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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) 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)

Long Range Weather From NOAA for 2022

By: Stanton Gill

NOAA put out there prediction for the summer of 2022. First off we will see an average increase of temperature by 1 °F this summer. This does not sound like much, but this is significant. The other long range prediction is for a hotter and drier than normal weather pattern for the western part of the United States. The East Coast will have a rainier than normal summer. It looks like the use of fungicides will be increasing in 2022 on the East Coast.

Next week is the official start of hurricane season. Oh, Boy! The National Oceanic and Atmospheric Administration's Climate Prediction Center on Tuesday forecasted 14 to 21 named storms, six to 10 hurricanes and three to six major hurricanes -- of Category 3 strength or greater.

The 2020 and 2021 seasons both exhausted the hurricane name list and broke records. Looks like it will be a scramble to come up with new names for hurricanes in 2022.

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.

Alternative Fertilizers?

By: Stanton Gill

The Ukraine/Russia conflict has been in the news since both countries are major producers of fertilizers used in horticulture and agriculture. Two researchers at Michigan State University are investigating the use of human pee as a fertilizer source. In desperate times, people are looking for alternative nitrogen, phosphorus, and potassium sources and human pee might have some potential.

Bagworm Hatch is Soon

By: Stanton Gill

Bagworms start to hatch around 600 degree days. Most of you are used to checking Leyland cypress, spruces, junipers, and *Thuja* 'Green Giant' for bagworms. Keep in mind that bagworms love to feed on the foliage of European beech, and we have found them in large numbers on hawthorn and crabapple trees. The damage on these deciduous trees is not as damaging as the impact when bagworm feed on evergreen plants.

When the bagworms hatch, they are extremely susceptible to applications of Bt *Bacillus thuringiensis* or Spinosad (Conserve).



Look for the small, early instar bagworms and they start hatching soon

Powdery Mildew

Elaine Menegon, Good's Tree and Lawn Care, found powdery mildew on untreated dogwoods in Hummelstown, PA this week. Powdery mildew requires a film of water for infection.



Powdery mildew infection occurs on landscape plants, including dogwood.
Photo: Elaine Menegon, Good's Tree and Lawn Care

Brown Rot Symptoms on Ornamental Cherries

David L. Clement

Brown rot symptoms have been reported recently on Kwanzan cherry branch tips. In rainy weather, infected blossoms allow the fungus to grow through the flower stem (pedicel) and into the twig below. Twigs develop elliptical cankers with profuse gumming at the margin between diseased and healthy tissue. Leaves on these infected shoots turn brown and wither, but remain attached. During wet weather, in May and June, the fungus sporulates (produces spores that spread disease) on the surface of infected twig cankers, producing powdery tufts of brown-gray spores that are visible on the outside of twig surfaces. Cankers enlarge from season to season, and sporulation may continue on large cankers for 4 years or more.



Look for brown rot infections on ornamental cherries
Photo: David Clement, UME

Management: In ornamentals, this disease is a relatively new problem and the control has not been studied extensively. Fungicide sprays will not cure infected twigs, but may reduce disease spread. Pruning blighted (diseased) shoots back to healthy tissue during dry weather may help, but is difficult if there are many infected twigs.

Leaf Damage Due to Bud Injury

By: Karen Rane, UMD.

We frequently receive questions in the spring about abnormal leaves on trees and shrubs. Symptoms include discoloration or cracking of leaf margins, abnormal curling and wrinkling. These symptoms are often due to damage to young leaves that occurred within the bud or as the new leaves are expanding. Factors such as feeding by insects or mites, phytotoxicity from chemical sprays or weather-related injury, can all damage tender buds and new growth, resulting in similar symptoms. As the leaves expand, the damaged tissue does not grow resulting in curled leaves with split leaf margins. Sometimes there is evidence of insect pests such as cast skins or stippling on the distorted leaves, but often there are no signs of pests on the plant. This makes identifying the cause of the distortion more difficult. If a number of plant species in the same landscape show this type of damage to emerging leaves, that suggests the problem may be due to cold injury (weather related problems usually occur on many different species, while insects and mites tend to be more host specific).



Various factors can cause damage to buds so leaves do not expand properly
Photo: Karen Rane, UMD

In this photo of a lilac, you can see distortion of the older leaves (arrow). You can also see that the damage was episodic – the more recently emerged leaves appear normal and this damage will most likely have little impact on the health of the plant.

Pine Oystershell Scale

Marie Rojas, IPM Scout, found pine oystershell scale (*Lepidosaphes pini*) on Mugo pine in Gaithersburg on May 23. Marie noted that she is seeing eggs under covers, but no crawlers yet. In 2014, crawlers first hatched at 549 degree days. Gaithersburg is now at 571 so monitor closely for crawlers.

Nancy Harding, UMD, included the following information in a 2014 IPM Report: Monitoring for crawlers will be challenging since they “hide” deep in the needle sheaths. Look carefully. The adult female cover is oyster-shell shaped, straight or slightly curved, moderately convex, and light brown. The male cover is shorter and narrower than the female cover and is the same color and texture. The body of the female is white; eggs and crawlers are white. It has been reported that there are two generations a year; however there is little known about the life history of this species. Damage of the scale’s feeding causes chlorosis at the base of the needles.



Now is the time to monitor infestations of pine oystershell scale for crawlers

Photo: Marie Rojas, IPM Scout

Control: When crawlers are active, apply pyriproxyfen (Distance) or buprofezin (Talus) mixed with 0.5 - 1% horticultural oil for control.

Entomosporium Leaf Spot of Photinia

David L. Clement

Leaf spotting on Photinia and defoliation have been reported from the Washington DC, and Rockville areas recently. Entomosporium leaf spot (photinia leaf spot) is one of the most common diseases of Photinia (red tip) in the landscape. Other names of this disease include Diplocarpon or Fabrea leaf blight. This is a serious disease for Photinia in the landscape. Symptoms begin as small spots that usually coalesce into large dead areas. Leaf lesions frequently have reddish brown margins with gray centers. Infected plants will defoliate before mid-summer and secondary infections frequently cause extensive disease on new foliage. Once this fungal disease gets into an established planting it is difficult to control and will take constant management to maintain the health of the plants.

Management: Sanitation steps such as pruning out symptomatic foliage and removal of leaf debris can help to reduce the number of fungal spores around the plant that can re-infect new foliage. Fungicides will not cure existing symptoms. Fungicide treatments will need to start early and be continued for most of the growing season. Fungicide products should be alternated to avoid resistance build up. We don't typically recommend Photinia in our area because this disease is so common. Consider replacing Photinia with other shrub choices that are less susceptible to disease problems.



Entomosporium leaf spot (photinia leaf spot) is one of the most common diseases on photinia
Photos: David Clement, UME

Four-lined Plant Bugs

Marie Rojas, IPM Scout, reports that she is finding four-lined plant bugs to be in unbelievably high numbers and damaging *Rudbeckia subtomentosa* in Gaithersburg. These plant bugs can cause a lot of damage early in the season. They have one early generation and the plants will grow out of the damage. There is usually no need to treat.



Four-lined plant bugs are causing heavy damage on *Rudbeckia*
Photos: Marie Rojas, IPM Scout



Ambrosia Beetles

Marie Rojas, IPM Scout, is finding ambrosia beetles drilling into *Cercis canadensis* (redbud) this week.



Ambrosia beetles are producing frass tubes at this time of year
Photo: Marie Rojas, IPM Scout

Sawflies on Roses and Creeping Jenny

Marie Rojas, IPM Scout, is finding a lot of sawfly activity on roses and creeping Jenny (*Lysimachia*) this week in Gaithersburg.

The sawfly on creeping Jenny also feeds on *Lysimachia vulgaris*. These plant species are considered invasive in many locations, especially when growing in moist areas. Heavy sawfly infestations can cause significant defoliation.

Two sawflies active on roses at this time of year are the bristly roseslug sawfly and curled roseslug sawfly. Both species have multiple generations throughout the spring and summer.

Control: Sawflies are best controlled when they are young larvae. You can simply pick them off by hand. A forceful spray of water from a hose can also knock off sawflies. Once dislodged, they cannot climb back onto the plant. If control is warranted, Spinosad, Mainspring, and Acelepyrn all work very well on this pest. Remember, sawflies are related to bees and wasps, not moths and butterflies, so Bt will not work as a control option



Sawfly larva feeding on creeping Jenny foliage
Photo: Marie Rojas, IPM Scout



There are several species of roseslug sawflies can do a lot of damage to roses throughout the summer
Photo: Marie Rojas, IPM Scout

Spotted Lanternfly Update

By: Stanton Gill

Brian Kunkel, (University of Delaware Extension), Suzanne Klick, and I (University of Maryland Extension) started out trials to evaluate a new systemic insecticide for potential control for spotted lanternfly. We are working closely with a nursery in Harford County. Here is what we saw out in the field on Wednesday. Nymphs are very active and area about the size of large aphids. They are hard to spot at first, and when spotted, they move onto the other side of stems rapidly. This made taking pictures of early instar nymphs difficult. Suzanne prevailed in the end and she obtained the pictures you see with this article. We applied drenches of a new systemic material. We will evaluate the level of control in 2 weeks and again later in July when the hyperactive nymphs begin to settle down a bit.

We found nymphs feeding on low foliage such as multi-flora rose and bittersweet. In our plots, the nursery owner had been mowing down ailanthus trees, so it was mainly on new shoots that we found nymphs present.

At the Harford County nursery site, they reported some activity of spotted lanternfly in 2021 and there was dramatic increase of activity in 2022.

We are also working with a nursery in Frederick County in evaluating use of ailanthus traps plants grown in 10-gallon pots which are being treated with systemic insecticides.



Early instar spotted lanternfly nymphs are active in Harford County this week.



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Other Armored Scales Move to Crawler Stage Soon

By: Stanton Gill

Minute cypress scale (on junipers and Leyland cypress) and euonymus scale both hatch out at a little over 500 degree days. Many areas of Maryland have reached this level of degree accumulation. Distance or Talus mixed with 0.5% horticultural oil are a couple of good materials for control.



Euonymus scale also infests pachysandra as in the photo

Minute cypress scale on Arborvitae 'Emerald Green'
Photo: Marie Rojas, IPM Scout

Oriental Fruit Moth Damage on Peach and Peachtree Leaf Curl

Jason Hipp, Deeply Rooted Tree Care, found oriental fruit moth damage on peach this week in New Windsor. Jason also found peach leaf curl. Oozing on the fruit is a sign of feeding by the moth larva. There is nothing to do for the damaged fruit at this point. You can protect undamaged fruit with either Avuant, Altacor, or Delegate. You have to wait until the next generation because larvae are already in the fruit. We will try to let you know when to treat for the future generation. Add in a spreader sticker if it is a nectarine.

The oozing on the fruit is from feeding by the Oriental moth caterpillar; the distorted leaves are infected with peach leaf curl.

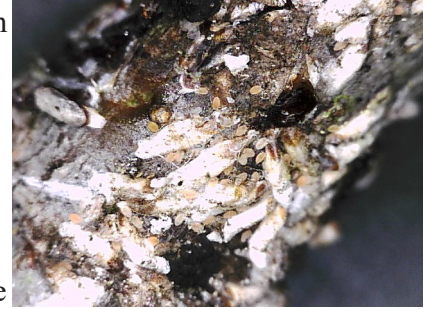
Photo: Jason Hipp, Deeply Rooted Tree Care



Good Catch - White Prunicola Scale

By: Stanton Gill

Marie Rojas, Professional IPM Scout, sent in pictures of crawlers from a branch covered in Japanese maple scale. At first she thought these were the crawlers of Japanese maple scale. I looked up the degree days for the area and they were just under 600 degree days for the areas she was sampling within. Japanese maple scale emerges around 850 degree days. Something was wrong here since we had 8 years of degree day data on the Japanese maple scale. Marie went back to the sample and found the plant had both Japanese maple scale present but also an infestation of white prunicola scale. So she caught the white prunicola scale just going into crawler stages this week. We can give a sigh of relief to know we still have more and degree days to go before the Japanese maple scale goes to crawler stage.



**White prunicola scale just started to go to crawler stage in Laytonsville on May 25.
Photo: Marie Rojas, IPM Scout**

White prunicola scale (*Pseudaulacaspis prunicola*) is a major problem on cherry, fruit trees, and cherry laurel. We are seeing sample submitted from landscapers managing customers fruit tree plantings. Infestations are characterized by numerous white scales that cluster on the trunk and scaffolds, giving them a whitewashed appearance. Feeding reduces tree vigor, and foliage of affected trees may become sparse and yellow. Heavy infestations can cause death of twigs, branches and entire trees if left unattended. We are reaching the number of degree days for crawler emergence. Monitor crawler emergence with black electrician's tape wrapped around scale infested branches with the sticky side out. A thin coating of petroleum jelly will enhance and extend the tape's effectiveness in capturing crawlers.

The insect growth regulators Talus or Distance will control crawlers and settle 1st instar stages.

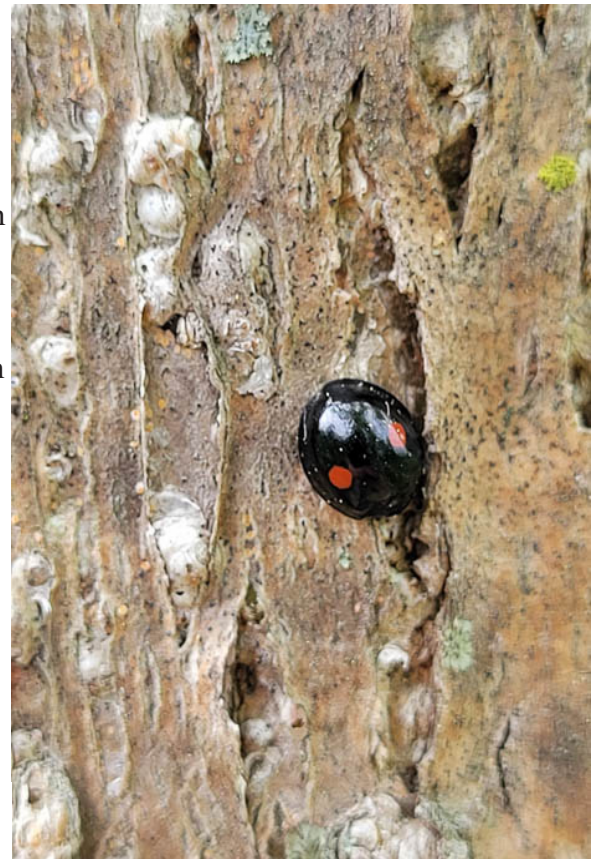
Beneficials in the Landscape and Nursery

Marie Rojas, IPM Scout, is finding the following predators active.

Lady beetles feeding on potato leafhoppers in the growing tips of *Acer rubrum*.

Twice-stabbed lady beetles seen on white peach/prunicola scale on *Catalpa speciosa*. Marie noted that the ones she flipped over were in the egg stage.

Assassin bug nymphs were hanging out in a large lichen cluster on a nursery tree trunk.



**Twice-stabbed lady beetle feeding on scale
Photo: Marie Rojas, IPM Scout**



Lady bird beetle feeding on potato leafhoppers
Photo: Marie Rojas, IPM Scout



Assassin bug nymphs using lichen as a shelter
Photo: Marie Rojas, IPM Scout

Beneficial of the Week

By: Paula Shrewsbury

The large fiery searcher hunts for caterpillar meals

Ground beetles, often referred to as carabid beetles (family Carabidae), are common and abundant predators in our landscapes and nurseries, and in natural areas. Ground beetles get their name because most of them forage and live at the ground level. There are over 40,000 known species of ground beetles worldwide. They are diverse in their appearance and in the food items (prey and weed seeds) on which they feed. The predatory tiger beetles are also now included in the Carabidae family.

One of my favorite ground beetles is the **fiery searcher**, *Calosoma scrutator*, and is one that differs from many ground beetles in that it often hunts in trees, though it can also be found running and foraging along the ground. The [fiery searcher is a common predator of pests](#) found in ornamental, turfgrass, and cropping systems, in addition to forests and fields. Fiery searcher beetles can be found under decomposing wood, rocks, leaves, etc. Adult beetles hunt for prey during the day usually by climbing and foraging on plants. They are active from May all the way through November and adults can live up to 2-3 years. The fiery searcher adult can reach about 1.5" and has long fossorial legs that explain their extraordinary running speed. Their front wings and the underside of their body are a beautiful metallic green - purple color. Females lay eggs in soil. The larvae hatch out and begin hunting for prey. [Larvae also climb or forage on the ground](#), but usually hunt at night. The fiery searcher has two main types of defense. If threatened by predators such as birds, snakes, lizards, frogs, and various animals, the fiery searcher releases chemicals from its body that produce a bad odor to deter predators

from eating it. [Fiery searchers are known for eating caterpillars](#) such as Eastern tent caterpillar, spongy (formerly gypsy) moth caterpillars, cankerworms, and others. It would be hard to go wrong trying to encourage a diverse and abundant population of ground beetles with their potential for providing pest insect and weed suppression.



The fiery searcher, *Calosoma scrutator*, often forages in trees for caterpillar meals.

Photo: P.M. Shrewsbury, UMD



The fiery searcher, *Calosoma scrutator*, is one of the largest carabid or ground beetles growing to 1.5" long. Their ability to run up trees and large mandibles, make them excellent predators of caterpillars.

Photo: M.J. Raupp, UMD



Ground beetle larvae are also important predators.

Photo: M.J. Raupp, UMD

Weed of the Week

By: Chuck Schuster

Soil temperatures continue to warm up, finally! It has been a cool spring in many ways.

In some landscapes, along road edges, and areas that are not mown regularly, a tall plant is starting to show itself again this year. A lot of plants are really taking advantage of the warming soil, and one in particular is our weed this week. Marestalk is being found in our landscapes and turf areas currently. Marestalk, *Conyza canadensis*, also known as "horseweed" or sometimes "Canada Fleabane" is an annual. Seeds can germinate in either fall or early spring. The earlier it germinates the earlier in the season it can produce flowers and viable seed. This weed has a short taproot and erect stout stems. It is unbranched at the base with a bushy-branched upper portion. It first may be noted with its early basal rosette. Marestalk has the capacity of growing to six feet

in total height in fertile soils, and will generally be several feet in height. The leaves are alternate and numerous, narrow, with coarse white bristles up to six inches in length and a one inch in width (see photos below). Marestalk reproduces by seed and will be found in turf, ornamental and many other settings. Of note is that this plant is a prolific seed producer. A single marestalk plant can produce 200,000 seed, usually dispersed between August and October. The seed is smaller than dandelion and can travel up to three-quarters of a mile. Prevention becomes difficult when surrounding areas allow it to go to seed. Marestalk will tolerate many different soil conditions, wet, dry, compacted, but is not shade tolerant.

Fertility management in turf to promote thick turf and proper mowing helps keep this weed under control. Marestalk responds to pH management keeping the soil in the desired range for most cool season turf. It prefers a lower pH. Dicamba, Dimension and 2,4-D are all very effective in turf settings. Be mindful of the issues with herbicides that have volatilization related issues. In landscape beds, post-emergent non selective herbicides (glyphosate) Prizefighter (Ammonium Nonanoate) can be effective if used when the plant is small and actively growing. Resistance to glyphosate has been noted in many regions in the US including in Maryland. Use the maximum label rate to prevent resistance when possible. Other options for control of this weed in landscape and nursery settings will include pre-emergent use of dichlobenil (casoron), oxyfluorfen and oryzalin (Rout) and Sureguard have shown good control. Applications can be made in early August to prevent this plant from even starting out.



The leaves of marestalk are alternate and numerous, narrow, with coarse white bristles up to six inches in length and a one inch in width
 Photos: Chuck Schuster, UME

Plant of the Week: *Deutzia* Yuki Cherry Blossom®

By: Ginny Rosenkranz

Deutzia Yuki Cherry Blossom® is a dwarf deciduous shrub growing 1-2 feet tall and wide in full sun to light shade, flowering best in full sun. A Proven Winners® hybrid cross from *Deutzia gracilis* ‘Nikko’ and *Deutzia x rosea* ‘Carminia’ created Yuki Cherry Blossom® and its lovely cherry blossom pink flowers. Each plant is covered with rich pink buds that open to five petals bell-shaped flowers. Each flower is pink bordered by white, edged on the outside and pure white on the inside. The flowers are gathered in open short clusters or racemes, covering the arching stems of the compact mounding shrub. Buds are set on the previous year’s growth, so pruning should be done after petal drop. The leaves emerge a rich burgundy color and expand to 3-inch dark green leaves that have burgundy red serrated margins. In the fall, the leaves blaze with burgundy bronze before

mulching the ground. The arching stems of *Deutzia* Yuki Cherry Blossom® can root if they touch the ground, creating a colorful carpet groundcover perfect for slopes and banks. Plants are hardy from USDA zones 5-8, and they prefer fertile, moist but well drained loamy soils. Once established, *Deutzia* Yuki Cherry Blossom® is drought tolerant. The small size of this *Deutzia* make it a perfect plant for small gardens, containers, foundations, or informal hedges. Hummingbirds and other pollinators enjoy the flowers, while deer usually avoid the plants. Like many of the *Deutzia* family, the tips of the plants can be susceptible to tip dieback during cold winters. Pests include occasional aphids, leafminers, and leafspots.



***Deutzia* Yuki Cherry Blossom® is good for small gardens**
Photos: Ginny Rosenkranz, UME

Degree Days (as of May 25)

Aberdeen (KAPG)	464	Annapolis Naval Academy (KNAK)	625
Baltimore, MD (KBWI)	670	College Park (KCGS)	570
Dulles Airport (KIAD)	646	Ft. Belvoir, VA (KDA)	674
Frederick (KFDK)	535	Gaithersburg (KGAI)	571
Gambrils (F2488, near Bowie)	620	Greater Cumberland Reg (KCBE)	528
Martinsburg, WV (KMRB)	505	Natl Arboretum/Reagan Natl (KDCA)	803
Salisbury/Ocean City (KSBY)	730	St. Mary's City (Patuxent NRB KNHK)	829
Westminster (KDMW)	695		

Important Note: We are using the [Online Phenology and Degree-Day Models](https://www.climatecentral.com/phenology) 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

June 17, 2022 (Virtual)

Contact: Ginny Rosenkranz, 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

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



Questions about home gardening?

Customers can send photos and questions to **Ask Extension**.

- Plant and insect ID
- Vegetable gardens
- Native plant gardening & more!

go.umd.edu/AskExtension

UNIVERSITY OF MARYLAND EXTENSION | HOME & GARDEN INFORMATION CENTER

If your homeowners have questions, they can contact the UMD Home and Garden Information Center via their website.

Commercial Ornamental IPM Information
extension.umd.edu/ipm

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

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