



**TPM/IPM Weekly Report for Arborists,  
Landscape Managers & Nursery Managers  
University of Maryland Cooperative Extension  
Central Maryland Research and Education Center**

**April 15, 2005**

Stanton Gill (Entomologist), Paula Shrewsbury (Entomologist) and Ethel Dutky (Pathologist), Chuck Schuster (Extension Educator), Ginny Rosenkranz (Extension Educator), David Jefferson Entomologist Specialist – U of D.C.), Suzanne Klick (Technician)

**Give us a call if you want to discuss problems: 301-596-9413**

**Big White Grubs**

Chuck Schuster brought in 3 very large white grubs found in leaf compost. These are green June beetle larvae. Green June beetle grubs feed mainly on organic matter, and to a lesser extent on plant roots. You may find these larvae in mulch piles, in mulched planting beds or in turfgrass with high levels of organic matter or thatch. The larvae are moving up into the top couple of inches as the weather warms up. Adults begin emerging in June or July with the peak occurrence in mid-July.



**Imported willow leaf beetle, *Plagioderia versicolora***

The adults that overwinter in leaf litter are active when new foliage emerges in spring. We have seen the adults active in the Brookeville area.

**Monitoring:** Look for glossy, pale yellow eggs on the undersides of foliage. They tend to lay eggs in irregular groupings. Blackish larvae will feed on the undersides of foliage. As they grow in size they will feed on the upper leaf surface and the bottoms of the leaves.

**Control:** Synthetic pyrethroids provide good levels of control.

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### Soft Scale on Hawthorn

Marty Adams with Bartlett Tree Experts brought in hawthorn trees with European fruit lecanium scale, *Parthenolecanium corni*, on the branches. The 2<sup>nd</sup> instar females are overwintering on the branches. The females will start to swell-up in May and we should see crawlers in late May to early June.

**Monitoring:** Examine branches of hawthorn, pyracantha, and other Rosaceous plants. You can find this scale on a wide range of plants.

**Control:** 1% horticultural oil and Distance applied at crawler period should control this scale.



### Gypsy moths

Marty Adams brought in a sample of first instar gypsy moth larvae. They were found on the south side of a chestnut oak in Ellicott City on April 12<sup>th</sup>.

**Damage:** Early instar Gypsy moth caterpillars will cause shot hole damage to the foliage. As caterpillars mature they can consume almost entire leaves, leading to defoliation under high populations.

**Monitoring:** For the last few years in this area, Gypsy moth populations have been relatively low, with only an occasional pocket of the region reaching damaging levels. Monitor for egg masses and newly hatched larvae to estimate if populations will be high enough to warrant control.

**Control:** If controls are needed, treat with a *Bacillus thuringiensis* var. *kurstaki* product (early instars only), Confirm, or Conserve.



### Hemlock Adelgid – Crawlers are out

We received samples of hemlock adelgid from Eldersburg (Carroll County) on April 14<sup>th</sup>. Crawlers have just begun to emerge.



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### **Borers in red maple**

Marie Rojas sent in digital pictures of red maples with large borer holes. Since these are old exit holes she did not have a larva or adult for us to examine. One possible borer that could cause this type of injury is the flathead apple tree borer, *Chrysobothris femorata*. The larvae overwinter under the bark. In spring the larvae cut into the sapwood and pupate. Adults in most years come out in June. There is one generation per year. Flatheaded apple tree borer does the most damage to weakened trees and trees that are mulched too high around the trunk. Trees of high vigor usually survive an infestation.

**Control:** Astro or Onyx can be applied to the trunk of susceptible trees



### **Indian wax scale**

Marie Rojas sent in pictures of Chinese holly with Indian wax scale. This scale can be found on a number of different landscape plants. Look for this scale on barberry, pyracantha, camellia, and most holly species but not on American holly.

**Monitoring:** Examine for crawlers in early June.

**Control:** We tried soil injection of imidacloprid (Merit) and obtained fairly good success.



### **Woolly Pine Adelgid, *Pineus strobi* in the Crawler Stage this week**

John Speaker reported that white pines have woolly pine adelgid in the crawler stage in the Gaithersburg area on June 14, 2005. He found large numbers of crawler active and there was a lot of activity from ladybird beetles feeding on the crawlers.

**Monitoring:** Look for white wax. Crawlers can be seen with a hand lens

**Control:** In most cases biological control keeps this pest suppressed and you do not need to make an application of insecticide.

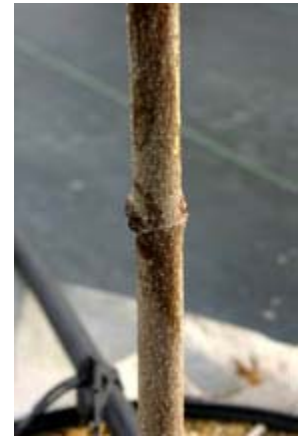
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### **Ambrosia beetle drilling into Cornus kousa**

The picture shows sap oozing out (dark areas in photo) of a Japanese red maple which had ambrosia beetles boring into the trunk in Woodbine area of Carroll County this week.

**Control:** Apply Astro or Onyx at the labeled high rate



### **Spruce Spider mite**

We received samples from the Annapolis area with spruce spider mite nymphs that are active this week.

**Monitoring:** Cut off a branch and use a 10X magnifier to examine the foliage. The eggs are found attached to needles or on the stem. The eggs are reddish-brown and have a small hair (stipe) sticking out of the top. Look for eggs in the center of the plant and on older growth. When eggs hatch the nymphs can be detected by placing a white paper on a clip board and placing under the branch and wrap sharply. You should be able to see these 'tiny specks' in webbing between the needles and stems.

**Damage:** Sap is removed from needles causing stippling and yellowing of foliage.

**Control:** Several excellent choices for mite control including Akari, Floramite, Hexagon, Tetrasan, Horticultural oil. Pyrethroids have been shown to kill predators of spider mites so avoid these products.

### **Pine Bark Adelgid**

Tim Zastrow with Bartlett Tree Experts reported active immature pine bark adelgid on white pine in Bethesda on April 11<sup>th</sup>.

**Monitoring:** Visually look for white fluffy wax on the bark of the trunk and branches of white pines. Use a hand lens to look for active adelgids. This insect usually has numerous natural enemies (lacewings, flower flies, lady beetles, etc.) feeding on it.

**Damage:** Low to moderate densities of this insect are usually not damaging, especially to healthy trees. Natural enemies often keep adelgid populations from reaching damaging levels.

**Control:** Mechanical remove adelgids by using a soft scrub brush and soapy water on the trunk and branches. An application of summer oil should also significantly reduce adelgid populations.

### **Sawfly on Mugo Pine**

Christopher Erb with Bartlett Tree experts found a pine sawfly on Mugo Pine in Silver Spring on April 12<sup>th</sup>.

**Monitoring:** Look closely at the needles of pine for signs of defoliation, and large aggregations of active sawflies.

**Damage:** Defoliation of needles and ultimately entire branches.

**Control:** Conserve should provide good control of sawflies and have reduced impact on natural enemies.

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### **Eastern Tent Caterpillars**

We received the first reports of Eastern tent caterpillars this week. Ginny Rosenkranz found larvae about ¼” in size in Salisbury on April 11<sup>th</sup> and Tim Zastrow reported that they hatched in Kensington over the weekend. He found first instar caterpillars on crabapple on April 11<sup>th</sup>. Marty Adams found larvae on crabapple in Elkridge on April 12<sup>th</sup>. Matthew Anacker with A & A Tree Experts, Inc. reported an infestation starting on a wild black cherry tree on April 13<sup>th</sup> in White Hall. Plants in bloom in Salisbury include *Prunus yedensis*, *Prunus subhirtella* ‘Pendula’, *Magnolia soulangiana*, *Magnolia stellata*, and *Pyrus calleryana* are in full bloom.

**Monitoring:** Visually search for hatched egg masses, small caterpillars crawling along branches, and webbing / tents beginning to be formed in the crotches of branches.

**Damage:** These caterpillars will cause defoliation and their tents are unsightly.

**Control:** If controls are needed, treat with a *Bacillus thuringiensis* var. *kurstaki* product (early instars only), Confirm, or Conserve. Physically destroying tents will also reduce populations.

### **White pine weevil**

Marty Adams reported on April 8<sup>th</sup> that he is still finding the adults of white pine weevil in Ellicott City. See April 8<sup>th</sup>'s report for more information.

### **What to be looking for...**

#### **European sawfly**

**Monitoring:** Look for eggs which were inserted in the needles last fall. You should find the eggs in April. When they hatch they will be grouped together and feeding with 3 – 5 larvae per needle.

**Damage:** Needles are consumed

**Control:** Conserve, synthetic pyrethroids

#### **Boxwood psyllid**

**Monitoring:** Pull back tip growth and examine new growth for presence of nymphs which cover themselves in white wax

**Damage:** Causes new growth to cup and curl

**Control:** Damage is considered insignificant and not worth controlling in most cases. If you need to control this pest most of the systemic insecticides such as Acephate (Orthene), Imidacloprid (Merit) will easily control this pest.

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## What is in bloom?

<b>Plant</b>	<b>Plant Stage</b> (Bud with color, first bloom, full bloom, first leaf)	<b>Location and Degree Days (DD)</b>
<i>Acer negundo</i> Boxelder maple	Full bloom (Ellicott City – April 8) Full bloom (Columbia – April 10)	107 DD (Ellicott City)
<i>Anemonella thalictroides</i> (Rue anemone)	First bloom (Silver Run – April 8)	
<i>Cercis canadensis</i> (Redbud)	First bloom (La Plata - April 5)	64 DD (Waldorf)
<i>Cornus florida</i> (Flowering dogwood)	First bract (Waldorf – April 8)	112 DD
<i>Corlyopsis spicata</i> (Spiked corlyopsis)	Full bloom (Ellicott City – April 8)	107 DD
<i>Forsythia</i>	Full bloom (La Plata - April 5)	64 DD (Waldorf)
<i>Gaylussacia brachycera</i> (Box huckleberry)	First bloom (Silver Run – April 8)	
<i>Jeffersonia diphylla</i>	First bloom (Silver Run – April 8)	
<i>Mahonia bealyi</i>		
<i>Mertensia virginica</i> (Virginia bluebells)	First bloom (Silver Run – April 8)	
<i>Pachysandra procumbens</i> (Allegheny pachysandra)	First bloom (Silver Run – April 8)	
<i>Phlox subulata</i> (Creeping phlox)	First bloom – (Clarksville - April 11)	136 DD (Ellicott City)
<i>Pieris floribunda</i> (Mountain pieris)	Full bloom (Silver Run – April 8)	
<i>Prunus cerasifera</i> (Purple leaf plum)	First bloom (La Plata - April 4)	58 DD (Waldorf)
<i>Prunus subhirtella</i> 'Pendula' Weeping cherry	First bloom ((La Plata - April 4) Full bloom (Salisbury – April 11)	
<i>Pyrus calleryana</i> (Bradford Pear)	Full bloom (La Plata - April 4)	58 DD (Waldorf)
<i>Rhododendron</i> 'PJM'	First bloom (Silver Run – April 8)	
<i>Rhododendron mucronulatum</i>	First bloom (Ellicott City – April 8)	107 DD
<i>Sanguinaria canadensis</i> 'Tennessee Form' (Bloodroot)	Full bloom (Silver Run – April 8)	
<i>Salix babylonica</i> (Weeping Willow)	First leaf (La Plata - April 4)	58 DD (Waldorf)
<i>Shortia galacifolia</i> (Oconee bells)	First bloom (Silver Run – April 8)	
<i>Spiraea prunifolia</i> (Bridalwreath Spirea)	First bloom (Ellicott City – April 12)	136 DD
<i>Vinca minor</i> (Periwinkle)	First bloom (Clarksville – April 12)	136 DD (Ellicott City)

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### **Degree Day Information (as of April 14, 2005):**

Annapolis	48
College Park	120
Ellicott City	144
Frederick	77
Germantown	129
Glen Burnie	102
Rockville	89
Silver Spring	122
Waldorf	125
Washington DC	137

### **Weed of the Week**

Crabgrass, *Digitaria* sp. is one of the more troubling weeds found in turf. This annual weed spreads both through seed dispersal and through rooting of stems. In regularly mowed turf it will grow prostrate and still be able to produce seed even at cutting heights of .5 inches. This weed can be controlled culturally and chemically.

Chemical control on established turf needs to start early in the season. Research at the University of Maryland has shown that 25 percent of the crabgrass seed has germinated by 200 growing degree days, 75 percent by 600 growing degree days and 100 percent by 1100 growing degree days. This can in an average year take 8 to 12 weeks. Application of a preemergence herbicide too early can result in less than complete prevention of seed germination. Another reason for preemergence failure is rainfall. If rainfall is heavy during this period a second application is necessary to keep the chemicals in the upper part of the soil profile.

Pre emergent chemical control on established turf would include benefin (*Balan*), bensulide (*Betasan*) and benefin plus trifluralin (Team). On newly seeded turf apply siduron (*Tupersan*). Post emergent control can be obtained using methanearsonate (*MSMA* or *DSMA*) after crabgrass has emerged but before it becomes too competitive with other turf species. Apply to actively growing crabgrass only. Check all labels for restrictions.

Cultural control starts now. Do a soil test to determine proper fertilization and liming requirements. Prevention of sunlight to the soil by way of a thick turf stand is one proven method of control. Crabgrass seed requires sunlight to germinate. Proper mowing height during the mowing season is another. Most cool season grasses should be mowed between 2.25 and 3 inches to provide a canopy which helps prevent germination of the crabgrass seed.

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