In This Issue...

- Acorns this fall
- Systemics for adelgids
- Barberry looper
- Bald-faced hornet's nest
- Beetle grub damage
- Emerald ash borer

Beneficial of the Week

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)

Where are the Nuts Coming From?
By: Stanton Gill

Many readers are noting that their customers’ houses are being bombarded by acorns over the last week. Not just a few, but hundreds and hundreds of nuts. The weather was perfect when oaks were in bloom in 2016 and we had an unusually high set for acorns in 2016. The high winds this weekend resulted in lots of acorns dropping. Some people describe them as sounding like gun shots on their roofs.

Acorns are a great food source for deer so maybe, on the good side, they will leave some of the plant material alone in the landscape this fall since they have plenty of acorns to feast on.

December 16, 2016 Pest Management Conference
We are still finalizing a few details and developing the brochure for this program. When available, we will send out an announcement and post it to http://extension.umd.edu/ipm/conferences
Systemic in Fall for Adelgids?
By: Stanton Gill

Last week we had inquires about fall applications of systemic insecticides for EAB. This week we got inquiries about fall application of systemic for hemlock woolly adelgid. Where are there still a few “last men standing specimen hemlocks” that have not succumbed to hemlock woolly adelgid yet? People want to know the best way to protect the remaining hemlocks until USDA releases the new hemlock resistant cultivars into the market.

Richard Cowles recently blogged about systemics and hemlock adelgids. Here is what he says:

Hemlocks can be effectively treated for hemlock woolly adelgid (HWA) through trunk injection. Resin production was no impediment to trunk injection in August – October, or again with spring timings for applications. As with hardwoods, you need to have evapotranspiration taking place for uptake of injected products. I found that hemlocks could be successfully injected until about Halloween. Soon thereafter, the trees appear to prepare for winter by reducing the water content of twigs (as demonstrated with pressure-bomb extraction of xylem sap). So, injection during the winter probably would not work.

In my experiments, the control of HWA through trunk injection was not as good as with other application methods. The vascular system of hemlocks tightly channels injected products to specific branches specifically connected to the injection area. Standard injection methods (e.g., Mauget type capsules or the Viper system, from Arborjet) resulted in half-treated trees. To improve treating trees through injection, you have to increase either the injected volume (by diluting the insecticide product) or the number of injections sites, or inject the trees two years in succession and offset the injection sites by a few inches. The Pointer product injected with the Wedgle syringe was completely ineffective.

It is much more efficient to do applications of systemic insecticides with soil injection or basal bark sprays. Even imidacloprid is readily absorbed and translocated when sprayed on the bark (Section 2(ee) provisions apply for using this application method). A properly applied basal bark spray will get around the problem of potentially “half-treating” trees through injection, and you don’t have to drill holes into the tree. Basal bark sprays move the active ingredient one step away from contaminating soil, and so even very conservative NY state has permitted the use of Safari as a basal bark spray for protecting hemlocks from HWA. For trees heavily affected by HWA, use of dinotefuran in a basal bark spray provides a very quick response (HWA mortality starts in a matter of weeks), whereas use of imidacloprid results in slow effects (the quickest evidence of a response is in about 6 months) but the benefit to the tree lasts about 7 years (see recent papers by Benton, et al.).

For states in which armored scales on hemlocks are as great a concern as HWA, you might consider combinations of imidacloprid + dinotefuran, or imidacloprid + clothianidin in a bark spray. Imidacloprid has little value in combating armored scales (but is cheap and long-lasting against HWA) while the dino or clothianidin provide faster effect and will at least suppress the scale populations. The effects of dinotefuran for managing HWA last for about 2 years.

2017 ADVANCED LANDSCAPE IPM PHC SHORT COURSE - JANUARY 3 – 6, 2017

We are pleased to announce the 2017 Advanced Landscape IPM PHC Short Course. This annual Short Course held in College Park, MD is a recertification short course for arborists, landscape supervisors, IPM monitors, advanced gardeners, and others responsible for urban plant management.

For further information and registration materials please click on the following link http://landscapeipmphc.weebly.com/ or contact Kiley Gilbert, IPM Short Course Coordinator, Phone: 301-405-3911, E-mail: kgilber4@umd.edu
Barberry Looper
Marty Adams, Bartlett Tree Experts, found barberry loopers (aka barberry geometry) feeding on barberry in Marriottsville this week. In some years, caterpillars can defoliate stands of barberry. There are multiple generations per year and caterpillars are active into November. Barberry loopers overwinter in the pupal stage in the soil.

Bald-faced Hornet’s Nest
Charlie Devilbiss, Naturalawn of America, found a large bald-faced hornet’s nest attached to this small, decorative house. These nests are not reused the following season.
Beetle Grub Damage
Mark Schlossberg, ProLawn Plus, Inc., found turf with damage from beetle grubs in Owings Mills. Mark noted that there were 5-6 grubs/ft$^2$ and it was near a Kwanzan cherry that had some beetle damage.

Emerald Ash Borer
David Driver, Extreme Arborist, found emerald ash borers attacking trees in Harford County. For more information on emerald ash borer check out [http://www.emeraldashborer.info/](http://www.emeraldashborer.info/).

Learn About Lawn Care at the National Arboretum

Great Looking Lawns Using Bay-Friendly Practices
October 22, 2016, 10:00 am – 12:00 pm

For a beautiful spring lawn, start now by learning and implementing the five fall “best practices” for a healthy, environmentally-friendly lawn. Come learn about selecting the best turfgrass varieties, maintenance practices to have a healthy lawn, reduce pests, and learn how to properly calibrate a fertilizer spreader. A guided tour of the ‘Grass Roots’ exhibit will follow the classroom part of the workshop. Take home lawn care information to help you through the process. Refreshments and door prizes will be provided!

Registration is free, but space is limited and pre-registration is encouraged.
Call 202-245-5965 or e-mail Geoffrey Rinehart at geoffrey.rinehart@ars.usda.gov to register.

Beneficial of the Week
By: Paula Shrewsberry

Ground beetles are beneficial in many ways.

In looking around the landscapes and walkways, I have been seeing a great number of ground beetles (family Carabidae) running around. Ground beetles are common and abundant in our landscapes and nurseries in addition to many other managed and natural environments. Ground beetles get their name because most species forage and live at the ground level. Although there are a few species, such as the fiery hunter (Calosoma sp.), that climb trees and attack caterpillars. They are diverse in their appearance and in the food items on which they feed. There are over 40,000 known species world wide of ground beetles. Some species of ground beetles can be quite small as adults at less than 1/8” in size, and others large at over 1” in size. Most are shiny black or metallic in color and have noticeable ridges or lines on their leathery front wings. Their feeding habits are diverse. Some species of ground beetles are carnivorous feeding mainly on prey (other insects and mites), and of these many are generalists feeding on a diverse range of prey items. Other species of ground beetles are omnivores which will feed on both prey and plant material (ex. weed seeds). Some species even partake in
pollinivory – feeding on pollen – for nutritional resources. Many omnivorous ground beetles are opportunistic and will feed on whatever food item is most abundant, but if a choice is available they often have a preference. Carnivorous and omnivorous species of ground beetles are predators of caterpillars, grubs, other species of beetles, fly maggots and pupae, aphids, weevils, earthworms, slugs, snails and other soft-bodied creatures hanging around the soil. There are also many species of ground beetles that are considered to be granivores and they mainly feed on seed, often weed seeds. Research has shown that they can be good biological control agents of weeds (studies in corn fields).

Because ground beetles are good biological control agents of potential pest insects and weeds, and they have diverse diet preferences, a number of studies have examined methods to enhance ground beetle populations by modifying managed environments to be more favorable for ground beetles – an approach referred to as conservation biological control. Studies have shown that installing “beetle banks” (rows of bunch type grasses) in agricultural fields enhances populations of ground beetle by providing refuge and overwintering habitat. Production nurseries often install grass allies between plant rows which should favor ground beetles. Container plant producers can put hard wood mulch over weed cloth beds. Our research has shown that this will increase prey item abundance (ex. collembola breaking down the mulch), provide habitat (nooks and crannies from the mulch) and increase ground beetle activity. It would be hard to go wrong trying to encourage a diverse and abundant population of ground beetles with their potential for providing pest insect and weed suppression. These practices will also increase the abundance and diversity of numerous natural enemies, especially those that are generalist feeders.

**Weed of the Week**
By: Chuck Schuster

As one looks out over areas that are not being mowed as often with the grass growing at a slower rate, one can see the reddish hue of this week’s Weed of the Week. Fall panicum, Panicum dichotomiflorum, is a sprawling late summer and early fall annual found throughout the United States. This weed is one of the few that seems to be growing and currently sticking out in the landscapes and fringe turf areas not seeing regular attention. Fall panicum, not managed, can reach a total of five feet in height, and grows with a very characteristic zigzag pattern because it bends at each node. It has large round, smooth sheaths, rolled in the shoot, 4 to 20 inches in length. Leaf blades have a noticeable midvein, occasionally having hair (pubescent) near the tip or the leaf base. The lower leaf surface is hairless and glossy. Nodes along the stem are swollen and bent.
in different directions which create an unusual growth habit. A shallow rooter, it is easily disturbed in the landscape, thus preventing it from thriving and producing seed. Stems have the ability to root at the nodes. Fall panicum has a fibrous root system. This weed is often mistaken for either Johnson grass or barnyard grass prior to seed head formation. After seed head formation, it can easily be distinguished by the seed head differences. Control of this late summer annual can be obtained with most pre emergent grass herbicides including pendimethalin, oryzlin and trifluralin. Post emergent control of this weed in landscape will include glyphosate products.

**Plant of the Week**

By: Ginny Rosenkranz

*Brunnera macrophylla* ‘Dawson’s White’ is a colorful addition of the Siberian bugloss or false forget-me-not. This shade-loving herbaceous perennial has variegated cream, white and green heart-shaped leaves that start small and expand until mid-summer. Plants grow from a basal root system, and spread very slowly by creeping rhizomes. ‘Dawson’s White’ needs organically rich consistency moist, well drained soils. It is not picky about soil acidity, growing well in both alkaline and acidic soils. Plants grow 1-1 1/2 feet tall and almost 2 feet wide while the airy flower stalks shoot up above the foliage around April with tiny light blue flowers with a bright yellow center that look very similar to forget-me-nots. *Brunnera* spp. grow best in cool summers without a lot of high humidity, making them a better ground cover plant in USDA zones 3-6, even though they can grow in USDA zones 7-8 as well. Plants are reported to be both rabbit and deer proof, and will attract early spring butterflies to the garden. Slugs and snails can be problematic.

*Brunnera macrophylla* ‘Dawson’s White’ is good for shady areas

Photo: Ginny Rosenkranz, uME

**Degree Days (As of October 12)**

<table>
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<tr>
<th>Location</th>
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<th>Location</th>
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<th>Location</th>
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<td>4320</td>
<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**

- **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.
Commercial Horticulture Conferences

New Location for 2016 December 2016 Conference
Howard Community College in Columbia for December 16, 2016. Look for the schedule in late October.

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, Dept of Entomology
Tel: 301-405-3911, Monday-Friday 8-4:30
Email: kgilber4@umd.edu

Thank you to the Maryland Arborist Association, the Landscape Contractors Association of MD, D.C. and VA, the Maryland Nursery and Landscape Association, Professional Grounds Management Society, and FALCAN for your financial support in making these weekly reports possible.

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

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