UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **October 21, 2022**

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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) and David Clement (Extension Specialist)
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)
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White Prunicola Scale

By: Stanton Gill

We received several emails and phone calls inquiring about white prunicola scale control on cherry laurel. The third generation occurred in September and there are now plenty of males, with their white covers, covering stems and in many cases making them look like they have snow flocking on them. Customers tend to notice the white male covers.

Male white prunicula scale covering cherry laurel stem.

At this point in the season there is not a lot to do, especially with the cold front that blew in on Tuesday and hung around for most of the week. If temperatures moved back into the 55 °F and above range and the night temperatures stay above freezing then I would suggest using a 3 – 4% horticultural oil application. It will not dissolve or make the white male cover disappear but it will impact the females that are settled on the stems.

Next season in 2023, watch for when we announce crawler activity for this scale. At that point, you can apply Talus or Distance (IGRs) to control early instars of the scale.

Crown Gall

By: Karen Rane and Dave Clement

Agrobacterium tumefaciens is the bacterium that causes crown gall disease. This disease is most common on plants in the rose family, but can infect hundreds of woody and herbaceous plant species. Galls are composed of undifferentiated plant tissue and initially are somewhat soft, lumpy and whitish in color, turning darker brown and woody (in woody hosts) with age. The galls are usually located at the base of the stem (crown) or roots of infected plants, but they can also form on branches of some woody hosts, such as willow, rose and euonymus (Fig. 1). Although plants are not typically killed by this disease, infected plants often show reduced plant vigor. The pathogen can survive for many years in soil, and enters the plant through small natural openings and wounds (such as pest feeding injury, frost injury, physical damage at planting or propagation) to the roots or lower trunk.

Fig. 1. Crown gall on euonymus.
Photo: D. Clement, UME

Unfortunately, there is no treatment that can cure a plant with crown gall – the pathogen can infect systemically in some hosts. Management is focused on preventing infection. Avoid purchasing or taking cuttings from plants with crown gall symptoms. Consider planting non-host plants, such as conifers or grasses, in soils where the disease is known to occur. More information on this disease can be found at this link: https://extension.umd.edu/resource/bacterial-crown-gall-flowers

Parasitic Plant Has Its Uses

By: Stanton Gill

Mistletoe is a parasitic plant that is associated with holidays. Most people know it as a plant part you hang up in a doorway to obtain a kiss. The common one in Maryland is the oak mistletoe. Oak mistletoe (*Phoradendron leucarpum*) is an evergreen parasitic plant that uses deciduous trees like oaks and maples as hosts. In Maryland, it is generally restricted to the coastal plain. The plant parts are very sticky, especially the seeds.

There is an excellent article about mistletoe and its potential use in medicine in the October issue of *Scientific American*. The article mentions that Greeks and Romans used the sticky mistletoe berries to treat skin ulcers and as a method to help seal up wound tissue on humans.

The berries and seeds contain a sticky material called **viscin**. This sticky substance is pooped out by birds who eat the berries depositing the sticky seed on trees branches where it germinates and penetrates into the plant tissue.

Researchers at McGill University in Ontario and researchers at Max Planck Institute and Interfaces in Potsdam are looking at Viscin‘s stiff strand, that is coated in a humidity sensitive coating that keep the material very malleable. The researchers are saying they have tested viscin on cuts and wounds as an alternative to petroleum-based synthetic glues that could be used to treat wounds on humans.

So this parasitic plant could have some interesting benefits for handling wounds.

Spongy Moth Makes A Comeback

By: Stanton Gill

Mark Schlossberg, ProLawn Plus, Inc., sent me this link for an update on spongy moth activity in Delaware. https://www.coastalpoint.com/news/state/increase-in-gypsy-moth-activity-detected-for-2022/article_319e22f0-49a3-11ed-ad3e-7f79a88476b2.html

We have seen an uptick on the Eastern Shore with spongy moth according to MDA, Spongy Moth Division. If you notice the Delaware people failed to change the name from gypsy moth. Previously known as "gypsy moth," the species *Lymantria dispar* is now "spongy moth", according to the Entomological Society of America.

Boxwood Leafminer Update

By: Stanton Gill

Boxwood leafminer must be a bigger problem than I thought. I received several emails with input on what was working and what was not. Bernie Mihm, Fine Earth Landscape and Nursery, sent in this comment: "I have sprayed Avid and Safari on boxwoods once or twice during the summer for leafminers and mites and it is very effective. I haven't had as much luck with oil in the cool weather. It looks like I might not need the Safari but I had thought that the systemic action was needed for the leafminers."

One nursery applied Avid in May of 2022 and reapplied it in September of 2022. Suzanne Klick examined 50 boxwood leaves from this nursery. Forty-four of the leaves had dead larvae in them. Only 6 had live larvae present. It would appear that the Avid worked pretty well here.

Many of the infested leaves had dead boxwood leafminer present after and Avid treatment; a small number of leafminers were still alive.
Photos: Suzanne Klick

Brown Marmorated Stink Bugs

We are getting reports from homeowners, landscapers, and orchards of brown marmorated stink bug activity. We are seeing activity increase in October. As it gets cold, we will start to see them enter buildings and homes.

Spotted Lanternfly – In Texas Now

By: Stanton Gill

According to Texas AgriLife Extension Specialist, Dalton Ludwick, a sighting of one spotted lanternfly near Houston was reported on iNaturalist, an app for the public to document organisms around the world. The USDA-APHIS and Texas Department of Agriculture investigated the area, but didn't find additional specimens.

Spotted lanternfly adults are active in Reisterstown.
Photo: Kevin Nickle, Scientific Plant Service

Predators of Crapemyrtle Bark Scale

We continue to receive reports of lady beetles feeding on crapemyrtle bark scale. Marc Vedder, Dumbarton Oaks, found these *Cryptolaemus* larvae feeding on CMBS on trees in Capitol Hill. Marc noted that he "counted a fair number of the larvae throughout the tall shrub".

Look for lady beetle larvae feeding on crapemyrtle bark scale
Photo: Marc Vedder, Dumbarton Oaks

Beneficial of the Week

By: Paula Shrewsbury

Praying mantids and their ootheca (egg case)

Praying mantids are in the order Mantodea and there are over 2,400 species of mantids from 15 families world-wide. That's a lot of mantid diversity! Although it seems a bit strange, phylogenetically, praying mantids are closely related to cockroaches and termites. In Maryland, there are three species of praying mantids that are common. They are the Carolina (*Stagmomantis carolina*), a native species of mantid that ranges from NJ south to FL and west to AZ; the Chinese (*Tenodera sinensis*) which was detected in PA in 1896 and is widespread in the Eastern U.S. and California, and found in a few other states; and the European (*Mantis religiosa*), another exotic mantid that was first detected in the US in 1899 in NY and is now widespread east of the Mississippi and north to Canada.

Chinese praying mantis adult female. Image taken in the fall. Note the large abdomen indicating she will soon be laying eggs.
Photo by M. J. Raupp, UMD

Mantids are generalist predators and eat many types of prey items. Young or small mantids eat small flies, crickets, other small insects, and sometimes each other. Large mantids capture and eat other large insects that are pests of ornamentals but they sometimes eat beneficial insects including pollinators such as bees, butterflies, flies, beetles and, yes, there are accounts of them capturing and eating humming birds, in addition to lizards and frogs.

An ootheca of a Chinese praying mantid attached to a twig where it will spend the winter.
Photo: M.J. Raupp, UMD

As we move into fall, reports of mantids have increased. It is not that there are more mantids than there were in the spring (they only have one generation per year), but they are adults and now larger and easier to see then earlier in the season when they were smaller and able to hide better. What are the mantids doing now? You might see adult mantids eating prey, mating, females with fat abdomens full of eggs, and females laying eggs in an egg case referred to as ootheca (cockroaches also produce eggs within ootheca). In Latin, ootheca means "egg container" or "egg cover". The ootheca is a styrofoam-like structure deposited by the female mantid and attached to a substrate such as a stem, twig or branch of herbaceous or woody plants and depending on mantid species, the trunk of a tree. Mantids overwinter in this oothecal structure. Within a single ootheca may be 100 to 200 eggs or more.

A small black spot, usually but not always with a white center, on the inside of each front leg provides a quick clue to separate the European mantis from other species found in our region.
Photo: by M.J. Raupp, UMD

Watch a video of Chinese mantids emerging from an ootheca in the spring.

An ootheca of the European mantid contains scores of eggs that will survive the winter and hatch next spring. Photo: M.J. Raupp, UMD

When the female lays her eggs, she produces a substance called spumaline in which she deposits her eggs creating the ootheca. Oothecae (plural of ootheca) are made up of structural proteins and tanning substances that cause the protein to harden around the eggs, providing stability and protection from predators, parasitoids, microorganisms, and extreme variation in seasonal weather. Female mantids produce frothy secretions from accessory glands near their genitalia. The female shapes the ootheca as she is depositing it. The frothy substrate containing the eggs gradually hardens. Most oothecа are tan to dark tan in color. Click to watch a video of mantid laying an ootheca.

The native Carolina praying mantis. Photo: M. Raupp, UMD

The size and shape of the ootheca differs for each species of mantid. The Chinese praying mantis ootheca is an irregular round shape that is about the size of a ping pong ball. Ootheca of the native Carolina mantis are elongate, ~1-1.5" long, appears to have stripes or ridges, and are often, but not always, found on the trunks of trees. The other ootheca you may see is that of the European mantid. It is similar to the Carolina mantid ootheca in that is elongate, but the European mantid ootheca is more uniform in color and doesn't have a ridge or stripe pattern (see images of adult mantids and their oothecа).

Although mantids can be voracious predators and they contribute to biological control, they are not particularly known for being good biological controls against pest insects. This is due to their diverse diet that includes non-pest insects. However, a landscape that has mantids in it is usually considered to be a "healthy" ecosystem.

The Carolina praying mantid ootheca is elongate in shape (~ 1–1.5" long). Photo: M.J. Raupp, UMD

Photo: P.M. Shrewsbury, UMD

An ootheca (egg case) of the native Carolina preying mantid on the trunk of an ornamental cherry tree found in early spring. This is an unhatched ootheca, but note there are several "holes" in the ootheca indicating that parasitoids of mantids have emerged from the ootheca.

Weed of the Week

By: Chuck Schuster

As one views many areas that are margins on the edges of turf and trees, a vine growing up can often be found. Its starts off small, but if left unattended or managed, it can grow as big as someone's arm. Oriental bittersweet, *Celastrus orbiculatus*, often called Asiatic bittersweet, is a deciduous woody perennial plant which grows very prolifically in this area. It is being noticed in many landscapes and nurseries this year, and does require attention. A problem of nursery and landscape settings, this fast growing vine can grow as tall as fifty feet or more in one year, with a stem diameter of up to four inches. The leaves are alternate and round in shape, (Photo 2) with a finely toothed margin. Damage from this weed can be from breakage of the desired plant, as it will grow into the canopy and create either weight or a potential storm damage hazard. The spirally habit (photo1) can also choke other desired plants. Oriental bittersweet is very similar to American bittersweet, and can be distinguished by the location of the flowers and fruit. Berry location on American bittersweet is only at the tips of the vines, where with the Oriental bittersweet, the berries occur all along the vines.

1: Twining growth habit
Photo: Chuck Schuster, UME

Oriental bittersweet is an invasive plant. One reason for concern is the color and great numbers of berries produced. As birds are one of the prime methods of dissemination, a brighter red color is very attractive to the birds and with greater numbers of berries to be found, the potential of spread is much higher. To add to this problem, the seeds also seem to have a higher germination percentage than that of American bittersweet.

2: Alternate leaf pattern
Photo: Chuck Schuster, UME

3: Fast growing upright growth
Photo: Chuck Schuster, UME

Plant of the Week

By: Ginny Rosenkranz

***Camellia sasanqua* 'Autumn Sunrise' continues to bloom into winter**
Photo: Ginny Rosenkranz, UME

Camellia sasanqua 'Autumn Sunrise' is another fall blooming camellia that blooms early in the fall and continues to bloom into the winter. The 4-5 inch large, single petal flowers start out very round and open into a cup shape that flattens out to show off the fragrant white with rose red tipped petals that surround the bright golden yellow anthers. The plants are cold hardy in USDA zones 7 – 9 and grow 8-10 feet tall, 3-4 feet wide, making them a possible candidate for an evergreen hedge. *Camellia sasanqua* 'Autumn Sunrise' grows best in full sun, but some protection from the early east and west sun. Both fall and winter nights can be very cold and if the very early sun hits the flowers and foliage of the camellia before the surrounding air warms up, both the flowers and the glossy green foliage can be damaged. Camellias also need slightly acidic, moist but well drained soils, and the plants should be planted about an inch above the soil line, and then covered with 1-2 inches of mulch. Besides being planted as an evergreen hedge, *Camellia sasanqua* 'Autumn Sunrise' can also be a part of the foundation planting and in woodland garden with dappled sunlight. Insect pest can include scale, aphids, planthoppers and spidermites. Cottony camellia scale will deposit honeydew which in turn attracts sooty mold which will turn the leaves black. Disease pests can include leaf spots, anthracnose, black mold, petal blight, canker, virus and root rot.

Degree Days (as of October 19)

Aberdeen (KAPG)	no data
Annapolis Naval Academy (KNAK)	4082
Baltimore, MD (KBWI)	4117
College Park (KCGS)	3791
Dulles Airport (KIAD)	3883
Ft. Belvoir, VA (KDA)	3876
Frederick (KFDK)	3630
Gaithersburg (KGAI)	3647
Gambrils (F2488, near Bowie)	3899
Greater Cumberland Reg (KCBE)	3478
Martinsburg, WV (KMRB)	3411
Natl Arboretum/Reagan Natl (KDCA)	4474
Salisbury/Ocean City (KSBY)	4103
St. Mary's City (Patuxent NRB KNHK)	4540
Westminster (KDMW)	4211

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

December 8, 2022 (Morning session)
Turf Nutrient Management Conference
Location: Carroll Community College

December 15, 2022
Advanced Integrated Pest Management Conference
Location: Carroll Community College
Program will be submitted for ISA CEUs and Pesticide recertification credits.

January 11-13, 2023
MANTS
Location: Baltimore Convention Center

January 3, 4 and 5 AND January 10, 11, and 12, 2023
UMD IPM Short Course
Lecture times: 7:45 am – 11:30 am Eastern Standard Time
Location: Virtual via Zoom

2 day in-person lab (8:00AM - 3:00PM)
Lab dates: Tuesday and Wednesday January 17 and 18 (8:00AM - 3:00PM
Location: In person at University of Maryland Campus, College Park, MD
Course and Registration Information: https://landscapeipmphc.weebly.com/
Questions contact: Amy Yaich, 301-405-3911, umdentomology@umd.edu

January 17 and 18, 2023
MAA Winter Conference
Location: Turf Valley, Ellicott City, MD

January 27, 2023
FALCAN Conference
Location: Frederick Community College

February 6, 2023
Western Maryland Pest Management Conference
Location: Allegany Fairgrounds, Cumberland, MD

February 15, 2023
2023 Eastern Shore Pest Management Conference
Location: Salisbury, MD

February 16 and 17, 2023
Chesapeake Green Horticultural Symposium
Location: Maritime Institute, Linthicum Heights, MD

Commercial Ornamental IPM Information
extension.umd.edu/ipm

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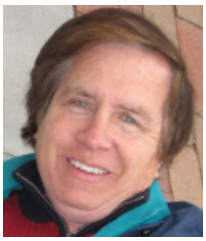

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.