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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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Disease Information: Karen Rane (Plant Pathologist), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)

Weed of the Week: Chuck Schuster (Retired Extension Educator), Kelly Nichols, Nathan Glenn, and Mark Townsend (UME Extension Educators)

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

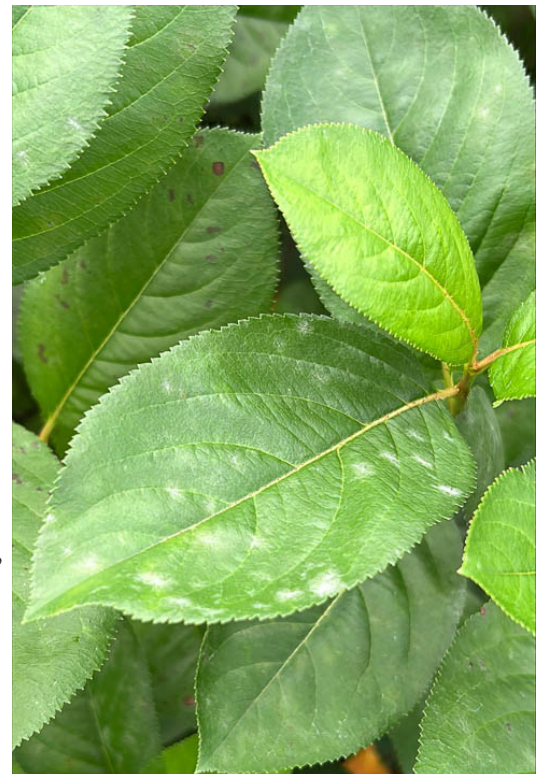
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Cool Nights, Sunny Days – Perfect for Powdery Mildew

By: Stanton Gill and David Clement

On Wednesday morning, it was 55 °F and sunny. This weekend, the cool night temperatures and sunny days are predicted for Sunday and Monday. This is perfect weather for powdery mildew development. Fall mildew infections in landscape settings are not as damaging to plants since most of the “leaf energy” has already been stored for next year in the plant. Mildew fungicides are best applied as a preventative before you see heavy coatings of fungal growth on the leaf surfaces. If you have susceptible plants in the nursery, now would be a good time to apply a registered preventative fungicide.



Powdery mildew on black chokeberry.
Photo: Kylie White, Ecotone, Inc.

Diagnostic Sessions Coming Up in September

By: Stanton Gill

MNLGA is holding a field day at Abbey Farm Nursery in Waldorf, MD on Sept 13, 2023. We will have a diagnostic outdoor session for disease management with David Clement and Karen Rane running this one. Brian Kunkel, University of Delaware and I will run the insect and mite diagnostic session. Andrew Ristvey will run the water and nutrient management session.

Register for the field day through the [MNLGA website](#).

See the conference section at the end of the report for more program listings.

How Mosquitoes Hear

By: Stanton Gill

It is the mosquito time of year. I ran into several Tuesday evening, walking about in the garden. Research published recently talked about how mosquitoes hear. They do not have eardrum like you and me, but use the hairs on their antennae to sense sound. They mate in flight so males have to pick up the beating of the female mosquito's wings to find her and mate. The sounds of human voices is also within mosquitoes hearing range.

NPR put out this interesting article on mosquitoes and how they use setae (hairs) to detect sounds. <https://www.npr.org/sections/goatsandsoda/2023/08/18/1194390459/hairy-ears-of-male-mosquitoes-help-them-find-the-ladies-can-we-disrupt-their-hea?f=327351768&ft=nprml>

Flourishing Weed in 2023 – Oriental Bittersweet

By: Stanton Gill

Oriental bittersweet, *Celastrus orbiculatus* Thunb., is native to Japan, China, and Korea. It is loving this hot weather and flourishing in nurseries throughout Maryland. It has many common names including: Asiatic bittersweet vine; Oriental bittersweet vine; Chinese bittersweet vine. Any way you look at it, and whatever common name you call it, this weed is becoming a major problem in Maryland nurseries. When the seeds ripen, which will be this fall, birds feed on the fruit and poop out the seeds, often at the base of a nursery plant. Once this plant vines up a nursery tree, it involves following the green leaves of the vine to the base and using your pruning shears to shear it off in the ground. If you catch it early, you can often pull it out of the grounds, that is, if the soil moisture level is high enough. It is a very time consuming and frustrating task to say the least.

Dog Day Cicadas

Mark Schlossberg, ProLawn Plus, Inc., reported that a customer is seeing a lot of emerging dog day cicada adults on one tree in Owings Mills this week. Males have been quite vocal recently in the mornings and early evenings. Rutgers University has a detailed article on the [dog day cicada](#).



**Look for emerging dog day cicadas and their empty pupal cases in the landscape this month.
Photo: Suzanne Klick**

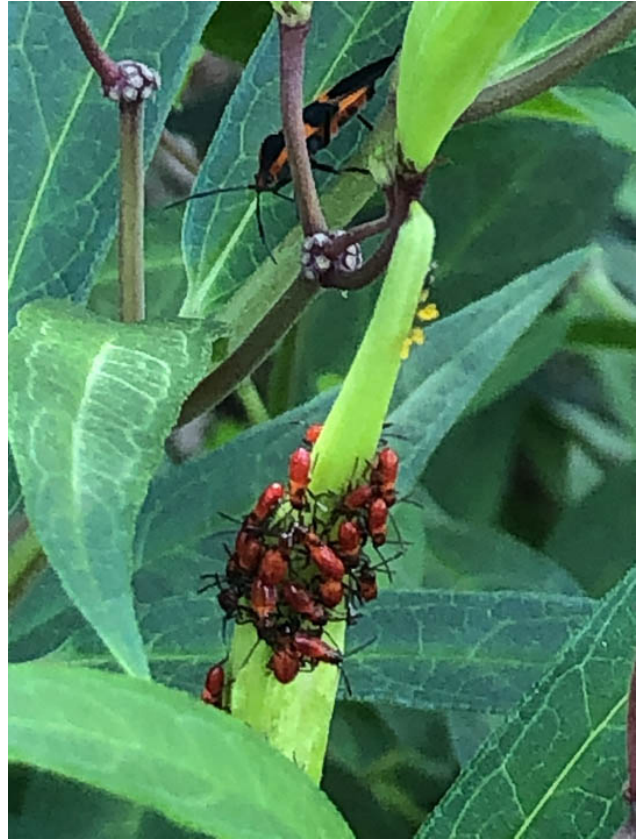
Plenty of Insects on Milkweeds

Bill Miller, The Azalea Works, found milkweed bugs and oleander aphids on milkweed in Bethesda this week. Bill also found oleander aphids infesting the milkweed. These aphids can be one of the most difficult aphids to control. Eric O'Neal, Good's Tree and Lawn Care, found monarch caterpillars all over butterfly weed in Harrisburg, PA.



Monarchs on butterfly weed.

Photo: Eric O'Neal, Good's Tree and Lawn Care



A large milkweed bug adult and milkweed bug nymphs feeding on the seed pod of *Asclepias*.
Photo: Bill Miller, The Azalea Works



Ants are tending oleander aphids for the honeydew.

Photo: Bill Miller, The Azalea Works

Orange-striped Oakworms

Eric O'Neal, Good's Tree and Lawn Care found orange-striped oakworm in Harrisburg this week. Look for feeding to continue into September. There is one generation per year. Orange-striped oakworms overwinter in the pupal stage in the soil. Marie Rojas, IPM Scout, found *Asimina* webworm caterpillars in Frederick County and along the C & O towpath. Both large caterpillars and clusters of young instars were active. They feed on the leaves, buds, and twigs of pawpaw species. The larvae create a leaf shelter within which they feed. Most often control of these caterpillars is not necessary. Look for beneficial insect activity to help determine if any treatments are necessary.



Orange-striped oakworms feed on red and white oaks.
Photo: Eric O'Neal, Good's Tree and Lawn Care



Asimina webworm - mid-instar caterpillars (above) and a late instar caterpillar (left)
Photo: Marie Rojas, IPM Scout



Bagworms

Elaine Menegon, Good's Tree and Lawn Care, found active bagworms in Hershey on August 17. Bagworms have finished up most of their feeding for the summer. As we move into September, you might see a male bagworm moving along in the landscape looking for a place to pupate. Females are wingless and pupate and emerge within the bag. The females will lay eggs and then die. Next year, monitor infested sites closely for egg hatch. Control this late in the season is not worthwhile. Control materials are more effective when applied to the early instar caterpillars.



**Bagworms are finishing up feeding at this time of year.
Photo: Elaine Menegon, Good's Tree and Lawn Care**

A Few More Caterpillars

Luke Kilgore, Casey Trees Berryville, Virginia, found a cecropia moth caterpillar (*Hyalophora cecropia*) on an *Ulmus* 'New Horizon'. It feeds on a variety of woody plants, but look for it particularly on apple, ash, box elder, cherry, lilac, sassafras, and willow. Luke also found a catalpa sphinx caterpillar (*Ceratomia catalpa*) on a *Catalpa speciosa* this week. There are multiple generations of this caterpillar so look for activity into the fall.



**This large, colorful cecropia moth caterpillar is one of our native species.
Photo: Luke Kilgore, Casey Trees**



**This catalpa sphinx moth caterpillar has been parasitized by wasps.
Photo: Luke Kilgore, Casey Trees**

Spotted Lanternfly Trials and Activity

By: Stanton Gill

Thanks to each of you reporting in large populations of spotted lanternfly. Brian Kunkel, University of Delaware Extension, Sheena O'Donnell, Suzanne Klick, and I were busy collecting adult spotted lanternflies this week for our trials to evaluate various controls. We are looking at both ground spray applications and drone applications of systemic and entomopathogens for controlling this spreading pest. We need a lot of insects for our netted branch trials at the nurseries, so we are always looking for new sites from which to collect. We are learning to put our hands cupped in front of the adult SLF, so they leap into our hands and not away from us. They always leap forward. If you miss the capture, then they land close by and rapidly spread their wings to show the red underwings. Red is a warning color, in this case "leave me alone I taste bad".

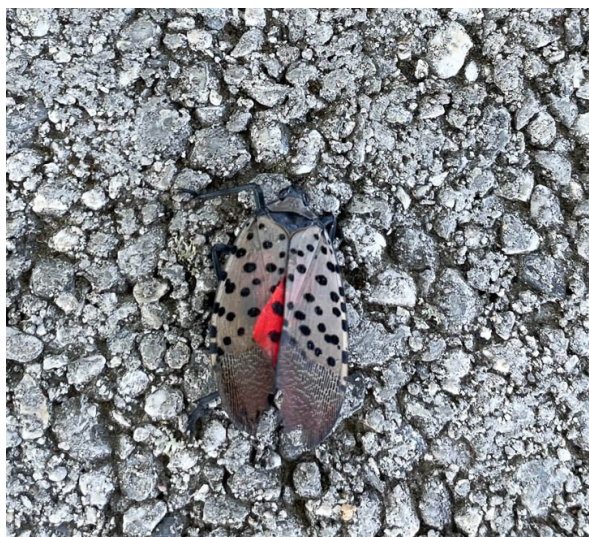
We received a call from Mark Schlossberg, ProLawn Plus, Inc., reporting a good population of SLF in Baltimore County. When Brian, Sheena (my technician), and I arrived we found 3 heavily infested trees loaded with spotted lanternflies. I had not seen so much honeydew on a tree that it had gone to bacterial fermentation. It turned into a white froth at the base of the tree. It was raining honeydew down on our hair while we collected them. There were plenty of honey bees, wasps, hornets, and assassin bugs feeding on the honeydew and the assassin bugs feeding on the SLF.

Brandon Allison, BrightView Landscape Services, found SLF on a Norway maple at Piney Run Park on August 19. Brandon noted there was a fair amount of honeydew on the foliage. He also found a dead one on his driveway in Sykesville. He noted that it is the first that he has seen SLF in his Sykesville neighborhood.

Luke Gustafson, The Davey Tree Expert Company, is reporting pockets of SLF infestations in Baltimore City. Luke is mostly seeing them on Ailanthus, sumac, silver maple, red maple, walnut and yellowwood. He notes that yellowjackets and European hornets have been enjoying the honeydew!



Honeydew produced by spotted lanternflies accumulating at the base of an Ailanthus tree.
Photo: Mark Schlossberg, ProLawn Plus, Inc.



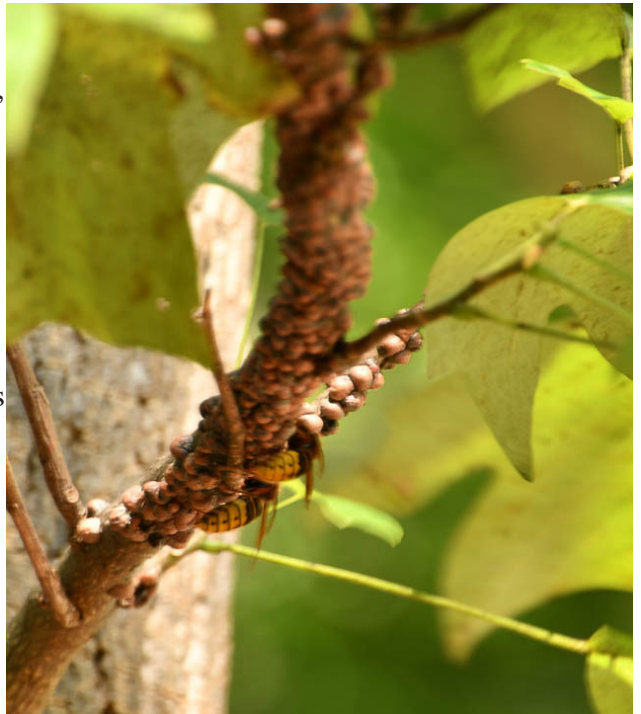
Dead SLF in driveway
Photo: Brandon Allison, BrightView Landscape Services



Many adult SLF active in areas of Baltimore City.

Hornets and Wasps

In McLean, VA, Dave Freeman, Oaktree Property Care, found European hornets around a population of tuliptree scale, feeding on the honeydew secreted by the scale. Sean McGuinn, Arlington Outdoor Education Center, reports seeing a lot of yellowjacket activity over the past month and more than usual flying around. He noted "it seems early to see so many out and about. I have them all over my yard, more than ever before. At work, we've identified over five active nests in just the past 2-3 weeks on our campus and within a rather small radius. Multiple campers have been stung just about every week this summer." Marie Rojas, IPM Scout, is finding baldfaced hornets on oak stem galls and European hornets on magnolia scale.



European hornets feeding on honeydew secreted by tuliptree scale.

Photo: Dave Freeman, Oaktree Property Care



A baldfaced hornet on galls on an oak stem.

Photo: Marie Rojas, IPM Scout

Pinecone Oak Galls

Marie Rojas, IPM Scout, found pinecone oak galls which are caused by cynipid wasps. No control is necessary.



Pinecone oak galls start out pinkish and become more tan to brown.

Photo: Marie Rojas, IPM Scout

Crapemyrtle Bark Scale

Sheena O'Donnell, UME, has been monitoring a crapemyrtle bark scale (CMBS) population here at the research and has been seeing crawlers for the last few weeks. They are still active this week at CMREC. Brian Kunkel, UDel, is still seeing strong crawler activity in Sussex County, Delaware. Sam Fisher, Bartlett Tree Experts, is also finding CMBS this week. Talus or Distance can be used for control of crawlers.

Cypress Twig Galls

Marie Rojas, IPM Scout, is finding very high populations of cypress twig midge galls in Gaithersburg. This gall is formed by a fly in the family Cecidomyiidae. These galls seldom cause enough damage to warrant control. If the aesthetic appearance of the tree is an issue and galls are not too abundant, then prune out the galls.



Cypress twig gall midge activity can make a tree look unsightly, but usually does not impact overall tree health.
Photo: Marie Rojas, IPM Scout

Not Something You Want to Hear, But Should Know About

By: Stanton Gill

If you are among the throngs of people flying across the United States to Asia and Europe there are two new strains of Covid that are extremely transmittable showing up in late August. Everyone wants to put COVID behind us, but it would probably be worth looking into booster shots for these new strains.

One of my fellow university colleagues just returned from Alaska where his wife picked up this new COVID strain. According to Centers for Disease Control and Prevention (CDC) estimates, EG.5 was responsible for 20.6% of cases of COVID-19 in the United States at the end of the third week of August, which was more than any other single circulating SARS-CoV-2 strain. That same week, a strain called FL 1.5.1 (or Fornax), which is reported to be surging rapidly in the U.S. and accounted for 13.3% of cases, was second, followed by a mix of other XBB strains and descendants of Omicron.

You might want to check out this information from Yale medical School at:

<https://www.yalemedicine.org/news/covid-eg5-eris-latest-coronavirus-strain>

Add One More Invasive Pest Entering the US

By: Stanton Gill

In August 2023, the Georgia Department of Agriculture (GDA), in coordination with the United States Department of Agriculture Plant & Animal Health Inspection Service (USDA APHIS) and the University of Georgia, confirmed the presence of a yellow-legged hornet (YLH; *Vespa velutina*) near Savannah, GA. This is the first time a live specimen of this species has been detected in the open United States. You can do a web search to see pictures of this hornet. **This wasp is a predator of honey bees. Georgia Department of Agriculture is conducting an aggressive program to try to eradicate this new pest.**

Predator Activity



Jagged ambush bugs are a generalist predator. Paula Shrewsbury wrote an article on ambush bugs in the [September 25, 2020 IPM Report](#).

Photo: Dave Freeman, Oaktree Property Care

Damage After Early August Storm

David Lantz, sent a photo from a client in Keedysville that was hit with a heavy hail storm. David noted that he lives a half a mile from this client and his location received no hail. He also noted that "You should see the field of corn adjoining this property. Shredded."



Area in Keedysville hit by heavy hail.
Photo submitted by David Lantz

Foliar Nematodes

By: Karen Rane and David Clement,UMD

While most plant parasitic nematodes are soil inhabitants and feed on plant roots, foliar nematodes in the genus *Aphelenchoides* attack the aboveground portions, causing discoloration and death of leaves on over 200 species of plants. These microscopic roundworms invade foliage through natural openings such as stomates, and feed directly on leaf cells. Symptoms appear as yellow to brown lesions that are elongate or angular in shape (Figs. 1-3). Leaf veins will restrict nematode movement within a leaf, so the lesion shape is dictated by the type of leaf vein arrangement. Initial symptoms may be difficult to observe, but as the growing season progresses nematode populations increase and symptoms become more visible. Foliar nematodes overwinter in the crown tissue of infected plants or in infected leaf debris. The nematodes move in films of water, swimming with a snake-like motion upwards into leaves and can be splash-dispersed by rainfall or irrigation. The best way to manage foliar nematodes is to avoid bringing this pest into the garden – do not install plants with symptoms of foliar nematode damage. Sanitation is also key to managing foliar nematodes – infected plants should be discarded (not composted!). Avoid overhead sprinkler irrigation that can both allow movement of nematodes between leaves and dispersal to additional plants. There are no chemical sprays that can completely eliminate foliar nematodes from an infected plant. The insecticide Pylon is labeled for use by commercial applicators, to reduce foliar nematode populations, but it does not eliminate the pests completely. Hot water treatment of propagative material can rid plant tissue of foliar nematodes but may also damage or kill the plant material being treated.

Common plants affected by foliar nematode include herbaceous perennials like hosta, ferns, anemone, chrysanthemum, columbine, dahlia and heuchera. Begonias, hibiscus, primrose, brunnera, gloxinia, hydrangea and strawberry are hosts as well.



Figure 1. Wood fern (*Dryopteris* sp.) showing leaf death due to foliar nematodes (left), and closeup of lesions bounded by veins (right). Photos: K. Rane, UMD



Figure 2. Elongate tan lesion on hosta leaf caused by foliar nematodes.

Photo: K. Rane, UMD



Fig. 3 – Angular lesions caused by foliar nematode on heuchera.
Photo: Jonathan D. Eisenback, Virginia Polytechnic Institute and State University, Bugwood.org

Beneficial of the Week

By: Paula Shrewsbury

Insect parasitic nematodes and root feeding weevils

Twobanded Japanese weevil was reported from a nursery in last week's IPM Newsletter. There are several other species of weevils that can be important pests in nurseries and landscapes such as black vine weevil, strawberry root weevil, and others. These weevils feed on foliage of trees, shrubs, and herbaceous plants as adults and the roots and crowns of plants as larvae. The larval stage in the ground can be particularly challenging to control. Which brings me to the beneficial for this week – entomopathogenic nematodes (ENs) - which are known to target weevil larvae in the ground in nature or ENs can be purchased commercially and applied to sites where weevil larvae are active.

Entomopathogenic nematodes are tiny (just visible to the naked eye), soft bodied, non-segmented roundworms that are parasitic to certain insects. They occur naturally in soil and locate their host insects by detecting carbon dioxide, vibration or chemical cues given off by insects. Nematodes have two different modes of host finding. They can be “cruisers” or “ambushers” depending on their species. Cruisers move in water within the soil in search of sedentary hosts, whereas ambushers sit in one place waiting for a mobile host to go by. [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 (killing the insect), and the nematodes feed on the bacteria. A win - win situation for everyone, except the pest insect of course.



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. Image from: ipm.ucanr.edu

Entomopathogenic nematodes occur naturally in soils and are commercially available and used in pest management programs as biological controls, particularly nematode 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* are best to use for white grub and weevil control), they can be applied using standard pesticide equipment (tank, chemigation, soil drenches) 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, weevil larvae, and white grubs.

About 15 years ago some colleagues and I did a study in a container nursery evaluating the use of *Heterorhabditis bacteriophora* (EN) for control of black vine weevil grubs in containers of *Bergenia* plants. Weevil larvae were reduced from an average of 6 larvae per plant to zero – great control of weevils by nematodes. Other studies have also found that applications of *H. bacteriophora* work well as suppressing weevil larvae populations in the soil ([see video here](#)).



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.

Image from: extension.umd.edu

Commercially available EN's have been used to control weevils and other pests such as peach tree and other clearwing borer, fungus gnat larvae, caterpillars, etc. Be sure to research (see below links) which nematode species is best for the pest insect you are targeting, and follow label directions for soil temperature and moisture requirements.

For more information on entomopathogenic nematodes that attack weevil larvae and other insects, and how to use them go to: <https://www.sciencedaily.com/releases/2008/03/080321121657.htm>

-article on the use of nematodes to control peach tree borer

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

-Great video on using ENs to control black vine weevil

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

-great information on how to use EN's and which species of nematode is best for specific pests.

Weed of the Week

By: Chuck Schuster, UME-Retired

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.

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.



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

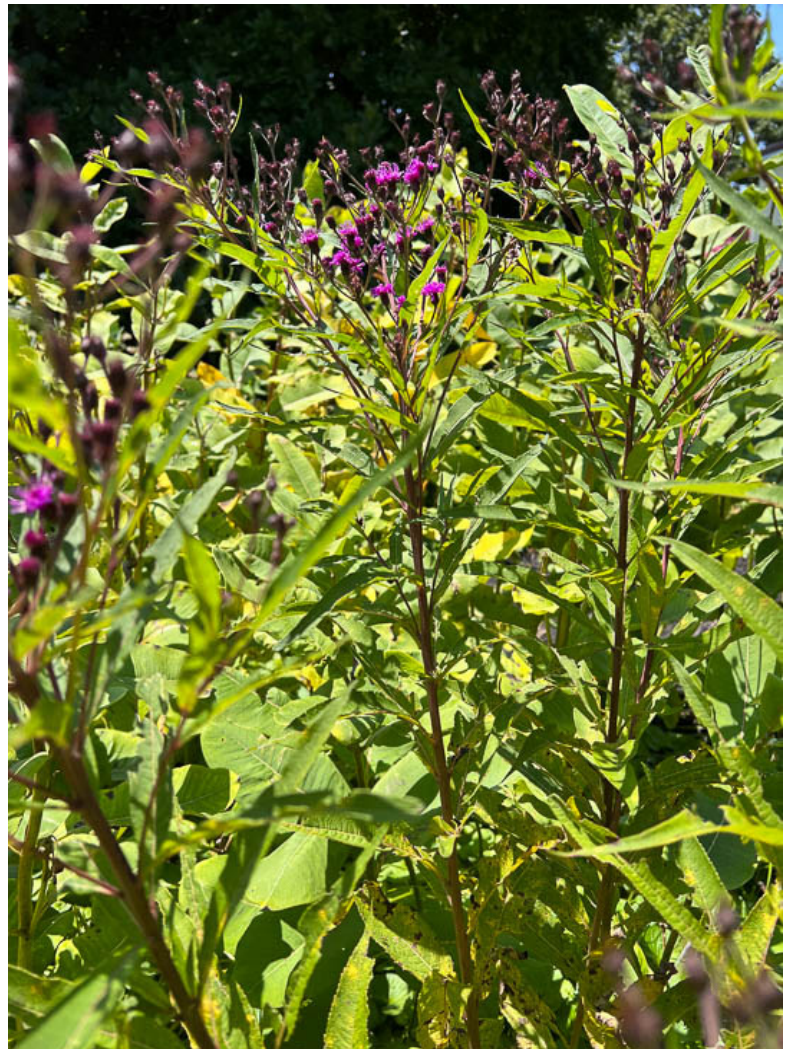


B. Spotted spurge has a thick taproot
Photo: Chuck Schuster, UME-Retired

Plant of the Week

By: Ginny Rosenkranz

Vernonia noveboracensis or New York ironweed, is a tall native herbaceous perennial that thrives in full sun and prefers moist organically rich acidic soils. Fortunately for all native perennial lovers, Ironweed will still grow very well in most average to wet soils. The plants grow 4-6 feet tall and 2-3 feet wide, with stiff, aromatic, sturdy green stems that mature to a rusty copper-brown. The 6-8 inch-long green leaves are spaced alternately up the stems, with a finely toothed margin, pointed tips and a downy underside. The tiny bright purple disc flowers are held in loose terminal clusters that expand to 3-4 inches wide on top of the stiff brown stems. There are no ray flowers, only disc flowers which gives the blooms a fluffy appearance. Flowers bloom from August to September, then mature into rusty colored clusters of seeds. The seeds can be pruned to reduce seedlings from multiplying, and the stems can be pruned to differ heights in the spring to promote differ heights of blooms in the late summer into fall. The common name of ironweed could have come from the stiff sturdy stem, the rusty iron color of the stems, the rusty color of the fading blooms or the rusty colored seeds. Ironweed fits into butterfly, cottage, native, pollinator and rain gardens, either in the back due to its height or mid-way, especially if the stems have been pruned to different heights. The flowers attract many specialize native and honey bees, butterflies and other pollinators. When the seeds are ripe, native song bird's fest. Plants are tolerant to deer browsing, and any nibbling in the early spring will save time from pruning.



New York ironweed in bloom
Photos: Ginny Rosenkranz, UME

Degree Days (as of August 23)

Abingdon (C1620)	2766
Annapolis Naval Academy (KNAK)	2984
Baltimore, MD (KBWI)	3039
College Park (KCGS)	2898
Dulles Airport (KIAD)	2940
Ft. Belvoir, VA (KDA)	2796
Frederick (KFDK)	2808
Gaithersburg (KGAI)	2672
Gambrills (F2488, near Bowie)	2853
Greater Cumberland Reg (KCBE)	2507
Perry Hall (C0608)	2668
Martinsburg, WV (KMRB)	2253
Natl Arboretum/Reagan Natl (KDCA)	3327
Salisbury/Ocean City (KSBY)	2976
St. Mary's City (Patuxent NRB KNHK)	3371
Westminster (KDMW)	3069

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 **2253 DD** (Martinsburg, WV) to **3371 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.

- Maskell scale – egg hatch / crawler 2nd gen (**2035 DD**)
- Euonymus scale – egg hatch / crawler 2nd gen (**2235 DD**)
- Mimosa webworm – larva, early instar 2nd gen (**2260 DD**)
- Japanese maple scale – egg hatch / crawler 2nd gen (**2508 DD**)
- Fern scale – egg hatch / crawler 2nd gen (**2813 DD**)
- White prunicola scale – egg hatch / crawler 3rd gen (**3238 DD**)
- Banded Ash clearwing borer – adult emergence (**3357 DD**)
- Tuliptree scale – egg hatch / crawler (**3472 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.

Conferences: Go to the [IPMnet Conference Page](#) for links and details on these programs.

September 13, 2023

MAA's Day of Safety and Health

Location: Howard County Fairgrounds, West Friendship, MD

Registration info: <https://safetyandhealth23.eventbrite.com/>

September 13, 2023

MNLGA Nursery Field Day

Location: Abby Farms, Waldorf, MD

[Registration is now open](#)

October 11, 2023

FALCAN Truck and Trailer Seminar

Location: Urbana Fire Hall, Urbana, MD

2024 Advanced Landscape IPM PHC Short Course

This is a recertification short course for arborists, landscapers, IPM consultants, horticulturalists, professional gardeners, and others responsible for urban plant management. The course lectures will be held over four days at the University of Maryland, College Park, MD. In addition, there will be a hands-on lab following lecture (available to a limited number of course attendees). Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture dates: Monday, January 8 - Thursday, January 11, 2024 from 8:00 am – 3:00 pm

Lab dates: Monday, January 8 - Thursday, January 11, 2024 (space limited) from 3:30 pm – 5:30 pm

Course and registration information: <https://landscapeipmphc.weebly.com/>

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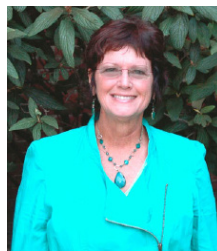
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