UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **July 2, 2021**

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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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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) 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)
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The Heat is "ON"

By: Stanton Gill

Temperatures reached into the high 95 °F range on Monday. Tuesday the heat index reached 105 °F by afternoon. Wednesday continued with the heat and high temperatures. These high temperatures are very stressful on plant material. Plants with root injury, stem cankers, and cicada damage will all show dieback over the next week and through July. It could be worse – in part of Oregon temperatures reached 117 °F on Monday. Las Vegas was the last place to record this high temperature in 2020. Just so you know, hot water heaters are regulated to remain at a maximum of 118 °F or below since temperatures above this are scalding to the flesh. We have used hot water at 122 °F to kill insects on plant material, so expect the high temperatures to do damage to plant material. You have heard it over and over again with global warming that we can expect huge weather swings which we are seeing in 2021.

From now through July, it will be branch tips dying back where female cicadas oviposited into the branches. We are receiving numerous pictures of white oaks with high numbers of browning branches from the cicada ovipostion damage. Many of your customers will think the trees are dying. The hot weather is only just beginning with July and August still to get through with more and more browning branches.

Cicada Damage

Brood X periodical cicadas have finished up their activity for this emergence year throughout most of our area. Now is the time the oviposition damage is evident on many trees and some herbaceous plants in the landscape. Many species have been damaged, but oaks oaks are quite often showing up with the most extensive damage. If activity has stopped in your area, and you haven't taken netting off of small trees yet, do so now. Christy Michaud, Heartwood Landscaping & Tree Services, Inc., is reporting that in customers' landscapes in Cecil County they are seeing damage to tips of deciduous trees as well as Fothergilla, Clethra, and some herbaceous species like mountain mint. She noted that they were still active in parts of Elkton last week.

Look for the oviposition damage caused by female periodical cicadas; the damage can be quite extensive along tree lines with many oaks

Oaks are one of the many species damaged by adult female periodical cicadas laying eggs in small stems

Crapemyrtle Aphid

By: Stanton Gill

Last week, I wrote about the multicolored Asian lady bird beetle *Harmonia axyridis* Pallas feeding on crapemyrtle aphids. Several people sent in emails asking what was safe and good to use to control crapemyrtle aphid with minimal impact on the beneficial lady bird beetles. Endeavour is a good material that acts as a stylet blocker for aphids. It has been reported to have minimal impact on several species of beneficials. Altus, from Bayer Company, is another good choice.

Multicolored Asian lady bird beetles feed on crapemyrtle aphids

Bagworm Activity

By: Stanton Gill

We were setting up for our bagworm/drone application trial this Thursday in a Central Maryland nursery. We found a lot of 2nd instar larvae with well formed bags about 0.5 inch in length. Be sure to monitor your customer's susceptible plants for bagworms this week. They are small, but if you train your eye to spot them, you will be amazed on how many *Thuja* 'Green Giant', leylands, spruces, and junipers are infested. Now is the time to apply Bt, Spinosad, or Mainspring for very effective control.

Bagworms were found infesting spruce in York PA on June 29
Photo: Eric O'Neal, Good's Tree and Lawn Care

Labor Shortage

By: Stanton Gill

Whether it is greenhouse operations, garden centers, landscape companies, arborists, and nursery owners, I am hearing the same thing – "Where is the labor force?" On the news, they said that Six Flag amusement parks in some states are having to limit the number of rides that operate due to the labor shortage. In many states, Six Flags operations are offering $1000 sign-up rewards and $20 per hour jobs. Disney is considering similar offers for their amusement parks. As the economy is gearing up, the labor shortage is getting rather severe. There is a lot of work out there – just too few laborers.

White-marked Tussock Moth Caterpillar

Donna Despres found a whitemarked tussock moth caterpillar on blueberry plants in Sykesville on June 26. This caterpillar is one that has a wide woody plant host range. There are multiple generations throughout the summer.The caterpillar may cause an allergic reaction. It overwinters in the egg stage.
Control: Usually not necessary.

White-marked tussock caterpillars, with their distinct white to yellow middorsal tufts, are active throughout the summer
Photo: Donna Despres

Boxelder Bug Nymphs

Connie Bowers, Garden Makeover Company, found a cluster of boxelder bug nymphs on sedum in Wheaton this week. They were found on a yellow groundcover sedum (*S. kamtchaticum*), but she noted that the bugs came from a nearby maple tree branch tip (probably dropped due to cicada damage). In the fall, adult boxelder bugs can be a nuisance when they search for a place to overwinter in people's homes. Control is not warranted.

Look for boxelder bugs in areas with maples
Photo: Connie Bowers, Garden Makeover Company

Web Blight on Holly

By: D.L. Clement Extension Specialist Plant Pathology

Rhizoctonia fungi usually attack plants at the soil line, causing constriction of the stem which results in girdling and death of the plant tops. However, when these pathogens attack above ground foliage, it is called web blight. The common name of this disease is from the matted blackened leaves that cling to the stems. This disease is especially severe when plants are grown close together and the leaves remain wet for extended periods. Outbreaks of web blight or Rhizoctonia aerial blight are seen most often cultivars of blue holly. This disease only occurs on landscape hollies during periods of high temperatures and humidity. Brown spots first appear along the leaf margins and then enlarge rapidly into irregular brown to black blotches over the entire leaf and stem. Blighting of the leaves usually starts closest to the ground and spreads upwards through the canopy. Symptoms usually stop with lower humidity and temperatures.

Web blight on holly only occurs on landscape hollies during periods of high temperatures and high humidity
Photo: Steve Sullivan, Land Care

Management: When possible, thin and prune foliage to improve air circulation. Avoid overhead watering in late afternoon or early evening.

Spotted Lanternfly (SLF)

We continue to get reports and photos of spotted lanternfly. Todd Armstrong, The Davey Tree Expert Company, found early instars of SLF on June 15 on a knock out rose in Jarrettsville (Harford County) and on June 15 in Quarryville, PA.

Fiesta Herbicide Question

Question from Eric Wenger regarding Kelly Nichols' article about Fiesta Herbicide and chelated iron: "It is stated that chelated iron is an "organic" substitute for synthetic herbicides. Is there any information relating to the organic certification of chelated iron? I do not see any organic labelling on the Fiesta label. I would appreciate further information or clarification."

Reponse from Kelly Nichols, UME:
"Iron HEDTA is on EPA's list of biopesticides, which are pesticides derived from natural materials like animals, plants, bacteria, and certain minerals. So, in that sense, it is organic (as opposed to synthetic). However, iron HEDTA (or Fiesta) is not on the Organic Materials Review Institute (OMRI) list of approved organic products."

Control of *Artemesia vulgaris* (Mugwort)

Comments from Eric Wenger: "In talking about control of *Artemesia vulgaris* (mugwort), Chuck Schuster mentions a few products but not Clopyarlid. While not labelled for residential turf, Clopyralid (sold under many trade names), is labelled for beds and other sites and it may be the most effective, selective herbicide for controlling mugwort, in certain situations."

Beneficial of the Week

By: Paula Shrewsbury

Metallic color and long-legs: What is it?

This long-legged dolichopodid fly was sitting on a leave enjoying the unidentifiable morsel of prey in its mouthparts. Note the characteristic long legs, metallic coloration, and single pair of wings of adult long-legged fly.
Photo: M.J. Raupp, UMD

Last week Bill Miller (The Azalea Works) sent me a few images of a beautiful fly and asked "What is it?". Thanks for bringing these beautiful, beneficial flies to my attention. These are long-legged flies also known as dolichopodids (Diptera: Dolichopodidae). We often see these small (~ ¼") metallic long-legged flies zipping around our woody and flowering ornamental plants. Long-legged flies are very diverse with over 6,600 named species worldwide with about 1,300 in North America. It does not seem like they are really doing much else but flying around, landing on plants, and flying around some more. However, these beautiful little flies are actually predators and scavengers. The adults of these "true flies" are often metallic green, blue or copper-colored. As true flies, dolichopodids have only 1 pair of wings and a pair of structures referred to as halteres where the second pair of wings would be on other insects. Halteres help flies with balance when they are flying. The transparent wings of many species have a dark, smoky color. Long-legged flies are in the Brachycera group (more evolutionarily advanced than other groups of flies) and have the characteristic very thin "aristate" antennae. Long-legged flies are abundant in many managed and natural habitats, especially near swamps, streams, and in woodlands and meadows. Adult females

typically lay their eggs in moist soils, or sometimes under the bark of trees. The legless larvae, which are maggots, are whitish and cylindrical. Larvae are found in varied habitats such as water, mud, decaying wood and grass stems. Little is known about the feeding habits of the larvae but some are believed to be predaceous, others are leaf miners in grass stems. I have only been fortunate enough to actually see an adult long-legged fly feeding on prey a few times, once feeding on an azalea lace bug adult, the other time the prey was beyond recognition. Adults are known to feed on an assortment of small insects and often catch their prey in flight. There are reports of long-legged fly adults feeding on other flies, hoppers, Collembola, mites, thrips, dragon fly eggs, termites, bark lice, beetle larvae, whiteflies, and small caterpillars. Click here for a video of a long-legged fly feeding on prey. They inject digestive enzymes into their prey to liquefy it for easier eating. Some long-legged flies feed on honeydew, and a few species feed on nectar from flowers. In addition to being beautiful (for a fly anyway) they also contribute to biological control in our managed and natural ecosystems.

This larva of a long-legged fly (Dolichopodidae) was found under a rock on a beach.
Photo: Peter Cristofono, BugGuide

Weed of the Week

By: Chuck Schuster

The weather has certainly gotten warm during the last week. This hot weather is assisting many undesirable plants to increase in size in landscapes, nurseries, and fringe area turf. Spotted spurge, *Euphorbia maculata,* is our weed of the week. This weed is very similar to prostate spurge. This summer annual is found growing throughout the eastern United States in lawns, landscapes, and nurseries and seems to be thriving with the hot weather that the area has been experiencing.

A. Leaves have a marroon or purple spot on the upper side
Photo: Chuck Schuster, UME-Retired

Spotted spurge is a prostrate summer annual, which forms dense mats growing to fifteen inches in diameter. It is easy to identify as it will secrete a milky sap when the stems are broken. This plant germinates when the soil temperatures have reached 55 °F at one inch depth. The root system is most noticeably a thin and fibrous, but a thin taproot is also present as is noted in photo B. Leaves are from one eighth to one half inch in length, (4-14 mm) opposite, with a maroon or purple spot on the upper leaf surface, as shown in photo A. The leaf margin is very finely toothed, which may be very difficult to discern. It prefers a compacted soil with full sun. In turf, aeration is a tool for prevention. It will grow well in sidewalk or paver openings. It prefers dryer settings, and where irrigation is used, consider a deep soaking rather than shallow watering. Flowers bloom in late June and can be found well into October. Spotted spurge will start producing flowers and seeds in as few as five weeks after germination. This is a prolific seed producer, with a single plant producing more than 1,000 seeds annually.

Spotted spurge can be mechanically controlled through removal, it pulls very easily. Attempt to stay current with the removal which can help prevent seed bank deposits. Spotted spurge does not like competition. A dense thick turf mowed at the appropriate height can be very helpful with control. High quality mulch covering the soil will prevent the seeds from receiving the needed UV light required for germination also. Control of spotted spurge can be obtained through the use of pre emergent materials that include prodiamine (Barricade), isoxaben (Gallery), trifluralin (Treflan) when applied early in the growing season, and with post emergent products that would include Fusilade II, glyphosate products, Prizefighter, Burnout and Pulverize. Prizefighter, Burnout and Pulverize may require more than one application. In turfgrass settings this plant can be controlled with the use of Fiesta, 2,4D and many other broadleaf weed control products that will not damage the desired species of turfgrass. In landscapes, use caution with the use of non-selective products as some can be harmful to desired plant species.

B. Spotted spuge has a thick taproot
Photo: Chuck Schuster, UME-Retired

Plant of the Week

By: Ginny Rosenkranz

Salvia × *sylvestris* 'Schneehügel' Snow Hill is a wood sage with tiny white flowers that visually cool the landscape during the heat of summer. Plants are clump forming and can grow 1 ½ - 2 feet tall and about 1 foot wide. Plants thrive in full sun in moist, humusy soils with excellent drainage. Once established, the plants are very drought tolerant, but repeat blooms are only found on plants that receive regular irrigation. Winter hardy from USDA zones 4-8, the plants do prefer cool nights. The medium green fragrant foliage grows, like most in the mint family, on opposite sides of the stems. The basal leaves have petioles, while the upper stem leaves are smaller and without petioles. The tiny, half inch long white flowers have 2 lips on the end of a thin tube, and they are arranged densely on the upright flower stalks that can rise up to 30 inches above the basal leaves. The flowers bloom strongly from May through June but continue to bloom lightly through the rest of summer. Deadheading the spent flowers can encourages new flowers to bloom later in the summer. *Salvia* × *sylvestris* 'Schneehügel' Snow Hill can be used in a pollinator's garden, cottage gardens, or in a perennial border. Powdery mildew, leaf spot, and rust can sometimes be found on the plants while scale and whitefly are occasional visitors. Deer usually leave *Salvia* × *sylvestris* 'Schneehügel' Snow Hill alone.

The main bloom period for *Salvia* × *sylvestris* 'Schneehügel' Snow Hill is May and June, but this plant blooms sporadically through the summer
Photo: Ginny Rosenkranz

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 **1220 DD** (Cumberland) to **1716 DD** (Reagan National Airport). 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.

- Fall webworm – mid to late instars (1173 DD)
- Peachtree borer – adult emergence (1181 DD)
- Green June Beetle – adult emergence (1539 DD)
- Pine needle scale – egg hatch / crawlers - 2nd gen (1561 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)

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

Degree Days (as of June 30)

Aberdeen (KAPG)	1240
Annapolis Naval Academy (KNAK)	1480
Baltimore, MD (KBWI)	1541
Bowie, MD	1551
College Park (KCGS)	1373
Dulles Airport (KIAD)	1441
Ft. Belvoir, VA (KDA)	1462
Frederick (KFDK)	1390
Gaithersburg (KGAI)	1377
Greater Cumberland Reg (KCBE)	1220
Martinsburg, WV (KMRB)	1232
Natl Arboretum/Reagan Natl (KDCA)	1716
Salisbury/Ocean City (KSBY)	1510
St. Mary's City (Patuxent NRB KNHK)	1621
Westminster (KDMW)	1596

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

2021 MDA Pesticide Container Recycling Program

See the brochure for dates and locations

Conferences

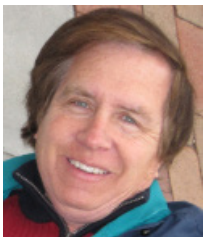
Diagnostic Sessions
We will be holding a plant diagnostic session for nutrient problems, diseases, and insects on July 21 at the Central Maryland Research and Education Center from 12:30 – 3:30 p.m. We encourage participants to bring samples of nutrient disorders and insect and disease problems for diagnosis by David Clement, Karen Rane, Stanton Gill, and Andrew Ristvey, University of Maryland Extension.

Save the dates...

Cut Flower Tour
September 14, 2021

MNLGA Field Day
September 16, 2021

CONTRIBUTORS:



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Thank you to the Maryland Arborist Association, the Landscape Contractors Association of MD, D.C. and VA, the Maryland Nursery, Landscape, and Greenhouse Association, Professional Grounds Management Society, and FALCAN for your financial support in making these weekly reports possible.

Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.