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**Beneficial of the Week:**

Monarch butterflies

**Weed of the Week:** Yellow nutsedge

**Plant of the Week:** *Ilex opaca*, American holly

**Degree Days**

**Pest Predictions**

**Conferences**

**[Pest Predictive Calendar](#)**

**IPMnet**  
**Integrated Pest**  
**Management for**  
**Commercial Horticulture**  
[extension.umd.edu/ipm](http://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](mailto:sgill@umd.edu)

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

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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)

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**Azalea Leaf Galls**

By: Karen Rane

The extended cool, wet weather this spring has been favorable for the development of *Exobasidium* galls on azalea. The galls are caused by the fungus *Exobasidium vacciniae*. Symptoms begin as puffy, light green or pinkish swollen shoot, bud or leaf tissue. Infection occurs on emerging tissue, so most infections occur in the spring when new growth is developing. The galls eventually develop a white spore-bearing surface, so removing galls before they turn white is one way to reduce infection. Older gall tissue eventually turns brown and hardens. A similar gall on camellia is caused by the fungus *Exobasidium camelliae*. These diseases do not affect the overall health of infected camellias or azaleas, and usually do not warrant treatment.



**Exobasidium leaf galls on azalea. The galls start out as fleshy pale green growths (white arrow) and mature to brown dry structures (yellow arrow). Photo: K. Rane, UMD.**

## Biological Control for Nurseries and Greenhouses Conference

By: Stanton Gill

On June 30, 2022, The University of Maryland Extension and MNLGA have organized a Biological Control Conference that will help you move forward with biological control in your operation. On July 1, we will have a morning session with a live demonstration of using a commercial steam device to control weeds in nurseries. This session on the second day will be hosted at Emory Knoll Farms, Street, Maryland.

We are bringing in speakers from Maryland, across the country, and from Canada to share information on practical biological control options.

Registration is \$90 for members and \$140 for non-members. The [agenda and registration link](#) are available on-line.

## Ambrosia Beetle Activity

By: Stanton Gill

Ambrosia beetle activity spiked this week with the summer-like, warm and humid weather. We had a Carroll County nursery report frass tubes and their baited bolts being heavily hit this week. We have moved into temperatures that result in lots of flight activity from ambrosia beetles. You should be able to get 3 - 4 weeks of control with bifenthrin or permethrin applied to trunks of susceptible trees. If applied earlier, you may still be covered – check when the first application went on.



**The frass tubes show that this tree in a wetlands area is heavily infested with ambrosia beetles.**

**Photo: Miri Talabac, UME-HGIC**

In our traps at CMREC, *Xylosandrus crassiusculus*, is increasing the most. There were 11 in our trap on May 18. There were three *X. germanus*. There were also several native species of ambrosia beetles in the trap. Richard Uva found 3 camphor beetles, *Cnestus mutilatus*, in his Lingren traps in Federalsburg (Eastern Shore) on May 18. This is the relatively new ambrosia beetle we have seen activity from in the last 3 years. We found this ambrosia beetle damaging *Thuja* 'Green Giant' in 2020. Miri Talabac, UME-HGIC, found heavy production of frass tubes on a tree in a wetlands area in Alexandria, VA.

## MDA Pesticide Container Recycling Program Starts June 2022

For details, see the brochure at [https://mda.maryland.gov/plants-pests/SiteAssets/Pages/pesticide\\_regulation/2022%20Recycling%20Brochure.pdf](https://mda.maryland.gov/plants-pests/SiteAssets/Pages/pesticide_regulation/2022%20Recycling%20Brochure.pdf)

## Up and Down Cold -Winter of 2022

By: Stanton Gill

In special IPM Reports back in January and February, we reported on the wild temperature swings of the winter of 2022. On January 8, temperatures dipped into single digit territory with some areas of Maryland reporting 6 – 8 °F. Then a couple of days later, the temperatures shot upward to be followed by another major downswing.

We worked with Maryland Arborist Association on Tuesday night with a diagnostic walk at Brookside Gardens. During the walk, we saw boxwoods with cracks forming on the trunks. We also had reports of cracks showing up on red maples and other smooth barked trees this spring. We suspect this trunk cracking is occurring from the extreme cold periods, punctuated with short warm spells that occurred in January and February. Buds on several plants started to swell during the short warm periods, and then the tissue was damaged with the dramatic downswing in temperatures.

This weather pattern did damage to certain other plants. One of them was fig plants. The roots of figs are extremely deep and the roots can withstand ambient air temperatures down to -40 °F, but the tops will die back. Damaged plants regenerate new shoots from the root system. In 2022 and 2021, we have relatively mild winters and saw very little damage to the top growth of fig plants. People report good crops in these seasons. This will not be the case in most areas in 2022. The up and down cold and warm weather severely damaged the canes of figs in 2022.

We received photos from a Howard County resident (Dr. Adams) who pulled his branches down to the ground this winter and covered the plants with old carpeting. He pulled off the carpet cover in early April. I visited his site last week and his figs are producing copious amounts of new growth with the early Breba crop already forming in May.

Breba is a fig that develops on a fig tree in the spring on the previous year's shoot growth. In contrast, the main fig crop develops on the current year's shoot growth and ripens in late summer or fall. Fig trees bear an abundant crop starting mid-August into fall. The breba crop varies from one variety to the other, some varieties produce a heavy crop of brebas, some only a few, and some will only produce the main crop. The shape of the breba crop is not always identical to the main crop, so if you covered your figs before the January and February onslaught of cold weather, you may see a breba crop. If not, you may not have a Breba or fall crop in 2022.



**Figs covered for the winter**  
**Photo: Dr. Peter Adams**



**This fig is part of a Breba crop which occurs on the previous year's growth instead of a crop on the current year's growth**  
**Photo: Dr. Peter Adams**

## Spotted Lanternfly Update

By: Paula Shrewsbury, UMD

A few weeks ago, Maryland Department of Agriculture (MDA) reported the first egg hatch of spotted lanternfly (SLF) in MD. First instar SLF nymphs were found on May 5<sup>th</sup> in Washington County, MD. SLF egg hatch begins around 240 degree days (DD) and continues until around 1100 DD (usually late June / early July). Since that date SLF nymphs are hatching in many locations. According to Kenton Sumpter, MDA, SLF nymphs can be found in numerous locations in Hagerstown (Washington Co.) MD. Last Thursday, May 12<sup>th</sup>, I saw hundreds of 2<sup>nd</sup> instar nymphs crawling around on the underside of maple leaves and lots of hatched egg masses on the underside of maple branches in northern VA in Winchester (Frederick Co.). On Saturday, May 14<sup>th</sup>, Mike Raupp (UMD) saw a similar pattern in Rocks State Park (Harford Co.) and Towson (Baltimore Co.), MD.

See the images to know what you should be seeing and looking for now. Just because you didn't have SLF last year does not mean you won't have them this year; and if you had them last year you may

have more or a wider distribution of SLF this year. A comprehensive resource for SLF management is "[Spotted Lanternfly Management for Landscape Professionals](#)" by Penn State Extension.



**Spotted lanternfly eggs masses on a post. Note the diversity in egg mass color and texture. The look of the egg mass can vary depending on how old it is, how well it was covered when laid, how much of the covering has worn off, and if the eggs have hatched or not (see other photo).**

**Photo: Heather Leach, Penn State Extension**



**Recently hatched spotted lanternfly egg masses on maple bark from Winchester VA. Note how the mass is rough and has openings where nymphs have emerged.**

**Photo: P.M. Shrewsbury, UMD**



If you are in area with spotted lanternfly populations, if you look up into the tree on the underside of the leaves, this is what you will see, but hundreds of these 2nd instar nymphs.

Photo: M.J. Raupp, UMD

A close up of a spotted lanternfly second instar nymph from Rocks State Park (Harford Co. MD).  
Photo: M.J. Raupp, UMD

### Maple Petiole Borer

Marie Rojas, IPM Scout, is finding maple petiole borers on the growing tips of *Acer rubrum* 'Red Sunset'. The damage usually occurs in the spring on new tip growth on 1 to 2 year old maples. Look for flagging tips and prune out damaged branches.



Maple petiole borers cause damage early in the season.  
Photo: Marie Rojas, IPM Scout

## Rose Rust

By: D.L. Clement

We've recently had a few reports of rust on Knockout roses in the landscape. There are multiple rust species that infect rose in the fungal genus, *Phragmidium*. These rusts have not been common here in Maryland in the past, however with our recent cool wet weather it appears that the pathogen is present and causing symptoms. This rust completes its life cycle entirely on rose. The bright reddish-orange spores appear during wet spring weather and can be seen on the lower leaf surfaces. Reddish-brown lesions occur above the rust infections on the upper leaf surfaces. The diseased leaves often are shed and plant growth may be stunted. The disease usually slows down, or symptoms may disappear during the warmer drier summer weather.

**Management:** Prune and space plants for adequate air circulation to allow quick drying of the foliage. Prune out infections as soon as you detect them to prevent the production and spread of spores throughout the growing season. Collect and remove prunings during autumn clean-up to reduce the number of overwintering spores. Fungicides may be needed for severe infections. Products with the following active ingredients may be used according to label directions and applications should be rotated between FRAC groups; mancozeb, chlorothalonil, myclobutanil, triadimefon, propiconazole, tebuconazole, flutalonil, azoxystrobin, fluxastrobin, trifloxystrobin, copper, sulfur, neem oil, and *Bacillus subtilis*.



Rust on rose usually slows down or symptoms may disappear during the warmer drier summer weather.  
Photos: Steve Sullivan, Land Care

## Beech Erineum Mites

Marie Rojas, IPM Scout, found beech erineum mites damaging beech leaves in Montgomery County this week. This eriophyid mite is known to only infest beech. It overwinters inside of buds. These mites do not impact the overall health of trees, so control is not necessary.



**Beech erineum mites do not impact the overall health of beech trees - their only known host**  
Photo: Marie Rojas, IPM Scout

## Potato Leafhoppers

We received a report today (May 20) that potato leafhopper adults are in central Maryland. They were seen in significant numbers on Forest Pansy redbuds. It was noted that the purple leaves make them super easy to spot. This pest arrives from the south, riding up on the jet streams. Look for leafhoppers on plants such as redbud, zelkova, river birch, maple, goldenrain tree, elm, honeylocust, sycamore, and London plane trees. They feed most often on the undersides of leaves.

Potato leafhoppers tend to be a problem on nursery trees and are not as likely to be found in high numbers on landscape trees. Potato leafhopper feeding by adults and nymphs causes the tip growth on maples to curl over and harden which is typically referred to as 'hopperburn'. The distorted growth is often mistaken as herbicide damage. Multiple generations continue to damage the new tip growth that flushes out on maples. A systemic insecticide can be used for control.

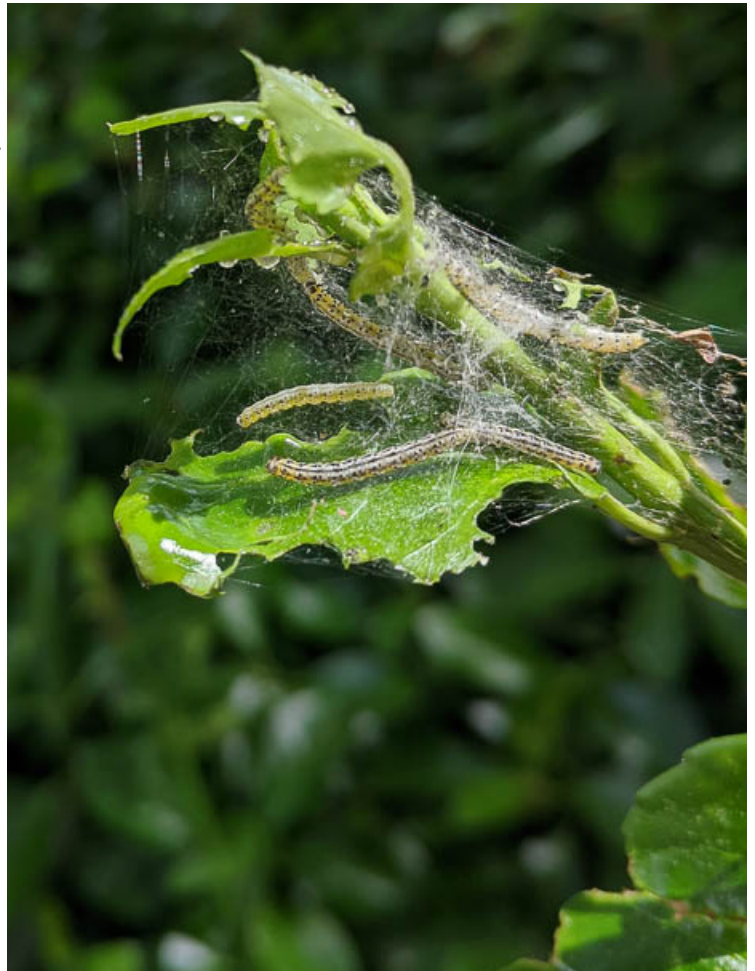


**Potato leafhopper adults are starting to move into our area this week**  
Photo: Steve L. Brown, University of Georgia, Bugwood.org

## Euonymus Caterpillars

Nicolas Tardif, Ruppert Landscape, found euonymus caterpillars on *Euonymus* 'Manhattan' on May 11 in Rockville. The euonymus caterpillar (*Yponomeuta cagnagella*) is active later than the euonymus leaf-notcher caterpillar. It produces webbing on the tips of foliage where it feeds. There is only one generation per year early in the season, so plants are able to recoup from the damage.

**Control:** If necessary, Conserve will control the larvae. Pruning out infested branch tips is another option.

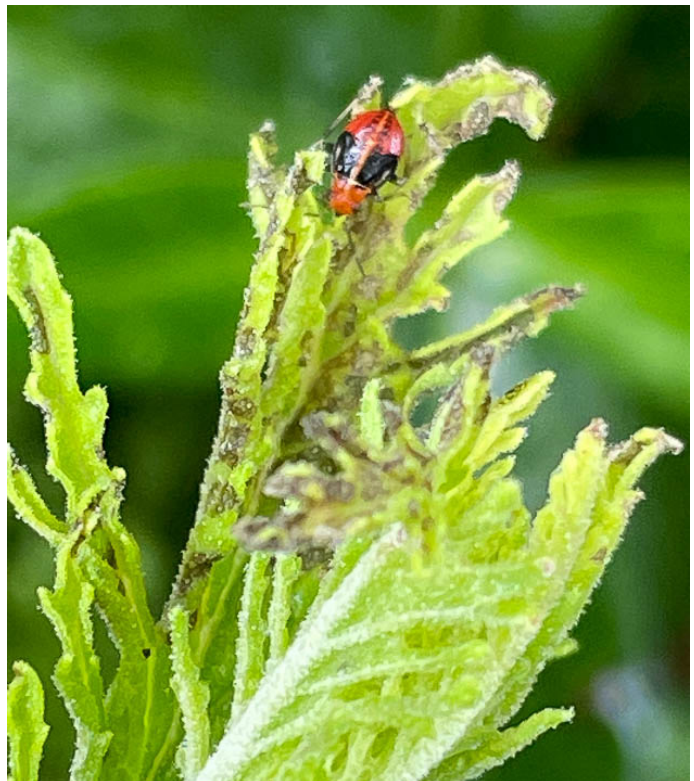


**Euonymus caterpillars cause damage early enough in the season for the plants to recover**

**Photo: Nicolas Tardif, Ruppert Landscape**

## Four-lined Plant Bugs

Anna Simons, Maxalea, Inc., found nymphs of four-lined plant bugs on some *Perovskia* in Timonium on May 13. These plant bugs feed on a variety of herbaceous and woody plants. As they feed, the insects inject a toxin into the plant tissue that causes the tissue to collapse and go necrotic. You end up with a series of small roundish dead spots on the foliage. Once the damage is present, there is not a lot to do about this pest. There is one generation per year early in the season. New foliage often covers up the old damage.



**Here is a nymph of a four-lined plant bug; these bugs cause damage early in the season**

**Photo: Anna Simons, Maxalea, Inc.**



## Crapemyrtle Bark Scale

Heather Zindash, The Soulful Gardener, found eggs, crawlers, and adults of crapemyrtle scale. Heather noted that the "Crawlers are often found in the crevices between branches, stems, and new growth tips. They blend in well with the bark." Miri Talabac, UME-HGIC, also found this scale in Northern Virginia on May 15. Scout crape myrtles closely for this scale. With overlapping generations, it can spread very quickly.

An [article on this scale](#) is available on the UMD Extension website.



Eggs, nymphs, and adults are active on crapemyrtles in our area.  
Photos: Heather Zindash, The Soulful Gardener

## Red Thread Infection

Mark Schlossberg, ProLawn Plus, Inc., reported that red thread was infecting turf in Owings Mills on May 16. This disease is known to thrive in low N-fertility areas. Supplying N-fertility during infection periods may help to alleviate some of the symptoms, but keep in mind that red thread is very persistent in the spring months.



Red thread infections are active this week  
Photo: Mark Schlossberg, ProLawn Plus, Inc.

## Aphids on Spirea

Elaine Menegon, Good's Tree and Lawn Care, found aphids on spireas on May 20 in Palmyra, PA . Elaine noted that she found a lot of lady beetles and determined that there was no need to treat.

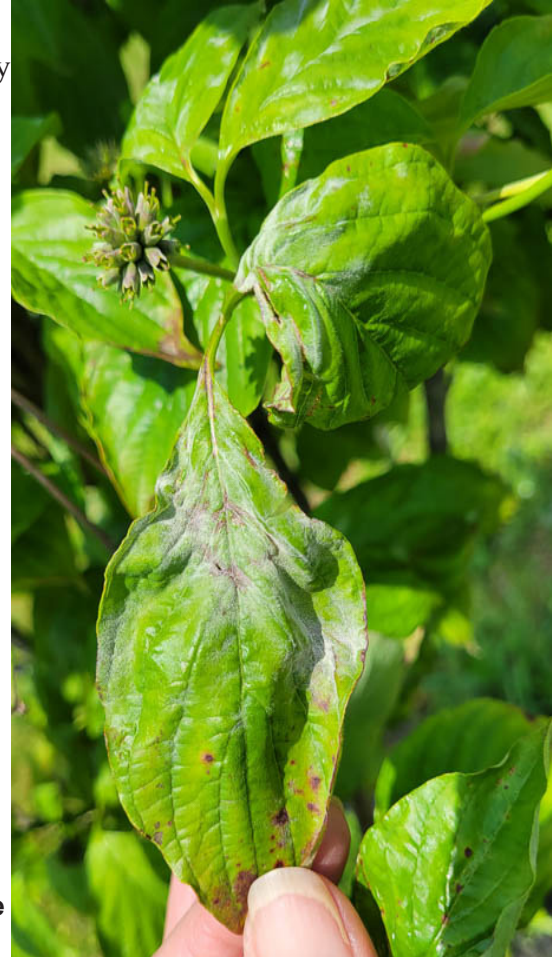


**Aphids are active on a variety of plants, like this spirea, this spring; look for predators.**

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

## Powdery Mildew

Marie Rojas, IPM Scout, found powdery mildew starting to show up on the leaves of *Cornus* 'Cherokee Princess' this week in Montgomery County.



**Powdery mildew infection on dogwood foliage**  
**Photo: Marie Rojas, IPM Scout**

## Black Locust in Bloom = Emerald Ash Borer Adult Activity

By: Paula Shrewsbury

This past week black locust, *Robinia pseudoacacia* (Fabaceae), came into bloom in many areas of MD. You will see the beautiful white drooping flowers on locust trees that are abundant on the sides of the road. Moreover, emerald ash borer (EAB), *Agrilus planipennis*, has started to emerge from ash trees. A graduate student, Angela, in the Department of Entomology at UMD is working on biological control of EAB. On Wednesday and Thursday of this week, she was sampling her field sites and found that EAB adults had started to emerge in Mullins Park (Havre de Grace, Harford County) and Tuckahoe State Park (Queen Anne, Queen Anne's and Caroline Counties) MD.

If you look at the [UME Pest Predictive Calendar](#) on the [IPMnet website](#) you will note that full bloom of black locust is a **Plant Phenological Indicator (PPI)** for emergence of adult emerald ash borer (EAB). You can also use **Growing Degree Days (DD)** to predict EAB adult emergence (see the Pest Predictive Calendar). When your location reaches about 420 DD, EAB adults should start emerging from ash trees. If you check your local DDs or look at the list of DDs for select locations in MD at the end of this newsletter, you will see that some locations are near (below or above) 420 DDs.

Please remember that PPIs and DDs are science-based estimates of activity. They indicate that you should start actively monitoring your trees for signs of EAB adult activity. Signs would include active adult beetles, new "D" shaped adult exit holes on the trunks of ash trees (see image), and/or defoliation (starts as shothole damage) of ash foliage by adult beetle feeding (see image).

**So what should you be doing if you want to save your ashes!** Hopefully you have already done plant inventories and / or identified the ash trees that you want to save. At this time in areas where EAB is abundant (much of MD and the mid-Atlantic region), ash needs to be treated with an appropriate systemic insecticide to protect it from being killed by EAB. EAB adults must feed on ash foliage (~14 days) before they become reproductively mature. Peak beetle emergence usually occurs 2-3 weeks after first emergence of adults (which is happening now in some areas). Getting insecticide into the foliage will help control the adults. Adult EAB emerge from around May to July and they feed on foliage for 3-6 weeks. The larvae that feed on the cambium under the bark during the summer should also be targeted. Peak larval establishment is between early June and mid-August. Note that young, early instar larvae, are more susceptible to insecticides than late instars. Spring applications of insecticides have been shown to me more effective than fall.

NOW is the time to treat trees with a systemic insecticide. Note that different systemic insecticides move through a tree at different speeds, and rate of movement is also affected by tree health and size, and soil moisture. The most common insecticide used is emamectin benzoate which should be applied in the spring and is reported to give up to 3 years (changed from the previous recommendation of every 2 years) of control. Imidacloprid is also used and the rate applied influences the amount of time the trees are protected (ex. 1-2 years); trees with >15" dbh likely need



**Adult emerald ash borer on ash foliage that recently emerged from under the bark of an ash tree where it spent the winter as a larva and pupa. Note the defoliation of the ash leaf where the beetle had been feeding.**

**Photo: Leah Bauer, USDA Forest Service Northern Research Station, Bugwood.org**

a high rate of imidacloprid. Others who want to use a biorational insecticide can use Azadirachtin. Read the insecticide label. **Be sure to read the publication [“Insecticide Options for Protecting Ash Trees from Emerald Ash Borer”](#)**. This bulletin provides excellent information on product choices, application method (systemic trunk or soil injections or bark applications, protective sprays) and timing, and at what stage of tree decline products will or will not likely work to control EAB.



There are other IPM practices that should be integrated with pesticide applications to manage EAB and protect ashes. For good information on this topic go to: <http://www.emeraldashborer.info/>. These include practices such as

cutting down / removing EAB infested ash trees especially those that are hazard trees, creating trap (girdled, insecticide treated) trees to attract and kill EAB, and not moving ash products (wood) to un-infested areas. UMD in collaboration with MDA and USDA are involved in studies that include the release and assessment of native and introduced biological control agents (ex. 4 introduced parasitoid species). Although biological control agents are establishing and attacking EAB, rates are still too low to control EAB when their populations are so high. However, results that we see are promising. With more time, this program should provide long-term sustainable suppression of EAB. In the meantime, protect the ashes you want to save with insecticides.

**New chewing damage on ash foliage indicates adult Emerald ash borer are active. A good monitoring characteristic to indicate adult EAB activity.**

**Photo by P.M. Shrewsbury, UMD**



**“D” shaped exit holes are a diagnostic clue that adult emerald ash borers emerged from your ash tree.**

**Photo: M.J. Raupp, UMD**

## **Brown Marmorated Stink Bugs**

By: Stanton Gill

It seems like a long time ago, but the brown marmorated stink bug was the insect that dominated the news 12 years ago. Weather and parasitoid activity reduced this major pest, that had been described by some as a “biblical plague”, to the minor nuisance category. This was big a relief for many. Now, we are getting reports of brown marmorated stink bugs buzzing around people’s houses. **They are certainly not** at the epic number of bugs we saw 12 years ago. The overwintering adults are trying to work their way outdoors and are creating a mild irritation as they buzz around lights in the evening. They are being found hanging out at windows during the day. The easiest thing to do is simply vac up the bugs and flush the content. No insecticides need to be applied.

## Oak Felt Scale Crawler Activity

By: Paula Shrewsbury

Oak felt scale (a.k.a. oak erricoccin scale), *Acanthococcus quercus* (Hemiptera: Eriococcidae) on oak trees in Sharpsburg (Washington County), MD started producing crawlers this past week. I first noticed this scale on the branches of a small (~12' tall) oak about a month ago. Interestingly, it was really liking the nooks and crannies of cicada oviposition wounds. They were on other parts of the branches, but most abundant in the wounds. As crawlers hatch, they move out onto new branches to feed. Oak felt scale looks like a mealybug upon first glance. It is white with slight ridges and has a cottony appearance. The females began to swell up and produce eggs (under their bodies) a few weeks ago and crawlers were just starting last week. Oak felt scale life cycle and damage is similar to many soft scales, although it is not a soft scale. There is one generation per year, eggs are produced in the spring, and the scales suck phloem sap and therefore are honeydew producers.

**Control:** There is not a lot of information on management of oak felt scale. The scales can be physically removed from the branches using a soft scrub brush and water if practical. Horticultural oil targeting the crawlers should also reduce the populations. *Hyperaspis* lady beetles have been reported to feed on oak felt scale. Note that the larvae of *Hyperaspis* are also white and waxy in appearance, but lady beetle larvae have chewing mouthparts and are more mobile.



Oak felt scale adult females plumping up with eggs under their bodies.

Photo: P.M. Shrewsbury, UMD



Oak felt scale concentrated in cicada oviposition wounds from the previous season.

Photo P.M. Shrewsbury, UMD

## Assassin Bugs

Assassin bugs continue to hatch throughout the area this week. John Verbrugge, Arader Tree Service, Inc. found nymphs recently. These bugs are generalist predators.



Look for assassin bugs throughout the summer  
Photo: John Verbrugge, Arader Tree Service

## Beneficial of the Week

By: Paula Shrewsbury

### Monarch butterflies and caterpillars are here!

Last Friday afternoon (May 13<sup>th</sup>) I was poking around the perennials coming up in my landscape beds and I saw my first Monarch butterfly (an adult female), *Danaus plexippus* (Family: Nymphalidae) of the season. I was very excited because there are some years where I don't see Monarchs until July or even early August (though sometimes in mid-late May). As I watched her, she landed on one of the young milkweed plants (the milkweeds were 1 foot or less). She tucked her abdomen underneath her body so tip touched one of the leaves suggesting she was laying an egg on the leaf. Any by golly, she did! After she left I found a small Monarch creamy white egg on the underside of the milkweed leaf. The eggs are ~1 mm with ridges that run from the top to the base of the egg (see image). To continue with this really great story, as I was inspecting the milkweeds for other possible monarch eggs, I actually found 1<sup>st</sup> and 2<sup>nd</sup> instar caterpillars (larvae) (see image) which means Monarch adults were there about a week or two earlier laying eggs! I counted about a dozen young caterpillars, usually one and sometimes two caterpillars, on the new growth / growing points of the milkweed stems. I could see slight defoliation of the newly emerged leaves around the growing point and little specs of black frass. Today (Wedn. May 18<sup>th</sup>) some of the caterpillars are 3<sup>rd</sup> instars, and on some plants, I can see small holes on some of the leaves on the stems below the growing points. Keep a watch out for these beautiful iconic Monarch butterflies and their caterpillars. Also do what you can to conserve Monarchs, both the east and the west coast monarch populations are struggling and need help.



**This monarch butterfly female was foraging on nectar from flowering plants in a MD meadow.**  
Photo: M.J. Raupp, UMD



**Monarch adult males have thinner veins on their hind wings than females, and males have a black spot (stigmata) on a vein in each of the hind wings, females do not.**  
Photo: Kenneth Dwain Harrelson, BugGuide

To learn more about monarchs you can review the three articles I wrote in the IPM Newsletter last summer: 8/20/ 2021 Beneficial of the Week: [Monarch butterflies are a biological wonder!](#) (about Monarch life history and migration)

8/27/2021 Beneficial of the Week: [How are Monarch populations doing?](#) (about the status of Eastern and Western monarch populations and threats to their survival)

9/3/2021 Beneficial of the Week: [What can we do to help the Monarchs?](#) (about efforts to conserve Monarch populations)



Two Monarch eggs placed by a female monarch on the underside of a milkweed leaf.

Photo: M.J. Raupp, UMD



Early instar (likely 2nd) Monarch caterpillar in a developing milkweed flower bud.

Photo: P.M. Shrewsbury, UMD



Early instar monarch caterpillar (~0.5" long) on the underside of leaf on butterfly weed (*Asclepias tuberosa*) found this week.

Photo: P.M. Shrewsbury, UMD

## Weed of the Week

By: Kelly Nichols

The occasional wet periods that we have had this spring has allowed for certain weeds to take off. As noted by Nicolas Tardif, yellow nutsedge (*Cyperus esculentus* L.) has been actively growing in the D.C. area for the last few weeks.

This troublesome perennial weed is widely found in turf, nurseries, and landscape beds. Yellow nutsedge becomes more problematic during spring and summers with above average rainfall. The seedling is very inconspicuous and looks very much like the desired turf species we want to find, but given time becomes more noticeable. One distinguishing characteristic is the color which is light green, with flat slender cotyledons (seed leaves). Yellow nutsedge can produce seed but primarily reproduces through tubers (red arrow photo 1). Several hundred tubers can be produced from a single plant during the summer. These tubers can survive in the soil for several years if conditions are not appropriate for them to grow and produce a new plant. The mature stem is

triangular in shape, which will help distinguish it from any member of the grass family. Lower leaves are arranged in groups of three. **Remember “sedges have edges” to help you identify it from grasses.**

Control of this plant earlier in the season before these tubers are formed is the best line of defense. Yellow nutsedge tubers can easily be spread by soil (topsoil or fill dirt) from one area to another during construction. Additionally, people and equipment can spread yellow nutsedge any time they move soil while planting or dividing ornamental plants in the landscape.

Control can be obtained by maintaining a dense stand of turf with proper fertilization. Yellow nutsedge becomes more of a concern when mowing heights are not maintained at proper levels and in soils that receive more than adequate amounts of rainfall/irrigation or do not drain well. Yellow nutsedge can also be a problem in well-drained areas, especially thin turf. In small stands of yellow nutsedge found in landscapes, consider digging around the plant and removing all of the root system. Appropriate pH management is another cultural tool that is very useful.

Products that contain sulfentrazone (Dismiss) have been shown to provide both pre emergence and post emergence control, though it is not labeled for pre emergence control. Prodiamine plus sulfentrazone (Echelon) is labeled for pre emergence control. Sulfentrazone plus quinclorac (Solitare) is effective as a post emergent product, but will require more than one application, in some cases 30 days apart. Other products containing sulfentrazone include Q4 Plus, Surge, SureZone, and TZONE, but these products are labeled for suppression as they contain lower concentrations of the active ingredient. Other products labeled are bentazon found in Basagran, which is labeled for use in tall fescue, the predominate species in this region; halosulfuron-methyl found in Sedgehammer and Sedgehammer+ (Sedgehammer+ contains a surfactant), S-metolachlor found in Pennant Magnum. Mesotrione (Tenacity) is also labeled for post emergence control in Kentucky bluegrass, perennial ryegrass, and tall fescue. This product causes a bleaching of the weeds. Read the label to determine if a nonionic surfactant is needed. Control generally takes more than one application. Halosulfuron products are rated the best for control of this difficult weed in many studies.

In landscape and nursery settings, it was found that Pennant Magnum, Sedgehammer, and Casoron (dichlobenil) worked well. Check labels to determine plant species that are safe for use with each chemical. Casoron as a granular product (4G) can be applied as a pre-emergence product during the dormant season in nurseries but not in the container themselves. It requires moisture following application. Sedgehammer works well in landscapes but should not be sprayed onto desired species of plant material.



**Photo 1. Yellow nutsedge primarily reproduces through tubers. Photo: Chuck Schuster, UME Ag Agent, Emeritus**



**Photo 2: Yellow nutsedge seed head and overall plant. Photos: Chuck Schuster, UME Ag Agent, Emeritus**



When controlling yellow nutsedge in turf, always remember the following 5 points. 1) Follow label directions exactly. 2) Do not mow turf 2 days prior to application of the herbicide. 3) Use the proper volume of water and do not apply when the turf is stressed. 4) Be cautious near transitions of turf to ornamental beds as some herbicides can cause damage to desired ornamentals. And lastly but not the least is 5) Repeat application according to label instructions.

### **Plant of the Week: *Ilex opaca* (American holly)**

By: Ginny Rosenkranz

*Ilex opaca* or the American holly is a native broad-leaved tree that grows 20-30 feet tall and 8-20 feet wide. The plants are dioecious which means that there is a male holly tree with only male flowers on it and a female holly tree with only female flowers on it. The fragrant female flowers are held singly on the plant or in groups of 2-3 together. The fragrant male flowers with yellow pollen are grouped in clusters, and they both typically flower in May to June. The tiny white, 4-petaled, star-shaped female flowers mature into bright red or red-orange drupes about ¼ to ½ an inch round and last through a number of cold frosts before being enjoyed by the native birds. The 2-4-inch evergreen leaves are shiny dark green, and every lobe carries a sharp spine. The plants grow upright in a narrow pyramid and are hardy in USDA zones 5-9. *Ilex opaca* prefers to grow in well drained but moist, acidic soils in full to part sun. Morning sun and afternoon shade is perfect in the southern parts of Maryland, and while they like some shade, dense shade will cause the plant's foliage to thin out. Plants are tolerant of air pollution and deer usually leave the foliage alone. Diseases of American holly include leaf spot, leaf rot, tar spot and powdery mildew, while insect pests include holly leaf miner, scale, spider mites and whitefly. In early spring, the oldest of the leaves will turn bright yellow then fall to carpet the ground, letting the youngest emerging foliage enjoy the sunshine.



***Ilex opaca*, American holly, flowers in May to June  
Photo: Ginny Rosenkranz, UME**

## Degree Days (as of May 18)

Aberdeen (KAPG)	366
Annapolis Naval Academy (KNAK)	476
Baltimore, MD (KBWI)	518
College Park (KCGS)	433
Dulles Airport (KIAD)	505
Ft. Belvoir, VA (KDA)	528
Frederick (KFDK)	404
Gaithersburg (KGAI)	435
Gambrills (F2488, near Bowie)	473
Greater Cumberland Reg (KCBE)	409
Martinsburg, WV (KMRB)	383
Natl Arboretum/Reagan Natl (KDCA)	647
Salisbury/Ocean City (KSBY)	583
St. Mary's City (Patuxent NRB KNHK)	658
Westminster (KDMW)	545

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

### June 10, 2022

Montgomery County Annual Procrastinator's Conference

The 27th Annual Procrastinator's Pesticide and Urban Nutrient Management Conference will be held on Friday, June 10. This in person meeting will take place at the Montgomery County Extension Office in Derwood.

[Registration](#)

Contact: Kelly Nichols, 301-590-2807, [kellyn@umd.edu](mailto:kellyn@umd.edu)

### June 17, 2022 (Virtual)

Contact: Ginny Rosenkranz, [rosenkranz@umd.edu](mailto:rosenkranz@umd.edu)

[Schedule and Registration](#)

### June 24, 2022 (Virtual)

Turf Program

Contact: [Mark Carroll](#), University of Maryland

### June 30, 2022

Greenhouse Biological Control Conference

Location: Maritime Institute, Linthicum Heights, MD

[Registration](#) is now open.

Contact MNLGA at 410-823-8684 with any questions.

### July 28, August 4, and August 11, 2022

Drone Training Program

**Commercial Ornamental IPM Information**  
**[extension.umd.edu/ipm](http://extension.umd.edu/ipm)**

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

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