

Commercial Horticulture

June 25, 2021

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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)

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Peachtree Borer Adults Active This Week

By: Stanton Gill

We have our student intern, Matthew Price, checking the baited clearwing moth traps for flight activity of males. He found the first peachtree borer, *Synanthedon exitiosa*, on Wednesday, June 23. If you are applying protective sprays of bifenthrin or permethrin to ornamental susceptible tree species, now is the time to do it.



Male peachtree borer
Photo: Joseph Berger, Bugwood.org



Female peachtree borer
Photo: Joseph Berger, Bugwood.org

Cicada - What is Happening This Week?

By: Stanton Gill

The cicada population has reached its peak, and everyone might be tired of hearing about them at this point in the season. Some great stories of run-ins between cicadas with people, dogs, cats, and other various pets have made for an entertaining spring. Our “peeing cicadas” article” received the most email responses.

From now on, it will be branch tip dieback where females oviposited into the branches. You will see many of your customers’ trees with dead branch tips. The branches you can reach can be pruned out and discarded. There is not much else to do at this point.

We called and/or visited 25 nurseries in central, northern and western Maryland over the last 10 days to assess the amount of damage. Two nurseries saw a fair amount of damage in Montgomery County. A third, in Carroll County, had damage to red and sugar maples, oaks, zelkovas, and redbuds throughout their 60-acre nursery. The interesting thing is that they had plantings of ginkgo trees in three separate fields. There was absolutely **NO damage** on the **ginkgo trees**.

A fourth nursery in Baltimore County reported no cicada activity until 2 weeks ago, and then suddenly they had a lot of activity and female ovipositing damage. They suffered similar, widespread damage as the nursery in Carroll County. The other 21 nurseries all reported no real significant damage from cicadas. Again, pruning out damaged branches at this point is the best thing you can do.



Cicada damage to newly planted maples in Reisterstown

Photo: Mark Schlossberg, ProLawn Plus, Inc.



Cicada damage on bur oaks in Berryville VA

Photo: Shawn Walker, Trees 101



Cicada oviposition damage on oaks in a nursery
Photo: MatthewPrice, UME



There is no damage on ginkgos in the same nursery
Photo: Stanton Gill, UME



We are receiving reports of cicada oviposition damage on herbaceous plants, including this goldenrod
Photos: Tim Overstreet, Howard County Department of Recreation and Parks



Bagworms

Elaine Menegon, Good's Tree and Lawn Care, found early instar bagworms in Lititz, PA on June 23. Monitor plants such as arborvitae, spruce, and Leyland cypress. Bagworms are also found on deciduous trees and herbaceous plants, but the damage is usually less evident. Bt (Dipel, Caterpillar Attack), Spinosad (Conserve) or Acelepyrn will all give good control of young larvae.

Japanese Beetles

We are in the early period of Japanese beetle activity. Wade Smith, Stauffers Home and Garden, found his first Japanese beetle adults in East York, PA on June 19. There is one generation a year, with adults active June into August. Control options include Mainspring, Acelepryn (both at 8 oz/100 gal rates has given us 10-14 days of control), and Acephate.



A Japanese beetle adult is feeding on evening primrose

Powdery Mildew

Marie Rojas, IPM Scout, is reporting that powdery mildew is starting to show up on garden phlox in Gaithersburg this week. Powdery mildew is also infecting *Monarda fistulosa* here at the research center in Ellicott City.



**Powdery mildew will infect plants throughout the summer
Photo: Marie Rojas, IPM Scout**

Ambrosia Beetles

Here are the ambrosia beetle counts from the CMREC trap on June 23: 5 *Xylosandrus germanus* and 1 *Xylosandrus crassiusculus*. Richard Uva found 6 camphor beetles and 1 *Xylosandrus germanus* in his trap in Federalsburg on June 24. The numbers are going down, but the beetles are still around.

2021 MDA Pesticide Container Recycling Program

See the [brochure](#) for dates and locations

Arborvitae Leafminer

By: Stanton Gill

Bob Malinowski sent in some pictures of arborvitae leafminer (*Argyresthia thuiella*) with adults active on arborvitae. Bob happened to catch adults when they were swarming over an arborvitae on a warm day on June 14. Eggs are laid on the newly emerged foliage, from which the larvae soon hatch, and then they chew their way into the leaves. These entrance holes are only noticeable under magnification. Larvae will feed within the foliage until October. The damage shows up in late fall and is very evident at the end of winter. Adult arborvitae leafminers appear starting around mid-June into July or 533-700 growing degree days. Chemical cover sprays can be applied at this time. Materials such as Spinosad, Mainspring, or Acelepryn are very effective.



Arborvitae leafminer adults are active now
Photo: Bob Malinowski

Spider Mites on Arborvitae, Junipers, and Spruce This Season

By: Stanton Gill

We are receiving several reports of spider mite injury showing up on arborvitae, spruce and junipers. Monitor these plants with a white paper on a clipboard. Tap the branches over the paper to see the mites that are dislodged.



Monitor arborvitae for spider mite activity
Photo: Tom Speakman



Spider mites are causing heavy damage on arborvitae
Photo: Karen Rane

Spotted Lanternfly Update from MDA

By: Kenton Sumpter, Entomologist, SLF Program

Things have been busy at the MDA. Spotted lanternfly (SLF) is out in force and our dedicated team is hard at work searching for spotted lanternfly. Traps have been placed in eleven counties. These traps help us to determine the degree to which SLF has spread. We place these traps along likely routes of dispersal and check them regularly, making note of the quantity of each SLF life stage that is captured. Recently, we have had traps go positive in southern Kent County and north-central Baltimore County. This news is extremely troubling for us because it signals to us that satellite populations could be developing in these counties. Additional traps have been placed near the new positives, and our employees are conducting thorough surveys to try and determine the extent of the SLF population in these locations. Our hope is that our partners in the USDA will be able to quickly move on these areas and treat them before the lanternfly can grow its population.

MDA has also reached out to many local vineyards in Maryland. As lanternfly spreads, we want to remain aware of the vulnerabilities of our vineyards and be able to keep the vineyard owners informed of developments in the SLF invasion.

Dontbug.md@maryland.gov continues to be a powerful tool for collecting citizen tips on lanternfly sightings and for distributing information to concerned landowners and businesses. On average, MDA fields 15-20 emails per day as well as 1-5 phone inquiries. It is a tall order to answer all of the questions posted sometimes, but we take citizen concerns very seriously around here! We encourage everyone to report what they see. We rely on the cooperation and participation of each citizen to better track the spread of SLF.

Across the border, our neighbors in Virginia have recently discovered lanternfly in Prince William County, near the city of Manassas. Just to be safe, we have begun surveys and trapping in Charles County. If spotted lanternfly crosses the Potomac, we want to know about it!

Thankfully, treatments have begun for 2021. On Tuesday 6/15, the USDA treated roughly a dozen trees of heaven in Hagerstown City Park with insecticide. The area comprised all trees larger than saplings along the tennis courts and ball fields at the west end of the park. The USDA's next plan is to retreat the Maryland House Travel Plaza in Cecil County and to treat the satellites in Kent and Baltimore counties. With a little luck and good weather, we should be able to score some victories against the lanternfly invasion!

Using Iron for Weed Control

Kelly Nichols, Ag Agent, University of Maryland Extension, Montgomery County

Iron can be used as an herbicide to manage broadleaf weeds in turf. It is an organic alternative to synthetic broadleaf herbicides such as 2,4-D and dicamba. Iron will not volatilize like 2,4-D and dicamba, making it a more fitting choice for use around vegetable and flower beds. However, iron is a contact herbicide, meaning that it only kills the part of the plant that it touches, so good coverage is key. Perennial weeds are harder to control with contact herbicides, since the herbicide is not translocated down to the roots.

There are a few products containing iron that are labelled for turf, including Fiesta and Iron X. The active ingredient is iron HEDTA (FeHEDTA). HEDTA is a chelating agent, which keeps the iron in a stable form. Broadleaves take up chelated iron easier and in a higher quantity compared to grasses. When the iron oxidizes (reacts with oxygen), it causes plant tissue to die.

Weeds listed on the label as being controlled or suppressed include black medic, common chickweed, Canada thistle, creeping buttercup, dandelion, English daisy, false dandelion, oxalis, plantain species, speedwell species, white clover, and wild geranium. The label for Fiesta products provide three application rates ranging from 2.5

to 9.8 gallons of spray solution per 1000 ft²; which rate to use depends on how easy to control the weeds are. (For example, black medic is listed as easy to control, while creeping buttercup is a tough perennial weed.) Be sure to read the label for all mixing and application instructions.

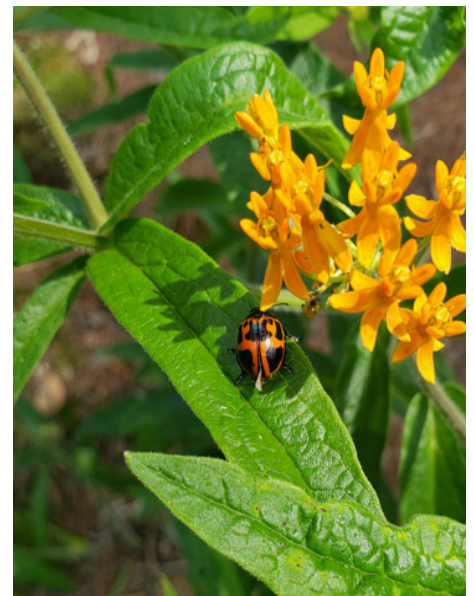
Below is a summary of recent research from the Guelph Turfgrass Institute in Canada which included iron HEDTA in trials.

In 2019, researchers conducted a study comparing different rates of liquid and dry formulations of Fiesta. Two applications of all treatments were made 21 days apart. Dandelion, clover, and black medic made up the majority of weeds present. At 7 days after the first application, most treatments reduced weed presence compared to the untreated control. However, regrowth of some weeds started occurring by 14 days after the first application. By the end of the study (63 days after the first application/42 days after the second application), the dandelion population was not significantly different from the untreated control, even though there was a temporary necrosis response from the herbicide application. The amount of clover throughout the study was highly variable, but by the end, only Fiesta at 288 mL/m² (6.25 gal/1000 ft²) and Fiesta at 400 mL/m² (8.7 gal/1000 ft²) provided significantly better control compared to the untreated check at 89 and 93 percent, respectively. All treatments provided 90-100% control of black medic at the end of the study. More information about this study can be found [here](#).

Also in 2019, the same researchers conducted another study looking at different rates of dry and liquid Fiesta applications for pre and post emergence control of crabgrass. Large and smooth crabgrass were seeded into bare-ground plots. Germination was slow to occur, and it was difficult to draw a conclusion regarding pre-emergence control of crabgrass. Populations of large crabgrass were variable throughout the plots, and no significant control of large crabgrass was achieved. Post-emergence control of smooth crabgrass was seen from all Fiesta products, with control ranging from 41-90%. In general, as might be expected, the higher rates provided better control. More information about this study can be found [here](#).

Swamp Milkweed Beetle

Marie Rojas, IPM Scout, found swamp milkweed beetle adults and larvae feeding on *Asclepias tuberosa* in Gaithersburg this week. For details on this beetle, see the [Bug of the Week article](#) by Mike Raupp, Retired-UMD.



Larvae and adults of swamp milkweed beetle are feeding on milkweeds this week
Photos: Marie Rojas, IPM Scout

Beneficial of the Week

By: Paula Shrewsbury

My... what long legs you have!

If you have been looking at your plants and shrubs, you most likely have seen what is commonly referred to as daddy long-legs. Their long legs make them quite noticeable and they can be found almost everywhere. Although daddy long-legs resemble spiders they are neither spiders nor insects. Taxonomically they are in the same class, Arachnida, as spiders, but in a different order. Daddy long-legs are in the order Phalangida and their closest relatives include scorpions and sun scorpions. There are about [24 species in MD](#). Common names include daddy long-legs, harvestmen, Sheperd spiders, and Opiliones. Daddy long-legs have one body segment compared to spiders, which have two, and insects, which have three. They have four pairs of long legs that may be 30 times longer than their body. A pair of eyes sits on a small mound on the front part of the body. Most daddy long-legs overwinter as eggs. Usually adults start to be seen around this time (mid-June). Mating behaviors differ between species. Most species reproduce sexually, some males offer a “nuptial gift” (a secretion) to the female. In some species males guard the female after copulation; the male provides parental care and guards the eggs. Adults usually hide during the day and become active at twilight. Although it varies by species, in general daddy long-leg habitat consists of woody shrubs and other vegetation where they can be found both on branches of woody plants and on the ground in leaf litter.



This male daddy long-leg, *Hadrobunus grandis*, is one of several species commonly found in Maryland. (image from: <http://www.life.umd.edu/entm/shultzlab/opiliomd/>)

Daddy long-legs do not have fangs or inject venom into their prey as spiders do. Their mouthparts (pedipalps) that are used for sensing, capturing, holding, and pushing its food into its mouth. Don't worry – daddy long-legs are not poisonous and cannot bite humans. However, daddy long-legs are not defenseless. For example, daddy long-legs are able to readily shed a leg if grabbed by a predator or curious on-looker. The leg continues to twitch for about an hour after it detaches. It is thought the motion distracts would be predators, as the daddy long-leg makes its escape. Many species of harvestmen have a pair of stink glands that produce a smelly fluid when disturbed known to be repellent to certain predators like ants.

Many often wonder are these long-legged creatures predators of other insects? Daddy long-legs are omnivores and been reported to feed on small dead and living insects, vegetation, and fungi. They are predators and decomposers. It is unknown what impact they have as a biological control agent on their own. However, daddy long-legs are a part of the suite of predator species often seen foraging in ornamental and turfgrass systems. Together this assemblage of predators likely makes a good “biological control” team. Be sure to give these harmless daddy's the respect they deserve.

Weed of the Week

By: Chuck Schuster

Weed control can be challenging, especially with perennial weeds. A phone call from a friend brought me out to a landscape in Montgomery County that has this challenging weed firmly established in the landscape. Ryan Peacemaker wanted ideas on controlling this problem weed in a landscape he manages.

Mugwort, *Artemisia vulgaris*, also known as chrysanthemum weed, is a weed found throughout the eastern United States. This perennial, rhizomatous plant can be spread from nursery stock to the landscape. This weed is prolific once introduced into a landscape and may grow to a height of four to five feet, though in the average landscape, usually reaches several inches in height. As the stems get longer they become woody, with a reddish brown color. Leaves are three to four inches in length, one to three inches in width, deeply lobed, and alternate. Leaf undersides produce white or gray hairs, and the upper side may have only a few hairs. Often not seen, the flowers will appear in small clusters at the top of the plant and will be on short upright stalks. Seed from this plant is often not viable.



This mugwort plant was treated with herbicide and is showing damage

Photo: Chuck Schuster, Retired-UME

Mugwort is a difficult to control weed. Hand pulling in a landscape setting is less than successful as the rhizomes, if not completely removed, will allow the restarting of a new plant. Pre-emergent herbicides are not effective as they work primarily with stopping seed germination, and seeds from mugwort are mostly non-viable. Good sanitation is important to prevent the introduction of this weed into the landscape when adding new plant material. In turf, it will tolerate close mowing and spreads through rhizomes. Dicamba and 2,4D work well on this weed in turfgrass. Use of Fiesta will only suppress it in turfgrass, but not control it. Use caution in warm weather because of volatilization. Landscape post emergent products that are effective will be the glyphosate family. Applications of glyphosate in both late summer and repeated in the early fall have shown the best results. A winter application of dichlobenil (Casoron) has been used in established beds of some woody materials including junipers, but can cause damage to newly planted trees and shrubs. Triclopyr has shown value in areas where ornamental grasses are grown and is effective in control of mugwort. The use of a dense landscape fabric is useful also. Products that are organic including Prizefighter, Pulverize, and Burnout do not effectively control this weed at all. The photo shows a plant that has been sprayed and is showing damage. Spring applications are often less than successful.

Plant of the Week

By: Ginny Rosenkranz

Hydrangea paniculata Sunday Fraise® is a very compact hydrangea with dark to medium green deciduous foliage, dark red stems, and ice cream cone-shaped flower clusters that start out pure white and gradually darken to pink. Flowers on all the paniculatas bloom on new growth so the plants can be trimmed back if needed in the early spring. The light pink color change starts at the base of the flower cluster and moves up to the tip of

the cluster. As it ages, the light pink color intensifies to dark pink, looking like a strawberry sundae. The plants are cold hardy from USDA zones 5-8 and prefer to grow in organically rich, moist but well drained soils and full sun. *Hydrangea paniculata* Sunday Fraise® grows 4-5 feet tall and wide and the flowers can grow 6-8 inches long, covering the plants in color and texture from July into the autumn. Watering the plants at the roots will help keep the foliage dry and prevent some of the leaf spot diseases. The plants are also susceptible to bacterial wilt, rust and mildew while aphids and mites are occasional visitors.



Hydrangea paniculata Sunday Fraise® is a compact hydrangea
Photo: Ginny Rosenkranz, UME

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 **1040 DD** (Cumberland) to **1512 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.

- Mimosa webworm – egg hatch 1st gen (1002 DD)
- Japanese beetle – adult emergence (1056 DD)
- Cryptomeria scale – egg hatch / crawlers (1101 DD)
- Fletcher scale – egg hatch / crawlers (1105 DD)
- Indian wax scale – egg hatch / crawlers (1145 DD)
- Oriental beetle – adult emergence (1147 DD)
- Fall webworm – egg hatch 1st gen (1173 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)

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 23)

Aberdeen (KAPG)	1054
Annapolis Naval Academy (KNAK)	1290
Baltimore, MD (KBWI)	1341
Bowie, MD	1354
College Park (KCGS)	1182
Dulles Airport (KIAD)	1247
Ft. Belvoir, VA (KDA)	1269
Frederick (KFDK)	1198
Gaithersburg (KGAI)	1183
Greater Cumberland Reg (KCBE)	1040
Martinsburg, WV (KMRB)	1059
Natl Arboretum/Reagan Natl (KDCA)	1512
Salisbury/Ocean City (KSBY)	1325
St. Mary's City (Patuxent NRB KNHK)	1426
Westminster (KDMW)	1379

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

Conferences

[2021 Greenhouse Growers Field Day](#)

July 8, 2021

Location: Catoctin Mountain Growers, Keymar, MD

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

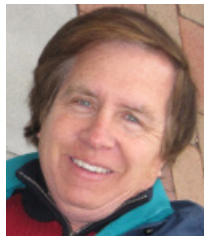
MNLGA Field Day

September 16, 2021

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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.

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