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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:

Stanton Gill, Extension Specialist, IPM and Entomology for Nursery, Greenhouse and Managed Landscapes, sgill@umd.edu. 410-868-9400 (cell)

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 (Extension Educator, Montgomery County)

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)

Ambrosia Beetles

By: Stanton Gill

We received another email picture of frass tubes from ambrosia beetle activity from Earl 'Bud' Reaves, Forester for Anne Arundel County. Earl found the frass coming out a large well established tree this week. This activity was on southern red oak.



Frass tubes produced by the third generation of ambrosia beetles are evident on a variety of trees in August

Photo: Earl 'Bud' Reaves, Forester for Anne Arundel County

Commercial Cut Flower Growers Tour and Seminar

We are organizing a one day tour and field seminar on commercial cut flower production on September 10, 2019. We will be visiting **Cool Hollow Flower Farm (Hagerstown)** and **Surreybrooke Farm (Middletown)** to tour their operations. We will have a series of seminar topics in the afternoon at Surreybrooke Farm.

Crape Myrtle Bark Scale

By: Stanton Gill

We have put out several alerts on a scale in the felt scale family called the crape myrtle bark scale. There has been a lot of activity south of us in recent years. We continue to alert you to be watchful for any crape myrtles brought in from the south for the presence of this scale on branches and trunks of trees.

Crape myrtle bark scale (CMBS) is a serious new threat to southern crape myrtles. This scale can turn what has been a beautiful, low-maintenance landscape tree into an unsightly, high-maintenance landscape tree. This nonnative scale was first detected in the United States in Texas in 2004 and was first found in Mississippi in spring of 2015. It has now spread pretty much throughout the south. When Dave Clement and I presented at the Virginia Beach winter conference we saw this scale active in the the area.

Kevin Chase, entomologist with Bartlett Tree Experts, sent me an email to let me know they are finding this scale in a lot of landscapes in the Virginia Beach area. They just received their first confirmation of the scale being active in the Richmond, VA. Greg Crews, Bartlett Tree Experts, took this photo of a slightly heavy population of the scale in Richmond. If you find this scale, please send me a photo and make sure you contact MDA Plant Protection Division if found in Maryland.



Crape myrtle bark scale has not been found in Maryland yet - but keep an eye out for it
Photo: Greg Crews, Bartlett Tree Experts

How Good are the Landscape Install and Maintenance Jobs This Summer

By: Stanton Gill

I have been visiting several landscape companies and talking via phone and email about how landscape install and maintenance jobs are looking as we move toward the fall. I have not found one negative report yet. Everyone is saying customers are lining up for work and most companies have work lined up into 2020. So far, it looks like everything is humming along. Hope it lasts.

Woolly Apple Aphids

Marie Rojas, IPM Scout, found woolly aphids feeding on pyracantha in a landscape in Gaithersburg this week. This aphid feeds on pyracantha, as well as other woody plants including apple, pear, hawthorn, mountain ash, and elm. Adults are reddish-purple and have a waxy covering. When monitoring, look for honeydew on shrubs and trees. This aphid feeds on both roots and on new terminal growth. Feeding on terminal growth can cause the leaves to curl and form rosettes.

Check to see if there are empty aphid skeletons left behind since predators such as lady bird beetles, syrphid fly larvae and lacewing larvae feed on them, leaving the waxy residue behind. If control is warranted, horticultural oil and insecticidal soap can be used which have a reduced impact on beneficial insects.



When monitoring for woolly apple aphids, look for honeydew
Photo: Marie Rojas, IPM Scout

Spotted Lanternfly Update

By: Stanton Gill

Brian Kunkel, University of Delaware Extension, and I took counts on our spotted lanternfly chemical treatment trials in Pennsylvania this week. We found mainly adults at this point in the season. There were 3rd and 4th instar nymphs around, but mainly confined to the edge rows. The adults are flying about in late August. Whenever we attempted to photograph them on stems, they immediately moved to the other side of the branch or trunk. If you make any movement toward them, they move rapidly around stems. If you shake a branch, they take flight rapidly. They were feeding heavily on red maple and excreting a fair amount of honeydew at this time of year.

In Maryland, they are still only being reported to be active in a small part of Cecil County.



Spotted lanternfly adults are active in Pennsylvania this week



Look for honeydew when scouting trees for spotted lanternflies

Leafcutter Bee Activity

By: Stanton Gill

Leafcutter bees are active in August. The adult bee cuts the edge of the leaf in a characteristic circle shape. Very little damage to the plant health but your customers may notice the notching on the leaf margins of broadleaf perennials in August. Heather Zindash sent in this picture showing damage on *Cercis* in Baltimore County.



Leafcutter bees cause distinctive notching damage on the edges of leaves
Photo: Heather Zindash, IPM Scout

Oleander Aphids

Marie Rojas, IPM Scout, found oleander aphids feeding on *Asclepias tuberosa* in Gaithersburg this week. She noted that aphid mummies were on the leaves too. Elaine Menegon, Good's Tree and Lawn Care, also found quite a few aphid mummies on milkweed. Also look for syrphid larvae, *Aphidoletes* midges, and lady birds beetles feeding on aphids.



The red arrow is pointing to an aphid mummy
Photo: Marie Rojas, IPM Scout

Woody Plants Need Roots!

By Karen Rane

We received a sample of a dwarf blue spruce in the UMD Plant Diagnostic Lab that provided a great lesson in plant diagnostics. The plant had been installed in a landscape less than a year ago, and since then had developed brown needles and twig dieback. It was a terrific sample – the entire plant, delivered to us within a few days of removal (Figure 1). Can you see the problem? The plant has virtually no fine roots! Several large roots (some 1 inch in diameter) had been severed at the production nursery when the plant was dug and prepared for sale. The actual size of the root system within a burlap ball can sometimes be difficult to determine, but if there are no fine roots visible when the burlap is removed, that could be a sign that the root system is not as large as you may think. Without fine roots, trees and shrubs cannot absorb water and nutrients necessary for growth. There are many factors that have an impact on the successful establishment of transplanted trees and shrubs – in this case, it was the poor quality of the plant from the nursery that was responsible for transplant failure. Having the entire plant as our sample allowed us to pinpoint the cause of the dieback symptoms.



Figure 1. Dwarf blue spruce with needle loss and twig dieback due to lack of sufficient fine roots.
Photo: Karen Rane

Caterpillars

A variety of caterpillar images have been sent this year. This late in the season control is usually not necessary.



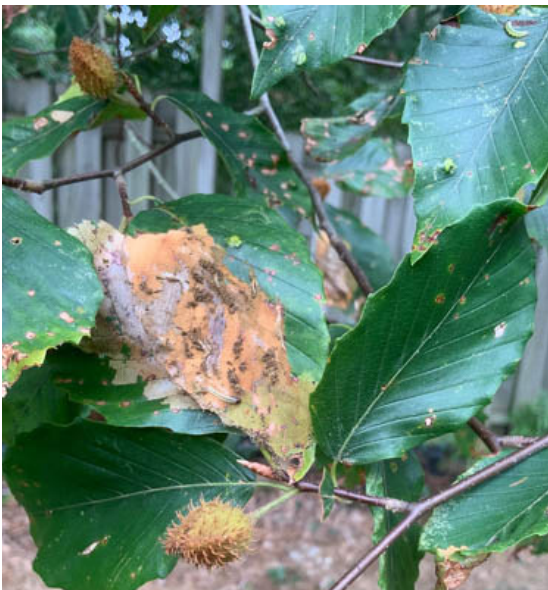
Marie Rojas found leafroller caterpillars using silk to knit two leaves together to feed within on *Liquidambar styraciflua* 'Hapdell' and 'Rotundiloba'.
Photo: Marie Rojas, IPM Scout



Monarch caterpillars are active in the area; Elaine found about 10 on milkweed in PA
Photo: Elaine Menegon, Good's Tree and Lawn Care



UMD-IPMnet
Bronze fennel here at the research center have been hosts to multiple generations of black swallowtail caterpillars (aka parsleyworms) this summer



Heather Zindash found a tortricid moth caterpillar feeding on a beech that was looking ratty this season in Brookeville. It is another caterpillar producing webbing to stitch leaves together. The tree will be fine and will leaf out next year. The damage is past mid-summer so the tree really does not suffer greatly (at least what we can detect) from this late season damage.
Photo: Heather Zindash, IPM Scout



These caterpillars were found in Frederick this week.
Photos: Greg Kenel, Creative Landscapes by Gregory

European Hornets

Lincoln Cruz, J. W. Townsend Landscapes, found several dozen European hornets chewing on the bark of birch in containers in Charlottesville, VA. He noted that they have been treating with bifenthrin to have some residual control. A non-chemical control can be using baited funnel traps to attract the wasps, capture them, and then dispose of them.



European hornets continue their bark stripping activity this week
Photo: Lincoln Cruz, J. W. Townsend Landscapes

Sugar Maple Problems?

David Thompson, Foxborough Nursery, called in concerned about many sugar maples with dying branches and mature trees dying in landscapes. He wanted to know if anyone else was seeing sugar maples with problems with dieback. Please send me pictures and locations where you are seeing dying sugar maples at Sgill@umd.edu. Let me know the growing conditions that the impacted trees. Thanks.

Walkingsticks

Greg Dionne, Hometown Tree Experts, found 6 walkingsticks last weekend in Gettysburg, PA. Walkingsticks feed on plants, but do not cause significant damage.



Walkingsticks blend in well on woody plants, but still face predation from songbirds, rodents, bats, and mantids
Photo: Greg Dionne, Hometown Tree Experts

Galls on Oak

Marie Rojas, IPM Scout, found galls that look somewhat like acorns on *Quercus bicolor* (swamp white oak). They start out pink and darken to brown over time. These galls are caused by a cynipid wasp and do not cause any significant damage to the tree.



This cluster of galls on *Quercus bicolor* are caused by a cynipid wasp
Photo: Marie Rojas, IPM Scout

White Prunicola Scale

Marie Rojas, IPM Scout, found white prunicola scale eggs and some crawlers on *Prunus* 'Kwanzan', 'Yoshino', 'Okame', and 'Snow Fountains'. This activity is the start of the third generation of this scale. The crawlers can be controlled using pyriproxyfen (Distance) or buprofezin (Talus) mixed with 0.5 - 1% horticultural oil.



Monitor susceptible host plants for third generation crawlers of white prunicola scale
Photo: Marie Rojas, IPM Scout

Leaffooted Bugs

Heather Zindash, IPM Scout, found leaffooted bugs on magnolia. A Carolina mantid was also present. Leaffooted bugs feed mainly on fruit, but are usually not a problem on ornamental plants. Leaffooted bugs overwinter as adults and will be active into fall.



Leaffooted bug (nymphs in left photo) feed on a magnolia while a Carolina mantid (right photo) is also present on the plant
Photos: Heather Zindash, IPM Scout



A spined soldier bug is feeding on a dusky birch sawfly larva. The feeding of the dusky birch sawfly larvae will continue into fall. Pruning infested branches and leaves is an option for small populations on small trees. Other control options include Conserve, horticultural oil, and insecticidal soap. Photo: Heather Zindash, IPM Scout

Beneficial of the Week

By: Paula Shrewsbury

Predators that “sing” in the night: Snowy tree crickets

Last week tree crickets were discussed in the newsletter for the chewing damage that they cause on the upper leaf surface of shrubs such as rhododendron and cherry laurel, and for the noise they make in the evening. At this time of year, as dusk and the darkness of night settles in we begin to hear a chorus of “insect musicians” chirping, clicking, trilling as part of their mating rituals. It is remarkable how loud this chorus of insect music can be. The main insects that are singing at this time of year, in addition to tree crickets, are annual or dog day cicadas, katydids, and field crickets. All of these, except the cicadas, are omnivores and feed on both plants (herbivores) and other insects (predators). If the plant feeding part of their life is not too extensive, these omnivores should be left alone to continue with the insect feeding part of their life. Today I want to focus on tree crickets.



Snowy white tree crickets are pale green to almost white crickets that hunt for their food at night
Photo: M. Raupp, UMD

There are many species of tree crickets, *Oecanthus* spp. (Orthoptera: Gryllidae) and overall most have a similar appearance. The most common species I have seen is the snowy tree cricket, *Oecanthus fultoni*, which has an elongate, narrow body (about 15-18 mm long) and is pale green in color with orange on the head. The antennae are long and thin and the legs, especially the hind legs, are long and muscular for jumping. Snowy tree crickets

are found throughout the U.S., active July through October, have one generation per year, and are active at night (nocturnal). Common habitats for snow tree crickets are trees, shrubs and vines, especially around houses and wood edges. Tree crickets can feed on the foliage of plants but usually not to the extent to warrant control. The defoliation appears as somewhat ragged or having a shredded appearance. As predators, snowy tree crickets feed on a variety of insects, mostly insects within the order Hemiptera (ex. aphids, scales, psyllids).

Tree crickets have one generation per year. Eggs are laid in the fall in a line of small holes drilled in the bark of branches. Eggs hatch in the spring. As nymphs develop through the season they undergo about 12 molts and reach adulthood around mid-summer (now). In the insect world, it is often the female that “chooses” whether to accept a male for mating or not. This has resulted in the evolution of various measures that males use to attract females. For tree crickets males don’t only have to produce a really great song, but they also have “courtship feeding”. Shortly after copulation the male produces a fluid from a gland located in the thorax between the wings. The female consumes this fluid. The fluid provides nutrition to the female that increases the likelihood of successful reproduction.

Tree crickets communicate through sound, much like cicadas. There is a lot known about the snowy tree cricket song. Only males produce the calling song, not females. Males use a stridulatory file (a row of little teeth-like structures on their wings) that they rub together to make their “chirp” (or trill) sound. The chirp is somewhat long and continuous. Females have a tympanum (for hearing) the male calls. Tree crickets have a system referred to as “sender-receiver matching”. A male tree cricket produces a mating call in a specific range of frequencies unique to that species. Females of that species pick up the call of males only from their species, not other species. Click on these links to see and hear tree crickets making music: [tree cricket singing](#), [tree cricket singing2](#),

One of the more interesting and fun facts about these crickets, is that they are sometimes referred to as “thermometer crickets” because the rate of their chirps correlates with temperature. You can actually use snowy tree crickets to estimate the temperature. In the eastern U.S. to determine Fahrenheit temperature, count the number of chirps in 13 seconds and add 40 to that number and that should be the ambient temperature. You can do an internet search to learn to recognize and distinguish the sound of snowy tree cricket chirping from other insect and animal sounds (go to: <http://songsofinsects.com/biology-of-insect-song> and click on the video). Some people who are into birds (birders) have learned to identify a bird just by its song. This website helps you to identify insects by the sound they make. Sounds like a great challenge. How many times have you said to yourself... “What insect is making that sound?” I suggest on one of these warm summer nights you get a flashlight and go outside to see and hear the nocturnal world of insects!

Weed of the Week

By: Chuck Schuster

Summer and the dry spell are bringing out the weeds. Common lespedeza, *Lespedeza striata*, also known as Japanese clover, is a summer annual weed found in in the eastern United States in turf and landscapes settings. It prefers compacted dry soils with low pH and poor soil fertility. This low growing, prostrate weed will grow 15 to 18 inches in diameter. Leaves are found in groups of three, oblong, have a prominent mid vein with a slight fold or crease, and are attached to the stem with a common petiole. Leaves will be up to three quarters of an inch in length and one quarter to one half inch in width. The root system is a semi woody taproot, from which a branching stem will originate. Hairs on the stem grow in a downward angle. Flowers will be pink to purple in color. Often mistaken for black medic, check the leaf for a small spike on black medic.



Lespedeza striata is a low growing prostrate weed
Photo: Dave Gill, Damascus, MD

This weed grows best in thin turf and on dry compacted poor fertility soils. Cultural control starts with mowing height, mowing tall to prevent weed seed from being exposed to ultraviolet light. Adjust soil pH to ranges used for desirable species of turf. The use of core aeration is often considered to reduce compaction, though concern of soil disturbance bringing up new weed seed to the surface is often debated. Utilizing University of Maryland recommendations for proper soil fertility is important also. Use of post emergent herbicide applications should target common lespedeza when it is actively growing. This plant will also be found in sidewalk cracks, as well as compacted paths. Many selective and non-selective products can be used depending on the setting. In turf settings a mixture of MCPA amine with fluroxypyr ester and triclopyr amine] (Battleship III), or 2, 4-D, MCPP (mecoprop), dicamba or triclopyr. Do not mow for at least 24 hours after application. Use caution with these chemistries around landscape plants. Some movement in the soil or air can be noted. Non-selective post-emergent products may include Ammonium Nonanoate products (Prizefighter) and Glyphosate based products and can be used as spot sprays in turf as well as in the landscape setting when the plant is actively growing. Use caution to avoid any contact with stem, shallow roots, and exposure to foliage of desired species of plants.



Close-up of Lespedeza flower
Photo: Rebekah D. Wallace, University of Georgia

Plant of the Week

By: Ginny Rosenkranz

Echinacea purpurea 'PowWow White' is a purple coneflower that has no purple color at all. Instead, the *Echinacea purpurea* 'PowWow White', a cultivar from PanAm Seeds, has daisy-like flowers that spread 3-4 inches wide with bright white ray petals that arch downward and overlap to circle a large yellow to yellow brown center cone. The plants can grow and flower from seeds the first year, but can also be purchased as container grown plants that grow to a sturdy and well branched 2-3 feet tall and 1 to 1 ½ feet wide in full sun locations. Flowers cover the sturdy stems from late spring to late summer and will also flower sporadically until the first real frost. The soil should be fertile and well drained, average to slightly moist to dry. The plants thrive through heat and humidity. Cold tolerant from USDA zones 3-8, 'PowWow White' is seldom bothered by deer and will also attract many different butterflies while the seed heads attract goldfinches during late summer through early fall. Early in the summer, dead heading will encourage the plants to re-bloom in late summer, but late summer flowers should be left to go to seed. Plants have dark green leaves that are narrow, slightly toothed and lance-shaped up to 6 inches long. *Echinacea purpurea* 'PowWow White' can be used in herbaceous perennial borders, moon gardens, native plant gardens, butterfly gardens, meadow or naturalized gardens. Japanese beetles, leaf spot, and aster yellows can be problematic.



Deadheading *Echinacea purpurea* 'PowWow White' in early summer will encourage re-bloom in late summer
Photo: Ginny Rosenkranz

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 2808 DD (Cumberland) to 3797 DD (Annapolis Naval Academy). 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.

Fall webworm (2nd generation) late instars (2793 DD)
White prunicola scale (3rd generation) crawlers to settled crawlers (3270)
Banded Ash clearwing borer adult emergence (3357)
Tuliptree scale crawlers (3519)

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 August 28)

Abingdon (C1620)	3146
Annapolis Naval Academy (KNAK)	3797
Baltimore, MD (KBWI)	3411
College Park (KCGS)	3146
Dulles Airport (KIAD)	3235
Frederick (KFDK)	3256
Ft. Belvoir, VA (KDA)	3385
Gaithersburg (KGAI)	3102
Greater Cumberland Reg (KCBE)	2808
Martinsburg, WV (KMRB)	2981
Natl Arboretum/Reagan Natl (KDCA)	3737
Salisbury/Ocean City (KSBY)	3385
St. Mary’s City (Patuxent NRB KNHK)	3596
Westminster (KDMW)	3486

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

CONFERENCES

September 10, 2019

Commercial Cut Flower Tour
Locations: Cool Hollow Flower Farm and
Surreybrooke Flower Farm
[Registration information](#)

December 6, 2019

Pest Management Conference
Location: Carroll Community College, Westminster,

December 17, 2019

Biocontrol Conference
Location: Maritime Institute, Linthicum Heights, MD

Advanced IPM PHC Short Course

Monday, January 6 - Thursday, January 9, 2020
Location: University of Maryland, College Park, MD
Contact: Amy Yaich, Admin. Assist. II, 301-405-3911,
umdentomology@umd.edu
Registration Information: <https://landscapeipmphc.weebly.com/>

Recertification credits will be posted on the website

January 17, 2020

FALCAN Pest Management Conference
Location: Frederick Community College, Frederick,
MD

February 13, 2020

2020 Pesticide and Fertilizer Recertification Conference

Location: Rockville, Maryland

Organized by and registration through LCA

February 19 and 20, 2020

Chesapeake Green: A Horticulture Symposium

Location: Maritime Institute, Linthicum Heights, MD

Organized by and registration through MNLGA

CONTRIBUTORS:



Stanton Gill
Extension Specialist
sgill@umd.edu
410-868-9400 (cell)



Paula Shrewsbury
Extension Specialist
pshrewsb@umd.edu



Karen Rane
Plant Pathologist
rane@umd.edu



Chuck Schuster
Extension Educator
cfs@umd.edu



David Clement
Plant Pathologist
clement@umd.edu



Andrew Ristvey
Extension Specialist
aristvey@umd.edu



Ginny Rosenkranz
Extension Educator
rosnkrnz@umd.edu



Nancy Harding
Faculty Research
Assistant

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

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