

Commercial Horticulture

July 9, 2021

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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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Weed of the Week: Chuck Schuster (Retired Extension Educator)

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Japanese Beetles

By: Stanton Gill

We have had three reports of major Japanese beetle outbreaks this week. Bob Mead, Mead Tree and Turf Company, reported large populations of Japanese beetle adults in Woodbine devouring peach, apple, and plum trees.

Mark Schlossberg, ProLawn Plus, Inc., reported that several of his customers in Baltimore County were seeing large populations of Japanese beetle activity in the landscape. Dave Clement, UME, reports heavy Japanese beetle activity in Finksburg (Carroll County) with heavy feeding on basil, raspberries, and fruit trees. If you are seeing a lot of activity in your area, let me know at Sgill@umd.edu. Please include the location and plants damaged.

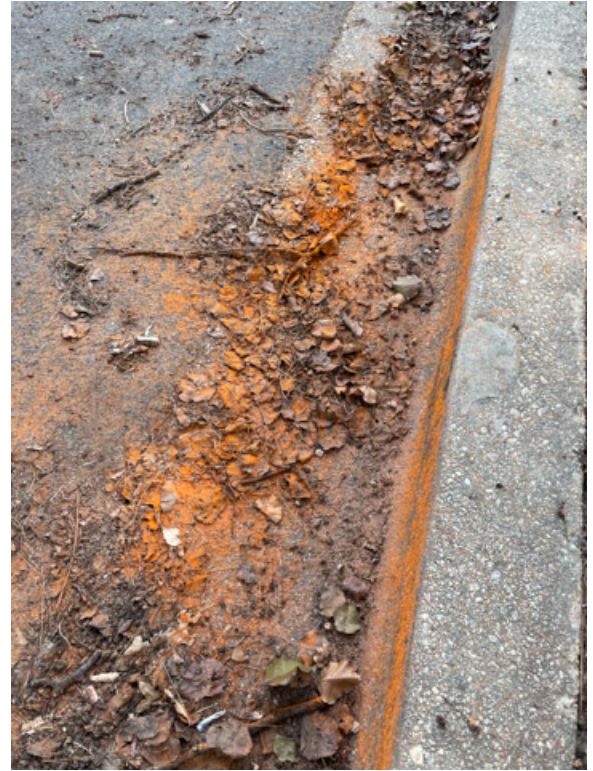
Meanwhile, Acelepryn (with specialty label) and Mainspring are two materials that have performed well in our field trials at 8 oz/100 gallon rate. Btg (*Bacillus thuringiensis galleriae*) does work at the high rate of 100 oz/100 gallons of water and provided about 3 - 4 days of good control of adult beetles in our trials.



This wheel bug nymph is feeding on an adult Japanese beetle

Gymnosporangium Rust

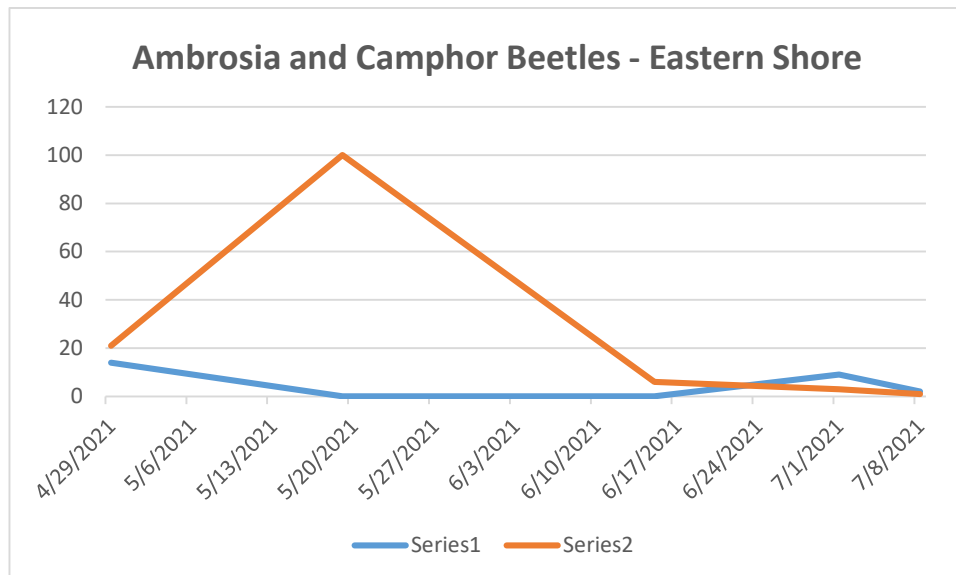
Bill McGee, Outdoor Creations, found a gymnosporangium rust heavily infecting Bradford and Chanticleer pears in many of the neighborhoods in Waldorf. He noted that "cars, sidewalks and anything else under them are covered with rust spores". It is too late in the season to treat.



Spores from gymnosporangium rust can be unsightly when they fall onto cars and paved areas
Photos: Bill McGee, Outdoor Creations

Ambrosia Beetles and Camphor Beetles

We received a report that 1 camphor beetle and 2 *Xylosandrus crassiusculus* ambrosia beetles were found in a trap being monitored in Federalsburg. Beetles are still active, but at this time, they are at very low numbers.



We peaked about May 20th and have seen the numbers decreasing since then. We will continue to monitor ambrosia beetles. If you see frass tubes, please let me know at sgill@umd.edu.

Milkweed Bugs

Marie Rojas, IPM Scout, is reporting milkweed bug nymphs are feeding on *Asclepias tuberosa* this week in Gaithersburg. There are two species of milkweed bugs (large milkweed bug and small milkweed bug) that are likely to be found on *Asclepias* species. The large milkweed bug mainly feeds on seeds. The small milkweed bug feeds on seeds as well as other insects.



Milkweed bug nymphs are often found on various species of milkweed
Photo: Marie Rojas, IPM Scout

Cypress Twig Gall

Marie Rojas, IPM Scout, found cypress twig gall on *Taxodium distichum* on July 7 in Gaithersburg. Pesticides are usually not recommended. Timing of chemical controls is critical because applications need to be made before galls begin to form. Pruning can be done to reduce the number of galls present. There are several species of wasps that parasitize gall-forming insects and help reduce the number of galls formed.



A fly midge causes these galls on bald cypress
Photo: Marie Rojas, IPM Scout

2021 MDA Pesticide Container Recycling Program

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

Brown Patch in Turf

Mark Schlossberg, ProLawn Plus, Inc. found brown patch infecting newly seeded tall fescue in Pikesville this week. Brown patch is caused by the fungus, *Rhizoctonia solani*. Nighttime temperatures at 70 °F or above, daytime temperatures in the 90s, and high relative humidity are optimal conditions for brown patch infection. For more information on this disease, see the [UMD Home and Garden Information resource page on brown patch in turf](#).



Brown patch is common in turf during the hot and humid periods of summer
Photo Mark Schlossberg, ProLawn Plus, Inc.

Cottony Maple Scale

Marie Rojas, IPM Scout, found cottony maple scale eggs on *Aesculus glabra* on July 6 in Gaithersburg. Preferred hosts of this native scale include elm, maple, hawthorn, dogwood, sycamore, poplar, linden, and grapes. There is one generation per year. We did not receive a sample for confirmation yet.

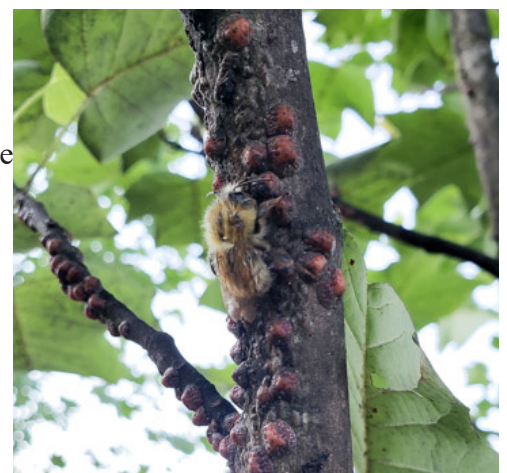
Control: This scale species can be controlled with foliar applications of Distance or Talus. Another control option is to apply TriStar or Safari as either a foliar application or a soil drench.



Look for egg hatch of cottony maple scale now
Photo: Marie Rojas, IPM Scout

Bees and Honeydew

Marie Rojas, IPM Scout, found a bee feeding on the honeydew produced by tuliptree scale. When ants feed on honeydew, they also defend the scale against predators.



Soft scale, like this tuliptree scale, produce honeydew on which bees, ants, and other insects feed
Photo: Marie Rojas, IPM Scout

Predators of Scale Insects

A variety of predators feed on scale insects. Marie Rojas, IPM Scout, found a syrphid fly larva feeding on Japanese scale this week.



This syrphid fly larva is one of the generalist predators that will feed on scale insects

Photo: Marie Rojas, IPM Scout

Oriental Persimmon – Premature Fruit Drop

By: Stanton Gill

An arborist sent in an inquiry for why his customer's oriental persimmon tree would abort fruit early in the summer. It is an interesting question. One of the top experts in Oriental persimmons was Dr. William Preston of USDA, Beltsville. Bill wrote a fine book on oriental persimmons based on his many years of work with this fruit and his and Dr. Shanks evaluation of various oriental persimmons suited for East Coast production. The work by Shanks and Preston on Oriental persimmons was some of the best work I have seen come out of USDA. They used to hold a Persimmon Day Festival during which they invited growers and the public to enjoy Oriental persimmons from their test plots.

Dr. Preston passed away three years ago, but back in 2007 and 2008, he taught me the art of grafting some of the better cultivars of Oriental persimmons. I got lucky, and some of my graft unions were successful and the trees flourished. We have been growing Gwang Yang (from Korea originally) since Bill recommended this as the most productive and cold hardy cultivar available. We planted our first Gwang Yang in our Westminster orchard in 2009. They are producing very well in the orchard with heavy fruit set this spring.

One thing Bill taught me is if you wanted a seedless or virtually seedless oriental persimmon, then just grow one cultivar. If you grow two different cultivars, then you tend to get seed development in the fruit. This type of reproduction is called parthenocarpy, which means the production of fruit without fertilization. This is great if you want a seedless or virtually seedless piece of fruit. One problem is in certain persimmon varieties, parthenocarpically produced fruit is highly susceptible to dropping from the tree before it matures. The reason persimmons fall from the tree before they ripen is the result of parthenocarpy, and happens when we go through extreme temperature swings. This happened in late June when temperatures reached the high nineties for 3 days follow by a cool front. This week, the high temperatures returned which stressed the developed fruit.

In a few select plants, such as bananas, persimmons, figs, navel oranges, and Satsuma plums, fruits may grow without the benefit of seed formation. In the case of persimmons, although fruit can develop without seeds, larger crops will result and fruit will stay on the tree until ripe when pollination/fertilization and seed development occurs. To obtain this, you need two different cultivars for cross pollination.

Zigzag Sawfly

From: United States Forest Service

On May 19, two (2) specimens of larvae suspected as *Aproceros leucopoda* (Family: Argidae), also known as the elm zigzag sawfly, were submitted by Eric Day of Virginia Tech via Karen Williams, SPHD of Virginia, collected on *Ulmus parvifolia* at a historic park setting in Frederick County, VA. These specimens were confirmed by the National Specialist at the Systematic Entomology Lab of USDA-ARS as *Aproceros leucopoda*. This represents the first U.S. record of this genus and species, and this pest been categorized by NIS as a quarantine pest.

The first North American records of this pest were reported by citizen scientists in Quebec, Canada in 2020. A fact sheet on the pest can be found here: [Aproceros | Sawfly GenUS \(idtools.org\)](https://www.idtools.org/Aproceros)

VDACS and Virginia Tech Extension staff are performing surveys for this pest to determine if this is an isolated find or if the pest is widespread.

For more information on this insect, go to <https://www.forestresearch.gov.uk/tools-and-resources/fthr/pest-and-disease-resources/elm-zigzag-sawfly/>

Emerald Ash Borer

Elaine Menegon, Good's Tree and Lawn Care, found an emerald ash borer adult on a property in York, PA where she was injecting ash trees. MDA has more information on [emerald ash borer](#).

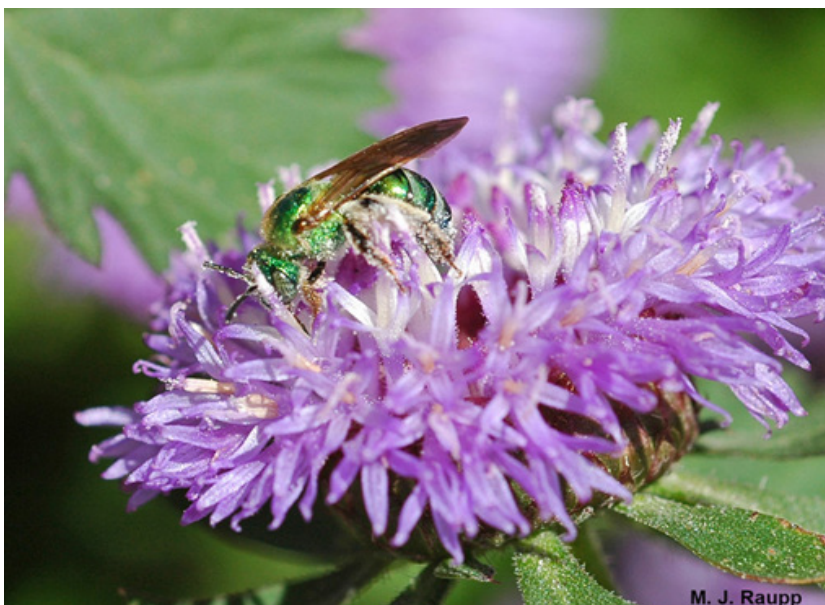
Beneficial of the Week

By: Paula Shrewsbury and Mike Raupp

Heat, sweat, and sweat bees – *Agapostemon virescens*

The weather has been a little on the warm side this week, and we have all been sweating more than usual. Therefore, I thought a story about sweat bees (Hymenoptera: Halictidae) would be timely. The name “sweat bee” is somewhat misleading. These bees don't really sweat of course, but some [halictid bees, a.k.a. sweat bees, alight on humans and imbibe salt-rich perspiration](#), hence they are called sweat bees.

Fortunately, along with this heat, an array of beautiful flowers are blooming in full force attracting lots of insect visitors for us to enjoy this week. In particular, *Echinacea* (cone flower), renowned for its medicinal qualities as well as its beauty, are buzzing with a diversity of bees and other pollinators, and natural enemies! Bees in the family Halictidae are frequently observed and interesting because different species range in their level



Halictid bees (a.k.a. sweat bees) are some of the most beautiful bees with their metallic coloration
Photo: M.J. Raupp, UMD

of “sociality”. A particular species can be solitary where every female cares for her own young, like many mason bees that we have to discussed previously, while other species may be eusocial (truly social) with queens producing non-reproductive daughters, worker bees, tasked with foraging for nectar and pollen and tending the brood of their mothers like honey bees.

Today I will discuss a halictid bee, *Agapostemon virescens*, which has a solitary life history. *Agapostemon virescens*, sometimes called “little green bees”, favor loamy soils with sparse vegetation as optimal real estate to build their nests. Individual nests may contain more than 100 brood cells and, while more than one female has been observed in a single nest, this species is considered to be solitary. A single female forages for food to bring back to her nest to feed her young. Female [halictid bees gather and store huge loads of pollen in pollen baskets, called corbiculae, on their hind legs](#), which she brings back to her nest. Once *Agapostemon* bees find favorable plots of land, many *Agapostemon* queens may move into the area and form large aggregations of individual nests. To enjoy these delightful native pollinators consider letting part of your lush lawn go a little thin in a sunny spot to provide nest sites as for nurseries of these bees. In addition, *Agapostemon* and other sweat bee species are generalist pollinators and a diversity of flowering plants provide food for them. Plan your landscapes and nurseries with halictid bees and other pollinators and natural enemies in mind – incorporate plants that provide season long pollen and nectar sources (blooms).

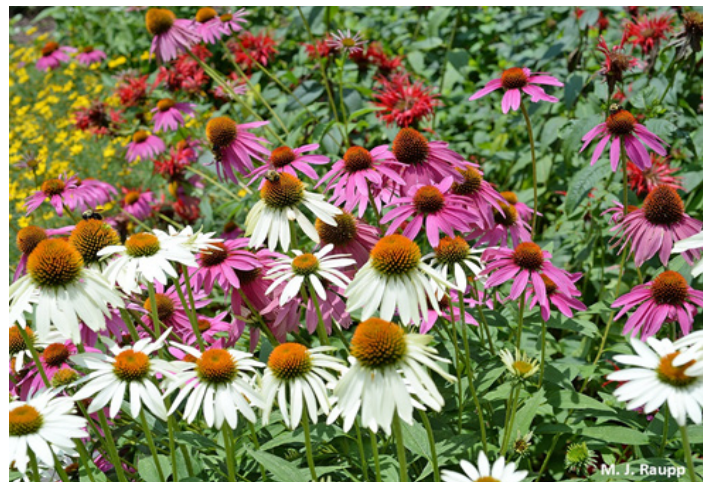
For more information on halictid (sweat) bees see:

<http://bugoftheweek.com/blog/2017/6/15/sweet-and-salty-solitary-sweat-bee-iaugochlora-purai?rq=salt>



Plant flowers to attract beautiful native bees like *Agapostemon*

Photo: M.J. Raupp, UMD



This patch of coneflowers (*Echinacea*) attracts a diversity of pollinators and natural enemies all day long

Photo: M.J. Raupp, UMD

Weed of the Week

By: Chuck Schuster

This week has provided an opportunity for those working outdoors to experience the actual air temperatures reach a high in the mid and upper 90 °F range. Weed pressure with recent rains can make our landscapes look less pristine and the desire to get these weeds under control causes one to look to the normal methods to do so. One needs to be mindful that the weather may cause certain herbicides to not be able to do the job they normally do.

As temperatures increase, many plants will slow or cease actual growth for a period of time, going into a heat related dormancy. Translocated herbicides during this period of time will be much less effective. Weeds that are already showing some resistance to products including glyphosate may actually develop greater resistance as

shown in some studies. When temperatures reach the mid 90 °F range, efficacy of certain standalone products vastly decreases.

When product mixtures of glyphosate and diquat are used, one can see a rapid visual injury being caused by the diquat. This is a synergistic relationship. Diquat is an antagonist to glyphosate, and one must use higher rates of glyphosate to gain the long term weed control desired. As temperatures increase, the diquat visual efficacy is very noticeable, but the longer term control of the weed often fails as the glyphosate is not able to work well when the plant is not able to move the chemical even at the higher rates as the plant is decreasing its growth because of the higher temperatures.

During periods of higher temperatures, one may find that applications of many translocated herbicides will fail. Consider pausing applications, waiting for a few days when cooler temperatures prevail and the plants move back into active growth. Do not blame the product, nor increase the rates to higher than recommended by the label to overcome this.

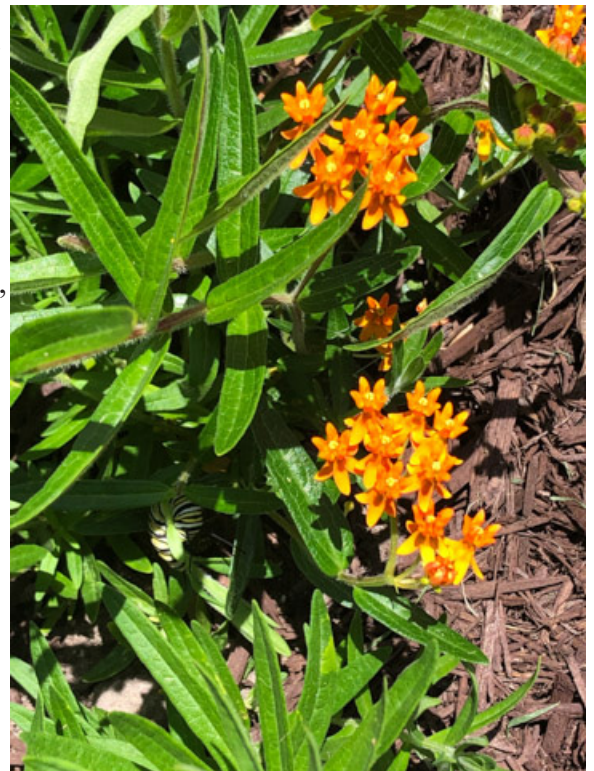
Products that are primarily contact in nature do not see a decrease in efficacy and may be the go to product to use, but remember they are really only controlling what is seen and not causing injury to the root system.

Plant of the Week

By: Ginny Rosenkranz

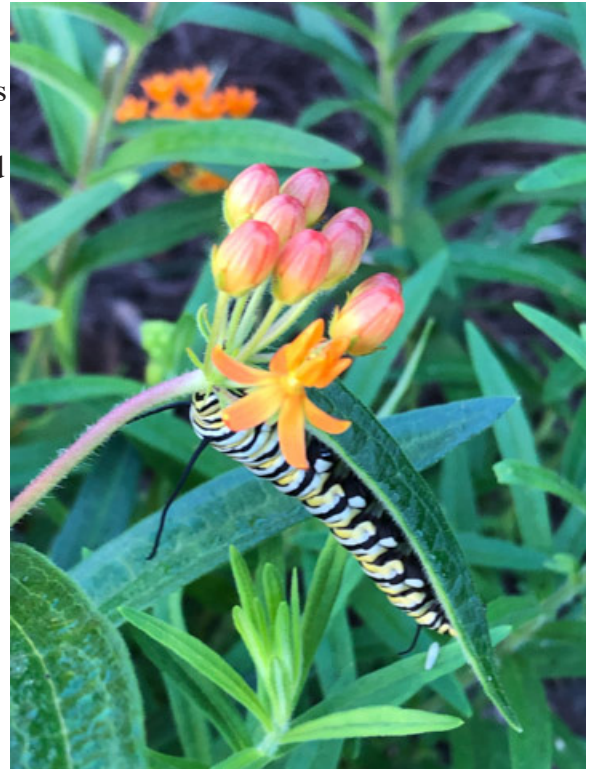
Asclepias tuberosa or butterfly weed is a native perennial that thrives in full sun and very well drained soils, plus it is moderately salt tolerant. Like all perennials, *A. tuberosa* can be grown from seed but will take about 2-3 years to become fully established. Perennials concentrate on growing a strong root system before setting flowers as a survival measure. And like many perennials, *A. tuberosa* has a strong tap root which helps it establish in the garden and also makes transplanting it very difficult. When mature, the plants can grow 1 – 2 ½ feet tall and about 1 ½ feet wide. The bright orange 5-petal flowers provide nectar for many pollinators from bees to butterflies and moths while the foliage provides food for caterpillars of the monarch butterfly, the gray hairstreak butterfly, queen butterfly, and milkweed tussock moth.

The flowers provide bright orange, yellow, and red color from June to August, sometimes into September. The colorful flowers are arranged on a flat cymose which will mature into thin, spindle-shaped seedpods that are 3- 6 inches long and filled with seeds with silky tails that float on the summer and autumn breezes. The foliage is narrowly egg-shaped and arranged on the hairy stems in an alternate and spiraling manner. Don't be surprised if the caterpillars feast on the foliage almost to the point of possible death, but the strong root system quickly provides more leaves and flowers for the next generation of pollinators. Some of the more colorful names for the butterfly weed is chigger weed, pleurisy root, and Indian paintbrush, but some of those common names are used for other perennials and can cause confusion when purchasing the right plants. Sometimes the common name like chigger weed is a good description and a caution for not digging the plants up from the wild. Plant the butterfly weed in sunny perennial gardens, pollinator meadows, and butterfly gardens along with other bright yellow, orange and red flowers, then cool down the colors with flowers with



***Asclepias tuberosa* bright orange flowers attract many pollinators
Photo: Ginny Rosenkranz**

blue or white blossoms. *Asclepias tuberosa* is resistant to deer and rabbit feeding and most insects with the exception of aphids that can be washed off with a strong stream of water from the hose. It is also resistant to most diseases, but is occasionally host to rust and leaf spot, as well as crown rot if planted in heavy or poorly drained soils .



Asclepias tuberosa is a caterpillar host for monarchs as well as gray hairstreak and queen butterflies
Photo: Ginny Rosenkranz

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 **1385 DD** (Cumberland) to **1915 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.

- Green June Beetle – adult emergence (1539 DD)
- Pine needle scale – egg hatch / crawlers - 2nd gen (1561 DD)
- White prunicola scale – egg hatch / crawlers - 2nd gen (1637 DD)
- 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)

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 7)

Aberdeen (KAPG)	1409
Annapolis Naval Academy (KNAK)	1667
Baltimore, MD (KBWI)	1732
Bowie, MD	1744
College Park (KCGS)	1553
Dulles Airport (KIAD)	1624
Ft. Belvoir, VA (KDA)	1647
Frederick (KFDK)	1569
Gaithersburg (KGAI)	1551
Greater Cumberland Reg (KCBE)	1385
Martinsburg, WV (KMRB)	1401
Natl Arboretum/Reagan Natl (KDCA)	1915
Salisbury/Ocean City (KSBY)	1703
St. Mary's City (Patuxent NRB KNHK)	1823
Westminster (KDMW)	1795

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 a plant diagnostic session for nutrient problems, diseases, and insects on July 21 at the Central Maryland Research and Education Center from 12:30 – 3:30 p.m. We encourage participants to bring samples of nutrient disorders and insect and disease problems for diagnosis by David Clement, Karen Rane, Stanton Gill, and Andrew Ristvey, University of Maryland Extension.

Save the dates...

Cut Flower Tour

September 14, 2021

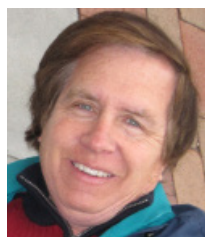
MNLGA Field Day

September 16, 2021

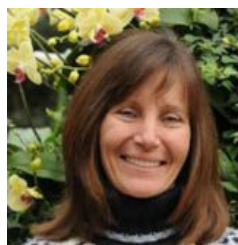
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