Welcome Back and Let’s Get Going with 2016

By: Stanton Gill

Well, the winter started out mild and at one point we were not sure if winter was even coming at the end of 2015. At Christmas it was in the 70 °F range. We received several pictures from our commercial horticultural brethren showing autumnalis cherry, Lenten rose and camellias in bloom. By January 18 it was 19 °F at night and dropped to 12 °F by January 21. What a contrast. These wild temperature swings damaged a lot of plants that started flowering and leafing out in December.

The warm weather of the last week is pushing out new growth, but we will see winter injury show up as we progress into May and June.
What Will We Concentrate on This Year?
By: Stanton Gill

I enjoy winter – it gives us a chance to summarize our field research projects, see where we were and where we need to go. We will continue to expand our efforts on ambrosia beetles in 2016 and work closely with Chris Ranger of USDA in Ohio. We will test alcohol meters to see which trees produce large quantities of ethyl alcohol since we know these are the trees ambrosia beetles will attack. We will also work with several nurseries in Maryland to evaluate whether alcohol infused tree bolts can effectively draw ambrosia beetles to the bolts and not the nursery trees.

Another insect we will concentrate on in 2016 will be adult Japanese beetles. In 2015, we tested several new materials as foliar applications for Japanese beetles in Maryland nurseries with very good results. In 2016, we will look at soil applications of systemic insecticides with some applications in spring and some in fall.

We will also be working jointly with the University of Delaware on root mealybug and root aphid in herbaceous perennials plants.
Are We Spending Enough on Turf Production?
By: Stanton Gill

Being very aware that sports are huge money generating machines, it is not too surprising what is going on at Raven’s Stadium. They decided that Bermuda grass was the best option for the field that the players tear up every two weeks during the season. Bermuda is one tough grass and for sports’ fields it makes complete sense as one of the tougher grasses. Trouble is, Bermuda grass requires high temperatures and a lot of direct sunlight. Raven’s stadium is shaded for most of the day in the fall when games are going on. Solution: bring in portable lights to keep the Bermuda grass growing and recouping between each game played on home field. Nothing like “natural grass” for a playing field even it involves using artificial lights to keep it healthy – I guess.

Eastern Tent Caterpillars
By: Stanton Gill

Gaye Williams, MDA, reported egg hatch in Annapolis on March 11. Caterpillars hatched on crabapple in Ellicott City on March 16 and Paula Shrewsbury reported egg hatch on wild cherry in College Park on March 18. Crabapples are reported to be in bloom on the Eastern Shore and parts of central Maryland this week. Usually we see hatch of the caterpillars just about bloom time (along with the blooming of forsythia). Physical removal of webs when the caterpillars are in the webbing in early morning is a good physical way of controlling this pest.
Control: Spinosad, Bt or Acelepryn will all give good control of these caterpillars.

Flatheaded Appletree Borer
Craig Greco, Yardbirds, Inc., found a larva of a flatheaded appletree borer inside a tree trunk this week. It overwinters in the larval stage. This borer attacks weakened trees.
Control: Keep trees healthy and vigorous to reduce problems with this borer. Keep trickle irrigation on susceptible trees, especially red maple, dogwood and oaks during the hot part of the summer. Applying a mulch layer will help conserve moisture. Permethrin or bifenthrin can be applied in early May to prevent entry of newly hatching larvae.
Boxelder Bugs Are on the Move
By: Paula Shrewsbury

Boxelder bug, *Boisea trivittatus* (Rhopalidae), adults were active this week in Keedysville. Boxelder bugs have left their protected overwintering sites (ex. your homes) this week. Very high numbers of these red and black adult boxelder bugs were flying and crawling on the ground on turf, rocks, leaf litter and trees in areas where maples and boxelders were present. There were many mating pairs of bugs. Females will soon lay eggs on the bark of trees, on leaves, or on the ground. Boxelder bugs feed on the developing seeds of boxelder and other maple species (Family Sapindaceae). Maples are blooming now will likely have seeds soon.

**Control:** These bugs do not usually cause visible damage to trees and do not warrant control. Areas where you see adults flying and crawling now should be monitored in late summer to early fall for aggregations of boxelder bugs that may find their way into homes to overwinter (nuisance pest).

Voles in Turf and Damage to Woody Plants
Dave Clement, HGIC, found vole activity in turf in the middle of February. The snow cover during the winter provided protection for them from predators in turf and while feeding on woody plants. Look for irregular gnawing marks at various angles on woody stems. The damage can be found as high as the height of the accumulating snow. In the spring, remove damaged plant material. There also will be many predators active to help reduce vole populations.

Sapsucker Damage
Marty Heidel, Arader Tree, sent in photos of yellow-bellied sapsucker damage on viburnum in the Valley Forge area. Marty noted that the viburnums affected were not looking as green as the ones not affected. All damage was up higher in the plant; he saw no signs of borers. Sapsuckers make two types of holes; round holes that go deep into the tree that are not enlarged in which sapsuckers probe for sap; and shallower rectangular holes that are maintained continually for the sap to flow.
Benefits of “beneficial” arthropods

Often as members of the Green Industries when we think of insects (and mites), the first thing to come to mind are insects that cause economic and aesthetic damage. However, in reality less than 1% of insects are actually insects that are considered serious pests. As we start the 2016 growing season I would like to discuss “beneficial” arthropods and the benefits they provide. Arthropods provide multiple ecosystem services. Some insects like Hercules beetles are decomposers that break down organic matter like wood from dead trees, while other decomposers such as carrion beetles eat dead animals (yuk!). Imagine what the world would be like if we didn’t have the diversity and abundance of insects around that we do to eat dead things, or dung (ex. dung beetles), or break down plant material. Insects not only remove these things but they recycle them into a form that can be used again in the environment.

Many insects, like lady beetles for example, are natural enemies that consume herbivorous insects, suppressing their abundance and impact on plants. Natural enemies provide biological control services and play a major role in shaping animal and plant communities in natural and managed environments. In addition to eating other insects, some insects are eaten by other animals so they are critical links in food webs. Some insects perform dual ecosystem services. For example, many natural enemies are omnivores and in addition to eating insects, they eat plant resources such as seeds, nectar and pollen. Omnivores that consume weed seeds, such as ground beetles, suppress weed growth. Other omnivores such as parasitic wasps feed on nectar and pollen, so they pollinate plants providing pollination services to plants in addition to being natural enemies that provide biological control. Other insects are just pollinators such as adult butterflies and moths. Be sure to respect insects and the important roles they play in maintaining healthy ecosystems and preventing pest outbreaks and damage. When making
plant and pest management decisions try to reduce detrimental impacts on these beneficial insects and conserve the “benefits” they provide. I look forward to sharing more on the various beneficial insects in our world. Enjoy the images of insects that provide a diversity of ecosystem services.

Hercules beetle adult male (left) and larva (right). The larvae have powerful jaws to chew up decaying wood (decomposer of organic matter). Photo: M. Raupp, UMD

This rainbow dung beetle was rolling and pushing a piece of horse dung down a hole where the dung will provide food for dung beetle larvae (decomposer of dung). (image by P.M. Shrewsbury, UMD)

Overwintering egg masses of the predatory wheel bugs can be found on trees at this time of year. Wheel bugs will soon hatch and begin eating stink bugs, caterpillars, and an diversity of other insects. Photo: P.M. Shrewsbury, UMD

**Lesser Celandine**

Brian Scheck, Maxalea, Inc., found the leaves of lesser celandine coming up on March 2 in Towson. Foliage was visible on a patch here at the research center in Ellicott City on March 11. This invasive weed produces bulblets which need to be removed from the site in order to control its spread. Chuck Schuster covered this weed in the *April 11, 2104 IPM Report*.

Lesser Celandine produces bulblets which make this weed very difficult to control and eradicate. Photo: Brian Scheck, Maxalea, Inc.
Weed of the Week
By: Chuck Schuster, University of Maryland Extension

Welcome to Spring! Well maybe? It has been an unusual winter in many ways, temperatures in late December in the 70’s, and soil temperatures in the upper 50’s at 3 inches of depth. The overall temperature movement has been upward since March 1, 2016 with some rapid increases between the first and second week of March (See photos below). During this time period soil temperatures increased more than 10 °F during a seven day period. All of this weather plays into the normal spring attempt to be ahead of crabgrass with pre-emergent applications, but not so far ahead that the window of efficacy from the day of application until the product stops being effective is before crabgrass is finished germinating.

Products containing dithiopyr (Dimension) prodiamine (Barricade) and pendimethalin (Pre-M) impact shoot and root development. Dithiopyr (Dimension) is also an early post emergent product that inhibits certain steps in plant cell division. All of these products can be used on established turf, but not sites that will be seeded with new seed. Siduron (Tupersan) is the only product that can be used in a turf setting when overseeding after application is considered. Timing of application, when soil temperatures reach 55-60 °F and have moisture, will activate the process working. With snow forecast this weekend (really?) it will slow the warm-up process but not by much. Soils are currently somewhat dry, and remember these pre-emergent products need rainfall or irrigation to be activated. Dithiopyr also provides early post-emergent control of crabgrass and some other annual grasses. This allows for applications to be done over a longer period of time and results to be successful. Other options for crabgrass control do include use of Drive (quinclorac), Tenacity (mesotrione), and SquareOne (quinclorac + carfentrazone) and Solitare (quinclorac + sulfentrazone). These are post-emergent products that can be used into late May and June. The benefit with some of these products is that it can be used on a seedling lawn, one that has been seeded and has is becoming established. Check the label carefully.

Control of crabgrass is not only achieved through herbicide applications. Good soil fertility, proper mowing height, and proper pH levels are other components in a crabgrass management that should not be overlooked.
Plant of the Week
By: Ginny Rosenkranz, University of Maryland Extension

Spring bulbs need to be planted in the fall to get established, but some of the smallest bulbs are often neglected due to their short period of bloom. On the other hand, despite their short period of bloom, many of the small bulbs are so colorful that they should be considered and a spot in the garden planned in the spring and planted in the fall. *Ipheion uniflorum* or spring starflower will grow in USDA zones from 5-9 and bloom around March to April with bright blue 6 petal star shaped flowers. The plant is a bulbous perennial with narrow grass like leaves and the upright flower stalk has a single pale to dark blue with pure white centers. Each bulb will produce many flower stems each with its own fragrant star shaped flower. The flowers will bloom even in the snow and will grow in landscape beds or even lawns. They naturalize rapidly by both seeds and bulb offsets. As small as they are, they are best planted where they can be admired close to a path, naturalized in a lawn or under a tree that is close to a deck or patio. They also naturalize with another small perennial bulb, Snowdrops or *Galanthus* (USDA zone 3-7) which bloom any time between January and April. Snowdrops are also tiny, growing only 3-6 inches tall with an arching stem that holds a small white flower with a drop of green. Each flower has 6 tepals, 3 pure white spreading outward and 3 short inner tepals tipped with green. Although the bulbs need a year to get established, the wait is worth the color in the early spring when little else is in bloom. The foliage should be allowed to yellow in late spring to ensure good bloom for the following spring. Both rabbits and deer leave these flowers alone to multiply in drifts with moist but well drained soils in partial shade. They are also tolerant of clay soils and black walnut tree roots. There are no serious pest problems.

**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>Forsythia</em></td>
<td>First bloom</td>
<td>Columbia (March 13)</td>
</tr>
<tr>
<td><em>Magnolia soulangiana</em></td>
<td>First bloom</td>
<td>Wheaton (March 10)</td>
</tr>
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**Degree Days (As of March 16)**

<table>
<thead>
<tr>
<th>Location</th>
<th>2016</th>
<th>2015</th>
<th>2016</th>
<th>2015</th>
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<tbody>
<tr>
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<td>68</td>
<td>3</td>
<td>65</td>
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<td>62</td>
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<td>National Arboretum</td>
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<td>21</td>
<td>91</td>
<td>7</td>
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<tr>
<td>Salisbury</td>
<td>91</td>
<td>22</td>
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</table>

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. Note: This site has not been functioning consistently lately.
Commercial Horticulture Conferences

National Firewood Workshop
Thursday, April 21st, 2016
8:30 am—4:30 pm
Continuing Education Credits approved by ISA, SAF, ML
http://extension.umd.edu/events/thu-2016-04-21-0900-national-firewood-workshop

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