

Commercial Horticulture

July 23, 2021

In This Issue...

- [Weather update](#)
- [No IPM report for two weeks](#)
- [Bagworms](#)
- [Exfoliating bark on sycamore](#)
- [Mites](#)
- [Catalpa sphinx moth caterpillar](#)
- [Japanese beetle update](#)
- [Putnam scale on blueberry](#)
- [Fern leaf folder caterpillar](#)
- [Magnolia leafminer](#)
- [Photos: Pollinator and caterpillars](#)

[Beneficial of the Week:](#)

Hummingbird clearwing moths

[Weed of the Week:](#) Wild carrot

[Plant of the Week:](#) *Coreopsis rosea* 'American Dream'

[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

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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)

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Violent Weather and Impact on Insects

By: Stanton Gill

My sister-in law in Ames, Iowa called Tuesday to let us know it reached 110 °F in Ames. A cooler weather front was blowing in and the temperatures were supposed to drop to the 50 °F range in the next couple of days in Ames. We usually see the mid-west weather hit Maryland 2 to 3 days after their weather pattern. I thought 2018 was weird with our 100 inches (plus) of rain in one season. I think this summer is equally strange with the high temperatures for 3 or 4 days, followed by major cool fronts, then back to high temperatures. It is having an unusual impact on mite and insect activity.

No IPM Reports for You, July 20th or August 6th

By: Stanton Gill

There is a famous line in a Jerry Seinfeld episode where the Soup Nazi says "No soup for you". Well, no IPM Alert for you next Friday July 30 or August 6th. We are taking time off, so we will see you again with the IPM report of August 13th, Lucky Friday.

Bagworms – Staggered Emergence in 2021

By: Stanton Gill

The weather this summer has been very different from other years, as mentioned in the opening article. In a normal season, if there is such a thing anymore, we would be suffering around July 4th with oppressive heat and humidity. Instead, it was mild and actually pleasant. Shortly after this time, we had excessively high temperatures, again followed by a cool period, then followed by excessive heat. On July 16 and 17, the weather went back to extremely warm and it went to extremely high humidity on Saturday, July 17 when it felt like Florida in mid-summer. Then, a rainstorm blew in like a freight train and dumped 2” of rain in less than an hour. On Sunday, the weather was sunny and cool again.

How is this weather pattern tied into an insect like bagworm? Well, these extremes are creating a situation in which bagworms are staggering their emergence from egg to larvae. Heather Zindash, The Soulful Gardener, observed this situation and sent in a photo this week of all of the life stages of bagworms she is finding on single plants. You might want to use this information to let your customers know they may see bagworms active over a longer period of time this summer.

We are conducting field trials on bagworms at a nursery in Central Maryland this week, and we observed the same thing with bagworms in our trial blocks. By the way, bagworms are tearing up *Thuja* 'Green Giant' this year. Check your customers plants this week and take action very soon. We are treating with 6 low risk materials. Mainspring at 4 oz/1000 gallons is working very well, Dipel (Bt) is working well at 2 lb/100 gallon rate, and Confirm at 4 oz/100 gallons is looking pretty good.



This group of bagworms was found all on one day (July 17)

Photo: Heather Zindash, The Soulful Gardener

Exfoliating Bark on Sycamore

Steve Sullivan, Land Care, noted the large amount of bark exfoliating off sycamores in 2021. He is curious if others are observing similar bark dropping. Let us know at sgill@umd.edu.



A lot of pieces of bark from sycamore are being found on the ground this month
Photo: Steve Sullivan, Land Care

Mites

By: Stanton Gill

The cool dry periods followed by extreme hot periods we have seen in the last 30 days has made a weather condition that is perfect for mite populations to explode in nurseries. Thanks to everyone reporting on mite activity. One nursery manager in central Maryland reported the worst mite populations they have seen in years.

People using synthetic pyrethroids prior to this heat spell may see mite really take off. The synthetic pyrethroids knock out many of the Coccinellidae (ladybird beetle family) predators of mites such as the mite destroyer beetles, lacewings, and *Phytoseiulus persimilis*, a predaceous mite, all of which do a pretty good job in keeping mite suppressed.



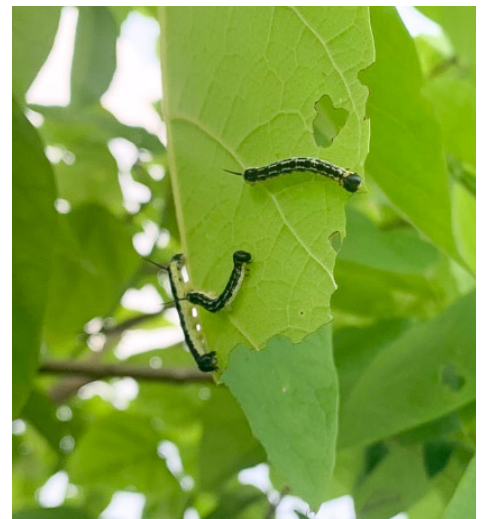
Mites are active this week on *Edgeworthia*
Photo: Heather Zindash, The Soulful Gardener

Katie Grant: We have been seeing heavy spider mite activity on the eastern shore of MD (Worcester County). I've seen them on known targeted plants like roses, herbs, and boxwoods, but also on plants I've never seen them attack before, like wild violets, butterfly bushes, hydrangeas and forsythia. Also (unrelated) this seems to be a banner year for leafhoppers-- I've never seen so many!

Serena Masters Fossi, Gardening and Gentle Redesign: Spider mites are everywhere in my neighborhood just around Lincoln Park near Capitol Hill, DC. I have also seen a lot on my rounds in NW DC. Affecting so many species of shrubs, herbs, perennials esp that get afternoon hot sun. But not limited to those locations, just worse in those locations.

Catalpa Sphinx Moth Caterpillar

Heather Zindash, The Soulful Gardener, found catalpa sphinx caterpillars feeding on catalpa in Baltimore on July 20. There are multiple generations of this caterpillar so look for activity through the fall.



Catalpa sphinx moth caterpillars are active throughout the summer
Photo: Heather Zindash, The Soulful Gardener

Japanese Beetle Update

By: Stanton Gill

Eric Wenger, Complete Lawn Care, found reports that he is finding high Japanese beetle populations in Laytonsville this summer. He noted, "We have an uncapped silo which for years has grown an amazing covering of Virginia creeper. I call it The Beetle-Barometer™. In years with high Japanese beetle populations, the Virginia creeper is shredded. It has been several years since we have seen this type of damage. Concurrently, we are seeing large numbers of masked chafer beetles as well."



Japanese beetles have been feeding heavily on this Virginia creeper this month
Photo: Eric Wenger, Complete Lawn Care

Putman Scale, *Aspidiotus ancylus*, Active on Blueberry

By: Stanton Gill

Marie Rojas, Professional IPM Scout, sent in a sample to our CMREC labs last week. It was a blueberry plant with an armored scale on it. It is Putman scale, *Aspidiotus ancylus*. During the Covid-19 shutdown, homeowners were buying fruit of all types, but blueberry plants were one of the most popular fruit shrubs being sold by garden centers. My concern is that this armored scale may be more widespread after so many plants have moved through the system.

Several species of scale can attack blueberry, but Putman scale is one of the most commonly encountered armored scale. The first symptom noticed is often a decrease in the vigor of the plants. With Putman scale, tiny dots on the fruit, canes, or leaves also may be noticed. A study conducted in southern New Jersey in the late 1990s by Sridhar Polavarapu confirmed two generations per year there. We do not have detail life cycle information on this scale in Maryland, but crawlers from the second generation should be in mid-summer. Marie's sample had newly emerged crawlers present this week.



Look for Putman scale on blueberries

Photo: Marie Rojas, IPM Scout

Insect growth regulators such as Buprofezin or Pyriproxyfen are labeled for use on fruit plantings. Hort oil used at 2% this fall would also control this scale.

Fern Leaf Folder Caterpillar

By: Stanton Gill

Heather Zindash, The Soulful Gardener, found fern leaf folder caterpillars this week. Native ferns have been a big selling item for the last 20 years. Unfortunately, an imported pest from Asia is attacking native ferns with increasing frequency. The fern moth, *Herpetogramma theseusalis*, is causing damage on ostrich fern and royal fern. In previous years, we have seen it feeding on sensitive ferns and royal ferns. Early feeding by this caterpillar causes tattered foliage. Eventually, the caterpillar rolls itself in the tips of the fronds where it pupates. We are not sure of the life cycle of this species in Maryland and how it develops in greenhouse growing environments. In Maine, Douglas Morse, Brown University, has reported one generation outdoors and that it overwinters in the mid-instar larval stage. We have seen activity in early summer and again in late summer, so I suspect we may have two generations per year.



Fern leaf folder caterpillar



Fern leaf folder caterpillars can be a significant problem on native ferns
Photo: Heather Zindash, The Soulful Gardener

Magnolia Leafminer

Annette Cormany, University of MD Extension, reported magnolia leafminer, also known as yellow poplar and sassafras weevil, in Washington County. Larvae mine inside leaves while adults feed on the lower leaf surfaces, causing brown spots that look like curved rice grains. Some leaves may scorch and drop prematurely, but this cosmetic damage does not threaten tree health.



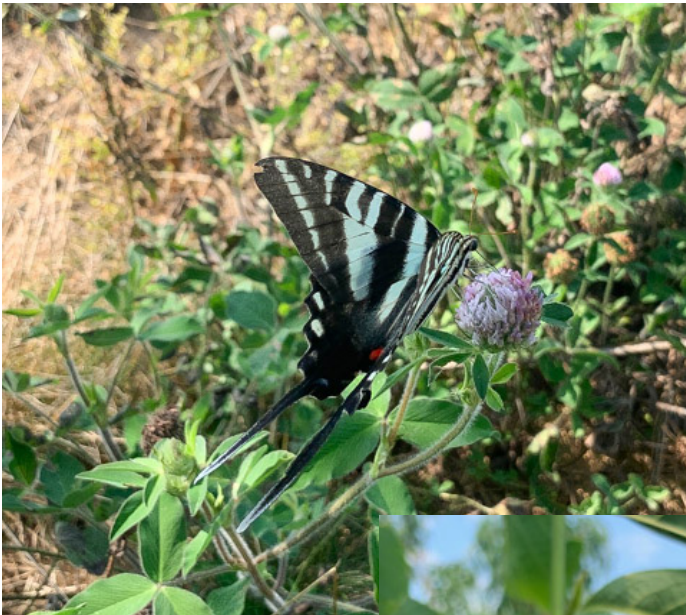
Magnolia leafminer is active this week
Photos: Dave Lantz, Lanco Turf Service

Pollinators and Caterpillars



Mountain mint flowers attract a wide range of pollinators, including the potter wasp (left) and redbanded hair-streak (right). Honey bees and bumble bees were also visiting these flowers.

Photos: Luke Gustafson, The Davey Tree Expert Company



Zebra swallowtail butterflies and caterpillars are active in Frederick County this week.
Photos: Angela Burke



This cecropia moth caterpillar is one of the largest caterpillars we see in the area. It is a general feeder with only one generation per year.
Photo: Angela Burke



Beneficial of the Week

By: Paula Shrewsbury

Hummingbird moth – a very fitting name

In the last few weeks, I have seen numerous hummingbird moths zipping around several different flowering plants. In addition to being amazingly beautiful, they are also pollinators. For those of you who have seen hummingbird moths flying around and sipping nectar from flowers you will understand why hummingbird moths are so named. The first time I saw a hummingbird moth I thought it actually was a hummingbird, but as I looked closer I could tell something wasn't quite right with that identification. Hummingbird moths are moths (Lepidoptera) in the family of moths Sphingidae. There are four species of hummingbird moths in North America, and they occur as far north as Alaska. They are also known as clear-winged moths because their wings have relatively few scales and appear clear compared to other moth species. The size, shape, coloration and movement of the moth are similar to that of hummingbirds ([click HERE to see hummingbirds](#)). Most notable are the wings and the speed at which they beat – over 70 beats / second. Yes, I said per second, not per minute! Like hummingbirds feeding at a flower or feeder, the clear wings of the moth appear almost motionless in flight and allow the moth to hover at a flower; in addition to flying backwards and sideways. [Click HERE](#) and [HERE](#) to view YouTubes of a hummingbird moth feeding on flowers while in flight. As you can see in the associated image, the mouthpart of the hummingbird moth is a long straw-like proboscis which it uses to reach down deep into tubular-type flowers to withdraw the nectar. Some of the favorite flowers of hummingbird moths are honeysuckle, snowberry, lilac, phlox, bee balm, dogbane, cardinal, salvia, trumpet vine, vetch, butterfly bush, vinca, and thistles. Hummingbird moths are common in meadows and urban/ suburban landscapes. Why would a moth want to look like a humming bird and have similar feeding and flight behaviors? We do not know for sure but some scientists hypothesize that it might be to confuse potential predators, especially since hummingbird moths are diurnal (day-fliers) rather than nocturnal (night-fliers) like most moths. Some predators may think of a moth as an “easy prey” and a humming bird just a little too energetic for them.



This snowberry clearwing (hummingbird) moth, *Hemaris diffinis*, has its straw-like proboscis (mouthpart) down into the deep flower of a butterfly bush drinking the nectar. The larvae of this moth feed on snowberry.

Photo: P. Shrewsbury, UMD



The hornworm caterpillar of a hummingbird moth is appropriately named.

Photo: M.J. Raupp, UMD

Female moths lay tiny, round glossy green colored eggs on the leaves of a number of shrub species and vines such as honeysuckle, snowberry, viburnum, hawthorn, and cherry. Of course, the larvae of these moths are caterpillars and most caterpillars eat foliage. Like its relatives the hawk and sphinx moths, hummingbird moth larvae are referred to as hornworms. They have a notable “horn” or spine-like protrusion sticking out from the back end of the caterpillar (see image). One of the most commonly known hornworms is the tomato hornworm (though not a hummingbird moth). After hatching from its egg, the hornworm caterpillars of hummingbird moths feed on and consume foliage for a few to several weeks. They then leave their food source and move down to the ground to pupate under the soil or leaf litter. There can be one (cooler areas) to three generations per year (warmer areas). Unlike their tomato hornworm relative, hummingbird moth larvae seldom are abundant enough to reach damaging levels.

Be sure to plant lots of bright colored tubular flowers and you will have the pleasure of these amazing clearwinged moths!

Weed of the Week

By: Chuck Schuster

As one travels this week, this plant is starting to place its flat-topped flower tall above many other plants. Wild carrot, *Daucus carota*, often called Queen Anne’s lace, or bird's nest, bishop's lace, is a biennial weed that can be found in many nurseries, landscapes, and new lawns throughout the United States. The first year’s growth will appear very similar to that of the common carrot, and during the second year the plant will bolt and produce a tall stalk with a flat-topped white flower. This flower is collected by many and used in dried flower arrangements. The flowers present as flat clusters (umbels) 2 to 5 inches across, are actually groups (umbellets) of 20 to 30 flowers each. Individual flowers are white, have 5 petals, and mostly about 1/8 inch across. Wild carrot can reach a total height in the second year of up to 40 inches.



Wild carrot will produce a thick taproot, a rough and hairy stem during its second year that is hollow. Leaves that are a lobed rosette the first year are alternate and lobed the second year. Leaves are finely divided and triangular in shape. Lower leaves are twice compound and appear more feathery than the upper leaves.. Very similar to common yarrow, wild carrot will produce leaves which have hairs on the underside during the second year.

Control can be obtained in the turf setting with many of the broadleaf herbicides doing a very good job. These products include Triclopyr and 2,4-D , MCPA, dicamba and combinations of these. Around trees and shrubs care should be used with these products due to potential drift and volatilization. Selective control can be obtained using a spot spraying technique with non-selective translocated products. They are known to work well in landscape settings, but use caution to avoid any contact with shallow exposed roots. Products that are not translocated and can be used to suppress this plant will include Burnout and Pulverize. These products are much more effective during the first year of growth when the plant has a smaller root system.



Wild carrot flower heads
Photos: Chuck Schuster, UME

Plant of the Week

By: Ginny Rosenkranz

Coreopsis rosea 'American Dream' is a threadleaf coreopsis that blooms from early summer into early fall with 8 bright pink sterile ray petals that surround a golden button of fertile flowers. The plants thrive in full sun with medium moisture and well drained soils. Winter hardy from USDA zones 3-9, the plants grow 1-2 feet tall and wide without regard to soil pH or soil type as long as it is well drained, especially in the winter. 'American Dream' becomes covered with the 1 ½ inch star-shaped flowers which welcome pollinators and especially butterflies of all sorts. The creeping rhizomes can create a groundcover of 'American Dream' and plants can also self-seed which can make it an aggressive grower. The bright green thread-like foliage is very similar to *Coreopsis verticillata*, but *Coreopsis rosea* 'American Dream' is not as heat or drought tolerant. The long period of bloom with the light and airy foliage make 'American Dream' a good choice for native or pollinator gardens, cottage gardens, and along pathways or borders. No serious problems are listed except crown rot in poorly drained soils, and deer usually leave the plants alone.



Coreopsis rosea 'American Dream' in full bloom
Photos: 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 1770 DD (Cumberland) to 2364 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.

- White prunicola scale – settled crawlers / 2nd instar - 2nd gen (1637 DD)
- Obscure scale – egg hatch / crawlers (1774 DD)
- Orangestriped oakworm – egg hatch / early instar (1917 DD)
- Maskell scale – egg hatch / crawlers - 2nd gen (2035 DD)
- Euonymus scale – egg hatch / crawlers – 2nd gen (2235 DD)
- Japanese maple scale – egg hatch / crawlers – 2nd gen (2508 DD)
- Fall webworm – egg hatch / early instar (2nd gen) (2793 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 July 21)

Aberdeen (KAPG)	1804
Annapolis Naval Academy (KNAK)	2097
Baltimore, MD (KBWI)	2177
Bowie, MD	2185
College Park (KCGS)	1975
Dulles Airport (KIAD)	2043
Ft. Belvoir, VA (KDA)	2070
Frederick (KFDK)	1973
Gaithersburg (KGAI)	1957
Greater Cumberland Reg (KCBE)	1770
Martinsburg, WV (KMRB)	1776
Natl Arboretum/Reagan Natl (KDCA)	2364
Salisbury/Ocean City (KSBY)	2134
St. Mary's City (Patuxent NRB KNHK)	2262
Westminster (KDMW)	2227

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

Diagnostic Sessions

We will be holding two more plant diagnostic sessions for nutrient problems, diseases, and insects on August 18th and September 22nd at the Central Maryland Research and Education Center (11975 Homewood Road, Ellicott City, MD 21042) 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

Montgomery College Course: Taught by Stanton Gill

LNTF 215 Pest Management*, ** 3 semester hours

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.

The lecture is online. Selected labs and field trips will be face to face. This format is more conducive to folks who work in the industry and those who do not live close to Germantown.

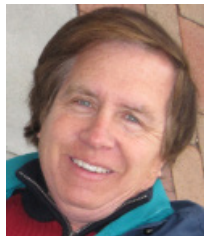
Thursday, 6:00 - 9:30 p.m.

CRN 21992, CRN 21993 Lab - On-line

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