Commercial Horticulture

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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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Beneficial of the Week

Ambrosia Beetles – Stay Alert
By: Stanton Gill, UME

We checked the alcohol baited traps in the early part of the week and did not find anything in the traps on Monday. We checked traps at nursery sites in Frederick County and Laytonsville in Montgomery County (also 4/6/2015) and found 4 of the ambrosia beetle, Monarthrum mali. This species is usually one of the first ambrosia beetles we pick up in our traps early in the season. Their color ranges from yellowish brown to very dark brown with a bicolored pronotum and elytra. Their hosts include: Acer, Alnus, Carya, Castanea, Chrysolepis, Liquidambar, Lithocarpus, Mimosa, Nyssa, Prunus, Quercus, and Tilia. The good news is they generally do not attack strong healthy plants in the nursery, but feed on weakened trees. Generally, I would say do not worry about this species in the nursery.

On Thursday afternoon, we checked the traps at CMREC and we had the first Xylosandrus crassiusculus and X. germanus. The numbers were low, but the ambrosia beetles were present. I suspect with the warm weather this weekend we should see an increase in flight activity.

What to do now?
If you have susceptible tree species I would apply either bifethrin (Onyx – in nursery or landscape) or permethrin (landscape use only). Permethrin is sold under several names including Astro and Perm 56.
Deer Tick Activity  
By: Stanton Gill, UME

A landscape manager brought in a female tick that had become attached to their neck. The person was working on a landscape at the edge of a woods over the weekend. Deer tick (aka black legged tick) activity is picking up as the weather finally warms up. Make sure to check yourself at the end of the day and remove any ticks before they attach and start feeding. If it does become attached, gently pry it from your skin without squeezing the tick’s body which would force the body fluids to be injected into your skin. Several landscape companies have bought tick removing plastic and metal devices you can slide under the body of the feeding tick and gently lift it off. Using repellants such as Deet when working in tick infested areas is probably not a bad idea.

Fruit Trees  
By: Stanton Gill, UME

Over the last five years I have seen a surge in the number of Maryland nurseries planting fruit trees to sell to their customers. Also, several arborists are now maintaining fruit trees for customers. If you are growing fruit trees in the nursery, try to get all of the pruning done in the next week. You can generally go up until bloom time for pruning. Dormant oils and fixed copper should go on this week on apples and pears. I made applications last week in Westminster, but this week is still ok in most parts of the state. The Eastern Shore may be further along on bloom development. The oil is for scale and overwintering aphid eggs. The fixed copper is to help reduce fire blight. You can do this treatment up to green tip stage on apples and pears. Peaches need an application of fixed copper before the buds show any color which should be happening soon. This treatment reduces peach leaf curl and bacterial diseases.

Eastern Tent Caterpillars  
We received a report of Eastern tent caterpillars hatching in Frederick this week. Last week, they had hatched in College Park which is a bit warmer.  
Monitor: In areas where forsythias are blooming, monitor trees for signs of newly hatched caterpillars and tents in branch forks. The tents will be small at this time. Preferred hosts of ETC include wild cherry, crabapple, and apple. They will also feed on a range of other deciduous trees.  
Control: Physically destroy tents as they form in branch forks. This action disturbs the caterpillar’s habitat and exposes them to natural enemies. Treat foliage with a product containing Bacillus thuringiensis (Bt) labeled for caterpillars. Confirm, an insect growth regulator, may also be used.
Galls on Forsythia
Brian Scheck, Maxalea, found galls on forsythia this week. The cause of the odd swellings on forsythia branches is uncertain. The fungus, *Phomopsis*, or a genetic abnormality are the two main candidates. The galls range in size from ¼ to 1-inch in diameter. Phomopsis galls can occur on many tree and shrub species, including viburnum, privet, American elm, hickory, maple, and oak, but they are particularly common on forsythia. Twig dieback can occur if the galls girdle the infected twigs. The disease is frequently mistaken for crown gall, which is a bacterial disease that usually attacks plants near the soil line. Phomopsis galls are located higher on the stems, however, not near the soil line.

**Control:** Because little is known about the disease cycle of *Phomopsis*, the only effective control measure is to prune out the galls. It is imperative that pruning tools should be sterilized between cuts by dipping them in a household disinfectant or rubbing alcohol to avoid spreading the fungus.

White Mold on Forsythia
White mold is a fungal disease caused by *Sclerotinia sclerotiorum* and is favored by cool, wet spring weather. Early symptoms include stem cankers followed by wilting and during wet weather a dense mat of cottony white growth. On forsythia, splitting the hollow stems will sometimes reveal a dark structure called a sclerotium, (plural sclerotia) inside.

**Management:** Prune out and remove infected stems and branches. Prune for better air circulation within the plant canopy.

**Apple Scab**
**Brown Rot Blossom Blight**  
*By: David Clement and Stanton Gill*

In 2013 and 2014 many of the Kwanzan cherry trees had dieback throughout the tree canopies. We had rainy periods when the Kwanzan cherries were in full bloom. Brown rot is a fungal infection that first attacks the cherry tree’s flowers later in spring, just as the flowers are starting to fade. Spores appear as minute black speckles on the flower petals.

As the spores progress, they kill the limb from the branch tips. Kwanzan cherry tree flowers infected with brown rot blossom blight will wilt and turn brown. The blooms remain on the tree where a brownish-gray fungus grows on them. The symptoms look like fire blight, but cherries are not susceptible to that disease. Management of this disease in orchards relies on good sanitation and proper timing of protectant fungicides. However, in ornamentals, this disease is a new problem and has not been studied extensively. Pruning blighted shoots back to healthy tissue during dry weather may help, but this is difficult if large numbers of shoots are blighted. For specimen trees, fungicides such as chlorothalonil and propiconazole applied as foliar sprays starting when blossoms first open may help protect trees from the blossom blight phase of the disease. Refer to product labels for rates and timing information.

**Gymnosporangium Rust**

We have not seen or had reports of spore germination yet this season. Be sure to monitor galls closely after the rain moves through the area. The gymnosporangium rusts require two kinds of plants to complete their life cycle. They overwinter on junipers such as the Eastern red cedar as leaf galls or shoot cankers. In cool, wet periods in the spring these galls produce orange gelatinous tendrils upon which the teliospores are found. The teliospores germinate to produce colorless basidiospores. The basidiospores are carried on air currents to infect the pomaceous hosts (apple, *Amelanchier*, some pears).

- **Cedar-apple rust** is caused by the fungus: *Gymnosporangium juniperi-virginiana*. The fungus alternates between many species and varieties of cedar, (*Juniperus* species) and many pomaceous plants such as apple, pear and hawthorn. Leaf spots are produced on the pomaceous plants.

- **Cedar-hawthorn rust** is caused by the fungus: *Gymnosporangium globosum*. Small galls are seen on the junipers, and leaf spots are seen on the pomaceous plants.

- **Cedar-quince rust** is caused by the fungus: *Gymnosporangium clavipes*. Shoot cankers are seen on the juniper and fruit and twigs are infected on the apples and hawthorns. This is considered the most destructive of the gymnosporangium rusts because of the damage to twigs and fruit.

**Control:** Timing is critical for good control on the pomaceous hosts (apple, hawthorn, etc). The sprays have to be applied when spores are being shed from the junipers, usually starting in mid-March, but happening later this year due to the colder temperatures. No chemical control is usually advised to prevent infection of the junipers. Infection of the junipers is happening all summer and into the fall from spores produced on the apples which would require many sprays all season. The period during which the pomaceous plants are infected is short (from the start of the infection period through May). Spray susceptible crabapples, apples, quince and hawthorn with a labeled fungicide.
Blister Beetles Invading Lawns
Mark Schlossberg, Pro Lawn Plus, Inc., sent in a picture of blister beetles walking across a lawn in Baltimore County this week. Blister beetles overwinter as adults and have become active with the warm weather. They are basically harmless.

Thank Goodness We are Not in California
By: Stanton Gill
This year may be one of our worst early springs with the cold and wet weather. Easter came early which helped push early sales and the weather was not the worst. Actually, since it reach the high 70 °F on Friday and it was relatively warm Easter weekend it really was not bad. We now have a long selling season until Mother’s Day – which is good news. The other good news is we are not in California. The governor of California, Jerry Brown, just announced that the state will restrict water use by 25% for urban areas. Agriculture will not be restricted since they are already taking the brunt of the drought impacts so far. Over 400,000 acres were taken out of production in 2014 due to drought. It will be worse this year. The mountains in California did not get the snowfall they needed. Oregon and Washington State report the lowest snowfall in 25 years.

The prediction for the next 30 years is severe drought for the Southwest. Brown is planning to encourage people to substitute drought tolerant plants for their lawns. They plan to put in incentives to get people to switch to drought tolerant plants which will be good for the horticulture business for generating new plant sales. Oliver Storm was a head grower at Tidal Creek Nursery and moved to north of San Diego to run his own greenhouse business in California. I spoke with Oliver this week and he said it was a balmy 70 °F in sunny California. Sales were good this spring, but he did mention the drought is looming on each customer’s mind. With the typical optimism of west coast folk he said at least they have the sun and the beach, so life is good – for now.

Fire Blight on Ornamentals
By: David Clement, HGIC

Fire blight is a bacterial disease, caused by Erwinia amylovora, that begins in the spring on over 75 species of susceptible plants in the rose family. In the landscape, plants often infected include crabapple, Bradford pear, hawthorn, cotoneaster and serviceberry. The spring infections come from overwintered cankers on twigs and branches. The ideal conditions are temperatures between 70-80 °F with high humidity or rainfall. The bacteria are easily spread during windy warm spring rain events and also by pollinating insects visiting the flowers. Any wounds or natural openings such as nectaries, hydathodes and stomates serve as infection points on a plant. Any young green tissue is quickly killed and turns black. The bacteria then move into the older woody tissue before girdling and causing branch death. There is usually a dark line that develops between infected and healthy tissue. The classic symptom is that of a “shepherd’s crook” where the infected tissue dies quickly and bends over at the end, turns dark, and retains the dead leaves.

Management: Look for resistant cultivars (see PSU, http://extension.psu.edu/plants/green-industry/news/2015/fire-blight, website). Proactively prune during the dormant season during dry weather. Stop pruning during the active growing season to avoid spreading the disease. After new growth has stopped and during dry weather prune back to 4-5 stubs that will be pruned out later during the dormant season. Manage fertilization carefully to avoid overproduction of succulent green growth.
Beneficial of the Week  
By: Paula Shrewsbury

Turf and Ants –  
Is this a good relationship or not?
It is the time of year that many people are thinking about their lawns. People with cool season grasses might be fertilizing or putting crabgrass preventer down at this time. Insecticides for the turf are also being marketed. However, most lawns are actively growing at this time of year and have a high tolerance for turf feeding insects, such as white grubs. At this time I suggest waiting to apply insecticides and let some of the natural enemies that attack turf feeding insects build up their populations and provide biological control of the turf feeding insects. There are numerous predators and parasitoids that attack turf pest insects.

Today I would like to discuss ants. Ants are cosmopolitan. There are many species of ants, they “do” many things, and they are found almost everywhere. Some ants become nuisance pests in turf. For example, the mounds formed by ants are unsightly, especially on the greens of golf courses. Some turf areas may become thin as ants dig and burrow in the turf. Some ants feed on grass seeds and may reduce the rate of establishment, but they also feed on weed seeds which can be a benefit. Harvester ants and red imported fire ants (not common in MD) can be dangerous and often require control. Other than these most ants are beneficial. They are very important predators in turfgrass environments. It is estimated that ants can eat ~75% of pest eggs and small larvae or nymphs in turf such as sod webworms, white grubs, cutworms, armyworms, chinchbugs, and others. That is a lot of biological control! Ants are part of a complex of natural enemies (predators, parasitoids, and pathogens) and other beneficial arthropods (decomposers) that occur in turfgrass environments and prevent many herbivorous insects from ever reaching damaging levels. Be sure to conserve these natural enemies when making turf management decisions.

Weed of the Week  
By: Chuck Schuster

Japanese Stiltgrass  
Cool temperatures still seem to have control of the weather, with a hint of warmer temperatures occasionally. Moist wet soils are providing an excellent opportunity for spring germinating annual grasses to get started. Soil temperatures in the upper 40s have been noted in many areas of central Maryland this week. Timely applications of pre-emergent herbicides will really help keep the plants whose value has yet to be established under control.

Japanese stiltgrass, *Microstegium vimineum*, is a native of Asia, first appearing in the U.S. in 1919. It is spreading rapidly throughout the eastern U.S. It is a shade tolerant, requiring as little as 5% available light, summer annual. Japanese stiltgrass is most often found in moist, shady environments such as forests, turf, ornamental beds, ditches and damp fields. It will thrive in the warmer dry weather.

Japanese stiltgrass has a fibrous root system, stems which are erect or reclining and it roots at stem nodes. Its leaves are up to four (4) inches in overall length and one half (.5) inches in width and have a white midvein...
which divides the leaf into unequal halves. The seed head has 1 to 6 terminal spike branches. A prolific seed producer, each plant will produce between 100 and 1,000 seeds annually. Pre-emergent herbicide applications for larger areas are the recommended method of control. The seeds will germinate in late March to early April in the average year, which is before crabgrass. Flowering occurs in late September to early October in this region. Prevention of seed production is important for control of Japanese stiltgrass for the following year. Wildlife are only marginally interested in this species as a source of food.

Mowing can be used to limit the spread and development of this weed. It must be kept short from the beginning of the season, this prevents seed head formation. Chemical control can be accomplished with the use of properly applied preemergence herbicides. Pre-emergent control of Japanese stiltgrass needs to be started very early in the season. Remember the early germination of this weed, before crabgrass, and note the rainfall during this period is necessary to activate these products. Control options are similar to that of crabgrass, start early and reapply in wet years. Barricade applied in research plots in December, March and May provided the highest percentage of control at 86%, with a single treatment in March on the average providing 81% control. Acclaim Extra has been used successfully as a post emergence herbicide in turf with Envoy being used in turf and selected ornamental beds. When using post emergent products, air temperatures above 65 °F have been found to provide the best environment for success. Use caution when using Envoy, as it has restrictions because of sensitivity of some ornamentals. Glyphosate products may be used for spot spraying in landscape beds, remember to use caution as this product will damage ornamentals that come in contact with this product.

Japanese stiltgrass is an invasive plant that does well in shady, moist sites. The red arrow highlights the white midvein which is a good identification characteristic. 
Photos: Chuck Schuster, UME

Plant of the Week
By: Ginny Rosenkranz, UME

Pieris japonica is a large evergreen shrub that has shiny dark green leaves. Some cultivars have colorful new foliage in reds or pinks while other cultivars’ new foliage is a bronze green. Its true beauty is in the early spring when the small bell-shaped fragrant flowers which are on 6-12 inch long panicles that cascade over the plant as if it suddenly became an evergreen water fountain. ‘Flaming Silver’ is a cultivar with new foliage that starts out red with pink leaf margins, which then matures to green leaves with bright white margins. The green and silver white foliage paired with the silver white flowers creates a frosty picture and brightens up a shady area in the spring and all year long. Thriving in USDA zones 4-7, Pieris needs shade and acidic moist well drained soils.
Lace bug is the most common insect pest, easily spotted with faded whitish yellow leaves and black tar spots on the underside of the leaves. Other insect pests include wax scale, twospotted spider mite, and nematodes. Leaf spot and phyophthora dieback are the two most common *Pieris* diseases.

### Phenology

<table>
<thead>
<tr>
<th>PLANT</th>
<th>PLANT STAGE (Bud with color, First bloom, Full bloom, First leaf)</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>Forsythia</td>
<td>Full bloom</td>
<td>Columbia (April 8)</td>
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<tr>
<td></td>
<td></td>
<td>Salisbury (April 6)</td>
</tr>
<tr>
<td>Magnolia soulangiana</td>
<td>First bloom</td>
<td>Salisbury (April 9)</td>
</tr>
<tr>
<td>Magnolia stellata</td>
<td>First bloom</td>
<td>Salisbury (April 9)</td>
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### Degree Days (As of April 9)

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<td>Salisbury</td>
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<td>108</td>
<td>87</td>
<td>69</td>
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To check degree day (DD) accumulations in your local area go to: [http://www.yourweekendview.com/outlook/agriculture/growing-degree-days/](http://www.yourweekendview.com/outlook/agriculture/growing-degree-days/). Note: degree days reported in this newsletter use a base temperature of 50 °F, a start date of January 1st, and the date of monitoring as the end date.
Upcoming Conferences:

MAA Pest Walk
May 20, 2015
Location: Irvine Nature Center, Owings Mills, MD

Eastern Shore Pest Walk
June 3, 2015
Location: Salisbury, MD
Contact: Ginny Rosenkranz, 410-749-6141

MNLGA Nursery Field Day
June 17, 2015
Location: Clear Ridge Nursery, Union Bridge, MD

Greenhouse Tour and MNLGA Picnic
June 25, 2015
Location: Greenstreet Growers, Lothian, MD

Summer Meeting of the Maryland Christmas Tree Association
June 27, 2015
Location: Pine Valley Christmas Trees, 342 Blake Road, Elkton, MD 21921
Meeting includes a 60th MCTA Anniversary celebration.
For more information: GaverTreeFarm@aol.com or http://www.marylandchristmastrees.org/

Alternative Greenhouse Crops Conference
August 5, 2015
Location: Brookside Gardens, Wheaton, MD

LCA Hands-on Training Seminar
September 16, 2015
Location: Johns Hopkins University, Montgomery County Campus

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