UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Special Report
for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **April 19, 2024**

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IPMnet
Integrated Pest Management for Commercial Horticulture

extension.umd.edu/ipm

If you work for a commercial horticultural business in the area, you can report insect, disease, weed or cultural plant problems **(include location and insect stage)** found in the landscape or nursery to sgill@umd.edu

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Disease Information: Karen Rane (Plant Pathologist), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)
Weed of the Week: Chuck Schuster (Retired Extension Educator), Kelly Nichols, Nathan Glenn, and Mark Townsend (UME Extension Educators)
Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/ Somerset Counties)
Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)
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Request for Sites with Spotted Lanternfly Egg Masses

By: Stanton Gill

We are looking to test out Metarhizium for control of spotted lanternfly in the egg stage. If you have a site in Central Maryland with multiple egg masses, please contact me at 410-868-9400.

Spotted Lanternfly Update

By: Stanton Gill

We are not seeting any egg hatching in Central Maryland at this point. Egg hatch occurs around 270 degree days. Many areas are at or almost to this degree day level. If you see any egg hatching, please let us know when and where at sgill@umd.edu. Thanks.

Slugs and Snails Active in Overwintering Tunnels

By: Stanton Gill

We are receiving many pictures of foliage being chewed. Much of the damage is from slugs and snails that have been overwintering under the pots and plant flats. Slug bait with Mesurol in the bait is one of the better controls.

Ambrosia Beetles

By: Stanton Gill

Timing is everything when it comes to ambrosia beetles. Our April 12th IPM Alert announcement of ambrosia beetle activity was right on the mark. We had two Maryland nursery growers and three Pennsylvania nursery growers report activity in their nurseries. Three mentioned I should emphasize that the hybrid series of *Cornus florida* and *Cornus kousa* are highly attractive to ambrosia beetles. On April 18, Marie Rojas, IPM Scout, found them hitting *Cercis canadensis* trees in Montgomery County. Marie also noted an ambrosia beetle adult on an alcohol monitoring bolt, but not boring inside of it. She found 30 ambrosia beetles in alcohol traps as well. Beetles were not identified to species. A nursery grower is also seeing them hit alcohol monitoring bolts, Styrax, Kwanzan cherries and Milkyway Kousa dogwoods in Carroll County. He noted that activity started on April 8.

Frass tubes are indicators of ambrosia beetle activity.
Photo: Marie Rojas, IPM Scout

You can see the rear of the ambrosia beetle in the hole on the trunk.
Photo: Marie Rojas, IPM Scout

Caterpillar Active on Euonymus

By: Stanton Gill

Matt Wentworth, The Davey Tree Expert Company, sent in this great picture his client took of euonymus caterpillars feeding this week on evergreen euonymus. This is one of the early feeding caterpillars active in the landscape. If you did nothing at all for control, the plant rapidly recovers from the damage since euonymus is an aggressive re-foliating plant.

Euonymus leaf-notcher caterpillars cause a lot of damage early in the season. Plants have plenty of time to refoliate.
Photo: Fj Hughes

Eastern Tent Caterpillars

We are not getting too many reports or seeing many eastern tent caterpillars so far this year. Mike Baker, D&D Lawn and Pest, found some tent caterpillars on a crabapple tree in Edgewater. Mechanical removal of the tents is a good control option, if it is feasible. Conserve and Bt are also options for control of young caterpillars.

Eastern tent caterpillars are active at this time of year.
Photo: Mike Baker, D&D Lawn and Pest

PawPaw Flowering and Beneficials

By: Stanton Gill

Paw paws are coming into bloom this week and will be in flower for 3-4 weeks. Do not apply any pesticides at this time. They will be in flower for a long period of time and attract flies, such as syrphid flies, and beetles, including carrion beetles.

Pawpaw flowers will become purple as they mature.
Photo: Stanton Gill, UME

Boxwood Leafminer – (*Monarthropalpus flavus*, Diptera: Cecidomyiidae)

By Nancy Harding and Paula Shrewsbury, UMD

A couple of weeks ago we reported boxwood leafminer larvae were changing into their pupal stage, see: https://extension.umd.edu/sites/extension.umd.edu/files/2024-04/24Apr05L.pdf. In Bowie, MD on April 15th, there were only 1 or 2 adults on my boxwood, whereas on April 16th there were hundreds of adults flying around. Boxwood leafminer adults emerge almost synchronously. Also, at this time there are many empty pupal cases sticking out the underside of the leaves. The accumulated growing degree days in Bowie on April 16 was **211 DD**. If you have boxwood, now is the time to monitor for adult emergence.

Fig. 1 Boxwood leafminer adult. Photo: Nancy Harding, UMD

Life cycle: The adult boxwood leafminer is a tiny orange-yellow gnat-like fly about 1/8" long (Fig. 1 and Fig. 2). Adult leafminers emerge over a two week period but each fly only lives about 24 hours. After mating each female lays about 30 eggs into the leaf tissue and then they die. Tiny whitish maggots (larvae) hatch in about 2 weeks and begin feeding until the weather warms. During the heat of the summer the larvae do not feed much. In the cooler fall months, the larvae actively feed and this is when most of the damage is done. As they grow, they will become bright yellow and overwinter as partially-grown larvae. Larval feeding between the upper and lower parts of the leaf causes blister-like mines on the underside of the leaf. Leafminer damage can cause the plants to look as though they have received severe winter burn, and damaged leaves drop early.

Fig. 2 Boxwood leafminer adults swarming around boxwood foliage after recently emerging as adults. Photo: Craig Gray, Arlington National Cemetery

Monitoring: At this time, shake shrubs to detect flying adults and look for pupal cases on the underside of the leaves.

Control: Encourage natural enemies such as green lacewings and spiders. Keep plants healthy. Use boxwood cultivars that are more resistant to boxwood leafminer. Cultivars of English boxwood such as *Buxus sempervirens* 'Pendula,' '‘Suffruticosa,' 'Handworthiensis,' 'Pyramidalis,' 'Argenteo-varigata' and 'Varder Valley' are more resistant. Mechanical controls can reduce populations. Prune the foliage before adults emerge, or if they have already emerged wait until adults are done laying eggs in the leaves. If numerous mines, an application of Avid, Mainspring GNL, or a synthetic pyrethroid can be used when the adults are flying. A systemic insecticide can be applied to the soil now to target the hatching and feeding early instar larvae.

Boxwood Psyllids

Jessica Corazza, City of Rockville, is reporting boxwood psyllid nymph activity in Rockville this week. We were in the same area and saw a few lady beetles around these populations. Psyllid nymphs produce the white, waxy material and are found feeding on growing tips. Feeding causes cupped and curled leaves. Boxwood psyllid has one short generation each year. Damage is rarely significant enough to warrant treatment. If you do treat, materials such as Avid, Endeavor, Altus, or Acephate should all control this insect.

Boxwood psyllid nymphs produce the white, waxy material.
Photo: Jessica Corazza, City of Rockville

Time to Spray for Summer Patch Disease

By: Fereshteh Shahoveisi, PhD, Turfgrass Pathologist

Figure 1) Summer patch symptom on Kentucky bluegrass in August.
Photo: Fereshteh Shahoveisi, UMD

It is that time of the year to spray for summer patch disease if you have had issues with the disease previously. This fungal disease affects turfgrass species such as annual and Kentucky bluegrass and fine fescues. While summer patch symptoms appear in the middle of the summer (Figure 1), the fungus actively grows in the spring. Proper identification of the disease is the key factor for an effective management. Once identified, fungicides are the effective tool in managing the disease; however, timing and application techniques are key to success. The best results will be obtained with spring applications when soil temperatures approach and stay at 65°F for a few days. For optimal control, plan for two to three applications at one-month intervals. To ensure that the fungicides are effective, watered them in to reach the root system where the pathogen is attacking the plant. After applications, immediately water in the fungicide with 1/8" to 1/4" inch of irrigation. Alternatively, use a high volume of water, 5 gallons per 1,000 square feet, for applications if immediate irrigation is not possible. There are several effective fungicides against summer patch such as azoxystrobin (Heritage), azoxystrobin + propiconazole (Headway), benzovindiflupyr + difenoconazole (Ascernity), and fluoxastrobin + tebuconazole (Fame T). Please note that Ascernity and Fame are not registered for application in home lawns. For more information about available fungicides and their efficacy you can refer to "Chemical Control of Turfgrass Diseases" by the University of Kentucky at https://www2.ca.uky.edu/agcomm/pubs/PPA/PPA1/PPA1.pdf.

What Stage Is Crapemyrtle Bark Scale Now?

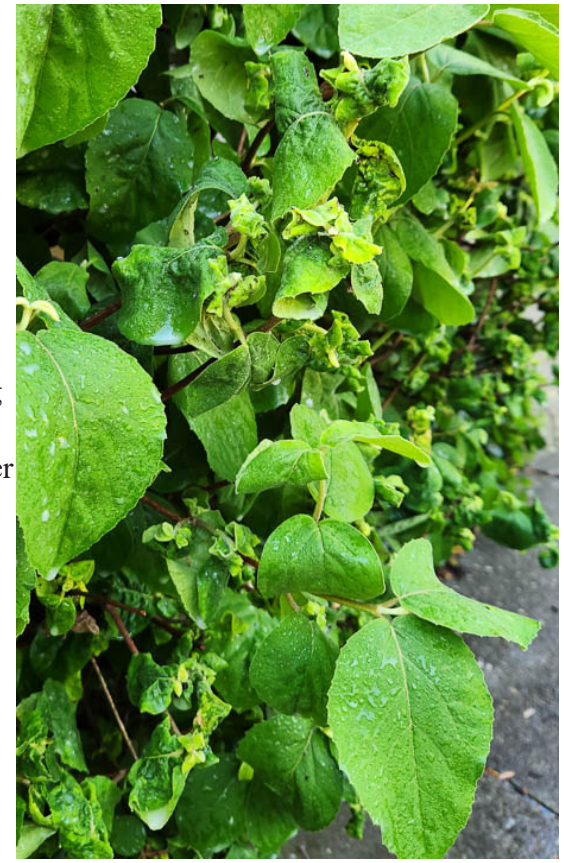
We had a request to show what stage we are seeing at this time of year of crapemyrtle bark scale. They are still overwintering females with the white, felted cover in our research plots in Ellicott City. Last year, we saw crawler emergence at the beginning of June in centarl Maryland.

The stage of crapemyrtle bark scale as of April 19 on plant sin Ellicott City. A lady beetle pupa is among ths population. Last year, we had reports and saw activity of lady beetles, lacewings, and syrphid flies on scale populations.
Photos: Suzanne Klick, UME

Aphd Activity

Sam Fisher, Bartlett Tree Experts, saw signs and symptoms of an aphid outbreak on some viburnums. Sam treated the plants with horticultural oil, which is a good option if you find beneficial insects on the plants. Marie Rojas, IPM Scout, is finding aphids on 'Winter King' hawthorns. These aphids cause the leaves to roll up and become distorted. Marie is also seeing spiny witchhazel gall aphids on river birch leaves.

Look for natural predators like lacewings, lady beetles, hover flies, parasitic wasps, and birds to determine if any control measures are necessary. Look for signs of parasitized aphids - they stop producing wax and become discolored (mummified). A circular exit hole made by the parasitoid can sometimes be seen in the aphid mummy's upper surface.



Heavy aphid damage on viburnums.
Photo: Sam Fisher, Bartlett Tree Experts

Leafminers on Hellebores

Karen Rane, UMD, found hellebores in Silver Spring showing leafminer damage. Karen noted that the leafminer damage is only on the unifoliate leaves located on the flower stems - she didn't see any on the compound leaves. Karen mentioned that she hasn't seen this type of injury before and was wondering how widespread it might be. The leafminers were on cultivated varieties and *Helleborus foetidus* which also had aphids on it that are specific to hellebores.

Leafminer damage is on the cultivated hellebore variety on the left; leafminer damage and aphids that are specific to hellebores are on *Helleborus foetidus* in the photo on the right.
Photos: Karen Rane, UMD

Diagnostic Session on May 2 on the Eastern Shore

This diagnostic session, organized by University of Maryland Extension and the Maryland Arborists' Association.

Danielle Bauer Farace and The Maryland Arborist Association and Ginny Rosenkranz, Extension Educator, have set up a plant diagnostic IPM session for May 2, 2024 at Salisbury University. Andrew Ristvey, David Clement, Ginny Rosenkranz and Stanton Gill will conduct this hands-on diagnostic skill building session. Come join us by registering on Eventbrite.

Elder Shoot Borers

Marie Rojas, IPM Scout, is finding activity and damage from elder shoot borers starting on *Sambucus* 'Eva'. This borer overwinters in the egg stage and caterpillars hatch in the spring and bore into new shoots. In winter, remove dead canes to reduce pupation. Be sure to remove prunings from the area.

This borer overwinters in the egg stage and caterpillars hatch in the spring and bore into new shoots.
Photos: Marie Rojas, IPM Scout

Galls on Elm

Marie Rojas, IPM Scout, is finding sack galls on Ulmus 'Wilson' this week. Look for aphids within these galls, Control is not necessary.

Galls are forming on elm leaves at this time of year.
Photo: Marie Rojas, IPM Scout

Fruit Disease Update from Kari Peter, Penn State

2024 Disease Update: Conditions Favorable for Apple Scab and Fire Blight Infection Week of April 15

Mother Nature seems to have finally committed to embracing spring temperatures in the last week. This has encouraged many apple varieties to zip from tight cluster to pink to bloom in a short time. Growers must closely monitor weather conditions this week, April 15–20, 2024. For trees in bloom, fire blight infection conditions are favored April 15–16. Rain is in the forecast for April 17–18. The temperature forecast is cooler these days; however, this will be a significant apple scab infection event. Trees will need to be protected to prevent disease.

With warm weather comes the threat of fire blight when trees are blooming, especially if some kind of wetting event (rain, fog) is in the forecast. According to MaryBlyt , infection conditions are being met April 15–16. And apple scab infection is predicted for April 15, 17–18. We have entered a period when the number of overwintering apple scab spores is nearing peak availability. Consequently, the favorable conditions and number of available mature spores create high disease pressure for scab infection. As a reminder, the rust galls (cedar apple rust and quince rust) are actively discharging spores during rain events.

Finally, we are not out of the woods yet for brown rot blossom blight in stone fruit. This article discusses general tips for disease management for apple scab, fire blight, rust, and brown rot blossom blight prevention during the coming week. Regardless of the bud development stage, all growers should reapply for protection this week since the region experienced high rainfall over the last week.

Sapsucker Damage

Elaine Menegon, Good's Tree and Lawn Care, received a call from a client about active " borers" in her crabapple tree. The damage turned out to be yellow-bellied sapsucker damage.

These holes going around the trunk in fairly straight lines are caused by yellow-bellied sapsuckers. Phto: Elaine Menegon, Good's Tree and Lawn Care

Gymnosporangium Rusts

Luke Gustafsopn, The Davey Tree Expert Company, reports that he has been seeing a fair amount of gymnosporangium rust on junipers in Baltimore this past week. As these galls produce spores into May, continue to make fungicide applications to roseacous plants, such as serviceberry, crabapples, and hawthorns.

Gymnosporangium rust spores from junipers will continue to infect roseacous plants into late spring.
Photo: Luke Gustafson, The Davey Tree Expert Company

Plum Curculio

By: Stanton Gill

Our pheromone baited trap in Westminster is showing flight activity from plum curculio by April 15th. The adults tend to fly under the canopy in their early flight activity. After petal fall on apple and pears, then they can be found flying up into the canopy and looking for newly formed fruit in which to lay eggs. Avaunt insecticide is effective as a contact material. The idea is to kill female adults before they cut into the soft new fruit and lay their eggs.

Peach Leaf Curl

Marie Rojas, IPM Scout, is finding damage from peach leaf curl infection on 'Desiree' peaches. It is too late to apply control measures at this time.

Distorted and discolored leaf is caused by an infection of peach curl disease.
Photo: Marie Rojas, IPM Scout

Caterpillar Activity in the Last 7 Days

By: Stanton Gill

The consultants at Home and Garden information center are getting in a lot of emails reporting caterpillars in lawns and landscapes. Their customer calls are reporting lots of bird grabbing these overwintering caterpillars and carrying them out for a snack. This is a good example of biocontrol from bird activity.

Eric Wenger, Complete Lawn Care, found cutworms just pouring out of some freshly cut sod he purchased this week from a local grower. Eric noted that he has “never really seen large turf caterpillars like this previously, in April. July or August, sure, but not April.”

Ross Fornaro, NaturaLawn of America, treated with Acelepryn on April 6 and is reporting that the treatment seems to be very effective. Ross noted that we have had plenty of moisture and grass is growing well for the material to be taken up into the grass for controlling the caterpillars. He brought a sample of a few caterpillars into our research lab for an UMD entomologist, Kelly Hamby, on campus to look at more closely. We have only seen photos from everyone so far.

One of many caterpillars found in freshly cut sod this week.
Photo: Eric Wenger, Complete Lawn Care

These caterpillars found in turf blend in very well with their surroundings.
Photo: Ross Fornaro, NaturaLawn of America

Pearleaf Blister Mites

Marie Rojas, IPM Scout, is finding pearleaf blister mites on Pyrus 'Seckle' this week. It is an eriophyid mite found on edible and ornamental pears, *Pyrus* sp. When buds start to grow in spring, pearleaf blister mites feed on new leaves. Management is often timed for the fall to treat the mites while they are in the outer bud scales. Delayed dormant applications also target the bud scales with oils. Timing during the season is best done prior to their movement into the leaf blisters after petal fall. A 2 % horticultural oil application is a good control option.

Beneficial of the Week

By: Paula Shrewsbury and Mike Raupp

Bumble bees are buzzing - loudly

Note the pollen collected on the hind leg of this bumble bee.
Photo: M.J. Raupp, UMD

I imagine many of you have heard the loud buzzing of bumble bees (*Bombus* sp.) as they fly around drinking nectar and picking up pollen from different flowers. Bumble bees are responsible for pollinating many cultivated crops and uncultivated trees, shrubs, and herbaceous plants in our gardens, fields, and woodlands.

This week, as I was out in a semi-wooded lot setting up a research trial and I heard this very loud buzzing sound. When I looked down, I saw a loud, busy, buzzing bumble bee. I must have seen at least 20 of these buzzing bumbles that day. The bumble bees seen (and heard) now, like in past springs, are queen bumble bees that survived the winter in holes in the ground or other protected outdoor locations. While in her overwintering location, the queen uses up most of her energy reserves to survive the winter. The first thing she does when she emerges is to drink nectar and feed on pollen from flowers to restore her energy. She can then look for a new nesting site, a place to call home. Queen bumble bees usually construct their nest in the ground in a burrow that was abandoned by a mouse or other small animal. Nests can be found in fallow fields, forest edges, and even in landscape beds. Bumble bees can even be "tricked" into starting their nests in special human-made hive boxes (often used to conserve bumble bee populations). The queen initiates her nest by moving into her new found burrow, building a waxen pot to store honey, provisioning a second chamber with pollen (known as the brood chamber), and laying several eggs within the brood chamber.

Eggs hatch into larvae that eat the pollen. These larvae will become the entourage of workers that will later aid the queen in feeding and caring for their sisters as the colony increases in numbers during the spring and early summer. Late in summer the queen lays eggs intended to become the new queens. Unfertilized eggs develop into male bees known as drones. The original queen and her workers die around the time of a hard frost, and about that time the new queens abandon the nest to find protected refuges to spend the winter. Bumble bees do not store massive reserves of honey in the colony as do honey bees. Bumble bees have annual colonies (the colony only lives for one year) and therefore have no need to store vast honey reserves, as only the queens survive the winter.

There are about 49 species of bumble bees known to occur in the United States. As with many pollinators, there is growing concern that this number is declining. For example, the Franklin bumble bee, a resident of Oregon and California, has not been seen recently in several locations where it was once found. Introduced pathogens, pesticides, and habitat loss and deterioration are thought to contribute to the decline of our native pollinators, including bumble bees. One way to help conserve these wonderful and environmentally important creatures is to use pesticides sparingly, or not at all, especially near flowers where these bees forage. Also don't forget to enhance your landscapes and nurseries with flowering plants to provide additional resources for honeybees and other beneficial insects. For more information on bumble bees and how you can help conserve them, go to the Xerces Society website.

Weed of the Week

By: Kelly Nichols, UME-Montgomery County

Japanese stiltgrass (*Microstegium vimineum*) seedlings began emerging in early April in Central Maryland (Figure 1). As of Monday, they were starting to push out the second true leaf. Controlling smaller weeds is easier than large weeds, and Japanese stiltgrass is no exception, so plan for post-emergent herbicide applications now before it gets too big. Japanese stiltgrass is an invasive grass that is typically seen in wooded areas. It likes shaded, wet areas and can easily take over the forest understory. However, it also creeps into lawns and hay fields. The leaves of Japanese stiltgrass are wider and shorter than most of our common lawn grasses. There is also a distinctive silvery midvein that is slightly off-center from the middle of the leaf (Figure 2). Japanese stiltgrass also has a shallow root system, so it can be pulled out easily.

Post-emergence herbicide options include fenoxaprop (Acclaim Extra®) and topramezone (Pylex®). The Acclaim Extra and Pylex labels state to spray when annual grass weeds like stiltgrass are in the 1 to 4-leaf stage or before the fourth tiller growth stage, respectively. A broad spectrum herbicide such as glyphosate can be used to control stiltgrass; however, keep in mind that broad spectrum herbicides will injure or kill any plant that it touches. So, this is only an option for spot-spraying heavily infested areas. For future years, pre-emergent herbicide options include prodiamine, pendimethalin, and dithopyr. However, ensure that Japanese stiltgrass is on the label of specific products. Pre-emergent products may not be the best option if turf is going to be planted in that same area, as these products will affect germination of desired species as well.

The one (and only one) positive thing about this invasive is that it is an annual, so there's no perennial root system to contend with. However, as an annual, stiltgrass spreads by seeds. Seedheads start to form in mid-September through October. Once they are visible (Figure 3), mow the area to prevent the seeds from maturing and becoming viable. The stiltgrass will likely not have enough time to regrow and set more seeds before the first frost. Once a control method is implemented, re-seed bare areas so they are not left for stiltgrass and other weeds to fill back in.

Figure 1. Japanese stiltgrass seedlings. Photo taken on April 6 near Clarksville, MD. Photo: Kelly Nichols, UME

Figure 2. A silvery midvein is slightly off-center. Photo: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Figure 3. Japanese stiltgrass seedhead beginning to emerge.
Photo: Nancy Loewenstein, Auburn University, Bugwood.org

Figure 4. A fully emerged seedhead.
Photo: Chris Evans, University of Illinois, Bugwood.org

Plant of the Week

By: Ginny Rosenkranz

Mertensia virginica is also called Virginia bluebells or Virginia cowslips, a lovely native herbaceous perennial that thrives in moist, rich, well-drained soils in part to full shade. They grow as clump forming erect plants 1 to 2 feet tall and 1 to 1 ½ feet wide, and depending on the site. Plants bloom from March to May, for about 3 weeks. Plants are cold tolerant in USDA zones 3-9, and have deep taproots that don't like to be disturbed. The 2-8 inch foliage is attached alternately on the stems, emerging in a deep purple color, maturing into a green blue color with a smooth, oval shape with wavey margins. The flower buds start out a soft pink that develop into a bright sky-blue trumpet shaped flower. Flowers grow to ¾ to 1 inch long and have a delicate sweet fragrance with 5 petals that fuse together to create the trumpet. They can self-seed and colonize, filling in areas around the trees. In mid-summer the plant foliage dies to the ground and goes dormant, so they should be interplanted with other shade loving perennials like Trillium, Dicentra, ferns or shade loving annuals for summer color. While they are in bloom bumblebees, long tonged bees, butterflies, skippers, moths, flower flies, bee flies and hummingbirds will visit. Plants are resistant to rabbits, deer and Black Walnuts. There are no serious pests.

Pink buds of Virginia bluebells open into purple blue flowers.
Photo: Ginny Rosenkranz, UME

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 **159 DD** (Martinsburg) to **332 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.

Boxwood spider mite – egg hatch **(141 DD)**
European pine sawfly – larva, early instar **(154 DD)**
Woolly elm aphid – egg hatch **(163 DD)**
Inkberry holly leafminer – adult emergence **(165 DD)**
Spiny witchhazel gall aphid – adult/nymph **(171 DD)**
Boxwood psyllid – egg hatch **(184 DD)**
Tea Scale – egg hatch / crawler (1st gen) **(195 DD)**
Hemlock woolly adelgid – egg hatch (1st gen) **(197 DD)**
Viburnum leaf beetle – first egg hatch **(210 DD)**
Azalea lace bug – egg hatch (1st gen) **(214 DD)**
Birch leafminer – adult emergence **(215 DD)**
Elm leafminer – adult emergence **(219 DD)**
Roseslug sawfly – egg hatch / early instar **(230 DD)**
Honeylocust plant bug – egg hatch **(230 DD)**
Elongate hemlock scale – egg hatch / crawler (1st gen) **(232 DD)**
Boxwood leafminer – adult emergence **(249 DD)**
Hawthorn lace bug – first adult activity **(259 DD)**
Spotted lanternfly – egg hatch **(270 DD)**
Bristly roseslug sawfly – larva, early instar **(284 DD)**
Imported willow leaf beetle – adult emergence **(290 DD)**
Hawthorn leafminer – adult emergence **(292 DD)**
Andromeda lace bug – egg hatch **(305 DD)**
Pine needle scale – egg hatch / crawler **(307 DD)**
Cooley spruce gall adelgid – egg hatch **(308 DD)**
Eastern spruce gall adelgid – **(308 DD)**
Spirea aphid – adult / nymph **(326 DD)**
Lilac borer – adult emergence **(350 DD)**
Melon aphid – adult / nymph **(351 DD)**
Spongy moth (formerly gypsy moth) – egg hatch **(373 DD)**
Holly leafminer – adult emergence **(375 DD)**
Hemlock woolly adelgid – egg hatch (2nd gen) **(411 DD)**
Basswood lace bug – first adult activity **(415 DD)**
Emerald ash borer – adult emergence **(421 DD)**
Locust leafminer – adult emergence **(429 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 April 17)

Annapolis Naval Academy (KNAK)	219
Baltimore, MD (KBWI)	238
College Park (KCGS)	230
Dulles Airport (KIAD)	268
Ft. Belvoir, VA (KDA)	267
Frederick (KFDK)	230
Gaithersburg (KGAI)	207
Greater Cumberland Reg (KCBE)	207
Martinsburg, WV (KMRB)	159
Millersville (MD026)	230
Natl Arboretum/Reagan Natl (KDCA)	318
Perry Hall (C0608)	192
Salisbury/Ocean City (KSBY)	235
St. Mary's City (Patuxent NRB KNHK)	332
Susquehanna State Park (SSQM2)	206
Westminster (KDMW)	264

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

Conferences

May 2, 2024
Pest Walk in Salisbury
Location: Salisbury University

May 22, 2024
MAA Pest Walk
Location: CMREC, Ellicott City, MD

June 4, 2024
MNLGA Program: Focus on Garden Centers
Location: Ladew Gardens, Monkton, MD

June 5 and 6, 2024
Biological Control Conference for Greenhouses, Nurseries, and Landscapes
Location: Central Maryland Research and Education Center, Ellicott City, MD

June 14, 2023
Eastern Shore Pesticide Recertification Conference
Location: via Zoom
For more information and to register.
After you register, you will be emailed the Zoom link.

June 20, 2024
UMD Extension and MNLGA Technology Field Day for Nurseries
Location: Ruppert Nurseries, Laytonsville, MD

June 28, 2024
Procrastinator's Pesticide Recertification Conference
Location: Montgomery County Extension Office, Derwood, MD

September 17 and 18, 2024 (rescheduled from March)
Cut Flower Program
Locations: Central Maryland Research and Education
Center, Ellicott City, MD and locations in Howard Co.

October 9, 2024
MNLGA Retail Day
Location: Homestead Gardens, Davidsonville, MD

Go to the IPMnet Conference Page for links and details on these programs.

Sustainable Horticulture Program at CCBC - Dundalk and Hunt Valley

Below are all the upcoming offerings from the Sustainable Horticulture Program. It may seem early to be thinking about summer and fall classes, but some classes are already filling up! Links to each attached flier are in the information below.

Summer classes: Start June 4th and end August 9th. (10 weeks). Two classes are offered: HORT 111 Herbaceous Plants on Tuesday evenings at CCBC Hunt Valley and HORT 134 Landscape Installation, Construction, and Maintenance on Fridays at CCBC Dundalk. Link to flier: Summer classes
Fall classes: Start August 26th, ends December 8th (15 weeks). Link to flier: Fall classes

The Basic Horticulture Technician Certificate Program: the Sustainable Horticulture Department is again offering full Scholarships for the Basic Horticulture Technician Certificate Program for the 2024 Fall Semester at CCBC Dundalk. This is an excellent way for a student to get started in Horticulture. Classes are every Thursday and Friday, for the fall semester (15 weeks total). Students take 4 courses, for a total of 12 college credits. Applicants must be college ready and academically prepared to take 4 college courses in 1 semester. Basic Hort. Technician Certificate.

The "Earn and Learn" opportunity with CCBC, called the American Landscape Institute or ALI for short. ALI is a scholarship program for high school graduates that combines paid employment with an 80% tuition scholarship to take horticulture classes. When students complete the 8 semester, 39 credit-program, they earn their Certificate in Landscape Design, Installation and Maintenance from CCBC. And after completing the program, each graduate receives their 20% tuition contribution back in the form of a check. They graduate debt free! Visit the ALI website to learn more about this unique program and to download the application: americanlandscapeinstitute.com Or contact me, Martha Pindale 410-688-5115 mpindale@ccbcmd.edu
For information on all of CCBC Sustainable Horticulture Certificates and AAS Degree, please contact Winny Tan. She will gladly answer questions and help with the registration process. Office: 443-840-3787 or wtan@ccbcmd.edu

Full Time (9-Month) Teaching Faculty Position in Horticulture and Landscape Design.**Northern Virginia Community College, Loudoun Campus**. For the full job description and to apply visit: https://jobs.vccs.edu/postings/71216. The *deadline to apply is May 19th, 2024.* This position would start in August for the Fall 2024 semester. The Horticulture Technology Program at Northern Virginia Community College (NOVA) in Sterling, VA, is looking to fill a full time (9-month) teaching faculty position. We are seeking qualified applicants with a variety of subject matter expertise including in Horticulture, Landscape Design and Landscape Architecture. Ideal applicants will be able to teach some of the following course subjects: Introduction to Horticulture, Plant Propagation, Plant Identification, Plant Pest Management, Woody Plant/Tree Identification, Site Analysis, Planting Design, Plant Composition, Landscape Design, Landscape Drawing Applications. Our state-of-the-art facilities include a modern 5,200 sq. ft. greenhouse, teaching gardens and dedicated classrooms with studio and laboratory spaces for horticulture and landscape design. The program offers students two different degree plans: a Horticulture Technology AAS and a Landscape Design Specialization AAS. For more information on the Horticulture Technology Program at NOVA, please visit: https://www.nvcc.edu/academics/programs/horticulture-technology.html

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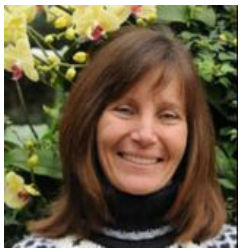

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.