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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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Hot Weather

Ok, now we have moved from a cool, wet spring into a hot spring. On Monday the temperatures reached into the low 90s, and the humidity was up. These high temperatures are creating stress on plant material, and we will start to see scorching on weakened trees over the next couple of weeks.



Heuchera 'Green Spice'

Hibiscus Sawfly

Hibiscus sawfly larvae have been active this week on perennial hibiscus in Ellicott City. Look for small pale green larvae on foliage. Initial damage are small shotholes, but as the sawflies continue feeding, they skeletonize the foliage. Heavy infestations can defoliate the plants.

Control: Conserve will work for sawfly larvae control. Remember that since sawflies are related to bees and wasps, not to caterpillars, Bt will not work.



Monitor for the Crawler Stage of Scale Insects

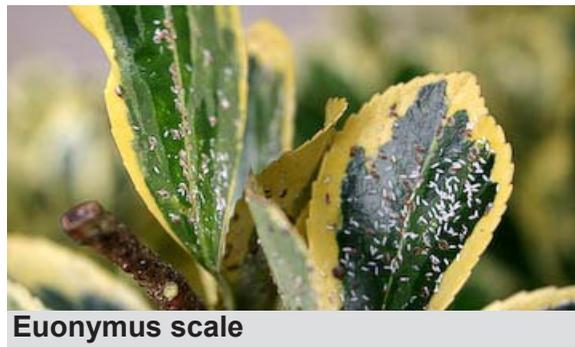
We have been receiving reports and a few samples of scales, but only some have reached the crawler stage so far this season. Please monitor for the following and let us know if you are seeing crawlers. You can also get samples to the research center and we can check to see which stages are present.

For information on each scale, check out our fact sheet at <http://ipmnet.umd.edu/landscape/docs/09ScalesUnivofMD.pdf>

Juniper Scale and Euonymus Scale

We are finding crawlers of juniper scale and euonymus scale this week in the Olney and Brookeville.

Control: Distance or Talus with 0.5% horticultural oil.



Crawlers of these scales usually appear late May or early June:

- Azalea bark scale
- Cottony camellia/taxus scale
- Euonymus scale (crawlers on May 31 in Montgomery County)
- European fruit lecanium scale (crawlers on May 26 in central MD)
- Japanese maple scale (crawlers on May 26 in College Park)
- Juniper scale (crawlers May 31 in Montgomery County)
- White peach scale
- White prunicola scale

Crawlers of these scales usually appear in early to mid June:

- Calico scale (crawlers on May 20 on the Eastern Shore)
- Cryptomeria scale
- Winged euonymus scale
- Fletcher scale
- Holly pit scale
- Indian wax scale
- Maskell scale

Ambrosia Beetles

Marie Rojas, IPM Scout, is reporting that she is still finding active frass tubes from ambrosia beetles that are 8 feet above the ground on the trunks of trees. Marie is seeing staining both around the beetle holes and on bark cracks and crotches.



Staining and frass tubes on trunk
Photo: Marie Rojas

Brown Marmorated Stink Bug (BMSB)

There is a lot of activity of BMSB this week. We are starting to get reports of females laying egg masses on foliage.

Brown Marmorated Stink bug Trap:

I (Stanton) was forwarded a web site that shows a simple trap to capture brown marmorated stink bugs using items purchased from local stores. It involves using a 2 liter soda bottle (pop bottle if you are from PA or the Mid-west) and cutting the top 1/3 off the bottle. The top section that is funnel-shaped is placed inside the bottle to create a funnel entrance. A simple LED light is placed in the bottom of the soda bottle. BMSB adults are obviously attracted to lights so the idea is that the adults fly to the bottle and drop down through the funnel.



My results are based on one night of data so far and I will let you know more on this project after continuing with it for another week. So far the lights did attract BMSB to the traps. Unfortunately the bugs were mostly found on the outside of the trap. Several were found in the funnel portion but they were clinging to the plastic and did not slide in. I think if the plastic was coated with a lubricant the BMSB might fall into the trap section much more easily. I placed one of the traps in our bedroom and heard the adults flying over to the trap during the night. Fortunately, my wife is a sound sleeper and did not hear the buzzing bugs flying all night. Around 1:00 a.m. this trap had 3 adults that landed on the outside of the bottle. I checked the other bottle traps and one had 1 adult on the outside and the third had 4 on the outside of the bottle. For the trap in the bedroom at 1:00 a.m. I dropped the three in the funnel opening so they were inside the trap with the hope that their collective odor would get more BMSB to go inside the trap. By this morning I had one additional BMSB that had entered the trap (trap 1) and was hanging out with the three that I dropped in the bottle at 1:00 a.m. There were 5 BMSB on the outside of the bottle and one in the funnel part, but she was clinging to the plastic. The other two traps had the following counts by 5:00 a.m.: Trap 2 - 6 adults on the outside of the bottle and 2 in the funnel, but none on the inside of the bottle; Trap 3: 4 adults were in the funnel part, and none in the inside of the bottle.



In the video on the web site the person showed containers loaded with BMSB. I have to wonder if he crammed these bugs into his trap for the filming. I will give a summary in the next weekly IPM Alert report.

Diseases on Willow (*Salix*)

Marie Rojas sent in photos of black cankers found on many *Salix alba* 'Tristis Niobe' trees that are planted in a nursery row in Montgomery County. Karen Rane noted that the symptoms are similar to samples submitted to the plant diagnostic lab this spring. Karen notes that there are two fungal diseases, scab and black canker, that have similar symptoms and often occur together, causing the condition called willow blight. It might be possible to see the olive-green spore clusters of the scab fungus near leaf veins on the underside of blighted leaves. Black canker spore structures are seen as "black dots" on the twigs.

Management of both diseases is the same - prune out infected branches back to healthy tissue (do this task in dry weather and clean tools between cuts). The wet spring weather has been perfect for these willow diseases, as well as many other fungal diseases on woody plants.



Greater Peachtree Borer

I caught the first adult males of the greater peachtree borer, *Synanthedon exitiosa*, this week in pheromone traps in Westminster. The greater peachtree borer (Order Lepidoptera, Family Sesiidae) is native to North America where wild cherries and plums are its native hosts. The adults are clearwing moths. The larvae are pinkish-white caterpillars that bore into the trunks where they feed just under the bark in the cambial tissue. There is one generation per year, but some larvae may require 2 years to complete development. Extensive larval feeding can girdle and kill trees. The larvae primarily attack tree trunks just at or below the soil line, but may enter trunks up to 12 inches above the ground. Other tree problems that are confused with peachtree borer injury include winter freeze and mechanical injury and infection by canker-causing fungi such as *Cytospora*. All of these problems can cause copious amounts of sap or gum to exude from holes or cracks in the bark. Key symptoms of peachtree borer infestation are the presence of sawdust and frass mixed with the gummy exudate near the base of the trunk.



Sap oozing at base of cherry laurel from peachtree borer

Control: Prevention is the most effective approach to management. Trunks of susceptible cherry, ornamental peach, and plum should be protected from tunneling larvae. Synthetic pyrethroids such as Onyx and Astro are labeled for use in the landscape. Only Onyx is labeled for use in the nursery.

Scarab Beetles: Japanese Beetles and Oriental Beetles

Paula Shrewsbury is seeing adult oriental beetle activity on flowering plants this week. No significant damage by adults, but larvae (white grubs) feed on turfgrass and can reach high enough numbers to cause damage so should be monitored. Tony Murdock, Fine Pruning, has seen several Japanese beetle larvae just under the surface in many areas where he has planted and laid sod. Start looking for the adults of Japanese beetles in the next few weeks on plants that the beetles favor such as Linden trees and roses.

Control: Adult Japanese beetles can be controlled by several insecticides (ex. clothianidin [Arena], imidacloprid). If grub control is warranted in turfgrass many of the neonicotinoids are labeled and give good control such as imidacloprid, clothianidin, and thiamethoxam. A somewhat newer product that has shown excellent control of grubs is Acelepryn.



Japanese beetle larva (grub)
Photo: Jim Baker, North Carolina State University, Bugwood.org



Japanese beetle (left) and Oriental beetle (right)

Ash Midrib Gall

Jason Swope, Landscape Management Solutions, sent in photos from one of his clients of galls on ash leaves. The galls are 1/2 inch to 1 inch long. The gall is fairly succulent and has thick walls. A small cavity within each gall contains one or more small maggots, the larval stages of very small flies called midges. Female midges lay their eggs in very young leaflets during early spring. Gall formation begins soon after the eggs are laid. Specifics of the biology of this insect are not known. The galls probably does not harm tree health.



Ash midrib gall

Woodpecker Damage on Oak

Lisa Oakes, Frederick County Parks and Recreations, sent us a photo of a white oak tree with damage from the yellow-bellied sapsucker. It is the only woodpecker that bores holes into live trees to obtain sap for food. It will sometimes feed on insects such as bees and hornets, that are attracted to sap. The sapsucker attacks more than 250 species of trees.



Sapsucker damage on oak
Photo: Lisa Oakes

Gall on Elm

Marian Hengemihle sent us a photo of elm finger galls on elm this week. This gall is caused by the eriophyid mite, *Eriophyes ulmi*.
Control: Usually not necessary.



Elm finger galls
Photo: Denise Bliss

Beneficial Insect Activity in the Landscape

Lee Talboys, Maxalea, sent a photo from last weekend of a wasp capturing a caterpillar that it will feed to its young.



Wasp capturing a caterpillar
Photo: Lee Talboys, Maxalea

Weed of the Week, Chuck Schuster

Spiny amaranth, often called spiny pigweed, *Amaranthus spinosus*, is a weed found in turf and occasionally in landscape nursery settings in the eastern United States. It is an erect summer annual, very similar to others in the pigweed family, but it has a sharp spine on the stems. The leaves of spiny amaranth are alternate on the stem, oval in general outline. Each leaf will be up to two and one half inches in length, without hairs and on a long petiole. The stem is upright, reaching a total height of up to six feet and has spines up to three eighths of an inch in length occurring at most leaf petioles. The flowers or seed heads occur at the ends of stems and in smaller clusters where the leaf petioles attach to the stem. A prolific seed producer, it is best to prevent seed production. It also has a shallow taproot.



Spiny amaranth
Photo: Virginia Tech Weed
Guide

Control in turf can be obtained by maintaining fertility, as it prefers poorer soils, mowing high to shade the soil to slow or prevent germination, and through using products that contain 2,4-D and dicamba as a post-emergent, and combinations containing this product. Pre-emergent control in turf can be obtained using dithiopyr, isoxaben. In nursery and landscape settings, trifluralin and Sulfentrazone can be used as a pre-emergent product.

Plant of the Week, Ginny Rosenkranz

Catalpa bignonioides, Southern catalpa, is a native tree with large green heart-shaped leaves arranged in a whorled or opposite position on the tree limbs. The bark is a rugged grey-brown with a lot of ridges and furrows, and the winter silhouette is an open, irregular, oval crown. The 4-8 inch leaves are a bright green in summer with a soft fuzzy pubescence on the underside which protects the leaves from losing moisture during the hot summer days. They also have an unpleasant odor when crushed. The fall color is a pale yellow-brown and the leaves often fall from the tree before any color is achieved. The flowers are large 2-inch, white tubular and bell-shaped with a frilled edge on the outer margin. The interior has purple lines that form a runway to help bees find their way to the nectar and pollen. The flowers are arranged in broad pyramidal panicles that can be 8-10 inches tall and wide in late May. After flowering, the 8-20 inch long pods change from green to brown and dangle from the tree all winter long. Catalpa grows in many different soil types and can withstand wet or dry, acid or alkaline, but prefers deep moist fertile soils. Catalpa is a large tree, growing 30-40 feet tall and 20-40 feet wide and needs a large landscape to accommodate its growth. Southern catalpa is hardy from USDA zones 5-9 and is susceptible to leaf spots, powdery mildew, Verticillium wilt, Anthracnose, mealybug, catalpa midge and catalpa sphinx (a caterpillar often prized by fishermen).



Catalpa flowers
Photos: Ginny Rosenkranz

PLANT	PLANT STAGE (Bud with color, First bloom, Full bloom, First leaf)	LOCATION
<i>Apocynum cannabinum</i>	First bloom (June 2)	Ellicott City Columbia
<i>Aruncus dioicus</i>	Full bloom (June 2)	Silver Run
<i>Clematis 'Westerplatte'</i>	Full bloom (June 2)	Silver Run
<i>Croomia pauciflora</i>	Full bloom (June 2)	Silver Run
<i>Indigofera kirilowii</i>	Full bloom (June 2)	Silver Run
<i>Leptodermis oblonga</i>	Full bloom (June 2)	Silver Run
<i>Lonicera periclymenum 'Serotina'</i>	Full bloom (June 2)	Silver Run
<i>Lonicera sempervirens</i> 'Blanche Sandman'	Full bloom (June 2)	Silver Run
<i>Mitchella repens</i>	Full bloom (June 2)	Silver Run
<i>Tradescantia virginiana</i>	Full bloom (June 1)	Ellicott City

Degree Days (As of June 2)

Baltimore, MD (BWI)	921
Dulles Airport	885
Frostburg, MD	509
Martinsburg, WV	789
National Arboretum	1023
Reagan National	995
Salisbury	956

Upcoming Programs:

June 10, 2011

Procrastinator's Pest Management Conference

Location: Montgomery County Extension Office, Derwood, MD

Contact: 301-590-2807

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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