

Commercial Horticulture

July 17, 2020

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

Disease Information: Karen Rane (Plant Pathologist) and David Clement (Extension Specialist)

Weed of the Week: Chuck Schuster (Retired Extension Educator)

Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/Somerset Counties)

Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)

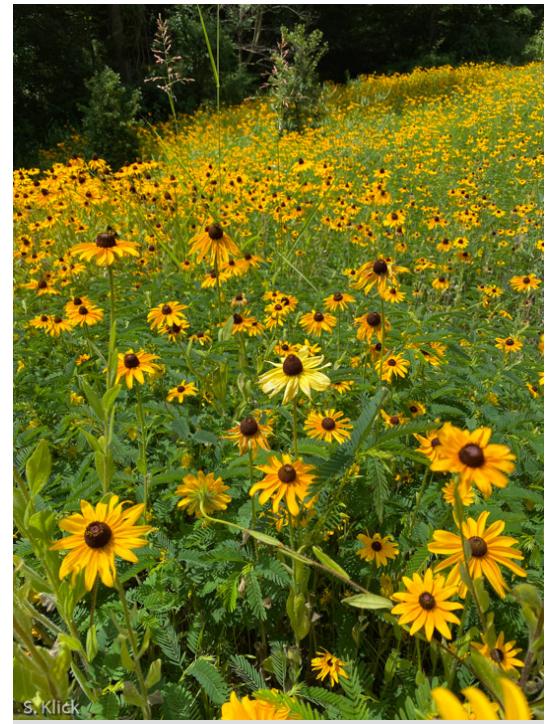
Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

Summer Heat and Watering

By: Stanton Gill

NOAA reports that we have had 23 days in a row of 90 °F weather. We had plenty of days of sunshine combined with this heat. This weather pattern will stress plants, especially ones transplanted in the last year or two. Make sure your customers are keeping their new plant material sufficiently watered. I guarantee we will get reports in August of plants "suddenly dying". Much of it will be attributed to this hot dry period - guaranteed.

Temperatures are predicted to reach the high 90s (°F) temperature and possibly the 100 °F range by Sunday. It will remain in the high 90 °F range through next week which will continue to stress plant material.



S. Klick
Rudbeckia hirta is drought tolerant option

Willow Leaf Rust

By: Karen Rane, UMD

Bob Mead, Mead Tree and Turf, submitted this photo of a rust disease on weeping willow (*Salix babylonica*). There are a number of rusts in the genus *Melampsora* that can infect willows. Rust fungi have complex life cycles, often requiring alternate hosts. In the case of willow rusts, some species have known alternate hosts, while for others, no alternate host is known. For all of the willow leaf rust species, the spore stage that develops on the leaves is the uredinial, or repeating stage – that is, spores produced on the willow leaves infect more willow leaves through the summer months. While rust can cause severe defoliation in large-scale willow plantations grown for biomass production, individual landscape trees appear to tolerate the disease in most cases. Protectant fungicides may be warranted on young trees in nurseries with a history of this disease.



Orange rust pustules on the underside of a willow leaf, caused by the rust fungus *Melampsora* sp.

Photo: R. Mead, Mead Tree and Turf

Gymnosporangium Rust



Tony Murdock, Fine Pruning, is finding heavy gymnosporangium rust infection on fruit this month. It is too late in the season to treat.

Photo: Tony Murdock, Fine Pruning

Ambrosia Beetles – 2nd Generation

By: Stanton Gill

Joan Stirling, Shorb Landscape Company, sent in this email this week: “A friend of mine who lives in Fulton, MD sent me a few photos of her crape myrtle and I believe this is ambrosia beetle. It took me by surprise as I didn’t think that crape myrtles were susceptible to ambrosia beetle; is this a rare occurrence? Please advise and feel free to share the photos for you weekly newsletter if you like and thank you in advance.”

It appears we are seeing the beginning of the second generation of *Xylosandrus* species activity. Those of you who have been using the baited alcohol traps, please send me samples from your traps. I will be returning to the CMREC lab/office on July 22 so you can send samples to University of Maryland, CMREC, 11975 Homewood Road, Ellicott City, MD 21042.

Meanwhile, check the trunks of susceptible species of trees over the next couple of weeks. Look for wet spots on tree trunks and the start of small sawdust piles. Once you see the frass tube projecting out of the trunk, the females are already in the heartwood and the game is over.

Casebearers

By: Stanton Gill

Bob Mead, Mead Tree and Turf, sent along a picture taken by Josh Dunk, Frederick City Forester, of a red maple in Downtown Frederick. We had a similar picture sent in 5 years ago from Steve Sullivan. It is a case bearer called *Zamopsycus commentella*. The larvae remove some bark and create a bag-like casing. They hold the bark-encased bag straight up as they move around on the bark of the tree. They look like thorns on the trunk of the tree. If you pull one off the trunk of the tree, you will see the head capsule and the true legs sticking out of the bottom of the cone-like structure. They are one of the more curious insects of summer but are basically harmless to the health of the tree.



The second generation of ambrosia beetles (*Xylosandrus* spp.) are active now

Photo: Joan Stirling, Shorb Landscape Company



Casebearers on the trunk of a red maple
Photo: Josh Dunk, Frederick City Forester

Bagworm Trial

By: Stanton Gill

Last week, we tested a spray drone for applying Bt and Mainspring insecticides. After the treatments were made, we placed mesh cages on each of the treated Leyland cypress trees and placed 10 live larvae into the netted cages. We are evaluating the control level 7 DAT this week.



Setting the drone up for take-off



The spray drone in flight



Stanton Gill is placing out spray indicator cards



Ten bagworm larvae were placed out into netted cages

Elm Bark Scale

By: Stanton Gill

Heather Zindash, IPM Scout, sent in pictures of an interesting scale called the European elm bark scale, *Gossyparia spuria* that we put in the last IPM report. Nancy Harding, UMD, noted that she found crawlers in Marlboro area 2 -3 weeks before Heather's find. The cool, wet spring and early summer cool weather likely extended the period of egg hatch and consequently, extended the crawler period. Now it has moved in hot weather the crawler extended period should be slowing and ending.

Control: Distance or Talus (IGRs) will work well on this scale at this time of the summer.

Nitrogen Fertility: Brown Patch's Proliferation Pal?

By: Joe Doherty, UMD

As the summer months press forward and we find ourselves already halfway through July, disease pressure on cool-season turfgrasses are high and here to stay. Managers of cool-season lawns (i.e., tall fescue, perennial ryegrass, Kentucky bluegrass) are intimately familiar with the ever-present pathogen *Rhizoctonia solani*, and the brown patch disease it causes. Once nighttime temperatures reach 70°F or above, daytime temperature break 90°F, and relative humidity is high we enter the perfect conditions for the brown patch pathogen to proliferate. Stand symptoms appear as 6-inch to several foot diameter, roughly circular patches that are typically light brown in color in color, and leaves along the outer edge of the patch may develop irregularly shaped lesions that are tan or chocolate in color with a dark brown border.

Historically brown patch has been associated with turf receiving excessive nitrogen fertility, a “disease of excess” if you will. However, recent research is showing this may not necessarily be the case. Researchers at North Carolina State University performed a two-year study evaluating the impact of various annual nitrogen rates (0, 1, 2, 3, 4, 5, and 6 lb soluble N⁻¹ yr⁻¹) on brown patch severity in a tall fescue lawn. Preliminary results show only the highest nitrogen rate (6 lb soluble N⁻¹ yr⁻¹) increased brown patch severity compared to not applying any nitrogen at all. In research on tall fescue lawns at the University of Maryland, preliminary results showed that monthly applications of 0.7 lb soluble N 1000 ft⁻² did not increase brown patch severity compared to not applying any fertilizer.

What does this mean for managing brown patch in Maryland? Abiding by Maryland fertilizer laws and applying a single application of 0.7 lb soluble nitrogen each month during the summer should not result in exacerbation of brown patch in lawns. In fact, this fertility can help turfgrass “grow out” of damage caused by the pathogen.

Aphids of Ornamental Honeysuckle

By: Stanton Gill

Zeke Gammill sent in pictures of honeysuckle aphid (*Hyadaphis foeniculi*) which are the most troublesome pests of ornamental honeysuckle vines (*Lonicera* spp.). Their feeding damage spoils the flowers and causes the leaves to become distorted and curled. Stylet blockers such as Endeavor give good control. The systemic insecticide Altus is also effective on aphids.



Honeysuckle aphids damage leaves and flowers of *Lonicera* species

Photo: Zeke Gammill

Orangestriped Oakworm

Marie Rojas, IPM Scout, is finding orangestriped oakworms on pin oak, *Quercus palustris*, and willow oak, *Q. phellos*, in Montgomery County this week. These caterpillars feed in clusters and initially skeletonize leaves. Larger caterpillars are defoliators and only leave behind the leaf mid-rib. The caterpillars will feed en masse and completely defoliate whole branches. Control is best when caterpillars are in the early instar stages. Bt and Spinosad work very well. Acelepryn or Mainspring will also work well.



Orangestriped oakworm eggs and first instar larvae on pin oak

Photo: Marie Rojas, IPM Scout



Orangestriped oakworm caterpillars on willow oak

Photo: Marie Rojas, IPM Scout

Japanese Maple Scale

By: Stanton Gill

Stephen Jackson sent in pictures of Japanese maple scale on zelkova trees that were just transplanted July 1, 2020. The number one problem is that July is one very tough month to transplant a very large zelkova tree and not have it scorch, but that is another issue. What I want to note is this is a picture of a horrendous population of Japanese maple scale on the trunk of this tree. This population should not have been allowed to build up to this level in a nursery. I know it is a sellers' market in 2020, but please realize that Japanese maple scale is a terrible armored scale, and we do not need to be spreading it into the landscape. We have published a [factsheet on Japanese maple scale](#). If you are a nursery operation and Japanese maple scale shows up, you can contact me, and I will be happy to work with you in solving this pest problem before it infests your whole nursery. Contact me at Sgill@umd.edu.



Monitor plants closely for Japanese maple scale because populations build up quickly
Photo: Stephen Jackson

Japanese Beetle Parasitoids

By: Stanton Gill

Those of you lucky enough to have lower levels of Japanese beetles this year may attribute part of the smaller Japanese beetle populations to the actions of *Tiphia vernalis* or *Tiphia popilliavora*. *Tiphia* is a small parasitic wasp that attacks the larvae or grubs of the Japanese beetle. With their help, populations of Japanese beetles are reduced in number from what potentially could be more severe infestations.

On Sunday evening, I was working in my garage when I heard a buzzing sound. There was an aerial battle going on between two male *Tiphia* wasps. The battle went on for several minutes and finally the two combatants flew off, with neither dying during the fight.



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A close-up of a *Tiphia vernalis* wasp

Photo: Whitney Cranshaw, Colorado State University, Bugwood.org

Tiphia wasp females dig into the soil in search of grubs. When a grub is found, the wasp stings it and paralyzes it momentarily while the wasp attaches one egg on the ventral side of the grub. When the wasp egg hatches, the resulting parasitic larva begins feeding on the grub. The parasitic larva is found outside the host, securely attached and it will feed on the grub until the host grub dies.

Studies done at the University of Connecticut indicated which ornamental plants to use as nectar sources for these wasps. For the spring *Tiphia* species, the best choice is peonies (*Paeonia lactiflora*). For example, the peony cultivars 'Big Ben', 'Bowl of Beauty', 'Festiva Maxima', and 'Sarah Bernhardt' were all shown to attract spring *Tiphia* wasps. Peonies secrete extrafloral nectar through the calyx of unopened flower buds. You will see wasps on the flower buds consuming nectar until the flower opens and then the nectar flow ceases. Other ornamental plants were tested, but they did not fare as well as peonies in terms of attracting *Tiphia* wasps and also not serving as a food item for Japanese beetles. Peonies did not sustain any damage from adult Japanese beetles either in the open field or in caged experiments.

Several ornamental and herb plants were tested as potential nectar sources for the summer *Tiphia* species. However, only wild carrot plants were attractive to this wasp out of all other plants tested such as yarrow, ornamental goldenrod, dill, fennel, and cilantro. At this moment, only wild carrot can be recommended for attracting summer *Tiphia* species. Wild carrot is considered a weed, but it is an aesthetically pleasing plant (its popular name is Queen Anne's lace).

Rodgers and Potter reported in central Kentucky and the seasonal dynamics of *Tiphia vernalis* Rohwer, an introduced parasitoid of Japanese beetle, *Popillia japonica* Newman. *T. pygidialis* was active from mid-August to early October, parasitizing third-instar masked chafers, whereas *T. vernalis* attacked overwintered third-instar *P. japonica* from mid-April to early June. Adult *T. vernalis* were attracted to modified Japanese beetle traps and yellow pan traps and to 10% sugar water sprayed on tree foliage. Spraying sugar water directly on turf most effectively monitored *T. pygidialis* wasps. Parasitism rates as high as 33 and 58% were observed for *T. pygidialis* and *T. vernalis*, respectively.

Sources for this Univ of Conn. and Univ of Kentucky research:

Legrand, 2009. Evaluation of ornamental plants as nectar sources for summer *Tiphia*. p. 77-79. In K. Guillard (ed), 2009 Annual Turfgrass Research Report, College of Agriculture and Natural Resources, University of Connecticut.

Legrand, 2009. Evaluation of landscape ornamental plants as nectar plants for *Tiphia vernalis* and as host plants for pest scarab beetles. p. 73-76. In K. Guillard (ed), 2009 Annual Turfgrass Research Report, College of Agriculture and Natural Resources, University of Connecticut.

Rodgers, M and Potter, D . 2004. *Environmental Entomology*, Volume 33, Issue 3, 1 June 2004, Pages 520–527, <https://doi.org/10.1603/0046-225X-33.3.520>

Spotted Lanternfly

From: Joe Fiola, UME

Hi all. I regret to report that a "significant population" of Spotted lanternfly has been identified and verified by MDA in Hagerstown City Park and the adjacent apartment complex. The MDA and USDA SLF team is working on delimiting the area, surveying for SLF and marking all *Ailanthus* in the area. USDA is planning on treating the *Ailanthus* soon. They will continue to monitor this site and set-up traps. Remember to be diligent to scout your vineyard/orchard edges and surrounding/local woods, concentrating on the Tree of Heaven (*Ailanthus*).



A spotted lanternfly nymph was found in Kinzer, PA this week
Photo: Elaine Menegon, Good's Tree and Lawn Care



An adult spotted lanternfly was found on pokeweed this week in Highspire, PA
Photo: Tom Gothel, Good's Tree and Lawn Care

I am in the process of updating the TimelVits on the SLF identification and management and have included some resources below.

[Penn State Entomology](#) - Spotted Lanternfly

[Maryland Department of Agriculture Spotted Lanternfly Information](#)

[Spotted Lanternfly \(SLF\) I - Background](#) ([html](#)) ([pdf](#))

[Spotted Lanternfly \(SLF\) II - Scouting and Management](#) ([html](#)) ([pdf](#))

[\(PDF\) Maryland Department of Agriculture Pest Alert](#)

[\(PDF\) MD Department of Agriculture - Spotted Lanternfly Poster](#)
[tree-of-heaven \(*Ailanthus*\) - Identifying *Ailanthus*/Tree of Heaven](#)
[Northeastern IPM Center Spotted Lanternfly](#)
[USDA APHIS Hungry Pests - Spotted Lanternfly](#)

(PDF) [EBR-44 Spotted Lanternfly](#), by Peter Coffey. Includes graphic representation of life cycle

From Kim Rice, MDA

I wanted to send out a SLF update for 2020. This year has certainly been interesting, and the way we are doing our work has certainly changed. Our SLF team has been very busy in the field doing an awesome job during these challenging times. As we move forward with the surveys this year, we are concentrating on prioritizing our survey sites, including vineyards, orchards and transportation hubs. USDA will be completing treatments at these priority sites. Due to Covid19 we are not knocking on homeowner doors or conducting surveys at these sites.

The quarantine is still in place in Cecil and Harford counties. A permit is required for any businesses moving within or through these counties, along with any movement in the quarantines in DE, NJ, PA and VA.

Cecil County - SLF continues to spread in Cecil county. It seems to be moving south through the county, the most southern spot is along the Bohemia River. The Chesapeake Travel Plaza, along I95 is positive. USDA will be working with a contractor to complete treatments at travel plaza.

Harford County - We have not seen much movement in this county, but we continue to survey.

Washington County - There has been a recent confirmation of SLF in Hagerstown (Washington County). The major infestation is located within the Hagerstown city park and a neighboring property including an apartment complex. There is also a railroad line in the area. The SLF team is working on a delimiting survey to determine the size of the infestation. USDA plans on treating this area once the survey is completed.

If you have any questions please let me know or send an email to dontbug.md@maryland.gov.

Leafcutter Bees

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



Typical leafcutter bee damage on rose leaves
Photo: Marie Rojas, IPM Scout

Spider Mites

Marie Rojas, IPM Scout, is finding that the hot weather is promoting spider mites. Marie notes that she has been finding them on boxwood and *Chamaecyparis obtusa*.

Dogwood Sawfly Active This Week

By: Stanton Gill

Jeff Lavrusky, Brightview Company, sent in this picture of dogwood sawfly feeding on red twig dogwood foliage this week. This sawfly species has one generation per summer. It loves to feed on native dogwood foliage, especially gray dogwoods. Take action quickly this week, because since this caterpillar species feeds in a group, the larvae can rapidly defoliate a native dogwood and your customer will have a bare tree for the rest of the season.

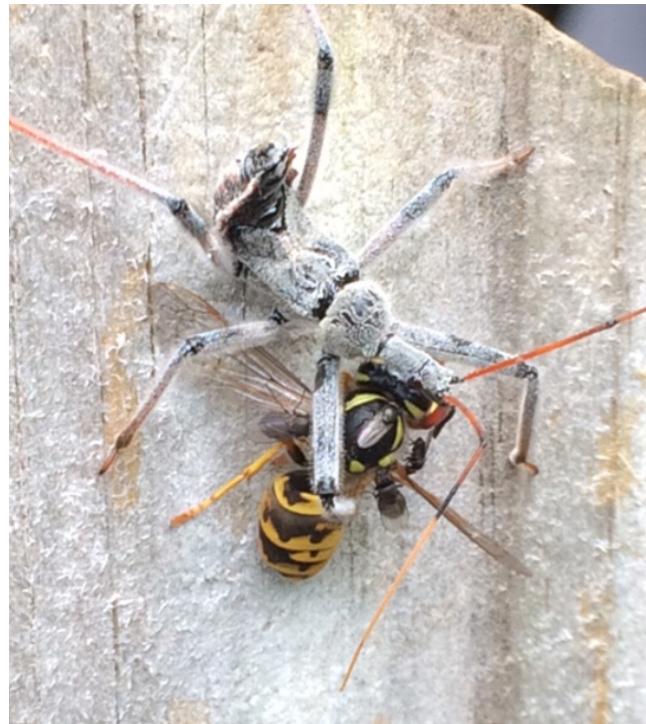
Feeding as a group, dogwood sawfly larvae can quickly defoliate a plant
Photo: Jeff Lavrusky, Brightview Company



Predator Activity

Dave Keane, Howard County Recreation and Parks, found a wheel with its prey. Wheel bugs are generalist predators as nymphs and adults. See Paula Shrewsbury's [IPM Report article](#) for more information.

This wheel bug nymph is a generalist predator
Photo: Dave Keane, Howard County Recreation and Parks



Monarch Butterflies Are Here!

By: P.M. Shrewsbury, UMD

I have been waiting to see this beautiful and biological wonder! This week I saw my first Monarch adult flying around my flowerbeds. In the last few days, I have seen about a half dozen Monarchs. Time to search the milkweed for eggs and larvae. If you would like more information on Monarchs see the [Beneficial of the Week from the Oct. 4, 2019 newsletter](#).



This Monarch butterfly female was foraging on nectar from flowering plants in a MD meadow.

Photo: M.J. Raupp, UMD



Late instar Monarch caterpillars feeding on milkweed foliage.

Photo: P.M. Shrewsbury, UMD

Beneficial of the Week

By: Paula Shrewsbury

Peachtree borers and nematodes.

Adult peachtree borer, *Synanthedon exitiosa*, activity was reported in last week's newsletter after being detected in pheromone traps. Peachtree borer adults are clear-winged moths in the family Sesiidae. Adults are now busy mating and females are searching for host plants (many *Prunus* species) to lay their eggs. Eggs are laid at the base of the tree or shrub, especially those that were over-mulched. Soon the larvae (caterpillars) will be actively feeding and boring in the lower trunk or crown area (from a few inches above the soil line to about 6" below) of susceptible hosts where they feed on the cambium tissue. Thinking IPM, you should be pulling back mulch on any over-mulched host trees and shrubs. When mulch is too high around the crown of a plant it makes an attractive habitat for peachtree borers. If you have had problems with peach tree borer in the past, or have signs of adult activity (pheromone traps) or new borer activity (borer galleries and sawdust), you should consider protecting your trees by treating the base of the tree with the appropriate insecticide now. Once borers have made their way into the wood, they



Healthy white grub on the left and a nematode infected white grub on the right. Change in color is a diagnostic characteristic that indicates some sort of pathogen is attacking an insect.

Photo: ipm.ucanr.edu

are less susceptible to any chemical measures of control. Inevitably, peachtree borer activity goes unnoticed until the borers are feeding in the wood (galleries and sawdust present) and it is too late to apply protective sprays. Which brings me to the beneficial for this week – entomopathogenic nematodes (ENs) - which can be used to target peachtree borer larvae in the wood.

Entomopathogenic nematodes are tiny (just visible to the naked eye), soft bodied, non-segmented roundworms that are parasitic to insects. They occur naturally in soil and locate their host insects by detecting carbon dioxide, vibration or chemical cues given off by insects. [ENs have very interesting life cycles](#). They have a mutualistic relationship with bacteria (each species of EN has a specific species of bacteria associated with it). The nematode enters the host insect through a body opening (ex. mouth, spiracle, anus), releases its associated bacteria into the insect body, the bacteria feeds on the insect and reproduces, and the nematodes feed on the bacteria. A win - win situation for everyone, except the pest insect of course.

Entomopathogenic nematodes are commercially available and used in pest management programs as biological controls, particularly species in the families Heterorhabditidae and Steinernematidae. Advantages of ENs are that they are non-toxic to humans, they are relatively specific (ex. *Heterorhabditis bacteriophora* for white grubs and weevils), they can be applied using standard pesticide equipment, and no personal protective equipment is required. ENs attack the egg, larvae and pupae of numerous pests active on and in the soil such as clear wing borers, fungus gnats, black vine weevils, and white grubs. Past and more recent research, especially in tree fruit orchards, have demonstrated that entomopathogenic nematodes can be effective at killing peachtree borer larvae feeding in the woody tissue around the crown and upper soil zone.

For more information on entomopathogenic nematodes that attack peachtree borer larvae and other insects, and how to use them go to:

<https://www.sciencedaily.com/releases/2008/03/080321121657.htm>

<https://www.planetnatural.com/pest-problem-solver/tree-pests/peach-tree-borer-control/>

<https://www.youtube.com/watch?v=jM4kZsQntxU>

<https://biocontrol.entomology.cornell.edu/pathogens/nematodes.php>



White grub infected with entomopathogenic nematodes. The spaghetti-like organisms inside the insect are adult nematodes and the hair-like organisms on the outside of the body are the juvenile stage of entomopathogenic nematodes leaving the grubs body in search of a new host insect.

Photo: extension.umd.edu

Weed of the Week

By: Chuck Schuster

Hotter and dry weather are giving turf a challenge at this point of the season. Landscapes are starting to see some escaped weeds that are not responding to pre-emergent herbicides. Soil temperatures are increasing ever so slightly, reaching a LOW of 71 °F and higher in some locations.

Pennsylvania smartweed, *Polygonum pensylvanicum*, is a summer annual weed for horticulture, nursery, and agronomic crops throughout the United States. It is often found in moist to wet areas which will include near roof gutter downspouts, low areas, and with irrigation equipment. Pennsylvania smartweed can grow three feet tall, has leaves that are alternate, long and narrow (lanceolate) that are from two to six inches in length and one to one and a quarter inch wide. Older leaves will be slightly hairy (pubescent) as will the first true leaves. An interesting point to note is the leaf petiole attachment to the stem. The ocrea is a very thin membrane sheath that



Photo 2: Leaves have purple spot
Photo: Chuck Schuster



Photo 3: Flowers are on spikes
Photo: Chuck Schuster



Photo 1: Pennsylvania smartweed has an enlarged stem node
Photo: Chuck Schuster

encircles the stem at an enlarged stem node arising from the petiole. (Photo 1). Leaves often have a purple spot in the middle of the leaf (Photo 2). Stems are branched and swollen at the nodes. The flowers are pink (Photo 3) and are found in clusters on spikes at the end of stems. The fruit is black. Seeds require cold weather for spring only germination.

Control of Pennsylvania smartweed includes improved drainage, turf managed to produce a thick dense stand through mowing height, and appropriate use of nutrients. Mulch can be used in landscaped areas if it does not remain damp for extended periods of time. Post emergent herbicides that include glyphosate products, Burnout, and Prizefighter work well on this weed. With Prizefighter and Burnout, catching the plant in the young growing stage provides the best results. It is becoming resistant to many pre emergent herbicides.

Plant of the Week

By: Ginny Rosenkranz

Lagerstroemia 'Tonto' or crape myrtle has foreign parents but was actually developed and grown in the U.S. National Arboretum as a hybridization of *Lagerstroemia indica* which gives the plant its size and the color of the flowers, and *Lagerstroemia fauriei* which gives the plant the colorful exfoliating bark and powdery mildew resistance. All of the lovely crape

myrtles with Native American names were developed by Dr. Don Egolf and they range in size from 'Potomac' which grows only 2 feet tall to 'Natchez' which grows up to 30 feet tall. There is a size and color of these hybrids for almost every sunny garden location. 'Tonto' is a wonderful small deciduous tree growing 8-15 feet tall, 10 feet wide with multiple stems that show off cream and light tan exfoliating bark. The bright magenta pink flowers bloom from mid-summer to early autumn and are formed on a large bouquet (panicles) up to 6-7 inches long. Flowers are held upright on the ends of the branches and mature into rounded



Crape Myrtle 'Tonto' has striking bright pink flowers
Photos: Ginny Rosenkranz, UME

seed capsules that stay on the tree almost all winter long. The foliage starts off a dark green in the spring and holds the color all summer, then turns a reddish purple in the autumn. ‘Tonto’ is cold hardy in USDA zones 6-7, and thrives in full sun and moist but well drained soils. The addition of a slow release fertilizer will keep the plant flowering without adding too much foliage and the possibility of being susceptible to winter injury. Plants flower on new growth, so pruning early in the spring will help produce lots of beautiful flowers. ‘Tonto’ is resistant to powdery mildew but can get fungal leaf spot. Insect pests include aphids, bark aphids, scale, and Japanese beetle.

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 **1428 DD** (Cumberland) to **2085 DD** (Reagan National). 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 / crawlers 2nd gen (1537 DD)
- Green June beetle – adult emergence (1539 DD)
- White prunicola scale – egg hatch / crawlers 2nd gen (1637 DD)
- Obscure scale – egg hatch / crawlers (1774 DD)
- Orangestriped oakworm – egg hatch / early instar (1917 DD)
- Maskell scale – egg hatch / crawlers 2nd gen (2035 DD)
- Euonymus scale – egg hatch / crawlers 2nd gen (2235 DD)

See the [Pest Predictive Calendar](#) for more information on DD and plant phenological indicators (PPI) to help you better monitor and manage pests.

Degree Days (as of July 16)

Aberdeen (KAPG)	1532
Annapolis Naval Academy (KNAK)	1762
Baltimore, MD (KBWI)	1859
Bowie, MD	1922
College Park (KCGS)	1743
Dulles Airport (KIAD)	1773
Frederick (KFDK)	1738
Ft. Belvoir, VA (KDA)	1866
Gaithersburg (KGAI)	1658
Greater Cumberland Reg (KCBE)	1428
Martinsburg, WV (KMRB)	1551
Natl Arboretum/Reagan Natl (KDCA)	2085
Salisbury/Ocean City (KSBY)	1841
St. Mary’s City (Patuxent NRB KNHK)	1998
Westminster (KDMW)	1809

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 calculatorThresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

Hone Your Diagnostic Skills With These Upcoming LCA Webinars

Diagnostics and IPM for Herbaceous Perennials and Annuals in the Landscape

Thursday, July 23 | 10:00 am–11:30 am ET

Karen Rane, David Clement, and Stanton Gill of the University of Maryland Extension will cover disease and insect biology, lifecycle, and control options using IPM methods for herbaceous perennials and annuals in the landscape. This session will improve your diagnostic skills in solving and dealing with problems on herbaceous plant material. An audience interactive question and answer session will be held at the end of the presentation.

Tree Problems—Diagnostic and Solutions

Thursday, August 20 | 10:00 am–11:30 am ET

Karen Rane, David Clement, and Stanton Gill of the University of Maryland Extension will cover diagnostic skill building for dealing with major tree problems caused by physiological conditions, disease, and insects. Participants will learn the steps in diagnosing tree problems. The team will cover major current tree problems in 2020 in the landscape and what you do to control these diseases and pests using IPM methods based on our and other university research efforts. An audience interactive question and answer session will be held at the end of the presentation.

Go to <https://www.lcamddcva.org/> to register

Climate and Sustainability Webinars, 2020

Dr. Sara Via, Professor & Climate Extension Specialist, University of Maryland, College Park

Every other Wednesday, June 17 – Aug. 26, 3:30pm

Upcoming Programs:

July 29, 2020 What can the pandemic teach us about being (un)prepared for climate change and other global disasters?

Aug. 12, 2020 The power of individual choice: what can individuals do to combat climate change and how much difference will it make?

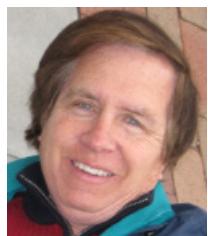
Aug. 26, 2020 Climate change is bad for your health

See the brochure for more information and a link to register.

Please Note:

The cut flower program scheduled for July 28th is full. There is a waitlist, but no walk-ins will be allowed due to Covid-19 restrictions.

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