UNIVERSITY OF MARYLAND E X T E N S I O N for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture

In This Issue...

- Weather update
- IPM Scouts' Session
- Drone Training Program
- <u>Powdery mildew on crape</u> myrtles
- Bagworms
- Crapemyrtle aphids
- Sourgum scurfy scale
- Oak flake gall
- Magnolia scale
- Spotted lanternfly update
- Beech leaf disease
- Invasive jumping worms
- Japanese maple scale
- Caterpillar activity
- Root aphids and root mealybugs
- Pollinators on citrus

Beneficial of the Week: Assassin bugs

<u>Weed of the Week:</u> Horsenettle <u>Plant of the Week:</u> Trumpet creeper

Degree days Pest Predictions Conferences Predictive Calendar

IPMnet Integrated Pest Management for Commercial Horticulture

extension.umd.edu/ipm

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

Coordinator Weekly IPM Report:

Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Greenhouse and Managed Landscapes, sgill@umd.edu. 410-868-9400 (cell)

Regular Contributors:

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

Wild Summer Weather Continues and Impacts Plant Material By: Stanton Gill

Yes, we have had rain in the last week. Unfortunately, some areas of Maryland are getting a couple of inches of rain while others are basically getting a small sprinkle with the drought conditions continuing. This impacts plant material. Root systems are streseed when container grown plants dry down quickly, then are irrigated, but rapidly dry down again. We had a call from a nursery owner with container-grown boxwood

plants, showing marginal

leaf yellowing. Dry



Marginal leaf yellowing on a boxwood outside our building is a result of a lack of consistent moisture. Photo: Stanton Gill, UME

down periods between irrigations is stressing the root system and resulting in marginal leaf scorching. Andrew Ristvey reports the research plants at

July 14, 2023

WYEREC are not receiving adequate amounts of water with 2-gallon per hour drip emitters. He is switching to spray stakes to try to keep up with the dry conditions and the substrate drying out rapidly.

We are conducting drone spray trials at nurseries this week. At one of the nurseries, they are seeing field grown Carolina silver bell trees wilting with normal drip irrigation, and some of the trees died in the rows from heavy loss of water through the foliage. They are now supplementing water to these trees and they are stabilizing. We are in the highest light part of the year and with the lack of rain in most of Maryland, irrigation needs are high in July and early August.

IPM Scouts' Diagnostic Session

By: Stanton Gill

I hate to complain about the rain since we were way short on rain in May and June, but the rains that came were spotty at best. Or course, plant pathologists are having a heyday with plenty of diseases showing up with the wet and warm weather combo. It's perfect for summertime diseases.

We do have a diagnostic IPM Session set for July 26. So, bring Dave Clement and Karen Rane your dying, disease-ridden plant material to this afternoon session.

Program and registration information are available on our Conferences webpage.

Catch-up Last Week and Drone Training

By: Stanton Gill

We missed last Friday since we needed a day to get caught up with our nursery drone trials which we managed to pull off fairly well. Our drone team of Kirk Floyd, David Clement, Andrew Ristvey, and myself fly out to Columbus, Ohio this weekend to conduct 3 seminars on the use of drones in nursery and greenhouse operations at the international 2023 Cultivate Conference. We will be back the middle of next week.

If you are interested in getting involved with using drones, be sure to sign up for our drone school which starts at the end of this month. Program and registration information are available on our <u>Conferences webpage</u>.

Crape Myrtles

By: David Clement and Stanton Gill

We are getting reports from several places in Maryland that crape myrtles are infected with powdery mildew. Paul Wolfe, Integrated Plant Care, reported over 17 customers with crape myrtles that have powdery mildew covering plant foliage in Bethesda and Rockville. The weather we reported on last month was cool nights and sunny days which were perfect conditions for powdery mildew.

Paul said that several customers are not seeing flowers develop on their crape myrtles. He did not know which cultivars were not showing blooms. If you are noticing a lack of blooms or problems on your customers' plants (please include cultivar name if you know it), let us know. Send an email to Dave Clement at <u>Clement@umd.edu</u>.

> Powdery mildew infections on crape myrtle continue this week in the area. Photo: Todd Armstrong, The Davey Tree Expert Company



Bagworms

Jeffrey Lavrusky, Brightview, found bagworms in New Market on July 7. Elaine Menegon, Good's Tree and Lawn Care, found active bagworms on arborvitae in Mount Joy, PA on July 9. On July 10, Bernie Mihm reported that he noticed eaten leaves on blueberries. Then, he saw one little bagworm after another. Bernie estimated that there must have been 50 to 100 bagworms on 10 blueberries. Bagworms feed on both evergreen and deciduous plants. They are seldom much of a problem on deciduous plants. Control materials work better on smaller larvae. Bt (Dipel, Caterpillar Attack), Spinosad (Conserve) or Acelepyrn will all give good control of young larvae.



Bagworms feed on deciduous plants like blueberries. Photo: Bernie Mihm



Bagworm instar stages vary in size at this time. Photo: Jeffrey Lavrusky, Brightview



Bagworm feeding can cause significant damage to arborvitae. Photo: Elaine Menegon, Good's Tree and Lawn Care

Crapemyrtle Aphids

Elaine Menegon, Good's Tree and Lawn Care, found aphids on crape myrtles in Hershey on July 9. Most aphid species only produce winged adults (alates) when they want to disseminate the populations or there is environmental stress on the plant on which it is feeding. With the crapemyrtle aphid, all adults have wings so they can take flight whenever they want and quickly spread to new plants.

Crapemyrtle aphid nymphs are pale to bright yellow with black spike or hair-like projections on their abdomen. Adults are also yellow in color but differ from nymphs in having black spots and two large black tubercles on the dorsal surface of the abdomen. Eggs overwinter on the stems. Throughout the summer, adult females give live birth to female nymphs through asexual reproduction called parthenogenisis.

Aphids produce honeydew, so if populations are heavy, honeydew and the sooty mold fungus that grows on it, will be very noticeable. Thick amounts of black sooty mold interfere with photosynthesis and may cause early leaf drop or complete defoliation of infested plants.

Control: A systemic such as dinotefuran will work. Altus, with true systemic activity, gives good control of this pest. Endeavor is a translaminar material that can be



Crapemyrtle aphids and many of their cast skins are present on this foliage. Photo: Elaine Menegon, Good's Tree and Lawn Care

applied to foliage and will travel to the bottom of the leaf. Some field trials have shown Endeavor to be effective as a basal trunk application.

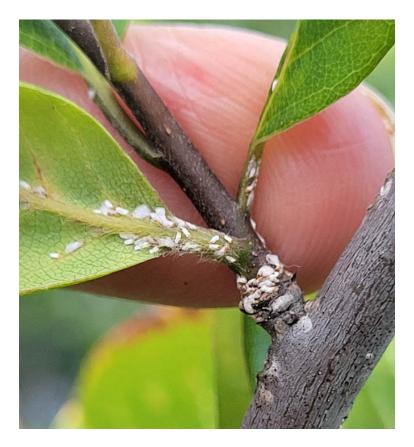


A crapemyrtle aphid nymph and black sooty mold covering a leaf of a big aphid infestation. Photos: Suzanne Klick, UME

Sourgum Scurfy Scale

Marie Rojas, IPM Scout, found sourgum scurfy scale (*Chionaspis nyssae*) at a nursery in Gaithersburg on July 10. Marie looked at them under her scope and found eggs are present. She is finding this scale on the leaves and on the stems. Marie will monitor them for crawler emergence. There is not much known on this scale in Maryland.

Scalnet.info listed the following as plant hosts: *Carpinus*, *Celtis* occidentalis, *Nyssa aquatica* and *N. sylvatica*, *Quercus*, *Lindera* benzoin, *Crataegus*, and *Symplocos tinctoria*.



Sourgum scurfy scale is found on leaves and stems. Photos: Marie Rojas, IPM Scout





Oak Flake Gall

Marie Rojas, IPM Scout, found oak flake galls on oaks in Gaithersburg. These galls are caused by the tiny cynipid wasp, *Neuroterus quercusverrucarum* (syn. *N. floccosus*). No control measures are necessary. For more information, go to the <u>oak flake article</u> by Joe Boggs, The Ohio University.





Symptoms of oak leaf gall wasp activity on the upper side of an oak leaf and the galls on the under side. Photos: Marie Rojas, IPM Scout

Magnolia Scale

Todd Armstrong, The Davey Tree Expert Company, found scale on saucer magnolia in New Freedom, PA on July 14. Todd noted that he spotted honeydew and sooty mold which drew his attention to look for scale. Look for crawler activity as we get later into the summer.

Magnolia scale produces crawlers in late summer. Photos: Todd Armstrong, The Davey Tree Expert Company



Spotted Lanternfly (SLF) Update

By: Paula Shrewsbury, UMD

About two weeks ago, in Hagerstown MD, I started seeing 3rd instar SLF move from the newer growth of low growing vegetation and sapling tree-of-heaven to the trunks and woody stems of tree-of-heaven and other trees. Yesterday in Hagerstown, I found mostly 3rd and 4th instar SLF with the majority of the nymphs being 4th instars. Fourth instars are easy to identify because of the color from the earlier instars to red with black and white spots. See the images.

To my knowledge, there have been no reports of adult SLF. If you see adults, please report when, the location, and on what plant to Stanton Gill (<u>sgill@umd.edu</u>) and me (<u>pshrewsbury@umd.edu</u>).

As SLF get larger (4th instars and adults) they consume more tree sap and produce more honeydew. At this time, you should consider if controls are necessary and what control measures are best for you situation. These may include the use of traps, trap trees, removing tree-of-heaven, or chemical (contact, systemic, low toxicity) controls. See the following links for information on SLF management options.

https://mda.maryland.gov/plants-pests/Pages/spotted-lantern-fly.aspx https://extension.psu.edu/spotted-lanternfly-management-guide https://www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/Entomology/spotted_lanternfly/Documents/ Spotted%20Lanternfly%20%20Property%20Management.pdf https://www.vdacs.virginia.gov/pdf/Spotted-lanternfly-BMP-yards-and-lanscapes.pdf





Fourth instar nymph of spotted lanternfly showing the characteristic red with black and white spots. Photo: P.M. Shrewsbury, UMD

Third and 4th instar nymphs of spotted lanternfly on the trunk of tree-of-heaven in Hagerstown, MD on July 13, 2023. Photo: P.M. Shrewsbury, UMD

Spotted Lanternfly Reports

Ross Fornaro, NaturaLawn of America, found mostly fourth instars on walnut in Hanover, PA on July 6. Joe Estrada, SavATree, found fourth instars on young *Ailanthus* trees in Leesburg VA.

Beech Leaf Disease

Natalie Ketchum, Good's Tree and Lawn Care, found beech leaf disease this week in Lancaster, PA. In Maryland, if you suspect beech leaf disease, you should report it to the Maryland Department of Agriculture's Forest Pest unit by emailing them at fpm.mda@maryland.gov or call 410-841-5870.

For more information, check out the recent UMD-AGNR <u>article</u> on beech leaf disease.



Beech leaf infection on a beech in Pennyslvania. Photo: Natalie Ketchum, Good's Tree and Lawn Care

Invasive Jumping Worms

By: Stanton Gill

For the last three years, we have been receiving inquiries on what to do for the non-native Asian jumping worms, *Amynthas* spp., that have rapidly invaded landscapes and woodlands across the USA. These invasive earthworms were first confirmed in Wisconsin in 2013. When disturbed, they thrash, spring into the air and can even shed their tails to escape. Jumping worms are typically smaller than earthworms. They are also more active and move quickly, making them difficult to catch or control. Jumping worms have become a concern because of their negative effect on soil health and plant growth. We presented the question of how to control them to entomologists, since we do not have many worm specialists available, across the USA. Several entomologists are doing work on the biology of these jumping worms and control options. There is nothing conclusive at this time. There are materials for worms, but no selective control options are available at this point.

Where Are We With Japanese Maple Scale Insects

By: Stanton Gill

We are still in the 1st generation of Japanese maple scale. Crawlers are still emerging. Talus and Distance, IGRs, can still be applied at this time.

Caterpillar Activity

Marie Rojas, IPM Scout, reports: "Caterpillars seem really nonexistent this year - barely any eastern tents, minimal bagworms, no first generation fall webworms to speak of, nothing!"

Ginny Rosenkranz, UME, found some milkweed tussock moth caterpillars on common milkweed. When she was cutting back the rapid growth of a tomato vine, Ginny found a tomato hornworm that looks like it succumbed to a biological control. Ginny also found a late instar black swallowtail caterpillar on parsely. Another plant host for this caterpillar is dill.



Milkweed tussock moth caterpillars feed in groups on *Asclepias* plants. Photo: Ginny Rosenkranz, UME



This hornworm caterpillar looks like it has succombed to a biological control organism. Photo: Ginny Rosenkranz, UME



Black swallowtail caterpillars (aka parsleyworms) are one of many caterpillars that you may find feeding on plant hosts in your garden. Photo: Ginny Rosenkranz, UME

Hey – Got Any Root Mealybugs or Root Aphids By: Stanton Gill

If you happen to find any root mealybug or root aphids active in your nursery would shares some of the insects with us? <u>Dr. Scott A. Schneider</u>, Research Entomologist and Location Leader, USDA ARS <u>SYSTEMATIC</u> <u>ENTOMOLOGY LABORATORY</u> is looking for root mealybug and root aphid specimens. If you find any and are willing to share contact me at Sgill@umd.edu. Thanks.

Helping Out Pollinators in July

By: Stanton Gill

Pollen sources get pretty slim in mid-summer. If you are growing citrus in container then you can provide a good pollen source with your plants. I have been growing 5- 6 foot tall orange, kumquats, lemons and limes in 40-gallon pots. They are all in full bloom in July and a great source of pollen for bumble bees, honey bees, syrphid flies, and native bees. If want to learn more about Maryland citrus growing and production of fruit trees using IPM, I will be conducting a 2-credit class this December 2023 to the end of January 2024 through Montgomery College Environmental Horticulture and Sustainable Agriculture program. The Advanced Fruit Production with IPM emphasis class will be online at night on Tuesday and Thursday each week from the beginning of December to the end of January. Email <u>Sgill@umd.edu</u> this fall to find out how to register.



Citrus in bloom in July for pollinators. Photo: Stanton Gill, UME

Beneficial of the Week

By: Paula Shrewsbury

Assassin bugs are major players in the world of insect biological control

Assassin bugs are true bugs (order Hemiptera, suborder Heteroptera) in the family Reduviidae. There are over 7000 species of assassin bugs, making them one of the largest families in the Hemiptera. Assassin bugs range in size from about $\frac{1}{4}$ - 1.5" depending on species. Most assassin bugs can be recognized by their elongate and narrow head and "neck", and their long thin antennae (usually longer than their body) and legs. Most importantly, both adults and nymphs have a long, dangerous looking proboscis (mouthpart) that they use to suck the life out of their prey - literally. Assassin bugs are very important predators, both nymphs and adults, of a diverse array of pest insects found feeding on ornamental plants and in other natural and managed plant systems. Over the last several weeks, some of you



Orange assassin bug female laying a cluster of eggs. Note the distinct black striping on the legs and along the margins of the abdomen. Photo: P.M. Shrewsbury, UMD

have sent photos in for use in the IPM Newsletter demonstrating their high level of biological control activity. Most assassin bugs are ambush or stalking predators and they hang out on foliage, flowers, and the trunks of trees. Once a prey insect wanders near them, the assassin bug approaches the prey very slowly, then quickly grabs the prey with their front legs, and impales the insect with its beak. Through its beak, the assassin bug injects digestive enzymes that liquefy the body tissues of the prey making it possible for the predator to suck up its newly captured food. Some species have raptorial legs (similar to praying mantids), a sticky substance,

and/or hairs on their legs that help then hold onto their prey. <u>Click here to see a great video</u> <u>of a wheel bug stalking a caterpillar</u>. Assassin bugs are predators of a diversity of prey such as caterpillars, sawflies, flies, aphids, stinkbugs, hoppers, lanternflies, psyllids, Japanese and other beetles, and more.

Three of the more common assassin bugs that I find in this area are the **orange assassin bug** (*Pselliopus barberi*), the **milkweed assassin bug** (*Zelus longipes*), and the **wheel bug** (*Arilus cristatus*). Orange assassin bugs are common in the eastern U.S. They are usually found in the spring or fall on flowers or foliage. They overwinter as adults in sheltered locations (under bark, rotting wood, etc.). Adults are about ¹/₂" long. They are orange with striped black markings on their legs, antennae, and the outer edge of their abdomen. There is one

generation per year. As the weather warms in the spring, orange assassin bug adults become active, mate, and lay eggs. They usually lay clusters of 4 to 29 eggs. It takes about 85 days from egg hatch to adult. Nymphs are active from about June to August.

The milkweed assassin bug gains it name not because it eats milkweed bugs, but because it resembles them. Both are orange and black in color, and elongate in shape. The milkweed assassin bug has long black legs with white markings, and a long somewhat scary piercing-sucking beak (proboscis) that it uses to stab its prey. Females are larger than males and get to be about ³/₄" long. The eggs are cylindrical and elongate in shape and laid in clusters of about 15 eggs. There are 5 nymphal instars before adulthood. The milkweed assassin bug is a generalist predator that feeds on a wide array of soft bodied prey in landscapes, vegetables gardens, and natural habitats. In particular, it is an important predator of several economic pests such as fall armyworm, Asian citrus psyllid, and the genista broom moth. The milkweed assassin bug has a diabolically clever "sticky trap strategy" for catching its prey. It hides in foliage with its forelegs outstretched as if reaching for something. It sits very still awaiting the approach of an unsuspecting victim. The front legs of this assassin bug are coated with sticky goo perfect for



An orange assassin bug with its proboscis impaled into its leafhopper prey. Go biological control! Photo: M.J. Raupp, UMD



The milkweed assassin bug uses its sticky forelegs to help capture its prey. Photo: M.J. Raupp, UMD

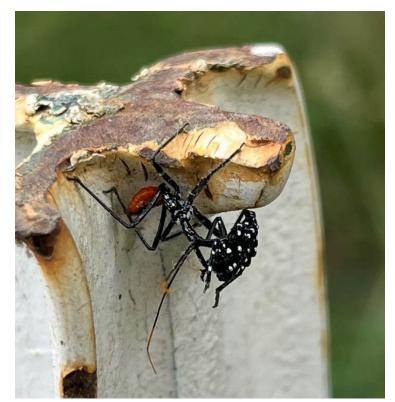
trapping a victim. <u>Click here to see a milkweed assassin bug foraging</u>. This little bug is pretty fierce and can feed on prey up to 6x its own size.

Wheel bugs are one of the more voracious assassin bugs. Wheel bug adults lay clusters of 10-40 eggs on the bark of trees in the fall and they stay in that stage until the weather warms in the late spring when prey items become abundant. This particular assassin bug gets its common name, wheel bug, because of the spoke bearing, wheel-like structure on the pronotum (section behind the head) of adults (see image). They are large bugs with adults reaching 1- 1.5". At this time of year, we are seeing later instar nymphs (immatures) attacking insects. Nymphs and adults are voracious predators and active through most of the growing season helping to control pest insect populations. Wheel bugs are generalist predators that feed on a diversity of insects such as caterpillars, plant hoppers, spotted lanternflies, sawfly larvae, aphids, stink bugs, Japanese beetles and more. Wheel bugs are stalking predators. Click the below link for a video of the voracious wheel bug attacking a brown marmorated stink bug. https://www.youtube.com/watch?time_continue=2&v=njrlj8rLKkQ

If you are fortunate enough to come across one of these assassin bugs, watch it carefully and you may see it "assassinate" its lunch. However, you should not handle them. Although they are too small to eat you, they can inflict some pain when they use the sucking-piercing mouth part to defend themselves! This can include a slight burning sensation and a red bump or reaction in response to the enzymes the bugs inject.



A predatory wheel bug adult with its large sucking mouth part stuck into a brown marmorated stink bug adult, resulting in stink bug death. Photo: M.J. Raupp, UMD



A wheel bug nymph feeding on a third instar nymph of spotted lanternfly. Photo: Matt Wentworth, The Davey Tree Expert Company

Weed of the Week

By: Nathan Glenn, UME-Howard County

Horsenettle, *Solanum carolinense*, is the kind of undesired, prolifically spreading plant that warrants nicknames such as apple-of-Sodom and devil's tomato (or potato). All parts of the plant, except for the mature plant, are capable of poisoning livestock. These parts contain a substance called glycoalkaloid solanine which carries symptoms of toxicity such as gastrointestinal irritation. However, its prickles make it less palatable to livestock, and very rare to hear reports of horsenettle poisoning.

Horsenettle is native to the southeastern U.S., but can be readily found as far west as Texas and in more temperate zones of the east and north central parts of the U.S. It is considered an invasive species in other parts of the U.S. and all over the world. Horsenettle is a common perennial weed of orchards, pastures, nursery crops, other perennial crops, and conventionally tilled and reduced-tillage crops including corn, small grains, and vegetables. It is very drought resistant and grows on a wide variety of soils, but loves sandy soils.

Horsenettle, a broadleaf dicot, can be identified by its star-shaped, white to pale violet flower; erect and rounded stem which does not exude a white sap when cut; alternate arrangement of ovate to lanceolate, lobed leaves that measure about 7-12 cm long and about half as wide; and spiny prickles found on many different parts of the plant. Horsenettle can commonly be confused with groundcherries, but is differentiated quite easily based upon the presence or absence of prickles on both the stems and leaves.

Horsenettle reproduces by seed and creeping rhizome that can produce new shoots as far as one meter away from the original plant. A single plant can produce as much as 5,000 seeds. Shoots will emerge in the Mid-Atlantic around June and reach maturity from July to September.

Horsenettle can be very hard to control, especially in a nightshade crop as it shares the same genus. The most important strategic component to managing it is prevention. In

fact, the best method of prevention is to first make sure that you are not feeding livestock infested hay. Early tillage and mowing will actually aid in the spread of horsenettle. However, summer tillage and mowing can be an important management technique considering there are not many other effective strategies from which to choose. Timely and sequential applications of an herbicide are usually required for effective control. Be sure to thoroughly research and read the label of herbicides prior to application to assure that you are using them properly.



Horsenettle flower, foliage and fruit. Photos: Nathan Glenn, UME

Plant of the Week

By: Ginny Rosenkranz

Campsis radicans is also known as trumpet creeper or trumpet vine, and thrives in full sun to part shade. This strong, fast-growing native vine is capable of climbing 30-40 feet high. The shiny dark green leaves are arranged opposite each other on the vine, and are composed of opposite pinnately compound leaflets that can grow 6-15 inches long. Each of the 7 to 11 leaflets can grow ³/₄ of an inch to 4 inches long and ¹/₄ to 2 inches wide and have coarsely toothed margins. Trumpet vine is deciduous, emerging with new leaves in late spring, thriving through the summer and turning a yellow green that fades quickly. It is an extremely fast grower, forming dense, multi-stemmed vines that have clinging holdfasts that helps it hold the vine to a structure and arial rootlets that help the vine continue to climb. The 3-inch flowers are trumpet shaped with a 1 ½ inch wide mouth, and come in shades of bright scarlet, rich orange and yellow orange. They bloom on new growth in clusters of 4-12 at the tips of the branches from June to September and are loved by native hummingbirds. The flowers mature into 3-5i inch long capsules that are loaded with seeds which have 2 large transparent wings to allow them to spread far and wide in the breeze. Underground runners also assist the plants to spread. Rampant growth has the plants swarming up trees to form impenetrable colonies unless pruned to keep the vines in check.





Plants are cold tolerant from USDA zones 4-9, and prefer average moist but well drained soils. Trumpet creeper is tolerant of salt water & air, drought, heavy soils and deer browsing. Plants grow nicely over a strong arbor or trellis. They also grow nicely up on a fence post where the vines can be pruned to form whorls of stems on the tops, or along a fence itself. Pruning is required to keep the vines in check. There are many cultivars that offer rich red, sunny orange and bright yellow flowers like Balboa SunsetTM which has 4-inch bright red flowers, 'Crimson Trumpet' with velvet red flowers, Indian Summer® with 3-in long orange red flowers that have yellow markings, and Summer SnowfallTM that has orange red flowers and green foliage streaked and spotted with white markings. Pests include leafhoppers that can damage young growth.



Trumpet creeper in flower. Photo: Ginny Rosenkranz, UME

Degree Days (as of July 12)

Abingdon (C1620)	1628
Annapolis Naval Academy (KNAK)	1794
Baltimore, MD (KBWI)	1855
College Park (KCGS)	1752
Dulles Airport (KIAD)	1776
Ft. Belvoir, VA (KDA)	1696
Frederick (KFDK)	1663
Gaithersburg (KGAI)	1591
Gambrils (F2488, near Bowie)	1720
Greater Cumberland Reg (KCBE)	1455
Perry Hall (C0608)	1562
Martinsburg, WV (KMRB)	1276
Natl Arboretum/Reagan Natl (KDCA)	2087
Salisbury/Ocean City (KSBY)	1793
St. Mary's City (Patuxent NRB KNHK)	2109
Westminster (KDMW)	1848

Important Note: We are using the <u>Online Phenology and Degree-Day Models</u> site. Use the following information to calculate GDD for your site: Select your location from the map Model Category: All models Select Degree-day calculatorThresholds 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 **1276 DD** (Martinsburg, WV) to **2109 DD** (St. Mary's City). The <u>Pest Predictive Calendar</u> 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.

Peachtree borer – adult emergence (1181 DD) Green June beetle – adult emergence (1539 DD) Pine needle scale – egg hatch / crawler (2nd gen) (1561 DD) White prunicola scale – egg hatch / crawler (2nd 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 2nd gen (1962 DD) Maskell scale – egg hatch / crawler 2nd gen (2035 DD) Euonymus scale – egg hatch / crawler 2nd gen (2235 DD) Mimosa webworm – larva, early instar 2nd gen (2260 DD)

See the <u>Pest Predictive Calendar</u> 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.

July 26, 2023 (1 - 3 p.m.) <u>IPM Scouts' Diagnostic Session</u> Location: CMREC, Ellicott City, MD

July 27, August 1-3, 2023 Drone School Locations: CMREC in Ellicott City, MD and Falcon Ridge Farm, Westminster, MD

September 13, 2023 MAA's Day of Safety and Health Locatiaon: Howard County Fairgrounds, West Friendship, 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.

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: <u>https://landscapeipmphc.weebly.com/</u> Questions contact: Amy Yaich, 301-405-3911, <u>umdentomology@umd.edu</u>

Questions from Your Customers

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

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