

Commercial Horticulture

September 27, 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: 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)

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Drought Conditions Still Exist In Many Areas

By: Stanton Gill

Some areas of Maryland received rain over the last 3 weeks, but not all areas are doing as well. We are still getting in reports of extremely dry soils and no rainfall to help out. These reports are coming from the Eastern Shore and Central Maryland.

Landscape managers and arborists are seeing many trees with scorching foliage and yellowing leaves and early fall leaf drop. This drought stress is weakening many trees, and we will see the after-effect into 2025 with secondary insect pests infesting and secondary diseases infecting these weakened trees.

Deer are moving into the landscape and in some cases into the nursery area to browse on plants. We had one Eastern Shore nursery report deer had come in and eaten out the center of their ornamental cabbage and kale they were growing for the marketplace. The droughty conditions of 2024 are forcing wildlife to look more toward nurseries and landscapes for browsing plants.

October 16, 2024 Cut Flower Program

Location: CMREC, 4240 Folly Quarter Road, Ellicott City, MD 21042

Go to our [IPMnet Conferences page](#) for a link to register.

Tuliptree Scale Active This Week

By: Stanton Gill

Tuliptree scale crawlers are active this week in central Maryland. Tuliptree scale is a soft scale in the family Coccidae and is showing up more and more on native plantings of tulip trees in urban landscapes and on deciduous magnolias in nurseries and landscapes. This soft scale is relatively easy to control. Insect growth regulators such as Talus and Distance control this pest at this stage. Systemic insecticides including Dinotefuran and Mainspring control this pest very well.

The scale overwinters as second instar nymphs, so in early November if temperatures hover above 50 °F during the daytime, you can apply 2-3% horticultural oil to kill the overwintering stages.



Look for crawlers of tuliptree scale.
Photo: Suzanne Klick, UME

European Hornets: Stripping Bark at the End of September

By: Stanton Gill

We are getting in emails reporting European hornets are stripping bark on birches and lilacs to use in their nest building. It is rather entertaining to watch these large hornets carrying long strings of bark. The stripping of the bark off the birch do not seem to do much damage to the tree. Nursery managers have reported that lilac branches are completely girdled with this bark removal resulting in dieback of branches. Fortunately, the damage is tolerable in most cases. If your workers are working among these plants the wasps are working on, then it might be worth applying a wasp spray to help keep them from being stung.



European hornets damage plant stems when feeding on sap and stripping bark for nest material.
Photo: Suzanne Klick, UME

Spruce Spider Mites

Elaine Menegon Good's Tree and Lawn Care, has a client who shears his hemlocks in July-August and the trees are beside a paved street. Elaine found heavy damage from spruce spider mites on these trees this week.

Horticulture oil at 1% gives a fair level of control. Females start laying eggs on needles in October. In early November, you can use a 3% oil on the eggs. Do not apply to blue spruce or Douglas fir. On blue spruce, it takes out the blue color on the needles since the blue is from a wax layer covering the needles. With Douglas firs we have seen phytotoxic damage with oil applications at the 3% rate.



Heavy stippling damage on this hemlock is from spruce spider mites.

Photo: Elaine Menegon, Good's Tree and Lawn Care

Oleander Aphids

Heather Zindash, The Soulful Gardener, found oleander aphids on one plant of sedum in a group of plants in a greenhouse. We usually receive reports of these aphids on milkweed plants.



Oleander aphids on one sedum plant in a greenhouse.
Photo: Heather Zindash, The Soulful Gardener

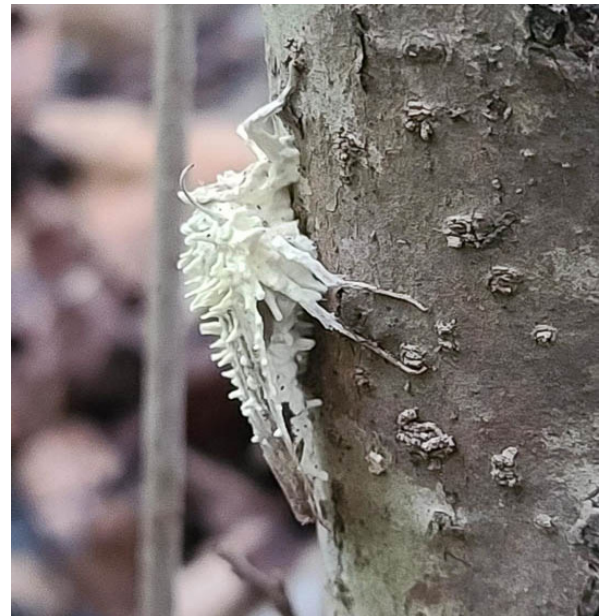
Deer Injury on Trees

Mark Schlossberg, ProLawn Plus, Inc. found deer damage on 'Green Giant' arborvitae this week in Owings Mills.



Deer damage on arborvitae.
Photo: Mark Schlossberg, ProLawn Plus, Inc.

Late Season Insect Photos



Josh Triplett found this empty insect husk still attached to the tree bark.
Photo: Josh Triplett, Bartlett Tree Experts



Ginny found these parasitic wasp pupae on a hornworm on a tomato plant.
Photo: Ginny Rosenkranz, UME

Spotted Lanternfly

By: Stanton Gill

Spotted lanternflies have started laying eggs this week. Look for the egg masses on structures, tree trunks, containers, buildings, and just about any surface on which they can lay eggs. Dave Freeman, Oaktree Property Care, is reporting that this year is the first time he is seeing them in numbers in Nokesville, VA. Sally Recinos, VA Master Gardener, saw photos from friends on a cruise ship out of Baltimore who were seeing a lot of adults on the ship decks.

If you are shipping out plant material to non-quarantine areas, make sure your employees recognize the egg masses. They should scrape them off of plant material with a knife and drop them in a bucket of soapy water. This is time consuming, but is a necessary step in trying to slow down this pest from spreading to new areas.



Spotted lanternfly adults clustered on a tree trunk.
Photo: Dave Freeman, Oaktree Property Care



A large gravid (carrying eggs) female and another adult spotted lanternfly eggs on a maple here at the research center in Ellicott City.
Photo: Suzanne Klick, UME



Spotted lanternfly egg clusters.
Photo: Emelie Swackhamer, Penn State University, Bugwood.org

Beneficial of the Week

By: Paula Shrewsbury

Watch out tree-of-heaven: a native and invasive insect are ready to wage war on you!

I often write about biological control as it relates to natural enemies that kill plant feeding (herbivorous) insects or related arthropods. Today I want to talk about herbivorous insects that feed on invasive plants in the hope they can provide biological control of the plant. The plant I want to discuss is the invasive tree-of-heaven (TOH), *Ailanthus altissima*; the insects are two that feed on tree-of-heaven, the well-known spotted lanternfly (SLF, *Lycorma delicatula*) and the ermine moth, *Atteva aurea*, and its larva known as ailanthus webworm.

First, let's discuss the ermine moth and its ailanthus webworm larva. This native southern moth made its way north with the arrival of a host plant, TOH from Asia. Some of you are familiar with Betty Smith's book "A Tree Grows in Brooklyn." This novel chronicle a young girl's triumph over childhood hardships and poverty in a Brooklyn neighborhood. The tree that grows in Brooklyn is the irrepressible TOH, a stalwart thriving in the most dismal of urban environments. In Smith's novel it serves as metaphor for the girl's resilience in the face of adversity as she survives the tribulations of childhood. Tree on Heaven comes from Asia but was introduced in 1784 to a garden in Philadelphia. In the United States, it ranges from coast to coast and border to border. Several Canadian provinces have also been invaded by TOH. TOH is designated as an invasive species throughout much of its range due to its ability to thrive in the worst of sites and displace native vegetation. In addition to being host of a beautiful silk moth, the Cynthia moth, its woody tissues, leaves, and seeds serve as food for wicked invasive species including spotted lanternfly and brown marmorated stink bugs. Where does ailanthus webworm come into the story. Ranging from the rainforests in Central America to states in the southern US are trees in the plant family known as Simaroubaceae. In the wilds of Florida glossy leaves of beautiful native Paradise trees, *Simarouba glauca*, serve as a food source for ailanthus webworm caterpillars. It happens that TOH is also a member of the Simaroubaceae. When TOH gained its Philadelphia freedom and moved south and west, it came into contact with other members of the Simaroubaceae. Ailanthus webworm took a liking to TOH and added it to its preferred host choice. Ailanthus webworm caterpillars build silken webs on leaves of ailanthus in late summer and early autumn here in the DMV. In several northern states, ailanthus webworms appear late in the temperate growing season. Apparently, ailanthus webworm favors a southern climate. Winters in northern states are just a bit too chilly to support its survival. Each year the moths migrate from winter redoubts in the south to reach TOH in northern states on which to lay eggs. In a warming world some experts predict that ailanthus webworm will be able to survive in more northerly states thereby expanding its range.



Ailanthus webworm web foliage of young tree-of-heaven together and often feed in groups. If you look closely, you will see multiple caterpillars and a few pupae in the webbing.

Photo: P.M. Shrewsbury, UMD



Close up of a late instar ailanthus webworm caterpillar and damage to tree-of-heaven foliage.

Photo: P.M. Shrewsbury, UMD

In addition to ailanthus webworm, TOH is assaulted by its historical acquaintance from Asia, the spotted lanternfly. Back in China, spotted lanternflies spent millions of years “learning” how to cope with TOH’s defenses and exploit nutritious phloem sap as a source of food. In late summer and autumn in the US, hundreds, maybe even thousands of spotted lanternfly adults can be found consuming nutrients from the branches and trunks of TOH. With persistent infestations over multiple years and vast numbers, lanternflies can be lethal to invasive TOH according to scientists at Penn State.



**Many moths are nighttime feeders, but beautiful ermine moths, the adult stage of ailanthus webworms, feed during the day.
Photo: M.J. Raupp, UMD**

With young TOH under siege from ailanthus webworm and established TOH assaulted by sap-sucking SLF, there might be hope that [these two herbivores may kill some or many TOH](#) and help prevent ecological impacts of TOH in our natural and managed ecosystems.



Spotted lanternflies often reach huge densities and rob vital nutrients from tree-of-heaven.

Photo: P.M. Shrewsbury, UMD



**After years of infestation by masses of spotted lanternflies, tree-of-heaven like these two may succumb to their ancient nemesis from Asia.
Photo: M.J. Raupp, UMD**

Weed of the Week

By: Mark Townsend, UME-Frederick County

This week's weed is one of interesting stature and history. Small carpetgrass, *Arthraxon hispidus*, is a low-growing warm-season annual grass native to Asia, but has made a home for itself in the Mid-Atlantic region and is now documented growing in 25 states from Florida to New England. The general consensus among plant historians is small carpetgrass was originally introduced to the United States in the early 1900s as an ornamental plant that thrived in its new environment. It is a grass of many colloquial names including creek grass, hairy jointgrass, and joint-head grass.

Small carpetgrass is most commonly observed growing in disturbed, full sun, low-lying or wet areas like riparian areas next to streams or ponds. However, it spreads quickly and can be found in wet meadows or yards. Its similar distribution as well as its size and shape make it easily confused with Japanese stiltgrass.

This grass reaches about 18" tall with 1-3" oval leaves emanating from its thin reddish stem. As other naming conventions indicate, the plant has easily noticeable hairs emanating at the base of the leaf along the margin. As the weed matures, purple-red head spikes appear producing small, light, slender tawny-colored seeds. These seeds are easily dispersed by wind and even water given its characteristic locale next to streams.

Its fast spreading nature can overwhelm native or otherwise desirable species. Some reports indicate small carpetgrass can create robust monocultures in 3-5 years from first identification. Again, its similarities to Japanese stiltgrass continue.

As always, cultural control is best achieved through early and effective establishment of desirable species. Consider varieties of turf or ornamental plants with highly vegetative characteristics early to shade out dormant carpetgrass seeds.

Mechanical small carpetgrass control is best achieved through hand-pulling prior to flowering for populations in small patches. In larger infestations where chemical control is not possible, consider mowing before flowering and seed set to limit seed dispersal.

Where chemical control options are possible, products containing DCPA, dichlobenil, dithiopyr, flumioxazin, and oxyfluorfen offer relatively effective pre-emergent options. Post-emergent products containing glyphosate



Leaves of small carpetgrass wrapping around thin red stems.
Photo: Leslie J. Mehrhoff, University of Connecticut, Bug-wood.org



Carpetgrass is often found in wet areas.
Photo: Leslie J. Mehrhoff, University of Connecticut, Bug-wood.org

have offered some efficacy. If next to wetlands, please select wetland approved herbicides like Rodeo®. Importantly, this weed is in fact a grass – a member of the poaceae family – despite its broader-leafed appearance, and therefore broadleaf herbicides are not effective.

Plant of the Week

By: Ginny Rosenkranz

Symphyotrichum laevis or smooth aster is a native herbaceous perennial that thrives in full sun with well drained soils. Plants will grow 2-4 feet tall, spread 1-2 feet wide and will be covered with ½ to 1-inch daisy-like lavender blue flowers from September to late frost. The colorful 15-30 ray flowers attract the pollinators and surround a bright yellow center disk of fertile florets. The green 1-3 inch long leaves attach themselves in an alternate fashion on the round green stems, often partially encircling the stems. The lance to spoon-shaped leaves have an entire margin and grow larger at the base of the plants and grow smaller and closer together going up the stems. Plants are cold tolerant from USDA zones 4-8 and are the host plant the pearl crescent butterfly larva. The large profusion of flowers supports many pollinators including 7 specialized bees, honey bees, and butterflies. In late October to November, the flowers mature into dry, one seeded fruit that are tipped with red bristles, and are feasted on by many native songbirds and small mammals. What isn't eaten can produce many new plants around the mother plant. Plants once established are drought tolerant, and although some sources say the plants are not browsed by deer and rabbits, other sources state that it depends on the surrounding plant populations and the number of deer in the area. Smooth asters can be planted in cottage, native, pollinator or wildflower gardens or in perennial borders. There are no serious pests.



Smooth asters make a lovely display in a container on a patio.

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 **3306 DD** (Martinsburg) to **4481 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 prunicola scale – egg hatch / crawler (3rd gen) (**3238 DD**)

Banded ash clearwing borer – adult emergence (**3357 DD**)

Tuliptree scale – egg hatch / crawler (**3472 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 September 25)

Annapolis Naval Academy (KNAK)	3977
Baltimore, MD (KBWI)	3983
College Park (KCGS)	3955
Dulles Airport (KIAD)	3984
Ft. Belvoir, VA (KDA)	3999
Frederick (KFDK)	3873
Gaithersburg (KGAI)	3692
Greater Cumberland Reg (KCBE)	3547
Martinsburg, WV (KMRB)	3306
Millersville (MD026)	3779
Natl Arboretum/Reagan Natl (KDCA)	4436
Perry Hall (C0608)	3626
Salisbury/Ocean City (KSBY)	3681
St. Mary’s City (Patuxent NRB KNHK)	4481
Susquehanna State Park (SSQM2)	3704
Westminster (KDMW)	4093

Important Note: We are using the [Online Phenology and Degree-Day Models](#) site. Use the following information to calculate GDD for your site: Select your location from the map Model Category: All models Select Degree-day calculator Thresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

2025 Advanced Landscape IPM PHC Short Course

This is a recertification short course for arborists, landscapers, IPM consultants, horticulturalists, professional gardeners, and others responsible for urban plant management. The course lectures will be held over four days at the University of Maryland, College Park, MD. In addition, there will be a hands-on lab following lecture (available to a limited number of course attendees). Coordinators: Drs. Paula Shrewsbury and Mike Raupp, Dept. of Entomology, University of Maryland

Lecture dates: Monday, January 6 - Thursday, January 9, 2025 from 8:00 am – 3:00 pm

Lab dates: Monday, January 6 - Thursday, January 9, 2025 (space limited) from 3:30 pm – 5:30 pm

Course and registration information: <https://landscapeipmphc.weebly.com/>

Questions contact: Amy Yaich, 301-405-3911, umdentomology@umd.edu

Conferences

October 2, 2024

2024 Truck & Trailer Safety Seminar - Hosted by FALCAN
Urbana Fire Hall, Urbana, MD
<https://truckandtrailer24.eventbrite.com>

October 9, 2024

MNLGA Retail Day
Location: Homestead Gardens, Davidsonville, MD

October 16, 2024

[Cut Flower Program](#)
Location: Central Maryland Research and Education Center, Ellicott City, MD

December 5, 2024

Tech Day: Focus on Solar
Location: CMREC, Ellicott City

December 12, 2024

2024 Cultivating Innovation in Maryland's Agriculture and Technology Conference
Location: Crowne Plaza, Annapolis, MD ([Program and registration information](#))

Charles County Government is offering a FREE one-day workshop for landscaping companies that maintain stormwater BMPs.

This hands-on training is designed for landscape and green infrastructure professionals who maintain sustainable stormwater Best Management Practices (BMPs) such as rain gardens, bioretention areas, and bioswales.

The workshop includes classroom and field activities, with a certificate of completion from the Chesapeake Bay Landscape Professional Certification program. It's sponsored by Charles County Government, the Chesapeake Bay Trust, the University of Maryland, and the Chesapeake Conservation Landscaping Council.

The workshop is October 22, 2024, at the Fieldside Neighborhood Community Center, 11850 St. Linus Drive, Waldorf, MD, from 9:00 AM-3:00 PM and registration is required. Please see the flyer for registration links and instructions. <https://certified.cblpro.org/product/charles-county-sustainable-stormwater-bmp-management-for-crews-certificate/>

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

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

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