UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **April 7, 2023**

In This Issue...

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), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)
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)

Xylosandrus Found Active in Carroll County

By: Stanton Gill

On Thursday in late afternoon, we were visiting a nursery in Carroll County. The farm manager had placed out an alcohol baited tree bolt. He reported seeing adult beetles on the bolt. During the afternoon, Brian Kunkel (University of Delaware Extension) and I were visiting the nursery around 4:00 p.m. and we observed one *Xylosandrus germanus* landing on the alcohol baited bolt. Marie Rojas, IPM Scout, found ambrosia beetles in traps in Montgomery County. The species caught in one of the traps is *Xyleborinus saxesenii*.

You should apply your peventative permethrin or bifenthrin sprays this weekend.

Ambrosia beetles are going to alcohol-baited bolts this week.
Photo: Stanton Gill

Locations Needed with High Numbers of Spotted Lanternfly Egg (SLF) Masses for Research (email Paula Shrewsbury at pshrewsbury@umd.edu).

I am conducting research to examine the effect of treating SLF egg masses on trees with mycoinsecticides (fungus that kill insects) to reduce early nymphal SLF. These could be urban sites or wooded edges but they need to have several trees with high numbers of egg masses that are in accessible (i.e. not too high up the tree), and we need to be able to get on the property to treat with commercially available mycoinsecticides. We are trying to find OMRI listed, reduced risk alternatives for SLF suppression. *Email me if you think you might have sites that could work (pshrewsbury@umd.edu).*

THANKS!

Spotted lanternfly egg masses on maple. Photo: P.M. Shrewsbury, UMD

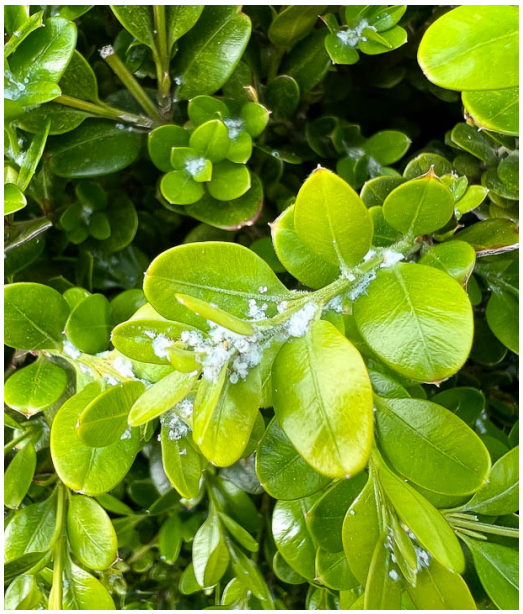
Spotted Lanternfly

By: Stanton Gill

We are not seeing much activity this week for spotted lanternfly. If you are seeing hatch ((270 degree days, Liu et al. 2020) in your area, take a good, clear close-up photo and send in the electronic pictures to us at CMREC, Sgill@umd.edu. In April, you can spray 3% hort oil on egg masses.

Boxwood Psyllids

Heather Zindash, The Soulful Gardener, found boxwood psyllid nymphs feeding in high populations in Gaithersburg on April 6. Look for boxwood psyllid nymphs feeding on terminal growth of boxwood in a few weeks. The boxwood psyllid causes tip growth to cup and curl. Look for a white, waxy material that the psyllids produce within the cupped leaves. Damage is rarely significant enough to warrant treatment. Materials such as Avid, Endeavor, Altus, or Acephate should all control this insect.



Boxwood psyllid nymphs produce a waxy covering. Photo: Heather Zindash, The Soulful Gardener

Boxwood Leafminers

Marie Rojas, IPM Scout, is reporting that boxwood leafminers are nearly pupated in Beallsville. Luke Gustafson, The Davey Tree Expert Company, found them at a similar stage. Overwintering leafminers are yellow. They turn orange as they pupate. It's not quite time to apply control measures when they are still in the pupal stage. Look for the orange-bodied adults as we get later in April.

When they turn orange, boxwood leafminers are ready to pupate.
Photos: Marie Rojas, IPM Scouts (left) and Luke Gustafson, The Davey Tree Expert Company (right)

Hemlock Woolly Adelgid

Marie Rojas, IPM Scout, found eggs of hemlock woolly adelgids on hemlock this week. The cottony masses cover the adult female body and her eggs. Newly hatched nymphs are reddish-brown with a white fringe near the front; and settled crawlers are black with a white fringe around the body and down the back. There are two generations a year.
Control: Spray trees with 2-3% horticultural oil to target just hatched or newly settled crawlers.

Hemlock woolly adelgid hatches at around 235 degree days. Some areas have reached that degree day levels; others are getting quite close.
Photo: Lorraine Graney, Bartlett Tree Experts, Bugwood.org

History of Summer Patch! It is Almost Time to Spray

By: Fereshteh Shahoveisi, Turfgrass Pathologist, University of Maryland

Summer patch is a common disease affecting several turfgrass species, more specifically Kentucky and annual bluegrass, and fine fescue. Disease symptoms become visible in mid-summer and include circular or irregular patches of brown or yellowing grass (Figure 1), which can range in size from a few inches to several feet in diameter. The patches may appear sunken or depressed (Figure 2), and the grass may become thin or even die in severe cases. Infected roots may also appear blackened or rotted.

While summer patch appears in mid-summer (mid-July to August in Maryland). The fungus becomes active in the soil and attacks roots in spring. So, if you have a history of summer patch and are considering applying fungicides, need to do it in spring when soil temperatures reach 65°F. Considering that the 2023 growing season is 2-3 weeks ahead of last year, start measuring soil temperature and get ready for spraying.

Figure 1) summer patch symptom on Kentucky bluegrass and tall fescue mix (tall fescue is not affected).
Photo: Fereshteh Shahoveisi

Figure 2) close-up of summer patch symptom on Kentucky bluegrass, the turfgrass stand is depressed.
Photo: Fereshteh Shahoveisi

Overseeding or renovating with nontarget turfgrass species such as tall fescue, keeping soil pH around 6.0, adequate fertilization, frequent irrigation, reducing soil compaction, and keeping the mowing height higher (around 3 inches) can all help to manage summer patch more effectively.

Cryptomeria Scale on Hemlock Hybrids

Marie Rojas, IPM Scouts, found cryptomeria on hemlock hybrids (*Tsuga caroliniana x chinensis*) this week in Gaithersburg. Also look for this scale on spruces and firs. This scale has a transulcent cover which can make it difficult to detect on the underside of needles. Cryptomeria scale has two generations per year. The first generation of crawlers occurs in June and July. Wait for the crawler stage to apply Talus or Distance.

Look for cryptomeria scale on the undersides of needles on cryptomeria, spruce, and fir.
Photo: Marie Rojas, IPM Scout

New Trap for Emerald Ash Borer That is Infected with *Beauveria bassiana*

By: Stanton Gill

Fraxiprotect for emerald ash borer was registered in Canada in 2022 and will be registered for use in the USA in 2023. The Lindgren trap attracts adult beetles and when they fall down through the fins they land in conidia of the entomopathogenic fungi, *Beauveria bassiana*. You can watch this YouTube video on how it works: https://www.youtube.com/watch?v=_ASMaNaEqCk

Disease Update for Fruit

By: Kari Peter, Penn State University

Despite cooler temperatures, apple scab spores continue to mature, and an apple scab infection event is forecasted from April 6, 2023, for those with green tissue present on their apple trees. Protection is necessary for this event. Growers will also want to apply fungicides to blooming stone fruit trees to prevent potential brown rot infection of blossoms.

Scab spores have started to disperse from overwintering leaves, which is coinciding with green tissue present on the trees. However, the spore numbers are low and will gradually increase over time. Depending on the variety, the apple trees are at some stage of green tip, and tight cluster is not far behind. There was an apple scab infection event on April 1; however, if you had applied any kind of fungicide during the week of March 26th, that spray would have protected your trees. We have a predicted apple scab infection event on April 6, 2023. In addition, conditions are favorable for brown rot infection of stone fruit blossoms.

Tight cluster begins powdery mildew control. Although dry weather favors low apple scab disease pressure, this is not the case for powdery mildew. It is important to be mindful of the dry days above 53 °F.

Blossom infections from the brown rot fungus can occur whenever pistils are exposed and a favorable climate exists. Infections can occur during wetting periods when temperatures are between 41 and 86°F. However, optimum conditions for infection occur with wetting and temperatures in the mid-70s. During long wetting periods (several days or more), blossoms can be infected regardless of temperature. Generally, infections that occur when conditions are sub-optimal are less severe. Blossoms and fruitlets will remain susceptible until the pistil desiccates (sometime between petal fall and shuck split). Keep blossoms protected with fungicides for blossom blight.

California is Leading the Way on Pollution Reduction

From NPR Broadcast

A recent decision by the U.S. Environmental Protection Agency allows California — which has some of the nation's worst air pollution — to require truck manufacturers to sell an increasing number of zero-emission trucks over the next couple of decades. The rule applies to a wide range of trucks including box trucks, semitrailers and even large passenger pick-ups. The new truck standards are aimed at companies that make trucks and those that own large quantities of them.

For details on these changes, check out the NPR article online.

White Prunicola Scale

Marie Rojas, IPM Scout, found white prunicola scale on *Cornus florida* in Beallsville this week. The first generation of crawlers will be in May. Closely monitor the host plants of *Prunus* spp., *Ligustrum* spp. (privet), *Syringa* spp. (lilac) and *Euonymus* spp. (euonymus). The white male and female "covers" will be on the bark of branches and trunks. The adult female has a distinctive "fried egg" appearance and clusters of males give the bark a fluffy appearance. Wait until you see crawlers to apply either Talus or Distance.

Female white prunicola scale will be producing eggs in late April to early May
Photo: Marie Rojas, IPM Scout

Cottony Camellia/Taxus Scale

Marie Rojas, IPM Scout, found cottony camellia/Taxus scale on holly this week in Beallsville. Overwintering females are present on the undersides of the leaves. They will plump up and then produce a waxy material when they lay eggs in May. The crawler period is late May to early June.

Overwintering female cottony camellia/Taxus scale are present on host plants at this time of year.
Photo: Marie Rojas, IPM Scout

Tuliptree Scale

Marie Rojas, IPM Scout, is finding black immature tuliptree scale on *Liriodendron* in Gaithersburg this week. This scale, and magnolia scale, do not produce crawlers until later in the summer.
Control: Talus or Distance can be used on these second instar scale at this time.

Look for overwintering second instars of tuliptree scale on *Liriodendron* and *Magnolia*.
Photo: Marie Rojas, IPM Scout

Disease Activity on Ornamentals

Marie Rojas, IPM Scout, found both cedar-apple and cedar-quince rusts on *Juniperus virginiana* in Gaithersburg this week.

Elaine Menegon, Good's Tree and Lawn Care, found peach leaf curl in Lititz, PA on April 6.

Gymnosporangium rust on *Juniperus virginiana*.
Photo: Marie Rojas, IPM Scout

Aphids on Maple

Heather Zindash, The Soulful Gardener, found a huge population of aphids, *Periphyllus* sp., on a Japanese maple in Gaithersburg creating very heavy honeydew and sooty mold on the small tree. Aphids are active on maples when the leaves start to emerge, but do not persist through the season. Parasitoids keep these aphids under control. There is not too much damage and the damage is covered by new growth. Control is usually not necessary. If populations are high enough that treatments are necessary, 1% horticultural oil or insecticidal soap have less impact on beneficials.

Aphids show up on Japanese maples early in the season, but are rarely a problem.
Photo: Heather Zindash, The Soulful Gardener

Dog Vomit Fungus

Ginny Rosenkranz, UME, found dog vomit fungus growing on mulch this week. She noted that it was not there on the evening of April 5, but it was present the next morning. This fungus is often found on mulched areas. You can break up the fungus with a rake. There is nothing else to do about it.

Dog vomit fungus grows on organtic materials and is often found on mulch.
Photo: Ginny Rosenkranz, UME

UMD Extension Shrub Pruning Video

Andrew Ristvey and Eric Buehl recorded a shrub pruning video, and it is posted on the UMD HGIC YouTube channel at https://youtu.be/gefbRNH8Rm4.

Woodpecker Activity

Marty Adams, Bartlett Tree Experts, sent in a photo of a tree stump where a northern flicker had been active. They mainly forage on the ground. The yellow-bellied sapsucker is another woodpecker about which we receive reports of damage (holes on trees in horizontal rows).

A northern flicker had been searching for insects in this tree stump.
Photo: Marty Adams, Bartlett Tree Experts

Deer – Rising to the Top of Plant Damaging Animals

By: Stanton Gill

With the relatively mild winter we had, many people report a lot of activity of deer with abundant browsing this winter. Leyland cypress, junipers, and even hollies suffered fairly heavy damage from deer browsing this winter.

An interesting article was published in *The Washington Post* on January 29, 2023 on the deer situation in the United States. They mentioned a about 2 million people have accidents involving deer each year and on an average 440 people die as result. A paper on animal and car accidents by Cunningham and Prugh, Washington State University, was published in the magazine, *Current Biology*. In this paper they estimate that 90 of the collisions involving cars and animals involved deer in 23 states between 1994 and 2021. The most dangerous time for deer and car collisions is the month of November, during mating (rutting) season when males are running around like crazy animals chasing females, often into roadways.

One of our University of Maryland Animal Wildlife researcher, Jennifer Mullinix, is conducting field trials in Montgomery County in 2023 looking at ways to deal with deer and deer ticks. Her objective is to reduce the incidence of deer ticks and Lyme disease in urban settings. She just completed a 5-year study in Howard County. We have asked her to write a short summary of some of her findings and she has agreed. This information will be in upcoming IPM Alerts.

Winter Weather for 2023

By: Stanton Gill

Right after Christmas, we dropped to single digit temperatures, then throughout January and February, it was one of the milder winters with temperatures in the 40 – 60 °F range. We had several pictures sent in late January of forsythia in bloom, some autumnalis cherry in bloom and daffodils pushing up green shoots thought the soil. On February 2, 2023, the famous Pennsylvania ground hog and shining star, Punxsutawney Phil, reportedly saw his shadow, so it was 6 more weeks of winter, according to this weather predicting groundhog. This guy was wrong in February and right by mid-March. We are getting a short, cold front here in mid April.

Not to be outdone, Maine has its own weather predicting arthropod. In Belfast, Maine (WABI) - a lobster named Passy Pete declared that winter was going on for additional time. In what has become an annual tradition, the now famous Belfast lobster predicted winter would last for six more weeks. During the ritual, the lobster is retrieved from the bay by the Belfast barons, a group of residents who help Passy. Passy communicates his prophecy by selecting a scroll that is read to the group that gathered for the event. He predicted an early winter this last fall/winter. His prediction for spring is: spring would be 6 weeks away.

Right after these predictions, what happened? A polar vortex gripped the mid-west and east coast with temperatures in Maryland dropping to single digit on February 3 and the 4. In New England, they had temperatures dip to - 10 °F. In Massachusetts, many homes suffered frozen pipes.

The weird weather phenomenon did clip the Northeast US and resulted in new weather records at Mount Washington in New Hampshire. This was already known to have the World's Worst Weather. Temperatures reached a record -104 °F. The all-time coldest record was -47 ºF set in 1934. How is that for a cold weather dip.

It gets better. The temperatures in Maryland rose to 50 °F by February 6, and the rest of February was very mild. On February 23, the temperatures to the second highest record for February with temps reaching 81 °F. The next day, the temperatures slammed down to the low 20 °F range.

Does Fall Pruning Impact Some Trees?

By: Stanton Gill

Pruning studies with other woody species, such as grapes (Wolpert and Howell, 1984), crape myrtle and cypress (Hayns, et al., 1991) showed that pruning in the fall reduced the cold hardiness of the plants during the winter. One fact has emerged from these studies.

- Pruning in November tends to reduce the cold hardiness of woody plants until late February, so the effects of pruning are fairly long-lasting.

These temperature swings are what damages plant material and helps weak diseases like *Botryospaeria* move into the damaged tissue. This shows up later in the spring as dead and dying branches. On Leyland cypress, expect to see dying branches with Seiridium canker moving into the winter damaged tissue. Seiridium canker of Leyland cypress is a fungal disease that produces oozing brown cankers and causes yellowing and browning of tree branches. Symptoms typically appear in early spring but can be seen year-round. Fungi enter the tree through cracks or wounds in the bark and form brown cankers that leak a thick, sticky substance called resin.

Join the Conversation: The Maryland Climate-Smart Ag Project

Maryland producers know their operations better than anyone. And they also know that changing weather and environmental patterns affect their bottom line.

This project is a producer-focused. It brings ag stakeholders (producers, technical service providers, researchers, organizations, and policymakers) together to develop and share science-based strategies and techniques. This will ensure Maryland farms can adapt to changing conditions and remain resilient and profitable for the future.

The Maryland Climate-Smart Ag Project is coordinated by the University of Maryland's Harry R. Hughes Center for Agro-Ecology, located at the Wye Research and Education Center.

Project Coordinator Terry Nuwer seeks to connect with agricultural stakeholders throughout Maryland to gain their input regarding their on-farm observations related to changing weather and environmental conditions. Producers are encouraged to pose questions, suggest ideas for research and farm demonstrations, and identify their "decision-making" process for adopting new practices for their operations.

Outreach will seek out all segments of agriculture (horticulture, viticulture, horse and livestock, poultry, agronomic crops, aquaculture, and forestry), including urban and small specialty farms and new and traditionally underrepresented groups. Information will be communicated via email and social media with informational updates tailored to each ag sector. In addition, producers can provide input via future listening sessions, surveys, and emails A portal through which producers can seek information is under development. The project's research team will examine current climate research pertaining to Maryland agriculture. They will identify gaps in our knowledge and research that need to be addressed. Agriculutural community input will play a key role in identifying these knowledge gaps.

This project will submit a report in June of 2024 to the Maryland Legislature that provides the following:

- a science-based description of expected changes to agricultural production and pest pressure statewide;
- a summary of research, policy, and programs as they currently stand;
- recommendations to inform the enhancement of state-level agriculture-centered policies and procedures for climate change adaptation and mitigation;
- a network of experts who will continue research and generate solutions for producers, and;
- a network of stakeholders who will receive the updates and share feedback on their their experiences.

To learn more about the Maryland Climate-Smart Ag Project, visit **go.umd.edu/MDClimateSmartAg** or find us
on Facebook at **https://www.facebook.com/HughesCenterAgroEcology.**

Sign up to receive emails on the project at ***https://lp.constantcontactpages.com/su/iDPyA50.***

You can also contact Project Coordinator Terry Nuwer at **tnuwer@umd.edu** or 410-827-6202, ext. 8.

Beneficial of the Week

By: Paula Shrewsbury and Mike Raupp

Bee Fly: the Dr. Jekyll and Mr. Hyde of the insect world

Bee flies are a very cute blonde colored, fluffy looking insect that you would think is a bee upon observation, but it is a fly. Their wings rapidly beat as they are busy feeding on the nectar and pollen of the flowers they visit. Bee flies, being flies, have aristate antennae and only 1 pair of wings. The close resemblance of these hairy flies to pollinators such as honeybees and bumble bees has earned them the name bee fly. Bee flies are in the family Bombyliidae and there are different species. Bee flies are quite interesting to observe. They have a remarkably long mouthpart called a proboscis which has been modified through evolution to be able to reach deep into flowers to sip the carbohydrate rich nectar which is an important source of energy that bee flies need to power their muscles, in particularly their flight muscles. Bee flies appear to be hyperactive fliers. Wings of a bee fly beat about hundreds times / minute. You can see a fascinating video (by M.J. Raupp, UMD) of a bee fly busily flying and feeding on flowers with its long proboscis.

Bee flies (Bombyliidae) are very cute and fluffy, but deadly if you are a solitary bee.
Photo: M.J. Raupp, UMD

Although bee flies do not deliberately collect pollen as a source of food for themselves or their young as do bees, their hairy body traps pollen and provides convenient transport of pollen from one plant to another (*Dr. Jekyll*). The fact that bee flies are common around flowers during times of high bee activity is more than just happenstance. Bee flies have a sordid side that often proves deadly for solitary bees (*Mr. Hyde*).
When solitary ground nesting bees such as halictids, colletids, and andrenids visit a flower and get a full load of nectar and pollen, they head back to their nest (a burrow or gallery that they dug in the ground) to provision it with food (floral resources) for their young. The sneaky and agile bee fly however, follows a bee back to its nest and deposits an egg in or near the burrow of the bee. In some species, the adult female scoops up sand or gravel to coat her eggs. This camouflages the eggs. Then when she flies over the nest openings (holes in the ground) of the solitary bees, she flicks out her eggs hoping to get it to land in or near one of the nest openings. After hatching, the fly larva wriggles into the gallery of the bee. Some species of bee fly, the larva first consume floral provisions left behind by the solitary bee before turning their attention to the developing baby bees. The fly larva attaches to the skin of the larval bee and suck its blood (exoparasite) which is the source of nutrients for the developing larva of the bee fly, and death of the bee larva.

Bee flies are a large diverse group known to attack and kill caterpillars, eggs of grasshoppers, ants, and larvae of beetles as well as baby bees and wasps. Fortunately, bee fly adults do not sting or bite!

Weed of the Week

By: Kelly Nichols

While driving around this past week, several clumps of a green plant with lacy leaves along the roadside caught my attention (Figure 1). This plant is often noticed once it has a stem with a white flower at the top; however, it is important to look out for this weed before that flower appears. Poison hemlock, *Conium maculatum,* is a biennial plant in the carrot family. As a biennial, it will produce a basal rosette (leaves growing in a circle at the ground) in the first year. In the second year, it will send up a stem and produce that white flower (Figure 2). The stalk can reach up to several feet in height.

Figure 1. Poison hemlock basal rosette before flowering.
Photo: Kelly Nichols, UME Montgomery County

The reason why we need to look out for this plant is just what its name suggests – it is poisonous. It's poisonous to if ingested (to both people and livestock), and some people may have an allergic reaction on their skin if they touch it. One of the key identifying features is the purple spots on the stem (Figure 3). The stem is also hollow and smooth. The leaves can be 7 to 15 inches long, have a basic triangular outline, are lacy or fern-like, and alternate along the stem. The white flowers are 1-2 inches long and are actually a cluster of smaller flowers that arise from a common point. Poison hemlock has a thick, white taproot.

In turf and right-of-ways, 2,4-D plus dicamba can provide control. (The tank mix is better than either of those products alone.) Triclopyr is also option for control. In landscape and nursery settings, glyphosate can also provide control; just be cautious when applying it near stems of landscape shrubs and trees. If the poison hemlock must be handled, wear long sleeves, gloves, long pants, sock, and shoes. Dispose of it in a manner that prevents others from coming in contact with it. Mowing is not recommended, as it easily spreads pieces of poison hemlock around.

There are a couple other weeds in the carrot family that look similar. Wild carrot (or Queen Anne's lace; *Daucus carota*) also has lacy leaves and white flowers, but it is a smaller-statured plant and does not have the purple spots on the stem. Giant hogweed (*Heracleum mantegazzianum* is a very large plant that can reach heights of up to 16 feet. (The leaves could be umbrella-sized.) Giant hogweed also has purple spots on the stem; however, the stem is hairy.

Figure 2. The flowering stalk of poison hemlock is hollow.
Photo: Pedro Tenorio-Lezama, Bugwood.org.

Figure 3. Stems of poison hemlock have purple spots and no hairs.
Photo: Joseph M. DiTomaso, University of California - Davis, Bugwood.org.

Plant of the Week

By: Ginny Rosenkranz

Cercis canadensis The Rising Sun™ is an Eastern redbud that was discovered in 2006 among some seedlings grown a nursery in Tennessee. The native redbud is often a multi-stemmed small tree, while The Rising Sun™ has a strong central leader with graceful branches. This time of year, before the foliage emerges, all of the branches except for the top 4-6 inches are covered in reddish-purple buds that open to rosy pink-purple edible flowers. The non-red flowers of redbud are about a half inch long and are attached to the branches by a half inch pedicel in clusters of 4-10 flowers and will bloom for up to 3 weeks. Plants are winter hardy in USDA zones 4-9, and can reach 8-12 feet tall and wide. Many of the cultivars including The Rising Sun™ are more drought and heat tolerant, thriving in full sun locations. After flowering, The Rising Sun™ heart-shaped foliage emerges with the newest leaves a deep golden orange that matures through shades of gold to

***Cercis canadensis* The Rising Sun™ is coming into bloom at this time of year.**
Photo: Ginny Rosenkranz, UME

yellow to lime green. The plants put out new foliage from spring through the summer, giving the tree multiple colors all through the growing season. In the autumn, the leaves blaze yellow and orange. According to the 6th edition of Manual of Woody Landscape Plants, The Rising Sun™ was the first of the redbuds to have yellow foliage. Plants prefer to grow in moist, but well drained soils, and are not fussy about acidic or alkaline pH. Plants can be planted as a specimen or in small groups, in lawns or at the margins of woods. Diseases include canker, leaf spots, Verticillium wilt, while insect problems include borers, caterpillars, leafhoppers, Japanese beetles, treehoppers, scale and webworms. During periods of high heat and drought, regular watering will keep the trees healthy and less susceptible to pests. Deer are not fond of feeding on redbud.

Close-up of *Cercis canadensis* The Rising Sun™ jsut starting to bloom
Photo: Ginny Rosenkranz, UME

Degree Days (as of April 5)

Abingdon (C1620)	83	Annapolis Naval Academy (KNAK)	135
Baltimore, MD (KBWI)	162	College Park (KCGS)	157
Dulles Airport (KIAD)	167	Ft. Belvoir, VA (KDA)	157
Frederick (KFDK)	115	Gaithersburg (KGAI)	136
Gambrils (F2488, near Bowie)	154	Greater Cumberland Reg (KCBE)	96
Perry Hall (C0608)	84	Martinsburg, WV (KMRB)	76
Natl Arboretum/Reagan Natl (KDCA)	217	Salisbury/Ocean City (KSBY)	174
St. Mary's City (Patuxent NRB KNHK)	254	Westminster (KDMW)	162

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 calculatorThresholds 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

IIn the Maryland area, the accumulated growing degree days (**DD**) this week range from about **76 DD** (Martinsburg, WV) to **254 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.

White pine weevil – adult first activity **(84 DD)**
Boxwood spider mite – egg hatch **(141 DD)**
Woolly elm aphid – egg hatch **(163 DD)**
Spiny witchhazel gall aphid – adult/nymph **(171 DD)**
Boxwood psyllid – egg hatch **(184 DD)**
Viburnum leaf beetle – first egg hatch **(210 DD)**
Birch leafminer – adult emergence **(215 DD)**
Roseslug sawfly – egg hatch / early instar **(230 DD)**
Eastern tent caterpillar – egg hatch **(86 DD)**
European pine sawfly – larva, early instar **(154 DD)**
Inkberry holly leafminer – adult emergence **(165 DD)**
Spruce spider mite – egg hatch **(179 DD)**
Tea scale – egg hatch/crawler (1st gen) **(195 DD)**
Azalea lace bug – egg hatch (1st gen) **(214 DD)**
Elm leafminer – adult emergence **(219 DD)**
Honeylocust plant bug – egg hatch **(230 DD)**
Elongate hemlock scale – egg hatch / crawler (1st gen) **(232 DD)** Hemlock woolly adelgid – egg hatch (1st gen) **(235 DD)**
Boxwood leafminer – adult emergence **(249 DD)**
Hawthorn lace bug – first adult activity **(265 DD)**
Spotted lanternfly – egg hatch **(270 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.

May 10, 2023
MAA Arborist Walk
Contact: Danielle Bauer Farace

June 16, 2023
Montgomery County Procrastinator's Conference
Location: Montgomery County Extension Office

June 20, 2023
Cut Flower Program
Location: Castlebridge Farm, Ellicott City, MD

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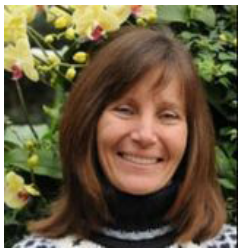

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