

Commercial Horticulture

July 28, 2023

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Hummingbird clearwing moth

### **Weed of the Week:**

Bittersweet nightshade

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

If you work for a commercial horticultural business in the area, you can report insect, disease, weed or cultural plant problems (**include location and insect stage**) found in the landscape or nursery to [sgill@umd.edu](mailto:sgill@umd.edu)

### **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)

### **Aster Yellows in Echinacea**

By: David Clement and Karen Rane

We've had a number of inquiries about Echinacea's with abnormal flower development and color. Flower symptoms include stunted greenish-white ray flower petals, and often green leafy growths protruding from the blossom centers. This problem is caused by aster yellows which belongs to a group of plant pathogens that are called phytoplasmas. This group is related to bacterial pathogens however; their cells have flexible membranes and have no cell walls making them pleomorphic in shape. They are single celled and reproduce by fission like bacteria. They are intracellular parasites and are non-motile. They are spread through the plant inside the phloem. The aster yellows pathogen is spread to ornamentals by phloem-feeding leafhoppers, primarily the aster leafhopper, *Macrostelus quadrilineatus* formerly *fascifrons*. Aster yellows can infect over 300 species of woody and herbaceous ornamentals, vegetables and weeds in 38 plant families as well as a number of grain crops.

This phytoplasma is transmitted when infected leafhoppers feed on the phloem of an infected plant such as a weed host. Leafhoppers acquire the pathogen, but there is an incubation period, sometimes referred to as a latent period, which may take 2-3 weeks, where the pathogen multiplies within the leafhopper, and then moves to the salivary glands. Only then is the leafhopper capable of transmitting the pathogen to another plant. After feeding, it can take 10 days to 3 weeks, depending on temperature and plant species for the appearance of plant symptoms.

The aster leafhopper can overwinter in the egg stage in Maryland that can result in mid to late season infections. Frequently, however this insect also begins developing down south early in the spring where they build up large populations. These southern adults will then migrate on the prevailing winds and jet streams that frequently move northward in the spring. Depending on weather and wind patterns these insects may arrive earlier in the season ready to transmit the disease.

**Management:**

Infections are systemic throughout the plant and therefore plants are not “cured” by removing symptomatic flowers. Promptly remove infected plants when symptoms are first noticed to prevent spread throughout the rest of the planting. Weed hosts such as wild carrot, field daisy, dandelion, thistles, ragweed, marestail, and pineappleweed which are often symptomless should also be removed where possible since they can serve as symptomless reservoirs for future infections. Monitor susceptible plants frequently for symptoms and destroy any that appear to be diseased. Early detection and prompt removal of infected plants may help reduce the spread of the disease.



**Aster yellows can infect over 300 species of woody and herbaceous ornamentals, vegetables and weeds in 38 plant families as well as a number of grain crops.  
Photo: David Clement, UME**

**Watch Out for Mid-summer Fruit Disease**

By: Kari Peter, Plant Pathologist, Penn State University Experiment Station

**Conditions Favoring Bitter Rot and Brown Rot**

This is a reminder for growers to stay on alert and keep fruit covered with fungicides as we are in the middle of the most ideal infection conditions for these rot-causing fungi: high temperatures, frequent rain events, and fruit staying wet for a long time. Also, there is a high incidence of sunburned apples, and this can lead to increased bitter rot infection. Growers are encouraged to stay vigilant during this unpredictable period by monitoring orchard conditions and applying fungicides before rain events.

**Important points about bitter rot:**

- Bitter rot spores are dispersed by rainwater, and warm temperatures and prolonged periods of moisture favor high disease pressure. This is typically from June through harvest.
- The fungus causing the disease is one of the few fruit rot organisms that can penetrate the unbroken skin

of the fruit and needs at least 12 hours of wetness to cause fruit infection.

- When the spore penetrates the skin, the infection will then go dormant (quiescent phase) for a period of time. During this time, the spore does not grow and is not susceptible to fungicides.
- Fungicides must be applied before the initial infection of the spore.
- The maturity of the fruit, temperature, humidity, and presence of disease determine when the quiescent period ends and the symptoms manifest. When you see symptoms, it is too late for disease control.

Be sure to rotate FRAC groups for fungicide resistance management. Growers need to remember what was applied in the early season to manage apple scab since FRAC 7 and FRAC 11 fungicides, regardless if they are in a premix or as a stand-alone product, are limited to four complete spray applications per year per the label.

### **Managing brown rot on stone fruit**

Peaches in the Mid-Atlantic are worth a lot of money this year because the southeast was hit by freeze events during the spring this year. Research at Rutgers showed that applying sprays at 18, 9, and 1 day before harvest provided greater than 95 percent control of brown rot under heavy disease pressure. At the Fruit Research and Extension Center, we have slightly modified this preharvest spray regime to give a bit more wiggle room for growers, instead aiming for a 3-day window for each time point. Be mindful of the products that were used to control blossom blight, and be sure to be in compliance by obtaining the current usage regulations and reading the product label.

### **IPM Class This Fall**

By: Stanton Gill

If you want to learn more about diagnostic IPM and Entomology, I will be offering a 3-credit class on Thursday evenings from 6:00 – 9:30 p.m. The lecture part is all online, so you can take the class from the comfort of your lovely home. There will be four lab sessions during the semester with hands-on diagnosis. The class is offered through Montgomery College, Germantown campus listing. It is listed online under HORT 215. Class starts the last Thursday in August. Guest lecturers include: Dr. David Clement, Extension Specialist in Pathology, University of Maryland Extension, HGIC, and Steve Black, Raemelon Farm (IPM in a nursery setting).

**To Register:** Contact: Stephen Dubik, Professor, and Montgomery College at [steve.dubik@montgomerycollege.edu](mailto:steve.dubik@montgomerycollege.edu).

Web registration: [www.montgomerycollege.edu](http://www.montgomerycollege.edu). (In-county tuition rates available for Business/Industry employees and Tuition waivers available for senior citizens)

### **Pine Bark Adelgids**

By: Stanton Gill

We are getting several reports of large outbreaks of pine bark adelgid. Heather Zindash, The Soulful Gardener, reported them in several locations on white pine. They are very obvious at this time of year because it looks like snow is covering the trunks. The same weather that we talked about in the spring that was perfect for aphids, was also perfect for white pine adelgids. Control in most cases is not necessary. If the weather will cool down, you can try a 1% oil application.

### **Weather Update**

Today, the temperatures went past the mid 90s (°F) with a heat index of 104 °F. Plant material is losing water rapidly. With anything transplanted in the last two years, be sure the plants are being irrigated. It looks like the weather will cool down early next week, but we also need rain.



## Bacterial Leaf Scorch

By: Karen Rane and David Clement

Symptoms of bacterial leaf scorch (BLS), caused by the bacterial pathogen *Xylella fastidiosa*, are beginning to develop now on shade trees in our region. *X. fastidiosa* is vectored by several species of xylem-feeding planthoppers. Common shade trees affected by BLS are oak, sycamore, maple and sweetgum. Typical BLS symptoms include browning leaf margins (“leaf scorch”) (Figure 1), often with a dark brown or yellow “halo” between the green and brown tissue. Repeated infections as well as spread of the pathogen within the water-conducting tissues of a tree will result in branch dieback and tree decline over a number of years. This progression is accelerated in trees exposed to other site stress factors like drought or restricted root area. There is no cure for infected trees, but maintaining tree vigor and reducing overall stress through cultural practices can help slow the progression of symptom development. Mulching and timely irrigation can reduce water stress. The growth regulator product Cambistat (paclobutrazol), available to commercial arborists, may help delay or reduce leaf scorch symptoms in infected trees and improve foliage appearance.



Typical BLS symptoms include browning leaf margins (“leaf scorch”).  
Photo: David Clement, UME

## Japanese Beetle Activity is High

By: Sheena O'Donnell, UME

We have seen a lot of Japanese beetle activity this week in many places. Here at Central Maryland Research and Education Center they have been feasting on zinnia foliage. The good news is that in mid to late summer they begin laying eggs and adult populations will taper off, allowing plants to push new leaves & growth (if it ever rains again). If you have a dense population that you need to control we have seen good results with Mainspring and Acelepryn, both lower risk insecticides. Organic operations can look into using Btg, under the commercial names Beetle-gone, grub-be-gone.

We are currently testing out a trap design that incorporates the use of an entomopathogenic fungi, *Beauveria bassiana*. Our goal is to create a trap that infects the insects with this entomopathogenic fungi then allows them to crawl out, spreading the spores to other individuals that it congregates to feed with. We are still in the early stages of this trial – stay tuned for more.



Heavy Japanese beetle feeding on zinnia foliage  
Photo: Sheena O'Donnell, UME

## Extensión en Español

Check out [Extensión en Español](#), a Spanish language blog by two UMD professors, Anahí Espíndola (Entomology) and Macarena Faruh (Plant Sciences & Landscape Architecture). They cover a range of topics, including fruit, pollinators, pests, soils, and pesticides.

### Cicada Killers and European Hornets

By: Stanton Gill

We are receiving pictures of both cicada killer wasps and European hornets that are active in landscapes.

The European hornet (*Vespa crabro*) is the largest eusocial wasp native to Europe. It is also the only true hornet (genus *Vespa*) found in North America introduced into the United States several centuries ago and is well established in the United States. It is also the only true hornet (genus *Vespa*) found in North America. It is big and somewhat scary to some folks but it also a great predator. We have found this European hornet feeding on spotted lanternfly in our field trials in 2021 – 2022. Leave this hornet alone.

Cicada killer, *Sphecius speciosus*, especially the female cicada killer wasps are active across Maryland during August, intent on their tasks of 1) digging underground burrows and 2) provisioning them with paralyzed cicadas that will be food for their grub-like larvae. The wasps will be very focused on these tasks for several weeks. The males hang around the ground nest and will buzz you if you approach. The males cannot sting since they lack an ovipositor. The females are so intent on collecting cicadas and grasshoppers, they are really not easily provoked to sting.



European hornets strip bark to carry off pieces to their nests.

Photo: Suzanne Klick



Cicada killers are active now.

Photo: David Krimins



## Spotted Lanternfly Reports (SLF)

The number of sightings of SLF adults is increasing dramatically this week. As we move into the adult stage, they will excrete large amounts of honeydew.

Chris Mirkovich, Charm City Landscapes, has seen fourth instar nymphs on coneflowers in Baltimore City.

Chris also found a hundreds of fourth instar nymphs and winged adults on *Parthenocissus quinquefolia*, *Hedera helix*, and *Vitis* sp. which was covering a fence in the yard in Baltimore City. Of the many plants in the area, Chris noted that he could not tell on which plants they were feeding.

Ian Selock reports finding adults in Myersville in western Frederick County. Ian found two adults last weekend on an *Ailanthus*, which was also covered in 3rd and 4th instar nymphs.

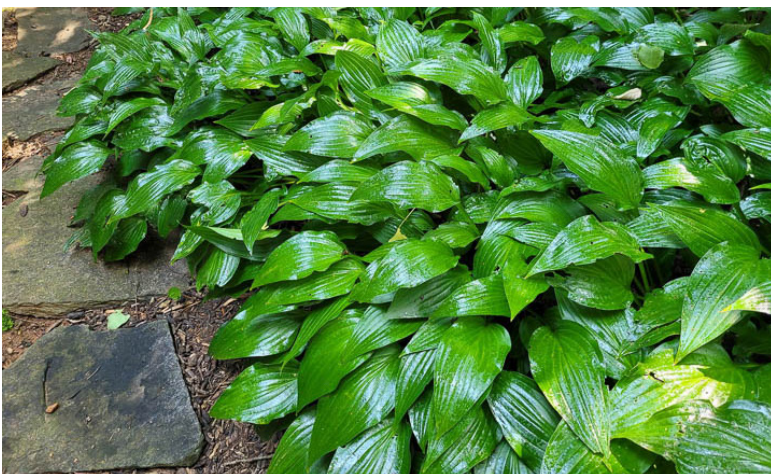
Ann Betten, Betten Landscape Design, saw one adult in Timonium this week. Ann noted how well it blends in with the stone.

Luke Gustafson, The Davey Tree Expert Company, reported numerous spotted lanternflies, including an adult, in Baltimore City property. Luke also saw an infestation of SLF on two yellowwood trees in Baltimore City. He noted that there were some on the lower trunk, but a lot more higher up in the canopy as indicated by the coating of honeydew on hosta and shrubs under the canopy.

Brandon Allison, Brightview, reported finding a spotted lanternfly adult last week at the White Marsh Mall. Brandon noted that he did not see any other SLF at that site.



In some areas, you need to look very closely to spot the spotted lanternfly adult.  
Photo: Ann Betten, Betten Landscape Design



This SLF population was so high, a lot of honeydew was raining down on these hosta plants below.

Photo: Luke Gustafson, The Davey Tree Expert Company



## Euonymus Scale

Elaine Menegon, Good's Tree and Lawn Care, found active euonymus scale in Hershey on July 24. Euonymus scale is a problem that can show up on pachysandra and boxwood. The preferred host are euonymus species, but if you have infested plant in the landscape it can easily spread to these other species of plants. There are three generations of this scale. The second generation occurred here in Central Maryland about two weeks ago. Monitor to see if they are in crawler or first instar stages, then Talus or Distance will be good to use.

**Male euonymus scale are covering the foliage and stems of this pachysandra.**

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



## Giant Bark Aphids

John Lamir, Montgomery County Parks, found giant bark aphids on the trunk of a beech tree in Frederick. Giant bark aphid populations tend to increase through the summer. Normally, we do not see these aphids as very active until late summer and fall. This year, they are appearing earlier than usual. Damage to trees is very minimal and control is not necessary. Lady beetles, syrphid flies, and other predators feed on these aphids.

**Giant bark aphids can be found in large numbers, but they are rarely a problem.**

**Photo: John Lamir, Montgomery County Parks**



## Boxwood Leafminer Larvae

Luke Gustafson, The Davey Tree Expert Company, is finding damage from boxwood leafminers from this season's young larvae is becoming more apparent on untreated boxwood. When boxwood leafminers are out of their summer diapause stage, you can use systemic or translaminar insecticides for control. Cut a leaf open to check if the larvae is actually moving around to show that it is out of summer diapause.

**The yellow, puckered areas on this boxwood foliage indicates early instar feeding by boxwood leafminer larvae.**

**Photo: Luke Gustafson, The Davey Tree Expert Company**





## Milkweed Tussock Moth Caterpillars and Catalpa Sphinx Moth Caterpillars

Nancy Woods found a cluster of milkweed tussock moth caterpillars this week. This species feeds on milkweeds and dogbane. There are at least two generations, so look for these caterpillars through the summer.

Luke Gustafson, The Davey Tree Expert Company, found catalpa sphinx moth caterpillars (aka catalpaworms) on several catalpa trees this week in Baltimore County. Luke noted that they had partially defoliated one portion of the tree. John Lamir, Montgomery County Parks, also found these caterpillars in Gaithersburg this week. These caterpillars can be found in high numbers and defoliate trees. There are also many predators and parasitoids that feed on these larvae. Control is usually not necessary. Bt can be used to control the early instar larvae.



**Milkweed tussock moth caterpillars a native insects that feed on *Asclepias*.  
Photo: Nancy Woods**



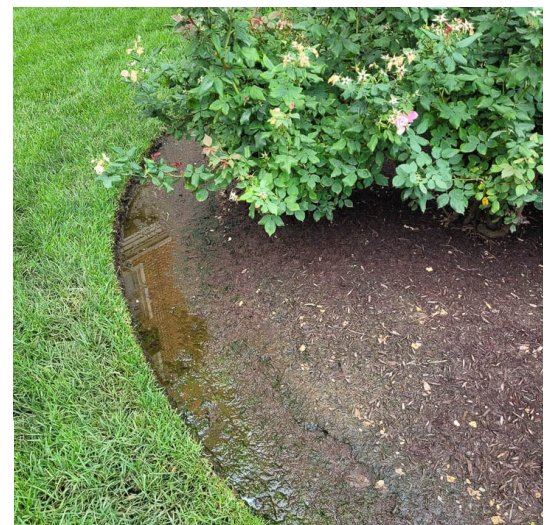
**Look for predator and parasitoid activity among catalpa sphinx moth caterpillar populations.  
Photos: John Lamir, Montgomery County parks**

## Irrigating During the Hot and Dry Weather

Luke Gustafson, The Davey Tree Expert Company, sent in a photo showing how excessive irrigation can lead to plant stress and root rot. Systems that were turned up during the dry part of June need to be adjusted to prevent excessive water use and standing water.

**Watch for puddling after excessive irrigation to avoid problems with plants receiving too much water.**

**Photo: Luke Gustafson, The Davey Tree Expert Company**





## Beneficial of the Week

By: Paula Shrewsbury

### Hummingbird moths are busy nectaring

In the past week, I have seen numerous hummingbird moths zipping around several different flowering plants, most commonly butterfly bush (*Buddleia*) and Monarda. In addition to being amazingly beautiful, they are also pollinators. For those of you who have seen hummingbird moths flying around and drinking nectar from flowers you will understand why hummingbird moths are so named. The first time I saw a hummingbird moth I thought it actually was a hummingbird, but as I looked closer I could tell something wasn't quite right with that identification. Hummingbird moths are moths (Lepidoptera) in the family of moths Sphingidae. There are four species of hummingbird moths in North America, and they occur as far north as Alaska. The most common species are the snowberry clearwing moth (*Hemaris diffinis*) and the hummingbird clearwing moth (*H. thysbe*). They are known as clear-winged moths because their wings have relatively few scales and appear clear compared to other moth species. The bodies are relatively plump and the tip of their abdomen opens into a fan. The size, shape, coloration and movement of the moth are similar to that of hummingbirds ([click HERE to see a hummingbird](#)). Most notable are the wings and the speed at what they beat – over 70 beats / second. Yes, I said per second, not per minute! Like hummingbirds feeding at a flower or feeder, the clear wings of the moth appear almost motionless in flight and allow the moth to hover at a flower; in addition to flying backwards and sideways. [Click here to view a hummingbird moth](#) feeding on flowers while in flight. As you can see in the associated image, the mouthpart of the hummingbird moth is a long straw-like proboscis which it uses to reach down deep into tubular-type flowers to withdraw the nectar. Some of the favorite flowers of hummingbird moths are honeysuckle, snowberry, lilac, phlox, bee balm, dogbane, cardinal, salvia, trumpet vine, verbena, vetch, butterfly bush, vinca, and thistles. Hummingbird moths are common in meadows and urban/ suburban landscapes. Why would a moth want to look like a hummingbird and have similar feeding and flight behaviors? We do not know for sure, but some scientists hypothesize that it might be to confuse potential predators, especially since hummingbird moths are diurnal (day-fliers) rather than nocturnal (night-fliers) like most moths. Some predators may think of a moth as an “easy prey” and a hummingbird just a little too energetic for them.



This snowberry clearwing (hummingbird) moth, *Hemaris diffinis*, has its straw-like proboscis (mouthpart) down into the deep flower of a butterfly bush drinking the nectar. The larvae of this moth feed on snowberry.  
Photo: P.M. Shrewsbury, UMD



The red-brown coloration is diagnostic of the hummingbird clearwing, *Hemaris thysbe*.  
Photo: P.M. Shrewsbury, UMD

Female moths produce a pheromone from glands at the tip of their abdomen that attracts males. After mating, female moths lay tiny, round glossy green colored eggs on the leaves of a number of shrub species and vines such as honeysuckle, snowberry, viburnum, hawthorn, and cherry. Of course, the larvae of these moths are caterpillars and most caterpillars eat foliage. Like its relatives, the hawk and sphinx moths, hummingbird moth larvae are referred to as hornworms. They have a notable “horn” or spine-like protrusion sticking out from the back end of the caterpillar (see image). One of the most commonly known hornworms is the tomato hornworm (it is not a hummingbird moth). After hatching from its egg, the hornworm caterpillars of hummingbird moths feed on and consume foliage for a few to several weeks. They then leave their food source (usually honeysuckle, dogbane, or some Rosacea plants) and move down to the ground to pupate under the soil or leaf litter. There can be one (cooler areas) to three generations per year (warmer areas). Unlike their tomato hornworm relative, hummingbird moth larvae seldom are abundant enough to reach damaging levels.



M. J. Raupp

**The hornworm caterpillar of a hummingbird moth is appropriately named given the distinct horn or spine on its last segment.**

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

Be sure to plant lots of bright colored tubular flowers and you will have the pleasure of these amazing clear-winged moths!

### **Weed of the Week**

By: Chuck Schuster, UME-Retired

Even with the generally dry conditions some weeds are thriving. One plant that just seems to be growing as if it has adequate moisture this year is bittersweet nightshade. Bittersweet nightshade, *Solanum dulcamara*, is an introduced plant originating from Eurasia as an ornamental. Over time, this plant has become somewhat invasive. This plant is a perennial vine with trailing and climbing growth habits. This vine may reach more than 10 feet in length, and is found throughout eastern and central United States.

Bittersweet nightshade can outcompete many existing plants in a landscape. This plant prefers rich soils. The leaves are a dark green to purple color, ranging in length from 1 to 4 inches, alternate, and will often present with 2 basal lobes. The leaves are oval and have smooth, entire margins. Flowers are star-shaped with a yellow center. Bittersweet nightshade reproduces by seed and by rooting at nodes. One positive thing about this plant is that the seeds do not have a high germination percentage after the first year. With an 80% germination rate the spring following the release of the seed, the following year the germination percentage is well below 40%. The stem is hollow and woody near the base. They appear with small hairs. Leaves emit an unpleasant odor when damaged. Bittersweet nightshade produces a blue flower from May through September during most years. The flowers have five petals, with a yellow fused anther in the middle. Most often flowers will be drooping. (Photo 2 see arrow) This plant produces a bright red berry that is egg-shaped and contains round, flat yellow seeds. This plant is poisonous if eaten.



Mechanical control of this weed is considered a good option in many settings. Pulling the plant with the roots will provide adequate control in many settings. If any part of the plant is left it may reestablish. Pulling when the ground is damp works well with small plants. Chemical control of Bittersweet nightshade can be accomplished using post emergent selective broadleaf herbicides containing 2-4D, and triclopyr or non-selective products containing glyphosate, and Imazapyr. Both glyphosate and Imazapyr have aquatic formulations available for use in areas that have a high-water table or where the plants may exist in water. Triclopyr can be used in most grasses, sedges, rushes, cattails, lilies and irises. Triclopyr is available in both aquatic and terrestrial formulations and is sold in formulations that include the amine (e.g. Garlon 3A) or ester/BEE (Garlon 4). Like imazapyr, triclopyr is absorbed by woody stems and roots as well as leaves so care must be taken not to apply to bark and roots of the desirable plants and trees. Many of these products can cause damage in the ornamental setting to desired species of plants. Use caution when applying.



**Photo 1: Bittersweet nightshade leaves emit a bad odor when damaged.**  
Photo: Chuck Schuster, UME-Retired



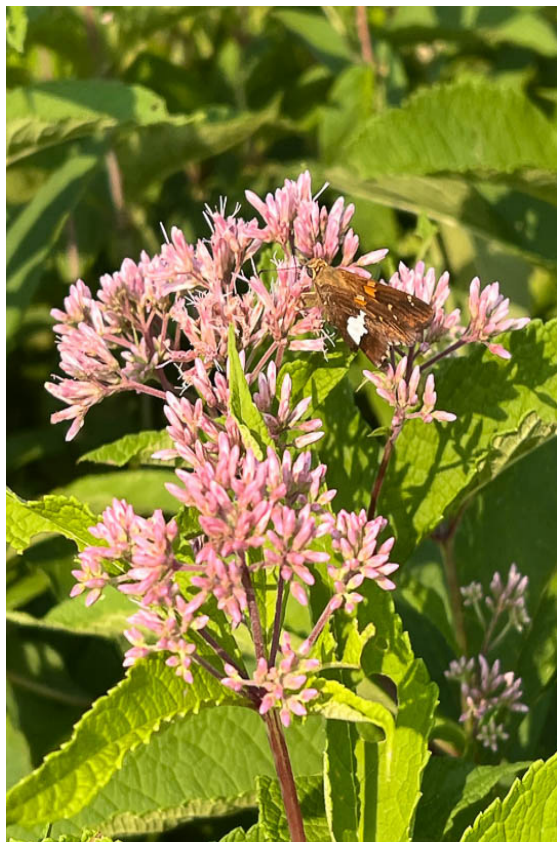
**Photo 2: Most often, flowers will be drooping.**  
Photo; Chuck Schuster, UME-Retired

## **Plant of the Week**

By: Ginny Rosenkranz

*Eutrochium dubium* ‘Little Joe’ or Joe Pye ‘Little Joe’ is a native herbaceous perennial cultivar that was discovered growing among other Joe Pye seedlings. Like the coastal plain Joe Pye, ‘Little Joes’ light lavender-pink, small, disk flowers bloom on umbrella-shaped clusters held up by dark purple stems from July through September. Joe Pye ‘Little Joe’ thrives in full sun to part shade and prefers moist organically rich soils that don’t dry out. The plants grow 3 – 4 feet tall and wide, with whorls of 3-4 leaves. Each leaf has bold veins with rounded toothed margins. ‘Little Joe’ is a more compact cultivar that grows more upright with stiffer stems. The flowers are also more compact and the clusters are smaller, but the color of the flowers is the same lavender-pink. ‘Little Joe’ is also more drought tolerant than the species, and although it will spread from seed like its parents, the plants will not come true to the cultivar. Cold tolerant from USDA zones 3-9, ‘Little Joe’ is also tolerant of heavy clay soils and deer pressure. In my garden, the deer trimmed the plants down to about a foot in

the spring, then they rebounded with dense lush foliage and flowers on plants that are almost 4 feet tall. These lovely compact ‘Little Joe’ plants will fit into rain gardens, moist borders, along a pond or stream, in cottage, native plant and meadow gardens. There are no serious pests. The name Joe Pye is from a native American Indian Mohican, an herbalist and healer from the late 1700’s.



**Joe Pye ‘Little Joe’ thrives in full sun to part shade and prefers moist organically rich soils that don’t dry out.  
Photo: Ginny Rosenkantz, UME**

### Degree Days (as of July 26)

Abingdon (C1620)	2025
Annapolis Naval Academy (KNAK)	2203
Baltimore, MD (KBWI)	2269
College Park (KCGS)	2155
Dulles Airport (KIAD)	2184
Ft. Belvoir, VA (KDA)	2086
Frederick (KFDK)	2065
Gaithersburg (KGAI)	1977
Gambrils (F2488, near Bowie)	2120
Greater Cumberland Reg (KCBE)	1815
Perry Hall (C0608)	1947
Martinsburg, WV (KM RB)	1612
Natl Arboretum/Reagan Natl (KDCA)	2514
Salisbury/Ocean City (KSBY)	2202
St. Mary’s City (Patuxent NRB KNHK)	2544
Westminster (KDMW)	2282

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



## **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 **1612 DD** (Martinsburg, WV) to **2544 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.

Pine needle scale – egg hatch / crawler (2<sup>nd</sup> gen) (**1561 DD**)  
White prunicola scale – egg hatch / crawler (2<sup>nd</sup> gen) (**1637 DD**)  
Obscure scale – egg hatch / crawler (**1774 DD**)  
Spotted lanternfly – egg laying (**1825 DD**)  
Orangestriped oakworm – egg hatch / early instar (**1917 DD**)  
Magnolia scale – crawler (**1938 DD**)  
Fall webworm – egg hatch / early instar 2<sup>nd</sup> gen (**1962 DD**)  
Maskell scale – egg hatch / crawler 2<sup>nd</sup> gen (**2035 DD**)  
Euonymus scale – egg hatch / crawler 2<sup>nd</sup> gen (**2235 DD**)  
Mimosa webworm – larva, early instar 2<sup>nd</sup> gen (**2260 DD**)  
Japanese maple scale – egg hatch / crawler 2<sup>nd</sup> gen (**2508 DD**)  
Fern scale – egg hatch / crawler 2<sup>nd</sup> gen (**2813 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.**

### **September 13, 2023**

MAA's Day of Safety and Health

**Location:** Howard County Fairgrounds, West Friendship, MD

### **September 13, 2023**

MNLGA Nursery Field Day

**Location:** Abby Farms, Waldorf, MD

### **October 11, 2023**

FALCAN Truck and Trailer Seminar

**Location:** Urbana Fire Hall, Urbana, MD

### **2024 Advanced Landscape IPM PHC Short Course**

This is a recertification short course for arborists, landscapers, IPM consultants, horticulturalists, professional gardeners, and others responsible for urban plant management. The course lectures will be held over four days at the University of Maryland, College Park, MD. In addition, there will be a hands-on lab following lecture (available to a limited number of course attendees). Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture dates: Monday, January 8 - Thursday, January 11, 2024 from 8:00 am – 3:00 pm

Lab dates: Monday, January 8 - Thursday, January 11, 2024 (space limited) from 3:30 pm – 5:30 pm

Course and registration information: <https://landscapeipmphc.weebly.com/>

Questions contact: Amy Yaich, 301-405-3911, [umdentomology@umd.edu](mailto:umdentomology@umd.edu)

Questions from Your Customers? Send them to the [Home and Garden Information Center](#)

We handle questions from **commercial** horticulturists.

The Home and Garden Information Center (HGIC) is set up to answer **homeowner** questions. If your customers have questions, please direct them to HGIC through their website at <https://go.umd.edu/AskExtension>.

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

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