and summer.

CONTRIBUTORS:



Stanton Gill
Extension Specialist
sgill@umd.edu
410-868-9400 (cell)



Paula Shrewsbury
Extension Specialist
pshrewsb@umd.edu



Karen Rane
Plant Pathologist
rane@umd.edu



Chuck Schuster
Retired, Extension Educator
cfs@umd.edu



David Clement
Plant Pathologist
clement@umd.edu



Andrew Ristvey
Extension Specialist
aristvey@umd.edu



Ginny Rosenkranz
Extension Educator
rosnkranz@umd.edu



Nancy Harding
Faculty Research
Assistant

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