

Commercial Horticulture

May 31, 2024

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Beneficial of the Week:

Syrphid flies on boxwood psyllid

Weed of the Week:

Horsenettle (*Solanum carolinense*)

Plant of the Week: Aquilegia
'Little Lanterns'

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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:

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Regular Contributors:

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

Disease Information: Karen Rane (Plant Pathologist), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)

Weed of the Week: Chuck Schuster (Retired Extension Educator), Kelly Nichols, Nathan Glenn, and Mark Townsend (UME Extension Educators)

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)

No June 7 IPM Report

By: Stanton Gill

Our two-day Biological control conference will be on June 5 and 6th. Since our attention and focus will be on this two-day conference, we will be not send out the IPM report on June 7th. We will be back June 14th.

Ambrosia Beetle Activity

By: Stanton Gill

With all of the rain in May, susceptible trees such as styrax, Kentucky coffee tree, redbuds, and hybrid dogwoods may be susceptible to damage from *Xylosandrus* species of ambrosia beetles. Jeff from Walters Nursery in New Jersey is seeing damage on copper beech from the first generation of ambrosia beetles. You might want to apply an application of bifenthrin or permethrin to the trunks of the trees.

New Building

We will be in our new building soon! Moving day is set for June 17th. We will be getting new phone numbers which we will list in a future IPM report.

Crape Myrtles (and Aphids)

By: Stanton Gill

A central Maryland nursery had a customer stop by with pictures of her crape myrtle with heavy damage from crapemyrtle aphid and much of the foliage covered with honeydew and black sooty mold fungus. She had the crape myrtle pruned back this spring to main trunks, pollarding the plants. New growth shot out this spring and was looking good until the last two weeks when aphids exploded on the plants. The customer noted she walks through her neighborhood and everyone else's crape myrtles look fine with no noticeable damage from aphids. The other neighbors did not have their crape myrtles pruned back this spring.

If you see similar damage showing up on heavily pruned crape myrtles, please send some pictures. I suspect that the heavy pruning and flushing of new growth is highly attractive to crapemyrtle aphids. We would love to hear your observations at Sgill@umd.edu.



**A high population of crapemyrtle aphids in D.C. this week.
Photo: Sam Fisher, Bartlett Tree Experts**

Psyllid Damage on Thornless Blackberry

By: Stanton Gill

We are getting in pictures of curled, distorted tip growth on thornless blackberries. The wet weather for the last 4 weeks has helped this insect flourish. There is a up-tick in reports of this damage showing up in the last week. The psyllids feed on the tip growth of the blackberry primocanes (new 1-year old canes) and cause the growth to curl and twist. It looks a lot like a herbicide injury. If you uncurl the foliage you will find the nymphs of the psyllids. Prune this tip growth off and get it out of the area. The thornless blackberry is a vigorous plant and will produce side shoots. When the rain period lets up a little, then the predators generally bring this psyllid population under control.



**Psyllid damage on thornless blackberry.
Photo: Stanton Gill, UME**

Crapemyrtle Bark Scale Egg Hatch

Nancy Harding, UMD is reporting that crapemyrtle bark scale eggs hatched on May 29 in College Park. Nancy is seeing a lot of predator activity.

From Luke Gustafson, The Davey Tree Expert Company: "I know the IPM Report has featured *Hyperaspis* beetle larva in the past, but as CMBS becomes ever more common in the Mid-Atlantic, we'll have more people confusing the predatory insect with the plant pest. I have had people tell me proudly they have been regularly squashing these guys to save their crape myrtle and prevent sooty mold this year. They are usually very disappointed to hear they've actually been killing the "good guys".



I saw this gathering of *Hyperaspis* larva week on a property in Baltimore City.

The individual had scrubbed the portion

of the trunk that was accessible from the ground, but there was still some CMBS up in the canopy which was presumably the food source for these hungry predators."

Crapemyrtle bark scale eggs are hatching and being fed upon by *Hyperaspis* lady beetle larvae.

Photo: Nancy Harding, UMD

The scale crawler stage is the time to treat with either Distance or Talus.



***Hyperaspis* lady beetle larvae are feeding heavily on a population of crapemyrtle bark scale.**

Photos: Luke Gustafson, The Davey Tree Expert Company

Bagworm Hatch

On May 29, James LaNore, MRW Lawns, found bagworms that just hatched in Southern Charles County. James found them on a juniper that is in the full sun. He first noticed the female bags from last year. He noted that they are about the size of a pen tip.

Monitor plants such as arborvitae, spruce, and Leyland cypress. Bagworms are also found on deciduous trees and herbaceous plants, but the damage is usually less evident. Since temperatures and accumulated degree day levels vary throughout the area, be sure to check infested trees for egg hatch before treating. Bt (Dipel, Caterpillar Attack), Spinosad (Conserve) or Acelepyrn will all give good control of young larvae.



Check trees for bagworm egg hatch. It is most effective to treat larvae when small.
Photos: James Lanore, MRW Lawns

Fall Webworms

Marie Rojas, IPM Scout, found first generation fall webworms in Laytonsville this week. Fall webworms have a wide woody plant host range. They feed within the webbing which is around the tips of branches and not in the crotches like eastern tent caterpillars which are active much earlier in the season. There are two generations per season. Usually, the generation in late summer to fall is more abundant. There are two color forms of the caterpillar: one that is yellowish white with a black head and one that is brown with a red head.

Control: If possible, prune out webbed terminals. Bt, horticultural oil, or insecticidal soap can be used for early instars. There are many predators and parasites that help keep this native pest at manageable levels.



Fall webworms are hatching late in May.
Photo: Marie Rojas, IPM Scout

European Elm Scale

Marie Rojas, IPM Scout, found European elm scale on 'Jefferson' elms in Laytonsville. This scale has one generation per year in our area and produces eggs from May into July. Look for the yellow crawlers along veins on the undersides of leaves from now through fall. Heavy infestations of this scale will produce large amounts of honeydew. It is a felted scale which is the same group as crapemyrtle bark scale.

Control: Look for beneficial insects which can do a good job controlling this scale. If an insecticide application is necessary, treat with a soil drench of dinotefuran (Safari, Transtect) or make foliar applications of Distance or Talus.



European elm scale has an extended crawler period during the summer.

Photo: Marie Rojas, IPM Scout

Eriophyid Mite on American Beech

Marie Rojas, IPM Scout, found eriophyid mite (*Acalitus fagerinea*) erineum patches on American beech this week. These patches start as light green to yellow in spring and then turn orange and eventually brown. The damage is not significant enough to impact the overall health of the tree.



Eriophyid mites cause erineum patch on beech.
Photo: Marie Rojas, IPM Scout

Tortricids on Apples and Pears

By: Stanton Gill

I am seeing tortricid moths in traps in Westminster this week. They will be laying eggs over the next few weeks. Larvae will damage the fruit of apples and pears. After the eggs hatch, you can apply Delegate (a spinosad) or another spinosad product labelled for fruit applications to apples and pears. Treatment time is still about two weeks out.

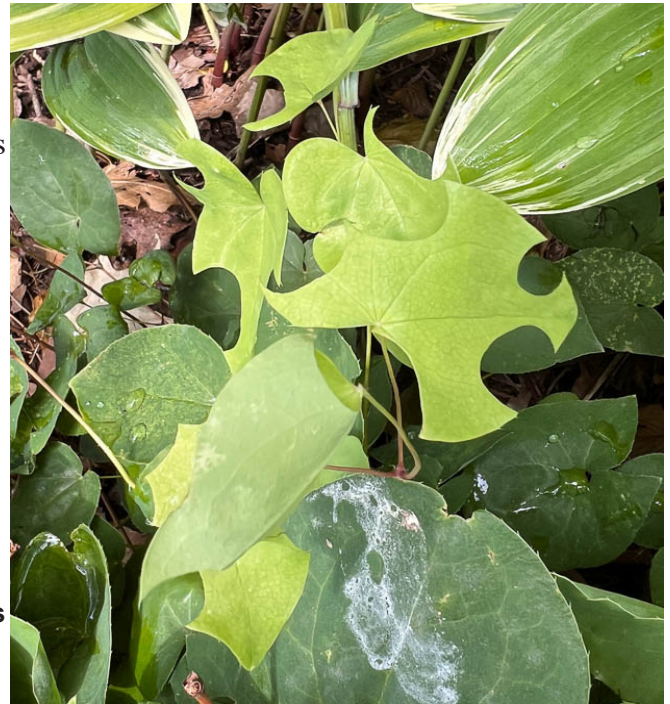
Spongy Moth Caterpillars

David Lantz found spongy moth caterpillars active on May 24 in Clear Spring, MD. If necessary and feasible, control options include Dimilin, Bt, or Conserve. You can find out what areas were treated in Maryland in May for spongy moth on the [MDA website](#).

Leafcutter Bees

Ginny Rosenkranz, UME, found leaves of *Epimedium* 'Sulphureum' that has been harvested by a leaf cutting bee.

Leafcutter bees line their nest cavity and separate it into cells with circular leaf sections that they cut from various plants. A leafcutter bee nest looks a bit like a cigar. Usually, the damage they cause is not significant. Since they are a very important pollinators of many plants, it is best to tolerate the damage.



Leafcutter bees cut out portions of leaf edges to use for their nests.

Photo: Ginny Rosenkranz, UME

Wool Sower Gall on Oak

Ginny Rosenkranz, UME, found wool sower galls on oak this week. These galls are caused by tiny cynipid wasps. They do not impact the overall health of the tree to warrant control. Joe Boggs has more photos and information on the [Ohio State University website](#).



A wool sower gall cut open to show the inside of the gall.
Photos: Ginny Rosenkranz, UME

Privet Problems

By: Miri Talabac, UME-HGIC

Ask Extension is receiving a higher-than-average number of questions (this spring, and last year) regarding privet decline. Granted, as an invasive species we don't advise that clients do much about it (instead we suggest replacement), but they have been hard to diagnose from the images we're seeing.

The most common symptom reported has been defoliation, with few leaf spot symptoms visible (but nothing severe) and no detectable mite or thrips feeding injury. Branch dieback might also be part of the decline, but it's hard to tell since the branches on pictured plants have been fairly denuded by the time we're contacted. Plus, most people are hedging them, so there's an element of over-pruning exacerbating the issue. Victims have been both deciduous and evergreen types of privet, though more clients have been asking about deciduous types. (I'd guess those are more widely grown of the two, rather than being less susceptible.)

Rust Infections

Ginny Rosenkranz, UME, is finding heavy rust infection on hollyhock leaves this week. Anna Schrad, Howard County Dept. of Recreation and Parks, found mayapple rust on mayapple leaves in Ellicott City on May 20. Karen Rane, Retired UMD, wrote an article on rust on mayapple and jack-in-the-pulpit in the [April 30, 2021 IPM Report](#). Claudio Silva reported rust on Amelanchier fruit. Gymnosporangium rust infections continue with the extended periods of rain and high humidity.



This photo shows a rust infection on the upper and lower leaves of hollyhock.

Photo: Ginny Rosenkranz, UME



Rust infection on mayapple.

Anna Schrad, Howard Co. Dept. of Recreation and Parks



Gymnosporangium rust infections are still active.

Photo: Claudio Silva

Ground Bees in Turf

Mark Schlossberg, ProLawn Plus, Inc., found damage caused by ground bees in turf in Reisterstown. These are small bees that are not aggressive, so try to get your customers to leave them alone since they are great pollinators and beneficial. They prefer dry, open areas so maintaining a healthy turf can reduce the appeal of turf areas for females to use as nesting sites. NC State University has [a fact sheet on ground bees](#) in turf with more details on their activities and cultural methods to manage these bees.



**Ground bee nesting sites in this turf area is extensive.
Photos: Mark Schlossberg, ProLawn Plus, Inc.**

A Successful Diagnostic IPM Session for Arborists

There were about 60 people who attended the Maryland Arborists' Association (MAA) and UME Diagnostic session on May 22 here at the Central Maryland Research and Education Center in Ellicott City. There were powerpoints and a drone demo during the program. MAA and UME will a follow-up session on June 27 from 5 p.m. to dark at Carroll Community College in Westminster.



'Drone's eye view' of the tour group during the IPM program.
Photo: Kirk Floyd, Ddrone Services

Six-spotted Green Tiger Beetle

Nancy Woods found a female six-spotted green tiger beetle, *Cicindela sexgutatta*, that was laying eggs. The tiger beetle is a predator as a larva and an adult. It is a very fast flier as it goes after prey. The larva hangs out in a burrow and then reaches out and grabs prey as it goes by. These beetles are often found along open, wooded pathways.



Six-spotted green tiger beetle adults are very fast fliers.
Photo: Nancy Woods

Beneficial of the Week

By: Paula Shrewsbury

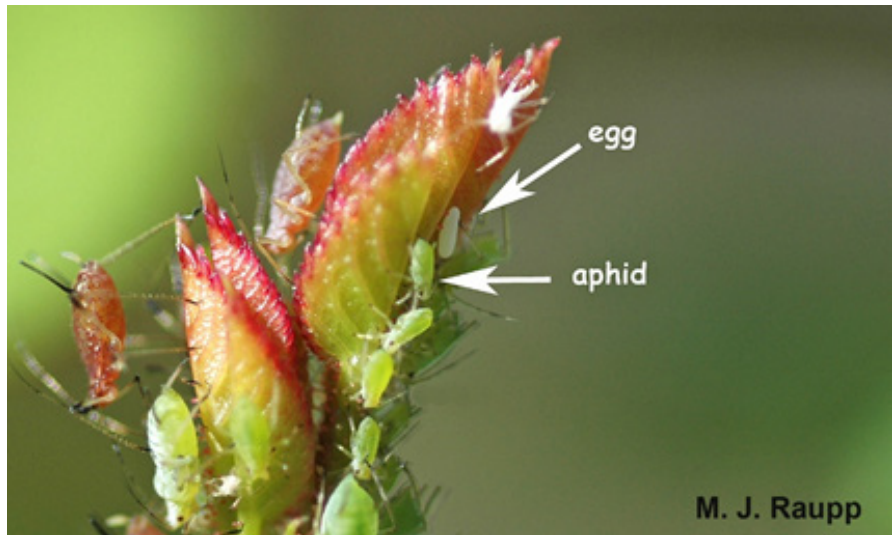
Syrphids feed on psyllids feeding on boxwood

In the Shrewsbury Lab, we are researching psyllids on boxwood which means we (especially Nancy Harding) are looking at a lot of boxwoods and a lot of psyllids. One of the interesting things that Nancy has found are a number of syrphid fly larvae feeding on the psyllids. Go syrphids! Syrphid flies, also known as flower or hover flies, are beneficial insects in the order Diptera (true flies) and the family Syrphidae. There are about 900 species of syrphid flies in North America.

Syrphid flies have interesting biology's. For example, although they are true flies, as adults they mimic bees and wasps, with most species having yellow and black stripes. Syrphid fly adults also behave like bees. They are pollinators and feed on the nectar and pollen of flowers. They commonly visit flowers and display a characteristic flight pattern where they hover over flowers and can quickly change their direction, hence their common names of hover or flower fly. The size of adult syrphid flies can range from 3-20 mm. To determine if you are looking at a bee or a fly that mimics a bee, the most obvious diagnostic characteristic is the number of wings. Fly adults have one pair of wings, whereas bees have two pair of wings. Also, in place of the second pair of wings, flies have halteres. Halteres are a pair of small, clubbed structures found just behind the first pair of wings and they are usually a light white to yellow color. Their large eyes and short antennae also help in identifying syrphid flies.

There are several generations of syrphids a year. Life stages include the egg stage, 3 larval instars, pupa, and adults. Syrphid fly adults are not predacious, they only [feed on nectar and pollen](#) and are considered important pollinators for some plants. In fact, they require floral resources to obtain the nutrients they need to make eggs and produce young. The larval stage of syrphid flies is the predacious stage and they are generalists feeding on a diversity of soft-bodied insects. Syrphid fly adult females cue in on branches infested with potential food for their larvae. The female will lay small white eggs individually on the leaves or buds of these infested plants. Once the eggs hatch, the legless maggot-like larva search for and voraciously consume prey items. Larvae vary in size (4-18 mm) and color patterns (yellow, pink, green, or brown with yellow or white markings) depending on life stage and species.

The body tapers at one end and it is this "pointed" end that is the head end where the feeding on prey business is done. The larvae have hook-like mouthparts that they jab into their prey and work back and forth to assist in the feeding process. Syrphid fly larvae are important generalist predators



M. J. Raupp

Little do these aphids know that death is near when the syrphid larva hatches out of its egg.

Photo: M.J. Raupp, UMD



Syrphid fly larvae are voracious generalist predators that feed on psyllids, aphids, mites, and other small insects.

Photo: P.M. Shrewsbury, UMD

that help to suppress many small soft-bodied insects such as psyllids, aphids, spider mites, thrips, small caterpillars and other prey. If you have plants infested with aphids, within a short time period you will have [syrphid fly larvae snacking on the aphids](#). A single syrphid larva can consume about 400 aphids in its lifetime. Since adults feed on nectar and pollen be sure to provide flowering plants to attract and support syrphids and other omnivorous natural enemies.



Syrphid flies feed on nectar and pollen when they are adults. Note the diagnostic one pair of wings, large eyes, and short antennae on this true fly that mimics bees.
Photo: P. M. Shrewsbury, UMD



Wax from psyllids on boxwood. Predatory syrphid larvae were found in the new growth where psyllids were feeding.
Photo: N. Harding, UMD

Weed of the Week

By: Mark Townsend, UME-Frederick County

Horsenettle, *Solanum carolinense*, is a perennial weed that is in the nightshade family that will be found in the southeastern United States in turf, nursery and landscape settings. This week, I've observed horsenettle emerging in pasture and turf settings, so it's time to start thinking about ID and control.

Horsenettle can grow tall, up to a height of three feet, though most often is found growing to less than twelve inches. The leaves are simple, elliptical to arrow-head in shape that occur on a petiole and alternate on the stem (photo 1). Leaves have thorny projections on the midrib and petiole (photo 2) that are outstandingly sharp and prickly. When crushed the leaves will omit an odor similar to a potato, as horsenettle is a cousin to potatoes, tomatoes, and tobacco. Its roots are a deep spreading rhizome. Stems are angled at the nodes (photo3), become wood with age and will have thorn-like projections



Photo 1: Horsenettle leaves.
Photo: C. Schuster, UME-Retired

and star shaped hairs. The flowers will be found on a flower stalk, have beautiful light violet, star-shaped petals with cone shaped yellow centers. The flower stalk will also have thorn-like projections. Horsenettle will have a one half inch diameter berry, starting out green and turning yellow fruit that dries to a wrinkled berry containing many small seeds. Similar to clammy groundcherry, yet clammy ground cherry does not have the thorny stems and leaves.

Control of horsenettle in turf can be achieved by mowing. Dense turf prevents Horsenettle from thriving. In landscapes and nursery, prevention is important. For plants that do become established, use of post emergent products containing glyphosate, 2,4-D, or Dicamba are useful as a spot spray. Selective post emergent products are less than successful in control of this weed and can be problematic in a nursery or landscape setting.



Photo 2: Thorny projections on horsenettle leaves.

Photo: C. Schuster, UME-Retired



Photo 1: Horsenettle stems are angled at the nodes.

Photo: C. Schuster, UME-Retired

Plant of the Week

By: Ginny Rosenkranz

Aquilegia canadensis 'Little Lanterns' is a dwarf, compact cultivar of the native herbaceous perennial species, and was introduced by Jelitto Perennial Seed in 2002. They prefer to grow in morning sun and afternoon shade in rich moist soils. Like the species, 'Little Lanterns' produces an abundance of bell shaped bright red and yellow 1-2-inch flowers that nod downwards in groups of 2 or 3. The red petal like sepals have 5 spurs facing upwards and underneath are the 5 soft yellow petals that show off the bright yellow stamens. Also, like the native, 'Little Lanterns' will self-seed into the gardens. Plants are tolerant of temperatures found in USDA zones 3-9 and will bloom from March to May in Maryland. Little Lanterns grow 9-12 inches tall and wide with lacy

blue-green foliage made up of 3 compound leaflets that are rounded with notches on the edges. Each leaf is attached in an alternate fashion. Because the plants naturalize so well, they can be planted in pollinator, cottage and woodland gardens where the bumblebees, butterflies and hummingbirds will flock to and both deer and rabbits will leave alone. 'Little Lanterns' has good resistance to leafminer.



***Aquilegia* 'Little Lanterns' prefers morning sun and afternoon shade.**

Photo: Ginny Rosenkranz, UME

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 **656 DD** (Martinsburg) to **1071 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.

- Potato leafhopper – adult arrival (**603 DD**)
- Black vine weevil – adult emergence (**607 DD**)
- Twospotted spider mite – egg hatch (**627 DD**)
- Bagworm – egg hatch (**635 DD**)
- Crapemyrtle bark scale – egg hatch (1st gen) (**638 DD**)
- Cottony camellia / Taxus scale – egg hatch / crawler (**649 DD**)
- Mimosa webworm – larva, early instar (1st gen) (**674 DD**)
- Juniper scale – egg hatch / crawler (**694 DD**)
- Calico scale – egg hatch / crawler (**765 DD**)
- Oak lecanium scale – egg hatch / crawler (**789 DD**)
- Rhododendron borer – adult emergence (**815 DD**)
- Japanese maple scale – egg hatch / crawler (1st gen) (**829 DD**)
- Dogwood borer – adult emergence (**830 DD**)
- European elm scale – egg hatch / crawler (**831 DD**)
- Cottony maple scale – egg hatch / crawler (**872 DD**)
- Winged euonymus scale – egg hatch / crawler (**893 DD**)

European fruit lecanium scale – egg hatch / crawler **(904 DD)**
 Cryptomeria scale – egg hatch / crawler **(937 DD)**
 Azalea bark scale – egg hatch / crawler **(957 DD)**
 Hibiscus sawfly – larva (early instar) **(1015 DD)**
 Japanese beetle – adult emergence **(1026 DD)**
 Fletcher scale – egg hatch / crawler **(1105 DD)**
 Spotted lanternfly – adult flight **(1112 DD)**
 Fall webworm – egg hatch (1st gen) **(1142 DD)**
 Indian wax scale – egg hatch / crawler **(1145 DD)**
 Oriental beetle – adult emergence **(1147 DD)**
 Peachtree borer – adult emergence **(1181 DD)**

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 May 29)

Annapolis Naval Academy (KNAK)	863	Baltimore, MD (KBWI)	847
College Park (KCGS)	856	Dulles Airport (KIAD)	932
Ft. Belvoir, VA (KDA)	911	Frederick (KFDK)	860
Gaithersburg (KGAI)	782	Greater Cumberland Reg (KCBE)	786
Martinsburg, WV (KMRB)	656	Millersville (MD026)	814
Natl Arboretum/Reagan Natl (KDCA)	1045	Perry Hall (C0608)	755
Salisbury/Ocean City (KSBY)	786	St. Mary's City (Patuxent NRB KNHK)	1071
Susquehanna State Park (SSQM2)	781	Westminster (KDMW)	946

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 4, 2024

MNLGA Program: Focus on Garden Centers
 Location: Ladew Gardens, Monkton, MD

[To register](#)

June 5 and 6, 2024

Biological Control Conference for Greenhouses, Nurseries, and Landscapes
 Location: Carroll Community College, Westminster, MD

[Registration via Eventbrite](#)

June 14, 2023

Eastern Shore Pesticide Recertification Conference
 Location: via Zoom
 Approved for MD, DE, VA and D.C. Pesticide CEUs

[For more information and to register.](#)

After you register, you will be emailed the Zoom link.

June 20, 2024

UMD Extension and MNLGA Technology Field Day for Nurseries

Location: Ruppert Nurseries, Laytonsville, MD

June 27, 2024

MAA Pest Walk

Location: Carroll Community College, Westminster, MD

June 28, 2024

Procrastinator's Pesticide Recertification Conference

Location: Montgomery County Extension Office, Derwood, MD

[Registration information](#)

September 17 and 18, 2024

Cut Flower Program

Locations: Central Maryland Research and Education Center, Ellicott City, MD and locations in Howard Co.

October 9, 2024

MNLGA Retail Day

Location: Homestead Gardens, Davidsonville, MD

Go to the [IPMnet Conference Page](#) for links and details on these programs.

Forest Management for Wildlife Symposium: Ruffed Grouse, American Woodcock, Young Forests, & More

Location: Cacapon Resort State Park, [818 Cacapon Lodge Dr, Berkeley Springs, WV 25411](#)

Thursday, July 11, 2024, 8:30 am - 1:00 pm (possible field trip after)

[For more information and to register to attend](#)

Non-Game Wildlife & Forest Management.

Game Species & Forest Management. Reina Tyl, Pennsylvania Game Commission. Bob Long, Maryland Department of Natural Resources. Emily Boyd, Pennsylvania Game Commission.

Forest Management Approaches: Dynamic Forest Blocks. Ben Larson, Ruffed Grouse Society.

Creating a forest management plan for your property: Practical tips and Implementation. Maryland Forest Service, West Virginia Forest Service, Pennsylvania Forestry.

Woodland Stewardship Network. Craig Highfield, Alliance for the Chesapeake Bay

Funding for habitat improvement: Edge feathering, Thinning, Timber Stand Improvements, Harvests. USDA Natural Resource Conservation Service

Workshopping Property Maps: Speakers and specialists will rotate around tables in the room to provide ideas for management and financial incentive programs on poster-size paper maps of landowner's property. This will occur at a roundtable so everyone can watch, learn, and contribute to forest management planning on property.

Potential Field trip demonstrating various forest management practices.

Commercial Ornamental IPM Information

<http://extension.umd.edu/ipm>

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Thank you to the Maryland Arborist Association, the Maryland Nursery, Landscape, and Greenhouse Association, Professional Grounds Management Society, and FALCAN for their financial support in making these weekly reports possible.

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

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