

Commercial Horticulture

August 21, 2020

In This Issue...

- Dodder
- Tubakia leaf spot
- Azalea bark scale
- Spider mites
- Yellownecked caterpillar
- Wet weather fungi
- Animal hoarding
- Galls on linden
- Downy mildew on basil
- Robber fly

Beneficial of the

Week: Parasitic wasps on
orange striped oakworms

Weed of the Week: Mile-a-
minute weed

Plant of the Week:

Lagerstroemia 'Pocomoke'

Pest Predictions

Degree Days

Announcements

Pest Predictive Calendar

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:

Stanton Gill, Extension Specialist, IPM and Entomology for Nursery,
Greenhouse and Managed Landscapes, sgill@umd.edu. 410-868-9400 (cell)

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 (Retired Extension Educator)

Cultural Information: Ginny Rosenkranz (Extension Educator, Wicomico/Worcester/Somerset Counties)

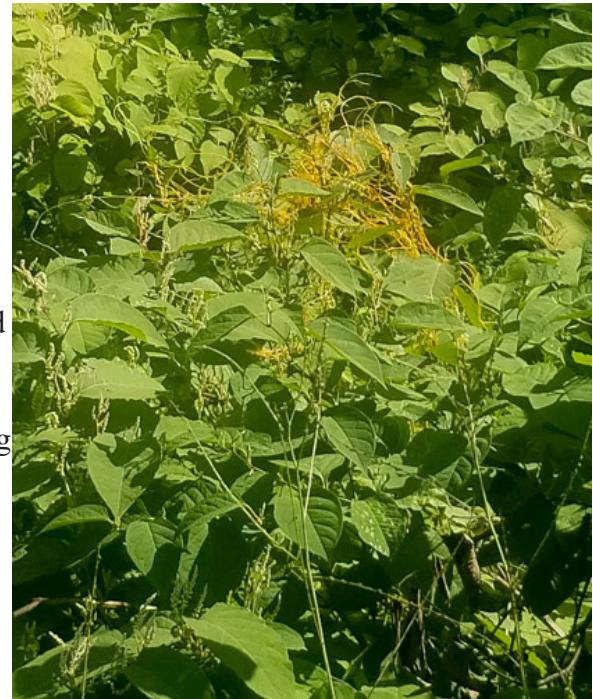
Fertility Management: Andrew Ristvey (Extension Specialist, Wye Research & Education Center)

Design, Layout and Editing: Suzanne Klick (Technician, CMREC)

Dodder

This week, Kenneth Miller, Howard County Bureau of Parks, found dodder which he noted he hasn't seen for a while. It was growing along the Little Patuxent River in Columbia. He reported that the "distinct yellow spaghetti color caught my eye". Dodder is a parasitic annual weed that needs to be prevented from going to seed. You can use a pre emergent herbicide in early spring to prevent flowering and seed production.

For more information, see Chuck Schuster's [Weed of the Week](#) in the July 31, 2015 IPM Report.



Dodder is a parasitic vine with stems that can range in color from yellow to orange to red

Photo: Kenneth Miller, Howard County Bureau of Parks

Tubakia Leaf Spot

By: Rachel Ross & Karen Rane

Tubakia leaf spot is caused by the fungal pathogen *Tubakia dryina*, and affects oaks, especially those in the red oak group. Symptoms typically appear each year in late summer to early fall as brown leaf spots of varying sizes (Fig.1). In severe cases on stressed trees, significant portions of the tree may develop symptoms and some defoliation may occur. However, these symptoms develop so late in the growing season that there is little impact on tree health. Fungicide applications are not necessary.



Figure 1. Tubakia leaf spot on red oak.

Photo: Paul Bach, University of Kentucky Research and Education Center, Bugwood.org

Azalea Bark Scale

Heather Zindash, IPM Scout, picked up crawlers of azalea bark scale in Northwest Washington this week. If the population is low and damage is minimal, look for beneficial insects which do a good job controlling this insect. If necessary, apply a dormant spray for overwintering nymphs on twigs. In summer when crawlers are active, you can use a summer rate (0.5 – 1.0%) of horticultural oil.



Azalea bark scale crawlers are active in D.C. this week

Photo: Heather Zindash, IPM Scout

Spider Mites

Elaine Menegon, Good's Tree and Lawn Care, found active spider mites on forsythia on August 20 in Camp Hill, PA. Elaine noted that the homeowner sheared them 2 weeks ago in the 90 degree heat. It is unusual to see spider mites on forsythia, so the infestation is most likely due to pruning during the hot weather. Horticultural oil can be used when temperatures go down. Other materials include Abamectin (Avid), Bifenazate (Floramite), Spiromesifen (Savate for nursery use and Forbid for landscape use - both have translaminar action). The rains should help suppress the mites.

Watch for spider mite outbreaks during hot, dry periods

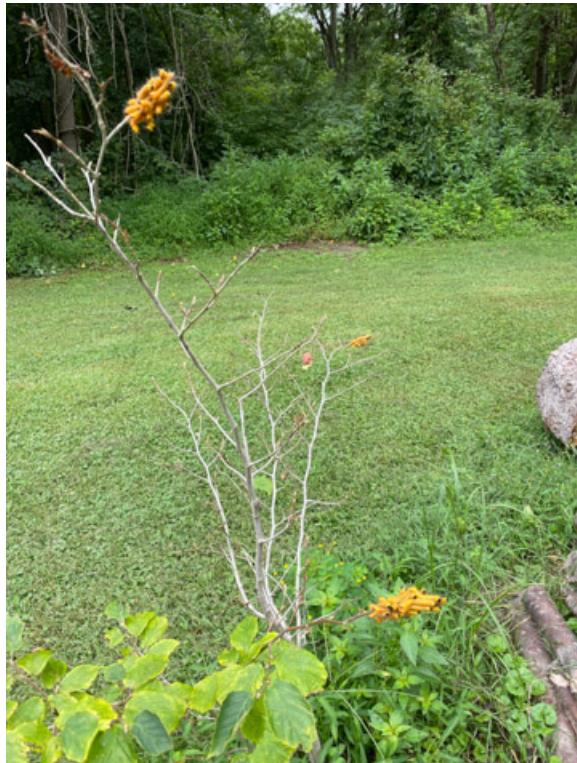
Photo: Elaine Menegon, Good's Tree and Lawn Care



Yellownecked Caterpillars Causing Major Defoliation

By: Stanton Gill

One of the caterpillars we run into each August is the yellownecked caterpillar, *Datana ministra*. They feed on a wide variety of plant material including apple-bearing trees. Generally, it feeds on basswood, paper and yellow birches, elm, honeylocust, oak, maple, mountain ash, and walnut. This insect is also destructive on the foliage of blueberry, pear, and other fruit trees. Smaller orangish larvae with yellow stripes become black with four yellow stripes on each side. The body of the caterpillars are covered with long fine whitish hairs. The head is jet black; the segment behind the head is bright yellow, hence its name. At this point in the summer, the larvae are about 50 mm long. When disturbed, larvae assume a threatening posture. Usually, they lift both the head and posterior tip of their bodies, making a distinctive "U" shape. We have had people send in video clips of the caterpillars moving into the U-shape in unison.



This cluster of yellownecked caterpillars (left) have defoliated this small tree (right)
Photos: Daria Andrejak

Cecropia Moth Caterpillar

Greg Kenel, Creative Landscapes by Gregory, found a cecropia moth caterpillar feeding on pin oak this week. We will continue to see activity for at least a few more weeks. There is only generation per year.



This cecropia moth caterpillar is feeding on pin oak foliage
Photo: Greg Kenel, Creative Landscapes by Gregory

Wet Weather Brings Out the Fungi

By: Karen Rane.

We've had lots of rainfall over the past few weeks, and wet conditions often stimulate the development of mushrooms and other macrofungi. Last week, I found these little structures in my lawn— the white fingerlike projections of the fungus *Clavaria sp.* The most common North American species, *C. vermicularis*, produces white, upright, club-shaped structures about 1-2 inches tall. Commonly called white spindles fungus, or fairy fingers, this fungus lives on dead organic matter and is widely distributed throughout the US in woodland sites. They are extremely fragile – and quickly disappeared under the lawnmower blade.



This white spindle fungus, *Clavaria sp.*, appeared in the lawn after the recent rain
Photo: Karen Rane

Animal Hoarding in 2020

By: Stanton Gill

I am not completely positive about this situation, but the animal life may be hoarding food this season similar to what humans did at the beginning of the Covid-29 crisis - hoarding toilet paper. We are getting in several emails from landscapers reporting that squirrels and several species of birds are all cleaning out customers' fruit plantings as fast as it ripens this season. I talked with several wildlife experts in mid-spring, and they said that they suspected that the cool wet spring was making birds extra hungry. In July, we turned it around and went into the record stretch of 90 °F weather that was both hot and humid. This weather was a complete contrast to the spring. The squirrels started taking lessons from the birds. They became voracious in their appetites.

Who knows? Maybe the birds and squirrels are planning on their own covid-19 outbreak and want to be prepared. In my orchard in Westminster, I had squirrels, for the first time I have seen them, removing peaches from four loaded peach trees. The peach trees had 100 – 120 lbs of peaches on each tree. I am not sure what the squirrels are doing with this many pounds of peaches - maybe making peach jam or something.

Bird pressure on our cheery crop was some of the heaviest I have seen in 18 years of orchard management. We netted several trees, but the birds learned to use their beaks to lift the bottom of the netting and hop under. They were very efficient in cleaning out a cherry crop in short order.

I received this email from Treble Herb: "These were probably picked too early (Chicago Hardy figs), but the birds have already been pecking at every purple surface. We're going to try to net now."

How we are dealing with it:

We grow over 17 cultivars of seedless grapes at our orchard in Westminster. Two weeks ago, we installed 17ft wide, 300 ft long bird netting over the grapes. We cable tied it at the bottom to keep all of the animal life out. It is expensive and hard to work under but extremely effective in keeping all of the wildlife out so far. It seems somewhat extreme, but there are not many other good options when the birds, wasps, and squirrels are hungry. Wasps and birds are damaging any grape vine that was not netted. There is a huge difference between netted and un-netted plants.

One of my former students from Montgomery College, Effie, sent an email to let me her parents in California grow a lot of fruit plants. They were reporting heavy damage from birds in CA - more than a normal year. In their case, it was not cool and wet, but hot and dry. The birds in CA are evidently desperate for water and she said they were actually piercing orange fruit to get at food and water. This is the first season they have seen this behavior.



Bird damage to figs
Photo: Treble Herb



Bird damage to apricots
Photo: Treble Herb

Galls on Lindens

Todd Armstrong, The Davey Tree Expert Company, found galls caused by eriophyid mites on foliage of a linden on August 17 in Lutherville. These galls do not impact the overall health of the tree.

The galls on this linden foliage look unsightly, but do not impact the overall health of the tree
Photo: Todd Armstrong, The Davey Tree Expert Company



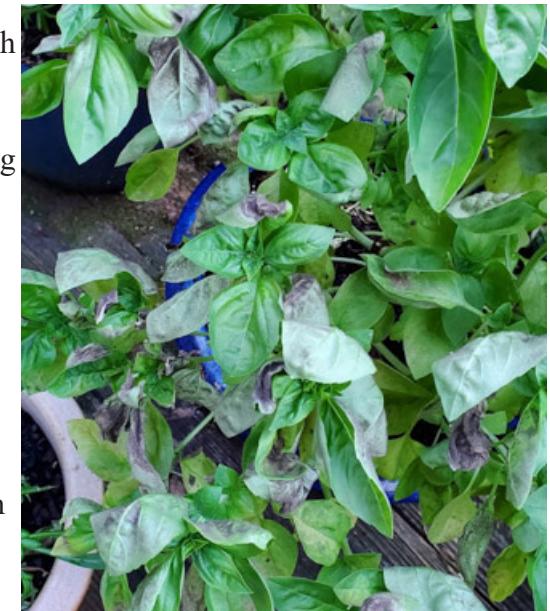
Downy Mildew on Basil

David L. Clement

A few reports of downy mildew on basil have been reported this month so new reports of disease symptoms will continue and will become more wide spread across the state this fall. Basil downy mildew problems in the U.S. began in 2007 in Florida during the 2007 growing season. Since 2008, it has become wide spread in many states and has been reported in Canada and South America. The disease is also widespread in Europe.

Downy mildews tend to be specific to certain species of plants. Basil has its own downy mildew caused by the water mold *Peronospora belbahrii*. The pathogen does not overwinter where freezing temperatures occur so the timing of infection proceeds from southern states northward each summer. Although the downy mildew pathogen has been detected in basil seed, seed transmission is probably a rare event. Air-borne dissemination of downy mildew sporangia, or transport of infected plants is the most likely way infection spreads to new sites.

Basil leaves that become infected with downy mildew will develop a yellowish appearance, similar to a nutritional problem. Yellowing typically first appears in areas between major veins and eventually spreads across the leaf. As the disease progresses, the characteristic signs of the pathogen appear as fuzzy grayish-purple sporangia on the lower leaf surfaces. When humidity remains high the chlorotic lesions quickly turn brown and cause plant collapse.



A heavy basil downy mildew infection
Photo: Suzanne Cholwek



Downy mildew symptoms on lower leaf surface of basil
Photo: David Clement

Good Guys Active in August

By: Stanton Gill

With the Covid-19 virus, people have the time to look around their landscapes more than usual. Tim Paesch, PCM Landscape Company, sent in this picture that one of his customers found on their lounge chair this week. It is a robber fly, family Asilidae. Robber flies have voracious appetites and feed on a wide array of other arthropods, which may help maintain a healthy balance between insect populations. We generally see these flies in August and September active in landscapes and nurseries.

Look for various species of robber flies that are active at this time of year
Photo: Customer of PCM Landscape Company



Beneficial of the Week

By: Paula Shrewsbury

Mummies of orangestriped oakworm

Yesterday, I was in a park in Montgomery County MD where I observed a nice (if you are an entomologist) infestation of mid and late instar orangestriped oakworms, *Anisota senatoria* (Saturniidae) on oak. Orangestriped oakworms are caterpillars that voraciously feed on red, white and other oaks, and sometimes hickory and birch. Early instars cause skeletonization of foliage, whereas later instars cause significant defoliation leaving behind only the major leave veins (see image). Orangestriped oakworms are gregarious (feed in groups) so it is common to see several to 20 or 30 on a single branch, and in heavier infestations multiple branches of a tree will be infested. This native caterpillar ranges from Maine to Georgia, west to Texas and north to Minnesota.

Like with many pest insects, there is a complex of natural enemies that provide biological control that leads to the suppression of orangestriped oakworm populations. The most common natural enemies of orangestriped oakworm are birds, disease, paper wasps, and wasps or flies that parasitize the caterpillars. In particular, ichneumonid wasps (Hymenoptera: Ichneumonidae) are common parasitoids of orangestriped oakworm. The female wasp stabs her ovipositor into the caterpillar and deposits an egg. The egg hatches and the wasp larvae consumes the caterpillar from the inside leaving behind just the shell of the caterpillar. These shells are referred to as caterpillar mummies. Many of you are familiar with the more common aphid mummies (aphids parasitized by wasps). How can you tell if you are looking at the shed skin of the caterpillar left behind when it molts (grows) from one instar to the next, or a caterpillar mummy that is the remains of the parasitized caterpillar? Is biological control going on? The diagnostic sign that the caterpillar was parasitized is a ragged hole, often on the side of the body (see image), where the newly formed adult wasp chewed its way out of the caterpillar. Whereas, shed skins usually have a straight-line split on the top of the caterpillar. Secondly, parasitized mummies usually remain on the branches of the tree



Cluster of orangestriped oakworm caterpillar “mummies” on tree branches indicate that a parasitic wasp has attacked and killed the caterpillars.

Photo by Mike Raupp, UMD



M. J. Raupp

Note the ragged exit hole on the side of the orangestriped oakworm mummy where the new adult parasitoid chewed its way out of the caterpillar.

Photo by Mike Raupp, UMD

and there will be a cluster of them since orangestriped oakworms are gregarious. Insect exoskeletons, the remains of normally developing caterpillars, do not remain on the branches of the tree.

Orangestriped oakworm populations are known to cycle. Every few years the populations become quite high, but then their natural enemies increase and "catch up" to the oakworms, and in turn knock back the densities of oakworms. This cycle repeats over time.



The remains of an oak tree following a heavy infestation of orange striped oakworm.

Photo by M.J. Raupp, UMD

Weed of the Week

By: Chuck Schuster

Rain, up to 3 inches in some areas, has promoted weed growth in many areas including the landscape and nurseries. Temperatures have moderated somewhat, but soil temperatures remain above 70 °F for the most part at the coolest time of the day. Some areas actually saw temperatures in the low to mid 60 °F range this week.

In many landscapes the Weed of the Week seems to have really taken off. Many of the pre-emergent products many have lost their efficacy with the early spring we had, and then the ample moisture early in the spring. Now, we deal with the weeds that have moved through this barrier.

Mile-a-minute weed, *Persicaria perfoliata*, seems to be growing very prolifically currently. Also called Chinese tearthumb or Asiatic tearthumb, it is an herbaceous annual vine that will quickly grow over many other plants. It has alternate leaves that are of a light green color, the leaves will have the shape of an equilateral triangle (photo 1). As this plant matures, its vines become woody and will turn reddish in color. The name is derived from the fast growth rate, up to six inches per day, or the common name from the recurved barbs that will cover the underside of the leaves and/or the stem. This plant produces a small white flower that then forms a blue berry-like fruit which is attractive to birds that help spread the seeds. It has been noted that the seeds have the ability to float for up to seven days. The recurved barb (photo 2) helps other wildlife spread the plant and seeds by attaching to fur. This plant can grow and cover landscapes when provided an opportunity.

Control of this plant can be obtained using several techniques. Pulling or mechanical control works well when the plant is small. After removal, provide some form of ground cover to prevent other seeds from germinating. Mulching a landscape bed is effective as this plant produces a small seed that will not germinate under mulch. A biological control agent that feeds solely on mile-a-minute exists, the mile-a-minute weevil (*Rhinoncomimus latipes*). The weevil lays its eggs in the leaves, stems, and buds of mile-a-minute weed, where the larvae feed until they pupate and drop into the soil. The insect's life cycle spans about one month, with several generations taking place over one growing season. Weevil infestation does not eradicate mile-a-minute weed. The weevil may not be transported over state lines, but infected plants can be moved within state boundaries. It has shown great promise, but remember to provide plant material to cover the soil to prevent other weed infestations. Pre-emergent products can be used to control this weed in the landscape and will not damage the desired species of plants found in landscapes and nurseries. Pendimethalin (Pendulum

2G) can be used for selective pre-emergence suppression of mile-a-minute. Application timing is critical and needs to be early, late February or very early March. Soil temperature monitoring is very important. Post emergent chemical control of this weed can be extremely successful but the weeds growth pattern is cause for concern using post emergent products. This plant will grow over the top of many landscapes and thus prevent the use of contact or translocated post emergent products including those in the glyphosate family and growth regulators. Prizefighter and Burnout have shown ability to control this plant with the same concerns with use over the top of desired ornamental plants as translocated products. These products will work well in landscape beds early in the season but not when growing into or over desired plants. If this plant is found in turf areas most any post emergent selective broadleaf weed product will control it easily.



1. The leaves of mile-a-minute weed are triangular
Photo: Chuck Schuster



2. Note the barbs on the stem of mile-a-minute weed
Photo: Chuck Schuster

Plant of the Week

By: Ginny Rosenkranz

Lagerstroemia 'Pocomoke' is one of the smallest of the crape myrtles by Dr. Egolf, who created 23 different crape myrtles while he worked at the U.S. National Arboretum in Washington, DC. 'Pocomoke' is a multi-stemmed deciduous shrub and also one of the coldest tolerant of all the crape myrtles. It is winter hardy from USDA zones 6-9. Like all crape myrtles, 'Pocomoke' thrives with full sun with moist but well drained soils. The leaves start off in the spring a glossy maroon color which turns dark green during the summer and matures to a bronze red in the autumn. All the deep rose pink ruffled flowers are grown on new growth, perched on top of each branch and bloom from the middle of summer into early fall. The bark of this miniature crape myrtle is gray and exfoliates to highlight some tan. When mature and if grown in the right sun and soils, 'Pocomoke' can grow 2-5



Crape myrtle 'Pocomoke' grows 2-5 feet tall
Photo: Ginny Rosenkranz

feet tall and wide. Plants are tolerant to drought, air pollution and clay soils, but prefer to have roots watered at least once a week during long periods of drought. 'Pocomoke' has excellent resistance to powdery mildew but can still succumb to fungal leaf spots. Pests also include crape myrtle aphids and crape myrtle scale. Because 'Pocomoke' is so small, it can create a lovely low hedge, become a specimen or can grow in a container.



The deep rose pink flowers of crape myrtle 'Pocomoke' are produced on new growth
Photo: Ginny Rosenkranz

Pest Predictive Calendar “Predictions”

By: Nancy Harding and Paula Shrewsbury

In the Maryland area, the accumulated growing degree days (DD) this week range from about 2374 DD (Cumberland) to 3196 DD (Reagan National). 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.

- Japanese maple scale – egg hatch / crawlers 2nd gen (2508 DD)
- Fall webworm - active caterpillar tents 2nd gen (2793 DD)
- White prunicola scale – egg hatch 3rd gen (3270 DD)
- Banded ash clearwing borer - adult emergence (3357 DD)
- Tuliptree scale – egg hatch / crawlers (3519 DD)

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

Degree Days (as of August 19)

Aberdeen (KAPG)	2518
Annapolis Naval Academy (KNAK)	2818
Baltimore, MD (KBWI)	2940
Bowie, MD	3000
College Park (KCGS)	2743
Dulles Airport (KIAD)	2813
Frederick (KFDK)	2768
Ft. Belvoir, VA (KDA)	2905
Gaithersburg (KGAI)	2671
Greater Cumberland Reg (KCBE)	2234
Martinsburg, WV (KMRB)	2530
Natl Arboretum/Reagan Natl (KDCA)	3196
Salisbury/Ocean City (KSBY)	2910
St. Mary's City (Patuxent NRB KNHK)	3089
Westminster (KDMW)	2899

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

Climate and Sustainability Webinars, 2020

Dr. Sara Via, Professor & Climate Extension Specialist, University of Maryland, College Park

Upcoming Program: Last one for Summer 2020

Aug. 26, 2020 Climate change is bad for your health

[See the brochure](#) for more information and a link to register.

Landscape Technology Program: Montgomery College - Germantown Campus, Fall 2020

LNTP 105 Intro. to Sustainable Landscaping 2 semester hours - All online
Gain a broad overview of trends within the Green Industry, including techniques and approaches for maintaining and improving soil health, composting, and managing stormwater, as well as provide a basic understanding of growth and nutrition to ensure environmental sustainability. Students will learn about national, state and local guidelines promoting sustainability in landscape design and management.
Monday, 7:30 - 9:10 p.m. CRN 22487

LNTP 215 Pest Management*, ** 3 semester hours
Hone your pest management skills with Stanton Gill. Explore the identification of key pests, their life cycles and control methods, with emphasis on integrated pest management strategies.
Thursday, 6:00 - 9:30 p.m. CRN 22118, CRN 22119 Lab

LNTP 222 Turfgrass Management*, ** 3 semester hours
Discover the proper way to manage turfgrass by using the newest and most adaptable turfgrass varieties for minimum insect and disease problems. Organic lawn care and alternative groundcovers will be discussed. This course will help prepare the student to become certified by the State as required by Maryland's newly enacted Lawn Fertilizer Law. Lab assignments emphasize weed, turf, and insect species identification.
Tuesday, 6:00 - 9:30 p.m. CRN 22121, CRN 22123 Lab

LNTP 253 Plant Materials I[†] 3 semester hours
Learn how to identify and properly use trees, shrubs, vines, and groundcovers in both residential and commercial landscape situations. Plant characteristics, such as seasonal interest and habit, are stressed so that appropriate plant selections can be made for any landscape situation. Class offered at two locations
Monday's section meets, 1:00 – 4:30 p.m. Agricultural History Farm Park - CRN 22650, CRN 22651
Lab. The Agricultural History Farm Park is located at 18410 Muncaster Road, Derwood, MD, 20855
Wednesday's section meets, 6:00 – 9:30 p.m. Germantown Campus - CRN 24016, CRN 24017 Lab

For further information about the program or courses, contact: Stephen Dubik (240) 567-7803 steve.dubik@montgomerycollege.edu

Web registration: www.montgomerycollege.edu

Classes start August 31, 2020

IPMnet
Integrated Pest Management for
Commercial Horticulture

extension.umd.edu/ipm

CONTRIBUTORS:



Stanton Gill
Extension Specialist
sgill@umd.edu
410-868-9400 (cell)



Paula Shrewsbury
Extension Specialist
pshrewsb@umd.edu



Karen Rane
Plant Pathologist
rane@umd.edu



Chuck Schuster
Retired, Extension Educator
cfs@umd.edu



David Clement
Plant Pathologist
clement@umd.edu



Andrew Ristvey
Extension Specialist
aristvey@umd.edu



Ginny Rosenkranz
Extension Educator
rosnkranz@umd.edu



Nancy Harding
Faculty Research
Assistant

Thank you to the Maryland Arborist Association, the Landscape Contractors Association of MD, D.C. and VA, the Maryland Nursery, Landscape, and Greenhouse 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.

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by University of Maryland Extension is implied.

University programs, activities, and facilities are available to all without regard to race, color, sex, gender identity or expression, sexual orientation, marital status, age, national origin, political affiliation, physical or mental disability, religion, protected veteran status, genetic information, personal appearance, or any other legally protected class.