TPM/IPM Weekly Report
for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture

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Announcements

Coordinator Weekly IPM Report:
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Regular Contributors:
Pest and Beneficial Insect Information: Stanton Gill and Paula Shrewsbury (Extension Specialists) and Nancy Harding, Faculty Research Assistant
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)
Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)
Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

How Cold Did it Get this Winter?
By: Stanton Gill, UME

I just returned from an International IPM conference in Salt Lake City, Utah. In Salt Lake City, the Bradford pears, azaleas and ornamental cherry trees were in full bloom. Everyone who lives there told me they had the least amount of snow they have seen in years. There is concern that their water reserves are going to be very low in 2015. A person at the meeting from Bozeman, Montana said it was 60 °F in Bozeman on Saturday (March 21). They are reporting a mild winter overall in Montana. A person from Alaska reported that it was the mildest winter in Alaska in several decades. Here on the East Coast we were beaten up by a cold, snowy, icy winter.

It would be hard to beat the low temperatures of 2014 in which we saw temperatures dip to -7 to -8 °F in January 2014. Meteorologists have labeled February 2015 on the East Coast as the coldest February in 35 years. I recorded low temperatures in the Westminster area this winter just to get some sort of handle on the frequency and depth of the cold we experienced. In 2015 the temperatures dipped to 7 °F on January 7. On January 8, the temperature dipped to 12 °F and on January 10 it reached 6 °F. On February 1, it dipped to 18 °F. The night temperature dipped to 9 °F on February 7 and February 13. Snowfall up to that point was very light, most storms under 1 – 3” in January and early February. On February 16, the temperature dipped to -1 °F with wind chills down to -19 °F. Right after this cold snap we had several nursery owners, ranging from Frederick County to the Eastern Shore, report pipes freezing in their greenhouses, residential houses and offices. Many plumbers
were doing very well at $98/hour for repairs. On February 18, it dropped to 3 °F, and on the next day it dropped to -4 °F. On February 28, the temperature dropped to 10 °F overnight. On March 1, the temperature reached 15 °F with a combination of sleet and snow occurring from March 2 – March 5.

What will be the result of these low temperatures? Well, fig trees and crape myrtles can expect to take it on the chin for the second year in a row. Burford holly took a beating from the cold weather and drying winds. Camellias generally suffered heavy winter damage with two exceptions: ‘Jerry Hill’ and ‘Ashton Delight’. We have been growing these two cultivars since 1998 and they came through last winter without damage and I do not see any damage from this last winter.

**Winter Injury...So Far**
It is still early in the season, but already we are seeing the aftermath of the winter cold, chilling winds, and salt treatments. Based on last year’s model, we can expect to continue seeing damage through June. Meanwhile, Steve Sullivan, The Brickman Group, sent in photos of winter injury on woody and herbaceous plants. Marie Rojas, IPM Scout, sent in photos of nandina with severe winter injury.

Steve Sullivan notes that they switched from pansies to viola several years ago and they do not see as much winter injury on the violas. We would be interested in other observations on fall planted pansies compared to violas. Contact me at Sgill@umd.edu. Also send me emails with pictures as you find winter injury cropping up in the landscape and nursery.
Show Your Customers You’re Pro-Pollinator with these Great Pollinator Plants  
By: Sara Tangren, Home and Garden Information Center

Supporting insects is all the rage this gardening season, so we’ve drafted a short list of the very best native plants for garden centers to carry. All the species on this list are:
- Native throughout the state
- Currently available as straight-species through local wholesalers
- Easy-to-grow plants that are presentable on the retail floor

We’ve also tried to cover a variety of colors, seasons, moisture/sun requirements, and forms, so there’s at least one species here for every garden in the state! In the meantime, we’ll be working on a longer, more detailed list for release later this summer – just in time for you to start planning your 2016 inventory.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Form</th>
<th>Bloom Color</th>
<th>Bloom Season</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pussytoes</td>
<td>Antennaria plantaginifolia</td>
<td>perennial</td>
<td>white</td>
<td>spring</td>
<td>semi-evergreen groundcover</td>
</tr>
<tr>
<td>Eastern Columbine</td>
<td>Aquilegia canadensis</td>
<td>perennial</td>
<td>red</td>
<td>spring</td>
<td>red bells for hummingbirds</td>
</tr>
<tr>
<td>Swamp Milkweed</td>
<td>Asclepias incarnata</td>
<td>perennial</td>
<td>pink</td>
<td>summer</td>
<td>damp to wet soils, rain gardens, for monarchs</td>
</tr>
<tr>
<td>Butterfly Milkweed</td>
<td>Asclepias tuberosa</td>
<td>perennial</td>
<td>orange</td>
<td>summer</td>
<td>dry, coarse soils, xeriscapes, for monarchs</td>
</tr>
<tr>
<td>Joe Pye Weed</td>
<td>Eutrochium fistulosum</td>
<td>perennial</td>
<td>lavender</td>
<td>summer</td>
<td>tall, majestic, butterfly magnet</td>
</tr>
<tr>
<td>American holly</td>
<td>Ilex opaca</td>
<td>understory</td>
<td>NA</td>
<td>spring</td>
<td>evergreen, berries for birds</td>
</tr>
<tr>
<td>Cardinal Flower</td>
<td>Lobelia cardinalis</td>
<td>perennial</td>
<td>red</td>
<td>summer</td>
<td>for hummingbirds, butterflies and more</td>
</tr>
<tr>
<td>Golden Groundsel</td>
<td>Packera aureus</td>
<td>perennial</td>
<td>yellow</td>
<td>spring</td>
<td>evergreen groundcover, early nectar source</td>
</tr>
<tr>
<td>Red Chokeberry</td>
<td>Photinia arbutifolia</td>
<td>shrub</td>
<td>white</td>
<td>summer</td>
<td>will hum with pollinators, red fall color</td>
</tr>
<tr>
<td>Narrow-leaf Mountainmint</td>
<td>Pycnanthemum tenuifolium</td>
<td>perennial</td>
<td>white</td>
<td>summer</td>
<td>formal looking, bountiful and diverse pollinators</td>
</tr>
<tr>
<td>Gray Goldenrod</td>
<td>Solidago nemoralis</td>
<td>perennial</td>
<td>yellow</td>
<td>fall</td>
<td>short, showy - not the aggressive goldenrod</td>
</tr>
<tr>
<td>Hillside Blueberry</td>
<td>Vaccinium pallidum</td>
<td>shrub</td>
<td>white</td>
<td>spring</td>
<td>our common lowbush blueberry, for acidic soils only</td>
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<tr>
<td>New York Ironweed</td>
<td>Vernonia noveboracensis</td>
<td>perennial</td>
<td>purple</td>
<td>summer</td>
<td>tall, royal purple, diverse pollinators</td>
</tr>
<tr>
<td>White Wood Aster</td>
<td>Eurybia divaricata</td>
<td>perennial</td>
<td>white</td>
<td>fall</td>
<td>short groundcover with foamy white flowers</td>
</tr>
</tbody>
</table>

Photos: Sara Tangren, HGIC
Emerald Ash Borer Treatments
By: Stanton Gill, UME
Besides Tree-age with emamectin benzoate, there is another product coming on the market. Rotam Company will be selling ArborMectin direct. Registration of their label is pending in NY, and I am not sure of the status elsewhere. Linda Wheeler, Rotam Professional Product Sales, informed me that the company will have a website available soon where more information will be posted, including when the product will be available for sale. I'll pass that info along when I have it. I have not seen the label, but if it is the same as the Rainbow label (Rotam was the manufacturer for the Rainbow-labeled material, so chances are it is), note there are some differences in listed pests from those on the Tree-age label.

Rose Cane Borer
By: Stanton Gill, UME
Craig Greco, Yardbirds, Inc., sent a photo of a rose cane borer this week. The most common tunnelers are hunting wasps that, for the most part, are beneficial predators. These small, harmless wasps nest in the rose pith. These hunting wasps feed on other plant feeding insects and provide some degree of insect control.

Female wasps lay eggs on cut canes. The eggs hatch into larvae which tunnel into the cane pith. They feed for about two weeks on aphids and other insects brought to the nest by the female wasp. After two weeks, the larva goes into a dormant state before emerging as an adult wasp.

Management: If the wasps do significant damage to a plant, prune the rose cane below the wasp nest area where there may be a slight swelling. Seal this cut (and routine pruning cuts) with water-insoluble glue or nail polish to prevent more nests of eggs. The amount of damage in most cases is not that significant.
Monitoring for Iris Borers - A Request from Stanton Gill
Thank you to those of you who have volunteered to place out iris pheromone traps. We are hoping to get a few more sites with irises, especially in Southern Maryland and on the Eastern Shore. We would like you to record male flight activity and send the data to me. Don’t worry – it just attracts the males not the females so it will not increase your population at the site. If interested call me at 410-868-9400 or email me at Sgill@umd.edu.

BROWN MARMORATED STINK BUGS WANTED!
The University of Maryland Dively Lab is in need of adult stink bugs for research projects. It’s that time of year where those pesky stink bugs start to become active and come out in buildings. If you have a large stink bug population in your Maryland home/office/school, our lab would appreciate you capturing the little invaders. Bugs can be collected in a variety of household items: plastic food containers, old coffee cans, etc. Just scoop them into the container of your choice, throw a piece of apple inside for food, and poke some holes in the lid. Just make sure not to throw them together in confined spaces like ziplock bags. They will ‘stink’ each other to death! Please contact Dr. Galen Dively by email (galen@umd.edu) or call (202-812-9828) if you can collect at least 50 stink bugs into a container. We can arrange to pick up the containers at various locations (within approximately 50 miles of College Park and as far west as Hagerstown).

Viburnum Leaf Beetle
We keep waiting for this pest to move south. We certainly do not want it since viburnums are pretty pest free right now in Maryland. Below are several links from Cornell University with information on this beetle. Be on the lookout for it in Maryland. Moving in plant material is the most likely way this pest will find its way into Maryland.

Viburnum Leaf Beetle (VLB) Citizen Science, Cornell University - info on this beetle

Viburnum Leaf Beetle (VLB) Citizen Science, Cornell University - link to viburnum susceptibility

Keep an eye out for the adults and larvae of viburnum leaf beetle
Photos: Paul Weston, Cornell University, Bugwood.org
Beneficial of the Week
By: Paula Shrewsbury

Early season pollinators are busy!
Insects provide numerous ecosystem services that are beneficial to the environment and humans, one of which is pollination. Although the weather has been on the cool side we have already seen some early season pollinators mating and busily collecting pollen. Specifically, honey bees and some of the solitary bees have been active over the last few weeks. Unlike honey bees, solitary bees do not have colonies. Solitary bees are not social and do not share the “work”. Each individual female has a unique “nest” which she provisions with food and rears her brood (young). It is not unusual though to see aggregations of solitary bee nests in the same location. Today, I would like to discuss plasterer bees which are a group of solitary bees in the family Colletidae, sometimes referred to as colletid bees. Some colletid bees nest in pre-existing holes or galleries in wood, plant stems, etc. Other colletid bees construct subterranean nests by excavating burrows in the soil. These bees are referred to as plasterer bees because they line their burrows with a polymer-like secretion. Most soil nesting colletids make a main burrow that may have up to several lateral cells. Each cell is provisioned by the female with food for her offspring which is a mixture of pollen and nectar. This mixture may be a semi-liquid mixture or of pollen and nectar or some species make a loaf of “bee bread” with pollen and nectar. Once a cell is provisioned, the female oviposits in the cell, and then seals the cell with soil.

Adult plasterer bees are hairy and somewhat cute. They are not aggressive and are not known to sting people. They are univoltine and adults are usually active from early-mid March to early-mid-May. When adults emerge in the March, they mate and then females begin foraging. To get the food back to the nest, most bees carry nectar in their crop (a special sac-like chamber in their digestive tract). Most solitary bees have an area of stiff hairs, called a pollen brush or scopa, into which pollen grains are pushed. These hairs are located either on the underside of the abdomen or along the hind legs. These early season pollinators feed on pollen and nectar from about 38 different early blooming trees, shrubs, and herbs such as *Acer* (maple), *Vaccinium* (blueberry), *Liriodendron* (tuliptree), *Prunus*, *Ribes*, and *Amelanchier*.

Often people who are not familiar with solitary bees will get a little anxious when they see aggregations of these bees flying around their yards or other areas. Be sure to inform your clients, friends, etc. that these little guys are great pollinators and not aggressive – so no worries! They are actually fun to observe on a sunny day.

![Plasterer bee emerging from the ground nest she has dug and provisioned with pollen for her brood.](image1)

![Above are the tumuli (opening with soil mounded) of nesting burrows of plasterer bees. Aggregations of these solitary bees are common in areas with sandy soil and thin turf.](image2)
Weed of the Week
By: Chuck Schuster
Not many weeds are really starting to grow yet in many areas. Currently we have 14 growing degree days (GDD) this season. While Thursday did provide a glimpse of hope for what is to come, the weekend is scheduled to be cold again. *Glechoma hederacea*, ground ivy or creeping Charlie, is a cool season perennial member of the mint family found throughout the northeast and southern United States. Ground ivy is found commonly in both turf and landscape settings. This weed has creeping stems that root at the nodes, that are square (mint family) and mostly without pubescence (hair). Flowers are found in clusters of 3 in the area between the stem and the leaf axils. They are funnel-shaped, lavender and bloom in early spring. Leaves are nearly round, toothed and are on long petioles. When mowed, the plant emits a mint-like odor. This weed was brought to this country from Europe for it medicinal purposes and has been used in the making of beer.

Cultural control of this weed in turf can be accomplished by maintaining a high mowing height and proper fertilization. Mowing height can influence this plant. This weed also can thrive under short turf mowing height. Chemical control of this weed can be accomplished postemergence in spring or in fall when the plant is actively growing. Products labeled for this will include Broadleaf weed control chemicals for turf. Products containing Triclopyr, 2,4-D, and fluroxypyr have been shown to have the best results. Pre-emergent products do not control creeping Charlie/ground ivy.

Plant of the Week
By: Ginny Rosenkranz, UME
*Veronica peduncularis* 'Georgia Blue' is an herbaceous perennial in the speedwell family. It is a low growing ground cover that is hardy from USDA zones 6-9 and grows only 6-8 inches tall and 1-3 feet wide, not an aggressive spreader. It thrives in full sun and part shade with moist well drained soils. Not an evergreen in Maryland, in the spring the foliage starts out as a reddish green that matures to a deep green in summer and turns a shiny bronze in the fall. The spring flowers are tiny and bright cobalt blue with a pure white eye. They are on slender spires about 8 inches tall and when in bloom, cover the plant totally in brilliant blue. The flowers bloom from April through May and can continue to bloom intermittently throughout the summer. 'Georgia Blue' makes a great edging plant, a non aggressive ground cover, a container plant or a rock garden addition. It can attract butterflies and is listed as not attractive to deer or rabbits. It grows well with *Phlox subulata* and all spring bulbs. It is also listed as *Veronica umbrosa*. No serious insects or diseases to date.
Degree Days (As of March 26)

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</thead>
<tbody>
<tr>
<td>Baltimore, MD (BWI)</td>
<td>13</td>
<td>13</td>
<td>7</td>
<td>Dulles Airport</td>
<td>17</td>
<td>8</td>
<td>18</td>
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<tr>
<td>Frostburg, MD</td>
<td>0</td>
<td>2</td>
<td>14</td>
<td>Martinsburg, WV</td>
<td>15</td>
<td>18</td>
<td>12</td>
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<tr>
<td>National Arboretum</td>
<td>42</td>
<td>38</td>
<td>23</td>
<td>Reagan National</td>
<td>42</td>
<td>38</td>
<td>23</td>
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<tr>
<td>Salisbury</td>
<td>40</td>
<td>47</td>
<td>42</td>
<td>St. Mary’s City</td>
<td>19</td>
<td>35</td>
<td>22</td>
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</tbody>
</table>

To check degree day (DD) accumulations in your local area go to: 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.

**Operator Certification (FTC) for Writing Nursery Nutrient Management Plans**  
**April 7th, 2015**  
9 to 3:30 PM

Central Maryland Research and Education Center  
11975-A Homewood Road, Ellicott City, MD 21042

Nursery Operator Certification (FTC) for writing nursery nutrient management plans will be offered to growers who are interested in attaining Farmer Training Certification for writing nutrient management plans. This training program will assist you in writing a nutrient management plan for your nursery or greenhouse operation. You must write a nursery nutrient management plan if you use fertilizers and you gross $2500 or more per year in sales. With this certification, you will be able to sign off and submit your own plan and annual implementation reports.

Each program consists of a Training Day and an Exam/Signoff Day. The Training Day will consist of learning the plan-writing process. After the Training Day you will have about 5 weeks, during which time you will study the Nursery Nutrient Management Training Manual and develop your plan. The Exam/Signoff Day will be for taking the exam and going over your newly developed plan (or renewing your old plan).

The process is relatively simple for small (or low-risk) operations, so if your operation size is less than 5 acres, we would strongly encourage you to think about becoming a certified operator. If your operation is larger than 5 acres, we would still encourage you to become a certified operator, even though the nutrient management process may be a little more complicated.
Upcoming Conferences:

2015 Interstate Ornamental Plant Management Conference
April 6, 2015
Location: Maritime Institute, Linthicum Heights, MD
Contact: Avis Koeiman, 301-405-3913

Recertification credits have been approved by the following states:
Delaware - Cat 03; District of Columbia - 3A, 3B, 3C, 5, 6, 7F; Maryland - Cat 3A, 3B, 3C, 6, 10; Virginia - Cat 3A, 3B, 10, 60; West Virginia - Cat 4A-13, 4B-13, 7-3; Pennsylvania - Please call

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

Alternative Crops for Greenhouse Production: Conference and Tour
August 5 and 6, 2015
Location: Brookside Gardens, Wheaton, MD on August 5th (conference day)

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

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.

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