UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **September 25, 2020**

In This Issue...

Beneficial of the Week:
Ambush bugs

Plant of the Week: *Spiraea japonica* 'Anthony Waterer'

Degree Days Announcements

Pest Predictive Calendar

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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Regular Contributors:
Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant
Disease Information: Karen Rane (Plant Pathologist) and David Clement (Extension Specialist)
Weed of the Week: 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)
Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

Pumpkin Update

By: Stanton Gill

The weather this summer, especially heavy rains in some areas of Maryland, has impacted the availability of pumpkins this fall

I spoke with several of the local Maryland pumpkin growers to see how the pumpkin crop looked since Halloween is coming up. Two things are resulting in a shortfall of Maryland pumpkins this fall. Back in July, we had over 21 days of 90 °F plus temperatures, followed by frequent light rains and high temperatures continuing in August. The high temperatures in July resulted in poor pumpkin flower pollination. Then in August, disease then moved in with the humid, wet, and hot conditions. In southern Maryland, they suffered through 25" of rain in one week. Some fields were flooded for up to a week. This flooding hit the pumpkin crop hard.

Spruce Spider Mites

By: Stanton Gill

With the cool nights, we are seeing an increase in activity of spruce spider mites, *Oligonychus ununguis*. Monitor for these mites on spruce, hemlock, arborvitae, Leyland cypress, cryptomeria, larch, and juniper. Place a light colored sheet of paper on a clipboard and wrap the branch over the clipboard. You will see the small mites moving about. Use your smart phone to take a photo, and then magnify it to see the mites on the paper. Infested needles become mottled and appear yellowish to gray in color. Once damaged, needles will not recover even after the mites are gone. Under heavy infestations, needles can brown or fall prematurely.

Spruce spider mites cause yellowing and browning of foliage, such as on this cryptomeria sample

Control: The mite growth regulator Hexagon is very effective in controlling spruce spider mites, affecting the immature stages. Hexagon is ovicidal resulting in females laying sterile eggs. It will also prevent eggs that have been laid from hatching. You may need to include a 1% horticultural oil to kill adult mites.

Blue Velvet Spread Fungus

Dave Keane found blue velvet spread fungus (also called cobalt crust fungus) in Washington County this month. It is often found growing on the undersides of fallen logs so it is not easily spotted.

For more information, read this Loyola Center for Environmental Community article.

Blue velvet spread fungus is a cool looking fungus to find on rotting logs
Photo: Dave Keane

Oaks Continue With Dieback in 2020

By: Stanton Gill

We continue to receive reports of red oaks, chestnut oaks, and white oaks dying in landscapes. Each week, we are receiving pictures of mainly red oaks with frass tubes or sawdust at the flair of the trees. Keep in mind we had a 21-day stretch of 90 °F plus weather in July to early August and these tempeartures have stressed many trees, making them susceptible to ambrosia beetle attacks. We had a number of rain showers in August, but nothing of real volume to really soak the ground.

The problems with oak are not only a problem in the landscape. I have a 40-acre forest in which we are doing a select harvest this month and I was surprised at the number of white oaks and red oaks that have died in the forest over the last 18 months. Our soil is a fairly good clay loam that is well drained. I must say even though it has a thick mat of organic material below this layer the soil is bone dry.

Sapsuckers Active in Late September

By: Stanton Gill

Bob Mead, Mead Tree and Turf, called in to report heavy fresh damage to sugar maples from yellow-bellied sapsuckers. We usually see this damage showing up in the fall, which started this week on Tuesday. In the winter of 2019 – 2020, it was mild enough that many of the sapsuckers did not migrate so we received reports of damage in January through March.

Sapsucker (*Sphyrapicus varius varius*), a type of woodpecker, damage is recognized by neatly spaced horizontal or vertical rows of holes in the tree trunks or on the branches. These holes are usually relatively shallow in the cambium or inner bark areas. Sapsuckers use their tongues to lap up sap from the holes produced. There is not a whole lot that you can do to prevent the damage since you do not know which trees they will attack, and sapsuckers are protected birds. Besides maples, they often damage Chinese holly and Foster holly.

Yellow-bellied sapsuckers are causing damage to trees at this time of year
Photos: Bob Mead, Mead Tree and Turf

Fall Webworms

Fall webworms are finishing up feeding for the season and are on the move to find places to pupate. Elaine Menegon, Good's Treee and Lawn Care, is reporting that she is still getting calls about webworms on honey locusts. She noted that "clients don't care that they are not really feeding any more just want them treated to reduce the webs".
Control: There is no point to using any control measures now since they are no longer feeding. The most that can be done is to prune out the webbing. Next year, we will include early caterpillar activity in the IPM reports. At that time, treat with Bt or spinosad.

Fall webworms are no longer feeding, but their webbed nests full of caterpillar frass do look unsightly, as on this honey locust in Hershey, PA Photo: Elaine Menegon, Good's Tree and Lawn Care

Hands-on IPM Diagnostic Session for Professional Horticulturists

By: Stanton Gill

The days were perfect for the outdoor, physcially distanced IPM diagnostic sessions that the University of Maryland Extension held at CMREC this week. Thirty-six professionals signed up for the two-day sessions taught by Karen Rane, David Clement, Heather Zindash, and myself. Thanks to all of the nursery growers and landscapers who generously supplied us with fresh samples of insects and diseases for these special sessions. All of the participants enjoyed the hands-on approach to figuring out insect and disease problems. As a bonus, each of the people attending who needed it received their full 8 credits for MDA pesticide re-certification.

Heather Zindash, The Soulful Gardener, presents at the September 22nd IPM Diagnostic Session at our research center in Ellicott City

As long as the University of Maryland guidelines do not change, we are now moving on to developing a physically distanced special Advanced IPM Session at Carroll Community College. We are aiming for December 18 and will limit the registrants to the first 39 people to sign up. Under University rules, we cannot gather more than 40 people, including the speaker and must provide 56 ft^2 of distance for each participant. We will put out the registration information in upcoming IPM alert later this fall.

Report Correction

Annette Cormany, UME, pointed out that the damage shown in last week's report as ugly nest caterpillar was most likely from barberry webworm. The barberry webworm is a dark caterpillar with many small, white spots. Japanese barberry, one of its host plants, is invasive in Maryland woodlands and forests.

Coyotes Coming Back in Maryland

By: Stanton Gill

Hunters at my orchard placed a trail camera around to monitor for deer activity. This last week they caught, on camera, coyotes wandering in the open fields at the edge of the woods in Westminster. I talked with a friend with DNR who lives within 5 miles of our orchard. She said she heard coyotes calling and yelping in her woods in the evening at their farm. I spoke with a farm owner in Howard County and she said they have been seeing coyotes increasing in their 900-acre farm over the last couple of years.

The coyote the hunters saw on the trail camera at my orchard was the size of a medium sized German shepherd. I spoke with Tom Robertson, who is my forester for our timber harvest, about the coyote sighting at our place. He said he had seen coyotes in the Taneytown area and one was female coyote taking down a deer fawn.

It is good to see the population of coyote are making a comeback and this will help, to a degree, keep down the ever expanding population of deer. Meanwhile, we are seeing an increasing number of deer hit on the roadways. We are moving into mating season so beware when driving down the road and watch for deer running into the roadway. It is an expensive accident when you run into one.

Two-marked Treehoppers

Jim McWilliams, Maxalea, Inc., sent in photos of a redbud with white, waxy areas on the trunk. Female two-marked treehoppers leave these white waxy plugs over the spots where they deposit their eggs. The wax will break down over a short period of time.

These white spots on the trunk of this redbud tree are wax "plugs" left by female two-marked treehoppers to cover where they lay eggs
Photos: Jim McWilliams, Maxalea, Inc.

Redheaded Pine Sawflies

Craig Greco, Yardbirds, LLC, found redheaded pine sawflies active this week. This native sawfly feeds on pines including jack, red, shortleaf, loblolly, Japanese black, and mugo. Other hosts include deodar cedar and Norway spruce. The larvae feed gregariously. A group of larvae can defoliate whole sections of a pine very rapidly in late August to early September.

Control: Prune off tip growth on which they are feeding and destroy. Conserve insecticide will also give control.

Redheaded pine sawfly larvae feed in clusters on tip growth
Photo: Craig Greco, Yardbirds, LLC

Caterpillars on Salvia Flowers

Nancy Woods, MNCPPC, found caterpillars of *Pyrausta inornatalis* feeding on salvia this week. David Clement, UME-HGIC, found an adult visiting a salvia flower earlier this month. Larval plant hosts are various salvia species.

***Pyrausta inornatalis* caterpillars feed on *Salvia* species.**
Photo: Nancy Woods, MNCPPC

***A Pyrausta inornatalis* moth vistis a salvia flower**
Photo: David Clement, UME-HGIC

Beneficial of the Week

By: Paula Shrewsbury

Ambush bugs: another "sit and wait" predator

The golden rod is in full bloom. That means it is ambush bug time. Ambush bugs are a group of predatory true bugs (Order Hemiptera: Heteroptera) that belong to the family Phymatidae. They are related to assassin bugs. There are many species of ambush bugs that vary in their appearance and size, and the type of plant they use as there foraging habitat. There is one generation a year. Overwintering is in the egg stage from eggs laid on the stems of flowering plants last fall. In the spring, nymphs hatch and begin hunting for prey. They complete multiple molts during the season and by now, most ambush bugs are in the adult stage (~1/2" in length). Males are smaller than females, and will often be seen riding on the back of the females while they continue to feed. This behavior may be to guard off other males, but they also take advantage of the fact that females are larger and good hunters, and share in her bounty. After mating, the female then lays eggs for the winter.

The yellow and brown patches of color and irregular outline of the body of this ambush bug helps it to camouflage very well within the golden rod flowers, where sits and waits until an unsuspecting victim comes too close and becomes its next meal.
Photo: M.J. Raupp, UMD

At this time of year, fall blooming flowers such as golden rod and asters look amazing. If you look VERY closely at the flower heads of these plants, you may see a highly camouflaged adult ambush bug sitting and waiting for its dinner to arrive. Adults and nymphs of ambush bugs camouflage with the flowers of the plants where they forage for prey. It was not known, if ambush bugs could change color to match the plant or if they select plants on which they camouflage well. Interestingly, a recent study demonstrated they use a combination of color change and choice of habitat (Boyle and Start 2020). Their coloration is often mottled (ex. yellow and brown or white and brown), and the outline of their body irregular, both characteristics that help them hide from unsuspecting prey (see the images).

This ambush bug is light in color and camouflages nicely on this light colored flower head.
Photo: M.J. Raupp, UMD

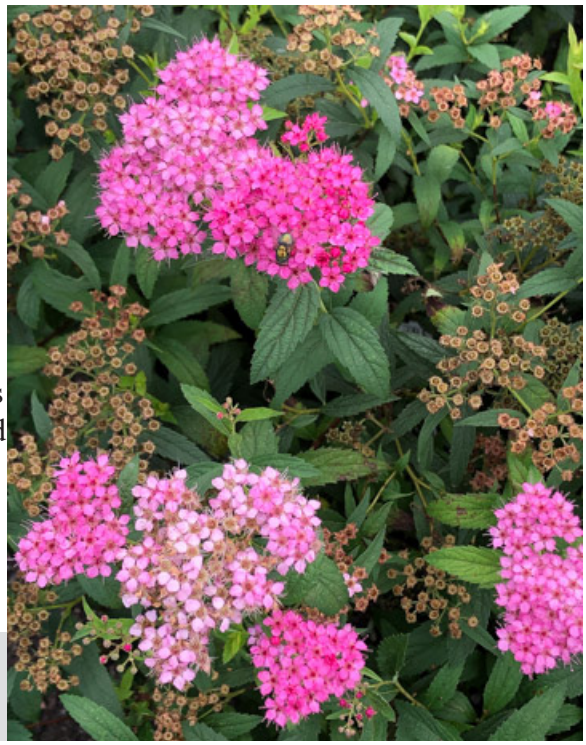
Ambush bugs are “sit and wait” predators, as was the crab spiders in last week’s Beneficial article. They use there camouflage and ability to sit very still for hours to hide from potential prey items. When the unsuspecting prey lands on the flower, the ambush bug pounces with speed and stealth on the prey grabbing it with its well-developed, thickened raptorial front legs (similar to a preying mantis). The ambush bug then injects enzymes into the prey. The paralyzing enzyme immobilize the prey and the digestive enzyme liquefy it allowing the ambush bug to slurp up its dinner using its sucking mouthparts. Click here or here to see videos of an ambush bug attacking prey. Ambush bugs feed on insects as big as or bigger than themselves. They feed on a variety of insects that visit flowers such as the wasp pictured here and other wasps, flies, beetles, bees, and more. The wasp pictured here (see image) is the European paper wasp, *Polistes dominula*. Introduced to the U.S. around 1970, it is now widespread especially in urbanized areas. Studies out of Dan Potter’s lab (Univ. of Kentucky) found this wasp was the most common caterpillar-hunting wasp in urban gardens and that it preyed on monarch caterpillars. This ambush bug is providing some good biological control. Although these bugs feed on a diversity of insects, some may not always consider them “beneficial” because they sometimes feed on pollinating insects. However, it is all part of the circle of life, which is truly amazing when you pay attention to it.

Look very closely and you can see the ambush bug’s sucking beak inserted into the head of the paper wasp (Polistes dominula), which has been shown to attack monarch caterpillars, among others, in urban gardens. The unsuspecting wasp landed on the flower to suck up some nectar and ended up with quite a surprise.
Photo: M.J. Raupp, UMD

Plant of the Week

By: Ginny Rosenkranz

Spiraea japonica 'Anthony Waterer' is a deciduous shrub that grows in a compact mound, growing 2-3 feet tall and 3-4 feet wide, fitting into small gardens or adding to gardens that need small blooming plants. In the spring, the slender 3-inch leaves emerge with a reddish tint that grows into a green blue which lasts all summer. In the late autumn, the foliage glows yellow and reddish purple. Plants should be pruned in early spring so that the new growth will provide the beautiful flowers. It is the flowers that bloom from May to September that attracts both butterflies, gardeners, and landscape contractors to the plants. The tiny flowers of S*piraea japonica* 'Anthony Waterer' are a bright carmine red and are gathered in a flattened bouquet called a corymb that can spread up to 6 inches wide. The corymbs that are full of bright flowers can cover the whole plant almost all summer long. Pruning out the faded blooms will encourage more flowers to bloom. 'Anthony



As we move through fall, the foliage of *Spiraea japonica* 'Anthony Waterer' will turn yellow and reddish purple
Photo: Ginny Rosenkranz

Waterer' is cold tolerant from USDA zone 4-8, and is also tolerant of air pollution, a wide variety of soil types, erosion, and deer. Plants grow best in full sun and moist, well drained soils. 'Anthony Waterer' can be used as a low border or hedge, as a mass planting, on a slope to prevent erosion, or as a specimen shrub. Plants can spread by suckers or even seeds, so gardeners should be prepared to remove unwanted seedlings. Although no serious insects and diseases are listed, the plants can become susceptible to aphids, leaf rollers, scale, leaf spot, fire blight and root rot. 'Anthony Waterer' is reported to have resistance to powdery mildew.

Degree Days (as of September 23)

Aberdeen (KAPG)	3205
Annapolis Naval Academy (KNAK)	3619
Baltimore, MD (KBWI)	3719
Bowie, MD	3798
College Park (KCGS)	3451
Dulles Airport (KIAD)	3546
Frederick (KFDK)	3470
Ft. Belvoir, VA (KDA)	3662
Gaithersburg (KGAI)	3364
Greater Cumberland Reg (KCBE)	3014
Martinsburg, WV (KMRB)	3212
Natl Arboretum/Reagan Natl (KDCA)	4027
Salisbury/Ocean City (KSBY)	3717
St. Mary's City (Patuxent NRB KNHK)	3911
Westminster (KDMW)	3696

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

Turf Field Day Webinar

September 25, 2020
8:00 a.m. to 1:00 p.m.
To register

Cut Flower Tour - Now on October 5, 2020

We had to postpone the cut flower tour until October 5th which has opened up a few slots. If you would like to attend, you can register via eventbrite.

Natural Area Management Services Webinar Series

Learn About Expanding Green Industry Services to your Clientele

Are you a Green Industry professional interested in expanding the suite of services to include creating and enhancing natural areas? Perhaps you manage land for an organization, work with volunteers, or are just an interested landowner**?** If so, then this four-part webinar series is for you!

Small-scale natural area management services include: wildlife habitat enhancement, forestry practices, invasive plant control, tree planting, trail development, chosen tree mgt., and more.

A resource manual & specialized checklist tool have been developed to complement the training and help Green Industry professionals determine which enhancement practices are suitable for a given property/site. Join us for this webinar series to increase your knowledge and skills useful for providing additional services to clientele.

When:

- **Webinar 1 - Expanding Your Business: Land Care Practices on Small-Acreage Properties -** Thursday, October 22, 2020
- **Webinar 2 - Land Care Practices for Woodland Health-**Thursday, October 29, 2020
- **Webinar 3 - Land Care Practices for Woodland Health Continued-Thursday-** November 5, 2020
- **Webinar 4 - Introduction to Woodland Health Assessment & Incorporating Woodland Health Practices -**Thursday, November 12, 2020

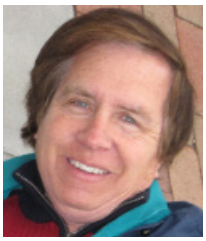
Time: Thursday evenings from 7:00 – 8:30 p.m.

Registration Information: https://go.umd.edu/NaturalAreasServices

Registration Materials & Cost: $35.00. Includes Woodland Health Practices Handbook, Woodland Health Assessment Checklist and Management Actions, and two Woody Plant Identification Guides (Common Native Trees of Virginia Identification Guide and Common Native Shrubs and Woody Vines of Virginia Identification Guide)
Note: For an additional $20 ($55.00 total) participants can also receive a copy of the original Woods in Your Backyard book (regular cost $29 + shipping).

The Woods in Your Backyard Partnership: includes the University of Maryland Extension, Penn State Extension, Virginia Cooperative Extension, Alliance for the Chesapeake Bay, and Virginia Dept. of Forestry

CONTRIBUTORS:



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