Commercial Horticulture

Coordinator Weekly IPM Report:
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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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IPMnet
Integrated Pest Management for Commercial Horticulture
extension.umd.edu/ipm

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

What is Going on With Cryptomeria?
By: Stanton Gill

The dense blue-green needles on cryptomeria trees often turn bronze in winter. In the last 2 weeks, I have received several e-mails with landscape managers asking why cryptomeria trees have so much tip foliage turning brown. This plant is a zone 7 plant and is considered marginally hardy with most of our winters.

Think back to the fall. It was very warm up through Thanksgiving. December really was not that cold. Plants such as cryptomeria and Leyland cypress continued to push tip growth late in the season and did not slowly harden off with the typical fall/winter period. In January, the temperature plunged to the teens. In February, we went into spring-like weather, and then in March the temperatures plunged again. This weather pattern is very hard on plants such as cryptomeria and much of the foliage is now browning. All you can do is prune off the brown tips (if the plant is at a height that allows pruning), and wait for new growth to emerge in June.

From a distance, the male cones now on cryptomeria branch tips can resemble foliar browning from cold damage.
Hemlock Woolly Adelgid
By: Stanton Gill

Since hemlocks are not quite as common in the landscape now, we often overlook problems that show up on this plant species. Recently, Carroll Shry, sent in a picture of female hemlock woolly adelgids producing their egg sacs on hemlock trees in the Frederick area. We should see crawlers fairly soon on infested plants. If the plant is under 25 ft in height then a foliar application of horticultural oil can be used to control this pest. If the plant is larger than 25 ft and difficult to cover foliage with oil, then use a systemic insecticide such as Dinotefuran as basal trunk application.

Boxwood Mites and Spruce Mites
By: Stanton Gill

I examined boxwood foliage at CMREC this Monday and the mites are still in the egg stage at this point. On Sunday April 2, I examined foliage on Alberta spruce and the eggs were just hatching on the stems. We should see spruce spider mites on Alberta and Norway spruces, but other spruce species are also susceptible. This mite is also found on Leyland cypress and several juniper species so monitor these plants for spruce spider mite hatch. The eggs have turned an amber to reddish color and they have a single hair (called a stipe) protruding out of the center of the egg. The length of the egg hatch is impacted by the weather. It is supposed to remain relatively warm for the next 7 days so we should continue to see hatch of spruce spider mites. **Control:** Horticultural oil at 1 – 2% rate can be use. The mite growth regulator (MGR) Hexygon is very effective at this early stage of development.

An Early Pollinator
Early spring native ephemerals provide a nectar source for insects. Nancy Woods, McCrillis Gardens, found this bumble bee nectaring at a trout lily (*Erythronium americanum*).
Strange Beetles Swarming in Prince George’s County Forest
By: Stanton Gill

Justin Arseneault, MD DNR, sent me electronic pictures of a scarab beetle that was swarming in large numbers in a stand of *Pinus virginiana*. I did not recognize the beetle. I sent the picture to other entomologist(s) for identification. P.J. Liesch in Wisconsin and David Shetlar at Ohio State both responded that it was a beetle in the genus, *Hoplia*. It does not harm pines and the beetle is generally considered a pollen feeder.

This scarab beetle, *Hoplia* sp., was found swarming around Virginia pines. It is considered a pollen feeder

Photo: Justin Arseneault, MD DNR

Trunk Damage on Crabapple
Marie Rojas, IPM Scout, reported rodent damage to trunks of *Malus* ‘Enterprise’ in a nursery this week. Marie noted that the damage is only on this variety and not others nearby.

The tree guard was lifted to show this trunk damage caused by rodents, likely voles

Photo: Marie Rojas, IPM Scout

Ambrosia Beetles
By: Stanton Gill

I checked on Monday, April 3 and found four *Xylosandrus germanus* in the alcohol baited trap here at the research center. Now is the time to apply Onyx Pro (bifethrin) or permethrin to the trunk of susceptible tree species. We will continue to monitor ambrosia beetles this season.
**Eastern Tent Caterpillar Activity Continues**

Eastern tent caterpillars (ETC) are forming their tents in central Maryland and larvae will continue to be active for about 6 more weeks. Paul Thomas, Scientific Plant Service, found a small ETC tent in a crabapple tree in Parkville on April 1.

**Management:** High populations of ETC should be treated when early instars are present. Products that contains *Bacillus thuringiensis* (biological insecticide) or Confirm (an IGR); both target young caterpillars. As caterpillars build tents that become visible, ETC populations and their damage can be reduced by physically destroying the tents.

**Look for tents in tree crotch angles as eastern tent caterpillar activity continues**

*Photo: Paul Thomas, Scientific Plant Service*

**Scale Update**

Marie Rojas, IPM Scout, is finding cottony camellia scale on ‘Dragon Lady’ hollies. Marie noted that they have begun to move back onto the undersides of leaves. The females will start producing white, waxy egg sacs later this month and crawlers are present in late May into June. This scale produces large amounts of honeydew on which sooty mold grows. There is only one generation per year. Marie is also finding cryptomeria scale on *Abies koreana*. Crawlers will be active June through July with a second generation in August and September. Look for yellow spotting or banding on the needles.

**Beneficial of the Week**

By: Paula Shrewsbury, University of Maryland

**What happens to all the wood from ash trees killed by EAB?**

We often think of wood boring insects as pests but some species might be considered beneficial insects in that they provide the ecosystem service of decomposition. Beetles such as ambrosia beetles and long horn beetles that feed on the inner wood of dying and dead trees and logs aid in breaking down the wood into a form that it then becomes recycled back into the soil, a process referred to as decomposition. The trick is for the “decomposer” to mainly attack dead or dying, not “stressed”, trees to be considered beneficial.

With the continued onslaught of emerald ash borer (EAB) against ash (*Fraxinus* spp) resulting in SO MANY dying and dead ash, the abundance of dead wood is quite remarkable in both natural and managed environments. In addition to trees dying from EAB feeding, many trees are being cut prior to the actual death of the tree as part of recommended
best management practices. There are multiple measures for disposing of the wood, including making it into firewood, but many trees are cut or die and are left to breakdown with the help of mother nature.

Last weekend I was riding my bike along the C&O Canal path and couldn’t help but notice all the ash trees that were being attacked by EAB as indicated by the abundance of woodpecker blanding to the bark. Some of the ash along the path had been recently cut. I stopped to take a closer look and could see galleries encircling the entire tree under fallen and loose bark. I also noticed hundreds of individuals of a beautiful beetle running around the tree, mating, and laying eggs. These beetles were choosing to lay their eggs on this dying, newly cut tree. Interestingly, I did not see the beetle on any of the EAB infested trees that were still standing. I figured these beetles were either really stupid, unlikely since evolution doesn’t usually select for stupidity in a species, or the larvae of these beetles have effectively evolved to do well in dead and dying wood.

I identified the beetle to be *Neoclytus caprea*, banded ash borer, which belongs to the group of longhorn beetles in the family Cerambycidae. Adult longhorn beetles have an elongated, cylindrical body that tapers towards the back end. The group gets their name due to their long antennae. Adult *N. caprea* are wasp mimics. They have long legs (reddish brown color) and have fast, erratic movement as the beetles run around the wood looking for mates and sites to oviposit eggs. *N. caprea* range from 0.4 – 0.9” in length and are black with yellow (sometimes creamy white) markings on their yellow band on the leading edge of the thorax (segment just behind the head), and multiple yellow bands along the front wings. The first yellow band at the leading edge of each wing actually forms a loop pattern. The larvae of long horn beetles are known as round headed borers. It is feeding by the larval stage that helps to break down the wood which aids in its decomposition.

*Neoclytus caprea* is a native species and is found throughout the U.S. and up into eastern Canada. In addition to ash trees, *N. caprea* also attack dead, newly cut and highly stressed hickory, elm, and white oak.

Adult beetles of *N. caprea* emerge in early spring around late March – early April. There is usually one generation / year. However, if larvae are developing in wood that has been cut and allowed to dry it may take multiple years for the larvae to develop to adulthood. Eggs of *N. caprea* are laid under bark flakes of dead, dying, or recently cut trees. The newly hatched larvae bore under the bark for a short period of time and then tunnel deep into the wood where they continue to feed and then pupate. Larvae pack their galleries with a sawdust-like frass. They overwinter as late stage larvae or pupae in the wood.

With *N. caprea*’s preference for dead and recently cut trees it is not surprising that *N. caprea* are common in firewood. Firewood, from infested trees, that is brought into the house and allowed to sit for a period time will result in the emergence of these beautiful beetles. The warm house presents fakes the beetle into thinking spring time is here and it emerges. Since these beetles mimic wasps many uninformed people think wasps are flying around their homes, or if they know they are beetles they worry about their furniture. Fortunately, these beetles cannot harm humans and can only lay eggs in wood with bark and will not infest finished wood in homes.

*Neoclytus caprea*, (a.k.a. banded ash borer) should not be confused with a similarly named borer, the banded ash clear wing borer. This clear wing borer is actually a wood boring caterpillar that attacks living and often stressed ash trees in managed environments. Another wood boring insect associated with ash includes the closely related redheaded ash borer, *Neoclytus acuminatus*.

If you see these beautiful black and yellow long horn beetles, *N. caprea*, running around recently cut ash, don’t panic. They highly prefer recently cut and dying trees. In addition, their larvae are helping to break down and decompose the extraordinary amount of ash trees being killed by EAB.
The weed this week is annual bluegrass, *Poa annua*. I saw this weed last Saturday in Denton at the Caroline County Fairgrounds. Annual bluegrass is a common weed in this region and the United States, and is noticeable to anyone looking out over a turf site because it is off color. Annual bluegrass is an annual, usually classified as a winter annual, though the location of the site can change this characteristic in some regions. Most winter annuals will die soon after seed production in the spring, but in warmer protected sites it may continue to grow much like a perennial. Annual bluegrass is noticed since it grows in an erect or small clump. It tolerates close mowing heights, but can reach heights of nearly one foot in landscapes and unmanaged turf. This information alone makes cultural control using mowing harder to achieve. It appears light green when compared to desired bluegrass species. One distinctive characteristic is the “boat-shaped” tip that the leaf blades form. The blades of this grass do not have hairs and are narrow, but long. Blade dimensions can reach four inches in length and one eighth inch in width. Annual bluegrass prefers a moist to wet soil, and while we have not had an overabundance of moisture this spring, we had a mild winter and some dampness last fall.

Moisture control is one of the cultural methods used to prevent this weed. Soils are not overly wet at this time, but with recent rains they may become so in the near future. Using irrigation water carefully can help manage this grass, especially in shady areas. Compaction is another condition that creates the ideal site for annual bluegrass. Field use that leads to compaction should be considered as well as cultural practices that correct this problem. Do not aerate during the germination period for annual bluegrass. While collecting clippings is not usually recommended, if you have an area with a stand of annual bluegrass, consider collecting the clippings during seed production periods to reduce the seed bank for the following fall.

Prevention is always the best method of control. Mulches in landscapes using a weed barrier beneath and in turf settings, and prevention of seed movement to a site on mowers by cleaning is very useful. Early detection
Plant of the Week
By: Ginny Rosenkranz, University of Maryland Extension

*Edgeworthia chrysantha*, paperbush, is a member of the daphne family and blooms very early in the spring. Winter hardy from USDA zones 7 – 10, it thrives in part sun to dappled shade, in moist, rich, well drained soils. Newer cultivars like ‘Snow Cream’, ‘Nanjing Gold’, ‘Akebono’, ‘Gold Rush’ and ‘Red Dragon’ are said to be more winter hardy. The early flowers appear in late February to April and are intensely fragrant. It blooms when the plant is just bare branches. The 2-inch white or primrose yellow flowers are made up of dozens of tiny florets that emit a spicy, gardenia-like fragrance and adorn the tips of each branch. The 5- to 6-inch blue green leaves with silvery undertones appear after the fragrant blooms are done, and in the autumn turn bright yellow. New foliage is covered with silky white hairs that fall off as the leaves mature. Plants grow 4 to 6 feet tall and wide in an umbrella shape, with smooth brown bark. In the winter when the foliage drops, the plants shape and bark are highlighted by the large silvery terminal flower buds that develop in late summer. Paperbush is said to be deer resistant and not at all tolerant of hot dry summers without irrigation. At this time there are no serious insect or disease pests.
Phenology

<table>
<thead>
<tr>
<th>PLANT</th>
<th>PLANT STAGE (Bud with color, First bloom, Full bloom, First leaf)</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Camellia japonica</em> ‘Jerry Hill’</td>
<td>First bloom</td>
<td>Ellicott City (April 3)</td>
</tr>
<tr>
<td><em>Cercis canadensis</em> (Eastern redbud)</td>
<td>Full bloom</td>
<td>Bowie (April 3)</td>
</tr>
<tr>
<td><em>Spiraea prunifolia</em> (bridal wreath spirea)</td>
<td>Full bloom</td>
<td>Ellicott City (April 5)</td>
</tr>
<tr>
<td><em>Viburnum carlesii</em> (Koreanspice viburnum)</td>
<td>Full bloom</td>
<td>Clinton and College Park (April 5)</td>
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Degree Days (As of April 5)

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<tr>
<th>Location</th>
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<th>Location</th>
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<tbody>
<tr>
<td>Annapolis Naval Academy (KNAK)</td>
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<td>Baltimore, MD (KBWI)</td>
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<tr>
<td>College Park (KCGS)</td>
<td>156</td>
<td>Dulles Airport (KIAD)</td>
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<tr>
<td>Ellicott City (E247)</td>
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<td>Fairfax, VA (D4092)</td>
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<td>Frederick (KFDK)</td>
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<td>Greater Cumberland Reg (KCBE)</td>
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<td>Gaithersburg (KGAI)</td>
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<td>Martinsburg, WV (C1672)</td>
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<td>Natl Arboretum.Reagan Natl (KDCA)</td>
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<td>Rockville (C2057)</td>
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<td>Salisbury/Ocean City (KSBY)</td>
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<td>St. Mary’s City (St. Inigoes, MD-KNUI)</td>
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<tr>
<td>Westminster (KDMW)</td>
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Important Note: We are now using the [Online Phenology and Degree-Day Models](#) site.

Use the following information to calculate GDD for your site: Select your location from the map
Model Category: All models Select Degree-day calculator
Thresholds in: Fahrenheit F Lower: 50 Upper: 95
Calculation type: simple average/growing dds Start: Jan 1

Check Out The Pest Predictive Calendar

Posted in 2016, this [Pest Predictive Calendar](#) is intended to assist landscape managers, growers, IPM professionals and others in predicting the appearance of pest insects and mites in order to make more timely management decisions. By using the Plant Phenology Indicators (PPI) and Growing Degree Days (GDD) on this table you can anticipate when the susceptible life stage(s) (stage you want to target for control measures of pest insects and mites are active.
COMMERCIAL HORTICULTURE CONFERENCES

Eastern Shore Pest Walk
May 11, 2017
Contact: Ginny Rosenkranz, 410-749-6141

MAA/UMD Extension Evening Plant Diagnostic Clinic
May 23, 2017
Location: Cylburn Arboretum, Baltimore, MD

Pesticide Recertification Conference (Eastern Shore)
June 2, 2017
Location: Wye Research and Education Center, Queenstown, MD
https://2017esprocrastinatorspest.eventbrite.com

Pesticide Recertification Conference
June 9, 2017
Location: Montgomery County Extension Office, Derwood, MD

MNLGA Nursery Field Day
June 29, 2017
Location: Ruppert Nurseries, Laytonsville, MD

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