

Trumpet Vine

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Trumpet Vine

Knowledge for the Community from
Loudoun County Extension Master Gardeners

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Loudoun County Extension Master Gardener

Visit us with your questions:

Demonstration Garden, Ida Lee Park

Tuesday and Thursday 8–11am

Garden Clinics, Saturdays

Leesburg Farmers Market
8-noon

Lowes, Sterling
9 a.m.–1 p.m.

Southern States, Purcellville
9 a.m.–1 p.m.

Last day for garden clinics
is Saturday, Oct. 31 for
all locations.

Help Desk

Via email LoudounMG@vt.edu

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Message From the Editor

How Should We Prepare for Unpredictable Weather

Carol Ivory, Loudoun County Extension Master Gardener

Inevitably the fall prompts gardeners to wonder what's ahead. Last year stands out as being particularly catastrophic. A drought started last summer, continued through the fall and into the winter. I remember January being brutally cold and dry, then some warm days in early February and then the "snow-crete," and a March that was nasty. It seemed that spring would never settle in, even through April and into May. "Can we put away our winter coats now?" we joked. Late spring and summer were marked by frequent, short, violent storms that often brought down mature trees. "Normal weather" seems to be a thing of the past.



Photo: [Julia Filirovska](#)

Northern Virginia was always happily in a moderate area but not any more. Climate change will only continue accelerating the frequency and intensity of disruptive weather events occurring in areas where they did not use to occur. Degraded areas are opened up to invasive species which thrive in the heat and longer growing season. Japanese knotweed and autumn olive spread faster as winters get milder. Warmer winters mean valued plants don't get the cold they need for proper dormancy. Fruit trees, wildflowers and forest species are all affected. Storms, droughts, and sudden seasonal swings mess up the timing that so many bird species rely on for feeding, breeding, and migration. When plants bloom before their pollinators show up, seed production drops. Fungi and bacteria used to die off during the winter but now they survive.

Extreme heat is also deadly not only to humans but to plants as well. Water uptake is diminished by temperatures 95°F and above. Trees can suffer heat stroke as well. Trees need more food during high temperatures even though photosynthesis stops at ~100°F. Stressed trees are more susceptible to borers and disease.

What to do? Continue with greater effort all the best practices you already know. Plant native plants that have high ecological value. Know your area, know your plants and focus on right plant, right place. Always maintain a ground cover of some combination of dense plants, leaves, mulch, wood chips or river rock and pea gravel. Never allow the soil to be bare. Wherever possible, leave the leaves. Be water-wise: avoid overhead watering, water in the early morning and in the evening, only water when needed. Plan to water your trees deeply twice a week. Pay particular attention to trees near heat islands and those with a restricted root area. Don't prune during hot spells. Once temperatures cool down, fertilize with a low salt, slow release, organic fertilizer. Start planning now.

The Mum Can Have Its Moment, But Native Asters Save The Season

The Late-Season Lifelines Loudoun County Homeowners Should Plant This Autumn

Kelly Veronica Roach, VCE Master Gardener Intern & VCE Certified Master Naturalist

It is finally September. The summer warmth is fading across the Virginia Piedmont, and we are welcoming cool morning air into our tired gardens. Some of my neighbors already have pumpkins on their porches. Beside the pumpkins will be the mums; those bright buttercup yellow and mulled wine red blooms that seem to shout happy autumnal greetings. Before running to your favorite local nursery with pumpkin spice latte in-hand to make the traditional purchases, I hope to make a case for a native aster in your shopping cart. Loudoun County landscapes are running low on forage, particularly with our persistent drought, leaving a perilous gap for pollinators. Fortunately, Loudoun County homeowners can provide a critical late-season lifeline by planting container-grown native asters this autumn alongside their beloved porch mums.

First, The Chrysanthemum: Beautiful but Barren

The mum (*Chrysanthemum spp.*) is the single most purchased plant in the United States. For the average market price of \$9.99 for an 8-inch pot or \$40.00 for a 16-inch planter, you too could participate in this American front porch ritual. 40 million mums are purchased every year, and some get planted in the garden with genuine hope; yet, every spring, dead sticks. So why does this happen and why aren't asters included in this conversation? Most consumers treat mums as seasonal, disposable outdoor decorations for porches rather than permanent garden perennials; these folks kick them to the curb with the decaying jack-o'-lanterns come November. In fact, most garden chrysanthemums native to China are actually perennials, hardy in horticultural zones 5-9. So why do they die when they are planted then? They die because of when they are planted and how they were grown.

A September mum has spent its whole life in a greenhouse being fed and pinched into a perfect blooming basketball to attract impulse buyers. Every ounce of its energy is going into flowers, the exact opposite of root growth. You plant it in cooling October or November soil and it enters winter with a root system the size of the pot it came in. Without deep roots, the plant is pushed out by freezing soil and rotted by winter wet, leaving a dead husk by spring; the plant was hardy, the calendar was not. No worries, you can purchase new mums in box stores every September, even sometimes in August.

There will always be a place for the mum on my porch. I have even succeeded with fall plantings and overwintering in my greenhouse with minimal watering and spring planting after the danger of frost has



Common Chrysanthemum. Photo: Kelly Roach



Multi-layered chrysanthemum petals.
Photo: Kelly Roach

passed. However, there is a critical flaw in most garden center mums that are bred for tightly packed double-flowered cultivars: their reproductive structures are converted into extra petals, meaning reduced or inaccessible nectar and pollen. This process is called petalody, where stamens mutate into petals. The visual appeal outweighs ecological value. Why does this matter and how do asters compare? That beautiful burgundy mum beside your pretty pumpkin is attracting pollinators to expend energy but they find zero food; tightly packed petals physically block access to any remaining nectar. The mum may be the most purchased plant in America, but it is also the least ecologically useful.

Forever The Aster: An Amazing Advantage

Native North American Asters (*Symphyotrichum* and *Eurybia*), by comparison, are a high-quality nectar source and support autumn pollinators with their open-center blooms. These asters are one of the last major nectar and pollen sources of the year; migrating pollinators like monarchs need them to fuel their annual migration to Mexico, bumblebee queens need them to build fat reserves for hibernation, and native specialist bees provisioning final brood cells need them. A specialist bee, of which there are 100 native to Virginia, must collect pollen from a very specific host plant. Asters (*Symphyotrichum* species) support 33 species of native bees which means that asters are the key to their survival. Unlike generalist honeybees, the larvae of these specialized Piedmont pollinators are anatomically locked; they can only digest food and survive on pollen harvested strictly from native aster family plants.

Native asters are a keystone species. They play a disproportionately large, vital role in sustaining local ecosystems and food webs compared to other plants; supplying high-energy nectar when other flowers are spent, but their pollen is what truly preserves regional biodiversity. Beneath the aster's brilliant star-shaped canopy lies an ecological powerhouse—a resilient, bulletproof perennial that doesn't just survive the transition to winter but breathes life back into our local ecosystems when everything else has clocked out.

The aster is September's birth flower. Despite its appearance, the aster flower is not one large single flower, but a collection of many tiny tubular flowers. The seeds of some varieties look like miniature parachutes, which are carried and spread by the wind. Native asters bloom in a striking spectrum from snow white to deep bluish-purple and orange, though they are most commonly found in shades of pink, white, red, mauve, and lilac. There are over 100 asters native to North America. In nature, asters rarely work alone, they have co-evolved alongside native goldenrods (*Solidago*), creating a stunning visual partnership. The bright, electric purples and deep blues of late-blooming asters perfectly contrast against the vivid yellows of goldenrod. This iconic color juxtaposition isn't just beautiful for humans, it is highly visible to bees and acts as a massive neon sign in the autumn landscape to say, “*food is still here for you.*”



Panicled Aster (*Symphyotrichum lanceolatum*) is a native perennial wildflower in Virginia and across most of North America. Photo: Kelly Roach



Heath Aster (*Symphyotrichum ericoides*) and Gray-stem Goldenrod (*Solidago nemoralis*) make a striking, low-maintenance autumn garden pairing. Photo: Kelly Roach

In addition to their ecological value, asters provide many planting options and satisfy a range of aesthetic sensibilities and growing conditions, from various sunlight conditions and shade to flood-prone ground and dry clay soil. Our versatile asters can be used in borders, rock gardens, wildflower gardens, and other landscapes. Once established, they need little maintenance or water, making them an excellent choice for beginner gardeners.

10 Asters to Plant This Autumn:

1. **Aromatic Aster** (*Symphyotrichum oblongifolium*): Aromatic blue-purple flowers with yellow centers, grows 1–3' tall. Thrives in dry-to-medium soil in full sun and blooms into November.
❁ Wildlife Value: It is a critical larval host for the silvery checkerspot butterfly. Its late nectar refuels migrating monarchs, and the seed heads provide valuable fat reserves for wintering dark-eyed juncos.
2. **Blue Wood or Heart-Leaved Aster** (*Symphyotrichum cordifolium*): Blue-violet to lavender flowers with yellow centers that mature to purple-red, grows 2–3' tall. Prefers dry-to-moist soil in full sun to part shade.
❁ Wildlife Value: Serves as a vital host plant for pearl crescent caterpillars. Songbirds like indigo buntings and American goldfinches regularly flock to its late-autumn seed heads.
3. **Eastern Silvery Aster** (*Symphyotrichum concolor*): Violet-blue flowers with stunning, silvery-white oval leaves, grows 2–3' tall. Prefers full sun and low moisture.
❁ Wildlife Value: Acts as a host plant for several native moth and butterfly larvae. The nutrient-dense seeds provide critical fall food for migrating orange-crowned warblers.
4. **Flat-Topped White Aster** (*Doellingeria umbellata*): Massive heads of white flowers with yellow disk centers, growing up to 7' tall. Thrives in moist soils.
❁ Wildlife Value: This plant is the primary, exclusive host for the rare Harris' checkerspot butterfly. In late fall, American tree sparrows and ruffed grouse rely heavily on its abundant seed crop.
5. **Hairy or Frost Aster** (*Symphyotrichum pilosum*): Cloud-like white flowers that turn reddish-purple with age, grows 2–4' tall. Notable for hairy stems that catch dew and appear frosted. Thrives in moist, well-drained soils and full sun to part shade.
❁ Wildlife Value: Hosts the caterpillars of the pearl crescent butterfly. Its highly accessible flower disk feeds late-season native bumblebee queens, while song sparrows consume the small winter seeds.
6. **Maryland Golden Aster** (*Chrysopsis mariana*): Striking, bright yellow daisy-like flowers that break up the traditional purple palette, grows 1–2.5' tall. Thrives in partial-full sun and low-to-medium moisture. Extremely drought-tolerant once established.
❁ Wildlife Value: Highly attractive nectar source for late-flying butterflies and specialized native bees. The fluffy, dandelion-like winter seed heads are a favorite forage for resident goldfinches.



Aromatic Aster. Photo: [G.L. Nesom](#)



Frost Aster. Photo: Kelly Roach

7. **New England Aster** (*Symphyotrichum novae-angliae*):

Large, showy clusters of pink to deep purple flowers with bright orange-yellow centers, grows 3–6' tall. Thrives in full sun and moist, rich soils.

☼ **Wildlife Value:** An absolute ecological powerhouse that hosts over a dozen caterpillar species. Its massive nectar output is a foundational fuel station for migrating monarch butterflies.

8. **Smooth Aster** (*Symphyotrichum laeve*): A profusion of lavender-blue, star-like flowers with distinctive, waxy blue-gray leaves that are completely smooth to the touch, grows 2–4' tall.

☼ **Wildlife Value:** Larval host to the pearl crescent and gorgone checkerspot butterflies. The highly visible flowers act as a magnet for native bees, while the seeds feed overwintering juncos and sparrows.

9. **Swamp Aster or Purple-Stemmed Aster** (*Symphyotrichum puniceum*): Vibrant violet flowers with thick, hairy purple stems, grows 4–8' tall. Ideal for rain gardens and consistently wet areas in full sun.

☼ **Wildlife Value:** Hosts several species of checkerspot and crescent butterflies. Its tall, sturdy stems provide perfect winter perches for foraging songbirds hunting for seed heads above the snowline.

10. **White Wood Aster** (*Eurybia divaricata*): Abundant, loose sprays of white flowers (infrequently pink or blue) that tolerate dense shade, grows up to 3' tall. Features handsome heart-shaped leaves.

☼ **Wildlife Value:** Hosts the caterpillars of the pearl crescent butterfly and the specialized wavy-lined emerald moth. Because it blooms in the dark safety of the forest understory, it provides safe forage for woodland-dwelling birds and pollinators.



Maryland Golden Aster. Photo by [\(L.\) Elliott](#)



Swamp Aster. Photo by [\(L.\) Á. Löve & D. Löve](#)

Plant with Purpose: Move Beyond the Bouquet to Build an Ecosystem

An 8-inch \$9.99 mum will likely last 6 weeks and die. A similar size native aster costs \$12, spreads and blooms every September and October, feeding hundreds of insects annually for a decade of ecological function. One is a beautiful bouquet, and the other is an entire ecosystem. If you have access to an empty outdoor potting container or a bit of ground, you can plant a keystone species and help reinstitute the biodiversity of the continent! Spend just ten minutes sipping your PSL on a sunny October afternoon watching what visits the blooms on your aster and you will absolutely understand how your efforts have made a difference.

The research of entomologist and author, Dr. Doug Tallamy, and his team at the University of Delaware have identified that a tiny fraction (5%) of native plants support 75% of the caterpillars that drive our local food webs. Asters rank among the top herbaceous keystone plants in North America and Loudoun County, Virginia; without them, the local population of caterpillars collapses which directly causes local songbird populations to starve.

Buy the mum if you must, but if we all bought just one native aster to plant this year too, we would change the world.

Goldenrods—Which of These Gorgeous Plants Is Right for Your Garden?

By Barbara De Rosa-Joynt, Loudoun County Extension Master Gardener



Monarch (*Danaus Plexippus*), buckeye (*Junonia coenia*), and painted lady (*Vanessa cardui*) butterflies on seaside goldenrod (*Solidago sempervirens*) before migrating south in fall. Photo: [Billtacular CC BY-NC-ND 2.0](#)

Some people dismiss goldenrods (*Solidago spp.*) outright due to some common misperceptions, but these folks are missing out! Much can be learned about these beautiful yellow late-blooming plants, and probably at least one is right for your garden if you site it correctly and give it a chance. This article identifies a short list of ten awesome goldenrod plants. It combines information about goldenrod's garden-worthiness, wildlife value, deer resistance, locally native status, and commercial availability, all of which emerges from the overlap of the Venn diagram those factors create.

But first, let's identify two common misperceptions.

Goldenrods cause fall allergies. As many people now know, goldenrod does not cause seasonal allergies. It has heavy, sticky pollen that needs pollinators to move it; it cannot blow away and make you miserable. The real culprit is ragweed (*Ambrosia artemisiifolia* and *Ambrosia trifida* are found in Northern Virginia), which blooms at the same time as goldenrod but has inconspicuous green flowers. Ragweed is wind-pollinated and creates the lightweight pollen that is the real source of your fall allergies.

All goldenrods are tall and aggressive. There are definitely some goldenrods that are tall and some that are aggressive, and some are both; however, that is a surprisingly small number out of this large group of species of plants. The vast majority of goldenrods, when sited properly, are well-behaved garden plants. If you have tried goldenrods before and found them too tall or too aggressive, you may just not have found the right species for your site yet.

There are more than 100 species of goldenrods native to North America, with 50 species native to Virginia and 17 of those native to Loudoun County. There are plants for sun, shade, and conditions in between. Though we often think of goldenrods as inhabitants of sunny fields, they can be found in a broad range of habitats, including wetlands, sand dunes, shady woodlands, and rocky cliffs.

Goldenrods are pollinator magnets and provide a rich source of pollen and nectar late in the season that is vital for migratory butterflies and late-flying bees, including new queen bees that need to build up their fat reserves in order to survive the winter. It is also a so-called keystone species. Keystone species are the 14 percent of native host plants that collectively feed the caterpillars of 90 percent of butterflies and moths (*lepidoptera*), a number of which also support specialist bee species whose larvae can only eat pollen from specific species. Goldenrods are the host plants



Ragweed (*Ambrosia artemisiifolia*). Photo: [Andrey Zharkikh CC BY 2.0](#)

for caterpillars of 104 lepidoptera, which eat their leaves, and their pollen also feeds 42 specialist bee species (plus generalist bees whose larvae can eat pollen from multiple species.) Goldenrods play a key role in the web of life by feeding insects, because pretty much everything else in the web eats insects, including birds, mammals, invertebrates, spiders, fish, and other insects.



Monarch butterflies (*Danaus plexippus*) on seaside goldenrod (*Solidago sempervirens*).
Photo: [Don Henise CC BY 2.0](#)

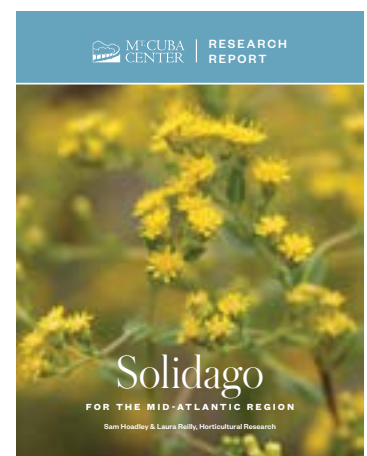


Hooded owl caterpillar (*Cucullia convexipennis*).
Photo: [Courtney Celley USFWS](#) (public domain photo)

Fun fact: The dunes of the Cape May National Wildlife Refuge and surrounding seashore in southern New Jersey have lots of seaside goldenrods (*Solidago sempervirens*) in bloom in August through October. These plants provide a critical food source for thousands of monarch butterflies migrating from the Northeastern United States and Southeastern Canada. These butterflies follow the New Jersey coastline and need to fuel up before crossing the Delaware Bay as they fly south to Mexico for the winter.

Garden-worthiness and wildlife value

From 2021-2023 [Mount Cuba Center](#), the noted native plant garden in Delaware, conducted [plant trials on goldenrod](#). In addition to its display gardens and educational programming, Mount Cuba conducts multiyear studies of native plants and their cultivars to evaluate their horticultural and ecological value and identify top performing native plants suitable for home landscapes. Mount Cuba studied 70 goldenrods and related species, growing plants in full sun and clay-loam soil and giving them minimal care, watering only for the first year. Plants were evaluated for overall plant (foliage, form, vigor, and habit), floral display, and disease resistance. The study also measured bloom time and counted visits from pollinators, highlighting bumblebees since late-blooming goldenrod is so important to their survival. Twelve top performers were identified based on the measures described above. Notably, the study identified only a handful of the species evaluated as aggressive, and none of them are included in the short list below.



Mount Cuba Center study.
Image: Mount Cuba Center

Deer resistance

The Temple University's Ambler Arboretum conducted a companion study to evaluate deer browse on the same species included in Mount Cuba's study, which were planted without fencing or chemical protection in an area of high deer traffic. Temple's study provides helpful information gardeners can consider when selecting plants for their own garden, and the data are a useful complement to Mount Cuba's garden-worthiness data. Interestingly, roughly

one third of the species had minor (less than 20 percent) or no deer damage, though several had more than 50 percent damage. That said, goldenrods are generally considered deer resistant plants because even after deer browse, they will typically grow back and still bloom, albeit later than they would otherwise and usually on shorter stems.

Locally native status

Mount Cuba used species from the eastern United States in the trial so many are not specifically native to Loudoun and some are not native to Virginia at all. While not all of Loudoun's 17 native species are found in the study, most are included. Loudoun and/or Virginia native status, as described in the Flora of Virginia, was considered in development of the short list below.



Native plant sale. Photo: [Marilyn Sklar](#), [Montgomery Parks CC BY-NC-ND 2.0](#)

Commercial availability

Another key element in developing the short list was a very practical one: can you purchase it reasonably easily? Large bench nurseries and big box stores will potentially carry some goldenrods, particularly the cultivars, but their inventory lists are not generally publicly available and will likely vary by store location. To identify availability, I looked at the online plant lists of seven native plant nurseries in Northern Virginia and Washington, D.C. and five online retailers to see if they carry plants included in the plant trial. I also checked which are included in the American Beauties line of native plants, which some of our local large bench nurseries carry, using it as a metric of the likelihood this plant would be stocked there. The short list below includes only plants that are stocked by at least three of the 13 suppliers I checked, and all but two can potentially be found at five or more. That is probably the most limiting factor for the short list—regardless of how amazing a plant is, if you cannot easily buy it, that is a problem. This consideration eliminated most of Mount Cuba's top performers because only two of their top 12 are reasonably readily commercially available for gardeners in our area. From what I can tell, four more top performers are potentially available online only in our area.

The short list:

1. **Fireworks goldenrod** (*Solidago rugosa* 'Fireworks')

Short list worthy qualities: The top-rated plant in the Mount Cuba trial for ornamental and ecological value, it is popular with pollinators, has cool-looking flowers, and is a modest size.

This plant was the number one ranked top performer in Mount Cuba's study and is one of my favorite plants because its flowers teem with pollinators when it blooms in September and October. It has also been recognized for its excellence in the garden by the Chicago Botanic Garden and the Pennsylvania Horticultural Society. It is one of the Master Gardeners of Northern Virginia's tried and true native plant selections for the mid-Atlantic, alongside the straight species, *Solidago rugosa* (wrinkle-leaf goldenrod), which is at #7 on this list. Fireworks goldenrod has a mounding habit and spreads modestly in dry to medium soil though it will spread more assertively in moister soils. It was rated as having an excellent floral display and received solid marks for pollinator and bee visits. If you have just one spot available for adding a mid-sized pollinator powerhouse in full sun to part shade, this is the plant for you—every pollinator in the neighborhood will come visit you with this one. In the Temple study, deer browse on fireworks goldenrod was around the middle of the pack across the set of plants studied, but it is among the higher ones on this



***Solidago rugosa* 'Fireworks'.** Photo: Barbara De Rosa-Joynt

short list. Deer browse will typically result in shorter, later-blooming plants. My garden has very heavy deer pressure, and the deer have generally ignored this plant, so I was surprised to see Temple's experience. The straight species is native to Loudoun County, but fireworks goldenrod is a "wild selection" cultivar that was found growing in a wild population of *Solidago rugosa* at the North Carolina Botanical Garden and brought to market in the 1990s.

Height: 4-5'

Bloom time: late August to mid-October

Light: Full sun to part shade

2. **Showy goldenrod** (*Solidago speciosa*)

Short list worthy qualities: A beautiful plant that lives up to its name, it received a top ten ranking in the Mount Cuba study for number of pollinator visits, is highly deer resistant, and boasts good fall foliage color.

Showy goldenrod is a clumping plant with upright stems covered in lovely clear yellow flowers. It received a solid middle tier garden worthiness rating from the Mount Cuba study partly due to flower stems flopping. The study used average soil, but showy goldenrod will generally do better in drier, poorer quality soil. Mount Cuba found that using the "Chelsea Chop" pruning technique (described below) improved the plant's performance by addressing the flopping. Within this short list, showy goldenrod has the second highest pollinator rating overall and the highest for bumblebee visits. In Mount Cuba's pollinator visit metric it ranked eighth out the 70 plants in the study. If you have a dry sunny spot in your garden, this mid-sized plant can be a real showstopper, and your bumblebees will be thrilled. The Temple University study found zero deer browse on this plant in its trials. Showy goldenrod has eye-catching fall color with leaves turning colors from yellow to purple. It is native to Loudoun County.

Height: 5-6'

Bloom time: mid-September to late October

Light: Full sun to part shade

3. **Stiff goldenrod** (*Solidago rigida*)

Short list worthy qualities: Interesting-shaped flower clusters create a striking floral display that is very attractive to pollinators and creates a strong vertical accent in the garden.

Stiff goldenrod holds its unusual-shaped (for a goldenrod) clusters of bright yellow flowers upright on strongly vertical stems on a clumping plant. This plant received a solid mid-tier evaluation for garden worthiness from Mount Cuba and is a solid late summer to early fall bloomer with good floral display, thriving in drier poor-quality soils in sunny areas. Stiff goldenrod was rated highly for the number of pollinator visits and received a good score for bumblebee use as well. If you have room for a tall, visually striking plant in full sun and dry soil, this plant is a great option. Temple University's study of deer browse found that stiff goldenrod received one of the highest rates of damage among the plants in this short list, though that represents only a medium score within Temple's study of dozens of plants. Stiff goldenrod is considered



Solidago speciosa. Photo: [Courtney Celley/USFWS \(public domain photo\)](#)



Solidago rigida. Photo: [Tina Shaw/USFWS \(public domain photo\)](#)

deer tolerant and will likely still flower if deer graze on it, but it will probably do so later than normal. Note that Mount Cuba found that stiff goldenrod does not respond well to the Chelsea Chop, reporting that the chop stops vertical growth, and the stiff goldenrod does not flower after this treatment. Therefore, it is not recommended that you prune this plant and instead site it where its 5-6' tall height is appropriate. It is native to Loudoun County.

Height: 5-6.5'

Bloom time: Early August to mid-September

Light: Full sun

4. **Gray goldenrod** (*Solidago nemoralis*)

Short list worthy qualities: A petite charmer in difficult conditions whose gorgeous flowers and long bloom period are popular with pollinators.

Gray goldenrod is named after its stem color, and it is stunning when planted in large groups. Its shorter stature and clumping habit make it a good option for smaller sites. The Mount Cuba study gave it a good score for floral display but docked points for ornamental and ecological value because this plant flopped in the relatively rich soil of the trial garden. However, Mount Cuba noted that when grown in the dry, lean soils it prefers, gray goldenrod would likely perform much better since in nature it typically stands upright. Gray goldenrod is a good candidate for challenging sites with poor dry soil, and if planted in such soil, it is less likely you would need to use the Chelsea Chop to prevent flopping. This plant scored well for pollinator visits and had solid numbers for bumblebee visits too. If you have a dry spot in full sun to part shade that could use the visual impact of a sweep of a low to mid-size plant, gray goldenrod could be just the thing for you--and your pollinators will be appreciative. The Temple University study on deer browse damage did not include gray goldenrod, but North Carolina State University Extension Gardener Plant Toolbox lists this plant as deer resistant. It is native to Loudoun County.

Height: 1.5-3.5'

Bloom time: mid-July to late October

Light: Full sun-part shade

5. **Early goldenrod** (*Solidago juncea*)

Short list worthy qualities: An early bloomer with unusually shaped flower clusters that is easy to grow and is low maintenance once established.

Early goldenrod scored well in the Mount Cuba study for its horticultural and ecological value. This mid-sized plant has beautiful and flower clusters with a characteristically lopsided appearance that often arches upward and outward, creating a good floral display on these mid-sized plants. Early goldenrod prefers dry rocky soil; it lost some points in its scores from Mount Cuba in part because it flopped in the relatively rich soil of the test garden site. In the wild it is a solid, upright clumping plant, so siting it in drier poor-quality soil can alleviate the need to prune to keep it from flopping. Mount Cuba indicated that when properly sited, early goldenrod can be a fantastic garden plant, and it is considered easy to grow and low maintenance once established. Early goldenrod received a good score for pollinator visits and had good numbers for



Solidago nemoralis. Photo: [dogtooth77](#)
CC BY-NC-SA 2.0



Solidago juncea. Photo: [Kerry Woods](#) CC BY-NC-ND 2.0

bumblebee visits too. If you have a hot dry spot in full sun to part shade and are looking for a mid-sized plant with interesting shaped flowers to bring a pop of yellow to your late summer garden, early goldenrod may be a good match for you. Your pollinators will welcome this addition. Temple University's study of deer browse found that early goldenrod received the most damage among the plants in this short list, though that represents only a medium score within Temple's study. This plant is considered deer resistant and after deer browse plants will typically flower later on shorter stems. It is a Loudoun County native.

Height: 4-5.5'

Bloom time: mid-July to late September

Light: Full sun-part shade

6. **Seaside goldenrod** (*Solidago sempervirens*)

Short list worthy qualities: One of the last plants blooming in fall, it creates a lifeline for migrating monarchs and bumblebee queens preparing to overwinter.

Mount Cuba gave seaside goldenrod a medium tier rating, penalizing it for flopping in the relatively rich soil of the trial garden, but noting that performing the Chelsea Chop remedied the flopping situation. Siting this goldenrod in dry poor-quality soil will also help with flopping, as it is drought tolerant and prefers lean soils. Seaside goldenrod is, as its name suggests, salt tolerant, which makes this plant a potentially good option for roadside plantings where road salt treatment is an issue. The dense flower clusters on this mid-size clumping plant are appealing to pollinators and it received a good pollinator score from Mount Cuba. The late timing of this plant's bloom season makes it a vital source of pollen and nectar for migrating monarchs and bumble bee queens seeking to build the fat reserves necessary to survive winter. Seaside goldenrod blooms the latest of the plants in this short list and it will tolerate wet soil but not shade. If you have a dry sunny spot in full sun--perhaps along your roadside--this plant is an excellent option and your monarchs and bumblebee queens will thank you. The Temple University study on deer browse damage did not include gray goldenrod, but North Carolina State University Extension Gardener Plant Toolbox lists this plant as deer resistant. It is native to Southeastern coastal Virginia.

Height: 5-6'

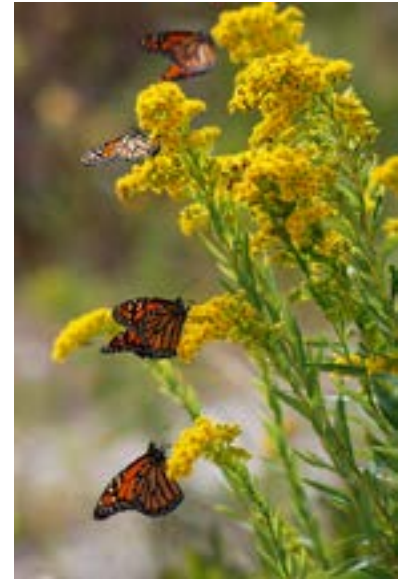
Bloom: late September to mid-November

Light: Full sun

7. **Wrinkle-leaf goldenrod** (*Solidago rugosa*)

Short list worthy qualities: A top-rated plant in the Mount Cuba trial for ornamental and ecological value and a tall beauty that is popular with pollinators.

This plant was one of the top performers in Mount Cuba's study, where it was recognized for its good floral display featuring airy panicles of flowers on a tall plant. It is also one of the Master Gardeners of Northern Virginia's tried and true native plant selections for the mid-Atlantic. Wrinkle-leaf goldenrod has a long bloom season, flowering mid-August to early October and sometimes starting its dazzling show as early as July and ending into November. In ideal conditions this plant can reach seven feet tall, though if desired its height can be reduced by using the Chelsea Chop technique to keep it shorter, recognizing that doing so will delay the start of blooming.



Solidago sempervirens with monarch butterflies. Photo: [Billtacular CC BY-NC-ND 2.0](#)



Solidago rugosa. Photo: [Dan Mullen CC BY-NC-ND 2.0](#)

This goldenrod received a good pollinator score in Mount Cuba's study and had a decent bumblebee score as well. Wrinkle-leaf goldenrod can be assertive in garden settings though notably Mount Cuba indicated it did not qualify as an aggressive spreader; nevertheless, site it where it has some room to roam since it spreads by rhizomes. If you have an area in full sun to part shade that you need to fill in and want an impactful bright floral display, wrinkle-leaf goldenrod may be just the ticket--you will have some very happy pollinators to boot. The Temple University study on deer browse indicated that this plant had relatively minor deer damage. It is native to multiple counties in Virginia, including Fairfax and Arlington, but not listed as native to Loudoun County according to the Flora of Virginia.

Height: 6-7'

Bloom: mid-August to early October

Light: Full sun-part shade

8. **Blue-stemmed goldenrod** (*Solidago caesia*)

Short list worthy qualities: A late bloomer with a pretty floral display that is a tried-and-true performer in shady garden conditions.

Blue-stemmed goldenrod has good floral display featuring pretty little clusters of flowers arranged along its purple-blue stem. Mount Cuba's rating for this plant is one of the lowest of those on this short list. However, the report indicates that blue-stemmed goldenrod did not fare well in the full sun of the test garden plot because it prefers shadier conditions and that elsewhere on Mount Cuba's property, where it is planted in shady woodland garden settings, it is a tried-and-true performer. Blue-stemmed goldenrod is also one of the Master Gardeners of Northern Virginia's tried-and-true native plant selections for the mid-Atlantic, and it is the most widely available goldenrod species locally on this short list. In the Mount Cuba study, this plant received a modest score for pollinator attractiveness, but it is unclear whether the score would have been higher if the plant had been situated in a more hospitable environment. If you have a shady area that needs a pop of bright yellow in late summer through mid-fall, this may be the right goldenrod for you, and your pollinators will be pleased. The Temple University study on deer browse indicated that this plant had relatively minor deer damage. It is a Loudoun County native.

Height: 3-4'

Bloom: late August to early October

Light: Part sun-part shade

9. **Slender goldenrod** (*Solidago erecta*)

Short list worthy qualities: A compact late-blooming pollinator favorite that prefers shade and received a top ten ranking in the Mount Cuba study for number of pollinator visits.

Mount Cuba evaluated this plant as having a good floral display and upright clumping form featuring lovely spikes of clear yellow flowers on interesting dark red stems. This woodland plant suffered some in the full sun of the test garden, which resulted in a mid-tier score, though the study noted that elsewhere at Mount Cuba Center the plant grows well in bright shade. It is unclear whether its scores would have been higher if the plant had been situated in more suitable conditions. Despite those challenges, slender goldenrod has the highest pollinator score on this short list and had good bumblebee numbers as well, and in the Mount Cuba study's pollinator visit metric it ranked seventh out the 70 plants in the study. So, if you have a



Solidago caesia. Photo: [Dan Mullen](#)
CC BY-NC-ND 2.0



Solidago erecta. Photo: [Rocky Gleason](#)

bright shade location in your garden that needs something to liven things up, this plant will make an attractive addition, and your pollinators will thank you. Mount Cuba also reported that this plant has attractive garnet-to-cranberry-red fall leaf color. The Temple University study on deer browse indicated that slender goldenrod experienced modest deer damage, which will typically result in shorter, later-blooming plants. This goldenrod is native to Loudoun County.

Height: 2.5-4'

Bloom: early September to mid-October

Light: part sun

10. **Zigzag goldenrod** (*Solidago flexicaulis*)

Short list worthy qualities: A short, versatile shade-loving late bloomer with quirky crooked zigzagging upright stems that makes it a good groundcover in shade.

Zigzag goldenrod's species name *flexicaulis* means "bent stem," and its floral display features clusters of flowers arranged along its upright crooked stems. Mount Cuba's rating for this plant is in the middle of the set of 70 plants evaluated but is one of the lowest on this short list. Though it can tolerate full sun, much like the other shade preferring goldenrods on this list it did not fare well in the full sun and relatively rich soil of the test garden plot. Zigzag goldenrod is often referred to as a woodland plant and in such settings can be expected to perform much better. In the Mount Cuba study, this plant received a modest score for pollinator attractiveness though its bumblebee score is still quite high and is one of the highest on this short list. It is unclear whether its scores would have been higher if the plant had been situated in more suitable conditions. If you have a shady location where you need a somewhat tall groundcover, perhaps to create a soft-landing area under trees or shrubs (see Trumpet Vine soft landings article for more information), zigzag goldenrod may be a good option for you. Your bumblebees will be delighted. The Temple University study on deer browse indicated that this plant had relatively minor deer damage. Zigzag goldenrod is clump forming, and in favorable conditions, it will spread steadily, making it a useful groundcover for shade. It is a Loudoun County native.

Height: 1-3'

Bloom: late August to late October

Light: Full sun-nearly full shade



Solidago flexicaulis.

Photo: Barbara De Rosa-Joynt

The Chelsea Chop

What is the Chelsea Chop? The Chelsea Chop is a technique you can deploy to reduce the height of goldenrods to make them shorter and/or reduce flopping. In this pruning technique, gardeners can cut plants back by 1/3 to 1/2, trimming just above a leaf node, between Memorial Day and the Fourth of July to get shorter, bushier plants that will bloom a little later and are less likely to flop. Don't cut them back after the Fourth of July though or the plants may not have enough time to bloom before frost. For a natural look, trim stems to slightly different heights.



Native plant sale. Photo: [Marilyn Sklar, Montgomery Parks CC BY-NC-ND 2.0](#)

Sources for native plants

Virginia has a number of native plant nurseries--see lists of nurseries [here](#) and [here](#), including in Loudoun County. Some nurseries from other states also come in for native plant sales in the spring and fall. You can find lists of sales in Northern Virginia [here](#) and in other states and across the state [here](#). In addition to these sales, most native plant nurseries have open hours for shopping, and some sell their plants at farmer's markets or other venues that aren't included in the lists above. Please check the nurseries' websites for details, including lists of plants they grow. While regular bench nurseries and big box stores often carry goldenrods, they won't necessarily know whether their plants have been treated with systemic or other pesticides, which can harm the pollinators and other wildlife you are trying to support. You don't want to attract butterflies or bees only to poison them. Native plant nurseries are typically small and often family-owned, and they will know exactly what has gone into and onto their plants--and as a bonus, you are supporting a locally owned small business.

Mythbusting: Horticultural Edition

Sharon Murphy, Loudoun County Extension Master Gardener

Have you ever been told something as a fact and held onto it dearly, only to find out many years down the road that the item in question was untrue and not a fact at all? The feeling is akin to learning that you have been singing the lyrics to a song all wrong for most of your life; flabbergasted and gobsmacked are two excellent ways to express this feeling.

This was the reaction in much of the auditorium during the keynote presentation at the 2026 Virginia Extension Master Gardener College. Dr. Linda Chalker-Scott's presentation, titled *Horticultural Myths, Lies, and B.S. (Bad Science)*, examined popular gardening myths and the evidence that allows the title of myth to be bestowed on them. In fact, one of the myths she debunked was one that I had been taught during my Master Gardener training many years ago, but more on that later.

Virginia Extension Master Gardener College is an annual event hosted by Virginia Cooperative Extension and attended by Extension Master Gardeners (EMGs) from throughout the state. For three days, EMGs take classes on a range of horticulture topics designed to ensure that we have current, research-based information to share with the public. I had a great time meeting EMGs from around the state and learning new things in my classes, but what struck me most was the very interesting and timely keynote presentation. Timely because in this age of information saturation it can be difficult to separate fact from fiction.

Dr. Scott is a professor and extension specialist at Washington State University's Puyallup Research and Extension Center. She has a Ph.D. in Horticulture and has spent much of her career examining the science behind common horticultural practices and claims. She also writes about horticultural myths and has authored *The Informed Gardener* and *The Informed Gardener Blooms Again*. She has the credentials and the no-nonsense attitude necessary to be a bona fide myth-buster.

The presentation began with a review of how to evaluate information using the CRAP test:

- C — Credibility of the source**
- R — Relevance to managed landscapes**
- A — Accuracy (science-based?)**
- P — Purpose (selling something?)**

This was a humorous way to remind us that we need to evaluate information methodically before accepting it as fact. After this refresher, she began to bust myths.

Myth 1: Companion Planting

While acknowledging that there can sometimes be value in intercropping, or in plant associations, the term "companion plant" has been hijacked to include so many pseudoscientific claims that it has little meaning.

Evidence that specific plants placed near each other provide protection from insects is lacking. Anecdotal evidence is more likely the result of plant diversity, which can encourage beneficial insects and make it more difficult for pests to find their preferred plants, rather than from specific plant pairings.

The bottom line: Companion planting charts are for entertainment and have little scientific value.

Myth 2: Compost Tea Is an Effective Insecticide

There is no scientific basis for the claim that compost tea is an effective insecticide, although studies are emerging to show that some non-aerated compost teas may help suppress some pathogens on some plants. There is no scientific evidence supporting these claims for aerated compost tea.

The problem lies in the microbial variability of each batch of compost tea, which makes it difficult to generalize findings. In studies examining aerated compost tea and using water as a control, there was no beneficial impact. In some cases, the compost-tea-treated trees were worse off.

The bottom line: There is no silver bullet for poor soil health, improper plant selection, or improper siting.

Myth 3: Super Absorbent Water Crystals Will Increase Drought Resistance

Apparently, there is a movement afoot to get gardeners to add super absorbent water crystals to their soil in order to decrease the amount of time that gardeners spend watering their gardens. The crystals are intended to absorb water and then slowly release it back into the soil over time.

The problem is that, in real-world applications, the gels are short-lived and degrade when exposed to UV radiation, salts, and other environmental stressors. Their lifespan is only about 18 months. They may not even be useful for that long since fertilizers and soil type can interfere with their ability to absorb water. There is also the unanswered question of what happens to these gels as they degrade and what impact they have on soil and other organisms in the environment.

The bottom line: Just stay away from them.

Myth 4: Black Walnut Trees and Allelopathy

This is the myth-buster that caused so much murmuring in the audience and caused me to put my pen down and stare in disbelief.

My initial Master Gardener training took place in the early 2000s in another state, and we were told many times that the reason nothing grows under a black walnut tree is because of allelopathy—the plant secretion of a biochemical that inhibits competition from neighboring plants. In the case of the black walnut, the chemical in question is juglone. But things do grow under black walnut trees for some people, so what gives? Research testing the juglone hypothesis suggests that the answer is more complicated than simply blaming juglone, with resource competition from the black walnut tree playing an important role. In other words, the tree is taking the water, nutrients, and light and making it difficult for other things to grow underneath the canopy. No different than the competition for resources from other trees, just more efficient.

The bottom line: Enjoy your black walnut tree. Black walnut trees provide food and habitat for wildlife and shade for people.

Myth 5: The Myth of Cloroxed Clippers

We are supposed to disinfect our tools between cuts when pruning diseased plants with a solution of bleach and water, right? Dr. Scott says that using a bleach solution will likely damage the plant tissue, your tools, your clothes, and your lungs, so it's best to stay away from it and use isopropyl alcohol instead. If isopropyl alcohol isn't available, household cleaners like Lysol are less corrosive to tools than bleach.

The bottom line: Choose a disinfectant that is readily available to you and is safe to handle. Always wipe excess solution from the blades before making a cut since even non-bleach disinfectants can harm plants. Blades that are dirty or pitted can harbor pathogens even after disinfection so be sure to use blades that are clean and in good condition.

Dr. Scott's presentation was fun and informative, but the key takeaway for me was that evaluating information sources is critical to making sure we are delivering research findings accurately.

While doing research for this article, I was reviewing Dr. Scott's Garden Professor blog to make sure I was accurately reporting what she had said in her presentation. I noticed that she had an entry from 2015 about black walnut trees that discussed juglone and allelopathy.

Thinking that I must have misheard her at the presentation, I read through the comments, hoping that they would shed some light on why she said one thing at the conference but had written another in her blog. I found that she had posted a link to a review of the literature on this topic, published in 2019, that reflected new research, new findings, and a new outlook on this topic.

This is why there is so much value in the mandatory continuing education requirement that master gardeners need to maintain their active status. Workshops, seminars, and Master Gardener College help us stay abreast of the latest research so that as things change, we change as well. As Master Gardeners, we have a responsibility to provide research-based information to the public. That means we also must be willing to question what we think we know and ask, "What is the evidence?"

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What's Growing in Your Backyard?

Learning to Recognize Invasive Plants in the Virginia Landscape

Steve Beer, Loudoun County Extension Master Gardener

Fall has a way of revealing things. For gardeners and landowners, fall can be one of the best times of year to begin looking for invasive plants.

As summer vegetation begins to fade, leaves change color and eventually fall, plants that blend into the landscape for much of the year can suddenly stand out. A vine still covered in green leaves may become conspicuous against a bare tree. Bright berries appear along a woodland edge. A shrub remains green after its neighbors have changed color. A patch of delicate grass turns to a distinctive straw-colored mat.

But identifying invasive plants is not simply a matter of memorizing photographs or relying on an app—although they are convenient! Many invasive species resemble native plants, and relying on one characteristic or a single ID tool can lead to mistakes. A better approach is to learn how to look at a plant and consider things like leaf shape, berry color, or growth habit along with using convenient ID tools.

Before pulling, cutting, or treating something unfamiliar, take a closer look.

Start With the Plant, Not the Name

When encountering an unfamiliar plant, begin with a few basic questions.

Is it a tree, shrub, vine, grass, or other herbaceous plant? Are its leaves arranged opposite one another or alternately along the stem? Are the leaves simple or compound? Are their edges smooth or toothed? Does the plant have thorns, tendrils, distinctive bark, fruit, flowers, or an unusual odor?

Then consider where it is growing.

Forest edges, roadsides, trails, streambanks, disturbed soil, old fields, utility corridors, and openings in the forest canopy are common places to encounter invasive plants. Japanese stiltgrass, for example, occurs in habitats ranging from forests and fields to lawns, trails, wetlands, floodplains and stream edges.

Finally and perhaps most importantly, ask: What native plant could this be instead?

Positive identification usually comes from a combination of characteristics rather than a single clue. Here are six invasive plants that provide excellent opportunities to practice.

Tree-of-Heaven: Look Beyond the Compound Leaves

Tree-of-heaven (*Ailanthus altissima*) is an invasive tree commonly encountered along roadsides, fencerows, forest edges and other disturbed areas. Its enormous compound leaves can make it appear distinctive—until you realize several native trees, including walnut, ash and sumac, can look remarkably similar.

The leaflets of tree-of-heaven generally have smooth margins except for one or more small notches near their bases. Its leaves and leaflets are arranged alternately or subalternately. Ash, by comparison, has opposite leaves, while walnut and sumac have teeth along the margins of their leaflets. Tree-of-heaven has distinct gray-ish bark with rough texture and cantaloupe-like appearance but smoother than the bark of walnut and ash.

Still unsure? One additional clue appeals to a different sense: crush a leaf or twig and smell it. Tree-of-heaven has a distinctive unpleasant odor frequently compared to rancid peanut butter.



Left: Tree of heaven bark. Photo: [Josh Bruckner](#); **Right: Seed cluster on female tree.** Photo: [Dave Jackson](#)

Female trees also produce large clusters of papery seeds, which can make mature trees particularly noticeable later in the growing season.

The lesson here isn't simply how to identify tree-of-heaven. It is that compound leaves alone aren't enough. Leaf arrangement, leaflet margins, bark, seeds and even smell can help confirm an identification.

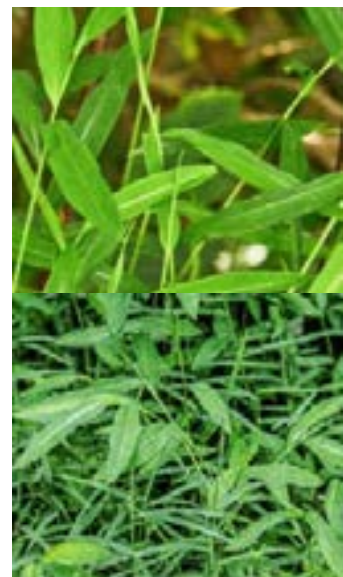
Japanese Stiltgrass: Look for the Silver Stripe

Not every invasive towers overhead, some are quite literally underfoot.

Japanese stiltgrass (*Microstegium vimineum*) is a slender annual grass that can form extensive groundcover in forests, fields, roadsides, trails and riparian areas. Its flat leaves are generally two to four inches long, and one of its most useful identifying characteristics is a faint silvery stripe along the midvein, slightly off-center on the leaf. Its stems feel smooth, and the plant pulls surprisingly easily from the ground, revealing slender branched roots.

That last characteristic helps distinguish it from one of its native look-alikes, Virginia whitegrass (*Leersia virginica*). Virginia whitegrass has narrower, more pointed leaves, rougher stems and a stronger root system that makes it harder to pull from the soil. By fall, Japanese stiltgrass begins dying back into straw-colored mats. Its seeds ripen and drop from August into December, making late summer and fall particularly important times to recognize an infestation.

A plant doesn't need to be large or dramatic to fundamentally change a landscape.



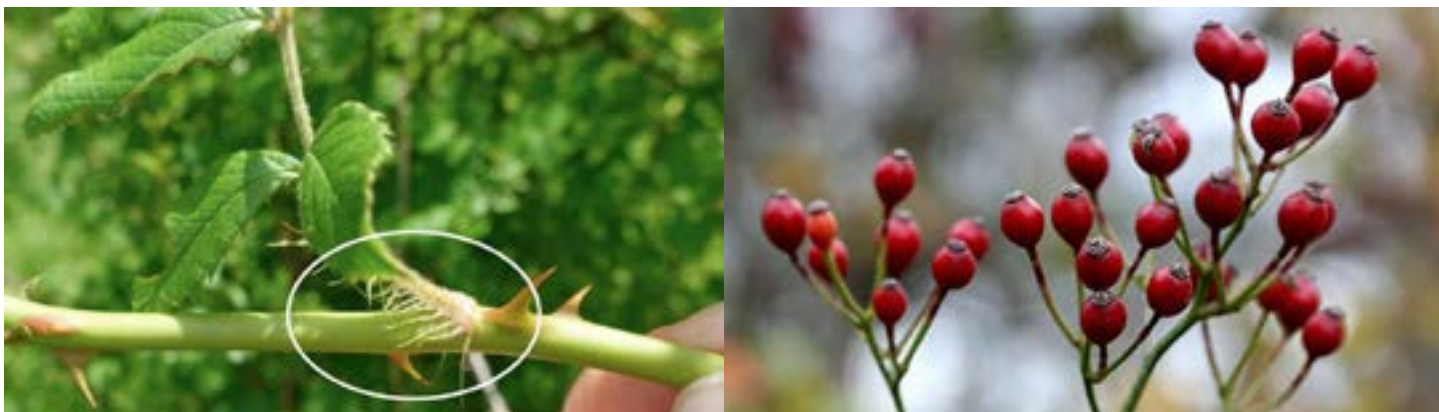
Top: Stiltgrass with silvery stripe on midvein; Bottom: Virginia white-grass, a native, is the finer-textured grass. Photos: [Susan A Roth for Blueridge PRISM](#)

Multiflora Rose: Check Beneath the Leaves

Anyone who has walked through a thicket of multiflora rose (*Rosa multiflora*) may remember the encounter.

This sprawling invasive shrub produces long, arching canes armed with curved thorns and can form dense thickets in fields, pastures, roadsides, woodland edges and forest openings. But Virginia also has native roses, so "thorny rose" isn't a sufficient identification.

One particularly useful clue is found where the leaves meet the stem. Multiflora rose has a small leafy structure called a stipule, with a distinctive comb-like fringe. Its curved thorns commonly occur in pairs, and its flowers are white rather than the pink flowers characteristic of the native roses.



Left: Fringe and thorns at leaf base Photo: [Dave Jackson PSU](#); **Right: Rose hips.** Photo: [R.A.Nonenmacher via Wikimedia Commons](#)

Later in the year, clusters of small red rosehips can remain on its green branches into winter, making established plants easier to notice. Sometimes the most diagnostic characteristic isn't the obvious one. With multiflora rose, look past the thorns and examine the base of the leaf.

Mile-a-Minute: A Triangle With Teeth

Few common names describe a plant as well as mile-a-minute (*Persicaria perfoliata*).

This annual vine can grow extremely fast, forming dense mats that cover and eventually smother native vegetation. Its approximately three-inch, triangular leaves provide the first clue, but closer inspection reveals tiny recurved barbs along the stems and veins on the undersides of the leaves.



Left: Barbed stem and triangular leaves; Right: Saucer-shaped structure and green (unripe) and blue (ripe) berries. Photos: [Dave Jackson PSU](#)

However, perhaps its best diagnostic characteristic is a small saucer-shaped leafy structure that completely encircles the stem beneath flower and fruit clusters. Later, its fruits ripen from green to a striking blue.

This facet is important because Virginia has native tearthumbs that also have prickles. Those native relatives lack mile-a-minute's distinctive encircling structure.

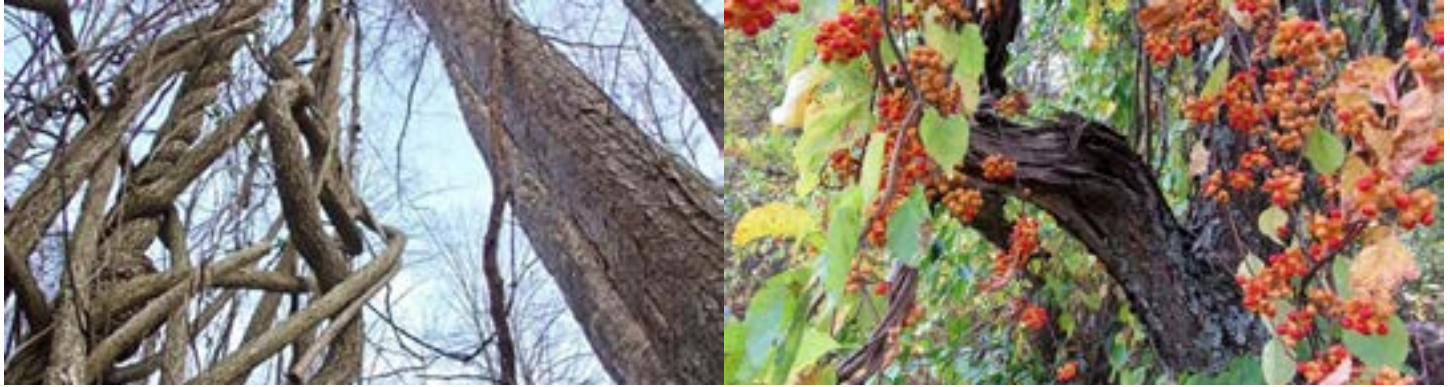
Here again, identifying a plant from a photograph of its leaf alone can be misleading. Leaf shape, barbs and the encircling structure provide much stronger evidence.

And yes—the barbs are quite real, so this is one identification exercise best conducted with gloves!

Asiatic Bittersweet: Look at Where the Fruit Grows

Fall provides perhaps the easiest opportunity to spot Asiatic bittersweet (*Celastrus orbiculatus*).

Its woody vines climb trees and can extend high into the canopy. Its massive vines choke trees and topple them with their weight. The leaves remain green after many surrounding native plants have changed color or dropped their leaves, eventually turning yellow later in the season. Its mature vines also develop pale bark with a distinctive netted pattern.



Left: 20 year old vines can choke and topple trees. Photo: [Susan A Roth for Blueridge PRISM](#); **Right: Asiatic bittersweet fruit all along the stem.** Photo: [Dave Jackson PSU](#)

But the important identification challenge is distinguishing invasive Asiatic bittersweet from the native American bittersweet (*Celastrus scandens*). Look at the location of the flowers and fruit.

American bittersweet produces its flowers and fruits in larger clusters at the ends of branches, while the invasive Asiatic bittersweet produces them along the stems at the leaf axils. Its yellow outer fruit covering eventually opens to expose red seed-containing structures, making fruiting vines particularly noticeable in fall and winter.

Because the native species can look similar, this is an especially good example of why identification should come before removal.

Autumn Olive: Flip Over a Leaf

Sometimes the easiest way to identify a plant is simply to turn over one leaf.

Autumn olive (*Elaeagnus umbellata*) is a large, densely branched invasive shrub that can reach approximately 15 feet in height and width. Mature leaves appear olive-green above but are densely covered with silvery scales underneath. Young leaves can appear almost entirely silver.

Late summer and fall provide another conspicuous clue: red fruits dotted with tiny silvery speckles. Bush honeysuckles can also produce red berries, but their leaves are opposite rather than alternate and lack autumn olive's characteristic silvery scales. Autumn olive also tends to leaf out earlier than much surrounding vegetation and remain green later in fall, giving us another useful identification tool: phenology, or the seasonal timing of plant growth.

Sometimes when a shrub looks suspicious, the answer really is on the other side of the leaf.



Top: Autumn olive leaves; Bottom: Ripe Berries. Photos: [Dave Jackson PSU](#)

Let the Season Help You

Learning plant identification becomes easier once you realize that a landscape changes throughout the year, which can provide valuable clues.

Fall fruit can reveal vines and shrubs that were difficult to notice in summer. Plants that remain green after surrounding vegetation begins going dormant can suddenly become obvious. Tree bark and growth habits become easier to see after leaves fall. Even dead vegetation can be informative: Japanese stiltgrass forms noticeable straw-like mats during the dormant season, while frost-killed mile-a-minute vines can persist as tangled, barbed blankets over other vegetation.

Instead of thinking of identification as finding one perfect photograph that matches your plant, think like a detective. Take photographs of the entire plant and close-ups of leaves, stems, bark, flowers or fruit. Note where the plant is growing, how much sun and moisture. Use reliable identification resources or seek help from your local Virginia Cooperative Extension office before taking action by contacting our Help Desk at:

<https://loudouncountymastergardeners.org/gardening-advice/help-desk/>

Identification Comes Before Control

Finding an invasive plant naturally raises the next question: What should I do about it? That answer is more complicated than it might seem.

Some invasive plants can be effectively hand-pulled. Others regenerate from roots left behind. Some spread primarily by seed, while others spread vegetatively. And with certain species, simply cutting down the plant can actually make the problem worse.

Tree-of-heaven is an excellent example: cutting an established tree without controlling its root system can stimulate vigorous root suckering and create a far larger problem than intended.

So resist the understandable temptation to immediately grab the loppers. First, identify the plant correctly. Then learn how it reproduces and spreads. Only then choose an appropriate management strategy.

That will be our next step...Coming this winter: You Found an Invasive Plant. Now What? — choosing the right control method, understanding timing, preventing regrowth, and beginning the process of restoring the landscape.

Growing Winter Squash

Angie Quintela, Loudoun County Extension Master Gardener

Going to the farmer's market in the fall is always a joyful odyssey of winter squash—a kaleidoscope of bright colors, speckled skin, and squat and round shapes. Trying to identify all the varieties you can find these days seems to require a literal PhD in Squash—but in only in the very best of the sense. Every year I try to add one more to my cucurbit lexicon: pumpkin, butternut, acorn, delicata, spaghetti, Hubbard, buttercup, kabocha, cushaw, carnival, banana, turban, Hokkaido or calabaza...and of course we could keep on going.



A plethora of beautiful curcurbits. Photo: [Suann Leighow, Penn State](#)

Winter squash is in the Cucurbitaceae family (which also includes summer squash, cucumbers, melons, and watermelons) and the genus Cucurbita. The edible round types are usually termed pumpkins while the remainder are called squash. Opposite of summer squash, winter squash are typically harvested all around the same time in one harvest after the fruits have mature seeds and the rinds have hardened. The hard rind is what allows winter squash to be successfully stored for winter eating—one of their signature vegetable garden traits.

Site Selection and Preparation

When you're planning out where to grow your winter squash keep in mind squash plants require 6-8 hours of sunlight. Winter squash also prefers well-drained soil because they are sensitive to being water logged. It is a good practice to add compost or well-rotted manure to improve the soil structure and its water-holding capacity.



Trellised squash. Photo: [Antonio Neto](#)

Winter squash feeds heavily on nitrogen and potassium. If you can, rotate your vegetables and grow winter squash on a site that follows beans or peas to benefit from the nitrogen they've fixed in the soil. To incorporate the necessary potassium, consider adding in granite dust or green sand (sold most places that carry the popular Epsoma and Down to Earth fertilizer brands). When using any fertilizer make sure to carefully follow the provided instructions for quantities and application. Wood ash is also a common go-to for adding in potassium to soil (particularly if you own a fireplace or fire pit!) but proceed carefully as wood ash also changes the soil pH, which in turn affects your vegetable's ability to absorb nutrients. Wood ash should only be used when carefully managed and in conjunction with soil tests.

Squash has a well-earned reputation for needing a lot of space and sprawling uncontrollably across your garden. Most varieties of squash vine to at least six feet (sometimes even 10-20 ft!). There are cultivar options now available that bush instead of vine and were bred for small spaces. Another space workaround is trellising—winter squash can grow up cattle panels, A-frames, or cages. Accommodate their heavier fruits with sturdy frames and be prepared to

net the heaviest fruits if necessary to keep them from prematurely dropping. Trellising has a few very notable benefits including saving space and increased air circulation. However, squash vines root at the nodes, drawing in water and nutrients for their network of vines beyond the primary stem. The trellising tradeoff is that trellising reduces this rooted network and the volume of water and nutrient absorption. This isn't a deal breaker, as squash are frequently trellised successfully, but something to keep in mind.

Planting

Squash is very frost sensitive. It's time to plant winter squash in the spring about two weeks after the last frost date, ideally when soil temperatures have warmed to 70 degrees Fahrenheit. To optimize seed warmth, mound the soil and plant the seed at the top. Winter squash is very shallow rooted, so ideally mulch with straw or wood chips to preserve moisture. Plan for most winter squash to take from 60-100 days to harvest.

Growing and Management

Winter squash need about 1-2 inches of water weekly after germination and once seedlings are growing well. Try to water at the roots and avoid the leaves as winter squash are prone to several foliar diseases. If that is not possible prioritize watering in the early morning to allow the plant ample time to dry off.

Winter squash is monoecious—meaning the plant has both male and female flowers on different parts of the same plant, so you don't have to worry about accounting for separate male and female plants. The male flowers grow first on a thin stem with a single stalk full of pollen. The female flowers grow on a shorter stem and have a bulging base with three stalks. If you use row covers (see pest management recommendations) it's important to remove the cover once the plant is flowering to ensure that insects can pollinate the flowers.

Winter squash has shallow roots so be careful when treading amongst your vines. The plants are pretty resilient though as long as you don't cut the main stem or crush the leaves. As they (inevitably) grow out of control, you can prune them back, just leave a few developing fruits on each vine. Cut the squash vine at one or two leaf nodes beyond the last fruit or if there are no fruits cut at the base of the vine. You can also just readjust any runaway vines by gently moving them. Ideally train the vine before it is settled and rooted, but if it has rooted, gently loosen the nodal roots and move. These transitions usually cause the squash leaves to temporarily wilt, but the plant should bounce back in a day or two.

Pest Management

A wide range of things seem to successfully eat or destroy winter squash plants. The most common offenders include Spotted Cucumber Beetle, Striped Cucumber Beetle, Squash Bug, Squash Beetle, Squash Vine Borer, Powdery Mildew, and Downy Mildew.



Left: Squash bug nymphs; Right: Squash bug adult. Photos: [Whitney Cranshaw, Colorado State University](#), on [Bugwood.org](#).

Key management tactics of these pests and diseases include:

- Use crop rotation to avoid disease that may have overwintered in the soil
- Water at root level and avoid wetting leaves to minimize promoting foliar disease
- Track pest eggs and nymphs and handpick them off of your squash plants
- Cover plants in row covers to break the egg laying cycle and remove when the plant flowers
- Completely remove diseased plants and debris that may be harboring overwintering insects/larvae; and of course, do not compost to avoid transferring to new soil

Key to Common Problems of Squash

University of Maryland Extension

Symptoms on Leaves	Details	Possible Causes	Frequency
White powdery spots	May be on upper and lower surfaces of leaves	Powdery mildew	Very common
Yellow or tan angular spots	Downy, grayish spots on leaf undersides	Downy mildew	Common
Small yellow or white spots ("stippling")	Leaves eventually turn yellow and look tattered	Squash bugs	Common
Smooth gray or silver blotches	No powdery substance or fungal residue	Normal leaf variation	Common
Distorted leaves, irregular yellow (mosaic) markings	Leaves may be deformed, puckered or stretched; they may curl upward or downward	Viruses	Occasional
Bright yellow leaves	A few leaves turn yellow on healthy plants	'B' gene (precocious yellow gene)	Occasional
Wilted leaves and vines	A hole may be present near the base of the stem; with sawdust-like material (frass)	Squash vine borer	Very common
Wilted leaves and vines	Leaves recover at night but wilt again and eventually die	Bacterial wilt	Common
Chewing/etching of leaves	Chewed leaf tissue is between the leaf veins; visible on the underside of leaves	Squash beetles	Occasional
Chewed leaves	Chewed leaves	Cucumber beetles	Very common
Dark, leathery, sunken spot on one end of the fruit	The spot may enlarge until the entire bottom of the fruit becomes dark and shrunken	Blossom end rot	Common
Fuzzy gray fungal growth on old flowers and developing fruit	Affected fruit parts turn dark brown and become fuzzy and mushy	Choanephora rot	Common
Flower/fruit drop; one end of fruit is underdeveloped or deformed	Affected small fruits fall off the plant	Pollination problems	Occasional
Fruits are unusual in shape	Fruits do not resemble the mother plant from which seeds were taken	Not true to type	Occasional

Other approaches to pest management include trying to desynchronize the squash harvest from the insect lifecycle by planting squash plugs (vs direct sowing) as early in the season as possible in order to get in a harvest before the peak insect cycle (important to choose the faster growing varieties of squash to succeed). Conversely, try planting a second harvest in late June/early July after peak egg laying (also important to choose a faster growing variety here to ensure squash has matured before the first frost).

Beneficial insects such as Green Lacewings, Lady Beetles, Minute Pirate Bugs, Damsel Bugs, Bigeyed Bugs, Hover Flies, Tachinid Flies and general Parasitoid Wasps can also help manage the winter squash pests (although disappointingly Squash Vine Borers have no meaningful enemy). Planting dill, cilantro, and parsley (and letting it

flower) are high value choices to attract the greatest number of these beneficial insects. Fennel is also a heavy hitter but make sure not to grow it directly with other vegetables (in a pot works great) because of its allelopathic qualities which inhibit the growth of any neighbors.

Harvesting

It's typically time to harvest your winter squash between late September to early October. Let the fruits harden on the vine. Winter squash is ready when the skin is dull and the rind is hard (and cannot be pierced with your fingernail). Vines will dry and begin to die back. Cut the squash off the vine leaving a 1–2-inch handle. Make sure not to carry the squash by its handle though, any breakage can be an entry point for disease and bacteria which will make the squash spoil faster and decreases the length of time the squash can be stored.



Squash ready to harvest. Photo: [Melissa J. Will](#)

Storage

Winter squash is great for bringing fresh eating to your table in the winter months. As with any vegetable stored long-term, prioritize eating squash with marks, bruises or punctures first as these will spoil more quickly and leave the rest for storage. To prepare for storage harden the squash off for 7-14 days in temperatures of 80-85 degrees Fahrenheit and 85% humidity. This hardening process can be outside on a deck or porch, but also right on the vine. Once hardened, store your squash in a cool well-ventilated area with temperatures between 50-60 degrees Fahrenheit and 50-75% humidity (a typical unfinished basement). Position them in a single layer, preferably not touching each other to reduce the possible spread of rot. Winter squash will store from 2-6 months. The squash varieties with the hardest rinds will store the longest. This ranges from acorn squash which will only store 5-8 weeks to Hubbard squash which can be kept for 5-6 months.

Resources:

<https://ccd.uky.edu/resources/crops/vegetables/winter-squash>

<https://extension.psu.edu/insect-pests-affecting-squash-plants>

<https://extension.psu.edu/pumpkins-and-winter-squash-in-the-garden-and-the-kitchen>

<https://extension.umd.edu/resource/growing-winter-squash-home-garden/>

<https://extension.umd.edu/resource/key-common-problems-squash/>

<https://soilandhealth.org/wp-content/uploads/01aglibrary/010137veg.roots/010137ch32.html>

<https://www.piedmontmastergardeners.org/article/tasty-journeys-with-winter-squash/>

<https://www.piedmontmastergardeners.org/article/wood-ashes/https://extension.psu.edu/pumpkins-and-winter-squash-in-the-garden-and-the-kitchen>

<https://www.pubs.ext.vt.edu/452/452-719/452-719.html>

<https://www.sciencedirect.com/topics/food-science/cucurbita>

<https://yardandgarden.extension.iastate.edu/faq/what-proper-way-harvest-and-store-winter-squash>

<https://www.tnstate.edu/extension/documents/Plants%20that%20attract%20insect%20predators%20and%20parasitoids%20-Kaushalya%20Amarasekare.pdf>

Native Tree Vulnerability—Status Update

David Rohrbach, Loudoun County Extension Master Gardener

Fall is a good time of year to plant deciduous trees in Loudoun County. Cooler weather reduces transplant shock, while root growth is encouraged by the fact that soils are still warm, and hold water that would otherwise be lost in the leaf canopy. These trees can then better withstand the onslaught of high heat and drought the following summer.

Correspondingly, this is an appropriate time to consider evolving risks of planting several favored, native tree species with significant historical pest and disease problems. What do we currently know about the risks associated with planting native species of Chestnut, Elm, Ash, and Beech?

American Chestnut (*Castanea dentata*)

American chestnuts are highly nutritious for deer, turkeys, squirrels and other wildlife. During the 1800's these accounted for as many as one quarter of all trees in parts of the Appalachian Mountains. But in the 1940s, the chestnut blight, caused by the fungus *Cryphonectria parasitica*, devastated much of the chestnut population. Virtually all of these trees are now gone.

The American Chestnut Foundation has worked for more than 40 years to identify and breed blight resistant chestnut trees. Complementary efforts are being pursued by several US universities. Thus far, no American chestnut cultivars have been identified with full blight resistance. However, several crossbred hybrid cultivars (American chestnut X resistant Chinese cultivars) have been developed with partial blight resistance. One example, the Dunstan chestnut, is now available from the Chestnut Foundation and through a few specialty nurseries. Tree breeding takes a long time, but progress is being achieved.

American Elm (*Ulmus americana*)

Another native tree historically common in Loudoun County is the American elm. Early in the last century these were widely planted for their rapid growth, large, arching canopy and shade. They provide homes for a diverse array of insect and bird species. Beginning in the 1940s, however, these trees were devastated by Dutch elm disease (DED). This disease also infects the native cedar elm (*Ulmus crassifolia*), slippery elm (*Ulmus rubra*), winged elm (*Ulmus alata*) and some zelkova.

DED is caused by at least three species of *Ascomycete* fungus commonly spread by native elm bark beetles (*Hylurgopinus rufipes*). The fungus generally first appears in the upper branches of a tree with early leaf yellowing and drop, the gradual dieback of branches and eventually root death. Early efforts to control the spread of the disease targeted control of the bark beetle with insecticides, including DDT. But recognition of the resulting decline of bird populations led to a sharp reduction in insecticide use in the 1960s. Several fungicides are now marketed as a treatment for DED including the thiabendazole hypophosphite. However, continuous treatments by a certified arborist are needed for the life of the tree, and these are not effective once the tree roots are infected.

As with the chestnut, the main alternative control strategy has been to breed new resistant elm tree varieties. Several varieties of American elm have recently been identified as less susceptible to DED—including the Valley Forge, Princeton, New Harmony and Jefferson. These trees may still exhibit some symptoms of DED, but are unlikely to die from the disease. Several of these new varieties can be found in nurseries in this region.

American Ash (*Fraxinus americana*)

Another historically common shade tree in northern Virginia is the American or White ash. But this too has been devastated—by the Emerald ash borer (*Agrilus planipennis*) (EAB). This insect, initially identified in 2002, was confirmed to have arrived in Loudoun County in 2012. It now exists all states in the eastern United States. The borer

feeds under the bark, on the vascular systems of all species of ash trees native to northern Virginia including Green (*Fraxinus pennsylvanica*), Blue (*Fraxinus quadrangulate*), Black (*Fraxinus nigra*), Pumpkin (*Fraxinus profunda*) and Carolina (*Fraxinus caroliniana*) ashes. Presence of the borer generally goes undetected until the upper branches of the tree begin to die. Thereafter, ash tree mortality rates are almost 100% within 4 years of exposure.

Several insecticides can be used to preserve individual trees. Systemic insecticides can be periodically applied to the soil or injected into the trunk of a tree by a licensed professional. However, this must be done before the tree shows signs of EAB infestation. Contact insecticides can be periodically applied as branch or tree sprays to the ash canopy, but present high risks to pollinators. The Virginia Department of Forestry is offering a cost-share to help landowners cover the costs of protecting native ash trees against these invasive pests. However, the new plantings of native ash trees are discouraged.

New ash seedlings are commonly seen in Loudoun County, just as there has been a decline in sightings of the EAB. However, borer populations will rise and fall with ash tree populations, and younger trees generally do not become susceptible until they develop a mature bark—when the tree reaches one to two inches in diameter.

Meanwhile, scientists are searching for ‘lingering’ native ash trees with a degree of resistance to the insect, and cross-breeding native trees with Asian varieties offering potential resistance. We hope these resistant varieties will soon be available on the market.

American Beech (*Fagus grandifolia*)

The American beech is also an important component of northern Virginia forests, providing food for birds, squirrels, foxes and bears while supporting biodiversity. Unfortunately, these trees are now at high risk to Beech leaf disease (BLD)—which can lead to the death of mature trees within 3 to 7 years. BLD was first identified in Ohio in 2012 and initially identified here by the Virginia Department of Forestry in 2021.

BLD is caused by a microscopic nematode (*Litylenchus crenatae* spp. *mccannii*) invading developing leaf buds. These nematodes can be spread by birds, rainwater and even wind. Early evidence of the disease appears as dark green bands between leaf veins, curled or leathery leaves, reduced leaf growth and branch dieback. These symptoms are most evident in mid to late summer. Over several years, the leaf canopy will decline, and the tree will eventually die.

Unfortunately, the European beech (*Fagus sylvatica*) is also susceptible to this disease.

There is no known cure for the disease. But several treatments can suppress disease development. One is a systemic fungicide/nematicide compound (fluopyram) that can be sprayed on trees, leading to a reduction of nematode density. Another option is to inject the trunk of a beech tree with thiabendazole which reduces symptom severity. Both options need to be repeated over time under the guidance of a certified arborist. Given their expense, these treatments are best suited only to prolonging the life of a few high value specimen trees.

Research continues to better understand this particular nematode. And the search has started to identify resistant beech varieties. In the meantime, the planting of American beech trees remains risky.



Beech leaf disease. Photo: Kristen Wickert, USDA Forest Service, Bugwood.org

Perhaps a Useful Tree Fungus—Tree of Heaven (*Ailanthus altissima*)

The Tree of Heaven is a non-native tree brought to the United States as an ornamental in the late 1700s, but soon was recognized as invasive, and eventually as a noxious weed. As such, it threatens the establishment and growth of native forests.

In 2014, the Tree of Heaven was also recognized as a primary vector for the spread of the invasive spotted lanternfly (*Lycorma delicatula*). This insect was first confirmed in Loudoun County in 2022. The lanternfly now seriously threatens the county's wine industry. While it rarely kills native trees, the lanternfly secretes a honeydew substance which in turn attracts a sooty mold that can turn underlying plants (and any other object) black. This disrupts the photosynthetic capacity of these plants.

Landowners are encouraged to remove the Tree of Heaven from their properties. However, this is an expensive operation involving the timely application of herbicide via cuts to wood in the side of the tree, or to the trunk of a tree within minutes of the tree being cut down. Otherwise, new trees will quickly regenerate from the cut tree's roots.

In the early 2000s, foresters identified a native fungus, *Verticillium nonalfalfae*, that appeared to be causing a wilt disease in the *Ailanthus*. This soil borne pathogen was first isolated in 2009, allowing the initiation of studies on the use of this fungus as a biocontrol agent. After more than ten years of research, scientists have concluded that this agent causes almost 100 percent dieback in the *Ailanthus*, while having a limited effect on neighboring plants of many different species. This fungus is known to exist in Loudoun County—including my own backyard. But research continues on the practical applicability of this fungus as a biocontrol agent for destroying *Ailanthus* stands.

Postscript: While I watch the *Ailanthus* die around me, my American beech remains uninfected, and my Valley Forge elm has reached a healthy 25 feet in height. Perhaps I will add a Dunstan chestnut next. But I will continue to wait before planting a native ash tree.



***Ailanthus altissima* infected by *Verticillium nonalfalfae*.**
Photo: David Rohrbach

Garden with Nature in Mind this Fall

Barbara De Rosa-Joynt, Loudoun County Extension Master Gardener



Yard waste bags at curb. Photo: [Steve Nelson CC BY-NC-ND 2.0](#)



Photo: Barbara De Rosa-Joynt

Many homeowners are becoming more aware of the importance of supporting pollinators and other wildlife that make their homes alongside ours. Nevertheless, every fall we see landscaping companies and home gardeners alike removing every bit of vegetation from ornamental flower beds, not to mention lawns, leaving behind swaths of bare mulch and turfgrass. Planting pretty flowers for pollinators and then stripping your yard clean of vegetation in the fall can inadvertently harm the very creatures you have been helping all season by accidentally sending them off to the landfill. Vegetable gardens need a good cleanup to avoid the spread of diseases, but ornamental beds are another matter and can and should be treated differently.

The actions we take—or don't take—in our gardens can help increase the odds of wildlife surviving the winter. According to the Xerces Society for Invertebrate Conservation, one of the most valuable actions you can take to help pollinators and other wildlife is to provide the shelter they need to survive the winter. It is time to rethink some longstanding traditional practices of fall cleanup for ornamental flower beds, and instead leave healthy perennial plants standing at the end of the growing season and leave fallen tree leaves on your property. To this end, you are encouraged to rethink the notion that leaves and dead plant stems are trash, because they most definitely are not—they are a valuable resource for wildlife and the homeowner. Of course you should remove diseased plants from your garden beds. However, leaves and non-diseased perennial plants are actually habitat that is critical to the wildlife trying to survive the winter on your property. You are encouraged to reimagine what gardens should look like in fall and winter—empty yards are not clean, empty yards are wildlife deserts.

Don't insects and other wildlife leave in the winter anyway? No. While they may disappear from our view, most have not gone far. Some butterflies are known for their amazing migrations to warmer climates, and many birds migrate as well. But in Virginia, most of the butterflies and moths that spend the summer in our yards also spend the winter in our yards, as do our native bees. Thousands of spider species and insect species including fireflies, lacewings, ladybeetles aka ladybugs, assassin bugs, parasitic and predatory wasps, syrphid flies, minute pirate bugs, beetles, and millipedes also overwinter in our gardens, in addition to wood frogs, toads, box turtles, salamanders, and other beneficial creatures. In winter, year-round resident songbirds will continue to forage in our yards looking for food—and their definition of food includes most creatures listed earlier in this paragraph in addition to seeds and berries. But in addition to serving as prey for birds (and in some cases, each other), many of the aforementioned insects provide pest management services in your garden, so you really want to keep these predators thriving so they help maintain a healthy balance in your yard.



Convergent lady beetle (*Hippodamia convergens*). Photo: [Katja Schulz](#)

A study conducted by Max Ferlauto and Karen Burghardt from the University of Maryland examined residential properties in Maryland and found that in a square meter of land where leaves were retained, an average of almost 2,000 insects would emerge by June the following year. Their study revealed that when leaves were removed it reduced the numbers of emerging insects and spiders by 17%, with some groups of species suffering greater losses (moths and butterflies (45%); beetles (24%); and spiders (up to 67%)). Among moth and butterfly species, the biggest impacts were seen on species that overwinter as larvae or in fallen leaves. The more leaf biomass that remained, the more butterflies and moths that would emerge in spring. The study documented over 100 species of butterflies and moths using residential yards as overwintering habitats.



Silver spotted skipper (*Epargyreus clarus*).
Photo: [Toni Genberg](#)



Photo: [David Mizejewski/NWE](#)

There are different approaches to leaving the leaves in your yard, creating a sort of spectrum of effort for the gardener. You can always just leave the leaves wherever they fall since most will shrink down and decompose. While excessive amounts of leaves can cause issues for turfgrass, it is generally okay to leave an inch or two of leaves on your lawn, which will allow the grass to still show through. Many people remove at least some leaves from turf areas, and a good practice is to rake them into flower beds, under shrubbery, or at the base of trees (avoid piling them up against tree trunks though), where they will do the most good for providing shelter and insulation for wildlife and will also look tidy for the benefit of the neighbors.

You can also keep the leaves but move them out of sight by raking them up and piling them in a quiet corner of the yard, which also helps wildlife—try not to pile them too deep though or you begin to lessen the benefit since insects are small and may not be able to extricate themselves from beneath a large pile. Keep in mind that some insects and other wildlife will go through what is called a “wandering phase” where they roam your yard looking for a good spot to tuck away for the winter under the insulation of fallen leaves. To avoid disturbing these creatures before they awake in spring, noted entomologist Dr. Douglas Tallamy of the University of Delaware recommends that you place leaves in a location on your property in the fall and then leave them there forever instead of moving them again to a new location in the spring.



Isabella tiger moth aka wooly bear (*Pyrrharctia isabella*). Photo: Barbara De Rosa-Joynt



Spring beauty (*Claytonia virginica*) and trout lily (*Erythronium americanum*).
Photo: Barbara De Rosa-Joynt

Some people worry that putting leaves in their flowerbeds will prevent spring ephemerals from emerging. Experts say that is not really an issue. It is recommended that you distribute leaves evenly in your beds and should aim for a loose layer no deeper than a few inches (think the two to three inches of leaves that typically fall from trees overhead) over places where you have spring ephemerals growing. Native plants that occur naturally in wooded areas are used to growing through leaves so as long as you don't pile them really high or pack the leaves down, your ephemerals will typically grow just fine.

A yard full of leaves can create a lot of biomass, so some people chop the leaves before spreading them so they take up less room and break down faster—I have done it before too. However, the study by Drs. Ferlauto and Burghardt found that shredding leaves was almost as bad for overwintering species as removing the leaves and bagging them for disposal (which essentially results in 100% mortality), so I don't do that anymore even

though it made my life easier when I did. Similarly, composting the leaves will often kill the species tucked in the leaves from either the heat of a hot compost pile or because the depth of the pile prevents wildlife, particularly small insects, from digging their way out. If you can find ways to leave the leaves (whole) tucked around trees and shrubs, in flower beds, and/or elsewhere on your property it gives the greatest chance possible for insects and other wildlife to survive and thrive on your land.

A complementary action you can take, and one that will help the leaves stay in place, is to leave the stems of non-diseased plants standing in your flower beds. Essentially, if it was a healthy plant during the growing season, leave it be. In addition to helping hold leaves in place in your flower beds, and perhaps more important, you will be retaining the overwintering sites of the butterflies and moths that attach their chrysalides and cocoons to plant stems or leaves. We have many species in Virginia that do this, including multiple species of swallowtail butterflies, and silk moths, among others. Spiders and a range of beneficial insects will often take refuge in stems left standing over the winter, so you are encouraged to consider taking this approach also.

As a bonus, over the winter the birds will eat the seeds of the flowerheads that you have left in place and many look really pretty in frost and snow, adding a decorative element to your garden that is not possible if your beds are a sea of empty mulch.



Left: Black swallowtail butterfly chrysalis (*Papilio polyxenes*). Photo: [Toni Genberg](#); **Center: Frost on *Pycnanthemum tenuifolium*.** Photo: Barbara De Rosa-Joynt; **Right: Eastern towhee (*Pipilo erythrophthalmus*).** Photo: [Kelly Colgan Azar](#)

It can be overwhelming to figure out what you can do to help wildlife on your property, but leaving the leaves in your yard and the stems standing in your flower beds is an easy way to provide shelter and insulation to help them survive the winter. At the end of the day, every little bit helps, so if you can't leave all the leaves in your yard or all the non-diseased stems standing, you are encouraged to leave as many as you can to help pollinators and other wildlife thrive. Your wildlife will thank you.



Graphic showing different methods of removing leaves.
Photo: Homegrown National Park



Extension Master Gardener 2027 Training Class Applications are Open

Barbara Bailey, Community Horticulture, EMG Coordinator

How would you like to make a difference in your community--and our world--through stewardship of the Earth? Virginia Cooperative Extension (VCE) Loudoun County Master Gardeners would like to welcome you to our enthusiastic group of educators who do precisely that! Under the direction of VCE Loudoun County, Extension Master Gardeners (EMGs) are trained to provide environmentally sound horticulture education and programs to the community.

We are accepting applications for the 2027 EMG Volunteer training class starting September 18th. Everyone who has been through our program loves the incredible learning experience we provide. Each volunteer receives a minimum of 65 hours of classroom training, including several labs. Graduating to an Intern after the formal classroom training, there is a hands-on learning internship of 75 hours in selected programming areas to be completed by the end of the year. As a tenured Master Gardener, you then complete a minimum of 25 hours of volunteering and 8 hours of continuing education each year to retain your certification. Many have found several interests within the program!

The 2027 training will be a hybrid class, either real time via Zoom or asynchronous class recordings. Daytime classes are on Tuesdays and Thursdays from 9 a.m. to 12:30 p.m. Do you have daytime commitments? **We have an option to complete the training outside of standard work hours!**

Class begins on **January 16 with an in-person Meet & Greet and ends April 1, 2027 (no classes during Loudoun County Public School spring break).** The fee for the course is \$235 and includes a digital copy of the 500+ page Virginia Gardener Handbook, instructor fees, T-shirts, lab costs and any additional course materials. The training schedule includes classes in basic botany, water quality, fruits, trees and shrubs, vegetables, disease and insect diagnosis, and related natural resource subjects. Some classes are supplemented with lab work.

Award winning VCE Loudoun Master Gardeners provide valuable services to the community including Help Desk and Garden Clinics, Water, Tree and Land Stewardship, a Demonstration Garden, an annual Symposium, Children's Education team, and much more.

For more information about the training program and to apply for the 2027 training class, see:

<https://www.loudouncountymastergardeners.org/become-a-master-gardener/>



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If you are a person with a disability and desire assistance or accommodation, please notify the Loudoun Extension office at 703-777-0373/TDD* during business hours of 8:30 a.m. to 5 p.m. *TDD number is (800) 828-1120.