



TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

July 15, 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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Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Brian Clark (Extension Educator, Prince George's County)
 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 (Regional Specialist, Wye Research & Education Center)
 Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

Change in Emerald Ash Borer Quarantine From: Carol Holko, Maryland Department of Agriculture

Please be advised that the Maryland state emerald ash borer (EAB) quarantine has been revised, effective July 11, 2011, to include all counties west of the Susquehanna River and Chesapeake Bay. The USDA is also revising their quarantine to include these areas. This means effectively that regulated products (ash trees & wood, and all hardwood firewood) may be moved legally across boundaries of the 14 counties (BALTIMORE, MONTGOMERY,



CHARLES, PRINCE GEORGE'S, WASHINGTON, GARRETT, ALLEGANY, FREDERICK, HOWARD, CARROLL, SAINT MARY'S, CALVERT, HARFORD, ANNE ARUNDEL) and Baltimore City. Moving regulated articles to the Eastern Shore, or out of state, is prohibited. This is a decision we did not make lightly, but three new counties have been positive in 2011 (Howard, Anne Arundel, Allegany) and we now believe that the benefit of a county by county quarantine is out weighed by the costs of compliance. I appreciate everyone's input and cooperation as we have worked through this.

As you can see from the survey map (linked listed below), Maryland is far from generally infested with EAB and our messaging will remain: Don't move

firewood, and don't move ash products from infested areas. The longer we can delay the spread, the longer communities, businesses and homeowners have to prepare. The MDA will continue to work with USDA to release natural enemies of EAB and to conduct survey and enforcement activities.

Revised Quarantine Order: http://www.mda.state.md.us/pdf/eab_quarantine_2011_july_final.pdf
Survey Map: <http://www.mda.state.md.us/plants-pests/eab/images/EABdetections06302011a.pdf>

PRESS RELEASE for Emerald Ash Borer

ANNAPOLIS, MD (July 11, 2011) – The Maryland Department of Agriculture (MDA) has confirmed the presence of the emerald ash borer (EAB) in two new counties (Allegany and Anne Arundel). Based on detections this year, MDA has placed all Maryland counties west of the Susquehanna River and the Chesapeake Bay under a quarantine to prohibit the movement of ash trees and wood out of the quarantined area, as well as movement of all hardwood firewood, effective immediately.

“We believe placing a quarantine on Maryland counties west of the Susquehanna River and the Chesapeake Bay is the best way to secure Maryland's Eastern Shore where EAB has not been found to date and protect our riparian forest buffer plantings,” said Agriculture Secretary Buddy Hance.

“We will continue to work with our federal, state, and local partners, to control the spread of EAB through biocontrol and surveillance activities. However, we rely upon cooperation from the community to follow the quarantine restrictions, not move firewood and to report signs of possible infestation.”

EAB was first detected in Prince George's County after infested ash nursery stock was illegally shipped into the state in 2003. It was detected through survey in Charles County in 2008. In 2011 it was confirmed in Allegany, Anne Arundel and Howard counties.

“The existence of the EAB in central and western Maryland was not entirely unexpected, given the high prevalence of ash trees in Maryland and our proximity to Pennsylvania, West Virginia and Northern Virginia where EAB quarantines are in effect,” said MDA Plant Protection and Weed Management Program Manager, Carol Holko. “We are continuing to monitor the situation, and working closely with the USDA and University of Maryland Extension (UME) to minimize the impacts of the emerald ash borer and the quarantine on homeowners, businesses, and communities.”

The EAB is an invasive pest from Asia that feeds on and kills ash trees within three years after infestation. Ash trees are one of the most common and important landscaping trees used in Maryland and are common in western Maryland forests. Ash wood is used for all traditional applications of hardwood from flooring and cabinets to baseball bats.

Presence of the emerald ash borer typically goes undetected until trees show symptoms of being infested – usually the upper third of a tree will thin and then die back. This is usually followed by a large number of shoots or branches arising below the dead portions of the trunk. Other symptoms of infestation include: small D-shaped exit holes in the bark where adults have emerged, vertical splits in the bark, and distinct serpentine-shaped tunnels beneath the bark in the cambium, where larvae effectively stop food and water movement in the tree, starving it to death.

Pennsylvania, West Virginia and Northern Virginia are infested with EAB and have quarantines in effect. New Jersey and Delaware are conducting surveillance activities and have no EAB detections to date. Green ash is among the top five trees planted and one of the most frequently successful in riparian forest buffers. Ash is planted in more than 2,400 acres of riparian forest buffer plantings on the Eastern Shore and supports about 150 types of butterflies and moths.

Ash is the most common tree in Baltimore City with approximately 293,000 trees and accounts for about six million trees in Baltimore and surrounding counties. USDA has estimated that losses could exceed \$227.5 million in the Baltimore area alone if the emerald ash borer were to become established.

To help stop this damaging beetle, homeowners and citizens who live in and travel through known infested areas can help:

Don't move firewood – buy it where you burn it. Hauling firewood is the most common way for damaging plant pests to be moved from one area to another. In addition, the state quarantine prohibits anyone from moving hardwood firewood or any other ash tree materials out of the regulated area.

Don't plant ash trees. As the EAB is expanding its range in Maryland, diversified plantings of alternative tree species are recommended for residential landscaping.

Report any signs of the emerald ash borer to the University of Maryland Home and Garden Information Center at 1-800-342-2507.

For information about the emerald ash borer and the quarantine, please visit www.mda.state.md.us/plants-pests/eab/ or call 410-841-5920. Additional information is also available online at: www.stopthebeetle.info/

Brown Marmorated Stink Bugs

Wendy Maddox, USDA Fort Detrick, is reporting that brown marmorated stink bugs seem to be a little earlier this year in damaging her (home grown) sweet corn in Shepherdstown WV. Last year, she mentioned that her first corn planting was ready to eat the second week of July and the stink bugs did not bother it. They totally destroyed the second planting in 2010 however which was ready the last week in July. This year, her first corn was ready on the 4th of July and the stink bugs have already damaged it although about half of it was OK to eat. She noted that she does not expect to get any edible corn off the second planting.



Univ. of MD
Two stages of nymphs found on tree of heaven (*Ailanthus altissima*)

Here at the research center in Ellicott City, BMSB activity on plants is increasing. There has been some stink bugs seen feeding on paulownia. Individual and mating adults and various stages of nymphs have been found on plants here at our site.

Bagworms

We are receiving reports of bagworm activity from different areas this week. Mark Quesenberry, Damascus Enterprises, Inc., is reporting a high infestation of bagworm in Damascus. Brian Scheck, Maxalea, Inc., found bagworms at a site in Ruxton MD on July 14. Marty Adams, Bartlett Tree Experts, is seeing heavy infestations in Mt. Airy.

Control: Conserve, Orthene, Acelpryn, and Astro are options for control of bagworms.



Heavy bagworm infestation
Photo: Mark Quesenberry, Damascus Enterprises

Weather Update

Ed Rhone, Hagerstown Community College, is reporting this week that at the college, there has been 2.5" of rain since July 2nd. He noted that crop stress over the area in general is not bad, considering so little rain since the end of June. Most of the corn from southern Pennsylvania through Hagerstown is 8"+ and now earing. He mentioned that the forecast is for many days of 90+ temperatures which is not a good outlook. Even with the recent rain, he is seeing only about 10% of the usual activity from the green June beetles. Usually there are over 500 beetles each year. So far, Ed has not seen any Japanese beetles flying in his area. No beetles on the usual suspects such as roses, linden or purple leaf plum.

Norm Brady, Bartlett Tree Experts, let us know that he is getting a lot of calls on drought induced leaf drop. So far, it's mostly been on birch trees, but sycamores and tulip poplars are starting to show symptoms as well.

Grasshopper Plague in Howard County

Damian Varga, Scientific Plant Services, called July 13 to report a major outbreak of grasshoppers in the Glenwood/Woodbine area. They are feeding on herbaceous perennials, holly, azalea and every woody plant they can find. We occasionally see these localized outbreaks of grasshoppers. Fortunately, it does not often repeat itself the following year.

Control: Acephate and synthetic pyrethroids can be used if necessary.



More Imprelis Information

The issues with Imprelis continue. We have received reports of damage on Alberta spruce, ginkgo, arborvitae, Leyland cypress, and cryptomeria.



Damage on ginkgo and Alberta spruce



Damage on cryptomeria
Photo: Chuck Whealton, Ruppert Landscape

Milkweed Bugs

We are finding milkweed bugs on swamp milkweed, *Asclepias incarnata*, on landscape plants in Ellicott City this week. Milkweed bugs can also be a problem on *Asclepias* species grown as cut flowers.

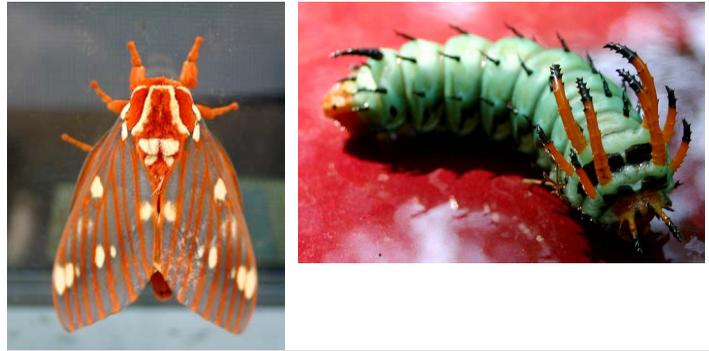
Control: If necessary, Acephate (Orthene) or a synthetic pyrethroid.



Small milkweed bug, *Lygaeus kalmii* (left)
and Large milkweed bug, *Oncopeltus fasciatus* (right)

Caterpillar and Moth Sightings

Craig Greco, Yardbirds, Inc., found a regal moth (*Citheronia regalis*) also called royal walnut moth this week. Its caterpillar is the hickory horned devil that has prominent, but painless, orange ‘horns’.



Regal moth and hickory horned devil caterpillar

Milkweed tussock moth caterpillars are feeding on *Asclepias incarnata* (swamp milkweed) here at the research center.



Milkweed tussock moth caterpillar

Harlequin Bugs

Harlequin bugs are active on cabbage this week in vegetable gardens. They are also commonly found on ornamental plants such as snapdragon and cleome. Harlequin bugs pierce plant foliage, making the foliage stippled and bleached.

Control: Acephate (Orthene) as a foliar spray or Precise (Acephate as a granule applied to the soil). Precise provides season long control. Synthetic pyrethroids such as Astro and Talstar also provide control of this bug.



Harlequin bug nymphs

Beneficial of the Week, Paula Shrewsbury

Spiders don't mind the stink!

As many of you know brown marmorated stink bug (BMSB) populations and pest status have increased dramatically in the last year or so. Entomologists at the University of Maryland, and several other Universities and USDA agencies, are conducting research to learn more about BMSB biology, behavior, monitoring, and management. A few weeks ago some keen and alert lab technicians, Caroline Brodo, Chris Riley, and Ryan Wallace (Shrewsbury lab) were collecting BMSB from wheat fields in MD (yes - BMSB were feeding on the nutritious seed heads of wheat) to use in various research projects. This is where they came across a crab spider (Thomisidae) making a feast of a BMSB adult – a pretty exciting find to watch! We have also found jumping spiders (Salticidae) feeding on BMSB. Crab spiders were discussed in the July 2, 2010 IPM Pest Alert and jumping spiders in the June 24, 2011 Alert. Both of these spiders are common on our woody and herbaceous ornamental plants in nursery and urban landscape environments. Most are considered to be generalist predators, meaning they will feed on a wide range of different types of insects, including



A crab spider (Thomisidae) has a hold of a brown marmorated stink bug adult and is about to make a meal of it. BMSB were feeding on the seed heads of wheat a few weeks ago.

Photo: Caroline Brodo, UMD

stink bugs. In addition, they are what we describe as “sit-and-wait” or ambush predators. See the archives for more details on these spiders.

Since these spiders don’t seem to mind the “stink” our hope is that spider populations will increase in response to increased BMSB populations, and sooner than later, have a greater impact towards suppressing BMSB. We will be researching spiders, and other predators and parasitoids, which feed on BMSB.



A jumping spider (Salticidae) feeds on an adult BMSB starting on the softer underside of the bug.
Photo: Mike Raupp, UMD

Plant of the Week, Ginny Rosenkranz

Tradescantia virginiana, spiderwort, is an herbaceous perennial with a very unusual name. There are a few stories on how the plant got its name, but it could be the spidery looking stamens in the center of each flower. Spiderworts thrive in full sun and moist but well drained soils and grow up to 2 feet tall and wide. It is a great example of a monocot, with long strap-like leaves and flowers that have three petals, 3 sepals and 6 stamens. The leaves are a dark olive green with parallel veins and a smooth margin. After the flowers are finished blooming, the foliage often fades out, but if trimmed back to 8-12 inches in midsummer, it will rejuvenate. The flower buds are in clusters at the end of the stems and each one inch flower stays open for one day only, being replaced by other buds opening the next day. Flowering will continue for 6-8 weeks, and again in the fall if the foliage has been trimmed back. Growing from USDA zone 4-9, the Spiderwort comes in many colors from blues and purples to bright reds and pure white. Some cultivars are ‘Bilberry Ice’, a white blooming flower with a blue tint on the margin and a dark purple stripe up the center of the petal and fuzzy purple stamens tipped with yellow pollen and ‘Snowcap’, a pure white flower that grows 2 ½ - 3 inches across. ‘Red Cloud’ has rosy red flowers while ‘Concord Grape’ and ‘J.C. Weguelin’ have bright blue to purple flowers. ‘Sweet Kate’ has chartreuse yellow foliage and bright blue flowers and does best with some afternoon sun to prevent the light colored foliage from getting sun scorch. Aphids and spidermites can damage both the foliage and the flowers, while some viruses can be problematic.



Tradescantia virginiana
Photos: Ginny Rosenkranz, UME

PLANT	PLANT STAGE (Bud with color, First bloom, Full bloom, First leaf)	LOCATION
<i>Clethra acuminata</i>	Full bloom (July 14)	Silver Run
<i>Echinacea tennesseensis</i>	Full bloom (July 14)	Silver Run
<i>Stokesia</i> ‘Purple Parasols’	Full bloom (July 14)	Silver Run
<i>Vitis aganus-castis</i>	Full bloom (July 11)	Ellicott City

Degree Days (As of July 14)

Baltimore, MD (BWI)	2048	Dulles Airport	1972
Frostburg, MD	1231	Martinsburg, WV	1788
National Arboretum	2221	Reagan National	2245
Salisbury	2152		

Upcoming Programs:

July 21, 2011

PGMS Field Day and Trade Show

Location: American University, Washington, D.C.

Contact: 703-250-1368

August 1, 2011

Cut Flower Tour in Southern Maryland

Locations: Mechanicsville and Loveville, MD

Contact: 301-596-9413

August 4, 2011

PGMS DC August Branch Meeting

Location: Bartlett Tree Experts, 1 Metropolitan Ct, Gaithersburg, MD

Contact: Adam Newhart, City of Gaithersburg, (O) 301-258-6370 ext. 103, anewhart@gaithersburgmd.gov

RSVPs are on a first come first serve with a maximum of (125) attendees Please RSVP by July 27 with your name and contact information, whether you are a member or not and the number of guests to: Adam Newhart

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