UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture — April 12, 2019

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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

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Disease Information: Karen Rane (Plant Pathologist), David Clement (Extension Specialist), and Joe Roberts (Plant Pathologist for Turf)
Weed of the Week: Chuck Schuster (Extension Educator, Montgomery County)
Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/Somerset Counties)
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Pieris Lace Bug

By: Stanton Gill

Pieris is starting to bloom this week in central Maryland. I examined foliage on several plants in Olney and Ellicott City. The lace bugs are still in the egg stage right now. They should be hatching once the flowers fade and new growth emerges on the foliage.

After blooming, the systemic dinotefuran can be applied as a soil drench. It should provide control for 2 – 3 months and be out of the plant by the time the time pollinators are active on the flowers next year. Another choice would be to apply Altus systemic as a soil drench.

Look on the underside of stippled foliage of pieris for lace bugs

Boxwood Research

By: Stanton Gill

Katie Shapiro, Bridge Landscape, sent along this website that listed a conference held in France that covered the rash of boxwood problems including boxwood blight. It looks like the Europeans are developing some interesting resistant varieties. It will interesting to see if they perform well in the United States.

https://www.ebts.org/2018/12/scientific-symposium-summary/

Ambrosia Beetles

By: Stanton Gill

We sent out the special report on Monday reporting flight activity of *Xylosandrus* species in central Maryland. They continued to show up in our baited traps through the week. We had seven *Xylosandrus germanus* and two *Xylosandrus crassiusculus* on Thursday morning. Samples from James Becker in Frederick were negative for *Xylosandrus* activity. These were collected early in the week of April 8. The cooler weather in western Maryland is probably delaying flight.

Frass tubes indicate ambrosia beetles are infestation

The disabled IPM Scout, Maria Rojas, showed up with her broken leg (yes, seems that breaking something is the latest trend) with a bag full of beetles collected from alcohol baited traps in Adamstown (Frederick County) and Darnestown (Montgomery County). The trap contents from Frederick did not have any *Xylosandrus* species of ambrosia beetles. This situation is consistent with the samples from James Becker in Frederick. The traps in Darnestown area were a different story. There were several *Xyleborinus alni* in the trap (8) and *2 Xyleborinus saxesenii*. The big thing is there were 6 *Xylosandrus germanus* and one *Xylosandrus crassiusculus* in the trap. Richard Uva placed alcohol baited traps in Federalsburg this week and we will see what his traps pull in next week.

Downy Mildew Resistant Basil

By: Stanton Gill

Three years ago we brought in a Rutger's University pathologist to speak to Maryland greenhouse growers. He mentioned that he was working on downy mildew resistant basil varieties and was close to market. Rutgers has released two cultivars: 'Obsession' and 'Devotion' (great names). 'Obsession'is a compact basil with good resistance to downy mildew. 'Devotion' is also downy mildew resistant but is a bigger plant than 'Obsession'. On another front, Israeli plant breeders have released 'Prospera' as a downy mildew resistant basil. I found Seedco and Johnny's Seed as suppliers in a web search.

Resistant cultivars are being bred because downy mildew is a serious problem on basil
Photo: David Clement, UME

Weather and Its Influence on Plants

By: Stanton Gill

The weather has finally come around to a reasonable state. I have never seen daffodils and deciduous magnolias look so good. We have avoided any killing frost at night and the flower display looks great so far. Even the cherry blossom parade came off without a hiccup. We are seeing peaches and fruit bearing plums coming into bloom this week near our CMREC lab. In western Maryland, the peach buds are swelling, but no flowering yet in Washington County and Carroll County so far.

Floral displays of daffodils and peaches are looking good this year
Photos: Stanton Gill

Thuja 'Green Giant'

By: Stanton Gill

I know *Thuja* 'Green Giant' is the darling of the nursery industry right now. It has proved to be a very attractive and fast growing screening plant for use in the landscape where people want to block out the view of the neighbors. For years, it has been reported to be very deer resistant. When you prune this plant, the odor that is given off is horrendous. I suspected that this bad odor is what was repelling the deer.

Deer browsing on *Thuja* 'Green Giant' is occurring this spring
Photo: Mark Schlossberg, ProLawn Plus, Inc.

Mark Schlossberg, Pro Lawn Plus, Inc., sent in a photo of mature *Thuja* 'Green Giants' with heavy browsing of deer. I asked him to confirm these were truly *Thuja* 'Green Giant'. The consulting arborist, Frank Dudek, visited the site with Mark and confirmed the plant ID. Mark called on Thursday morning to tell me he is now seeing the same injury on *Thuja* 'Green Giant' in Howard County. Mark talked with a DNR rep who told him the deer herds are at record levels and does are birthing more twins and even triplets. You might have to start protecting your customers' *Thuja* if their taste for this plant expands.

Boxwood Psyllid

Lincoln Cruz, J. W. Townsend Landscapes, is reporting that in Charlottesville, VA he has started to find the waxy residue in some boxwood from boxwood psyllid nymphs. Lincoln notes they are sitting at around 180 GDD at CHO as of yesterday, and is not surprised that he started finding them in some built up subdivisions with a warmer microclimate. In Maryland, we usually get reports of psyllid activity in early May. Look for boxwood psyllid nymphs feeding on terminal growth of boxwood in a few weeks. The boxwood psyllid causes tip growth to cup and curl. Look for a white, waxy material that the psyllids produce within the cupped leaves. Damage is rarely significant enough to warrant treatment.

Japanese Spurge

By: Christa K. Carignan, CPH

On a walk this week to search for native spring wildflowers in bloom, I came across this large swath of Japanese spurge (*Pachysandra terminalis*) covering a forested area of Howard County. This is an example of how an invasive plant escapes from gardens and landscapes and completely takes over a natural area to the detriment of native plants and the species (bees, birds) they support. I saw a similar scenario with common periwinkle (*Vinca minor*) covering a section of upper Rock Creek Park in Montgomery County last weekend. (See Invasive Vinca, Rhymes with "Stinka".)

Japanese spurge is a landscape plant that has become invasive in natural areas Photos: Christa Carignan, CPH

Clients often want quick, evergreen groundcovers, but invasive plants have unintended consequences in our natural ecosystems. This is an opportunity to turn to other choices that are unique, beautiful, non-invasive, and adapted to Maryland's growing conditions. Some alternative groundcovers include: ferns – Christmas fern (*Polystichum acrostichoides*) and marginal woodfern (*Dryopteris marginalis*), sedges – blue wood sedge (*Carex glaucodea*) and Pennsylvania sedge (*Carex pensylvanica*), Canadian ginger (*Asarum canadense*), golden groundsel (*Packera aurea*), and creeping phlox (*Phlox stolonifera*). See additional choices listed here: https://extension.umd.edu/hgic/topics/groundcover-list.

If you want photos of some of the alternative groundcovers, you can find Christmas fern, golden groundsel, and blue sedge here: https://extension.umd.edu/hgic/topics/recommended-native-plants-maryland

Herbicide Resistance

By: Stanton Gill

NPR ran a good piece on the development of resistance in pigweed to glyphosate, dicamba and 2, 4-D. They called it the super weed that has been hit with just about everything on the market. In Georgia, they are reporting that it is cropping up in field crops throughout the state. Let me know at sgill@umd.edu if you are finding this weed showing up in larger numbers in your nursery.

Spotted Lanternfly - Pennysylvania Permits

By: Stanton Gill

It was recently announced that as of May 1, 2019, the PA Department of Agriculture will be enforcing the SLF business permit requirement.

Back in December 2018, the Pennsylvania Department of Agriculture announced that businesses operating in the spotted lanternfly quarantine zones (in and out of the state) were being encouraged to obtain the required Spotted Lanternfly permit. This permitting process is to help stop and slow the spread of this invasive pest.

Testing for the permit:
https://extension.psu.edu/spotted-lanternfly-permit-training

With the recent announcement that the SLF permit requirement will begin being enforced starting in May, it is critical that you take action now to get your permit if you have not already.

For those of you taking the exam, keep in mind, I received my car hangers 3 weeks after I took the test.

Beneficial of the Week

By: Paula Shrewsbury

Eastern tent caterpillars and their caterpillar friends are busy eating leaves… What's eating the caterpillars?

It is that time of year when eastern tent caterpillars and cankerworms are active, with other species soon to come. There never seems to be a shortage of caterpillar species that love to consume foliage of various ornamental trees and shrubs. So what eats caterpillars? There are numerous parasitoids (wasps and flies) and generalist predators that attack caterpillars. Predators include birds, mammals, bugs, beetles, and spiders. Birds as predators were discussed in an earlier issue (3/29/2019). Numerous species of songbirds consume tent caterpillars such as robins, blue jays, cardinals, orioles, chickadees, nuthatches, and many more. Today, I want to discuss a beautiful, large (~1.5"), predatory beetle known as the fiery searcher or caterpillar hunter. This species of ground beetle (Carabidae, *Calosoma scrutator*) is arboreal. This is unusual because most "ground" beetles forage for prey on the ground (obviously). Besides its size, most notable is coloration of the fiery searcher, which consists of metallic green outer wings edged with gold and the head and thorax are bluish-black. Both the adult and larval stages are predacious.

The fiery searcher or caterpillar hunter, *Calosoma scrutator*, is one of the largest carabid or ground beetles growing to 1.5" long, is one of the few ground beetle species that are arboreal, and it has a particular fondness for caterpillars.
Photo: P. Shrewsbury, UMD

The fiery searcher is a common predator in ornamental and turfgrass systems in addition to woods and fields. They climb up trees to find prey such as cankerworms, eastern tent caterpillars, and gypsy moth caterpillars. You should start to see these large predators around this time of year. Fiery searchers are active from about late April to November and are often found under rocks, logs, bark, leaf litter, and decomposing logs when they are not foraging in trees. Eggs are laid in the soil and both the larvae and adults climb trees in search of

caterpillars. Adult beetles hunt during the day and larvae hunt at night. When larvae mature they move back to the soil to pupate from which adults emerge. Beetles can live up to 3 years.

Watch for these beautiful beetles, but if you have a need to handle them, don't be surprised if they "stink on you". Fiery searchers give off quite a nasty smell when disturbed!

The larva of a fiery searcher feeding on a gypsy moth caterpillar.
Photo: Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org

Weed of the Week

By: Chuck Schuster, UME

The weather continues to be very mild to warm. For early to mid-April, air temperatures have been warm. Soil temperatures have varied a great deal by location, as would be expected, but the variations have been rather large, more than expected. Critical temperatures are for areas near towns and cities, nearer the water and into southern Maryland and the shore of Maryland. As one moves across Maryland it is interesting to watch the wave of different plants that are emerging in the turf and landscape. In one trip down Interstate 97 to Annapolis, it was a "showpiece" of landscape color on the sides of the road. The white blossoms on these trees early in the season is a sign of the Bradford pear, which went wild. (Photos 3 and 4)


Photo 1


PHOTO 2

The Bradford pear was a desired species gaining interest in the mid 1960's with the promotion of it by Lady Bird Johnson. Early trees grew to 50 feet or more, were very brittle and would break with a snow load. The early trees were self sterile and would not spread. Later cultivars, developed to keep them smaller, unfortunately were not sterile with other cultivars and developed into an invasive species. The cultivar 'Bradford', was able to hybridize and produce fertile fruit. This fertile variety is also often used for rootstock during grafting. If the scion (crown) is damaged the rootstock can then become dominate. Many of the early white blossoming trees are the callery pear.


Photo 3


Photo 4


Photo 5

Photos:
Chuck Schuster

Callery pear, *Pyrus calleryana*, is a member of the rose family, originating in Asia. It was first introduced into the United States in 1909. It was used in the 1950's as a start of the development of the Bradford pear. This tree is an invasive weed, growing 30-50 feet in height, with a 20- 30 foot width. Young trees may have long thorns (photo 1) which can be destructive to tires. Leaves are alternate, simple and broadly ovate in shape, appearing with a small rounded toothed margin, one and one half inch to three inches in length. Leaves are shiny and dark green with a leathery feel (photo 5). It flowers early in the season with a white 5-petal flower that occurs before the leaves emerge. The flower (photo 2) will be about one inch in diameter and will produce a seed that is small, brown and woody that matures in the fall. The bark is a light gray color.

Do not allow this tree to grow unchallenged. It will take over poorly managed sites and will be difficult to control. Basal bark treatments are very effective using triclopyr (Garlon 4 or Pathfinder II) between mid February and mid April. Bud inhibitors have been less than effective.

Plant of the Week

By: Ginny Rosenkranz, UME

Chaenomeles speciosa, flowering quince, is a deciduous shrub that can grow 6-10 feet tall and wide. Plants thrive in full sun to part shade but flower best in full sun. They are able to grow in many soil types, but prefer well drained loam soils. Flowering quince is cold hardy from USDA Zone 4-8 and are also tolerant of clay soils and occasional drought. *Chaenomeles speciosa* are grown for their dark, shiny green foliage and their bright scarlet to red, sometimes pink or white 5-petal flowers. The bright 1 – 1 ½ inch flowers open to show off the bright yellow pollen, then mature into a yellow green fruit that makes excellent preserves. The flowers are formed on second year growth, so to promote excellent flowering each year, prune the plants back after flowering. The plants grow in a mounded tangle of branches that are covered in thorns and any suckers should be pruned out at once. There are new cultivars that are thornless and the ones from Proven Winners also have double blooms in scarlet, rose, peach, and orange that are sterile and do not produce fruit. *Chaenomeles speciosa* can be grown as a barrier, screen, as a specimen, or grouped in a flowering border. The branches can be pruned in the late winter, brought indoors, and forced into bloom while winter still holds its icy grip on the landscape. Some of the pests includes rabbits, fungal leaf spot, fireblight, and aphids.

Look for the new cultivars of flowering quince; some will also have double blooms
Photos: Ginny Rosenkranz, UME

Degree Days (as of April 10)

Aberdeen, MD (KAPG)	97
Annapolis Naval Academy (KNAK)	149
Baltimore, MD (KBWI)	117
College Park (KCGS)	108
Dulles Airport (KIAD)	112
Frederick (KFDK)	96
Ft. Belvoir, VA (KDA)	134
Gaithersburg (KGAI)	108
Greater Cumberland Reg (KCBE)	72
Martinsburg, WV (KMRB)	91
Natl Arboretum.Reagan Natl (KDCA)	173
Salisbury/Ocean City (KSBY)	128
St. Mary's City (Patuxent NRB KNHK)	154
Westminster (KDMW)	109

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 mapModel Category: All models Select Degree-day calculatorThresholds in: Fahrenheit °F Lower: 50 Upper: 95Calculation type: simple average/growing dds Start: Jan 1

CONFERENCES

Maryland Pesticide Re-certification Session
April 18, 2019
Location: Cumberland, MD

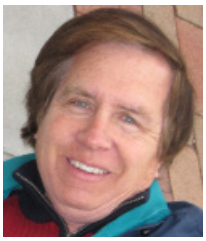
MAA Pest Diagnostic Clinic for Arborists
May 22, 2019
Location: Woodmont Country Club in Rockville
When availabe, the schedule and registration information will be posted on the Maryland Arborist Association (MAA) website.

Eastern Shore IPM Pest Walk
May 15, 2018
Location: Salisbury University, Salisbury, MD
https://2019esipmpestwalk.eventbrite.com

Eastern Shore Procrastinators Pesticide Conference
June 7, 2019
Location: Wye Research and Education Center, Queenstown, MD
https://2019esprocrastinators.eventbrite.com

All Day Session on Herbaceous Perennials
July 25, 2019
Location: The Perennial Farm in Glen Arm, MD.

CONTRIBUTORS:



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Thank you to the Maryland Arborist Association, the Landscape Contractors Association of MD, D.C. and VA, the Maryland Nursery and Landscape Association, Professional Grounds Management Society, and FALCAN for your financial support in making these weekly reports possible.

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