

Commercial Horticulture

June 24, 2022

In This Issue...

- [No IPM alert next week and Drone Program](#)
- [Boxwood leafminers](#)
- [Eastern dobsonfly](#)
- [Japanese beetles](#)
- [Spotted lanternfly](#)
- [Bagworms](#)
- [Oleander aphids](#)
- [Growing peaches](#)
- [Osage orange 'White Shield'](#)
- [Japanese maple scale](#)
- [Snapping turtle](#)
- [Lady beetles](#)

[Beneficial of the Week:](#) Minute pirate bugs (*Orius* spp.)

[Weed of the week:](#) Canada thistle

[Plant of the Week:](#) *Juniperus davurica* 'Parsonii'

[Degree Days](#)

[Pest Predictions](#)

[Conferences](#)

[Pest 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:

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Weed of the Week: Chuck Schuster (Retired Extension Educator) and Kelly Nichols (Extension Educator, Montgomery County)

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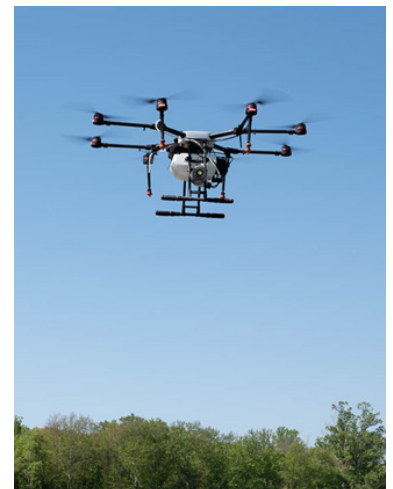
No IPM Alert for July 1

By: Stanton Gill

We organized a 2 day Biological Control Conference with MNLGA that will be conducted on June 30 and July 1st at the Maritime Institute near BWI Airport in Linthicum, MD. Since many of our University of Maryland Extension faculty will be speaking or involved in this conference, we will not issue a July 1st IPM Alert. We will resume on July 8th. Hope to see many of you at the Biological Control Conference.

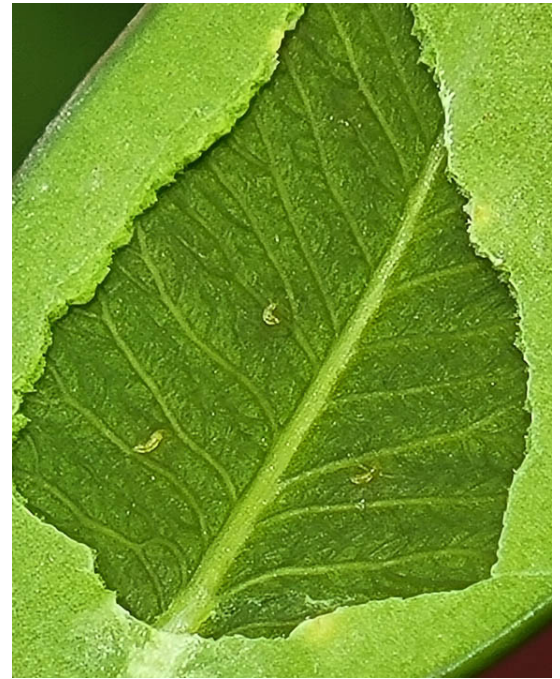
Drone Training July 28, August 4, and August 11, 2022

Registration information and links
are available
on the [IPMnet conference page](#)



Boxwood Leafminers

Marie Rojas, IPM Scout, found some tiny boxwood leafminers in *Buxus* 'Winter Gem'. The larvae feed until it gets hot and they go into a resting stage. The insecticide Avid can be applied to control early instars. This material is translaminar in action, traveling from the top the foliage to the bottom, so it should provide fairly good control.



Boxwood leafminers are feeding within leaves at this time of year
Photo: Marie Rojas, IPM Scout

Eastern Dobsonfly

Marc Vedder, Dumbarton Oaks, spotted a female eastern dobsonfly in NW Washington DC on June 21. The aquatic larvae are predators in fast-flowing streams. Adults do not feed.

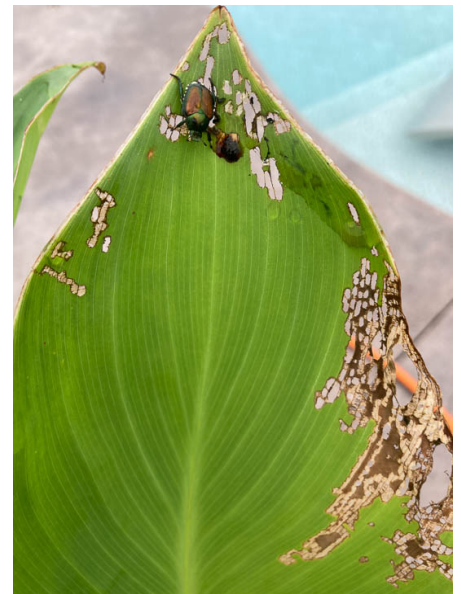


Look for adult eastern dobsonflies at lights in the summer. This one is a female.
Photo: Marc Vedder, Dumbarton Oaks

Japanese Beetles

By: Stanton Gill

Marie Rojas, IPM Scout, is finding them in western Montgomery County this week. Elaine Menegon, Good's Tree and Lawn Care, is finding them on canna lilies in York, PA. Not everyone has Japanese beetle activity in their area, but if you do, you are seeing lots of flight activity this week as it warms up. They will hit purple leaf plums and zelkovas as their first preference. They will migrate around feeding on many species of trees in your nursery over the next 4 weeks. Acelepyrn and Mainspring have given us excellent control of adult Japanese beetles.



Japanese beetles feeding on canna lily
Photo: Elaine Menegon Good's Tree and Lawn Care

SPOTTED LANTERNFLY (SLF) NEEDED for RESEARCH

By: Paula Shrewsbury, UMD

I need a handful of locations in MD with high infestations of SLF to conduct a research study evaluating bio-pesticides as a control. I need locations with hundreds of SLF and the ability to apply bio-pesticides. Please contact me if you think you might have a site that I could use (pshrewsbury@umd.edu).

Spotted Lanternfly Update

By: Paula Shrewsbury, UMD

Last week Kenton Sumpter, from the Maryland Department of Agriculture (MDA), reported that most spotted lanternflies, *Lycorma delicatula*, in MD are in their 2nd or 3rd nymphal stage. In the 2nd and 3rd instars, SLF are black with white spots, when they molt to 4th instar they will be red with white spots and black markings. See the images to know what you should be seeing now (2nd and 3rd instars) and looking for in the next week or so (4th instars).

A comprehensive resource for SLF management is "[Spotted Lanternfly Management for Landscape Professionals](#)" by Penn State Extension.



Spotted lanternfly 3rd (black with white spots) and 4th (red with white spots and black markings) instar nymphs. Image from USDA website

[The Penn State Spotted Lanternfly Management Guide](#) has a diagram of the spotted lanternfly, *Lycorma delicatula*, life cycle depicting each life stage and the time the stages are active. It is an illustration by E. Damstra.

Bagworms

Bagworm hatch reports continue to be sporadic. Marie Rojas, IPM Scout, is reporting that bagworms are (finally) starting to hatch out in western Montgomery County. Bt (Dipel, Caterpillar Attack), Spinosad (Conserve) or Acelepyrn will all give good control of young larvae.



Bagworm hatch throughout the area this year is variable
Photo: Marie Rojas, IPM Scout

Oleander Aphids

Steve Clancy, Town Creek Landscaping, found oleander aphids covering *Asclepias tuberosa* this week. These aphids are very difficult to control. Predators and parasitoids feed on them, but they seldom seem to be in high enough numbers to decrease these oleander aphid populations.



Oleander aphids are a common pest on the various species of milkweeds.

Photo: Steve Clancy, Town Creek Landscaping

If Your Customers Must Grow a Peach

By: Stanton Gill

During the height of the Covid outbreak, or should I say the beginning of Covid outbreak, many of your customers planted fruit trees in the landscape and likely are now having YOU take care of them. I generally do not recommend growing peaches in urban environments unless someone is really dedicated and wants to go through June peach thinning process, disease protection program, insect protections, fending off squirrels, fending off Japanese beetles, oriental fruit moth, and peach tree borer that hits weakened peaches.

There are plenty of other easier to grow fruits in residential landscape other than peaches. I will be teaching a 2-credit class starting in January of 2023 at Montgomery College on Thursday nights as an online course.



'Rich May' peaches

Photo: Stanton Gill

Now, back to peaches. If your customer insists on growing peaches, I would recommend sticking with two early ripening cultivars. One is called 'Rich May' and the other is 'Desiree'. 'Rich May' came out of the Zaiger Genetics Plant of Modesto, California breeding program. 'Desiree' came out of the Rutgers Plant breeding program. It is a medium size, highly colored very early season peach that is resistant to bacterial leafspot, a terrible disease of peach. Both of these cultivars ripen in June, often beating out the arrival of Japanese beetles. We just harvested the 'Rich May' peaches at our Orchard in Westminster on June 20th (see picture). Besides beating out Japanese beetles we harvest in June and it avoids the stress that peach trees go under bearing large fruit into late June, stressing the tree, and making it more susceptible to peach tree borer. Adult peachtree borer is flying this week (picking them up in our pheromone traps) and mating this week in central, Maryland. You still have to provide the early season disease preventative fungicide protection but you can let up after this early harvest before summer starts June 21st. You will still have to beat off the squirrels since peaches are a famous urban delicacy.

White Shield Osage Orange Hybrid and How it Fits Into IPM

By: Stanton Gill

Back in late April, I wrote about *Maclura pomifera* 'White Shield' osage orange that had been brought into the nursery and landscape market. Robinson Nursery donated 10 trees for us at the Central Maryland Research and Education Center to plant for evaluation of how it performed in Maryland. This is a male clone of a tree that is supposed to be able to grow in terrible soils of urban environments and still survive and look good. It is also fruitless since it is a male clone. It has potential to fit into an IPM approach since the tree has relatively few known insect or disease pests. Also, it claims to thrive in urban environment making this a good potential plant species. It is fruitless, thornless and a zone five plant that reaches 35 ft heights and a canopy spread of 30 -35 foot. It has glossy green leaves and it is heat and drought tolerant.

We installed the grafted trees in two sites in late April of 2022. The liner trees were 5/8 to 3/4" diameter at planting time. They had a long tap root and the top of the tree looked like a buggy whip. The two sites selected were one where it the soil is stone ridden, and the second site was poor soil in an exposed location. The trees sat dormant until this last week (June 20th) when they leafed out. Now they are growing well and look good.

Steve Black installed 'White Shield' in his nursery to see how it performed in nursery growing conditions.

We will report on the progress of these trees later in the season.



Maclura pomifera 'White Shield' growing at Raemelton Nursery
Photos: Steve Black, Raemelton Nursery

Japanese Maple Scale

By: Stanton Gill

We are in the midst of the crawler period for the Japanese maple scale. This scale is something that the horticulture industry must recognize as a pervasive and major problem in the industry. If you find it at your nursery or on your customers plants, get a control program going quickly. Talus and Distance (IGRs) are very effective if applied now, while they are in the crawler and settled first instar stage.

[Japanese Maple Scale: A Pest of Nursery and Landscape Trees and Shrubs \(FS-967\)](#) is available on the UMD Extension website.

Snapping Turtle

Rebecca McWilliams, Maxalea, Inc., found this snapping turtle walking toward a nearby pond in Mays Chapel, Maryland on June 18. It is mating season, so you will see them migrating throughout the area.

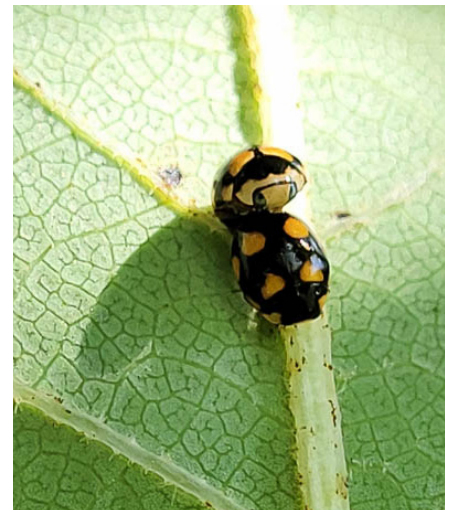
Maryland DNR has [information on snapping turtles](#) posted online.



Snapping turtle moving across a turf are toward a pond
Photo: Rebecca McWilliams, Maxalea, Inc.

Lady Beetles

Marie Rojas, IPM Scout, found these small lady beetles with orange spots at a nursery in Montgomery County this week.



A pair of the many species of lady beetles found in Maryland
Photo: Marie Rojas, IPM Scout

Beneficial of the Week

By: Paula Shrewsbury

Pirates on my coneflowers!

On one of the beautiful sunny days this week, I was out observing the many insects on the flowers and plants in my landscape beds. It was a very busy day for insects. As I was admiring the coneflowers (*Echinacea pupurea*, Asteraceae) I noticed tiny dark colored insects crawling in and out of the nooks and crannies of the flower heads. Not just one, but several insects per flower head. Upon closer examination with a hand lens, I realized these little creatures were **minute pirate bugs** (see image) which are predaceous true bugs (*Orius* spp.; order Hemiptera; family Anthocoridae). Upon further examination, I saw that there were also pretty high densities of thrips crawling around on the petals of the coneflower (see image). It all came together, *Orius* spp. are well known predators of thrips (and other insects) and they also feed on the pollen of flowers (omnivores).

There are two species of *Orius* that are abundant and important, the minute pirate bug (*Orius tristicolor*) (minute pirate bug is also the common name of the group) and the insidious flower bug (*Orius insidiosus*). The

minute pirate bug (*O. tristicolor*) occurs throughout North America, and down into Central and South America. The insidious flower bug (*O. insidiosus*) is more common in the eastern U.S. but occurs south from Utah and Southern California into Central and South America.

Orius spp. have needle-like sucking mouthparts that they impale into their prey and then use to suck out the prey's insides, ultimately killing them. Adults are small (< 1/8"), oval, and black with white markings at the base and ends of the wings. *Orius* undergo incomplete metamorphosis so nymphs and adults may occur in the same location, and are both predacious and may feed on similar prey items. Nymphs and adults are similar in shape but nymphs are usually yellowish-orange with red eyes (see image) but get darker in later nymphal stages. Both stages are highly mobile. *Orius* overwinter as adults and begin activity early in the season. Tiny eggs are inserted into plant material and it takes about 3 weeks to develop from egg to adult. There are multiple generations of *Orius* per year and they remain active until day length becomes shorter (< 14 hours) later in the season.

Orius are considered generalist predators that feed as adults and nymphs on a wide range of prey items. They commonly found in association with [thrips](#), which they consume in addition to spider mites, aphids, small caterpillars, psyllids, leafhopper nymphs, whiteflies, chinch bugs (in turf), plant lice, and insect eggs of many species. *Orius* are also omnivorous in that they feed on pollen from many flowering plants and plant juices when prey is not available. I have seen *Orius* in the flower heads of a diversity of flowers feeding on pollen and prey. This suggests planting flowers may help to encourage predatory *Orius* spp. and suppress plant feeding thrips and other pests. Applications of most broad-spectrum insecticides, such as pyrethroids, neonicotinoids, organophosphates, and carbamates, can eliminate *Orius* populations, so if *Orius* is present choose reduced-risk insecticides when warranted. Some *Orius* species are commercially available and are used successfully in biological control programs against thrips in greenhouses and field grown peppers. Occasionally, *Orius* may even take a "taste" of humans, but the bite is only irritating for a few minutes.



Two adult predatory minute pirate bugs, *Orius* spp., on the flower head of a coneflower.
Photo: P.M. Shrewsbury, UMD



A high density of thrips, a common prey of *Orius* spp., on the petals of coneflower.
Photo by P.M. Shrewsbury, UMD



An adult *Orius* bug feeding on a whitefly nymphs.
Image from <http://www.ars.usda.gov>; by Jack Dykinga



Orius nymph feeding on an aphid. Note the orange coloration, sucking mouthpart, and wing buds (not fully developed wings) on the top of the thorax.
Image from <http://extension.entm.purdue.edu/>

Weed of the Week

By: Kelly Nichols

In keeping with the thistle theme, this week's weed is Canada thistle (*Cirsium arvense*). It can be found in many locations, so be aware of it and make note of where it is found (Figure 1). Canada thistle is a creeping perennial that reproduces by seed and rhizomes. It is frequently found in patches because of its horizontal rhizome growth. Roots can be found penetrating the soil up to 36 inches downward. Seeds will germinate about the same time as the appearance of root derived shoots starting in April and going through May. Two flushes are found most years, one in late spring and then again in late fall. It can be distinguished from other members of the thistle family by looking at the stem and flowers. The stem on Canada thistle will be spineless, unlike bull thistle or musk thistle, and the flowers lack spines or prickles, again unlike bull or musk thistle. Seedlings have cotyledons that are club-shaped; leaf margins are not regular and have spines. Leaves are alternate, sessile, simple, and oblong. They have an irregular lobe with spiny margins. Canada thistle plants can produce 1,000 seeds per flowering shoot. Canada thistle will not have a basal rosette (Figure 2).

Control can be accomplished by using many broadleaf post emergent herbicides. In turf areas 2,4-D with chlorsulfuron, and dicamba are effective. In beds and nursery rows repeated application of glyphosate is effective, Roundup on dry land, and Roundup Custom in damp areas. Do not spray too frequently as one wants the next generation to emerge before application. Cultural controls would include fertility management and maintaining a dense turf, but being mindful of nitrogen applications, as excess nitrogen will increase weed growth. A high mowing height to allow shading of newly germinating seeds is an effective management tool in turf. Burning is not an effective method of control for Canada thistle.



Figure 1. Canada thistle grows in many different types of areas.
Photo: Chuck Schuster, UME Ag Agent, Emeritus



Figure 2. Canada thistle does not have a basal rosette.
Photo: Chuck Schuster, UME Ag Agent, Emeritus



Figure 3. Young Canada thistle plant.
Photo: Chuck Schuster, UME Ag Agent, Emeritus

Plant of the Week

By: Ginny Rosenkranz

Juniperus davurica 'Parsonii' or Parson's juniper is a lovely dense dome-shaped, mounded evergreen that grows 2-3 feet tall and spreads up to 4-10 feet wide. The gray-green to soft blue-green foliage is made up of tiny scale-like needles that are both adult and juvenile, and the branches spread themselves just slightly above the ground. For a juniper, the texture is soft and the females produce a small purple brown cone that looks like a berry, which is enjoyed by birds. Parson's juniper is winter hardy from USDA zones 6-9 and thrives in full sun to partly shady and well-drained slightly acidic soils. The color of Parson's juniper stays the same through all 4 seasons. Plants are heat, drought, and salt tolerant and seem to be resistant to deer and pollution. Parson's juniper can be used as a ground cover, can prevent erosion on a slope or bank, in a drought tolerant garden, as a border or as a foundation planting. Diseases include Phomopsis and Kabatina, especially if planted in heavy soils.



***Juniperus davurica* 'Parsonii' is mounded evergreen that grows 2 - 3 feet tall**

Photo: Ginny Rosenkranz, UME

Degree Days (as of June 22)

Aberdeen (KAPG)	1094
Annapolis Naval Academy (KNAK)	1277
Baltimore, MD (KBWI)	1330
College Park (KCGS)	1180
Dulles Airport (KIAD)	1270
Ft. Belvoir, VA (KDA)	1298
Frederick (KFDK)	1149
Gaithersburg (KGAI)	1170
Gambrils (F2488, near Bowie)	1256
Greater Cumberland Reg (KCBE)	1132
Martinsburg, WV (KMRB)	1080
Natl Arboretum/Reagan Natl (KDCA)	1520
Salisbury/Ocean City (KSBY)	1367
St. Mary's City (Patuxent NRB KNHK)	1549
Westminster (KDMW)	1397

Important Note: We are using the [Online Phenology and Degree-Day Models](#) site. Use the following information to calculate GDD for your site: Select your location from the map Model Category: All models Select Degree-day calculator Thresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

Pest Predictive Calendar “Predictions”

By: Nancy Harding and Paula Shrewsbury, UMD

In the Maryland area, the accumulated growing degree days (DD) this week range from about **1080 DD** (Martinsburg, WV) to **1549 DD** (St. Mary's City). The [Pest Predictive Calendar](#) tells us when susceptible stages of pest insects are active based on their DD. Therefore, this week you should be monitoring for the following pests. The estimated start degree days of the targeted life stage are in parentheses.

- European fruit lecanium scale – egg hatch / crawlers (**904 DD**)
- Cryptomeria scale – egg hatch / crawlers (**937 DD**)
- Azalea bark scale – egg hatch / crawlers (**957 DD**)
- Japanese beetle – adult emergence (**1056 DD**)
- Fletcher scale – egg hatch / crawler (**1105 DD**)
- Fall webworm – egg hatch (1st gen) (**1142 DD**)
- Indian wax scale – egg hatch / crawler (**1145 DD**)
- Oriental beetle – adult emergence (**1147 DD**)
- Peachtree borer – adult emergence (**1181 DD**)
- Green June beetle – adult emergence (**1539 DD**)
- Pine needle scale – egg hatch / crawlers (2nd gen) (**1561 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.

July 7, 2022 Greenhouse Growers Field Day – Tidal Creek Growers

By: Stanton Gill

MNLGA worked closely with Tidal Creek Growers in developing an on-site Greenhouse Tour and Education Day for greenhouse growers at the Tidal Creek Greenhouse in Earleville, MD. The sessions will start with educational stations in the greenhouse. A tour of the greenhouse herbaceous annual and production facility will be conducted in the afternoon. For schedule and registration information, go to the [MNLGA site](#).

Conferences

June 30, 2022

Greenhouse Biological Control Conference

Location: Maritime Institute, Linthicum Heights, MD

Contact MNLGA at 410-823-8684 with any questions.

On July 1st, and a part of the program, there will be an **on-site demo of using steam for weed control** from 8:30 a.m. to 10:30 a.m. at Emory Knoll Farms, 3410 Ady Road, Street, Maryland.

July 14, 2022 (1 - 3 p.m.)

IPM Scouts' Diagnostic Session

Location: CMREC, 11975 Homewood Road, Ellicott City, MD 21042

Registration information will be available soon.

July 28, August 4, and August 11, 2022

Drone Training Program

Registration information and links are available on the [IPMnet conference page](#)

UMD ADVANCED LANDSCAPE IPM LAB-FIELD COURSE (in-person)

Dates: July 28 and 29, 2022 (8:00 a.m. – 4:00 p.m.)

Location: Plant Science Bld, University of Maryland, College Park, MD

Description: This 2-day course will consist of both field walks around campus and activities in the lab. Sessions will focus on diagnostics of plant disease and insect problems, and pest and natural enemy identification using live and other specimens, and interactive activities. Labs will be run by instructors (*Drs. Paula Shrewsbury, Mike Raupp, Karen Rane*).

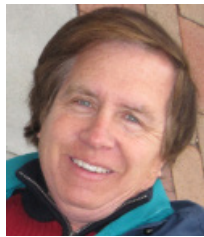
For registration and course details: Email Amy Yaich at umdentomology@umd.edu

Fall Horticulture Classes at CCBC

You can find out about fall horticulture classes at CCBC by going to [their website](#).

Commercial Ornamental IPM Information
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