

Commercial Horticulture

September 2, 2022

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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

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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)

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Be Careful at This Time of Year

By: Stanton Gill

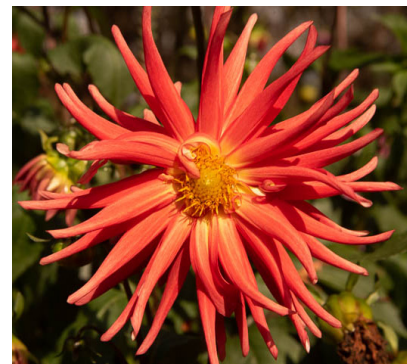
Two things are happening at this time of year. The earth is tilting on its axis and this means morning sunlight is at a sharp angle. With the bright sunny days this week it is making driving early in the morning before 8:30 a.m. a real challenger for many drivers. The sun is aiming right into your eyes.

The other thing is with the cool nights and mornings, deer activity is increasing. Deer are wandering into roadways. Combine deer wandering into the roadways with bright, blinding sunshine in the morning and we have the formula for some accidents. Just be cautious over the next month of driving, especially on sunny mornings. Insurance company reps tell me the urban areas of Maryland have some of the highest incidence of damage to cars and trucks involving deer.

Cut Flower Tour
September 27, 2022

Locations: Zekiah Ridge Farm, La Plata, MD, and Hertzler Farm, Charlotte Hall, MD

[Schedule and Registration](#)



Big Silk Moth Caterpillars Out in Early September

By: Stanton Gill

It is September and that means lots of activity from caterpillars feeding on herbaceous and woody plants. You might run into some of the giant silk moth larvae in the nursery and landscape either feeding on foliage or wandering around on the ground looking for a place to form their cocoon and pupate.

Bill Miller sent in this picture of a hickory horned devil larva which will pupate this fall and become the royal walnut moth. This is one beautiful moth with a wingspan of 5 - 6". You do not need to do anything about these large caterpillars other than observe them and show your family and friends. Maybe take a "selfie" with the big caterpillars. The hickory horned devil tends to be found on hickory and walnut trees, but Steve Clancy brought some in 6 years ago with them feeding on London plane trees in a nursery setting.



Look for this large caterpillar, the hickory horned devil, as we move through late summer into fall. The pocket knife is about 2 inches long.

Photo: Bill Miller

Interesting Herbaceous Plant

By: Stanton Gill

Back in May, Ed Snodgrass of Emory Knoll Farms gave me a Mexican lemon tree. In June, I saw an herbaceous plant poke its stems up out of the pot and it had beautiful pink flowers. Later, it set small fruit. It continued to flower throughout the summer right through August. I called Ed and asked what was the freeloader that he sent along with the Mexican lemon tree. He said it is *Talinum paniculatum*. It is commonly called Jewel of Opar, Pink Baby's Breath, and Flame. It is native to much of North and South America and the Caribbean countries.

Cultivars include 'Kingwood Gold', 'Limón', and 'Variegatum'. The leaves are edible and have been used in traditional medicine in Asia. It is used in home medicine as a diuretic, healing, emollient, vulval and anti-infective and also consumed in salads.



Close-up of *Talinum paniculatum* fruit
Photo: Stanton Gill

The plant adapts well to a range of soils with excellent drainage. It tolerates drought, but looks best with regular watering. My plants started flowering in May and have continued through September with regular blooming. The seed pods that form after flowering are slightly shiny and appear jewel-like in the sunlight. It is a small flower that opens in the daylight. This would be an interesting plant to try out for summer/fall blooms.

Dog Day Cicadas

By: Stanton Gill

In early August, an arborist called me to report he was surprised to not be seeing any significant activity from the dog day cicada, *Neotibicen canicularis*. He said he saw it every year in early August. He wondered if the cicada killer was wiping out the dog day cicadas this year, following a banner year for cicada food with the periodical cicada that came out last year. Dog day cicadas are observed during the “dog days of summer”, which fall somewhere between late July to early September, or once the “Dog Star” Sirius appears in the morning sky.

The following week on August 12, I saw my first dog day cicada in Brookeville. On August 26, I was walking in my woods at the farm and dog day cicadas were everywhere with the males singing loudly. So, they are a little late this summer, but they are definitely here and males are singing their courtship songs.

On Monday, I received a call from a Montgomery County employee with the department of transportation reporting lots of activity of a large black and yellow wasp-like creature making holes in lawns in late August. This insect is likely the cicada killer wasp, *Sphecius speciosus*. Cicada killers are one of the larger wasps you will find in early September in the landscape.

Male cicada killers don't sting, and female cicada killers avoid people and rarely deploy their stingers. They are extremely beneficial. So, tell your customers they do not have to run out and purchase insecticide to spray on these beneficial wasps.



Adult dog day cicadas continue their activity this week.

Photo: Mark Schlossberg, ProLawn Plus, Inc.



Cicada killers prey on cicadas.

Photo: Suzanne Klick

Twice-stabbed Lady Beetles

Marie Rojas, IPM Scout, found a twice-stabbed lady beetle feeding on white prunicola scale. Marie reported that there are no crawlers active in western Montgomery County as of August 30. Brandon Allison, Brightview, also found these lady beetles on a red maple with gloomy scale. Twice-stabbed lady beetles are native to this area and provide biological control of scales in nurseries, urban and natural forests, and orchards. Paula Shrewsbury wrote a Beneficial of the Week article in the [October 12, 2018 IPM Report](#).



Twice-stabbed lady beetle larva feeding on white prunicola scale.

Photo: Marie Rojas, IPM Scout



Many twice-stabbed lady beetles are active on a red maple.

Photo: Brandon Allison, Brightview

Ambrosia Beetle Research Update

By: Stanton Gill

Katie Shapiro, George Bridge Landscape, sent me a URL link of a journal article on ambrosia beetle research. In the article, they are looking at biological control options for ambrosia beetle instead of the standard use of bifenthrin applied to trunks of trees.

<https://www.frontiersin.org/articles/10.3389/fsufs.2021.737977/full>

Spotted Lanternfly Update

By: Paula Shrewsbury, UMD





In the [August 5th IPM newsletter](#), I described that spotted lanternfly adults have 4 distinct developmental phases – Early-1, Early-2, Mid, and Late (see the chart). Back on August 5th most, but not all, spotted lanternflies had molted to adults, especially in Hagerstown MD where I was conducting research. Those were Early-1 phase adults described as: when adults first appear, adult feeding occurs, and the sex ratio is about 50:50 male and females on tree trunks. Last week when I was in the parking lot of a movie theatre and shopping plaza in Hagerstown, I noted numerous adult spotted lanternflies flying to the sides of buildings and on the ground (sidewalks, parking lot, road) – many of which were squished either by accident or by people who wanted them dead. Some were landing on people. I do want to point out that even though spotted lanternflies were collecting on buildings, etc., the densities were not even close to the massive numbers I saw on buildings in Pennsylvania last year about this time (something to look forward too – not!). When I collected adults in a Hagerstown park for my study this week, I found many more female than male spotted lanternflies, and the honeydew / sooty mold on plants was heavier than it had been. Spotted lanternfly adults are now in the Early-2 phase which is described as: adults continue to feed heavily, start to fly and the sex ratio changes to mostly females on tree trunks.



Squished spotted lanternfly on the sidewalk in Hagerstown MD.

Photo: P.M. Shrewsbury, UMD

The Mid phase begins when the first SLF adults begin to mate, followed by mass flights of adults, and the abdomens of females swell due to the ovaries developing after mating. When the first egg masses are laid, marks the beginning of the Late phase. I did not see any spotted lanternflies mating or eggs yet. Let Stanton (sgill@umd.edu) and I (pshrewsbury@umd.edu) know if you see spotted lanternflies flying to building and trees, or any other developmental activities that are in the later phases.

Early-1	Early-2	Mid	Late
			
Feeding (Aug. 1 to 24)	Feeding and sex ratio skewed (Aug. 25 to Sept. 13)	Mating and major flight events (Sept. 14 to 30)	Oviposition (Oct. to Nov.)

Phenological differences between the four adult developmental phases of spotted lanternfly.

Image from OTIS Laboratory 2018 Annual Report, USDA APHIS

Evidence of Planthoppers

Marie Rojas, IPM Scout, received a report from a landscaper of possible scale on *Osmanthus*. When she looked at the sample, it was the waxy material produced by planthoppers.



The waxy material produced by planthoppers is a common sight at this time of year.
Photo: Marie Rojas, IPM Scout

Leaf Galls

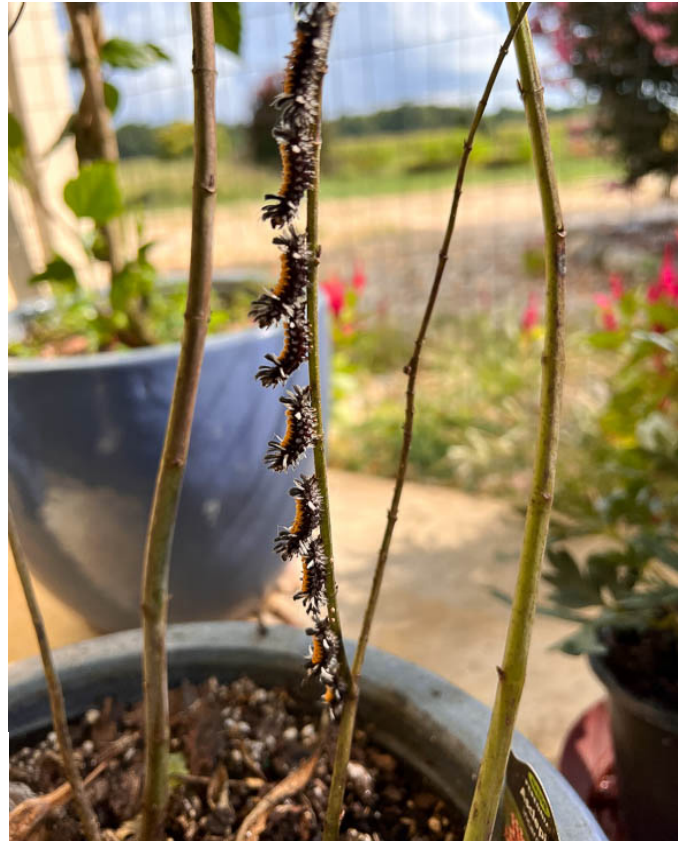
Mike Knouse, Macpeak Landscaping, found leaf galls this week. These are leaf galls caused by a cynipid wasp. Control is not necessary. They are more of an aesthetic problem.



Control is usually not necessary for leaf galls.
Photo: Mike Knouse, Macpeak Landscaping

Another Insect on Milkweeds

Ginny Rosenkranz, UME, found milkweed tussock moth caterpillars lined up along the stem of a milkweed plant this week. They are one of the many insects that feed on *Asclepias*.



Milkweed tussock caterpillars lined up on *Asclepias* stem
Photo: Ginny Rosenkranz, UME

Walkingsticks

Ben Morris, SavATree, found a pair of walkingsticks mating this week. Walkingsticks feed on plants, but do not cause significant damage.



Walkingsticks can be hard to spot because they blend into their surroundings so well.

Photos: Ben Morris, SavATree

Batteries and the Environment - Univ of MD Breakthrough

By: Stanton Gill

No doubt about it, portable devices that use Lithium batteries have changed the commercial horticulture world. Many professional horticulturists use battery operations, hand drills, trimmers, pruning equipment and even mowers. Lithium batteries have changed the world. The problem is they have to store at the right temperature of 40 °F to keep them working for longer periods of time. The batteries made from Lithium do wear out and are thrown away. They take hundred of years to break down. The University of Maryland has researchers who are developing an alternative type of battery that uses a product derived from crustacean shells to store energy. For details, see the [The Guardian article online](#).

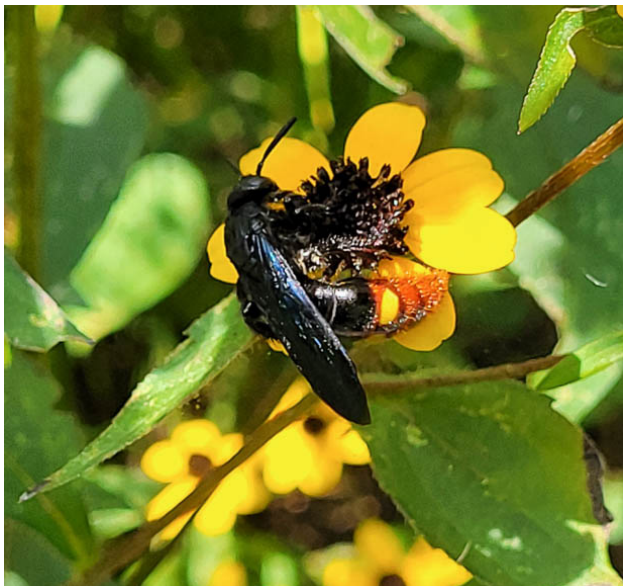
Jumping Worms

We are receiving reports from garden centers of jumping worm activity. The Home and Garden Information Center has information on these worms at <https://extension.umd.edu/resource/invasive-jumping-worms>. Heather Zindash, The Soulful Gardener, took a [video which is available online](#).



Drought Stress

This turf in Pikesville is under severe drought stress.
Photo: Mark Schlossberg, ProLawn Plus, Inc.



Digger Wasps

A blue winged digger wasp, *Scolia dubia*, visiting *Rudbeckia* 'Blackjack Gold' flowers. These wasps lay eggs in Japanese beetle and green June beetle grubs.
Photo: Marie Rojas, IPM Scout

Beneficial of the Week

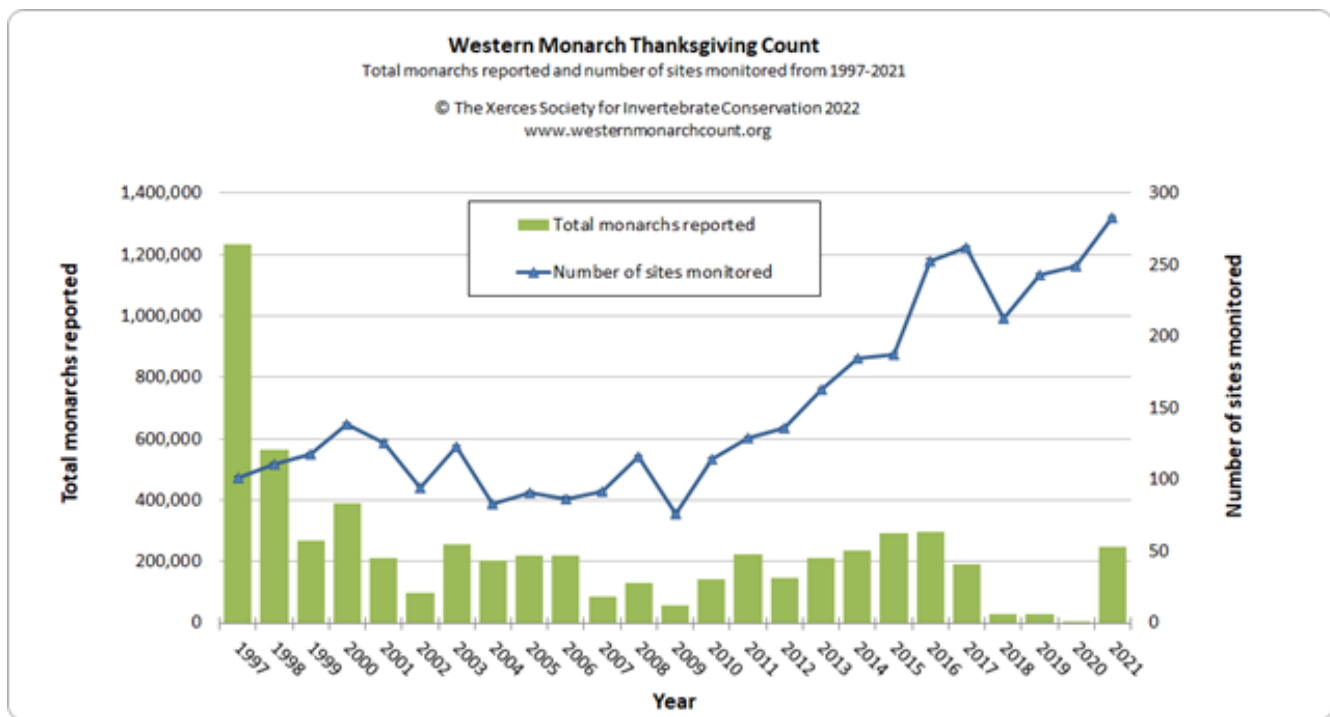
By: Paula Shrewsbury

What is the status of Monarch butterfly populations?

Just about a year ago I did a three-part *Beneficial of the Week* series on the iconic migratory monarch butterfly (see links below). In the last week or so, I have been observing a pretty steady stream of monarch adult butterflies nectaring on various flowers in my yard (they really like the zinnias) and in other landscapes. I thought this would be a good time to give an update on the status of monarch populations. Last year I reported that both the Eastern and Western populations of monarch butterflies were in decline and nearing extinction as indicated by their overwintering numbers. Over the last twenty years the Eastern monarch population has declined by 80%, and that the Western monarch population was dangerously low with a 99% decline (ex. 1,914 butterflies total in 2020/21). See the [“How are Monarch populations doing?” Beneficial of the Week](#) article from August 2021 to review their status then and threats that lead to the reduction in Monarch populations.

Have there been any changes in the status of monarchs? The short answer is yes. In July of 2022, the monarch butterfly was added to [The International Union for Conservation of Nature “red list”](#) of threatened species, categorizing it as officially endangered. Disappointingly, attempts to have monarchs declared an endangered species by the U.S. Fish and Wildlife Service failed in December of 2020 as resources were needed to focus on "higher-priority listing actions" according to agency officials. Listing monarchs on the U.S. Endangered Species List would provide a number of legal protections that they do not have now.

Most exciting is the incredible news released in January 2022 about the Western monarch populations this past winter. In an extraordinary and not fully understood turnaround, populations of Western monarchs have increased more than 100-fold to almost 250,000 (from <2,000 the winter before) overwintering butterflies as reported in the [current annual winter monarch census \(Xerces Society\)](#) completed in January 2022. The census also reports that overwintering sites have shifted to the south somewhat. [See the report for more detail on these](#)



Graph of the total abundance estimates of western monarch butterfly populations with number of sites monitored from 1997-2021 by the Western Monarch Thanksgiving Count. (image from Xerces Society)

[overwintering sites](#). Scientists believe this bounce in monarch numbers is really inspiring news. Everyone is now asking the question “Why?”. A number of [hypotheses are being discussed](#). Most experts believe this phenomenon is the result of a mix of possible factors and as one UC Davis insect ecologist stated, it is likely a “[series of fortunate events](#)”. Some of these hypotheses will be the focus of future research.

Eastern monarch overwintering populations have also increased. [Reports of the annual survey of overwintering populations in Mexico](#) were released in May 2022 from the World Wildlife Fund Mexico. They measure populations based on the area that monarchs occupy, rather than number of butterflies. In 2021/22 monarchs occupied approximately 2.84 hectares of forest, whereas in 2020/21 monarchs occupied 2.1 hectares, an increase of about 35%. Also, very good news.



This season's western monarch butterflies cluster on a Eucalyptus tree in Pismo State Beach Monarch Butterfly Grove, California.

Image by Lisa Damarel, from Xerces.org

Although these increases in Eastern and Western monarch populations this past winter are a ray of hope, we can't lose sight that monarchs are still in a significant decline. Western monarchs have lost more than 95% of their populations since the 1980's (see the graph on Western Monarch Counts by the Xerces Society), while Eastern monarch populations have declined more than 70% in the last three decades. Concerted efforts must continue to save the monarchs. For example, provide habitat and food for adults and caterpillars, mitigate climate change, reduce pesticide use, and stop destruction of overwintering sites due to development and logging. To learn more about efforts to conserve monarchs, go to the 9/3/2021 Beneficial of the Week: [What can we do to help the Monarchs?](#) Every person's efforts can help!

Weed of the Week

By: Chuck Schuster

As day length gets shorter, and one thinks about the application of pre-emergent products for fall germinating weeds consider the needs of these products to be watered in. Currently many areas are very dry, and many pre-emergent products require a quarter to half inch of moisture to be activated.

The plant of concern of this week is Virginia creeper. Virginia creeper, *Parthenocissus quinquefolia*, is a perennial weed, sometimes used as an ornamental, that has a vining growth habit. It can be found throughout the eastern United States in landscapes, fruit crops, and in fencerows. Virginia creeper will grow along the ground or on other objects including plants. Often found in areas that are not heavily managed, it can be cut with a mower but will return.

Leaves occur in groups of usually five leaflets, but can vary from three to seven being palmately compound (all originating from a common location of the stem). Leaflets can be up to five inches long, have a toothed margin and turn a maroon color in the fall. The root structure is fibrous, and stems can root at nodes when they touch the ground. The flowers are small, pale green to white in color, with a blue-black colored fruit in late spring. The flowers will mature to a small purple hard berry that is about one quarter of an inch in diameter. The berries contain an amount of toxic oxalic acid and have been known to cause health issues including death in humans. The berries are not toxic to birds and provide an important winter food source for many bird species. This plant is often confused with poison ivy, but most Virginia creeper have five leaves. The plant climbs by way of small discs pads attaching to objects including masonry walls, these pads do not damage brick and block structures and will deteriorate from the surface over time if one severs the plant at the base. This plant may cause slight skin irritation to some.

Late summer and early fall is an excellent time to provide control of this woody plant. One can use glyphosate products or other herbicides labeled for woody perennial weed control. Never apply these products if the vine is growing on a desired tree or shrub or in areas where the spray may drift onto the desired plants. Wet the leaves well, attempting to provide at least 50% coverage using a 1% glyphosate solution (1.25 oz of 4.5lb acid material per gallon of water) for effective control. For best control, don't apply on stressed/wilted weeds. In areas not near desired landscape plantings, good results can be obtained using products that contain 2, 4D. Evaluate the setting carefully, as 2,4D does have the ability to re-volatilize and move even after drying. When found climbing on desired plant species do not apply herbicides as a foliar spray to both the climbing vine and the desired plant as they may be absorbed through the bark of the desired plant causing damage. Cut back and pull off the landscape planting. Careful application of a glyphosate product using a small brush can be used on the cut end of the Virginia creeper.

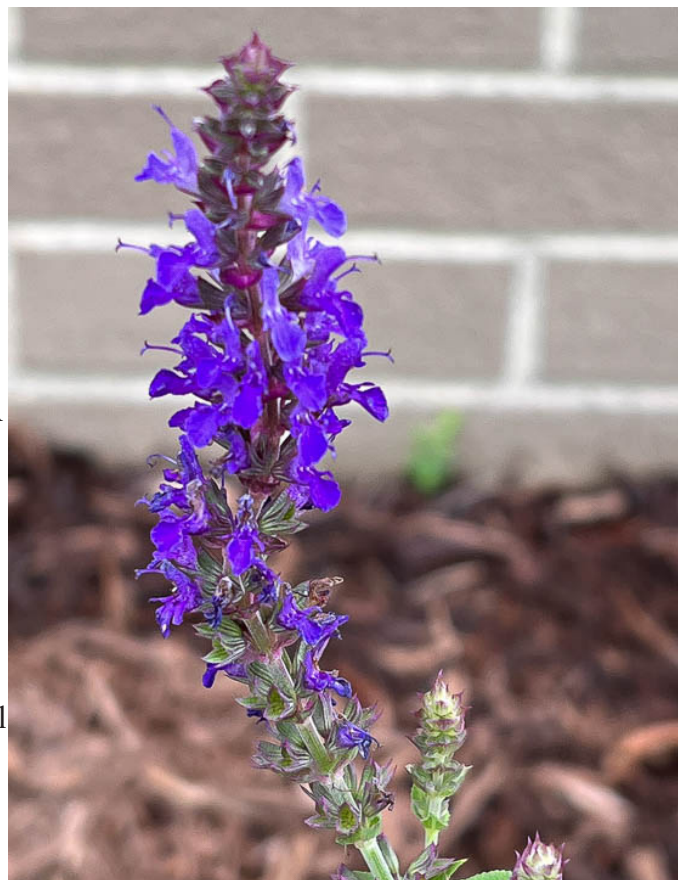


Virginia creeper in the landscape and views of its foliage
Photos: Chuck Schuster, UME-Emeritus

Plant of the Week

By: Ginny Rosenkranz

Salvia x superba Bordeaux™ Deep Blue, or meadow sage, is a brightly colored nativar herbaceous perennial that can bloom in spring and summer with spikes of deep blue-violet flowers. I am borrowing the term nativar as ‘a native plant genotype selectively propagated for its desirable traits’ from Dr. Dan Potter, University of Kentucky. Plants can grow 18-24 inches high and 16 x 20 inches wide. The aromatic foliage grows on a compact plant that supports the upright flower spikes. Plants are winter hardy in USDA zones 4-9, and thrive in full sun with dry to medium moist soils with excellent drainage. The colorful flowers begin to bloom at the base of the flower spike and continue to bloom upwards, giving the landscape color for weeks. Each small flower has 3 bottom lobes and a top lobe that attract many pollinators including butterflies, bees and hummingbirds. The plants brighten up decorative containers, butterfly gardens, cottage gardens and perennial borders. Pruning the spent flowers will encourage them to bloom again. Planting blue flowers with bright yellow or orange flowers seems to highlight both colors in the landscape. These native plants have no serious insect or disease pests, and both rabbits and deer usually leave them alone, due to the strongly scented foliage.



Pruning the spent flowers of *Salvia x superba* Bordeaux™ Deep Blue will encourage them to bloom again.
Photo: Ginny Rosenkranz, UME

Degree Days (as of August 31)

Aberdeen (KAPG)	2990
Annapolis Naval Academy (KNAK)	3291
Baltimore, MD (KBWI)	3367
College Park (KCGS)	3129
Dulles Airport (KIAD)	3184
Ft. Belvoir, VA (KDA)	3185
Frederick (KFDK)	2988
Gaithersburg (KGAI)	3025
Gambrills (F2488, near Bowie)	3208
Greater Cumberland Reg (KCBE)	2897
Martinsburg, WV (KMRB)	2828
Natl Arboretum/Reagan Natl (KDCA)	3627
Salisbury/Ocean City (KSBY)	3365
St. Mary's City (Patuxent NRB KNHK)	3665
Westminster (KDMW)	3474

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 **2828 DD** (Martinsburg, WV) to **3665 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.

- Japanese maple scale – egg hatch / crawler (2nd gen) (**2508 DD**)
- Fern scale – egg hatch / crawler (2nd gen) (**2813 DD**)
- White prunicola scale – egg hatch / crawler (3rd gen) (**3238 DD**)
- Banded ash clearwing borer – adult emergence (**3357 DD**)
- Tuliptree scale – egg hatch / crawler (**3519 DD**)

Conferences

Urban Tree Summit

Dates: September 7, 8, 14 and 15, 2022

Montgomery Parks and Casey Trees, Washington D.C., present the eleventh annual conference — Urban Tree Summit. Presentations will focus on the health and welfare of trees in our increasingly developed landscapes.

Registration Link: <https://montgomeryparks.org/about/divisions/arboriculture/urban-tree-summit/>

September 27, 2022

Cut Flower Tour

Location: Zekiah Ridge Farm, La Plata, MD, and second site TBD

[Schedule and Registration](#)

September 29, 2022 (9:00 AM to 3:30 PM)

Operator Certification (FTC) for Writing Nursery Nutrient Management Plans for Nurseries, Greenhouses and Controlled Environments

Location: Wye Research and Education Center, 124 Wye Narrows Drive, Queenstown, MD 21658

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SOLAR WORKSHOPS

Are you interested in using solar electricity to power your home, farm, or business? If so, you'll want to join one of the University of Maryland's upcoming workshops addressing the opportunities and challenges associated with solar energy. Each workshop will cover important topics that will help you successfully, and sustainably, implement a solar electric system, including discussions of:

- How solar energy works and what role it plays
- How solar impacts you as a homeowner or landowner
- How to finance and facilitate a solar project

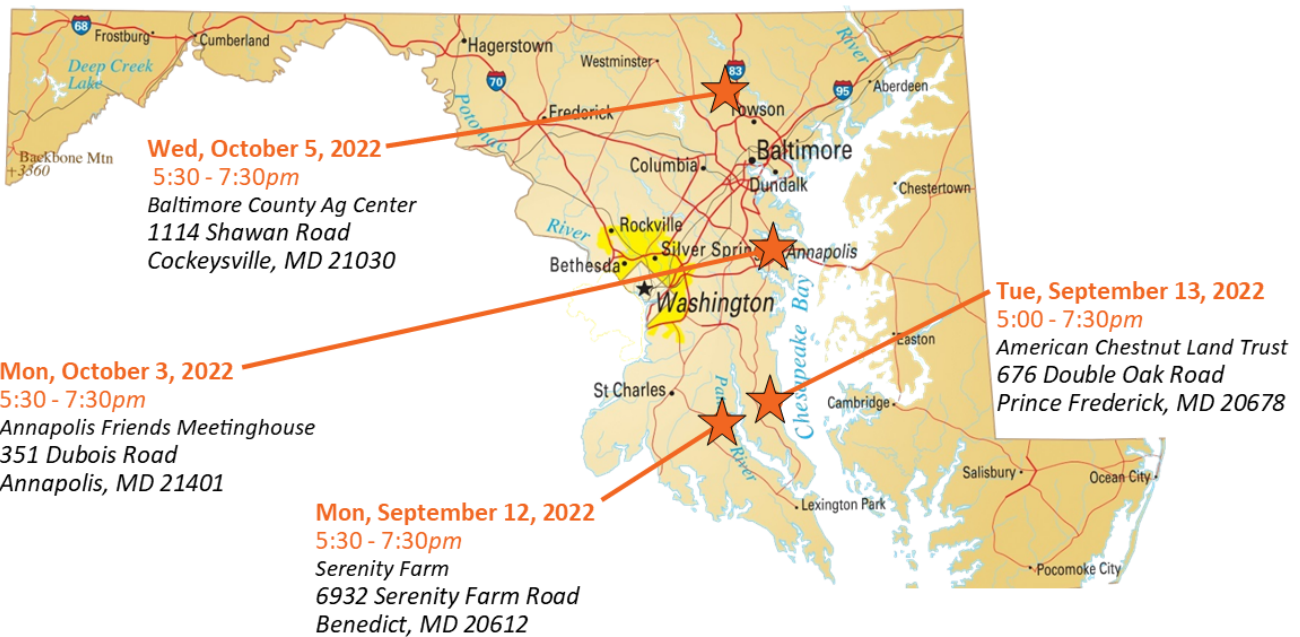
Registration is required to attend any of these free workshops scheduled this fall.

FREE REGISTRATION AT
go.umd.edu/Solar2022



PROGRAM CONTACT

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