



TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

April 29, 2011

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Integrated Pest Management for Commercial Horticulture

www.ipmnet.umd.edu

If you work for a commercial horticultural business in the area, you can report insect, disease, weed or cultural plant problems found in the landscape or nursery to sklick@umd.edu

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 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)
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Wet, Wet, Wet

If this makes you feel better in the Portland area they had 47 days of rainfall over a 50 day time span this spring. Even the slugs are complaining. The rainfall just keeps coming this spring here in Maryland. It is great if you planted grass seed earlier and it is great for newly established plants.



A couple of things come into play when we get this much frequent rain. The pre-emergents applied this spring tend to be leached through the soil profile, so weed control may be a factor for nursery owners and landscape managers this summer. The other factor is foliar diseases may be more prevalent this season, especially after this week when we have had rain combined with warmer temperatures.

More Winter Injury Shows Up this Spring

We received in e-mails and calls this week on the winter damage topic of last week. Several people have reported browning of foliage of Leyland cypress this spring as a result of winter cold damage. Also, nandina was reported to suffer from cold damage this winter. If you see other plant species with winter damage and have pictures send them in to me at Sgill@umd.edu. Thanks.

Cold Injury on Rhododendrons

Marty Adams, Bartlett Tree Experts, reported damage on some rhododendrons and not on others in Carroll County.

The following native deciduous Rhododendrons were damaged severely, with all flower buds killed and new vegetative growth originating from lower stems only:

Rhododendron austrinum, *R. oblongifolium*, *R. bakeri*, and *R. viscosum*

The following native deciduous Rhododendrons were undamaged and are growing normally with no flower bud damage:

Rhododendron flammeum, *R. atlanticum*, *R. vaseyi*, *R. prunifolium*, and *R. prinophyllum*

Hawthorn Leafminer

Adults emerge when serviceberry and flowering quince bloom. Eggs will hatch a few days after being laid within the leaves. At the end of May, larvae will leave their mines and pupate within the soil. Overwintering will also take place in the soil. Hawthorne leafminers only have one generation a year.

Control: Contact controls should be applied around the first of May. Monitor trees for adult activity as well as egg laying scars on the leaves. Chemical treatment can be applied in the fall or early spring, using imidacloprid or Dinotefuran (Safari) or thiamethoxam (Flagship) to control hawthorn leaf miner in spring.



Hawthorn leafminer damage

Gypsy Moth Update

The gypsy moth is still by far the most destructive pest of forest and shade trees in Maryland. The caterpillars eat the leaves of oaks and other hardwoods in May and June. Heavy populations of caterpillars will eat most or all leaves on a tree. Large outbreaks have affected hundreds of thousands of acres statewide. We checked with the gypsy moth division of MDA and the gypsy moth larvae have not hatched yet, but they should be soon.

Japanese Maple Scale

Japanese maple scale (JMS) is being monitored in College Park from maple trees. As of April 29 there are mature mated females, but no eggs present. In 2009 and 2010 first generation crawler emergence occurred in early June. We will keep you informed on when we see crawler activity. JMS has a very wide host range so monitor your woody plants closely.

Control: Target crawlers with the insect growth regulators Talus or Distance with 1% horticultural oil. The systemic neonicotinoid Arena (clothianidin) as a soil drench has also been shown to be very effective.

Ambrosia Beetles

Marie Rojas found ambrosia beetles, *Xylosandrus*, boring into redbud trees in Barnesville. She also found the ambrosia beetle boring into *Styrax* trees in Adamstown, MD.

We received samples from a Lindgren alcohol trap in Harford County on Thursday and there were *Xyleborinus alni*, *Xyleborinus saxesnii*, *Cylorhinidion*, and many samples of *Xylosandrus germanus* (this one is damaging MD trees) and two *Xylosandrus crassiusculus*.

I examined samples from our Lindgren alcohol trap at the CMREC Lab and our counts were down this week. We did have *Xyleborinus alni*, *Xyleborinus saxesnii* and several *Xylosandrus germanus* in the traps.

Control: Apply Onyx in Nurseries. In landscape you can use Astro or Onyx applied to trunks of susceptible trees.

Powdery Mildew

Paul Wolfe, Integrated Tree Care, called in to report powdery mildew on euonymus in the Bethesda/Potomac area.

Plum Curculio

Adult plum curculio are out this week and the females will cut a crescent-shaped wound into apples, pears, crabapples, plums and apricots.

Control: Imidan is labeled for home orchards and should be applied this week to reduce the damage.



Plum curculio adult
Photo: E. Levine, The Ohio State University, Bugwood.org

Cottony Camelia/Taxus Scale

Norm Brady, Bartlett Tree Experts, is reporting that cottony camelia/taxus scales have just started laying eggs this week in Talbot County. Eggs extend about 1/4 of the body length of the laying females.



Egg sacs produced by cottony camelia/taxus scale females

Brown Marmorated Stink Bugs (BMSB)

BMSB adults were seen on the bark of a maple tree in College Park. This is the first report on ornamentals we know of this season. Adults have spent the winter in structures and natural protected areas. With food now available they are moving out to feed, mate, and reproduce. A few weeks ago were the first reports of adult BMSB on fruit trees in WV and NJ. Last year on fruit crops alone in the mid-Atlantic region it was estimated BMSB resulted in a loss of \$50 million. We are not sure yet of the impact that BMSB will have on the green industries. This is a question we will be addressing this season. Many entomologists and pathologists at UMD and throughout the region are working together to identify a management strategy for BMSB.

Volutella Dieback of Pachysandra

A frequent call this week has been patches of pachysandra that are dying out. The most common cause for this in the spring disease is volutella dieback. The symptoms of this fungal disease on pachysandra include brown or black spots on leaves that may enlarge and blight the entire leaf or stem. Infected plants may turn black and become soft. In wet weather pink spores will be visible on infected surfaces. Under drier conditions the brown spots may have a target appearance or have concentric rings.

Management: Avoid overhead irrigation and thin plantings to increase air circulation that will promote faster leaf drying. Thinning can be accomplished by selective pruning of infected leaves or by mechanical removal such as with a lawn mower set at the highest setting. Removal of fallen debris and clean up of old leaves etc. will also help reduce the amount of moisture trapped and will promote faster drying of the planting bed. Fungicides that contain copper have shown effectiveness, but only when combined with the cultural practices mentioned above.



Volutella dieback on pachysandra
Photo: Home and Garden Info Center



Blighted stems and leaves from volutella
Photo: Home and Garden Info Center



Volutella leaf spots on pachysandra
Photo: Home and Garden Info Center

Rusts on Juniper

Cedar quince rust is active on junipers in Maryland this week. Last week, cedar apple rust was also reported on junipers in Frederick.

Correction for April 15, 2011 Report: Please note that the top two photos were identified incorrectly. The corrections have been posted on-line (www.ipmnet.umd.edu).



Cedar quince rust on juniper



Cedar apple rust on juniper
Photo: Steve Black



Beneficial of the Week, Paula Shrewsbury

A flashy predator – the six-spotted green tiger beetle, *Cicindela sexguttata*

There are multiple species of tiger beetles in Maryland. Species vary in color, but most have a metallic hue to them, and all are predators. At this time of year and for the next month or so you will frequently see the six-spotted green tiger beetle active on hiking and biking trails in wooded areas, especially in sunny spots. As you approach them they will take flight and land about 5 to 10' away. Unlike assassin bugs or preying mantids which are “sit and wait predators”, tiger beetles are “active hunters”. They actively stalk, chase, and capture their prey along the ground. Tiger beetles have quite



A six-spotted green tiger beetle adult enjoying a tasty ant meal
Photo: Mike Raupp, UMD

long legs for running and large eyes that enable them to search their surroundings for any signs of movement which would indicate potential food or danger. Their jaws are powerful with very prominent “teeth” which they use to grab and crush their prey – yikes! Both adult and immature tiger beetles are carnivorous. The eggs of tiger beetles are laid in the soil where, once hatched, the larvae build an underground burrow. The larva waits in the burrow for an unsuspecting prey to pass by. When this happens the tiger beetle larva jumps from its burrow and grabs the prey, pulls it into the burrow and enjoys a feast. These beautiful insects are interesting to watch, but if you have the need to catch one beware – they have been known to draw human blood.

To learn more about the green tiger beetle visit the following web sites.

<http://insects.tamu.edu/fieldguide/bimg129.html>

<http://www.raupplab.umd.edu>

Weed of the Week, Chuck Schuster

Common sowthistle, *Sonchus oleraceus*, is an annual weed found throughout the United States. Common sowthistle produces blue-green leaves, a stem that can reach six feet in total height, and it secretes a milky sap like material when cut. Leaves on the young plant are alternate, oblong to egg-shaped and form a rosette. Leaves are alternate up the stem, without hairs, and have lobes that clasp the stem. The leaf margin is toothed with soft prickles. The flower head approaches three quarters of an inch in diameter with yellow rays and are in clusters on the top of the stem. The seed is a white feathery puff ball very similar to that of dandelion. Common sowthistle produces a taproot. It is very similar to prickly lettuce, but can be properly identified by looking at the underside of the prickly lettuce leaf and finding spines or prickles on the mid vein, where common sowthistle does not have them.

Common sowthistle control in landscapes can be accomplished using Trifluralin and isoxaben granular mixture, (Snapshot) and oryzalin Surflan as pre emergent products, with turf, a 2, 4D product, dicamba product also works well as well as mixtures of both. Non selective translocated products containing glyphosate are effective, but caution should be used when applied in the mulch bed to prevent drift onto exposed roots, the root collar or the trunk.



Common sowthistle
Photo: Chris Evans, River to River CWMA, Bugwood.org

Plant of the Week, Ginny Rosenkranz

Arisaema (Jack-in-the-Pulpit) is a plant that thrives in cool, moist, shady woods with plenty of rich organic matter in the acidic or neutral soils. The green leaves are palmately compound with 3 leaflets. The flower or spathe is also green, green and white striped, pink and white, striped purple or greenish with purple mottling. Jack-in-the-Pulpit plants can start life as males and can change to females the next year if there are not enough females in the surrounding woods. Jack-in-the-Pulpits grow 12 to 30 inches tall and grow from underground tubers. *Arisaema triphyllum* or the native Jack-in-the-Pulpit grows 12-30 inches tall and is cold tolerant in Zones 4-8. The

spathe is striped with green and white or green and purple on the outside, and the inside of the flap is a dark chocolate color. It prefers to grow in very moist shade rich in organic matter and blooms late in April. Once it has bloomed, and fruited, the plants go dormant during the heat and drought conditions of summer. Slugs and snails which also like moist, shady areas are the most common pests, and leaf spots and rust are the diseases that sometimes affect the plants.



Jack-in-the-pulpit
Photo: Ginny Rosenkranz

PLANT	PLANT STAGE (Bud with color, First bloom, Full bloom, First leaf)	LOCATION
<i>Alliaria petiolata</i>	First bloom (April 23)	Columbia
<i>Amelanchier nantucketensis</i>	Full bloom (April 25)	Silver Run
<i>Cornus florida</i>	Full bract expansion and first flower (April 25)	Ellicott City
<i>Halesis caroliniana</i>	First bloom (April 25)	Silver Run
<i>Hydrastis canadensis</i>	First bloom (April 25)	Silver Run
<i>Staphylea colchica</i>	First bloom (April 25)	Silver Run

Degree Days (As of April 28)

Baltimore, MD (BWI)	309
Dulles Airport	305
Frostburg, MD	129
Martinsburg, WV	247
Mechanicsville, MD	348
National Arboretum	351
Reagan National	341
Salisbury	352

“Maryland Day” in College Park (<http://www.marylandday.umd.edu/>)

Maryland Day - the University of Maryland's popular - and free - open house - celebrates its thirteenth anniversary on Saturday, April 30 from 10 a.m. until 4 p.m. Now one of the top annual events in the state of Maryland, the university welcomes the entire Washington, D.C. region to have fun, learn and explore.

All over Maryland's 1250 acre campus, visitors can “Explore Our World” with tours, exhibits and demonstrations. The university is broken up into six specific areas of exploration, learning and fun: Science and Tech Way, Ag Day Avenue, Arts Alley, Sports and Rec Row, Biz and Society Hill, Terp Town Center.

The Department of Entomology sponsors the “Insect Petting Zoo” (Plant Science Bld, room 1161, 10:00-4:00) which allows insect enthusiasts, young and old, to look touch, and hold to their hearts content, and the not so enthusiastic to learn at a more comfortable distance. For more information on the Zoo go to http://www.raupplab.umd.edu/?BugOfWeek_17F.html

Hornbake Plaza - part of Terp Town Center - will focus on health and wellness. Don't miss the Cooking Stage. This year's hostess is Alumna Joy Bauer - who is best known as The Today Show's nutrition and health expert. Dining Services will be cooking up some of her best recipes and samples are free! She'll also be providing health talks and book signings.

Two popular children's book authors will also be part of Maryland Day - on the Big Top stage. Alumnus Jeff Kinney, author of the popular series Diary of a Wimpy Kid will speak and then do a book signing. He'll be followed by Laura Duksta. She will share her applauded school program “Self-Esteem through Love: Empowering Our Children to Shine!” **In addition, our own Bug Guy, Dr. Mike Raupp, will hold a book signing of his new children's book “26 Things That Bug Me” (Plant Science Bld, Room 1161).**

Of course there's more - tours for prospective students, live performances, a kid's carnival, learn how to dig for historic treasure just like a Maryland archaeologist, get free fingerprinting for your kids, tour the largest neutral buoyancy tank on the East Coast. And don't miss the autograph sessions with our men's and women's basketball teams, as well as the men's football team and new Head Coach Randy Edsall.

Upcoming Programs:

May 18, 2011 Pest Walk

Location: Eastern Shore

Contact: Ginny Rosenkranz, 410-749-6141

May 26, 2011

Taking Care of Trees: Top to Bottom Organic Turf Care - Opening Pandora's Box

Location: Gwendolyn E. Coffield Community Recreation Center, Silver Spring, MD

June 2, 2011 Pest Walk

Location: Carroll County Extension Office, Westminster, MD

Contact: 410-321-8082

June 23, 2011

MNLA Field Day

Location: Priapi Gardens, Cecilton, MD

Contact: 410-823-8684

June 25, 2011 (Saturday)

Summer Maryland Christmas Tree Association Meeting

Location: Sewell's Tree Farm, Taneytown, MD

Contact: 410-452-9793

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