UNIVERSITY OF MARYLAND EXTENSION

TPM/IPM Weekly Report

for Arborists, Landscape Managers & Nursery Managers

Commercial Horticulture **August 2, 2024**

In This Issue...

IPMnet
Integrated Pest Management for Commercial Horticulture

extension.umd.edu/ipm

If you work for a commercial horticultural business in the area, you can report insect, disease, weed or cultural plant problems **(include location and insect stage)** found in the landscape or nursery to sgill@umd.edu

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), David Clement (Extension Specialist) and Fereshteh Shahoveisi (Turf Pathologist)
Weed of the Week: Chuck Schuster (Retired Extension Educator), Kelly Nichols, Nathan Glenn, and Mark Townsend (UME Extension Educators)
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)

Fall Armyworms

Ron Miller, Super Lawns, found adult fall armyworms in Oakton and Vienna, Virginia this week. Ron also noted that Alejandro Del-Pozo, Ph.D. Virginia Tech, sent out an announcement that the fall armyworm has been seen causing damage in North Carolina and has received two reports of fall armyworms in the Richmond area. Dr. Alejandro Del-Pozo is putting out pheromone traps to monitor for adults. Look for these caterpillars causing damage in turf. They did quite a bit of damage when they showed up in Maryland in 2021. Let us know if you see them this year.

Fall armyworm larva.
Photo: Frank Peairs, Colorado State University, Bugwood.org

Fall armyworm adult found in Virginia this week.
Photo: Ron Miller, Super Lawns

The World Broke a Record Last Week

By: Stanton Gill

The good news is two American women swimmers won the gold and silver medals in the butterfly event of the Olympic races this week. The bad world news is that meteorologists recorded **record high temperatures** for 4 days in the last week. Not a record we really want to see broken but it happened. I spoke with my relatives in New Hampshire and Canada and both said they were experiencing over 2 weeks of excessive high temperatures for these northern areas. They both said if you come to visit bring a fan along.

This extended hot weather continues this week and will impact nursery and landscape plant material. Last week we reported that Mark Schlossberg, ProLawn Plus, Inc., reported leaf scorching on Japanese maples. Here are the pictures of the scorching foliage injury.

Leaf scorching damage on Japanese maple from high temperatures.
Photos: Mark Schlossberg, ProLawn Plus, Inc.

Maple Gouty Vein Midge

Marie Rojas, IPM Scout, found maple gouty vein midge (*Dasineura communis*) on Legacy sugar maples. Marie noted that when she cut open the galls, she could see the tiny immature midges inside! The galls may look unsightly, but they do not impact the overall health of the tree.

The midge, *Dasineura communis*, causes these pocket galls along the major leaf veins.
Photo: Marie Rojas, IPM Scout

Casebearer Larvae

Marie Rojas, IPM Scout, found the bagworm-like casebearers, hanging out on both maples and oaks on July 29. These casebearer larvae remove some bark and create a bag-like casing. They hold the bark-encased bag straight up as they move around on the bark of the tree. They look like thorns on the trunk of the tree. If you pull one off the trunk of the tree, you will see the head capsule and the true legs sticking out of the bottom of the cone-like structure. They are one of the more curious insects of summer but are basically harmless to the health of the tree.

If you pull a casebearer larva off the trunk, you will see its head and legs coming out of the opening in the bag.
Photos: Marie Rojas, IPM Scout

Oleander Aphids

If you have milkweeds in the landscape, you will most likely see oleander aphids on them. Kenneth Miller, Howard County Recreation and Parks, found them on swamp milkweed in Ellicott City. This aphid species is difficult to control. Look for predators such as lacewings, lady beetles, syrphid flies, and *Aphidoletes* midges.

Oleander aphids are often a constant insect pest on milkweed species.
Photo: Kenneth Miller, Howard County Recreation and Parks

SLF Survey

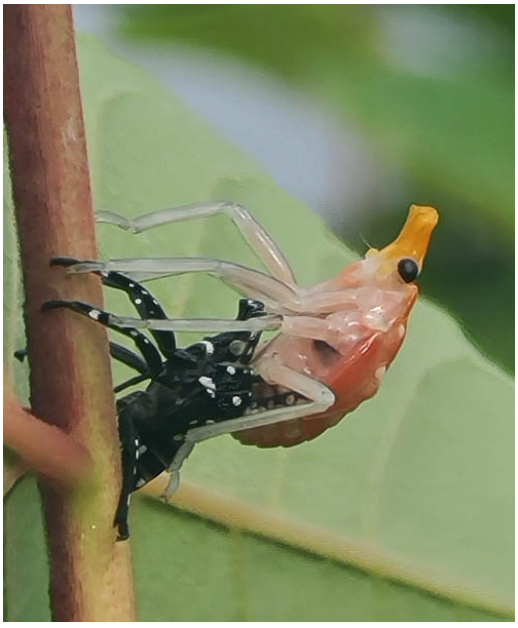
The Shrewsbury lab NEEDS INFORMATION ON SPOTTED LANTERNFLY ACTIVITY AND DAMAGE. CLICK HERE TO TAKE A SHORT SURVEY (~3 minute). Thank you!

Spotted Lanternfly Update

By: Stanton Gill

Paula Shrewsbury and I continue to keep you updated throughout this spotted lanternfly part of the season. We are getting in a lot of emails reporting large clusters of spotted lanternflies mainly feeding on the invasive tree, *Ailanthus*. Several people reported they are cutting down their ailanthus trees to reduce feeding sites for the spotted lanternfly adults. We know they accumulate in large numberson Ailanthus, as well as on red maple and black walnut. Please let us know if you are seeing mass numbers on these and other tree species.

Several of the e-mails are from people who are noticing when you disturb the adults they leap off the plants rapidly, sometimes landing on the person closest to the infested plant. The good news is they do not bite or cause you any problems other than the alarm they set off in most people that do not want a bug landing on them. If you find a large cluster of the spotted lanternfly on a plant you can apply insecticidal soap. This is probably one of the safest control materials. In our work on this bug over the last 7 years, we have seen populations increase for 2 to 3 years and then it is common for predators and parasites to crash the populations.

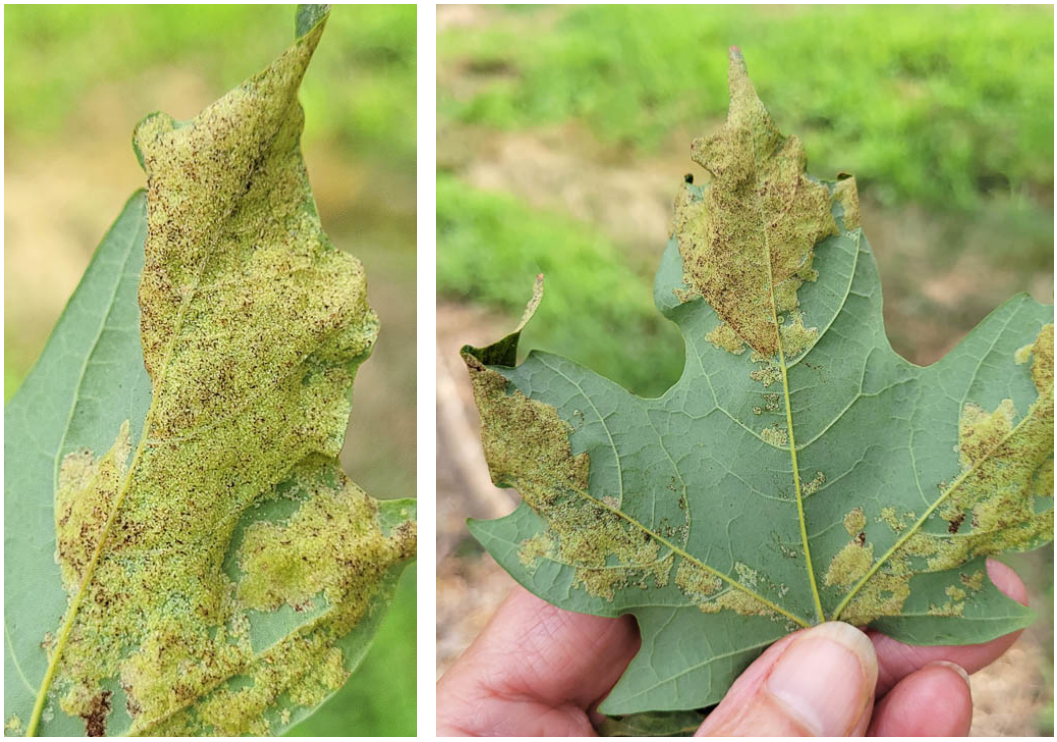


Spotted lanternfly emerging from 3rd instar to 4th instar
Photo: Ben Morris, Randolph NJ Branch of Savatree

Heavy infestation of spotted lanternfly adults at base of an *Ailanthus* tree; Note the pooling of honeydew at the base and sooty mold on branches and nearby plants.
Photo: Allyson Rogan, UME-HGIC

Mites

Marie Rojas, IPM Scout, is finding a species of erineum mites on the Legacy maple leaves. Marie noted that they are causing whitish, blisterlike areas on the undersides of the leaves. Marie is also seeing spider mite activity on oaks.



Erineum mite damage on maple leaves.
Photo: Marie Rojas, IPM Scout

Leafcutter Bees

Marie Rojas, IPM Scout, found leafcutter bee activity on *Asimina triloba* this week. The bees cut out rounded sections of the leaf edges. Leafcutter bees line their nest cavity and separate it into cells with circular leaf sections that they cut from various plants. A leafcutter nest looks a bit like a cigar. Usually, the damage they cause is not significant. Since they are a very important pollinators of many plants, it is best to tolerate the damage.

Leafcutter bees cut out circular sections on the edges of leaves.
Photo: Marie Rojas, IPM Scout

August 13, 2024 (afternoon)
IPM Diagnostic Session
Location: CMREC, 4240 Folly Quarter Road, Ellicott City, MD

Fern Scale

By: Stanton Gill

We have reached the degree day threshold for fern scale crawlers to become active this week in central Maryland. We see this armored scale on true ferns and very commonly on liriope plants in the landscape and nursery. In Florida, this scale is even found on citrus plants.

Most of the systemic insecticides such as Altus, Mainspring, and Dinotefuran all work well for controlling this scale on herbaceous plant material.

Liriope is one of the plant hosts for fern scale.
Photo: Suzanne Klick, UME

Euonymus Scale

Elaine Menegon Good's Tree and Lawn Care, found active euonymus scale on winged euonymus on a property in Hershey on July 29. Pachysandra and boxwood are other plants hosts. Egg hatch for the second generation of euonymus scale occurs at about 2235 degree days. We are past this level in Maryland now. Check plants to see if crawlers are still active to determine if an application of Talus or Distance will be effective.

Feeding by euonymus scale causes leaf chlorosis.
Photo: Elaine Menegon, Good's Tree and Lawn Care

Japanese Maple Scale

By: Stanton Gill

We have reached the stage when the second generation of Japanese maple scale starts crawler stage at this accumulation of degree days of 2500 DD. This scale is one of our most serious scale pests that hits a huge number of landscape and nursery trees. The crawler period for this scale is rather long and will last 6-7 weeks. In the upcoming weeks, apply either talus (IGR) insecticide or Distance (IGR) insecticide for the most effective control.

Look for the purple crawlers of Japanese maple scale.
Photo: Suzanne Klick, UME

Squirrel Activity

Paul Wolfe, Integrated Plant Care, is seeing squirrels going crazy on zelkova trees. They are cutting the ends off the branches. The branch tips are left on the ground.

Third Generation of Oriental Fruit Moth

By: Stanton Gill

We have reached the degree days for emergence of the 3rd generation of Oriental fruit moth. We are picking the adults up in baited pheromone traps in Westminster. For the third generation, 2,100 to 2,200 and 2,450 to 2,500 degree-days for peaches and 2,450 to 2,500 and 2,900 to 3,000 degree-days for apples. Altacor applied or Delegate (Spinosad) should provide protection to the fruit.

The first and last two generations are most numerous. They overwinter as larvae in silken cocoons on the tree or on the ground, and they pupate and begin to emerge as adults during April, shortly before peach trees bloom.

Pawpaws

By: Stanton Gill

On the good side of life, pawpaws are swelling in August. Joe Ligo, formerly of Maryland Public TV, sent in these pictures of pawpaw fruit. This is very exciting for pawpaw enthusiasts. The fruit usually ripens in September into early October, depending on the temperatures. Remember to harvest them when they feel like a water balloon, lightly squeezing the fruit in September when they begin to ripen. When the fruit ripen they are very aromatic and will attract raccoons and possums who will climb a tree to harvest them before you can get your harvest hands on them. Watch for the ideal harvest time and act quickly.

Pawpaws are setting fruit at this time of year; harvest time is September into October.
Photos from: Joe Ligo

Orange-striped Oakworms

Sam Hamner, Good's Tree and Lawn Care, found orange-striped oakworms this week in Lititz, PA. Marie Rojas, IPM Scout, also found caterpillars in high numbers on several species of oaks. If necessary, use Bt for small larvae. Look for caterpillars that have been parasitized by wasps.

Older orange-striped oakworms eat all but the midrib.
Photo: Sam Hamner, Good's Tree and Lawn Care

Catalpa Sphinx Moth Caterpillars

Luke Gustafson, The Davey Tree Expet Company, found late instar catalpa sphinx caterpillars on August 1 in Catonsville. Luke noted that, "one tree was about half defoliated. There was some biocontrol at work as some of the caterpillars I noticed had been parasitized."

This catalpa sphinx moth caterpillar has been parasitized by wasps.
Photo: Luke Gustafson, The Davey Tree Expert Company

Powdery Mildew on Crape Myrtle

Ginny Rosenkranz, UME, is finding a heavy infection of powdery mildew on an old crape myrtle cultivar, 'Charlie'. If you see powdery mildew on crape myrtles, please let us know the cultivar (if it is known).

Powdery mildew continues to be a problem on crape myrtle cultivars this summer.
Photo: Ginny Rosenkranz, UME

A Few Insects on Buttonbush

On *Cephalanthus occidentalis* (buttonbush), Marie found eastern leaf-footed bugs, brown marmorated stink bugs, and mantids all over the spent blooms.
Photos: Marie Rojas, IPM Scout

Beneficial of the Week

By: Paula Shrewsbury

This predator has a snappy defense to protect itself

If you spend some time at night looking at plants and the bugs moving around on them you are likely to come across a click beetle. **Click beetles** are in the Elateridae family and there are over 9,000 species worldwide, and almost 1,000 of those species occur in North America. Other common names are elaters, snapping beetles, spring beetles, and skipjacks. These names come from an unusual and sometimes startling defensive behavior these beetles have when threatened by predators. Click beetle adults have tough bodies (hard exoskeletons) and they have a "clicking mechanism". Click beetles have an amazing "spine" on the underside of their body (the prosternum which is the first section of the thorax) that snaps or fits into a matching "notch" on the mesosternum (the second section of the thorax). When the beetle snaps these two sections it makes a loud clicking noise and sends the beetle up into the air, sometimes up to several inches high. It is almost like a self-catapulting mechanism. This behavior can be quite startling if you do not expect it. This mechanism is usually used as a defense when the beetle is threatened but it also helps the beetle right itself if for some reason it ends up on its back. If it does not land right side up following a "click", be ready for this jumping act to happen again. Some of the most beautiful and larger click beetles are the eyed click beetles or eyed elaters (see image). These beetles are named so because of the false eye spots on the top of their bodies on the pronotum which is the section just behind the head. These large "eyes" likely make the beetle appear larger and more intimidating to potential predators. False eye spots are another defensive mechanism these beetles, and numerous other insects, have evolved.

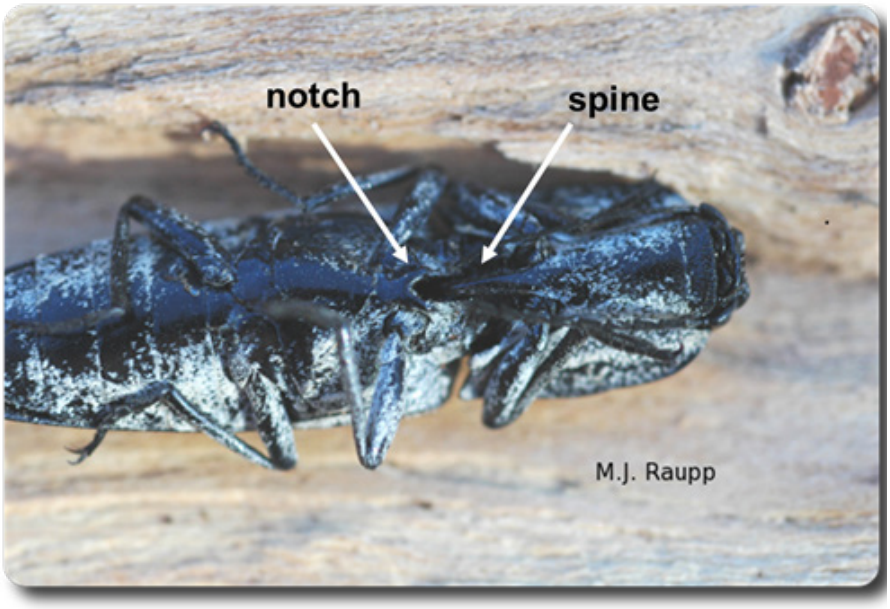
A click beetle adult demonstrating the typical shape of these beetles.
Photo: J. Berger; Bugwood.org

Eyed click beetles, also known as eyed elaters, are named so because of the false eye spots. They are one of the larger click beetles and are almost 2" as adults. These "eyes" likely make the beetle appear larger and more intimidating to potential predators.
Photo: P.M. Shrewsbury, UMD

Click beetle adults are elongate in shape, the wings taper narrower at the end, and are usually less than 2 centimeters in length (see image). Most have dull colors and patterns and can fly. Adult click beetles can be found on plants, on the ground, in decaying wood, and on or under the bark of trees. Most adults are nocturnal (often seen at lights near buildings) and are plant feeders, feeding on nectar, pollen, and flowers, although they seldom cause damage to plants. Some species, however, are predacious as adults and feed on aphids and other soft-bodied insects. The adults and larvae of some species are even luminescent (they glow). The larvae of click beetles are called wireworms and are found in soil. The larvae are slender, elongate (~1-1.5"), and

have somewhat hard exoskeletons and 3 pairs of legs on their thorax (see image). Many species are saprophytes feeding on dead insects and organisms in the soil, while other species of wireworms are serious agricultural pests of potatoes and strawberries. There are however, click beetle species, such as the eyed elater, where the larvae are predacious and actively hunt in the soil for insects, insect eggs, and small invertebrates to consume.

When you see a click beetle, pick it up and examine it closely. But be ready for it to "click" and jump suddenly in its attempt to scare off a potential threat or to right itself. Catching click beetles and watching them click is a great activity to teach kids about biology and ecology.



The spine on the first segment of the thorax and the notch on the second thoracic segment on the underside of the beetle are the body features that fit together and allow the click beetle to "click" and jump.
Photo: M.J. Raupp, UMD

The larva of the eyed elater uses its powerful mouthparts to kill its prey.
Photo: M.J. Raupp, UMD

Weed of the Week

By: Nathan Glenn, UME-Howard County

Goosegrass is a warm-season annual, reproducing by seed. Stems branch out from the base of the plant laying almost flat on the ground then turning upward reaching a height of up to 2.5 feet. The leaf sheath margins are whitish, broad, flattened, and smooth. The mouth of the sheath is hairy. The ligule is membranous, fringed, and shaped in a V-shape with the flattened stem. The blades are hairless or with sparse hairs. The seed heads are composed of 2 to 13 finger-like spikes. Frequently there is one spike below the whorl of spikes.

The origin of goosegrass is not clear. Some of the earliest records of goosegrass came from China, India, Japan, Malaysia, and Tahiti.

Goosegrass growth habit.
Photo: Texas A&M AgriLife Extension, Casey Reynolds, PhD

Goosegrass is generally a weed problem in warm areas of the world, but is also prevalent in the temperate zone. Goosegrass is prevalent in cultivated crops, pastures, lawns, and waste areas.

Goosegrass is a prolific seed producer. In warmer regions 40,000 to 50,000 seeds per plant is common. Light enhances the germination of goosegrass seeds. Drought and low temperature delay flowering and growth of plants.

Goosegrass seedling and root system. Photo: Texas A&M AgriLife Extension, Casey Reynolds, PhD

Goosegrass flower. Photo: Texas A&M AgriLife Extension, Casey Reynolds, PhD

Plant of the Week

By: Ginny Rosenkranz

Thelypteris kunthii is also known as the wood fern and the river fern. This bright green deciduous fern has long arching fronds that have pinnate pinnatifiedor blades. Pinnate means compound, each leave is made up of leaflets, and pinatified means that the leaflets are divided but are solidly attached. These ferns are cold tolerant in USDA zones 7-10, thriving in humus rich moist soils in sun with afternoon shade, also tolerant of poor drainage. Like many ferns, the wood fern spreads forming colonies with creeping rhizomes. Spores are produced in the late summer into the early autumn on the underside of the foliage. The large upright arching fronds grow 2-3 feet tall and 8-12 inches wide, adding light green color to the shady garden floor and a bronze green in autumn. Ferns can be planted in containers, along a shady border and allowed to spread in a shady woodland garden. There are no serious insect or disease pests and deer almost always leave ferns alone.

Wood ferns grow well in a shady wooded area. Photo: Ginny Rosenkranz, UME

Pest Predictive Calendar "Predictions"

By: Nancy Harding and Paula Shrewsbury, UMD

In the Maryland area, the accumulated growing degree days (**DD**) this week range from about **2231 DD** (Martinsburg) to **2981 DD** (St. Mary's City). The Pest Predictive Calendar tells us when susceptible stages of pest insects are active based on their DD. Therefore, this week you should be monitoring for the following pests. The estimated start degree days of the targeted life stage are in parentheses.

Maskell scale – egg hatch / crawler (2nd gen) **(2035 DD)**
Euonymus scale – egg hatch / crawler (2nd gen) **(2235 DD)**
Mimosa webworm – larva, early instar (2nd gen) **(2260 DD)**
Japanese maple scale – egg hatch / crawler (2nd gen) **(2508 DD)**
Fern scale – egg hatch / crawler (2nd gen) **(2813 DD)**
White prunicola scale – egg hatch / crawler (3rd gen) **(3238 DD)**

See the Pest Predictive Calendar for more information on DD and plant phenological indicators (PPI) to help you better monitor and manage these pests.

Degree Days (as of July 31)

Annapolis Naval Academy (KNAK)	2655
Baltimore, MD (KBWI)	2669
College Park (KCGS)	2659
Dulles Airport (KIAD)	2700
Ft. Belvoir, VA (KDA)	2673
Frederick (KFDK)	2636
Gaithersburg (KGAI)	2471
Greater Cumberland Reg (KCBE)	2388
Martinsburg, WV (KMRB)	2213
Millersville (MD026)	2531
Natl Arboretum/Reagan Natl (KDCA)	2978
Perry Hall (C0608)	2428
Salisbury/Ocean City (KSBY)	2435
St. Mary's City (Patuxent NRB KNHK)	2981
Susquehanna State Park (SSQM2)	2476
Westminster (KDMW)	2776

Important Note: We are using the Online Phenology and Degree-Day Models site. Use the following information to calculate GDD for your site: Select your location from the map Model Category: All models Select Degree-day calculatorThresholds in: Fahrenheit °F Lower: 50 Upper: 95 Calculation type: simple average/growing dds Start: Jan 1

Conferences

August 13, 2024
IPM Diagnostic Session
Location: CMREC, Ellicott City, MD

September 17 and 18, 2024
Cut Flower Program
Locations: Central Maryland Research and Education Center, Ellicott City, MD and locations in Howard County

September 18, 2024
Urban Tree Summit (Casey Trees and Montgomery Parks)
Location: Silver Spring Civic Center. To register please visit Urban Tree Summit or https://urbantreesummit.org/

October 9, 2024
MNLGA Retail Day
Location: Homestead Gardens, Davidsonville, MD

December 5, 2024
Tech Day: Focus on Solar
Location: CMREC, Ellicott City

December 12, 2024
2024 Cultivating Innovation in Maryland's Agriculture and Technology Conference
Location: Crowne Plaza, Annapolis, MD
Program and registration information

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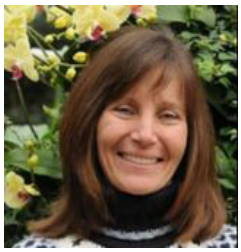

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Photos are by Suzanne Klick or Stanton Gill unless stated otherwise.