



**TPM/IPM Weekly Report for Arborists,
Landscape Managers & Nursery Managers
University of Maryland Cooperative Extension**

May 29, 2009

Coordinator of the electronic weekly IPM report:

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Regular Contributors:

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 Ctr)

Design, layout and editing: Suzanne Klick (Technician, CMREC)

Please call us if you are a commercial horticultural business finding insect, disease, weed or cultural plant problems in the landscape or nursery. Send submissions to Sklick@umd.edu or call Stanton Gill at 301-596-9413.

Recertification Programs

Procrastinator's Pesticide Applicators' Recertification Program – Montgomery College

June 5, 2009

Location: Montgomery College, Germantown, Maryland

Contact: Chuck Schuster, 301-590-2807

Pesticide Recertification Conference – Eastern Shore

June 12, 2009

Location: Wye Research and Education Center

Queenstown, MD

Call Ginny Rosenkranz 410-749-6141 or rosnkrmz@umd.edu for more information

Japanese Beetles

Japanese beetles are pupating in the ground and should start emerging soon. Last summer was dry during July and August so the populations remained down in most areas. We should not see a huge Japanese beetle population this summer but if you see populations emerging in your areas let us know and give us an estimate of what the population looks like in the area.

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Crape Myrtle Dieback

We put out a request for reports of dieback of crape myrtle from this last winter. We received 6 calls or e-mails reporting that crape myrtles were not leafing out this spring after going through the winter. One report was from a nursery with trees in ground; the other reports were all in landscape settings. The winter apparently had an impact on crape myrtles this year but it is varying from site to site.

Anthracnose on Sugar Maples, Sycamore, Ash and Other Trees

The wet cool spring has resulted in a lot of cases of anthracnose in Maryland. We are receiving pictures and samples to the University of Maryland Extension. It is showing up on sugar maple, white ash, and London plane trees just to mention a few seen this week. Anthracnose is a name for a group of diseases caused by several closely related fungi that attack many shade trees. Each species of anthracnose fungus attacks only a limited number of tree species. The fungus that causes sycamore anthracnose, for example, infects only sycamore and not other tree species. Other anthracnose-causing fungi have similar life cycles, but require slightly different moisture and temperature conditions for infection.

Symptoms: Depending on the extent of the rainy period, anthracnose fungi may cause minor to significant defoliation on maple, oak, elm, walnut, birch, sycamore, and hickory species and other tree species. Infection occurs during cool, wet periods on young foliage. Look for leaves with brown spots and blotches or young shoots that are entirely blighted and still hanging on the tree. Severe infections during very wet and cold springs can cause tree defoliation in some seasons.

Control: There is not much to do at this time of year for this problem - just let your customers know it is tied into the weather.



Symptoms moving from the bottom of the tree upward are typical of anthracnose
Photo by Terry Martin, Treemovers, LLC



Close-up of anthracnose symptoms on sugar maple
Photo by Terry Martin, Treemovers, LLC

English Ivy

At this time of year, leaf spots start to show up on English ivy. These leaf spots can be caused by a fungus (anthracnose - *Colletotrichum*) that requires a film of water for fungal spores to germinate or bacterium (*Xanthomonas*).

Control: Protective copper sprays

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Bagworm

Bagworms should be hatching soon. Examine Leyland cypress, arborvitae, white pines, spruce and juniper for the bagworms.

Control: *Bacillus thuringiensis* (Bt) will work well on the early instars. Spinosad (Conserve) also works well. Acelpryn from Dupont is a new material that is a systemic insecticide that works well on caterpillars.

Lace Bugs

John Speaker found both adult lace bugs and newly laid eggs on the midrib veins on the undersides of foliage. The eggs are very detectable using a hand lens. Damian Varga, Scientific Plant Services, is also finding lace bugs on azalea in Clarksville this week.



Gypsy Moth

Most of the gypsy moths are between the 3rd and 5th instar stage at this point. We are getting reports of them feeding heavily on spruce trees. Generally they are mainly a problem on deciduous plants but for some reason they seem to love to feed on spruce trees. In the Catoctin Mountains they were spraying Bt and the NPV virus last week to control gypsy moth. I (Stanton) was hiking in the woods there this weekend and found several sickened gypsy moth larvae on lower foliage of oak trees.

Emerald Ash Borer Update:

West Virginia: Gary Gibson, West Virginia Department of Agriculture, sent out an email this week announcing that emerald ash borer has been found in Morgan County, West Virginia, near Berkeley Springs. In response to this find, Agriculture Commissioner Gus R. Douglass has amended the West Virginia Emerald Ash Borer Quarantine (established in 2008) by regulating Morgan County for the destructive beetle. Until the recent discovery in Morgan County, Fayette County was the only other West Virginia county known to be infested with EAB.

Kentucky: Officials with the Office of the State Entomologist in the University of the Kentucky Entomology Department announced two confirmed occurrences in Kentucky of emerald ash borer. These are the first findings of this destructive insect in the state. The discoveries resulted from Kentucky Division of Forestry and University of Kentucky officials investigating reports of dying ash trees in a private woodlot in Shelby County and a residential landscape in Jessamine County.

Emerald Ash Borer – Control Options (Summary by Stanton Gill)

Mid-west entomologists have just released an excellent publication called “Insecticide Options for Protecting Ash Trees from Emerald Ash Borer” on-line at http://www.entm.purdue.edu/EAB/eabPdf/insecticide_24jan07.pdf. In this publication they suggest if emerald ash borer (EAB) has not been detected within 10 -15 miles, your customer’s

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trees are at low risk. If EAB is detected within 15 miles of your customer trees you need to discuss whether it would be worth applying a protective application of insecticide to valuable trees. You can help them protect their ash tree but you need to discuss the long term choices involved. The publication does a pretty good job of laying out the options for you to discuss with your customer. It is a tough choice that people will need to make. If your customer is in a quarantine area it is an easy choice – if the tree is infested or near infested trees it will be taken down under present quarantine restrictions. If they are not in a quarantine area but within 15 miles then the decision-making starts.

The authors mention that trees that are already infested and showing signs of canopy decline when treatments are initiated may continue to decline in the first year of treatment and then show improvement in the second year due to lag time associated with vascular healing.

In the studies at Ohio State University and Michigan State University had variable results with treatments of imidacloprid, both soil and trunk injected, depending on the site and the size of the trees treated. Safari was evaluated using basal trunk sprays and gave result similar to imidacloprid. **They are finding the bigger the tree the greater the rate of material that needs to be applied and still the results are less consistent on the larger trees.** Also, soil applications are best when applied near the base of the plant and soil injections should be no deeper than 2 – 4” to avoid placing the systemic insecticide beneath feeder roots. Emamectin benzoate, applied in mid-May to early June gave the best control of EAB of any of the systemic materials in side by side testing. In Deb McCullough’s trials they obtained control for 2 years of the study. In one other field research project they reported obtaining control up to 3 years in trees treated with emamectin benzoate.

Dodder

We received a call from someone finding the parasitic dodder on Coreopsis ‘Moonbeam’. At this time of year dodder is ‘vining’ up the plant and should be coming into flower fairly soon. Destroy any plant infested with dodder before it can flower and set seed.



Columbine Leafminer

Adults of the columbine leafminer, *Phytomyza aquilegiovora*, are puncturing foliage of columbine this week. The adult lays the eggs between the leaf surfaces and the larvae will cause damage to the foliage by mining.

Control: In most landscapes it is probably not worth trying to control this leafminer. The damage is noticeable but usually the plant survives. For commercial herbaceous perennial nurseries where they want to sell really clean plants then imidacloprid can be used to treat the plant or Avid, or Tristar. Applications need to go onto before the leafminers show up in the foliage.

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Juniper Scale

Ninebark and mountain laurel are in bloom this week. This is the time when juniper scale produces crawlers. Examine foliage of junipers and Leyland cypress using a 10 -16 X hand lens and look for the crawlers in the next week.

Euonymus Scale

We received a sample from Derrick Bender, Allegany County Cooperative Extension office who had euonymus scale on boxwood foliage. The euonymus scale attacks boxwood and pachysandra besides being a major pest on euonymus. Crawlers are still present this week for euonymus scale.

Control for both of these scales: 1 % horticultural oil spray, Distance, Talus, or Safari



Phlox Plant Bug

Steve Sullivan, The Brickman Group, reported heavy feeding damage on phlox by the phlox plant bug in Wheaton this week.

Control: Orthene, Astro, Insecticidal soap



Photo of phlox plant bug nymph and damage by Steve Sullivan

Calico Scale

Matt Shultz reported this week that calico scale is in the crawler stage on the Eastern Shore in Maryland.

Control: Look for the crawlers on plants in your area and then apply Distance or horticultural oil.



Photo of calico scale nymphs on female cover by Matt Shultz

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Peach Tree Borer Emerging

We caught the first adult peach tree borer this week at the research center in Ellicott City this week. The adults are usually flying around searching for a mate and it takes about two weeks before mated females lay eggs on barks of trees.

Trees to Protect: Newly transplanted or weakened *Prunus* species such as cherry trees, purple leaf plums and cherry laurel are the plants to protect. Onyx (Bifenthrin) or Astro (permethrin) can be used to protect the trunks of susceptible trees.



Beneficial of the Week - Entomopathogenic Nematodes (EPNs), by Brian Clark

Entomopathogenic nematodes are a great tool when adding biological control to your repertoire. However, great care must be used when using these organisms to increase your control of pest species.

The first aspect is to identify what pest you are trying to control. Certain nematode species perform better against different insects, much like chemical controls that use different classes of insecticides. Nematodes species are even broken down into strains that can vary in their control abilities. The Entomological Society of America publishes yearly Arthropod Management Tests that will often carry some of the research in this area. Contact your local extension agent or specialist for more information (but give them a few days to get back to you).



Photo taken of *Steinernema feltiae* var. SN inside a house fly larvae by Dr. Allen Szalanski

There are two major genera of EPNs useful for turf and ornamental pest control, *Steinernema* and *Heterorhabditis*. Each is fairly effective against a certain category of hosts. *Steinernema* overall are very effective against a broad selection of insects, except white grubs. However, *Heterorhabditis* species are effective against grubs. Of course living things never read

the literature, so there are always exceptions to every rule...

Nematodes are living organisms and there are many things that will decrease their effectiveness. Low moisture, sunlight, high temperature, and heavy clay substrate will all affect a nematode's survivability, mobility, and infectivity. For soil applications, apply early or late in the day and water in. When using to control trunk feeding insects, use water to help move the nematodes down into the galleries. As added bonuses, many nematodes are compatible with some traditional insecticides and may continue to infect pest insects at low levels after the initial application to assist with an overall IPM control program.

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You will typically order nematodes in millions or billions (yes, billions!). Since they are typically applied at 1 million per square yard, you may need to pull out the calculator to estimate how many you will need. Nematodes will arrive in a number of ways. They can arrive on an open-cell sponge, a large container that will need to be aerated (aquarium bubbler), or a clay based matrix. Take a sample and look under a magnifying scope or 10-20X hand lens. A large number of the nematodes should be curled up or moving; if they look like toothpicks, they're dead. Once the viability of the nematodes is determined, they should be refrigerated immediately and used as soon as possible.



Photo taken of several EPN products by Brian Clark

Weed of the Week, Chuck Schuster

Knawel, *Scleranthus annuus*, often referred to as German moss, is a winter annual most often, but will present as a summer annual on occasions. Found forming dense thick mats, it is a weed found in turn and occasionally in landscapes. Often mistaken as a grass because of its thin linear leaf, it has a taproot and fibrous root system. The leaves are opposite on the stem, and will be attached by a clear membrane. Knawel will grow prostrate along the ground, out from the taproot. It will present a small spiny green flower, often hard to see, that form in clusters between the leaf and stem. Often mistaken for creeping phlox, but can be distinguished by knawel's lack of hairs on the leaves that creeping phlox will have.



Control of knawel can be achieved using 2, 4D products, Three-Way, Cool Power, and many others.

What's in Bloom or Leafing Out*

Plant	Plant Stage (Bud with color, first bloom, full bloom, first leaf)	Location
<i>Catalpa speciosa</i>	First Bloom (May 28)	College Park
<i>Chionanthus pygmaeus</i>	Full Bloom (May 27)	Silver Run
<i>Diphylla cymosa</i>	Full Bloom (May 27)	Silver Run
<i>Kalmia latifolia</i> 'Olympic Fire'	First Bloom (May 27)	Silver Run
<i>Physocarpus opulifolius</i> 'Luteus'	Full Bloom (May 27)	Silver Run
<i>Rhododendron maximum</i> 'Roseum'	First Bloom (May 27)	Silver Run
<i>Sophora davidii</i>	Full Bloom (May 27)	Silver Run
<i>Viburnum nudum</i> 'Winterthur'	First Bloom (May 27)	Silver Run

*This list may include weeds and other invasive plants.

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Degree Day Information (as of May 28):

Baltimore, MD (BWI)	613	Dulles Airport	664
Frostburg, MD	350	Martinsburg, WV	627
Mechanicsville, MD	629	National Arboretum	895
Reagan National	714	Salisbury	670

Upcoming Programs

As they become available, brochures are posted on-line at <http://ipmnet.umd.edu/crses97.htm>

Procrastinator's Pesticide Applicators' Recertification Program, June 5, 2009

Location: Montgomery College, Germantown, Maryland

Contact: Chuck Schuster, 301-590-2807

MAA Spring Pest Walk, June 11, 2009

Location: Rawlings Arboretum and Conservatory, Baltimore

Contact: director@mdarborist.com or 410-321-8082

Pesticide Recertification Conference, Turf, Ornamentals, Aquatics and Right of Way

June 12, 2009

Location: Wye Research and Education Center

Queenstown, MD

Call Ginny Rosenkranz 410-749-6141 or rosnkranz@umd.edu for more information

Energy Tour for the Commercial Green Industry, June 23, 2009

Location: Sites in Howard and Frederick Counties

Contact: Suzanne Klick, 301-596-9413

Maryland Arborist Association and University of Maryland Pest Walk, July 7, 2009

Location: Salisbury Zoo

Salisbury, MD

Call Ginny Rosenkranz 410-749-6141 or rosnkranz@umd.edu for more information

Cut Flower Farm Tour, July 27, 2009

Location: Farmhouse Flowers and Plants (Brookeville) and Plantmasters (Laytonsville) in Montgomery County

Contact: Suzanne Klick, 301-596-9413



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