UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture — May 1, 2020

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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 sklick@umd.edu

Coordinator Weekly IPM Report:
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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)

Innovative Business Change

By: Stanton Gill

With the stay at home policy, many people may not want direct visits for landscape design work. One innovative company in the Washington Metro area is now offering a way for you to sign up online for a landscape consultation for $75 for a one-hour period. The customer walks around the landscape with their camera on their phone or tablet showing the consultant the landscape situation they are trying to improve. The company develops a plan after this consultation and can do the work or advise the homeowner on what they can do themselves. It is an interesting way of using electronics during restrictive times.

Ambrosia Beetles

By: Stanton Gill

The counts of ambrosia beetles in our baited alcohol traps in Brookeville and Westminster continue to be low this week. Brian Dahl, Pope Farm, found 16 beetles in his trap in Gaithersburg this morning. I have not seen the samples yet for identification, so I do not know if any are *Xylosandrus* species. Marie Rojas, IPM Scout, did not find any beetles in the trap this week. The cool weather, combined with high winds, appears to be keeping flight of ambrosia beetles down so far which is good news.

Wheel Bug Egg Masses Needed

Paula Shrewsbury (Entomology, UMD) is in need of unhatched wheel bug (*Arilus cristatus*) egg masses for a research project. The wheel bug egg mass can typically be found on a wide variety of landscape trees such as cherry, zelkova, sycamore, goldenrain tree, Japanese pagoda, maple, crabapple, elm, hornbeam, and are located on the trunk or branches of the tree. If found, remove the egg mass carefully using a knife. You usually need to take a little bit of bark with it. Please mail the sample (in a hard container to protect the egg mass from getting squished or jostled) with the location, date, and host tree (if known) where it was collected to:
Shrewsbury Lab
University of MD - Department of Entomology
4291 Fieldhouse Dr.
4112 Plant Sciences
College Park, MD 20742

Please email Nancy Harding if you are sending in egg masses so I can be sure to pick them up (irregular campus mail deliveries due to COVID). If you have any questions, please contact Nancy Harding at 301-717-9524 (mobile) or nharding@umd.edu.

Chuck Schuster

By: Stanton Gill

Chuck Schuster, Extension Educator in Montgomery County, retired at the end of 2019. The University was on its way to replace his very valuable position. All of the University budget money for hiring has been frozen and Chuck's position will not be filled until the budget returns to normal, which may be quite awhile. Meanwhile, the dedicated Chuck has agreed to continue working with us at the University of Maryland Extension as part of our IPM team and will write for the IPM Alerts. He will also help organize online conferences, and eventually, when we can conduct, real life conferences.

Roseslug Sawflies: (order Hymenoptera, family Tenthredinidae)

By Nancy Harding and Paula Shrewsbury

Sawflies are not true flies (Diptera); they are wasps. These wasps (Hymenoptera) are named for the adult female's saw-like, abdominal appendage used for inserting eggs into plant tissue. There are three slug-like sawflies of rose: the bristly roseslug sawfly (*Cladius difformis*), the roseslug sawfly (*Endelomyia aethiops*), and the curled roseslug sawfly (*Allantus cinctus*). These insects are not meticulous when it comes to choices of roses on which to feast. Even the 'Knock Out' roses make a tasty meal for these plant feeding insects. Where 'Knock Out' rose were bred to be resistance to certain diseases like black spot, they still can be damaged by a variety of rose-loving insects.

Two of the three common roseslug sawfly larvae were found on 'Knock Out' roses in Bowie on April 25: roseslug sawfly and bristly roseslug sawfly. The accumulated growing degree days in Bowie as of 4/25 were 270DD. Heather Zindash, IPM Scout, found a high population of bristly rose slug sawfly in a residential landscape in Washington D.C. on April 29. Both of these roseslug sawflies are typically found active early in the season. They are in their very early instar stage measuring about 1/16" in length. Because of their size and pale green semi-transparent color, you will need to look very closely at the undersides of the leaves. Also monitor for the early signs of feeding (small patches of brown etching, a type of chewing damage). We will continue to monitor roses for curled roseslug sawfly activity

Fig.1 Roseslug sawfly larvae
Photo: Luis Alfonso, Horticulturist, UMD

Roseslug sawfly (Fig. 1) is an introduced insect from Europe. The larvae have pale green colored bodies and light tan-orange colored head (see Fig. 1). When larvae are fully grown (final instar) they are only about ½" long. These sawflies cause leaf damage by feeding on the undersides of rose leaves causing a windowpane appearance, a form of leaf etching (Cranshaw, 2004).

Fig.2 Bristly roseslug sawfly larvae
Photo: Nancy Harding, UMD

Adult roseslug sawflies are about ¼" long and look very wasp-like except they have a wide "waist" (where thorax and abdomen join) (Davidson and Raupp, 2010). They emerge in early spring and lay eggs singly in pockets along the edges of leaves using a saw like ovipositor. Eggs hatch and larvae emerge in late April to early May. Larvae crawl to the ground to spin cocoons by mid-June. There is one generation per year.

Bristly roseslug sawfly (Fig. 2) is also an introduced insect from Europe. The larvae are about 5/8" long and greenish white (pale green) with a light tan head capsule with long, distinguishing stout bristles. Feeding of the early instar larvae of the bristly roseslug sawfly causes leaf etching on the lower leaf surface, where the later instar larvae feed between the main veins, producing holes in the leaves (skeletonization). This sawfly is the most damaging of the three species, as it has multiple generations (reported 5 – 6) throughout the season, so control is often necessary.

The adults are small, thick-waisted wasps, mostly black in color. The bristly roseslug sawfly life cycle is similar to the roseslug sawfly, except it has multiple generations per year.

Control: Sawflies are best controlled when they are young larvae. You can simply pick them off by hand. A forceful spray of water from a hose can also knock off sawflies. Once dislodged, they cannot climb back onto the plant. If control is warranted, Spinosad, Mainspring, and Acelepyrn all work very well on this pest.

For more information on the roseslug sawfly go to:

Bug of the week http://bugoftheweek.com/blog/2018/5/21/rosie-defoliators-roseslug-sawfly-iendelomyia-aethiopsi-and-curled-rose-sawfly-iallantus-cinctusi

And/or https://extension.umd.edu/hgic/topics/rose-slugs-shrubs

Response About Cold Damage

From Chuck Whealton, Ruppert Landscape:
I read your article on frost damage in the April 17th IPM Weekly Report and you weren't kidding about that frost last week. The damage to my specimen Crimson Queen is significant. I've owned this tree for forty years, having bought it from a little maple nursery that used to be in Woodbine. It's been in its current location at my home in Sykesville for the last twenty years and I've never had damage on it like I see now.

Todd Armstrong, The Davey Tree Expert Company, is also reporting cold damage on Japanese maples and Korean boxwoods.

***Acer palmatum* 'Crimson Queen' is showing cold damage from the recent frosts**
Photos: Chuck Whealton, Ruppert Landscape

Hemlock Woolly Adelgid

Tony Murdock, Fine Pruning, found a heavy infestation of hemlock woolly adelgid in Frederick City near Baker Park on April 23. Tony noted that the adelgids were getting ready to hatch. The cottony masses cover the adult female body and her eggs. Newly hatched nymphs are reddish-brown with a white fringe near the front; and settled crawlers are black with a white fringe around the body and down the back. There are two generations a year.
Control: Spray trees with 2% horticultural oil or insecticidal soap to target crawlers or newly settled crawlers. Systemic insecticides can be applied as a basal trunk application.

Monitor hemlocks for egg hatch of hemlock woolly adelgid
Photo: Tony Murdock, Fine Pruning

Sapsucker Damage Being Found

By: Stanton Gill

Joan Stirling, Shorb Landscape Company, sent in this photo of incredibly heavy sapsucker damage on a Chinese holly in Bethesda. Sapsuckers normally migrate south, but with the mild winter, more hung around Maryland, hence we are seeing more damage this year.

This Chinsese holly has been damaged by sapsuckers
Photo: Joan Stirling, Shorb Landscape Company

Cold Damage to Strawberry Flowers

Jerry Brust, UME

It has been an unusually cool April, especially the last 2 weeks. This weather is following a warmer than average March. If you have strawberry plants starting to flower, the flowers are going to be suseptible to cold damage during one of our chillier nights. The photo shows two flowers, the one on the top is suspended above the ground while the second one is almost resting on the ground. This small difference in elevation may have been the difference between a cold damaged flower—the flower on top with black center, and one that is not damaged--bottom one. If the plants had been covered during the night, it probably would have reduced or stopped any cold damage from occurring. The plants need to be uncovered in the morning or they will get too hot. The cold damaged flowers should be removed, as they could be the starting place for something like Botrytis.

The strawberry flower on top has been damaged by recent frosts
Photo: G. Brust, UME

Allium Leafminer Found on Ornamental Allium Plants

By: Jerry Brust, UME

Well it finally happened. Sharp-eyed Christa Carignan, the Coordinator of Digital Horticulture Education at the UME Home and Garden Information Center, found the tell-tale signs of allium leafminer *Phytomyza gymnostoma* (fig. 1) on garden leeks and onions and also on **ornamental alliums** in central Montgomery County (fig. 2). The ornamental allium on which she found it was a 'Globemaster' type of cultivar. This pest of onion, leek, garlic, and now ornamental alliums will be active for the next 3-4 weeks.

To go over recommendations for this pest again: New transplants or seedings of any allium plant should be watched closely for the tell-tale signs of the fly's damage which is made by the female's ovipositor. The need for monitoring is especially true for ornamental plantings of alliums if there are garden onions, leeks, or garlic being grown in the same area. When eggs hatch, the larvae at first mine leaves (fig. 3) and then move down to the bulbs and leaf sheathes (fig. 4) where they feed and eventually pupate. Pupae will undergo a summer aestivation (type of hibernation, temperatures are too warm for them to be active) and only emerge again in late September. Penn State has good information about the new pest which can be found at: Penn State Allium Leafminer Pest Alert page. You can cover any just-transplanted allium planting with a row cover (but don't wait too long after transplanting) to keep the flies off during the spring, or if needed, treat with insecticides. Penn State has found efficacy using neonicotinoids (Scorpion, Assail), diamides (Exirel), spinosyns (Entrust, which is OMRI-labelled), and pyrethroids. A spreader-sticker is recommended when applying insecticides to any Allium crop.

Fig. 1 Characteristic allium leafminer oviposition marks on onion leaf
Photo: G. Brust, UME

Fig. 2 Symptomatic marks of allium leafminer on an ornamental Allium plant
Photo: Christa Carignan, UME

Fig. 3 Allium leafminer larvae mining (arrows) leaf of an allium plant
Photo: Christa Carignan, UME

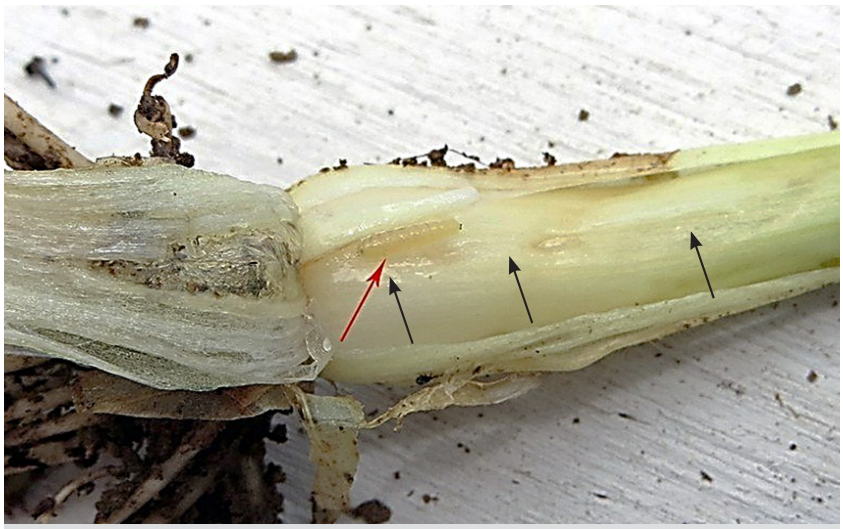


Fig. 4 Allium leafminer larva (red arrow) and feeding damage (black arrows) in onion
Photo: S. Spichiger, Penn State

Lilac Bacterial Blight

By: Rachel Ross and Karen Rane

Our recent cool, wet weather increases the threat of lilac bacterial blight. This disease is caused by the bacterium *Pseudomonas syringae* pv. *syringae*. Symptoms present as brown to black lesions on young leaves which may coalesce and cause leaf distortion (Fig. 1). Young shoots can become blighted and wilt (Fig. 2), but woody stems are not commonly affected.

Cultural practices can help reduce the impact of this disease in the landscape. Avoid over-fertilization and excessive pruning as this encourages new shoot growth which is highly susceptible to infection. Proper spacing of plants encourages air circulation. Avoid overhead irrigation to keep foliage as dry as possible. Infected tissue can be pruned out at least 6-8" into healthy tissue to help remove inoculum. Only prune when host tissue is dry to reduce spread of the pathogen. The disease is most common on French lilac (*Syringa vulgaris*), but other *Syringa* species are less affected. In nursery production, early spring application of a copper product (just before bud break) may help reduce disease incidence.

Fig 1: Leaf lesions and distorted necrotic (dead) leaves of lilac
Photo: R. Mulrooney, U of DE

Fig 2: Girdling and wilting of a young shoot caused by lilac bacterial blight infection
Photo: R. Mulrooney, U of DE

Is Cherry Laurel Toxic?

By: Stanton Gill

I had an interesting call from a landscaper on Tuesday morning. He had installed four cherry laurel plants at a customer's landscape. They wanted them removed since she read that the foliage is toxic to dogs. Here is what we know- chokecherry, black cherry, and cherry laurel contain cyanogenic glycosides. All parts of these plants other than the ripe pulp around the seeds are considered toxic and contain cyanide. Years ago, there was an accident in Kentucky where a couple of racehorses got a hold of chokecherry foliage and died from the consumption, but they consumed a fair amount. The foliage of cherry laurel has an awful taste and the chances of a dog consuming a large quantity would normally be rather remote, but there is some risk here if an animal consumed a large amount of foliage.

Boxwood leafminer – Diptera (*Monarthropalpus flavus*)

By: Nancy Harding and Paula Shrewsbury

Boxwood leafminer adults were found in Bowie on April 25 clinging and hovering within inches of a pyramidalis boxwood (*Buxus sempervirens* 'Pyramidalis'). The accumulated growing degree days in Bowie on 4/25 was **270DD.**

Fig. 1 Boxwood leafminer mating
Photo: Nancy Harding

Boxwoods have been used for hundreds of years in England and Europe and have long been a beloved plant of public and private formal gardens here as well. They can be seen in many historical estates from Long Island to the Chesapeake Bay. With the introduction of other species and cultivars of boxwoods came this gall fly (boxwood leafminer). The boxwood leafminer is considered to be the most serious destructive insect of many cultivars of *Buxus sempervirens* and *B. microphylla*, and can be found wherever boxwoods are grown.

Fig. 2 Female boxwood leafminer laying eggs
Photo: Nancy Harding

The adult boxwood leafminer is a tiny orange-yellow, gnat-like fly 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 (Fig. 1), the female lays about 30 eggs into the leaf tissue (Fig. 2), 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 time period 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. Leafmining damage can cause the plants to look as though they have received severe winter burn, and damaged leaves drop early.

Monitoring: Shake shrubs to detect flying adults during the spring. Look at the underside of the previous year's leaves for mining to easily detect infestation. Mines of 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. Cultivars of English boxwood such as *Buxus sempervirens* 'Pendula,' '"Suffruticosa,' 'Handworthiensis,' 'Pyramidalis,' 'Argenteo-varigata', and 'Varder Valley' are more resistant. Mechanical controls can reduce populations. Prune the foliage before adults emerge, or if they have already emerged wait until adults are done laying eggs in the leaves. If numerous mines, an application of Avid, Mainspring GNL, or a synthetic pyrethroid can be used when the adults are flying. A systemic insecticide can be applied to the soil now to target the hatching and feeding early instar larvae.

For more information go to:

http://bugoftheweek.com/blog/2013/1/31/boxwood-blues-boxwood-leafminer-imonarthropalpus-flavusi

https://extension.umd.edu/hgic/boxwood-leafminer-shrubs

White Mold on Ornamentals

By: Karen Rane

White mold, also called Sclerotinia blight, is a fungal disease caused by *Sclerotinia sclerotiorum* and is favored by cool, wet spring weather – just the sort of weather we've been having the past few weeks. This pathogen has a very large host range, including vegetables, herbaceous ornamentals, and even field crops like soybean. Early symptoms on woody plants like forsythia include collapse of young shoots and stem cankers followed by wilting of the entire branch (Figure 1). Symptoms on emerging growth can resemble cold temperature injury. A dense growth of cottony white fungal mycelium is sometimes visible on the outer surface of the affected stems, especially under moist conditions (Figure 2). Infected herbaceous plants often develop a tan crown rot that progresses to complete plant collapse (Figure 3). On forsythia, splitting the hollow stems will sometimes reveal a dark survival structure called a sclerotium, (plural sclerotia) inside. Sclerotia can also be found in the crowns of infected herbaceous plants (Figure 4), or in the soil. Managing this disease on woody ornamentals in the landscape involves pruning infected twigs at least 6 inches below the margin of visible cankers. Infected herbaceous plants should be dug out and removed. Do not compost plant material with white mold infections, as the sclerotia can survive in the soil and plant debris for many years.

Figure 1. Wilted forsythia shoot due to Sclerotinia blight
Photo: K. Rane

Figure 2. The same forsythia twig after overnight incubation under moist conditions. Note white fungal growth on shoot (arrow)
Photo: K. Rane

Figure 3. Collapsed iris due to white mold
Photo: P. McNeal

Figure 4. White mycelium and sclerotium (arrow) of Sclerotinia on base of infected iris leaf
Photo: P. McNeal

Willow Oak Gall

By: Stanton Gill

Tom Ford, Penn State Extension, sent in pictures of damage to a willow oak. Curtis Young and David Shetlar of Ohio State helped me out on this one. The insect is a maggot of a midge (oak gall midge). We would need an adult for an accurate species identification.

There is a maggot, *Contarinia sp.,* that gets into oak flowers where it feeds and develops.When it reaches maturity, they will "rain" down out of the trees onto anything below including cars, decks, people, etc.

Curtis sent along this article published in 2011 about a gall midge that hits live oaks in CA: "Now anyone who lives around live oaks knows that for the past ten days or so these trees have been showering the world with pollen and the senescent catkins (male flowers). These tiny larvae are occasionally reported under oak trees shortly after flowering.

Willow oak gall is caused by a maggot
Photo: Tom Ford, Penn State Extension

After consulting with retired USDA entomologist Raymond Gagne, these tiny insects were identified as a type of (unnamed) *Contarinia* gall fly. As a graduate student, one of the insects I studied was *Contarinia sorghicola*, the infamous sorghum midge (infamous to sorghum growers anyway). This tiny fly attacks sorghum, and its cousin johnsongrass, only when the plants are shedding pollen. The fly lays an egg inside the developing floret, and feeds on the expanding seed. The result for a sorghum plant is no seeds. This is bad if you grow sorghum.

But the tiny midge that feeds on oaks likely does no harm to the tree, says Gagne. He theorizes that the tiny maggots are likely feeding on sap in the developing flowers. The adult flies, which you wouldn't see unless you knew what to look for, emerge from the soil and lay their eggs on the flower buds before the catkins open. The larvae that hatch from these eggs feed rapidly, growing to their 1.5 mm full size before they drop from the tree into the ground. Once on the ground they go into diapause, a kind of suspended animation, until the following spring when they pupate and emerge as adults when the tree is ripe once again for attack."

Cool Insect Catch

By: Stanton Gill

Mary Travaglini, Montgomery County Goverment, sent in a great picture this week. It is a black blister beetle (Meloidae family) with another beetle species on the dorsal side of the blister beetle. Three years ago, I had another very similar picture sent to me. An entomologist ecologist from the Mid-west said we were seeing a very interesting act of nature.

First off, blister beetles are plant-feeding insects (Meloidae) that contain cantharidin, a toxic defensive chemical that protects them from predators. Accidentally crushing a beetle against the skin can result in a painful blister, the source of the insect's common name.

The insect ecologist informed me that the smaller beetle is feeding on the chemical that the blister beetle has in its exoskeleton. This chemical makes the smaller beetle, which cannot produce its own cantharidin, more toxic to predators and increases the chance that a female of its species will mate with it since it has chemical defenses now.

The smaller beetles are feeding on the cantharidin given off by the large blister beetle; the chemical provides the small beetles protection from predators
Photo: Mary Travaglini, Montgomery County Government

Crape Myrtle Problems

By: Stanton Gill and Karen Rane

Greg Dionne, Hometown Tree Experts, sent in pictures of crape myrtle branches with pitting in the branches. Karen Rane and I each think it could be injury from hail. We have had three hail storms over the last 3 weeks in central Maryland. Greg responded to the possibility of it being hail damage with the following comment: "I really doubt it is physical damage, especially from hail. Some of the branches are vertical so it would be impossible for this to happen. They remind me of the slice marks from the locust when they use their ovipositor. After looking at the photos again and zoomed in, I noticed this crack is directly below the leaf/branch scar, not sure if that is coincidence or a clue. I am planning to revisit in a week to take a look after the next couple days of 70 °F and see if it has begun to leaf out." We would be interested if anyone else is seeing similar damage on crape myrtle.

Another note – several landscapers are reporting that crape myrtles are very late leafing out this year. Crape myrtle is a late one for leafing out, but so far it appears to be behind schedule this year. The delay is probably due to the frequent cool, wet weather. Send me an email if your crape myrtles are late leafing out and let me know the location. My email is sgill@umd.edu.

The red arrows mark where the damage is along the stems of this crape myrtle. Has anyone seen this damage this spring?
Photo: Greg Dionne, Hometown Tree Experts

Beneficial of the Week

By: Paula Shrewsbury

Biological control of adelgids: Predatory silver flies

In recent newsletters, there have been reports of adelgid activity (hemlock woolly adelgid and pine bark adelgid). Therefore, this week's beneficial is predatory **silver flies** (Diptera: Chamaemyiidae), which are among the most important natural enemies regulating adelgid species in their native ranges. In addition to adelgids, silver flies can provide biological control for some species of aphids, scales, and mealybugs. There are an estimated 100-150 species of silver fly worldwide. Adult silver flies are small (1-4 mm), stocky and usually silvery gray to brown in color. Larvae, the predacious stage, are small, legless and orange in color. The larvae can be found feeding in the waxy mass of adelgids.

Predacious silver fly, *Leucopis* sp., adult found on the needle of a hemlock heavily infested with its prey, hemlock woolly adelgid. (Photo by Bud Mayfield, USFS)

Of the adelgids we have in MD, the most damaging is hemlock woolly adelgid (HWA) (*Adelges tsugae*, Hemiptera: Adelgidae) which is native to Asia and the Pacific Northwestern U.S. Originally, it was thought that both the eastern and western U.S. populations were introduced from Asia, but research has determined that the Western population is native. HWA is a tiny sap-sucking insect that has caused widespread decline and death of hemlocks in the Eastern U.S. Since the first detection of HWA in 1951 in VA, it has spread to 17 states ranging from the Smokey Mountains to southern Maine killing trees in managed and natural habitats. The introduced eastern population of HWA has few natural enemies, and our eastern and Carolina hemlocks have little natural defenses against them. Therefore, much effort has gone into identifying potential biological control agents to suppress the eastern HWA. Biological control of the native northwestern HWA, however, is another story. Two predacious silver fly species from western North America, *Leucopis argenticollis* and *L. piniperda*, show promise as biological control agents in the west. Surveys of HWA in Washington and Oregon found these silver flies to be very abundant and widespread. These silver flies are being studied to understand how they affect the population dynamics of northwest HWA, in addition to their potential as biological control for the eastern HWA. Interestingly, *L. argenticollis* and *L. piniperda* have both been reported in the east, only not from HWA. *Leucopis piniperda* were found on pine adelgids in MD, CT, VA, and WVA and *L. argenticollis* in MN and PA. It turns out these populations of silver flies are genetically different from those found on HWA in the northwest. It appears that for both species of silver flies that different populations specialize on different adelgid species. Research continues to understand more of the biology and ecology of these silver flies, to identify measures to use them as biological control agents of the eastern population of HWA. Several states are collecting silver flies from the northwest and releasing them in HWA adelgid forests in the east. Find out more about the release program in NY and TN. Let's hope these predacious silver flies find our eastern HWA tasty.

Close up image of a predacious silver fly, *Leucopis* sp., larvae in the woolly wax ovisac of hemlock woolly adelgid. Photo: nrs.fs.fed.us

Weed of the Week

By: Chuck Schuster

The weather outside has been very changeable. Rain again most of the week to prevent many from doing work in the damp to saturated soils. Soil temperatures have remained cool this week, as compared to earlier in the month. Soil temperatures ranged from 46 to 56 °F this week. Several damp days also occurred with Friday's rain in some areas reaching 1.5 inches.

Photo 1: Courtesy of Judith Smith

This week's weed of the week is *Erodium cicutarium,* also known as redstem filaree, redstem stork's bill, common stork's-bill, or pinweed. Found across much of the northern United States, it can be a weed of economic concern in some crops. In northern areas, it is generally considered an annual, and in the warmer southern areas it will grow taller and act as a biennial, while in this region it is a biennial. This plant is considered an invasive and sometimes noxious weed (not in Maryland). It can grow densely and outcompete native plants. *Erodium cicutarium* will produce a rosette which will give way to a often leafy upright stalk. These stalks can reach a height of almost four inches to nearly twenty inches in total height. Flowers at the top of the stalk will be between .375 and .5 inches in diameter (photo 1). The flowers are pink to lavender in color. The flowers are arranged in a loose cluster and have ten filaments – five of which are fertile – and five styles. The leaves are pinnate to pinnate-pinnatifid (think of a fern), and often are sticky or with hairs (pubescent), (photo 2 and 3). The root structure is a deep reaching taproot. The seeds are dispersed using a spring-like projection away from the plant, and the seed on the soil will burrow into the soil as humidity causes the awn (see photo 4)

Photo 2: Courtesy of Judith Smith

Photo 2: Courtesy of Judith Smith

Photo 4: USDA

to straighten or coil back as humidity changes. The awn coils under dehydration and uncoils when wet. This movement allows the seed to eventually position themselves into a crevice and create a drilling action that forces or “drills” the seed into the soil.

Control of *Erodium cicutarium* is not for the faint of heart. Culturally, it may be controlled or suppressed by hand pulling. In some areas, it is burned to help control it, but this method is not a viable option for nursery or landscape. It can be suppressed utilizing Prizefighter, Avenger, Burnout, but because of the deep taproot, these products will not control the plant. The use of 2,4D, Dicamba, or combinations of these materials when the plant is small and prior to flowering is very effective, but limited in scope in areas where desirable species exist as these products can move after settling on the weed with temperature volatilization. The younger the plant is at application the better the results. The use of glyphosate will suppress it, but will take several applications for control. This is a difficult to control plant. Prevention of seed dispersal is very important in longer term control.

Plant of the Week

By: Ginny Rosenkranz

Cornus florida ' Karen’s Appalachian Blush', a native dogwood, began life in an abandoned nursery in Tennessee. The nursery had been abandoned due to a severe powdery mildew outbreak that was destroying most of the native dogwoods. This cultivar along with ‘Jean’s Appalachian Snow’ and ‘Kay’s Appalachian Mist’ were discovered and found to be very powdery mildew resistant among all the others that were succumbing to the disease.

***Cornus florida* 'Karen's Appalachian Blush' has large, pink-tinged bracts**
Photo: Ginny Rosenkranz

Trees can grow 15- 20 feet tall and wide and have the lovely horizontal growth and flat crown of our native dogwoods. Like all of the native dogwoods, the plants prefer to grow with morning sun and afternoon shade. Cold tolerant from USDA zones 5-9, ‘Karen’s Appalachian Blush’ grows best in organically rich acidic soils with a light application of mulch to keep the roots cool. Dogwoods also need to be watered during periods of high temperatures Although its claim to fame is powdery mildew resistance, the plant also has very large and beautiful creamy white bracts that have a soft pink blush around the outer edges and the color cleft is a burgundy red. The bracts are large and thin, don’t over lap, and are a bit floppy. The fertile flowers in the center button are yellow green. Flowers and bracts are about 4-5 inches across. The flowers mature into very glossy bright red fruit that is prized by many native birds in the autumn. The dark green oval foliage is arranged in an opposite pattern on the branches and turns shades of red in the autumn. Pests include leaf spot, leaf and twig blight, dogwood Anthracnose, and stressed trees can become vulnerable to borers and scale.

Pest Predictive Calendar "Predictions"

By: Nancy Harding and Paula Shrewsbury

In the Maryland area, the accumulated growing degree days (DD) this week range from about 126 DD (Aberdeen) to 341 DD (Patuxent River Naval Base). 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.

- Spiny witchhazel gall aphid – adult/nymph (171DD)
- Boxwood leafminer – adult emergence (249DD)
- Spruce spider mite – adult/nymphs (276DD)
- Azalea lace bug (egg hatch 1st gen) (281DD)
- Pine needle scale (egg hatch 1st gen) (283DD)
- Hemlock woolly adelgid (egg hatch 1st gen) (300DD)
- Spirea aphid (adult/nymph) (326DD)
- Lilac borer (adult emergence) (350DD)
-

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 29)

Aberdeen (KAPG)	126
Annapolis Naval Academy (KNAK)	206
Baltimore, MD (KBWI)	244
Bowie, MD	284
College Park (KCGS)	214
Dulles Airport (KIAD)	242
Frederick (KFDK)	200
Ft. Belvoir, VA (KDA)	282
Gaithersburg (KGAI)	210
Greater Cumberland Reg (KCBE)	178
Martinsburg, WV (KMRB)	160
Natl Arboretum/Reagan Natl (KDCA)	339
Salisbury/Ocean City (KSBY)	280
St. Mary's City (Patuxent NRB KNHK)	341
Westminster (KDMW)	238

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

Phenology

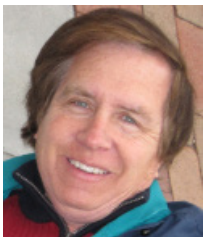
PLANT	PLANT STAGE (Bud with color, First bloom, Full bloom, First leaf)	LOCATION
Fagus grandifolia (American beech)	First leaf	Clarksville (April 25)
Rhododendron austrinum (flame azalea)	Bud	Wheaton (April 25)

CONFERENCES

June 3, 2020
Eastern Shore Pesticide Recertification Program
Location: Chesapeake College, Wye Mills, MD
This program will be conducted on-line.

June 20, 2020 - Has been postponed until 2021
Maryland Christmas Tree Association Summer Meeting

CONTRIBUTORS:



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