

Commercial Horticulture

July 29, 2022

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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

Coordinator Weekly IPM Report:

Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Greenhouse and Managed Landscapes, sgill@umd.edu. 410-868-9400 (cell)

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) and Kelly Nichols (Extension Educator, Montgomery County)

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

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

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

Summer Diagnostic Sessions

By: Stanton Gill

We have held two diagnostic IPM walks this summer. The second one was held on Thursday, July 21 at Woodmont Country Club. We had 46 arborists in attendance and they got to travel around Woodmont in style. Lisa Barton arranged for many, many electric vehicles with liquid crystal screens and global positioners on each cart. We had a great evening of diagnosing tree problems and everyone thoroughly enjoyed traveling about in electric golf carts.

Join us for the next diagnostic session on the afternoon of August 25 at the Wye Research and Education Center in Queenstown, MD.



An evening at Woodmont Country Club for an IPM Session
Photo: Karen Rane, UME

Dogwood Sawflies

By: Stanton Gill

Rachel Rhodes, UME-Queen Anne's County, found a heavy population of dogwood sawfly larvae on red twig dogwood in Centreville this week. July is the month they generally cause major leaf loss on gray dogwood and other native dogwoods. Dogwood sawfly larvae will eat all but the midrib of the leaf. These sawflies overwinter in the last instar stage. After the second molt, the bodies of the larvae become covered with a white powder-like material to mimic bird droppings which helps to protect them from their enemies. At their final molt, they have a spotted pattern to camouflage them as they crawl over leaf litter. There is only one generation per year.

Control: Options include Conserve, horticultural oil, and synthetic pyrethroids. At this point in the summer, it is probably too late to treat since the damage is already done. Look for these sawflies next year in early July.



There are various color forms of dogwood sawfly larvae
Photos: Rachel Rhodes, UME-Queen Anne's County

Lucky or Not Lucky

By: Stanton Gill

Well, last week we had several pictures of toppled trees from one of the several tornadoes that touched down in Maryland. I thought we were finished with this tree damage until the next tornado or tropical storm. Sunday, July 24, will go down for me as a "surprise day". On the super-hot day with no real wind, a giant portion of a red oak dropped its weighty branch on our 2-year old sport utility. The lucky part is no one was in the car. The unlucky part is it basically totaled the car.

On examination afterwards, there was a canker with internal rot on one of the major branches 30 feet up the tree. It is difficult to detect, but a good lesson that with heart rot in trees, you cannot predict when it will drop, but it will drop. Use this information to convince customers to be proactive in examining trees and remove dead and dying branches.

Fall Armyworm- Activity in 2022?

By: Stanton Gill

Well, here it is late July. In 2021 at this time of year, we were getting first reports of fall armyworms, *Spodoptera frugiperda*, damaging turfgrass. I received in two requests to comment on whether these caterpillars will be a big deal in 2022. The answer lies in “It is all about the weather and storms blowing north”. In 2021 we had tropical storms with winds carrying the adult moths up the East Coast and into the Mid-west. So far in 2022, we have not had strong southern winds blowing from Florida and Georgia where this caterpillar is common. So far, we are looking good with regards to lack of caterpillar injury in Maryland in 2022. If you find caterpillars in the turfgrass, please contact me at Sgill@umd.edu.

Meanwhile below are several of the reports we put out about the caterpillar in 2021.

August 30, 2021

We put a report of fall armyworm damaging turf in several locations during the month of August in the Friday, August 27th, 2021 IPM Alert. Since then, I have received many emails telling me professional horticulturists and agronomists are seeing damage in Germantown, Gaithersburg, Clarksburg, parts of Howard, Frederick, Anne Arundel, Calvert, Prince Georges, and Baltimore Counties. Stuart Frazier, Aquarius Supply, is reporting heavy damage in the Richmond and Chantilly areas of Virginia.



Fall armyworm
Photo: Frank Peairs, Colorado State University, Bugwood.org

We are receiving calls reporting areas where they have completely denuded lawns.

Fall armyworm is a native pest to North America. The weather has been perfect for it to flourish in August of 2021. The fall armyworm (FAW, *Spodoptera frugiperda*) is a destructive pest that can feed on 80 different crop species, including corn and more importantly to the turf and horticulture industries. It clearly prefers grasses. This native pest has been exported to other countries. FAW was first reported in Africa in 2016, and has now been documented in more than 30 African countries. It is relatively new to African farmers, where corn is a staple crop for more than 300 million subsistence farmers and small-scale producers. USDA is working on helping growers in these countries deal with this pest.

Back to the lawn situation. Most of the larvae pictures we are receiving are later instar larvae, which tend to be difficult to control. The later instar larvae have distinct inverted “Y” pattern on the head capsule. The larvae have 6 instar stages. In the later instars, the larvae have 4 blackspots on the last two abdominal sections with setae (hairs) projecting from the center of the blackspot. Young, early instar larvae are greenish in color and have a black head capsule. By the second instar, the larvae head capsule becomes more orange. They will be pupating very shortly. The FAW normally pupates in the soil at a depth 2 to 8 cm. The larva constructs a loose cocoon by tying together particles of soil with silk. The cocoon is oval in shape and 20 to 30 mm in length. If the soil is too hard, larvae may web together leaf debris and other material to form a cocoon on the soil surface. The pupa is reddish brown in color, measuring 14 to 18 mm in length and about 4.5 mm in width. Duration of the pupal stage is about 8 to 9 days during the summer, but reaches 20 to 30 days during cooler weather.

Control Options: Late instar larvae, which is what we are seeing right now, are very difficult to control. If we see another generation active this fall, and after monitoring turf closely for early instar larvae, you need

to decide if control is needed later this fall. There are several options available including chlorantranilprole (Acelepyrn), indoxacarb (Provaunt), and spinosad A and D (Conserve) SC.

September 3, 2021

Fall Armyworm- Hyperactivity

By: Stanton Gill

Wow, the flood of emails on armyworm really came in after our Special IPM Alert on Monday. We had reports of fall armyworm activity in Williamsburg, VA, Arlington Cemetery in Northern VA, North Carolina, Ohio, Illinois, Kansas, Texas and Tennessee. In Maryland, we received reports from throughout the state including activity in Washington County and Garrett County. In Garret County, they were not only damaging turfgrass but also hay fields.

Now, the question is will fall armyworm continue to be a problem in September? Most of the pictures I received were later instar stages of the fall armyworm. They go through 6 larvae instars then pupate, as I reported in the Monday report. They will pupate in the soil, then adults could emerge and start to mate. This should put potential egg laying from mated adult females at the end of September in Maryland. Since the caterpillars chew on the tops of grass plants, I suspect we should not see the large turf loss we saw in August. In late September, the temperatures should cool down and cool season grasses should be growing vigorously, producing new leaf sheaths and tillers rapidly. This growth should outpace any feeding injury from the fall armyworms. You should examine turfgrass for the small larvae that are greenish with black head capsules in the early instars. If larvae are present, you could apply Spinosad, Provaunt, Mainspring, or Acelepyrn and get very effective control. I spoke with Nancy Rechcigl at Syngenta Company and she said at 4 oz of Mainspring /100 gallons, you should get 4 – 6 weeks of protection. The caterpillars feed on the blades and stalks of the grass. The roots and crown should still be intact, and once cool weather is here with rains, the grass should start to produce new replacement shoots. When looking at an area of brown lawn, it is upsetting and the immediate reaction is you should do something right now. The problem is the damage is done. Now you need to be patient and wait for the lawn to recoup. You can reseed in September.

Spotted Lanternfly Update

By: Stanton Gill

We are conducting field trials testing new systemic insecticides at a nursery in Harford County as a joint effort with University of Delaware Extension. We saw the first adult spotted lanternflies (SLF) show up last week at this site. We saw more this week, but there are still lots of 3rd and 4th instars present. The 4th instar tends to leap and will alight onto anything, such as trucks and cars. So, this is one of the more mobile stages where people have a chance to see them spread. Of course, the adult stage we are moving into provides a lot of opportunities for adults to spread to other areas as well.

The trials we are conducting are on woody plants, but we are finding them in the nursery owner's gardens feeding on tomatoes, peppers, basil, and other garden vegetables. No damage is being seen on these crops, but as the nursery owner said "they are annoying".



This adult spotted lanternfly was hanging out near the ferris wheel at the Harford County Fair. Photo: Todd Armstrong, The Davey Tree Expert Company

Several of you may be working with people growing sunflowers for bird seed, oil, or cut flower production. The interesting thing is the 3rd and 4th instar nymphs at this site are clustering on sunflowers. The nursery owner noted that they have been increasing on the sunflower plants over the last 3 weeks. Something about sunflower plants is attractive to this life stage. We could not detect injury to the sunflower plants, even with the heavy density of the bugs. This is the good part. It will be interesting to see if they migrate in hemp fields. If any of you detect them on hemp, send along a picture.

The first year the grower detected the SLF was three years ago. Last year, he saw a steady increase in population. In 2022, they are everywhere on this farm of 127 acres and can be found through his woods. For the counties in which you are working that don't have this problem yet, let your growers know that they are moving into the life stages when they are easily moved about on vehicles, trailers, and anything being transported from a quarantined county.

Spotted Lanternfly (SLF) Reports:

Christy Michaud, Horticulturist, saw her first adult spotted lanternfly (SLF) over the weekend, along with at least 2 other instars. Christy noted that she is seeing the honeydew produced by the spotted lanternflies dropping on substory shrubs

Elaine Menegon, Good's Tree and Lawn Care, found her first SLF adult in Elizabethtown, PA on July 25.

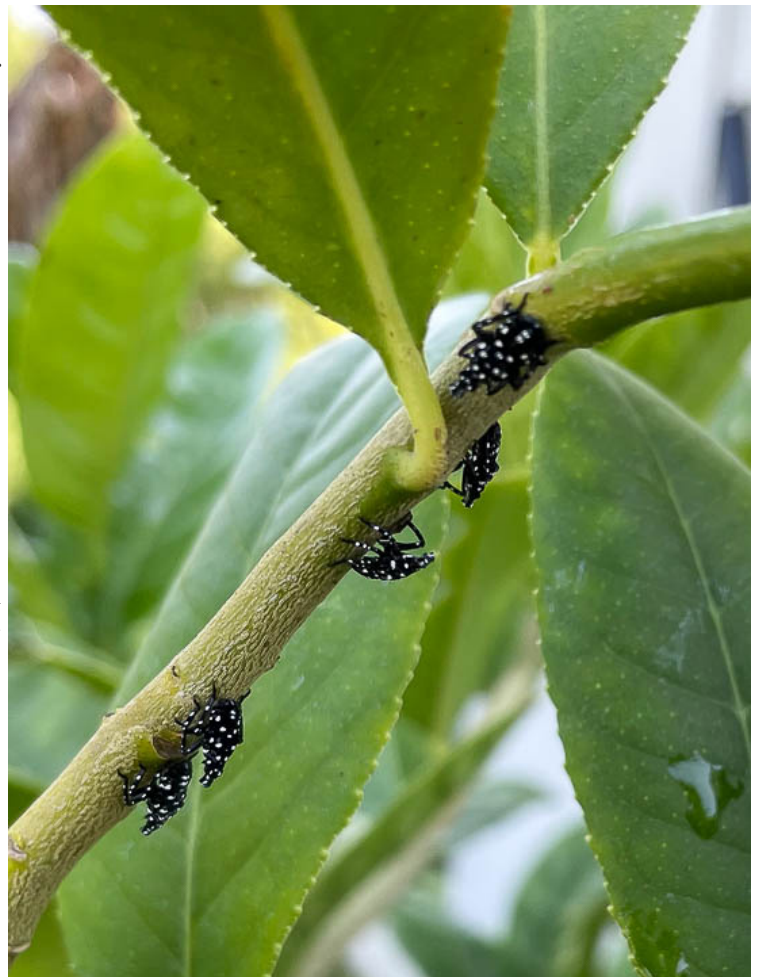
Ernie Brandenburg, B&B Lawncare, found an SLF adult in Abingdon on July 26.

David Lantz, found spotted lanternfly on Ailanthus in Hagerstown - pic

Todd Armstrong, The Davey Tree Expert Company, saw an adult SLF at the Harford County Farm fair (by the ferris wheel) on July 27.

Annette Cormany, UME-Washington County, received a photo of SLF nymphs and adults from a client in Washington County on July 28

Fourth instar spotted lanternfly nymphs on *Ailanthus* in Hagerstown
Photo: David Lantz



Third instar spotted lanternfly nymphs on sunflower
Photo: Stanton Gill



Lauren Greenberger found SLF adults on new *Ailanthus* seedlings that she was treating in Dickerson on July 28. Lauren noted that many of them were covered in spotted lanternflies.



Adult spotted lanternfly adults are feeding on *Ailanthus* in Montgomery County
Photo: Lauren Greenberger

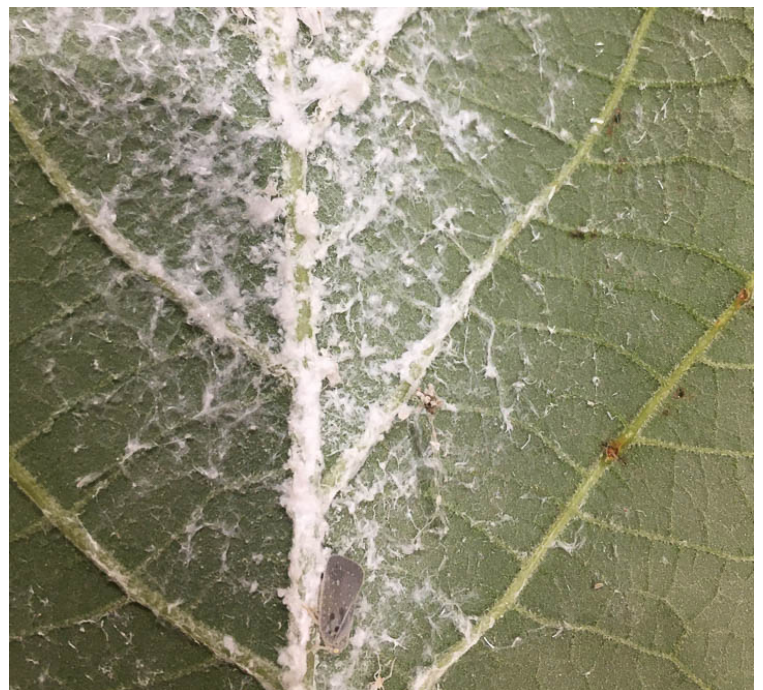


Adults and fourth instar spotted lanternfly nymphs are active in Washington County
Photo: Anne Siebert

Planthoppers on *Styrax*

Jon Cholwek, Pogo Tree Experts found adult citrus flatid planthoppers on a fragrant snowbell tree this week. It is the nymphs that produce the woolly material. No control is necessary for this insect.

Woolly material produced by nymphs of the citrus flatid planthopper; an adult is at the bottom of the photo
Photo: Jon Cholwek, Pogo Tree Experts



Ozone Damage to Cucurbit Foliage Common Now in Mid-Atlantic

By: Jerry Brust, UME

The weather for the last week or so in our area has been ideal for air pollutants to cause injury to vegetable crops, especially cucurbits. One of these air pollutants is ozone, which is considered to be the most damaging phytotoxic air pollutant in North America. Injury is most likely during hot, humid weather with stagnant air masses. Symptoms consist of small, irregular shaped spots or flecks that range in color from dark brown to black or light tan to white (fig.1). Symptoms also include stippling (small darkly pigmented areas approximately 2-4 mm in diameter), bronzing, and reddening. These symptoms usually occur between the veins on the upper leaf surface of older and middle-aged leaves, but may also involve both leaf surfaces for some cultivars. The type and severity of injury depends on the duration and concentration of ozone exposure, weather conditions, and plant genetics. Some or all of the symptoms can occur on vegetables under various conditions. Symptoms on one cultivar can differ from the symptoms on another. With continuing ozone exposure, the symptoms of stippling, flecking, bronzing, and reddening are gradually replaced with chlorosis and necrosis (fig. 2). Early ozone foliar damage can resemble spider mite injury. The presence of mites can be confirmed by examining the underside of the leaf. Mite populations would have to be comparatively great (≥ 45 /leaf) to cause the type of leaf injury shown in figure 2. As the exposure to ozone continues the spots may fuse forming larger damaged areas (fig. 3). Due to the tissue collapse induced by ozone, leaves are prone to infection by pathogens such as *Alternaria* sp (early blight) and will senesce sooner. Symptoms of ozone damage can appear on one side of a plant or stem depending on the source of pollution and micro-climate.



Fig. 1 Ozone damage to cucurbit foliage
Photo: G. Brust, UME



Fig. 2 More advanced ozone damage to watermelon foliage
Photo: G. Brust, UME

The injury pattern on watermelon foliage is initially observed on older mature leaves near the crown or center of the plant, often progressing with time to the younger foliage. The yellowing of the plant centers in rows of watermelon is quite distinctive and can give fields an obviously striped pattern of alternating yellow and green bands. This type of injury on watermelon can be referred to as "center of the crown dieback." In contrast, injury on muskmelons is typically less severe and is visible at a later stage of plant development. Irrigated plants will promote greater symptom development if the cultivar is sensitive compared with drought-stressed plants. Ozone injury on watermelons generally appears in mid to late July prior to fruit maturation.

Trying to estimate yield loss due to air pollutants in the field is difficult and only approximations can be made. In a California study, ozone damage to crops caused the greatest yield losses (10-30%) in watermelon, cantaloupe, grape, onion, and bean. Other research has shown that when average daily ozone concentrations are moderate to high, yields of vegetables can be reduced by 5-15%.



Fig. 3 Ozone damage to cantaloupe foliage
Photo: G. Brust, UME

Green June Beetles and Japanese Beetles

In Trappe, MD, Ben Statler, Ashton Manor Environmental, found green June beetles attracted to areas on trunks of willow oaks where sap is oozing. Marie Rojas, IPM Scout, found them “having a field day on peaches” in Frederick County. Green June beetles are more of a problem on turf with high organic content and fruit than ornamental plants. Marie also continues to find Japanese beetles doing heavy feeding on a variety of plant material. Mainspring and Acelepryn can be used for adult control of Japanese beetles.



Green June beetles feeding on an area of a willow oak trunk where sap is oozing
Photo: Ben Statler, Ashton Manor Environmental



Japanese beetles and green June beetles are feasting on peaches this week
Photo: Marie Rojas, IPM Scout

Bald-faced Hornets

John Stuart, Montgomery County Department of Transportation, has been receiving calls about bald-faced hornet activity in the county. John notes "a late start to bald-faced hornet activity and the nests are undersized this year". If any Montgomery County resident finds a bald-faced hornet nest in a county ROW tree that they feel is a hazard they can report it to 311 from a landline or 240-777-0311 from a cell phone.

Bald-faced hornets not true hornets, but are actually a species of aerial nesting yellowjacket. They are generalist insect feeders that consume many pest insects. They occasionally feed on nectar and have the potential of being minor pollinators. Human contact is often limited to areas around the nest. At the end of the season, the nest will slowly disintegrate. If control is necessary, use an approved chemical for colony elimination or contact a pest control company.



Bald-faced hornets may be a problem in high traffic areas
Photo: John Stuart, Montgomery County Department of Transportation

Bagworms

Mark Schlossberg, ProLawn Plus, Inc., found damage from bagworms on blue spruce this week. There has been staggered hatching of bagworms this summer, but in most areas, we are getting to the end of feeding by bagworms. A lot of the damage has already been done for the season.

Control: Options include spinosad (Conserve), Acelepryn, Mainspring, Orthene, and Astro. In light infestations, hand picking off bags is an option.



Bagworms have been feeding heavily on this blue spruce
Photo: Mark Schlossberg, ProLawn Plus, Inc.

Caterpillar Activity

We often receive various reports of caterpillar activity as we get later in the summer. This week, Kevin Nickle, Scientific Plant Service, reports finding the second generation of fall webworms on July 26. Sam Fisher, Bartlett Tree Experts, found yellow-necked caterpillars defoliating a blueberry. Multiple reports have come in of early instar orange-striped oakworms feeding on oaks. Marie Rojas, IPM Scout, is finding redhumped caterpillars on *Cercis canadensis* (redbud) in Gaithersburg. Most often control of these caterpillars is not necessary. Look for beneficial insect activity to help determine if any treatments are necessary.

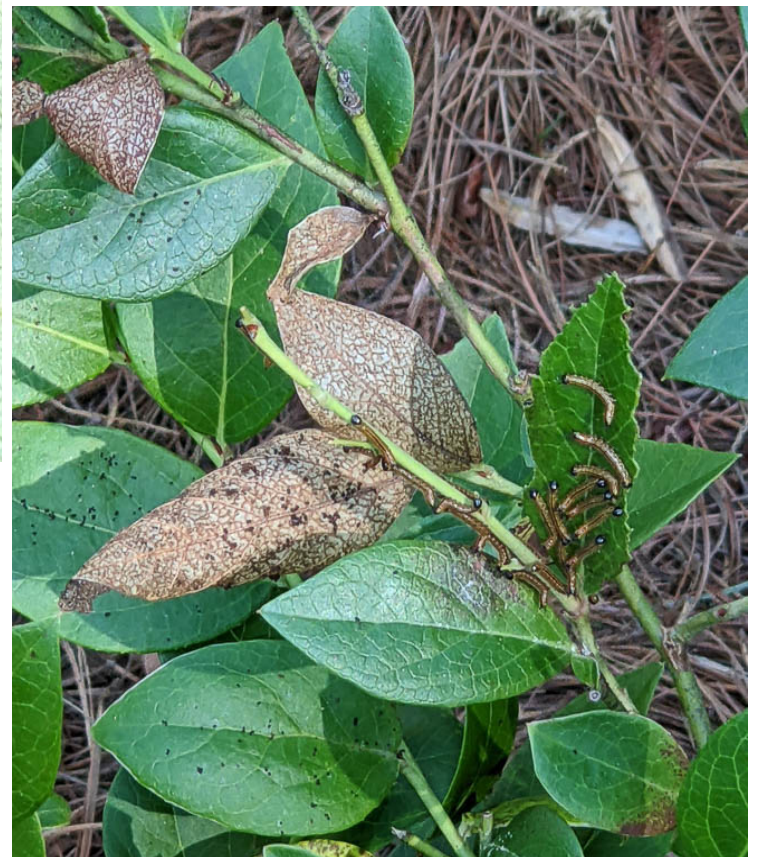


Found on redbud this week, redhumped caterpillars have a wide woody host plant range.
Photo: Marie Rojas, IPM Scout



The second generation of fall webworms will be active for the next few months.

Photo: Kevin Nickle, Scientific Plant Service



Yellow-necked caterpillars will be active into the fall.
Photo: Sam Fisher, Bartlett Tree Experts



When they are in search of places to pupate, orange-striped oakworms are often seen on sidewalks and roadways.
Photo: Marie Rojas, IPm Scout

Beneficial of the Week

By: Paula Shrewsbury

Looks like a predatory lacewing larva, but it's not

This week I was out scouting the landscape on the UMD College Park campus. I came across two interesting insects on some red maples: one was a wicked outbreak of gloomy scale (Hemiptera: Diaspididae) and the other was a predator, a dustywing (Neuroptera: Coniopterigidae), eating the gloomy scale. Duskywings' are predators that are not commonly found, so this was an exciting observation. Dustywing larvae look somewhat like lacewing larvae which is not surprising since they are "distant cousins". Both are in the order Neuroptera, but dustywings are in the family Coniopterigidae and lacewings are in the family Chrysopidae.



Figure 1. An adult dustywing measures only about 3 mm. While superficially similar to adult whiteflies, dustywings are larger overall and have longer antennae.

Photo credit: Mike Raupp, UMD.

Most entomology textbooks mention that dusty wings are "relatively rare," however, they may be quite numerous on the trees and shrubs that they frequent. Dustywing adults are very small (~ 3 mm long) (Fig. 1), and because of their size, they are probably just overlooked in the landscape. Lab studies have shown that the larvae are voracious predators of several species of mites and crawlers of whiteflies and scale insects. In a field study in citrus groves in Southern California, dustywings were key predators of citrus red mites and provided an acceptable level of control. It makes sense that the dustywing was found on a maple infested with gloomy scale. Its mother laid her eggs where her offspring would get a good meal.

Larvae have a tapered body shape (Figure 2 and see this [video](#)), similar to green lacewing larvae. However, dustywing larvae have mouthparts that are shaped differently. Rather than the appearance of an alligator with large mandibles that stick out (green lacewing), dustywings possess a smaller sucking tube by which body fluids are quickly "slurped" from prey. Adults have more typical chewing mouthparts, but they are not as predacious

as the larval stages and more commonly feed on plant tissues. After several stages of development (or instars), larvae pupate inside a silken cocoon on the underside of a leaf. The cocoon is about 3mm in size and could be mistaken as spider webbing. The silk is made in glands in the abdomen but exuded from the body through the anus (see this [video](#)). After several hours of weaving back and forth with its butt, the larva has enclosed itself entirely in silk and the process of metamorphosis begins.



Figure 2. A late stage larva of a dustywing (~5 mm long). Note the tapered shape of the body. Larvae are voracious predators of mites, crawlers of scales and whiteflies, and other soft bodied insects.

Photo credit: Mike Raupp. UMD

The common name for the family comes from the fact that the adults are covered in a powdery white wax (similar to a whitefly adult), and other common names for these insects include mealy-wings or dusky-wings. Dustywings have a very interesting behavior that leads to this “dusty” appearance. After emerging as an adult, pores on the abdomen start to extrude waxy white ribbons that curl as the ribbon grows longer. When the ribbon curls back on itself, the curled end breaks away, and using its legs the

adult begins to smear the circular curl particles all over its body. The only parts of the body that do not receive a waxy coat are the eyes. Scientists are uncertain as to why dustywings produce wax. However, a waxy layer would certainly help such small insects conserve water. Scientists who study other insects with waxy covers, such as whiteflies, have noticed that wax particles rub off onto parasitoids, and as a result, tiny wasps spend a lot more time grooming to get the wax off rather than parasitizing whiteflies. For whiteflies, the wax acts as a protective barrier. Wax is also known to help other predatory insects blend in and avoid predation or harassment by other predators. If you have ever seen mealybug destroyer larvae (Order Coleoptera, Family Coccinellidae), their wax covering helps them resemble the mealybugs that they eat. By looking like a mealybug and possibly smelling like one after a while, the beetle larva is ignored by the ants that are taking care of the mealybugs. Some dustywings, with their covering of wax, could also benefit in the same manner. Further studies of dustywing biology and behavior and its interactions with other species are needed to determine the precise function of its wax.

If you were to encounter an adult dustywing in the landscape, you might at first think that it was a large whitefly. When disturbed, adult dustywings dart and flutter and eventually rest on the underside of leaves. When bothered too often, they flutter, drop to the ground, and fake death! A whitefly is much smaller than a dustywing. Recall that dustywings are also predators of whiteflies. If you disturb leaves on your plants, and small white insects fly out from beneath, always take a second look to see what it might be. You may be surprised to see little predators already hard at work eating their prey.

Weed of the Week

By: Kelly Nichols

Before we get to this week’s weed, remember to stay hydrated and take breaks as needed in this heat!

Nimblewill (*Muhlenbergia schreberi*) is a wiry-looking warm-season perennial grass (Figure 1). It can grow in a variety of conditions, including sun, shade, wet, dry, low fertility, and high fertility. As a warm season grass, it will go dormant during cooler weather, leaving brown patches that stand out in the midst of our cool season grasses. The leaf blades are short and hairless (except for a few hairs near the stem). Nimblewill forms thick patches, and often has a slightly blue or grey color, which can help distinguish it from our desired turf grasses. Nimblewill has a hairy ligule (a small piece of tissue located at the base of the blade near the stem). Creeping

bentgrass, which can be confused with nimblewill, has a membranous, or smooth, ligule.

Nimblewill reproduces by seeds (Figure 2) and stolons (Figure 3). The seed head will form a panicle once mature. The roots are shallow, making it easy to pull out. However, remember that any piece of stolon or root left in the ground can re-sprout, adding to the challenge of controlling it. Therefore, while tillage can bury the plants, it can also serve as a means to spread the plant. Bermudagrass is another grass that can be confused with nimblewill; however, nimblewill has a more upright growth habit. Bermudagrass also has a deeper root system and its seed heads resemble those of crabgrass.

Ensure that proper fertility and irrigation practices are followed to help desired plants compete with the nimblewill. Mowing just prior to seed formation (typically late summer through the fall) can reduce the amount of viable seeds present for the following years. There are a few herbicide options as well. Glyphosate can be used as a spot treatment in areas thick with nimblewill. Tenacity® (active ingredient: mesotrione) and Pylex® (active ingredient: topramezone) are two additional herbicides that are labeled for nimblewill control in turf. Mesotrione and topramezone interfere with chlorophyll production, resulting in a bleaching effect. Both herbicides allow for up to three applications, with a few weeks in between applications. A surfactant is also needed. With any control option, re-seed treated areas to avoid bare spots where weeds can just fill in again.

Axxe® herbicide contains the active ingredient ammonium nonanoate. This is on the OMRI approved list of organic pesticides; however, there are some restrictions. Preventative, mechanical, physical, or other weed management practices must also be used. When used as an herbicide, Axxe can only be used for farmstead maintenance (roadways, ditches, right of ways, building perimeters) and ornamental crops.



Figure 1. Nimblewill growth habit.
Photo: Chris Evans, University of Illinois, Bugwood.org.



Figure 2. Nimblewill seed heads.
Photo: Joseph M. DiTomaso, University of California - Davis, Bugwood.org.



Figure 3. Nimblewill stolons.
Photo: Joseph M. DiTomaso, University of California - Davis, Bugwood.org.

Plant of the Week

By: Ginny Rosenkranz

Juniperus procumbens 'Nana' or the Japanese garden juniper is a beautiful dwarf, blue-green ground covering evergreen that grows slowly. The plants can grow in a short mound up to 18-14 inches tall before cascading to carpet the ground 8 inches high and up to 6 feet wide. The short linear blue-green awl-shaped needles usually are positioned in whorls of 3 on the branches that spread parallel to the ground. In the autumn, the plants can produce a bluish berry-like cone that birds enjoy when ripe. Plants thrive in full sun and average to well-drained soils. Cold hardy in USDA zones 4-9, *Juniperus procumbens* 'Nana' is tolerant of droughts, heat, poor soils, air pollution and deer browsing. Plants can be used to cover flat areas or steep slopes, it can cascade over retaining walls and can be grafted as an upright cascading specimen planting. They can also be used to create exquisite Bonsai trees that can live very long lives. Like most junipers, the Japanese garden juniper can be susceptible to Phomopsis twig blight, cedar-apple rust, and if planted in wet or poorly drained soils, root rot. Insect pests of junipers can include the occasional aphid, bagworms, twig borers, webworms, scale, and spider mites. This photo of the *Juniperus procumbens* 'Nana' was taken in West Palm Beach, Florida at the Society of the Four Arts Gardens and shows the plants' age as many of the junipers are mounding up in their centers.



***Juniperus procumbens* 'Nana'**

Photo: Ginny Rosenkranz, UME

Degree Days (as of July 27)

Aberdeen (KAPG)	2038	Annapolis Naval Academy (KNAK)	2271
Baltimore, MD (KBWI)	2346	College Park (KCGS)	2179
Dulles Airport (KIAD)	2221	Ft. Belvoir, VA (KDA)	2230
Frederick (KFDK)	2064	Gaithersburg (KGAI)	2097
Gambrils (F2488, near Bowie)	2225	Greater Cumberland Reg (KCBE)	2030
Martinsburg, WV (KMRB)	1976	Natl Arboretum/Reagan Natl (KDCA)	2565
Salisbury/Ocean City (KSBY)	2343	St. Mary's City (Patuxent NRB KNHK)	2595
Westminster (KDMW)	2435		

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 **1976 DD** (Martinsburg, WV) to **2595 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.

- Orangestriped oakworm – egg hatch / early instar (**1917 DD**)
- Magnolia scale – crawler (**1938 DD**)
- Fall webworm - egg hatch / early instar (2nd gen) (**1962 DD**)
- Maskell scale – egg hatch / crawler (2nd gen) (**2035 DD**)
- Euonymous scale – egg hatch / crawler (2nd gen) (**2235**)
- Mimosa webworm – larva, early instar (2nd gen) (**2260**)
- Japanese maple scale – egg hatch / crawler (2nd gen) (**2508 DD**)
- Fern scale – egg hatch / crawler (2nd gen) (**2813 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

Solar on the Farm Webinar

August 16, 2022, 1:00 p.m. to 2:30 p.m. ET

Registration is required, but there is no cost for this program

Learn more at go.umd.edu/Solar2022

IPM Scouts' Diagnostic Session

August 25, 2022

Location: Wye Research and Education Center, Queenstown, MD

Urban Tree Summit

Dates: September 7, 8, 14 and 15, 2022

Montgomery Parks and Casey Trees, Washington D.C., present the eleventh annual conference — Urban Tree Summit. Presentations will focus on the health and welfare of trees in our increasingly developed landscapes.

Registration Link: <https://montgomeryparks.org/about/divisions/arboriculture/urban-tree-summit/>

September 7, 2022

MNLGA Nursery Field Day

Location: Longwood Gardens

[Registration](#)

September 27, 2022

Cut Flower Tour

Location: Zekiah Ridge Farm, La Plata, MD, and second site TBD

Fall Horticulture Classes at CCBC

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

Fall Environmental Horticulture and Sustainable Agribusiness Classes at Montgomery College

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

HORT 215 Integrated Pest Management and Entomology: Hone your pest management skills with Stanton Gill. Explore the identification of key pests, their life cycles and control methods, with emphasis on integrated pest management strategies.

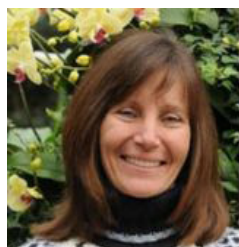
HORT 222 Sustainable Turfgrass Management: Discover the proper way to manage turfgrass by using the newest and most adaptable turfgrass varieties for minimum insect and disease problems. Organic lawn care and alternative groundcovers will be discussed.

**HORT 215 and HORT 222 and other select courses in the Program, have been approved by the MD Department of Agriculture to prepare Greens Industry professionals for pesticide application certification in Category III.

CONTRIBUTORS:



Stanton Gill
Extension Specialist
sgill@umd.edu
410-868-9400 (cell)



Paula Shrewsbury
Extension Specialist
pshrewsb@umd.edu



Karen Rane
Plant Pathologist
rane@umd.edu



Chuck Schuster
Retired, Extension Educator
cfs@umd.edu



David Clement
Plant Pathologist
clement@umd.edu



Andrew Ristvey
Extension Specialist
aristvey@umd.edu



Ginny Rosenkranz
Extension Educator
rosnkrnz@umd.edu



Nancy Harding
Faculty Research
Assistant

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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