Yucca Bugs
Brian Scheck, Maxalea Inc., found yucca plant bugs on yuccas in Roland Park on September 1. There are three generations of the yucca plant bug in Maryland. It overwinters as eggs laid in the leaf tissue. Feeding causes stippling and chlorotic foliage. Look on the undersides of foliage for the small reddish color nymphs. They move fast, so it is best to look for them early in the morning.

Control: Horticultural oil can be used to suppress the plant bug population if you have mostly nymphs present. It does not work well against adults. Adults can be controlled using Orthene or a synthethic pyrethroid.
Honeyvine milkweed (Cynanchum laeve) is a larval host plant for monarch caterpillars. It is a true milkweed, but its leaves and stems do not produce a milky sap like Asclepias species. It has leaves very similar to morning glory and field bindweed.

Dogwood Borer Activity
By: Stanton Gill

With all of the new insects introduced from other countries, we sometimes forget about the pests that have been around awhile – such as the dogwood borer. We had two nurseries report damage on Cornus florida from dogwood borer. Samples were brought to our CMREC lab and I examined them under the dissecting scope. They were Sessididae (clearwing moth) larvae; dogwood borers are in this family. The interesting thing is both nursery owners said the trees were growing well in the nursery and did not show any signs of earlier stress. Generally, the dogwood borer attacks weakened or wounded trees. The adult dogwood borer was flying when weigela was in bloom back in early summer. Fortunately, it has one generation per year. If you find damage on your dogwoods and dig in and find a cream colored larva with gold crotchets on the prolegs then please send me some samples. One possible control for this late in the season would be a trunk drench of Acelepyrn, which is labeled for clearwing moth borers.

MDA News Release: Boxwoods Shipped to Pennsylvania Need New Documentation
CONTACT: Julie Oberg, 410-841-5888, Jason Schellhardt, 410-841-5744

ANNAPOLIS, MD (September 2, 2016) – Any Maryland growers, wholesalers, landscapers or other distributors who plan to ship boxwoods to Pennsylvania are now required to have a phytosanitary inspection and certification or to develop a compliance agreement with the Maryland Department of Agriculture in order to get these shrubs across the state line. The Pennsylvania Department of Agriculture recently implemented a quarantine to prevent the introduction or movement of boxwood blight in Pennsylvania. Boxwood blight is caused by a fungus and was first found in Pennsylvania in 2012. The disease can result in complete leaf loss and death of the plant.

Anyone who intends to ship boxwoods from Maryland into Pennsylvania must meet these new requirements. If you have questions, call the department’s Plant Protection and Weed Management Section at 410-841-5920 or ppwm.mda@maryland.gov. For information, visit the Pennsylvania Department of Agriculture’s website.

Delaware and Emerald Ash Borer
By: Stanton Gill

Delaware officials announced that they have confirmed emerald ash borer in their state. The emerald ash borer was found on the Eastern Shore of Maryland two years ago and it was just a matter of time until it showed up in Delaware. We list the control options for protecting valuable ash trees in the online UME article, Hard Decisions Ahead With Ash Trees.
Winged Euonymus Scale and Spider Mites on Burning Bush
Jessica Frakes, Thrive, Inc., found winged euonymus scale and spider mites on winged euonymus (burning bush) in D.C. on August 31. She also found mites on hornbeam.

**Winged euonymus scale:** This scale is mainly found on winged euonymus, but the scale is reported to feed on maples, ash, lilac and willow. Crawlers are active in June and July in Maryland. Feeding causes yellowing of foliage and dieback of branches in heavy infestations. Heavily infested plants have been defoliated during the growing season. This scale tends to blend in with the corky ridges on the winged euonymus branches making detection more challenging until your eye is trained to pick up the scale covers.

**Control:** A mixture of 0.5 - 1% horticultural oil and pyriproxyfen (Distance) or buprofezin (Talus) does a great job controlling this scale. Dinotefuran (Safari, Transtect) applied as a soil drench also works well.

**Spider mites:** Look for stippling and bronzing on foliage. Monitor plants for the mites by using a clipboard with white paper and tap branches over the paper. Check the undersides of the leaves for the presence of mites and eggs. If left unchecked the mite populations can build up and cause foliage to drop off the plant.

**Control:** Horticultural oil can be used when temperatures are not high. Other materials include Abamectin (Avid), Bifenazate (Floramite), Spiromesifen (Judo for nursery use and Forbid for landscape use - both have translaminar action).

**Look for Spiders**
We are seeing and receiving reports of different spiders on landscape plants this fall. In today’s report, Rebecca Waterworth and Paula Shrewsbury cover flower crab spiders for the beneficial of the week.
Beneficial of the Week
By Rebeccah Waterworth and Paula Shrewsbury

For everyone who might be attending a crab feast this weekend in celebration of Labor Day, I thought that I would write about another common “crab” found in landscapes, crab spiders (Order Araneae, Family Thomisidae). Many common species of crab spiders include those that hunt on flowers. As a result, these particular crab spiders are called flower crab spiders. They are often brightly colored with yellow, green, and orange to blend in with the flower background. Crab spiders that forage on bark or the ground are black or brown, and we will not specifically discuss them at this time. However, all crab spiders are ambush predators that sit and wait for prey, and then, they attack! This is unlike what we typically think of spiders doing to catch their food, such as orb-weaving garden spiders (Family Araneidae) with their large and intricate webs.

Crab spiders do not build webs, though they produce silk for drop lines. In the event that a spider is disturbed from where it is sitting, a silken thread is quickly attached to the perch, and the spider can climb this thread to resume waiting for prey. There is some debate as to how many species of crab spiders there might be in North America. Current estimates range from 140 to 200 species.

Crab spiders get their common name from the fact that they look like small crabs with their somewhat flattened bodies. All spiders have four pairs of legs. What is unique about crab spiders is that the first three of their four pairs of legs extend (=angled) forward. In all other common spiders, only the first two pairs of legs extend forward. The first two pairs of legs are long and thickened and are often seen held out and up, similar to a crab holding its claws. These are the legs that contribute most to the capture of prey. Similar to hardshell crabs, crab spiders can walk sideways in addition to forwards and backwards. They have eight small eyes which limits their
ability to detect motion within 20 cm, and they can only detect prey if it is much closer. The body length of the largest crab spiders in North America is only 11 mm, so it is important that crab spiders inject venom into their prey to paralyze it. As a result, they can actually consume prey larger than themselves, such as bumble bees or butterflies (see photo).

One very common flower crab spider at this time of the year is the goldenrod crab spider, Misumena vatia. It is one of the few species of crab spiders that can change color depending on the color of the flowers where it is hunting! The base color of this species is white. After a few days of waiting and hunting on yellow flowers, a liquid yellow pigment is secreted to the outer cell layer transforming the white spider to yellow. Color reversal is also possible. Changes in color are induced by visual feedback (spider’s vision). If spiders’ eyes are painted over, they are unable to detect color and no longer change between white and yellow.

Crab spiders are a common generalist predator on the flowers in my conservation strips. Throughout this summer, I have beat sampled individual flowers of each plant species to learn more about which beneficial arthropods might be visiting. (Most of my natural enemies are very small and would not be visible during visual sampling.) After tapping five individual flowers of New England aster (Symphyotrichum [=Aster] novae-angliae) or cup plant (Silphium perfoliatum) into cups with ethanol, I was surprised to see a couple of small crab spiders in each sample. In one sample, I almost had one small crab spider per flower! Prior to sampling, there was no indication that spiders were present. They blended in so well.

I will definitely approach flower watching with a more discerning eye next time. There is a good chance that eight little eyes will be watching me!

**Weed of the Week**

By: Chuck Schuster

**Why Are Crabgrass and other Grassy Weeds Thriving This Year?**

Summer weeds are thriving this year. Spring started out warm, and then quickly cooled off. This early start caused some to start the process of applying annual grass pre-emergent products. If the warming trend had continued this would have been an excellent idea. That warm period quickly turned cool again and very wet. The wet period prevented the further application of products which was helpful as the soil did not warm up to the 53 °F level that is used for determining when crabgrass and Japanese stiltgrass will germinate. Soils warmed in mid-April to the appropriate level, and pre-emergent products were applied, but the rains did not stop. This continual flow of moisture helped to move the herbicides slightly below the seed zone thus making them less than effective. Two factors make pre-emergent products work well. Placement of the herbicide must be made before the seed germinates. This is critical as many of these products only work prior to the germination. If applied after the seed starts to germinate, the product will not do the job and the weeds will grow. The second needed factor is a minimum of .25 inches of rain to activate the products. These products will bind to the soil with average or slightly above average moisture levels, but this season provided much more than that. This has allowed many weeds to grow through the herbicides that were used. These rains continued through June which made many of these products less than effective.

Japanese stiltgrass and crabgrass respond to one pre-emergent product, Prodiamine, very well. Crabgrass has an additional tool that works in the early phase of post emergence, Dithiopyr. BUT this product does not control Japanese stiltgrass. The turf manager must decide if the stiltgrass population history is high which then may limit the use of a broader spectrum product to control crabgrasses.

The moisture also helped move the nitrogen that is applied to the turf below the root zone as nitrogen is water soluble. This shift helped steal some of the vigor from the turf.
Weeds and weed control is a delicate balance. Turf managers have excellent results many years, but on a few occasional years it is a problem to stay ahead of them when rainfall dilutes the products and moves them ever so slightly lower in the soil profile than they will be effective.

Landscape weeds have also taken advantage of the pre-emergent products that are typically used with mulch. Again, excess moisture in June, and the heavy rains we have experienced in August have allowed the weeds to get past the barrier. It is not from poor products, or lack of proper planning, it is because of the unusual rainfall and different temperatures we have seen this summer.

**Plant of the Week**
By: Ginny Rosenkranz

*Hydrangea paniculata* Bobo® is a very compact plant that still provides masses of beautiful white flowers in mid-summer to late summer and even into the fall. Bobo® blooms on new growth so even if the winter is harsh, the plants will grow and bloom every summer. The plants grow 2 ½ - 3 feet tall, 3-4 feet wide with a free branching habit and a mounded shape. Plants prefer full sun and grow best in organically rich, moist, well drained soils. Unlike some Hydrangea, Bobo® will bloom consistently in many different soil acidities and is cold hardy from USDA zone 3-8. The abundant sterile white flowers bloom in a large panicle up to 11 inches long, and mature to a pale pink- red- purple in late summer or fall. They can be used as cut flowers or left on the shrub through the winter to add architectural interest to the winter landscape. *Hydrangea paniculata* Bobo® can be used as a mass planting, in a mixed border planting, a short hedge, as an accent plant and even in a container. No serious pest problems, but there is some susceptibility to bud blight, bacterial wilt, leaf spot, rust, and powdery mildew.
### Degree Days (As of August 31)

<table>
<thead>
<tr>
<th>Location</th>
<th>GDD</th>
<th>City</th>
<th>Airport Code</th>
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<tr>
<td>Annapolis Naval Academy (KNAK)</td>
<td>3269</td>
<td>Baltimore, MD</td>
<td>KBWI</td>
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<tr>
<td>College Park (KCGS)</td>
<td>3092</td>
<td>Dulles Airport</td>
<td>KIAD</td>
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<td>Ellicott City (E3247)</td>
<td>3123</td>
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<td>Greater Cumberland</td>
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<td>Rockville</td>
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<td>MD-KNUI</td>
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</tbody>
</table>

**Important Note:** We are now using the [Online Phenology and Degree-Day Models](#) site.

Use the following information to calculate GDD for your site at the [Online Phenology and Degree-Day Models](#) site: Select your location from the map.

- **Model Category:** All models
- **Select Degree-day calculator**
- **Thresholds in: °F**
  - Lower: 50
  - Upper: 95
- **Calculation type:** simple average/growing dds
  - Start: Jan 1

Once you know the GDD and/or plant phenological indicators (PPI, what plants are blooming) in your location, you can go to the [Pest Predictive Calendar](#) to determine what pests you can expect to be active soon in that location.

### September 14, 2016 – Great Time for Cut Flower Growers to Expand Your Horizons

We set up an informative and wonderful program for September 14 from 8:30 – 4:00 on cut flower production. Learn what are some of the best bulb crops and flowering plants for your customers. This program is geared toward horticulturists who want to grow herbaceous plants as cut stems, but the information can be used by garden center personnel, landscape managers and government parks people.

Brent Heath, Brent and Becky’s Bulb Company of Virginia, will cover superior bulb species in the morning and then talk about how to create bulb layered container plantings for outstanding displays. Dr. Chris Wein, former Chairperson of Horticulture at Cornell University will cover weed control options. He will give this talk with Dr. Richard Uva, the author of Weeds of the Northeast and owner of Seaberry Farms.

**Check out the brochure** to find out about more topics that will presented and how to register.

### 2016 ASCFG National Conference

The Association of Specialty Cut Flower Growers is having its national conference on November 6-9, 2016 in Grand Rapids, MI. For details, check out the [ASCFG conference website](#). Stanton Gill will be speaking on IPM for Cut Flower Production.
Commercial Horticulture Conferences

Cut Flower Lectures and Tour
September 14, 2016
Locations: Carroll County
Brochure

Advanced Landscape Plant IPM PHC Short Course
January 3rd to January 6th
Website: landscapeipmphc.weebly.com
For registration information visit our website or contact:
Kiley Gilbert
University of Maryland
Department of Entomology
Tel: 301-405-3911, Monday-Friday 8-4:30
Email: kgilber4@umd.edu

New Location for 2016 December 2016 Conference
We are moving the IPM conference held in December to Howard Community College in Columbia for December 16, 2016. Our planning committee met last week and we are busy developing an exciting line up of topics and speakers. This conference will be limited in numbers since the main conference room is slightly smaller than the Carroll Community site you have used for the last 3 years.

We plan to have the schedule out in mid-October so if you want to attend don’t delay in signing up.

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

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