UNIVERSITY OF MARYLAND EXTENSION

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

Commercial Horticulture **April 11, 2025**

In This Issue...

An article on the problems with arborvitae dying in landscapes will be included in a report this month.

Beneficial of the Week: *Calasoma* spp. beetles feeding on caterpillars
Weed of the Week: Yellow rocket (*Barbarea vulgaris*)
Plant of the Week: Redbud (*Cercis canadensis*)

Pest Predictive Calendar
Phenology
Conferences

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 sklick@umd.edu

Coordinator Weekly IPM Report:
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Pest and Beneficial Insect Information: Paula Shrewsbury (Extension Specialist) and Nancy Harding, Faculty Research Assistant
Disease Information: David Clement (Extension Specialist) and Ana Fulladolsa (Plant Pathologist and Director, UMD Diagnostic Lab)
Weed of the Week: Kelly Nichols, Nathan Glenn, (UME Extension Educators), and Chuck Schuster (Retired Extension Educator)
Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/Somerset Counties)
Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)
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Ambrosia Beetle Update

By: Paula Shrewsbury

This past week has been relatively cool and rainy, and I did not expect to see many ambrosia beetles in the ethyl alcohol baited traps that were put out this past week, and we did not. We trapped a total of 5 ambrosia beetles. At Salisbury there was 1 black stem borer (*Xylosandrus germanus*) that was collected last week; and 4 fruit tree pinhole borers (*Xyleborinus saxesenii*) at CMREC (Ellicott City). For beetles of significant concern, in the last two weeks we have only seen 3 total black stem borers (*X. germanus*), and no granulate ambrosia beetle (*X. crassiusculus*) or camphor shoot beetles (*Cnestus mutilatus*).

Recommendations: Given the trap results, and next week's weather predictions, there does not appear to be a high risk of ambrosia beetle activity. Always monitor though since we are dealing with biology and weather.

If you recall from last weeks traps, the most abundant beetle we collected was the fruit tree pinhole borer (*X. saxesenii*), and we caught 4 from CMREC this week and I said I would follow up to determine if this species of ambrosia beetle was something that you must be concerned about. I contacted Chris Ranger and Julie Baniszewski (USDA ARS Wooster, OH), two researchers who are experts on ambrosia beetles, and asked them about fruit tree pinhole borer (*X. saxesenii*).

Here what Chris told me. "*Xyleborinus saxesenii* (fruit tree pinhole borer) infests trees in orchards and nurseries. While losses due to branch dieback and tree death aren't necessarily common with this ambrosia beetle, an infestation can be a sign of tree stress and coincide with infestations by more destructive species, including *Xylosandrus germanus* (black stem borer) and *Xylosandrus crassiusculus* (granulate ambrosia beetle). Growers should monitor their trees for active infestations. Regarding treatments, the efficacy of entomopathogenic or antagonistic fungi has been inconsistent. Preventive use of permethrin or bifenthrin is more effective than other conventional insecticides, but growers would have to check product labels to ensure they can treat trees depending on their flowering stage." Julie added that *X. saxesenii* start to fly in OH in May (~100 DD) and they trap them occasionally in the summer (about a 3-month period total). She also stated that this beetle only makes up less than 5% of the thousands of beetles they trap.

***Xyleborinus saxesenii*, fruit tree pinhole borer, adult trapped at CMREC, Ellicott City MD on April 10, 2025.**
Photo: S. Klick, UME

I think the take home here is that fruit tree pinhole borer (*X. saxesenii*) do not directly cause significant damage to trees (ex. killing them), and in general their numbers are much lower than other ambrosia beetles. However, since they usually attack diseased, unhealthy, or stressed trees, including those attacked by more damaging ambrosia beetles, you should monitor your trees for them (and we will continue to report them in trap catches).

As a reminder or FYI – Traps to monitor for ambrosia beetle activity are at the Central MD Research and Education Center (CMREC) in Ellicott City, Marie Rojas (IPM scout) put traps in Beallsville and Gaithersburg, and Ginny Rosenkranz (UME) put up a trap in Salisbury, MD. We are monitoring closely for the following ambrosia beetles: *Xylosandrus germanus* (black stem borer), *X. crassiusculus* (granulate ambrosia beetle), and *Cnestus mutilatus* (camphor shot borer), and keeping an eye out for other potential troublemakers. Given what we have learned we will also report on the fruit tree pinhole borer (*X. saxsenii*).

Pollen From Trees

Ginny Rosenkranz took and sent this photo showing that loblolly pines are ready to release a lot of pollen soon. Other trees are also shedding pollen that is causing problems for those with allergies and is coating many cars in the area.

Freeze Damage to Boxwood Leaves

By: Paula Shrewsbury

Mark Noll (Maxalea) shared images from a site he was at on April 9th in Towson, MD where there was freeze damage to boxwood leaves. It appears water froze between the upper and lower leaf layers causing them to split open (see image). I have never seen this before. Good find Mark! It will be interesting to see what the plant looks like a little later this season. More typical cold damage to boxwoods appears as leaves that are dull and off color, curled and wilted, often on the newer growth (see image).

Seeing this damage made me think about the difference between frost and freeze damage to plants. Freeze is usually more damaging than frost. Frost occurs when ice crystals form on the surface of the plant, usually when plant level temperatures reach 32°F. Frost often results in damage on cold sensitive plants and appears as edges of leaves or flowers appearing burnt and possibly leaf or flower drop. The National Weather Service gives frost warning when temperatures are predicted to be between 33-36°F. Freeze on the hand occurs when the water in the plant cells freezes and expands. This ends up killing the plant or plant parts because it damages the vascular system. Leaves and sometimes stems wilt, turn brown or black, and die back (see image). A freeze occurs when air temperatures are 32°F or below. Other factors, such as drying winds at these low temperatures, may also affect the damage that occurs. When I checked the weather for Towson the night of April 8th / morning of the 9th, the low temperature was 30°F with winds between 11-21 mph, explaining freeze damage to the boxwoods.

Unusual freeze damage to boxwood leaves. It appears water froze between the upper and lower leaf layers causing them to split open. Photo: Mark Noll, Maxalea, Inc.

More typical freeze damage to boxwood leaves. Leaves are off color, curled and appear wilted. Photo: Bob Mead, Mead Tree and Turf Care

Look Out for Blossom Blast and Apple Scab on Fruit Trees

By. Ana Cristina Fulladolsa

Scab lesions on apple leaf and fruit.
Photo: Bruce Watt, University of Maine, Bugwood.org

In the most recent disease update, Dr. Kari Peter from Penn State (https://extension.psu.edu/2025-disease-update-blossom-blast-risk-for-blooming-stone-fruit-trees-april-9) warns us that current low temperatures and rain can favor fruit tree disease in Maryland and Pennsylvania. The article contains critical information on prevention and management of two diseases: blossom blast and apple scab.

Which symptoms should you look for?

Blossom blast is caused by the bacterial pathogen *Pseudomonas syringae* pv. *syringae*. Symptoms include blossoms wilting, turning brown and clinging to the tree, and dead buds that don't develop in the spring. Leaves have irregularly shaped brown spots with yellow halos, can turn reddish-brown to black and die, but remain on the branch. As disease progresses, cankers develop on tree limbs with infected leaves and expand to the trunk, resulting in dieback and stunting. Amber oozing may be seen on cankers, which can also produce a sour, fermented smell. Infected fruit may show circular, sunken, brown lesions. This disease is common on cherries, peaches, plums and other stone fruits.

Apple scab is a fungal disease caused primarily by *Venturia inequalis*. Disease symptoms are generally first observed as round lesions with "feathered" edges, olive-green to black in color, on the upper surface of leaves. Lesions start small, pinhead-sized and continue to expand and merge to cover a large portion of the leaf. Early infection may result in small, twisted leaves. Leaves with many lesions turn yellow and drop later in the season. Scab lesions may also appear on petioles, sepals, pedicels, and fruit. Pedicel infections may cause fruit drop. Fruit infections show as olive-green, rough, round lesions and, when heavily infected, fruits are malformed and cracked. Apple, crabapple, and pear are often affected by this disease.

Powdery Mildew of Dogwood

By: D. L. Clement and Sheena O'Donnell

Dogwood Powdery Mildew infects native dogwoods throughout the US. Early signs of infection include a powdery appearance on the newly emerging leaves. There are two powdery mildew species that have been reported to infect dogwoods; Erysiphe pulchra, which is the more prevalent species, and Phyllactinia guttata. This is an early season mildew that continues infection through the growing season, and is one of the most destructive diseases of flowering dogwoods in Maryland. It is an unusual powdery mildew since the white coating may not be highly visible during the entire growing season. Often the early white coating symptoms will disappear by summer.

Powdery mildew may cause multiple leaf symptoms including yellow to brown spots, leaf scorch, or maroon colored patches on infected leaves towards late summer. The fungus produces spores (conidia), which spread infection to surrounding leaves causing new leaves to curl upward and new growth to be generally stunted before actually showing mildew growth. Secondary infections caused by airborne conidia continue to spread throughout the growing season. Powdery mildew spores are unique in that they do not require a wet leaf to

cause infection, only high humidity. Later in the season, dark specks appear in the mildew growth, which are the sexual fruiting bodies (chasmothecia) that can overwinter in buds, bark crevices and fallen plant debris. These structures will release their spores next spring starting the disease cycle again.

Look closely at new leaves of dogwood for white spots of powdery mildew.
Photo: David Clement, UME

Management

Cultural practices include avoiding heavy pruning, or the use of high nitrogen fertilizers, both of which trigger rapid and tender growth which encourages further infections. Mulch root zones, prune out dead branches, and maintain an open airy branch structure to promote circulation.

The best way to avoid this disease is to choose resistant varieties. University of Tennessee's breeding program developed a powdery mildew -resistant 'Appalachian' series of C. florida in the early 2000's, including 'Jean's Appalachian Snow', 'Karen's Appalachian Blush', 'Appalachian Joy', and 'Kay's Appalachian Mist'.

In general, Cornus kousa plants are resistant to powdery mildew infection. Also, since C. kousa is generally more tolerant of higher light levels it is more tolerant of conditions that do not promote the spread of powdery mildew. Rutgers has been breeding dogwoods for powdery mildew disease resistance since the 1970s. Their Stellar series - includes cultivars 'Celestial', 'Constellation' and 'Ruth Ellen'. These plants are hybrids of C. florida x C. kousa, so they have traits of both types of dogwood. C. kousa 'Scarlet Fire' is one of Rutgers' newest varieties which displays deep-fuschia bracts.

The Tennessee State University (TSU) Ornamental Pathology Program conducted a study in 2017 to evaluate fungicide rotation at 14, or 21-day spray application intervals for the control of powdery mildew of dogwood. The initial fungicide application was Mural 45WG (7 oz/100 gal)(a.i. benzovindiflupyr + azoxystrobin) alternated with Palladium WDG (6 oz/100 gal)(a.i. cyprodinil + fludioxonil), or Concert II 4.3SE (35 fl oz/100 gal)(a.i. chlorothalonil + propiconazole).

The TSU Ornamental Pathology Program also evaluated Mural 45WG (5 oz/100 gal and 7 oz/100 gal)(a.i. benzovindiflupyr + azoxystrobin), Concert II 4.3SE (35 fl oz/100 gal)(a.i. chlorothalonil + propiconazole) and Pageant Intrinsic 38WG (18 oz/100 gal)(a.i. boscalid + pyraclostrobin).

These trials showed the 14-day rotation program significantly increased plant height compared to the non-treated control flowering dogwood plants. All treatments significantly increased plants' height compared to the non-treated control. Among fungicide-treated plants, plant height was significantly greater in plants treated with the higher rate of Mural. Nursery and landscape professionals can use 14-day treatment intervals while maintaining good protection.

ref: https://www.tnstate.edu/extension/documents/Dogwood%20Powdery%20Mildew%20Factsheet.pdf

Eastern Tent Caterpillars

Sam Fisher, Bartlett Tree Experts, found Eastern tent caterpillars in D.C. on April 9. Mechanical control works well. As tents become larger, reach into the tent, tear it open, pull out the caterpillars, and toss them in a bag and dispose of them. If necessary, you can also spray foliage with *Bacillus thuringienis kurstaki* or spinosad (Conserve) which give good control with minimal impact on beneficials.

Eastern tent caterpillars are still clustering on branches at this time of year.
Photo: Sam Fisher, Bartlett Tree Experts

Elsinoe Spot Anthracnose on Dogwood

By: David L. Clement

This coming week would be a good time to scout for Elsinoe infection especially with the prediction of rain this weekend and dogwood blossoms are beginning to open in central Maryland. Symptoms of spot anthracnose appear first as tiny (less than 1/8" diameter), circular lesions on flower bracts. Symptoms are visible as tan spots with reddish borders on bracts and then proceed to cause spots on leaves. This disease is caused by the fungus *Elsinoe corni.* In seasons when environmental conditions are conducive to disease, spots on bracts and foliage may be numerous, and leaves or bracts become puckered, or distorted around the spots as the leaves expand. *Elsinoe corni* survives the winter on twigs, in buds, or on infected fruit and leaves that remain on the tree. New infections occur in early spring. In most years, spot anthracnose causes little damage. However, in very cool, wet springs, symptoms can be severe.

Look for the small circular lesions on dogwood leaves caused by Elsinoe infection.
Photo: David Clement, UME

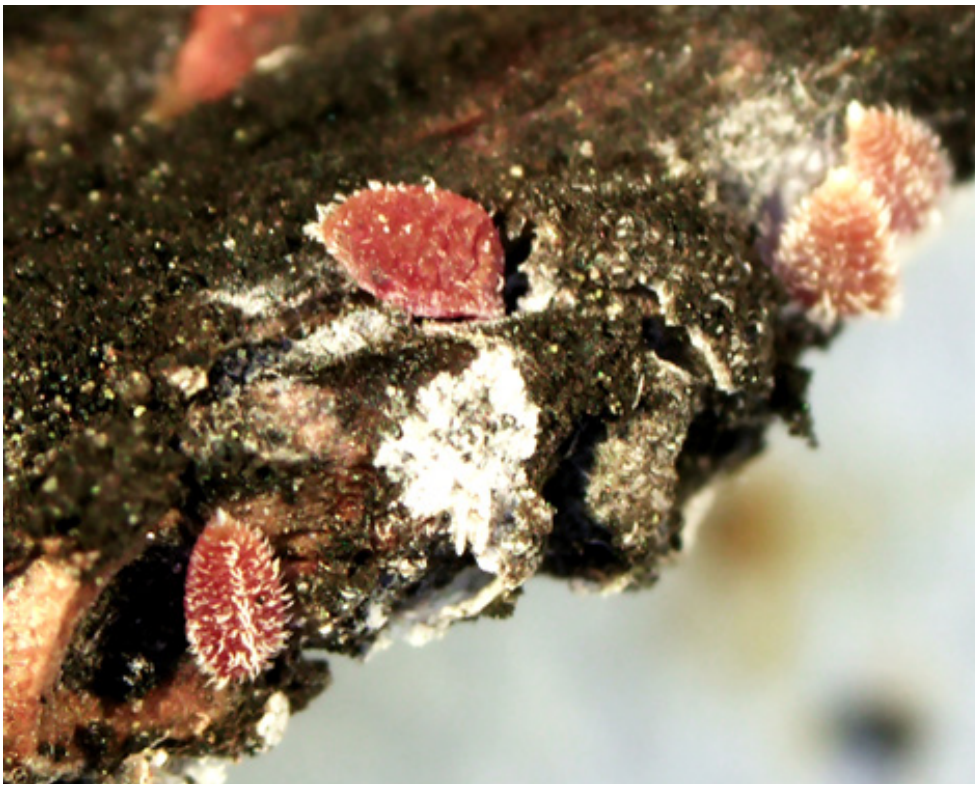
Management: In most years, management is not necessary. Spot anthracnose can be controlled preventatively with most general-purpose fungicides including propiconazole, thiophanate methyl, and myclobutanil. Spraying should begin as buds begin to open and repeated until the bracts have fallen. Symptomatic bracts and leaves will not respond to treatments. Additional sprays may be needed if the season is wet and again in late summer and fall after flower buds have formed.

Crapemyrtle Bark Scale is Active

By: Paula Shrewsbury, UMD

On April 10, 2025, Karin Burghardt (Dept. Entomology, UMD) and Sheena O'Donnel (CMREC Research Tech., UME) were observing crape myrtle trees with the invasive crape myrtle bark scale (CMBS), *Acanthococcus lagerstroemia*, in College Park, MD. Sheena is working on a project to determine the life cycle of CMBS in MD. They noted active stages of CMBS on the trees and brought me a sample. It is not clear at what stage CMBS overwinters or how many generations a year it has with reports of 2 to 4 depending on location. In looking at the literature, some reports say CMBS overwinter as eggs in ovisacs left by the adult female, while others state it overwinters in all stages from egg to early and late nymphs to adults. Based on the sample I saw on April 10th, it looks like CMBS overwinter in multiple life stages in MD. In observing the CMBS on the branches of the crape myrtle, we (Karin and I) saw newly settled crawlers (no white wax covering yet), later nymphal stages with varying degrees of waxy covering, and adults (see images). Of interest was an adult male CMBS (looks like a small midge-like insect with a dark red body, wings, and 2 thread-like appendages coming off its abdomen), and adult females which looks like a late immature stage. To our delight, the male was searching up and down the branch and when he found a female he liked, he mated with her. It was interesting to observe the mating behaviors. We did not see any new ovisacs yet.

Recommendations: Given the above observations, I recommend you monitor crape myrtles with CMBS and confirm there are active, live stages on the trees. Be sure to use a hand-lens or other magnification. Live CMBS will be pink to purple in color and will gush this color when you squish them, dead ones won't gush. Depending on the density of the population and how many trees you are managing, you can use mechanical control such as a soft scrub brush and water to physically wash the scales off the branches and trunk of the tree. There are also multiple chemical controls that are available for CMBS suppression. These include systemics such as dinotefuron, or contacts such as horticultural oil or other labeled products. Be sure to follow label directions to protect pollinators and get optimal control. I found a very good fact sheet on CMBS from Clemson Cooperative Extension that I suggest anyone who is dealing with CMBS should read. It provides a thorough description of CMBS biology and management.



Crapemyrtle bark scale nymphs (immatures) sampled in College Park, MD on April 10, 2025. Photo: K. Burghardt, N. Harding, P. Shrewsbury, UMD

Boxwood leafminer – (*Monarthropalpus flavus*)

By Nancy Harding and Paula Shrewsbury

In last week's IPM Report, Marie Rojas reported boxwood leafminer getting close to pupation (see: extension.umd.edu/sites/extension.umd.edu/files/2025-04/25Apr04L.pdf). This week on April 8 in Bowie, leafminers are now in the pupal stage on *Buxus sempervirens* 'Pyramidalis' (Fig. 1). When late instar larvae are ready to pupate, they chew the inner surface of the lower leaf layer to the point where there is only a thin layer of tissue membrane left between the insect and the outside. These circular, thin membraned areas are referred to as "windowpanes" (Fig. 2). Seeing windowpanes are a good indication the pupae are in the leaf and will pushing their way out of the leaf very soon. The boxwood leafminer pupae were found in leaves with "windowpanes" (Fig. 2).

Fig 1: A boxwood leafminer pupa revealed when the leaf was pulled away.
Photo: N. Harding, UMD

The accumulated growing degree days in Bowie on 4/9 was **155 DD** and based on our Pest Predictive Calendar https://extension.umd.edu/programs/agriculture-food-systems/program-areas/ornamental-horticulture/ipmnet/pest-predictive-calendar, boxwood leafminer **adult emergence** can occur when the growing degree days are near or at **249 DD**.

Fig 2: Boxwood leafminer windowpanes, indicating the pupae will emerge shortly.
Photo: N. Harding, UMD

The boxwood leafminer is a fly (Order: Diptera). There is one generation per year. The adult boxwood leafminer is mosquito-like with a tiny orange-yellow body, a dark brown head, and are about 1/8" long. Adult leafminers emerge over a two week period in early spring, but each fly only lives about 24 hours. After mating, the 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. The larvae feeding between the upper and lower parts of the leaf causes blister-like mines on the underside of the leaf. In the early spring, boxwood leafminer pupate and are orange with dark brown heads.

Monitoring: Look at the underside of the previous year's leaves for blister-like leaf mines with windowpanes made by the pupae. Mines from the current season do not become obvious until fall.

Control: Encourage natural enemies such as green lacewings and spiders. Keep plants healthy. Use boxwood cultivars that are more resistant to boxwood leafminer. Wait for peak adult emergence and before they lay eggs (very small window of time) and a contact insecticide can be applied to target adults. Abamectin (ex. Avid)

works as a contact and a systemic insecticide. An application when adults are flying should target adults and young larvae that hatch a few weeks after the adult's lay eggs in the leaves.

For more information go to:

http://bugoftheweek.com/blog/tag/Boxwood+leafminer

https://extension.umd.edu/resource/leafminers-ornamental-plants/

Beneficial of the Week

By: Paula Shrewsbury

Caterpillars munching on leaves of trees… *Calosoma* to the rescue!

By Paula Shrewsbury, Department of Entomology, UMD

It is that time of year when early season caterpillars, such as eastern tent caterpillars and cankerworms are active, with other species soon to come. Eastern tent caterpillars spend the winter as eggs on twigs of their host trees. They begin to hatch out around the time Forsythia shrubs are in bloom. Eastern tent caterpillars consume foliage and build protective silk tents in the branch crotches of trees such as wild cherry, crabapples, apples, and sometimes other hardwood trees. Spring and fall cankerworms, also early season caterpillars, consume foliage of a wide range of trees including oak, maple, elm, birch, beech, hickory, and other hardwoods. However, outbreaks (damaging densities) of cankerworms are most common on oak trees sometimes completely defoliating trees. There never seems to be a shortage of caterpillar species that love to consume foliage of various ornamental trees and shrubs.

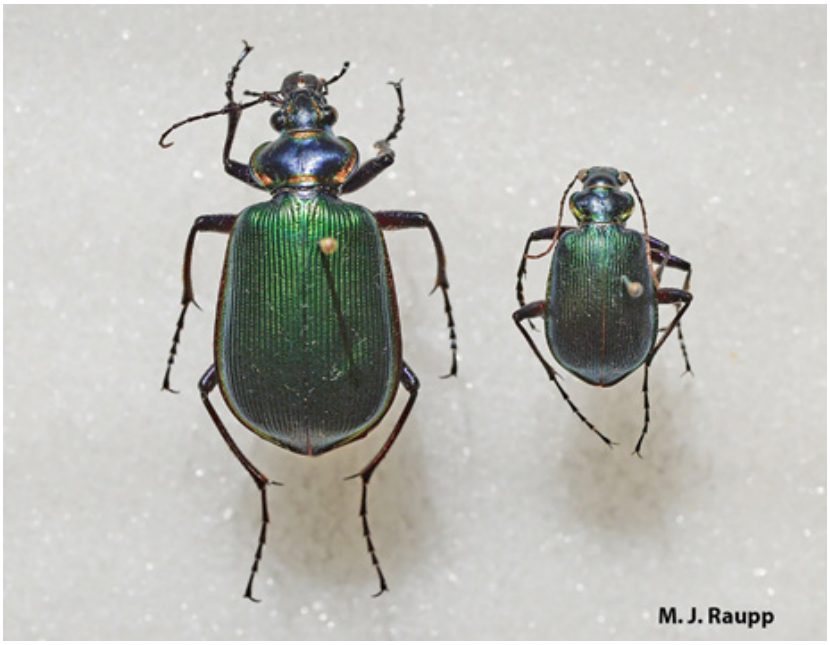
The fiery searcher, *Calosoma scrutator*, is one of the largest carabid (ground) beetles growing up to 1.5" long. It is one of the few ground beetle species that are arboreal, and it has a particular fondness for caterpillars.
Photo: M.J. Raupp, UMD

Fortunately, there is not a shortage of natural enemies that like to eat caterpillars. There are numerous parasitoids (wasps and flies) and generalist predators that attack caterpillars. Predators include birds, mammals, bugs, beetles, and spiders. Numerous species of songbirds consume caterpillars such as robins, blue jays, cardinals, orioles, chickadees, nuthatches and many more.

A larva of a *Calosoma* beetle feeding on a gypsy moth caterpillar.
Photo from: Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org

Two notable beetle predators of caterpillars in trees are the Fiery searcher and Wilcox's Spring caterpillar hunter. The **fiery searcher**, (*Calosoma scrutator*, Carabidae), also known as the caterpillar hunter, is a beautiful, large (~1.5"), predatory beetle. The name fiery searcher comes from the ability of this beetle to move rapidly through the forest as it searches for prey.

A related beetle, **Wilcox's Spring caterpillar hunter** (*Calosoma wilcoxi*, Carabidae), looks identical to the fiery hunter except it is smaller, only about one third the size (see image). The fiery hunter is active most of the season, from ~April into November, whereas the Wilcox's Spring caterpillar hunter is active mainly in the early season, from ~March through June. Both are common in the Eastern U.S. and the fiery searcher is also found throughout the southern U.S. These *Calosoma* beetles, prefer arboreal (forage in trees) habitats. This is unusual because most "ground" beetles (family Carabidae) forage for prey on the ground (makes sense). *Calosoma* beetles are most noticed for their coloration which consists of metallic green outer wings edged with gold and the head and thorax are bluish black. Both the adult and larval stages are predacious. *Calosoma* beetles are common predators in ornamental and turfgrass systems in addition to woods and fields. They climb up trees to find prey such as cankerworms, eastern tent caterpillars, and gypsy moth caterpillars. You should start to see these large predators now. *Calosoma* beetles are often found under rocks, logs, bark, leaf litter, and decomposing logs when they are not foraging in trees. Eggs are laid in the soil, and both the larvae and adults climb trees in search of caterpillars. Adult beetles hunt during the day and larvae hunt at night. When larvae mature, they move back to the soil to pupate from which adults emerge. Beetles can live up to 3 years. Several literature accounts associate the presence of *Calosoma wilcoxi* with the elimination of cankerworm outbreaks in natural forest environments – a naturally occurring biological control.



Wilcox's Spring caterpillar hunter, *Calosoma wilcoxi* (right), is about one third the size of its cousin, the fiery searcher Calosoma scrutator (left). Both are voracious predators of caterpillars. Photo: M.J. Raupp, UMD

Watch for these beautiful beetles, but if you have a need to handle them don't be surprised if they "stink on you". *Calosoma* beetles release a potent chemical defense made up of methacrylic acid and salicylaldehyde, which give off quite a nasty smell and lingers for hours. It is not personal; it is just the beetle's defensive mechanism to deter predators that want to eat them. They may also give a pinch with their mandibles (mouthparts), also to defend themselves.

Weed of the Week

By: Nathan Glenn

Yellow Rocket (*Barbarea vulgaris*)

With the recent increase in spring precipitation, we're seeing a second wave of weed activity—and one flashy plant is making itself known. As you drive through the countryside this time of year, you might spot fields or roadsides dotted with bright yellow blooms. Meet **Yellow Rocket**, also known as **Wintercress** (*Barbarea vulgaris*), a common winter annual (and sometimes biennial) weed in the mustard family.

Widespread throughout the eastern U.S., Yellow Rocket is frequently found in lawns, landscapes, nurseries, and agricultural fields. It germinates in cool, moist soils during fall or early spring, forming a basal rosette that develops multiple upright stems. Flowering occurs from May to June, after which the plant typically dies off in the summer heat and drought. However, its seeds can persist in the soil for years, making it a recurring issue.

Identification Tips:

- **Height**: 30–90 cm (1–3 ft)
- **Seedling leaves**: Egg-shaped with long stalks and a small notch near the tip
- **Mature leaves**: Alternate, shiny dark green, toothed edges, terminal lobes with a heart-shaped base
- **Leaf size**: 2–8 inches in length
- **Taproot**: Central taproot with fibrous lateral roots
- **Comparison**: Unlike wild radish, Yellow Rocket leaves are smooth, not hairy

Fun Fact: Yellow Rocket isn't just a weed—its young leaves were once foraged as an early spring green and are high in vitamin C. However, mature plants become bitter and are no longer palatable.

Control Recommendations:

- **Mechanical**: Deep tillage, hand pulling
- **Cultural**: Proper mowing or grazing **before flowering or seed set**
- **Chemical**: No pre-emergent options are currently available. Post-emergent herbicides that have shown effectiveness include:
    - 2,4-D + MCPP + dicamba
    - Diquat
    - Flumioxazin
    - Glyphosate

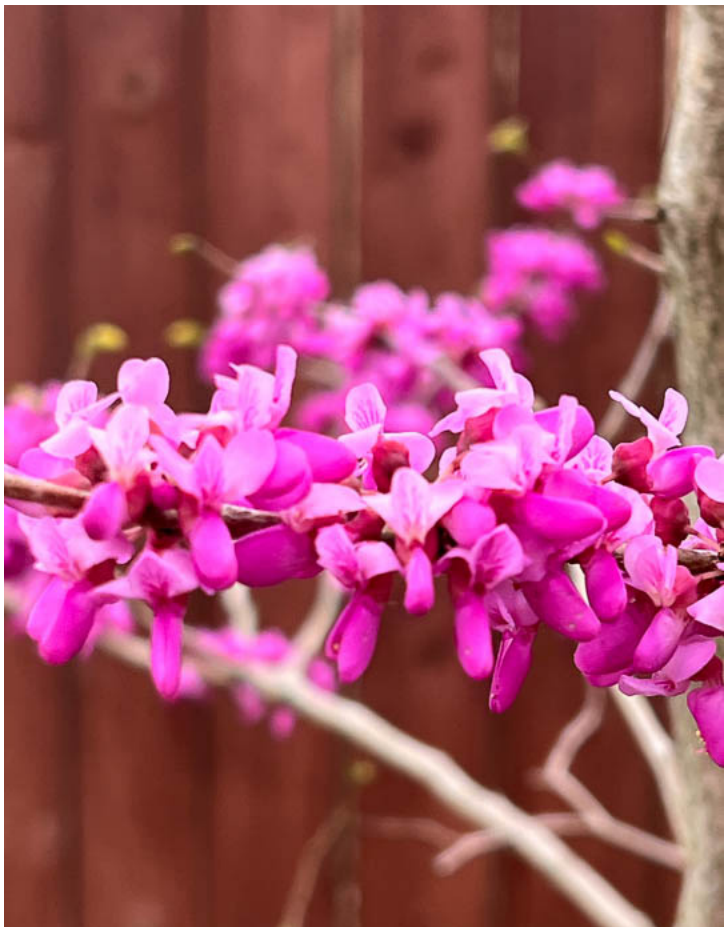
Always **read and follow the label** for specific application instructions, site restrictions, and mix rates. **The label is the law.**

Yellow rocket starts with a basal rosette of leaves.
Photo courtesy of Virginia Tech

Look for yellow rocket flowers from May to June.
Photo courtesy of Pete Landschoot, Penn State

Plant of the Week
By: Ginny Rosenkranz

Cercis canadensis or the Eastern redbud, grows from southern Ontario, the Great Lakes down to West Texas and Florida. They can grow 20-30 feet tall and spread 25-35 feet wide, preferring to grow in full sun to part afternoon shade and thrive in moderately fertile, moist but well drained soils. Early spring before the heart-shaped foliage emerges, the pea-like flowers sprout in clusters of 4-10 from the bare branches in bright rose pink to lavender- purple (never red) flowers. Each flower has 2 petals on top and 3 petals on the bottom. The flowers provide nectar to early migrating hummingbirds and both the flowers and the seeds are eaten by native songbirds. The flowers mature into flattened bean-like seedpods that turn brown by late summer. The heart-shaped green to blue green leaves are attached to the slim branches in an alternate fashion, with the branches zigzaging at the node where the leaves are attached. The leaves fade to a soft yellow to greenish yellow in the autumn. There are a number of insects including leafcutter bees and butterflies that either use the foliage for nests or food. Redbuds are cold tolerant in USDA zones 4-8, and are tolerant of the roots of black walnuts and deer browsing. Canker disease can be a significant problem, and other diseases include blight, dieback, leaf spots, mildew and Verticillium wilt. Insect damage includes Japanese beetles, borers, caterpillars, treehoppers, scale, and webworms.



Redbud flowers provide nectar for early migrating hummingbirds.
Photos: 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 **108 DD** (Clarksville) to **279 DD** (Nat'l Arboretum/Reagan Nat'l). 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)**
Eastern tent caterpillar – egg hatch **(86 DD)**
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)**
Spruce spider mite – egg hatch **(179 DD)**
Boxwood psyllid – egg hatch **(184 DD)**
Tea scale – egg hatch / crawler (1st gen) **(195 DD)**
Hemlock woolly adelgid – egg hatch (1 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 – larva, 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 – egg hatch **(308 DD)**
Spirea aphid – adult / nymph **(326 DD)**
Lilac borer – adult emergence **(350 DD)**
Melon aphid – adult / nymph **(351 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 9, 2025)

Annapolis Naval Academy (KNAK)	126
Baltimore, MD (KBWI)	169
Belcamp (FS836)	112
Clarksville (001MD)	108
College Park (KCGS)	175
Dulles Airport (KIAD)	181
Ft. Belvoir, VA (KDA)	211
Frederick (KFDK)	144
Gaithersburg (KGAI)	165
Greater Cumberland Reg (KCBE)	122
Martinsburg, WV (KMRB)	148
Millersville (MD026)	155
Natl Arboretum/Reagan Natl (KDCA)	279
Perry Hall (C0608)	113
Salisbury/Ocean City (KSBY)	180
St. Mary's City (Patuxent NRB KNHK)	262
Westminster (KDMW)	183

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

Upcoming IPM Scouts' Diagnostic Sessions (afternoon)
June 17, 2025, July 30, 2025, and August 26, 2025
Location: CMREC, Ellicott City, MD

June 18, 2025
Eastern Shore Pesticide Recertification Conference
Location: Zoom

June 24, 2025
Stanton Gill Symposium and Lab Dedication
Location: CMREC, Ellicott City

Co-sponsors: University of Maryland Extension and Maryland Nursery, Landscape, and Greenhouse Association

June 27, 2025
Pesticide Recertification Conference
Location: Montgomery County Extension Office, Derwood, MD

September 11, 2025
MNLGA Field Day
Location: Raemelton Farm, Adamstown, MD

Stanton Gill
1952 - 2024

The lab in the new building at CMREC-Ellicott City is named in honor of Stanton.

Commercial Ornamental IPM Information
http://extension.umd.edu/ipm

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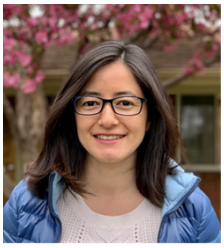

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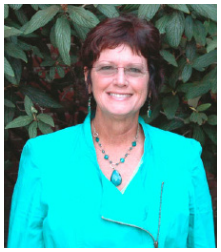

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