UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **March 31, 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) and David Clement (Extension Specialist)
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)

Ambrosia Beetle Activity

By: Stanton Gill

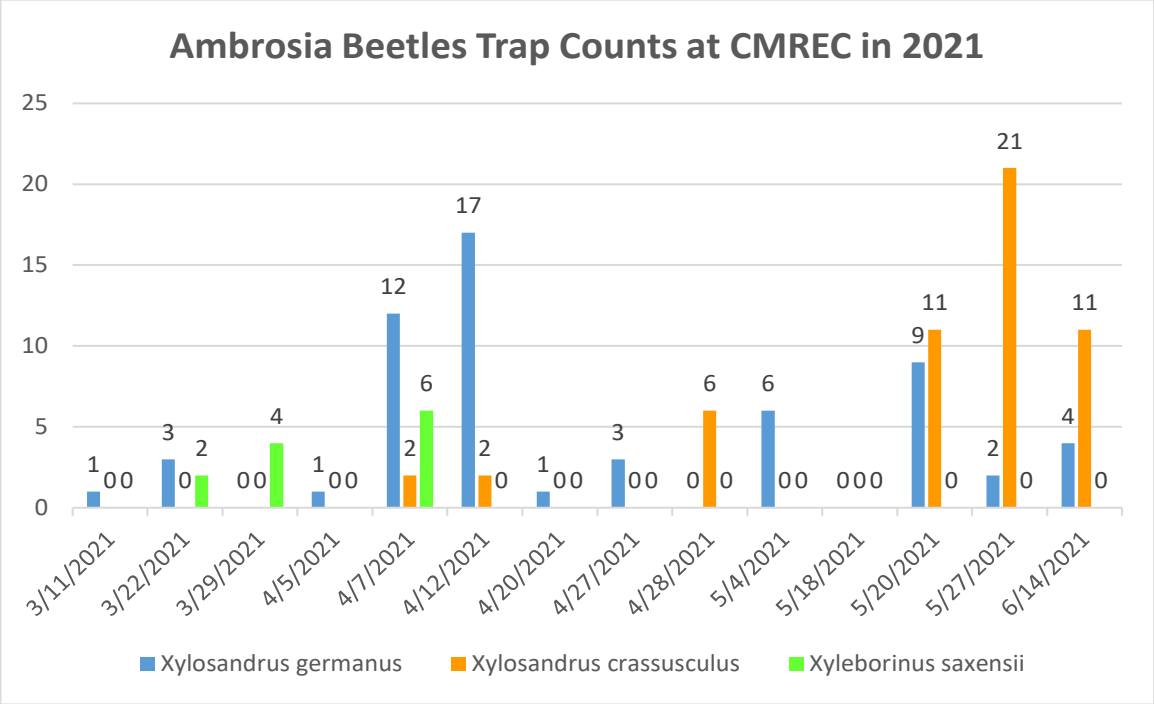
With this crazy winter/spring weather with temperatures up, then down, then back up again, I am getting many emails asking what is happening for 2023 with regards to ambrosia beetle activity, especially with *Xylosandrus* species. We pulled together charts of what the flight activity looked like in 2022 and 2021. Marie Rojas, IPM scout, checked a trap and found a half-dozen ambrosia beetles. The species have not been identified. So far this year, we have not seen any activity in our baited alcohol traps at CMREC.

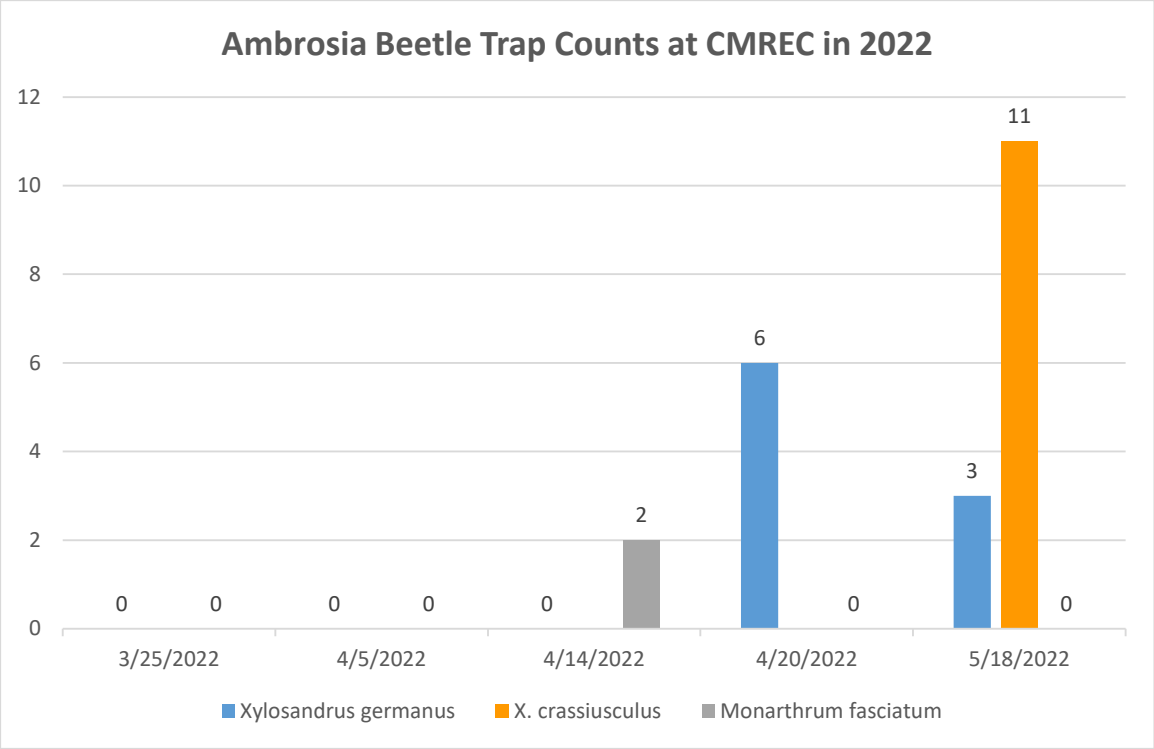
A question has come up in the past about when and whether to retreat plants hit by ambrosia beetles. Pyrethroids are impacted by sunlight and exposed wood may be breaking down faster than shaded parts of the trunk.

I asked Jason Oliver, Tennessee State University, to comment on this length of time that pyrethroid treatments are effective. Here is his response:

“My former MS student got pretty good protection against AB using permethrin up to 17 days. He was not using live trees, but tree bolts that were hollowed and filled with ethanol. The bolts were sprayed at different pre-intervals of 0, 8, 17, and 24 days before ethanol was added to make them attractive. The 0 and 8 day sprays before ethanol were definitely protective, but for the most part no significant differences out to 17 days before ethanol. Control was less effective at 24 days before ethanol. Irrigation did not seem

to make a difference on treatment efficacy, which suggests Perm-Up 3.2EC is fairly rain fast once the residues have dried on the bark. Other studies cited in the paper also support this finding. Although permethrin has never been 100% on AB control, I think you are fairly safe recommending out to 14 DAT before respraying."





Only 1 camphor beetle found in trap on May 4 in 2021 and no camphor beetles in trap in 2022 at CMREC. No Xyleborinus saxensii found in trap in 2022 and no Monarthrum fasciatum found in trap in 2021 at CMREC.

Fungus on Armored Scale

Marie Rojas, IPM Scout, reported that the felt fungus (*Septobasidium*) associated with armored scale was on *Nyssa sylvatica*. Marie noted that those plants have had low levels of Japanese maple scale in the past, so not surprising to find the felt fungus. Marie pointed out that people often see it now since trees aren't leafed out yet.

Look for this felt fungus (*Septobasidium*) that is associated with armored scale. Photo: Marie Rojas, IPM Scout

Disease Resistant Pears - Part of an IPM Approach

By: Stanton Gill

Many landscapers have customers asking them to manage fruit plantings in their landscape. This has created a niche market for Maryland landscapers and nurseries. The nurseries can produce larger, fruit bearing stage fruit trees. One of the fruit categories that has potential for expanding is the area of new pear cultivars. Chris Walsh (Univ of Maryland) and Al and May Pong were some of the pioneers in introducing Asian pears to the Maryland market. I jumped on this band wagon and have been growing Korean, Chinese, and Japanese cultivars for the last 22 years. I love Asian pears because they are relatively pest resistant with one exception, bacterial fire blight can take you down quickly. I found that certain cultivars of Asian pear were most susceptible to bacterial fire blight. Chinese Asian pears such as 'LI' and 'Ya Li' are extremely susceptible to this disease. 'Twentieth Century', 'Atago', and 'Nataka', all being Chinese pears, are very susceptible to fire blight. I have noted that 'Hosui' and 'Kosui' can succumb to this disease but rebound quickly and show less damage. The Asian pear that I have not seen real damage from this disease is 'Olympic', also called Korean Giant Asian pear.

For years, I have not grown European type pears since most cultivars have been highly susceptible to bacterial fire blight. Back in 2013, I was giving presentations at a biological control conference in Ontario, Canada. I was visiting the Experiment Station and was introduced to a new cultivar called 'Harrow's Sweet' that was developed at the Harrow Research Station in Ontario, Canada. This cultivar, in Canadian trials, had very good resistance to fireblight. So, I planted 10 trees in Westminster. It has not had any problems with fire blight since the planting. Shortly afterwards, they released 'Harrow Crisp' which has a nice snappy, sweet flavor and is very resistant to fire blight. These trees I planted just started to bear in 2022, and the flavor is excellent. Another variety I found out about on a second visit to the Ontario Experiment station was the cultivar named 'Cold Snap'. This pear is large and has an incredible, sweet flavor. I found it holds in cold storage until about the end

of February. This is one my favorites and shows high resistance to fire blight. I planted 15 trees of this cultivar, and it is a big hit with everyone I have introduced it to at our farm markets.

Not to be outdone, the USDA-ARS Appalachian Research Station in Kearneysville, West Virginia released a cultivar called ‘Bell’. ‘Bell’ is named after the long-time pear breeder, Richard Bell. This cultivar is very resistant to fire blight. I planted several ‘Bell’ pear trees in 2020, and they will come into bearing in 2023. I had a chance to try this cultivar at a taste test event, and it was very juicy and flavorful. I have high expectations for this cultivar.

One other that has been on the market for several years and shows good resistance to fire blight is ‘Potomac’. ‘Potomac’ is a cross between ‘Moonglow’, a modern disease-resistant pear, and ‘Beurre d'Anjou’, a traditional French variety. It was introduced in the 1990s.

If you want to learn more about these pears and other new fruit cultivars I teach a 2-credit class at Montgomery College, Germantown campus that is online form late December 2023 to the end of January 2024. The course is Advanced Fruit Production With an IPM Emphasis and listed under the HORT program of Montgomery College.

White Pine Weevil

Bob Trumbule caught white pine weevil in a teddar trap in Upperco (Baltimore County) on March 30. White pine weevils overwinter as adults. To prevent damage, treat terminal growth when the adult activity is noted on conifers or in traps. Avaunt insecticide is labelled for weevil control in nurseries. Penn State has an article posted online on using Tedder traps to monitor for white pine weevils.

White pine weevil caught in a teddar trap
Photo: Bob Trumbule

Gymnosporangium Rusts

By: David Clement and Karen Rane

Christine McComas, UMD Home and Garden Information Center, received photos of quince cedar rust on Eastern red cedar through 'Ask Extension'. Timing is similar for the various gymnosporangium rusts, so now is the time to treat the alternate rosaceous hosts. There is a Penn State fact sheet with more information on these rusts and the plant hosts for each rust-host complex. and suggestions for resistant plants available at https://apples.extension.org/table-of-juniper-hawthorn-and-crab-apple-resistant-to-rust-diseases/.

Protectant fungicides should be applied to the rosaceous hosts before the spores become gelatinous on the juniper host. Spray applications rotated with Azoxystrobin products and Mancozeb products should give good management of foliar symptoms. Targeting the rosaceous hosts can help reduce infection, but timing can be a problem as spores from the juniper can be released throughout the spring and early summer. If rust infections are problematic in your area, selection of resistant junipers, crabapples, hawthorns, and serviceberries can significantly reduce disease damage.

Gymnosporangium rust galls on Eastern red cedar
Photo: Submitted to 'Ask Extension' by Maryland homeowner

Fruit Tree Disease Control Now

By: Kari Peter, Associate Professor, Penn State University Experiment Station

Consider dormant applications of copper to manage fungal and bacterial diseases on fruit trees. Sanitation is critical for limiting fruit rots in the orchard. Fruit trees around the region are waking up from their dormant slumber, as evidenced by green tip appearing in the apple trees and pink bud in the peaches. The 2023 season is upon us, and disease management should kick into gear.

Growers are encouraged to apply dormant copper sprays on apples and pears to control fire blight, apple scab (and possibly other fungal diseases, such as apple blotch and bitter rot). While growers are finishing their winter pruning, removing any mummified fruit hanging in the trees is very important. This is especially critical for brown rot in stone fruit trees. Mummified fruit left hanging in the trees will become spore factories during the season and cause infection on blossoms and fruit. Fungicides can be overwhelmed with such high inoculum pressure. Consequently, sanitation is important for fruit rot prevention. In addition, be sure to remove any dead wood from your trees since this can also be a reservoir for brown rot spores.

Stone fruit – peaches, plums and nectarines

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Crapemyrtle Bark Scale

By: Stanton Gill

Sam Bahr, horticulturist, University of Maryland, sent pictures of heavily infested crape myrtles that are loaded with crapemyrtle bark scale. Get ready because this felted scale (Eriococcidae) has managed to spread itself around to many crape myrtles in Maryland, D.C., and Delaware. Brian Kunkel, Paula Shrewsbury, and I will be monitoring this fast spreading scale. We will let you know when crawlers emerge in different parts of Maryland and Delaware.

An infestation of crapemyrtle bark scale on crape myrtle.
Photo: Sam Bahr, UMD

Multiple Problems on White Pine

Heather Zindash, The Soulful Gardner, found "3 of 13 mature, established white pines (Pinus strobus) in a landscape showing significant needle discoloration this spring. On these trees, she found white pine adelgid, pine needle scale, and a small population of white pine aphids. Heather noted taht these pests are taking a toll on these pines. Assess the situation to determine which controls may be needed.

There are several generations a year of white pine aphids. Look for flagging and discoloration of needles.
Control: These aphids overwinter as black eggs on needles. Dormant oils can be used in winter if needed.
Photo: Heather Zindash, The Soulful Gardener

Multi-colored ladybird beetles help keep pine adelgid populations in check. A 1 – 2% horticultural oil gives good control in April.
Photo: Heather Zindash, The Soulful Gardener

Predators like lady beetles help keep pine needle scale under control. Wait until crawlers are active in May to apply control measures if needed.
Photo: Heather Zindash, The Soulful Gardener

If control is necessary, you can use horticultural oil for eriophyid mites. Do not apply oil to blue spruce.
Photo: Heather Zindash, The Soulful Gardener

Beneficial of the Week

By: Paula Shrewsbury

Pillbugs and sowbugs – both are recyclers of organic matter

This is the time of year when there is a lot of mulching and digging going on. You are likely to come across organisms that decompose and recycle organic matter. Two of these organisms are pillbugs, *Armadillidium* spp., and sowbugs, *Oniscus* spp. Although they are not insects, they are all in the same phylum (Arthropoda). Insects are in the subphylum Hexapoda, while pillbugs and sowbugs are in the subphylum Crusatcea and the order Isopoda. They are the only crustaceans that are adapted to living their entire lifecycle on land, although they do live in moist habitats.

Unlike pillbugs, sowbugs have two short, pointy "tails" at the hind end and they cannot roll into a ball. Photo by David Cappaert, Michigan State University, Bugwood.org

Pillbugs and sowbugs range from about ¼ to ½" in length, they have oval shaped, segmented bodies that are convex on the top and light to dark gray in color. They look like mini-armadillos. They have two pairs of antennae (only one can be seen) and 7 pairs of legs. Sowbugs have a pair of tail-like projections (uropods) at the end of the body and pillbugs do not.

The common pillbug is convex and does not have a tail at the end of its body. Photo by Joseph Berger, Bugwood.org

Pillbugs "roll" their body into a ball when disturbed or threatened. This allows the hard upperside of the body to protect the soft underside. The "rolled up" pillbug resembles a pill given them their name. Photo by M.J. Raupp, UMD

They can only survive in moist areas, and hide under objects during the day, often found under mulch, compost, stones, flower pots, wood, or other items on damp ground in high numbers (video by M.J. Raupp, UMD). At night they may be seen crawling around other areas such as patios or sidewalks. They do not bite or sting and they move slowly. The big difference between pillbugs (commonly called roly-polies, doodle bug, potato bug, or pill woodlouse) and sowbugs (commonly called woodlouse) are that pillbugs can roll up into a ball (a defensive behavior) and most sowbugs do not.

Pillbugs and sowbugs are primitive animals but they have an important role in the soil ecosystem and food web. They are scavengers and feed on decaying organic matter such as leave litter and rotting wood, and fungi, and they help with decomposition and recycle nutrients back into the food web. Some isopods are known to feed on a number of pests such as grubs, slugs, and aphids. They also serve as prey to a diversity of predators (spiders, centipedes, beetles), helping to retain them in a habitat.

In addition to the benefits of recycling nutrients back into the environment, pillbugs and sowbugs sometimes become nuisance pests by entering building basements and crawl spaces (damp areas), sometimes building up in large numbers. Move favorable habitat away from building entry points and foundations, seal entry points, and try to dry out moist areas to reduce their numbers.

Weed of the Week

By: Chuck Schuster, Extension Educator, Retired

With temperatures up and down the last seven days, weeds are taking advantage of it in the turf where not previously controlled. Turf in some areas is starting to grow, and in other areas (northern exposed slopes), it is still slow to show much activity. Soils on the western shore remain somewhat cool, and unfortunately dry. This is making pre-emergent weed control activation a challenge without the needed rainfall. In three days last weekend, I received barely .4 inches.

I have noticed a fair amount of chickweed in my travels lately. Common chickweed, *Stellaria media,* is a winter annual that prefers cool moist areas. Chickweed grows in a dense prostrate fashion and is found in many turf and landscape settings. This is a late summer, early fall germinating weed in many areas. Reproduction is by seed. Leaves are opposite, egg-shaped, and pointed at the apex. The root system is fibrous and shallow and easily detaches when the foliage is pulled. A prolific seed producer, one common chickweed plant can produce more **than 2,000 seeds** per year under ideal growing conditions. These seeds also seem to have long-term viability in the soil with a germination rate above 90% after 30 months. With several important nematode species being able to infest common chickweed, control of this plant is useful to prevent other problems.

Common chickweed can be distinguished from mouseear chickweed by noting the presence of hair on the leaf blades. Mouseear chickweed has a hairy leaf blade and will root at the nodes.

Note the diffuse root system. No rooting at nodes on this example, which is a method of distinguishing common chickweed from mouseear chickweed.
Photos: Chuck Schuster, UME-Retired

Cultural control of chickweed can be accomplished in turf by maintaining a dense thick turf. This cultural control method utilizes proper pH, fertility, and of course, mowing at an appropriate height. Chickweed prefers a damp setting, so irrigation management is useful. It does not tolerate warmer parts of the season and dies off during drought stress periods. Prevention and control of chickweed can be achieved through either pre-emergent or post emergent pesticides. To prevent chickweed germination, benefin, under trade name Balan, can be used in the late summer. Chickweed in ornamental beds can be controlled with an early spring application of "Snapshot" which is a mixture of isoxaben and trifluralin, but requires one half inch of rainfall or irrigation within three days to properly activate. Post emergent chickweed in turf can be controlled by many of the broadleaf herbicides. Post emergent chickweed in beds or in turf can be achieved through the use of a glyphosate product as well as products that include Prizefighter, Burnout, Pulverize, and Avenger. It should be noted that glyphosate resistance is being noted in some areas.

Plant of the Week

By: Ginny Rosenkranz

Prunus × *yedoensis* or Yoshino cherry is the beautiful, graceful flowering cherry that decorates the Tidal Basin in Washington, D. C. It is not necessary to travel to Washington to see these fragrant flowering trees, they are also planted on many home and commercial properties in Maryland, where everyone who lives near can see and enjoy the delicate white 5 petal flowers tinged with pink. The thousands of fragrant 1 - 1 ½-inch flowers are held in clusters of 3-6 flowers in a bouquet or racemes, and last almost 2 or 3 weeks depending on the weather. Some cultivars have double blooms like *Prunus x yedoensis* 'Akebono'. Usually the flowers appear and bloom before the foliage emerges. The flowers mature into small bitter black cherries that are prized by many birds. The bright dark green 3-5 inch long leaves have a serrated margin, looking like a small sawblade. In the autumn, the leaves turn a soft yellow. The plants are fast growing when young, and then they slow down until the trees reach 30-40 feet tall and wide, with a broad billowing crown. Plants thrive in USDA zones 5-8 and are heat and humidity tolerant. Yoshino cherry prefers full sun and moist, but well drained, rich soils. These small to medium sized trees can be planted as a specimen or in groups or drifts, brightening the early spring landscape and delighting the eyes.

There are a number of insects that can potentially become pests including aphids, borers, caterpillars, Japanese beetles, and spider mites. Diseases include die back, leaf curl and leaf spot.

Yoshino cherry blooms last 2-3 weeks depending on the weather.
Photo: Ginny Rosenkranz, UME

Degree Days (as of March 29)

Abingdon (C1620)	43
Annapolis Naval Academy (KNAK)	82
Baltimore, MD (KBWI)	112
College Park (KCGS)	103
Dulles Airport (KIAD)	112
Ft. Belvoir, VA (KDA)	104
Frederick (KFDK)	68
Gaithersburg (KGAI)	87
Gambrils (F2488, near Bowie)	104
Greater Cumberland Reg (KCBE)	54
Perry Hall (C0608)	44
Martinsburg, WV (KMRB)	42
Natl Arboretum/Reagan Natl (KDCA)	149
Salisbury/Ocean City (KSBY)	125
St. Mary's City (Patuxent NRB KNHK)	195
Westminster (KDMW)	106

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 **42 DD** (Martinsburg, WV) to **195 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.

Euonymus leaf-notcher caterpillar – larva, early instar **(37 DD)**
White pine weevil – adult first activity **(84 DD)**
Eastern tent caterpillar – egg hatch **(86 DD)**
Boxwood spider mite – egg hatch **(141 DD)**
European pine sawfly – larva, early instar **(154 DD)**
Woolly elm aphid – egg hatch **(163 DD)**
Inkberry holly leafminer – adult emergence **(165 DD)**
Spiny witchhazel gall aphid – adult/nymph **(171 DD)**
Spruce spider mite – egg hatch **(179 DD)**
Boxwood psyllid – egg hatch **(184 DD)**
Tea scale – egg hatch/crawler (1st gen) **(195 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.

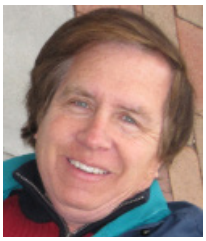
Conferences: Go to the IPMnet Conference Page for links and details on these programs.

May 10, 2023
MAA Arborist Walk
Contact: Danielle Bauer Farace

June 16, 2023
Montgomery County Procrastinator's Conference
Location: Montgomery County Extension Office

June 20, 2023
Cut Flower Program
Location: Castlebridge Farm, Ellicott City, MD

CONTRIBUTORS:



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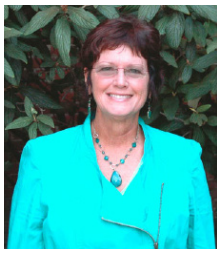

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.