

**In This Issue...**

- [Spindle worm on elderberry](#)
- [Salt marsh moths mating](#)
- [Scout for bagworms](#)
- [Impact of April 21st freeze](#)
- [Beech leaf disease](#)
- [Linden bark borer moth](#)
- [Azalea lace bugs](#)
- [Assassin bugs](#)
- [Fire blight](#)

**Beneficial of the Week:**

A generalist spider that feeds on azalea lace bug

**Weed of the Week:**

Wavyleaf basketgrass  
(*Oplismenus undulatifolius*)

**Plant of the Week:** Tulip tree (*Liriodendron tulipifera*)

**Pest Predictive Calendar**  
**Degree Days**  
**Conferences**

**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 [sklick@umd.edu](mailto:sklick@umd.edu)

**Coordinator Weekly IPM Report:**

Laura Nixon, IPM Specialist in Entomology, University of Maryland Extension, [Lnixon1@umd.edu](mailto:Lnixon1@umd.edu), and Paula Shrewsbury, Professor and Extension Specialist in Ornamental and Turf IPM, Department of Entomology, [pshrewsbury@umd.edu](mailto:pshrewsbury@umd.edu)

**Regular Contributors:**

Pest and Beneficial Insect Information: Laura Nixon and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant  
Disease Information: David Clement (Extension Specialist) and Ana Cristina Fulladolsa (Plant Pathologist and Director, UMD Diagnostic Lab)  
Weed of the Week: Kelly Nichols and Nathan Glenn, (UME Extension Educators) and Dan Buonaiuto, (Assistant Professor), Dept. of Plant Sciences and Architecture  
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)

**Spindle Worm on Elderberry**

By Laura Nixon

Austin Merrbaugh, Antietam Tree & Turf, found an elder shoot borer moth larva (*Achatodes zae*) feeding in the shoots of a black lace elderberry this week. These larvae are also commonly called spindle worm. This species overwinters as eggs, which hatch in early spring and the small larvae tend to go unnoticed. As the larvae grow larger, they burrow into the green shoots of elder plants (*Sambucus* spp.) in late spring and early summer and hollow out the stems. Key signs of this pest are entry holes, brown frass/sawdust, and flagging shoots.



**Spindle worm or elder shoot borer moth larva.**  
**Photo: Austin Merrbaugh, Antietam Tree and Turf**

**Control:** Prune out damaged shoots and dissect to confirm the presence of spindle worm. Infested plant material should be burned or frozen (ideally on site) to kill eggs and larvae and prevent next year's population.

## Salt Marsh Moths Mating

By Laura Nixon

We were sent an ID request this week from Phil Suchman (Marshall's Riverbank Nurseries) for two very different-looking moths mating! These are salt marsh moths (*Estigmene acrea*); if you have seen them before, you may be more familiar with the male form, which has vibrant orange hindwings. Females tend to be a little larger and the hindwings are white. This mating pair were found on a *Cryptomeria* 'Radicans', which is not a reported host for this species, so it was likely just a convenient spot for the pair to alight.



Dorsal and ventral views of female (left) and male (right) salt marsh moths.

Photo provided by Phil Suchman.

The caterpillars of salt marsh moth are generalist foliar feeders, but numbers are kept low enough by natural enemies that it is unusual for them to hit pest status.



Salt marsh moth caterpillar.

Photo: David Cappaert, Bugwood.org

## Start Keeping an Eye Out for Bagworm

By: Laura Nixon

Bagworm egg hatch is predicted to occur at 635 DD, which was been reached at some locations in Central Maryland this week. Although bagworms are generalists, their most common hosts include Leylands, arborvitae, and spruce; if you have plants of concern, be sure to monitor closely for larval activity over the next couple of weeks. Control is most effective when applied to smaller caterpillars.

**Control options:** *Bacillus thuringiensis* kurstaki, spinosad (e.g. Conserve), chlorantraniliprole (e.g. Acelepryn), tebufenozide (e.g. Confirm).



An early instar bagworm feeding on a blue spruce needle.

Photo: Suzanne Klick, UME

## Evidence of the Freezing Temperatures on April 21st Continues

We continue to receive reports of damage to plants from the freeze that occurred on April 21, 2026. Maryland is still experiencing severe drought conditions this spring which stresses plants.



Katsura tree cold damage in West Chester, PA  
Photo: Ryan Longenecker, Davis Landscape, Ltd.



Amanda Laudwein sent in a photo of a magnolia that had cold damage last month that now has some blooms. Amanda noted, "this is going to be one weird looking tree this spring".

Photo: Amanda Laudwein



Freeze damage on cut leaf Japanese maples is evident in northern Baltimore County.

Photo: Mark Schlossberg, ProLawn Plus, Inc.

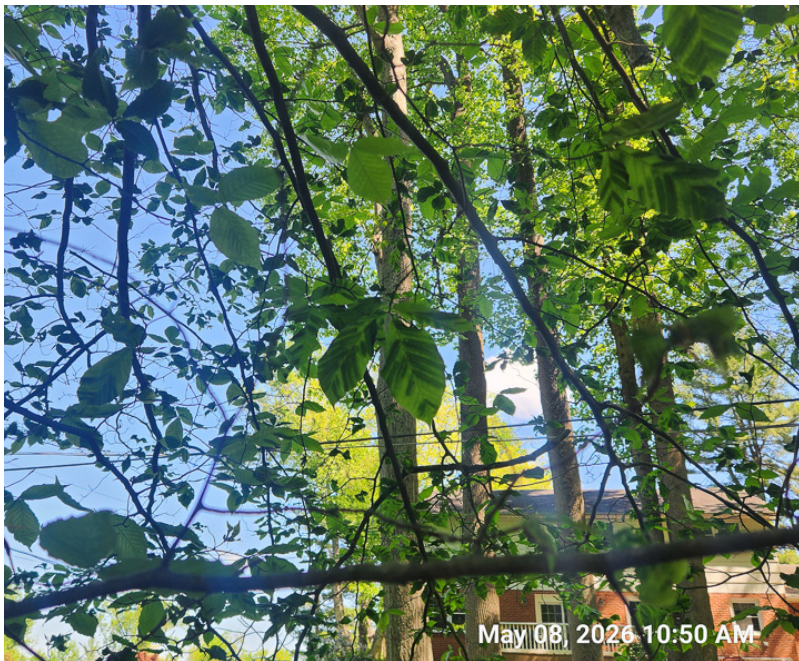
## Beech Leaf Disease Reports Are Increasing

By: David Clement

Kevin Schroeder, The Davey Tree Expert Company, found beech leaf disease on large mature beech trees at locations in Street, MD (Harford County) and Galena, MD (Kent County). Steve Darrow, Empire Landscape, LLC, found beech leaf disease infection on mature trees that were showing signs of dieback. These trees are in Windemere, MD in Baltimore County.

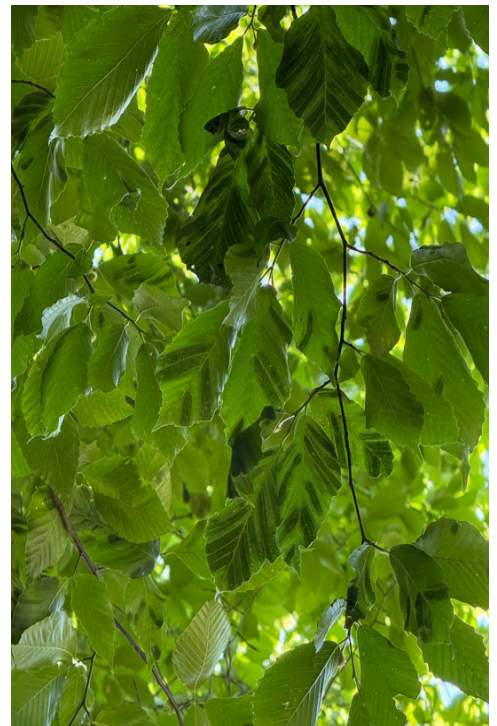
### Management of BLD

There are no cultural practices that can limit the spread and severity of BLD. Removal of infected trees will not eradicate this disease from infested sites. The three best management tools that should be applied before mid-July, which are available through licensed professionals, are phosphite product soil drenches, foliar sprays of the locally systemic nematocide fluopyram, and root flair injections with product formulations of thiabendazole hypophosphite before mid-July.



We continue to receive regular reports of beech leaf disease in a variety of areas throughout Maryland.

Photo: Steve Darrow, Empire Landscape



Looking up into the canopy or at backlit foliage makes it very easy to see the symptoms of beech leaf disease.

Photo: Kevin Schroeder, The Davey Tree Expert Company

### Linden Bark Borer Moth

By: Laura Nixon

This week, I saw a linden bark borer moth (*Chrysoclista linneella*) adult while sitting under a linden tree in Frederick, MD. Larvae of the linden bark borer moth bore into and feed on the bark of European linden and produce orange/brown colored frass. Larvae pupate in the spring with adults emerging in May. This species doesn't reach population levels that are harmful to trees in our region.

Linden bark borer moth adult.

Photo: Laura Nixon



## Azalea Lace Bugs

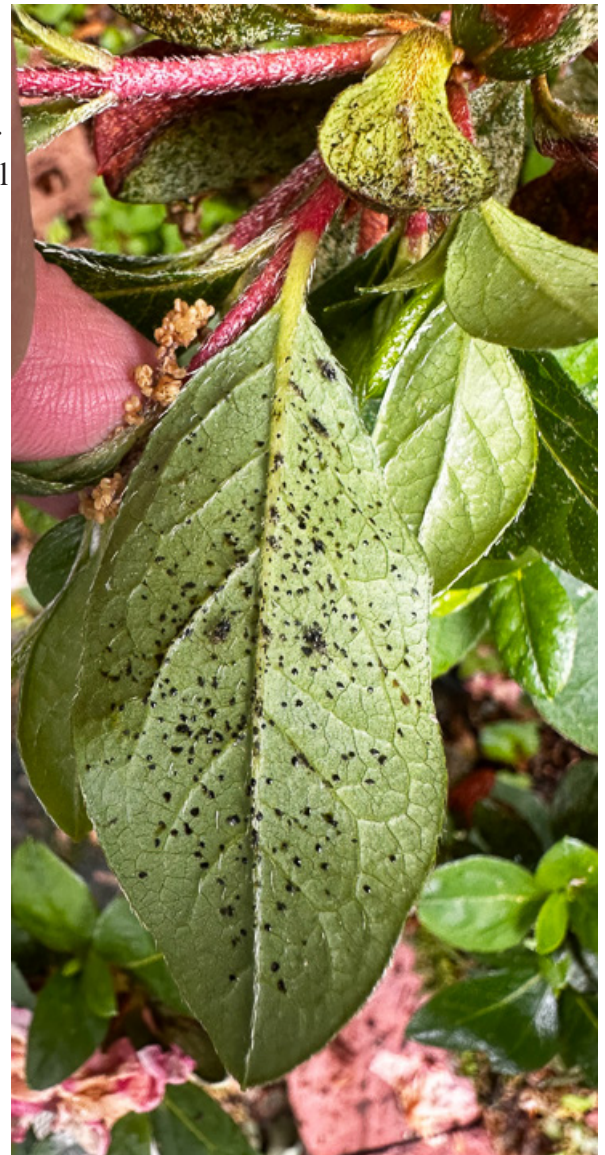
By: Suzanne Klick

Andy Driscoll, MNCPPC-Green Farm, found azalea lace bug adults on Korean azaleas in Wheaton on May 12. Read this week's Beneficial of the Week to find out about a generalist spider that likes to feed on azalea lace bug and how to enhance beneficial insect populations in the landscape. With four generations of azalea lace bugs a year, they can be a problem through early fall. See the [May 7, 2026 IPM report](#) for more information on azalea lace bugs.



Look on the underside of azalea leaves to see which stages of azalea lace bug are present.

Photo: Andy Driscoll, MNCPPC-Green Farm



Black fecal spots on the underside of azalea leaves indicate lace bugs are active.

Photo: Dave Freeman, Oaktree Property Care

## Assassin Bugs

Marie Rojas, IPM Scout, reports that assassin bug egg hatch is increasing this week. As temperatures warm up over the next week, it's good to have the predators ready to prey on the pest insects. Wheel bugs are generalist predators and feed on a variety of insects including lace bugs.

Look for the red and black wheel bug nymphs as they spread out from the egg mass onto nearby foliage.

Photo: Suzanne Klick, UME



## Fire Blight

By: D.L. Clement

Since it has been unusually dry and cold this spring, we have not seen much in the way of fire blight symptoms. However, with the possibility of increased temperatures and possible rain this coming week there may be more typical symptoms showing up on susceptible hosts. Marie Rojas, IPM Scout, is finding a little bit of fire blight this week on Liberty and Freedom apples.

Fire blight, caused by the bacterium *Erwinia amylovora*, attacks more than 70 members of the Rose family, and causes disease on crabapples, flowering pears, service berry, quince, cotoneaster, hawthorn and pyracantha. It spreads by

insects and rain, particularly during spring bloom. Key symptoms can be a "scorched" appearance with leaves and blossoms rapidly turning brown or black, resembling fire damage. Infected twigs and branches may bend over into the shape of a shepherd's crook, and the blackened flowers and leaves will remain attached to the tree. Fire blight can also cause defined cankers on branches with sunken, dark, or cracked areas. During rainy periods a cream-colored bacterial ooze can appear on the cankers. This ooze is full of the bacterial pathogen and highly contagious which can cause secondary spread within the tree canopy.



**Note the scorched appearance of these apple leaves that are infected with fire blight.**

**Photo: Marie Rojas, IPM Scout**

### Management:

Since the infection period has passed, the susceptible host plants management will be pruning during dry weather. Prune only in dry weather and make cuts at least 8-12 inches away from infected dark discolored wood into healthy light-colored plant tissue. Be sure to sterilize pruners with alcohol, or bleach between cuts. Delay summer pruning until the terminal bud has set and new growth has stopped. Follow up with dormant pruning in the winter as well to ensure complete removal of infected branches and dispose of all pruned material. Remove all succulent growth such as water sprouts that are very susceptible to infection and remove any root suckers from the base of trees.

### Beneficial of the Week

By: Paula Shrewsbury

#### *Anyphaena celer* – a generalist spider that likes to eat azalea lace bugs

Azaleas are blooming and azalea lace bugs, *Stephanitis pyrioides* (Heteroptera: Tingidae) are active. I have a particular fondness for azalea lace bug since I did my Ph.D. research on their biology, ecology, and natural enemies. Azalea lace bug is considered a key pest of azaleas because it is frequently found in landscapes and nurseries at densities that cause significant aesthetic and/or economic damage to azaleas and often need some type of control measures. Azalea lace bug has four generations per year and should be monitored through early fall. When you monitor lace bugs, like with all pests, you should also monitor for natural enemies. Several species of natural enemies' attack azalea lace bugs.

In the research I did on azalea lace bug, I determined that azalea lace bug frequently reached outbreak densities on azaleas growing in simple landscapes (low amount of vegetation), while in complex landscapes (high amounts of vegetation), lace bugs seldom reached high densities. I did numerous studies to determine what resulted in this pattern in lace bug outbreaks. What I found was there were more natural enemies, especially generalists, in complex landscapes where there was lots of vegetation and plant species diversity. Diverse landscapes and their diversity of plants support insects that serve as prey (food) for the natural enemies, so the natural enemies stay in diverse landscapes. These natural enemies feed on azalea lace bug before they could establish and build up populations, preventing outbreaks. In complex



***Anyphaena celer*, a foliar foraging spider that prevents azalea lace bug from outbreaking in diverse landscapes.**

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

landscapes compared to simple landscapes, greater plant complexity supported more prey, more prey supported more natural enemies, and more natural enemies led to lower numbers of azalea lace bug.

There was one predator, *Anyphaena celer*, that was very abundant in complex landscapes but not simple landscapes. *A. celer* is a spider that belongs to a group referred to as ghost or wandering spiders (Family: Anyphaenidae). Research showed that *A. celer*, although a generalist predator, significantly reduces azalea lace bug populations in complex landscapes. Interestingly, given the major biological control role it plays against azalea lace bug, when you search the literature there is not a lot of information on *A. celer*. What do we know? *A. celer* is found in the U.S. and Canada, although other species of *Anyphaena* occur in many locations in the world. *A. celer* do not build webs to catch their prey, they forage for prey in low growing vegetation (ex. shrubs) and are referred to as hunters. They, and other spiders in the Anyphaenidae family, are known for their swift speed while hunting. In addition to being voracious predators, some species of *Anyphaena* are known to supplement their diet with nectar, particularly nectar from extra-floral nectaries on plants. This sugar-rich food source provides nutrients that help maintain *Anyphaena* metabolism and has been shown to improve their survival.

Be sure to plant azaleas in diverse landscapes that should support natural enemies and reduce the likelihood of lace bugs outbreaking and the need for intervention.

## **Weed of the Week**

By: Dan Buonaiuto

This week's weed is a bit of a local celebrity in the Maryland invasive species world. Wavyleaf basketgrass (*Oplismenus undulatifolius*, or WLBG), is a shade-tolerant perennial grass native to Europe, that was first discovered in our very own Patapsco Valley State Park in the late 90's. Since its initial detection, WLBG has spread rapidly throughout Maryland, Northern Virginia, and into Pennsylvania.

### **Wavyleaf Basketgrass Identification:**

The distinct "rippled" leaf blades are this species' namesake and its most identifiable characteristic (See Figure

1). The leaves are also fairly wide (0.5-1.0 inches) and pubescent. The stems and leaf sheaths are also pubescent with thin white hairs.

### **Wavyleaf Basketgrass Ecology:**

WLBG is primarily considered a forest invader, forming thick mats in shaded areas (Figure 2), but this species can also be found in patchy shade, along roadsides and trails in a variety of moist soil types. WLBG's thick growth habit suppresses native vegetation. WLBG seeds are dispersed through "epizoochory" i.e., by sticking to the fur (or boots or equipment) of animals. Because it is relatively new on the scene here in North America, we still have much to learn about the biology and impacts of this invasive plant.

### **Wavyleaf Basketgrass Control:**

**Mechanical:** With its shallow root system, hand-pulling WLBG when the soil is moist is an effective (and satisfying) control option. Mowing is not considered an effective management tool.

**Chemical:** As a relatively recent invader, there is limited available research on effective herbicides for WLBG control. Currently only glyphosate and the grass-specific herbicide clethodim have been evaluated, and both have been shown to control WLBG after 1-2 applications. Applications are most successful in the late spring/early summer before the grass flowers, usually in August. There is not much data on the seed longevity for WLBG, but anecdotal reports suggest this species can form a seed bank, so expect multiple seasons of management.



**Figure 1: The rippled leaf blades are the source of the wavyleaf basketgrass' name.**

**Photo: Kerrie L. Kyde, Maryland Department of Natural Resources, Bugwood.org**



**Figure 2: Wavyleaf basketgrass forms thick mats in wooded areas.**

**Photo: Kerrie L. Kyde, Maryland Department of Natural Resources, Bugwood.org**

### **Plant of the Week**

By: Ginny Rosenkranz

*Liriodendron tulipifera* is also known as our native tulip tree or yellow poplar that can grow 60-90 feet tall and 30-50 feet wide. These large trees prefer to grow in full sun and can tolerate part shade, thrive in moist, organically rich, well drained and slightly acidic soils. It is sensitive to drought, heat and soil compaction. They are cold tolerant in USDA zones 4-9. The common name of tulip tree is due to the similarity of the cup-shaped, tulip-like flowers that bloom in May- June. Fragrant 1 ½ - 3-inch flowers are held upright and are constructed with 6 green to golden yellow petals in 2 rows with a reddish orange band near the base. The orange center of the inside of the flower creates the look of a tulip flower. In the center of the flower are the numerous stamens fused with the pistils. The flowers grow in the high crown of the tree and often go unnoticed until the petals

begin to fall. The flowers mature into dry scaly, oblong, cone-shaped brown fruits, each bearing numerous winged seeds that separate throughout the winter months. The deciduous, bright green leaves are glossy and are attached to the stems in an alternate fashion. They can expand up to 8 inches long and wide with pinnate veins and a smooth margin. Each leaf has 4 main lobes with a broad apical lobe and smaller lateral lobes near the rounded base. The leaves are attached to the tree by a 2–4-inch-long petiole. In the autumn the leaves turn a lovely golden yellow. When the flowers are in bloom, hummingbirds, butterflies, bees, and some birds like cedar waxwings feed on the nectar. The eastern tiger swallowtail (*Papilio glaucus*) caterpillars enjoy the tulip tree leaves and have 3 flights, the spicebush swallowtail (*Papilio Troilus*) has 2 broods, the viceroy (*Limenitis archippus*) has 2-3 broods. Sprouts, buds, and seeds are feasted on by white tailed deer and gray squirrels, while some songbirds eat the flowers in the spring. Many birds build their nests in tulip trees. The trees will tolerate deer, rabbits, black walnuts, wet soils, and fires. Their downside is that they have weak wood, possibly because they can grow very fast and are susceptible to limb breakage from winds, snow, and ice. The shallow root system prevents smaller trees or shrubs from growing within the drip line. Aphids and scale insects can be problematic while verticillium wilt, mildew, mold and canker are the potential diseases.



**Tulip trees host a variety of wildlife including butterflies, birds, and squirrels.**

**Photos: Ginny Rosenkranz, UME**

## **Pest Predictive Calendar “Predictions”**

By: Nancy Harding and Paula Shrewsbury

In the Maryland area, the accumulated growing degree days (**DD**) this week range from about **395 DD** (Clarksville) to **696 DD** (Nat'l Arboretum/Reagan Nat'l). 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.

Lilac borer – adult emergence (**350 DD**)  
Melon aphid – adult / nymph (**351 DD**)  
Spiny ash sawfly – larva, early instar (**358 DD**)  
Spongy moth (formerly gypsy moth) – egg hatch (**373 DD**)  
Holly leafminer – adult emergence (**375 DD**)  
Hemlock woolly adelgid – egg hatch (2<sup>nd</sup> gen) (**411 DD**)  
Basswood lace bug – first adult activity (**415 DD**)  
Emerald ash borer – adult emergence (**421 DD**)  
Locust leafminer – adult emergence (**429 DD**)  
Honeylocust plant bug – egg hatch, early instar (**433 DD**)  
Fourlined plant bug – egg hatch, early instar (**435 DD**)  
Lesser peachtree borer – adult emergence (1<sup>st</sup> gen) (**468 DD**)  
Oak erricoccin scale (oak felt scale) – egg hatch / crawler (**469 DD**)  
Maskell scale – egg hatch / crawler (1<sup>st</sup> gen) (**470 DD**)  
Oystershell scale – egg hatch / crawler (1<sup>st</sup> gen) (**486 DD**)  
Minute cypress scale – egg hatch / crawler (**511 DD**)  
White prunicola scale – egg hatch / crawler (1<sup>st</sup> gen) (**513 DD**)  
Euonymus scale – egg hatch / crawler (1<sup>st</sup> gen) (**522 DD**)  
Bronze birch borer – adult emergence (**547 DD**)  
Potato leafhopper – adult arrival (**603 DD**)  
Black vine weevil – adult emergence (**607 DD**)  
Twospotted spide mite – egg hatch (**627 DD**)  
Bagworm – egg hatch (**635 DD**)  
Cottony camellia / Taxus scale – egg hatch / crawler (**649 DD**)  
Mimosa webworm – larva, early instar (1<sup>st</sup> gen) (**674 DD**)  
Juniper scale – egg hatch / crawler (**694 DD**)  
San Jose scale – egg hatch / crawler (1<sup>st</sup> gen) (**723 DD**)  
Crapemyrtle bark scale – egg hatch / crawler (1<sup>st</sup> gen) (**724 DD**)  
Calico scale – egg hatch / crawler (**765 DD**)  
Oak lecanium scale – egg hatch / crawler (**789 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 13, 2026)

|                                     |     |
|-------------------------------------|-----|
| Annapolis Naval Academy (KNAK)      | 510 |
| Baltimore, MD (KBWI)                | 550 |
| Belcamp (FS836)                     | 476 |
| Clarksville (001MD)                 | 395 |
| College Park (KCGS)                 | 605 |
| Dulles Airport (KIAD)               | 602 |
| Ft. Belvoir, VA (KDA)               | 625 |
| Frederick (KFDK)                    | 483 |
| Gaithersburg (KGAI)                 | 557 |
| Greater Cumberland Reg (KCBE)       | 510 |
| Martinsburg, WV (KMRB)              | 543 |
| Millersville (MD026)                | 571 |
| Natl Arboretum/Reagan Natl (KDCA)   | 696 |
| Perry Hall (C0608)                  | 478 |
| Salisbury/Ocean City (KSBY)         | 564 |
| St. Mary's City (Patuxent NRB KNHK) | 610 |
| Westminster (KDMW)                  | 661 |

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

May 20, 2026

[Mid-Atlantic Nursery Workshop: the Water Loop to Pot: Managing Ponds, Irrigation, Substrates, and Runoff for Better Production Profits](#)

Location: Hampton Roads Agricultural Research and Education Center, Virginia Tech, Virginia Beach, VA

June 16, 2026

[2026 Eastern Shore Procrastinators Conference](#)

Location: Zoom

June 18, 2026

MNLGA Field Day

Location: Mt Cuba Center, Hockessin, DE

June 26, 2026

[Montgomery County Pesticide Procrastinators Conference](#)

Location: Derwood, MD

[IPM Scouts' Diagnostic Session](#) (1 - 3 p.m.)

June 23, 2026

Location: CMREC, Ellicott City, MD

## Commercial Ornamental IPM Information

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

---

### CONTRIBUTORS:



Paula Shrewsbury  
Extension Specialist  
pshrewsb@umd.edu



Laura Nixon  
Extension Specialist  
lnixon1@umd.edu



David Clement  
Plant Pathologist  
clement@umd.edu



Ana Cristina Fulladolsa  
Plant Pathologist  
acfulla@umd.edu



Nathan Glenn  
Extension Educator  
Howard County  
nglenn@umd.edu



Nancy Harding  
Faculty Research  
Assistant



Kelly Nichols  
Extension Educator  
Montgomery County  
kellyn@umd.edu



Dan Buonaiuto  
Assistant Professor  
Dept. of Plant  
Sciences and Land-  
scape Architecture  
dbuona@umd.edu



Andrew Ristvey  
Extension Specialist  
aristvey@umd.edu



Ginny Rosenkranz  
Extension Educator  
Wicomico,  
Worcester, Somerset  
Counties  
rosnkranz@umd.edu

Thank you to the Maryland Arborist Association, the Maryland Nursery, Landscape, and Greenhouse Association, Professional Grounds Management Society, FALCAN, and USDA NIFA EIP Award # 2024700043556 for their financial support in making these weekly reports possible.

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by University of Maryland Extension is implied.

University programs, activities, and facilities are available to all without regard to race, color, sex, gender identity or expression, sexual orientation, marital status, age, national origin, political affiliation, physical or mental disability, religion, protected veteran status, genetic information, personal appearance, or any other legally protected class.