Trumpet Vine

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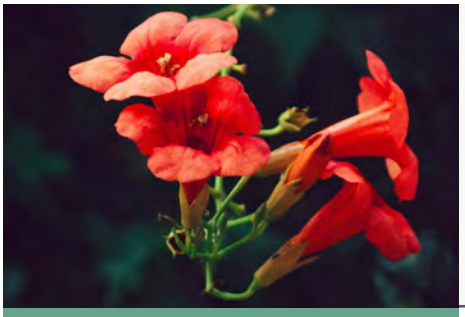

Trumpet Vine

Knowledge for the Community from Loudoun County Extension Master Gardeners

Loudoun County Extension Master Gardener Lecture Series

- Free and open to the public
- 7:00 p.m.
- Hosted by Loudoun County Public Library
- Planned by Loudoun County Master Gardeners

Upcoming Virtual Lectures

- **October 2: The Buzz about the Spotted Lanternfly** by Beth Sastre, VCE Loudoun Commercial Horticulturist
- No lectures held from November through January due to the winter holiday season.

Check the event calendar on our **website** for virtual lecture links and updates on topics and speakers.

Also, visit us on Facebook: **VCE Loudoun Master Gardeners**.

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Message From the Editor

Fall Reminders and an Eye on the Drought

Carol Ivory, Loudoun County Extension Master Gardener

The fall allergy season is upon us, and it's time to remember which pollen causes allergies and which pollen doesn't. The pollen that causes that sneezing, coughing, and runny, itching eyes is pollen that is fine, lightweight, and carried by the wind. In the fall, that's ragweed pollen. Ragweed flowers are inconspicuous greenish flowers that don't have to attract pollinators. The wind moves it and allows you to easily inhale it. Goldenrod pollen grains are large, heavy, sticky, and designed to adhere to the bodies of pollinators so that they can disperse the pollen to the next flower to fertilize it. But there is a small twist to all this. Some people do have an allergy to goldenrod that can be triggered if the person buries their nose in the flowers. Goldenrod flowers do not have a fragrance, so keep your nose out of the goldenrod!

Top photo: Goldenrod flowers
Bottom: Ragweed flowers
Photos provided by Carol Ivory

Fall is the time to plant, and this issue of the Trumpet Vine is full of ideas for planting. It begins and ends with bulbs and contains plenty of incentives to plant perennials for wildlife. But we are in the midst of a drought that started seven weeks ago and shows no sign of ending. Take advantage of the fall plant sales but hold your new plants in spots close to your door so that you can water them as needed and protect them from the deer. Bulbs can be planted as late as mid-November, and other shrubs and perennials can also wait until midfall when perhaps some rain and definitely milder weather provide for better growing conditions. Long range forecasts predict a drier winter. That follows the same pattern as last year. Plan to water throughout the winter when the ground is dry but not frozen. Some trees have already browned, and I have an eight-year-old clethra in my yard that looks like it has died but I'm hoping it will come back next year. I hope we have a wet spring so we'll have another firefly display.

Daffodils: Plant in Fall for Spring Color

Lina Burton, Loudoun County Extension Master Gardener Emeritus

True harbingers of spring in our gardens, daffodils are one of the most reliable bulbs you can plant, with the earliest ones brightening up gray late winter days with their cheery yellow heads waving in the cold winds, defying winter's wrath.

There's a lot to like about daffodils. They're reliable; they increase every year. They are disease and pest resistant, including being resistant to moles and deer. They're versatile and grow well in sunny garden beds or naturalized under trees and in open woodlands, where they can grow and bloom undisturbed for years.

Currently over 25,000 registered cultivars exist, but only about a thousand or so are generally available commercially. They all are descendants of various *Narcissus* species native to Spain, Portugal, northwestern Italy, southern France, and North Africa.

These daffodils with their under carpet of *Chionodoxa* will be followed by peonies on the south and east sides of the smokehouse and by irises, daylilies, and peonies on the north and west sides. They've lived happily together for many years. Photo credit: Lina Burton

Daffodils are divided into 13 divisions, with each division containing flowers with certain floral characteristics in common. Probably the most commonly grown daffodils belong in Divisions 1, 2, and 3. Double daffodils comprise Division 4. Divisions 5 through 13 are called the Upper Divisions. Flowers from these divisions are less commonly seen in gardens, although there are a few old favorites among them, such as Ice Wings, February Silver, and Geranium.

Daffodils like good drainage. These are planted on a steep hillside. Photo credit: Lina Burton

Growing conditions: Daffodils are easy to grow and will do well in any good garden soil. However, if you're creating a new bed specifically for daffodils in clay soil, dig the soil to a depth of 8 to 12 inches and amend it with Leafgro® or "Super Fines" about a month before planting to give the soil time to settle. Daffodils prefer slightly acidic soil (6.0-7.0) but will also grow well in slightly alkaline soil. They prefer sharp drainage and are best if planted on a slope or in raised beds. Most prefer dry summer conditions; if you're growing other plants among your daffodils, choose perennials or annuals that do not require watering.

Division 6 daffodils, descended from *Narcissus cyclamineus*, are the exception to this rule; they prefer moist (but not wet) locations with some afternoon shade in the summer.

Division and propagation: Every year most daffodils produce new bulbs, some more rapidly than others. After a few years, what started out as only one bulb becomes a large clump consisting of many bulbs, some large enough to flower, others still too immature to do so. Eventually they will become crowded, the flowers will start to get smaller, and blooming will decrease. Sometimes you'll even see bulbs pushing up above the soil, trying desperately to find their own growing space. When this happens, it's time to divide the clumps.

Starting in mid-June (while they still have some foliage attached so you can find them), dig the clumps, shake off the dirt, twist off and discard the foliage, and place the bulbs in mesh onion bags (six or seven bulbs to a bag). Turn a hose on the bags to wash them, and place on an old window screen to dry in the sun. I prefer drying in morning sun or afternoon shade on our east-facing porch. Dry for a week or two (turning occasionally) before hanging in a dry, airy, shady spot, such as an open garage, for the rest of the summer. Although some people replant the divided bulbs immediately, there is more of a risk of losing bulbs to basal rot when replanting newly dug bulbs as opposed to bulbs that have dried over the summer. People who show daffodils usually replant in the fall, not in June.

Planting: In the fall, plant daffodils after the soil has cooled to 55°, starting with the miniatures. Mid-October to early-November is perfect. Dig a hole 6 to 8 inches deep, put about ½ to 1 teaspoon of bulb fertilizer in the hole, cover the fertilizer with a 2-inch layer of soil, place the bulb on top of the soil, and fill the hole with soil. Standard bulbs are planted with their tops about four inches below the soil. Miniatures are planted with their tops no more than three inches below the soil. For an attractive display the next year, plant in clumps of about five bulbs per clump, planting each bulb in the clump about 4 to 5 inches apart and each clump about 12 inches apart.

After planting, it's very helpful to cover the bed with pine bark mulch not only to prevent weeds, but to prevent mud splashing on the flowers from spring rain.

Buying bulbs: Bulbs are widely available in garden centers and big box stores in the fall. Or, if you want specialty bulbs, you can buy from breeders, ordering in late spring or early summer for best selection. (See the American Daffodil Society website at https://daffodilusa.org for a list of reputable growers.) When buying from growers you should know that sometimes they publish only an unillustrated, typed list of bulbs; you'll need to look elsewhere to see what the daffodils look like. An excellent pictorial reference is https://www.daffseek.org, which has photographs of thousands of daffodils and extensive information about each one. Locally, the Washington Daffodil Society (https://thewashingtondaffodilsociety.org) sponsors an annual bulb sale for its members and, at their fall meeting, also have a free bulb exchange.

Ongoing care: After blooming, wait at least six weeks before cutting back the foliage. Don't braid or try to "neaten it up." After six weeks, you can cut the foliage off and dig if they need dividing. Unless you're showing daffodils, they don't need to be watered or fertilized. If you're going to show, water them in March and April if there is less than one inch of rainfall per week and again in the fall for a few weeks.

There are several different methods of fertilizing, but generally, broadcasting 5-10-10 or a good bulb fertilizer such as Bulb-tone around the plants in the fall is helpful but not necessary unless you're showing. If you're growing flowers for show, fertilizing again in early spring is helpful, using 0-10-10 or 0-0-50. In any case, **do not** use manure or any other high-nitrogen fertilizer on or around daffodils.

Daffodils and catmint surround and protect a small *Nyssa sylvatica* (black gum) from the local deer herd. The daffodils in the bed near the driveway will be followed by iris and peonies. Photo credit: Lina Burton

In addition to their early spring beauty, one of the joys of growing daffodils is their easy care. Unless you're showing, you don't absolutely **have** to do any of this to have lovely

flowers! Just dig holes in your flower bed or border, plant the bulbs, and walk away. In all likelihood, they'll be just fine and you'll have lots of beautiful daffodils for years to come.

Daffodils Recommended for Outstanding Garden Performance

An informal survey of a few Washington Daffodil Society members several years ago resulted in the following list of daffodils recommended for outstanding garden performance in our area. Most of these flowers are Wister Award Winners, which must meet specific criteria, including: must be a good grower and flower well, must have long-lasting blooms of good color on tall stems, and must be showy at a distance. Foliage must be vigorous and disease resistant. Bulbs must not multiply so fast that they require dividing in only a few years. Emphasis is on garden performance, although some are also useful for show. Many of these are available locally in the fall, and all are available from catalogs. They are all inexpensive.

Note about the coding: The number represents the division number. The first letter (before the hyphen) is the color of the perianth (petals); the second set of letters (after the hyphen) represents the color of the corona (cup). Thus, Monal, 2y-r, is from Division 2 and has yellow petals and a red cup.

Trigonometry
Photo credit: Kirby Fong, from https://daffseek.org

Seagull
Photo credit: Kirby Fong, from https://daffseek.org

Irish Affair
Photo credit: Ralph Sowell, from https://daffseek.org

Early

February Gold, 6y-y. Blooms extra early.

Monal, 2y-r. Wister Award Winner.

Rapture, 6y-y. A great daffodil. One of the best. Lasts a long time in the garden. Good for cutting and for show. Only 10-12 inches tall. Wister Award Winner.

Early-midseason

Trigonometry, 11a w-p. I've had Trigonometry in my garden for 23 years and it always puts on a show.

Ice Follies, 2w-w. Opens with a yellow cup, fades to white. Wister Award Winner.

Ceylon, 2y-o. Wister Award Winner.

Saint Keverne, 2y-y. Wister Award Winner.

Seagull, 3w-r. A lovely, airy daffodil, bred before 1893, which continues to delight in the garden. Protect from full sun.

Midseason

Irish Affair, 2 w-y. A great blooming daffodil in my garden.

Falconet, 8y-r. Wister Award Winner

Earlicheer, 4w-y. A very popular double.

Mount Hood, 1w-w. The most popular white. Make sure it has good drainage.

Bravoure, 1w-y. Wister Award Winner.

Chromacolor, 2w-p. Wister Award Winner.

Sweetness, 7y-y. Wister Award Winner.

Petrel, 5w-w. A sweet little daffodil for the front of the bed, not a miniature, but still small. Each bulb produces up to 7 pure white flowers per 12" stem.

Petrel
Photo credit: Tony James, from https://daffseek.org

Late-midseason

Great Gatsby, 2y-r. A clump makes a stunning statement in the garden.

Stratosphere, 7y-o. Wister Award Winner.

Accent, 2w-p. Wister Award Winner.

Tahiti, 4y-o. Extremely showy and strong with double heads held up well. Wins at shows. Wister Award Winner.

Fragrant Rose, 2w-gpp. Wister Award Winner.

Hillstar, 7yyw-yww. Wister Award Winner.

Merlin, 3w-yyr. Wister Award Winner.

Kokopelli, 7y-y. Wister Award Winner.

Misty Glen, 2w-gww. A really nice white. Wister Award Winner.

Phalarope, 6w-y. Makes a showy clump in the garden.

Greaty Gatsby
Photo credit: Kirby Fong, from https://daffseek.org

Late

Salome, 2w-ppy. Wister Award Winner.

Intrigue, 7y-w. Wister Award Winner.

Tripartite, 11a y-y. One of the last to bloom; very late. Flowers hold up well and plant is showy for a long time. Wister Award Winner.

Quail, 7y-y. Wister Award Winner.

Dreamlight, 3w-gwr. Wister Award Winner.

Cheerfulness, 4w-y. A little too late for most shows, but a pretty flower.

Yellow Cheerfulness, 4y-y. Also too late for shows, but pretty.

Sir Winston Churchill, 4w-o. A pretty little flower. One of the very latest to bloom.

Phalarope
Photo credit: Tom Stettner, from https://daffseek.org

Attracting Hummingbirds to Your Yard

Barbara De Rosa-Joynt, Loudoun County Extension Master Gardener

Whether you call them hummingbirds, flying jewels, sun gems, hummers, warriors, or something else, you can't help but smile when you see (or hear) a hummingbird visiting your garden. I love the humming sound their wings make—like a teeny fan boat—and the soft beepity-beep of their calls as they move about my yard.

Female ruby-throated hummingbird
Photo credit: ksblack99

There are 366 species of hummingbirds, and all are found exclusively in the Western Hemisphere, from as far north as Alaska to the southernmost tip of South America, with the greatest number residing in Central and South America. The United States is home to 15 species with 9 others occasionally straying far enough north to be spotted here. The only species breeding in Virginia, and in the eastern United States and Canada for that matter, is the ruby-throated hummingbird (*Archilochus colubris*). They also have the largest breeding range of any North American hummingbird, spanning nearly half of the United States. You can see the National Audubon Society migration map here.

Adult male ruby-throated hummingbird
Photo credit: Leos Kral

Hummingbirds are sexually dimorphic, meaning males and females look distinctly different. Ruby-throated hummingbird males have a red gorget—small, stiff, highly reflective red feathers on their throat that flash spectacularly bright in sunlight but can look dark, even black, depending on the light. This patch of feathers makes them easy to tell apart from the females, which have a white throat, sometimes streaked with buff or gray. Juvenile birds can be hard to tell apart, though young males sometimes have darker streaking on their throat, or the tiniest bit of red coloring.

These winged jewels migrate to Mexico or Central America in the winter, leaving Northern Virginia in late August to September, and returning here around mid-April, with males migrating first in each direction. Hummingbirds use changes in the length of day and angle of the sun as their cues to migrate.

You can attract hummingbirds whether you have a small patio garden or a large property. In addition to food, they also need places to nest and sources of water for bathing. Hummingbird nests are tiny—around 1.5 to 2 inches in diameter and about 2 inches deep—made of materials like strands of spiderweb silk, with fluff from dandelions, thistles, cotton, and feathers to line the walnut-sized nests, and moss, lichens, and other plant materials to camouflage them. Ruby-throats generally prefer to nest in trees and like to perch on tree branches. Hummingbirds receive sufficient fluids from nectar so they don't need a birdbath for drinking, but they like a

Female ruby-throated hummingbird on nest. Photo credit: Courtney Celley/ USFWS (public domain)

mister on a birdbath or the spray from a fountain for bathing; sometimes you will even see them zipping through a sprinkler for a bath.

Please remember that if you want to attract hummingbirds to your yard, it is important to refrain from using pesticides on your property. According to noted entomologist Dr. Doug Tallamy, 80 percent of hummers' diets, including what adults feed their babies, consists of insects like mosquitoes, gnats, flies, small bees, spiders, beetles, caterpillars, and aphids. If you poison or kill the hummingbirds' protein sources in an effort to kill ticks, adult mosquitos, or other insects in your yard, you remove food that is critical for adult and young ruby-throats to survive on your property. Please make your yard a safe space for them to thrive.

While some people put out hummingbird feeders, you are encouraged to plant native and other appropriate plants to support their need for nectar instead. The bonus: better and more diverse nutrition for your birds and no worries about messy mixes, forgetting to refill the feeder, needing to replace sugar water daily in hot weather to avoid it spoiling, or attracting ants and wasps. If you feel you must have a feeder, please make sure to keep it scrubbed clean and to frequently provide fresh sugar water. Your garden plants can become the only nectar feeder they need when you provide a steady supply of nectar by ensuring you have hummingbird-friendly flowers in bloom throughout the growing season.

Juvenile male ruby-throat on firespike
Photo credit: Susan Young

Hummingbirds are generally attracted to brightly colored flowers. They like red blossoms but will use flowers of other colors and enjoy plants growing in sun and shade. The shape of the flower is the most important thing—they typically use tubular flowers, deploying their long beaks and tongues to sip nectar. Sometimes they harvest insects from those same blossoms, and they have been known to steal insects from spider webs as well. To attract and keep hummingbirds around, it is important to ensure you have food available—insects **and** nectar—from the time they arrive from their migration in mid to late April until they depart for fall migration in late August and early September.

So, what to plant to help provide the 20 percent of a hummingbird's diet that is from nectar? Many hummingbird-friendly options exist, but if you only have room for three, the best three to plant are coral honeysuckle (*Lonicera sempervirens*), eastern red columbine (*Aquilegia canadensis*), and cardinal flower (*Lobelia cardinalis*). These three native plants combined will provide a continuous source of nectar to cover the entire timeframe that ruby-throats are with us in Virginia. And if you only have room for one plant, coral honeysuckle is the top recommended plant for attracting hummingbirds. This native honeysuckle begins to bloom right around the time ruby-throated hummingbirds arrive in Virginia, and it keeps blooming throughout the growing season. Eastern red columbine blooms in spring to provide another early source of nectar into the beginning of summer, and cardinal flower blooms starting in June to July and lasts until around when the hummers begin to head south at the end of August into September. More about these and a number of other hummingbird-friendly flowers below, listed in roughly chronological order by bloom time.

Note: Plants marked with an asterisk can be found at the Loudoun County Master Gardeners' Demonstration Garden at Ida Lee Park in Leesburg. Native status designated per the Digital Atlas of the Virginia Flora.

Eastern Red Columbine (*Aquilegia canadensis*)*

Blooms: red and yellow, March-May

Size: 1 to 3 feet high and wide

Light: part sun

Moisture: average

Form: short-lived perennial that replenishes itself by actively reseeding

U.S. native status: native to Loudoun County

Easter Red Columbine
Photo credit: Grayson Smith/USFWS (public domain)

Foxglove beardtongue, smooth penstemon (*Penstemon digitalis*)*

Blooms: white, April-June

Size: 1 to 5 feet high, 2 to 3 feet wide

Light: full sun to part shade

Moisture: average to dry

Form: perennial

U.S. native status: native to the central and eastern United States; native status in Virginia, including Loudoun County, is unclear

Crossvine (*Bignonia capreolata*)

Blooms: orange-red, April-June, may rebloom

Size: 30 to 50 feet high and 6 to 9 feet wide

Light: full sun

Moisture: average

Form: perennial vine

U.S. native status: native to Loudoun County

Note: will increase in width by suckering but can be controlled by removing root suckers and pruning; it needs suitable location with sturdy structural support; it is not considered as aggressive as trumpet creeper vine

Crossvine
Photo: Barbara De Rosa-Joynt

Indian pink (*Spigelia marilandica*)

Blooms: red and yellow, April-July, may rebloom thereafter

Size: 1 to 2 feet high and 1 foot wide

Light: part to full shade

Moisture: average

Form: perennial

U.S. native status: not confirmed as native to Virginia; native to Tennessee and southeastern United States

Coral honeysuckle, trumpet honeysuckle (*Lonicera sempervirens*)*

Blooms: reddish-orange, April-September

Size: 8 to 15 feet high and 3 to 6 feet wide

Light: full sun to part shade

Moisture: average

Form: perennial vine

U.S. native status: native to Fairfax County but not Loudoun County

Female ruby throated hummingbird on coral honeysuckle
Photo credit: Janet HIll

Bleeding heart (*Dicentra eximia*)

Blooms: pink and white, May-June

Size: 1 to 2 feet high and wide

Light: part sun to full shade

Moisture: average

Form: perennial

U.S. native status: native to Loudoun County

Beebalm
Photo credit: Sonnia Hill

Beebalm (*Monarda didyma*)

Blooms: red, May-July

Size: 1 to 5 feet high and 2 to 3 feet wide

Light: full sun to part shade

Moisture: average to wet

Form: perennial

U.S. native status: native to Loudoun County

Common milkweed (*Asclepias syriaca*)

Blooms: light pink, May-August

Size: 2 to 7 feet high and 3 to 5 feet wide

Light: full sun

Moisture: average

Form: perennial

U.S. native status: native to Loudoun County

Note: aggressive spreader; needs suitable location

Common milkweed
Photo: Barbara De Rosa-Joynt

Catmint, nepeta (*Nepeta spp.*)

Blooms: lavender, May-September

Size: 1 to 2 feet high and 2 feet wide (depends on species)

Light: full sun to part shade

Moisture: average

Form: perennial

U.S. native status: not native

Large firecracker plant (*Cuphea* hybrid 'Vermillionaire')

Blooms: red, May-frost

Size: 18 to 28 inches high and 18 inches wide

Light: full sun

Moisture: average

Form: annual

U.S. native status: not native

Note: this is the absolute favorite plant of my local hummingbirds, they visit it all day long

Egyptian starflower, Pentas (*Pentas lanceolata*)

Blooms: red, pink, white, or lavender, May-frost

Size: 1 to 2 feet high and 2 feet wide

Light: full sun to part shade

Moisture: average

Form: annual

U.S. native status: not native

Bacopa (*Sutera cordata*)

Blooms: white, pink, or blue, May-frost

Size: 4 to 6 inches high and 1 to 2 feet wide

Light: full to part sun

Moisture: average

Form: annual

U.S. native status: not native

Lantana (*Lantana camara*)

Blooms: red, pink, orange, white, or purple, May-frost

Bacopa
Photo: Barbara De Rosa-Joynt

Size: 12 to 16 inches high and wide

Light: full sun

Moisture: average

Form: annual

U.S. native status: not native

Crocosmia (*Crocosmia spp.*)

Blooms: red, June-July

Size: 2 to 3 feet high and 2 feet wide

Light: full to part sun

Moisture: average

Form: perennial

U.S. native status: not native

Buttonbush (*Cephalanthus occidentalis*)*

Blooms: white, June-August

Size: 5 to 12 feet high and 4 to 8 feet wide

Light: full sun to part shade

Moisture: average to wet

Form: shrub, can be pruned into small tree

U.S. native status: native to Loudoun County

Note: tolerates flooding

Buttonbush
Photo: Barbara De Rosa-Joynt

Wild bergamot (*Monarda fistulosa*)*

Blooms: pink, June-August

Size: 2 to 4 feet high and 1 to 2 feet wide

Light: full to part sun

Moisture: average to dry

Form: perennial

U.S. native status: native to Loudoun County

Wild bergamot
Photo: Barbara De Rosa-Joynt

Swamp milkweed (*Asclepias incarnata*)

Blooms: pink, June-August

Size: 1 to 5 feet high and 3 to 4 feet wide

Light: full sun

Moisture: average to wet

Form: perennial

U.S. native status: native to Loudoun County

Note: tolerates flooding

Nodding onion (*Allium cernuum*)

Blooms: white to pink, June-August

Size: 1 to 3 feet high and 1 foot wide

Light: full sun

Moisture: average

Form: perennial

U.S. native status: native to Loudoun County

Brazilian verbena (*Verbena bonariensis*)*

Blooms: purple-pink, June-frost

Size: 2 to 4 feet high and 2 to 3 feet wide

Light: full sun

Moisture: average

Form: tender perennial

U.S. native status: not native

Note: northern VA is the northernmost range of verbena and individual plants may not return but the plant freely reseeds and will replenish itself

Brazilian verbena
Photo: Barbara De Rosa-Joynt

Cleome, spider flower (*Cleome hasslerana*)

Blooms: pink and white, June-frost

Size: 2 to 6 feet high and 3 to 4 feet wide

Light: full sun

Moisture: average

Form: annual

U.S. native status: not native

Note: aggressively reseeds, remove seed capsules if this is not desirable

Canna, canna lily (*Canna spp.*)

Blooms: red, yellow, pink, or white, June-frost

Size: 2 to 6 feet high and 1 to 2 feet wide

Light: full sun to part shade

Moisture: average

Form: perennial

U.S. native status: not native in Virginia

Note: canna do not reliably overwinter in Northern Virginia, but rhizomes can be dug up and stored inside until spring

Trumpet creeper, trumpet vine (*Campsis radicans*)

Blooms: reddish orange, July-August

Size: 30 to 40 feet high and 4 to 10 feet wide

Light: full sun

Moisture: average

Form: perennial vine

U.S. native status: native to Loudoun County

Note: very aggressive spreader, needs suitable location with sturdy structural support; tolerates drought once established

Butterfly weed (*Asclepias tuberosa*)*

Blooms: orange, July-September

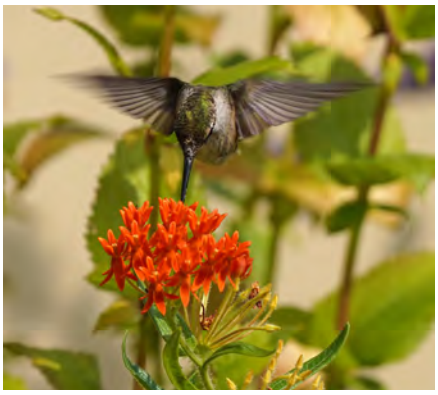
Size: 1 to 1½ feet high and wide

Light: full sun

Moisture: average to dry

Form: perennial

U.S. native status: native to Loudoun County



Ruby throated hummingbird on butterfly weed
Photo credit: Courtney Celley/ USFWS (public domain)

Cardinal flower (*Lobelia cardinalis*)

Size: 1 to 3 feet high and 2 to 3 feet wide

Light: part sun to shade

Moisture: average to wet

Form: perennial

U.S. native status: native to Loudoun County

Note: tolerates flooding

Ruby throated hummingbird on cardinal flower
Photo credit: Toni Genberg

Obedient plant (*Physostegia virginiana*)

Blooms: pink, lavender, or white, August-November

Size: 3 to 4 feet high and 2 to 3 feet wide

Light: full sun to part shade

Moisture: average to wet

Form: perennial

U.S. native status: native to Fairfax County but not Loudoun County

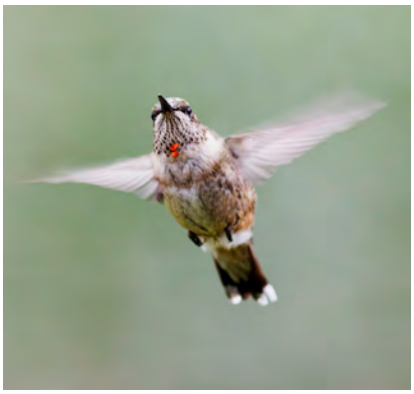
Note: can be aggressive, but shallow roots are easy to remove to prevent spreading if desired

For information on where you can buy native plants, please see the article on great late-blooming native plants in this issue of the Trumpet Vine.

Fun facts about hummingbirds:

1. **Flexible accommodations:** Hummingbird nests are only about the size of a walnut but can stretch to accommodate the babies as they grow.
2. **Short but bendy:** Ruby-throated hummingbirds have very short legs, so short that they cannot walk or hop, they can only sort of shuffle along a perch. However, they are still limber enough that they can scratch their head or neck by raising one of their feet over their wing.
3. **Energetic:** Hummers are known to have a very high metabolism, which supports their tremendously fast wing beats—up to 90 beats per second—and near-constant movement.
4. **Big appetite:** Hummingbirds need to eat frequently to support all this movement, and they eat about half of their body weight in insects and nectar daily to do so, eating every 10 to 15 minutes and visiting 1,000 to 2,000 flowers per day.
5. **Smart:** Hummingbirds have excellent memories and can recall which flowers they have visited, and they know how long it takes for nectar to replenish—a good reason to ensure that your plants are well watered—and even recognize specific food sources in their territory.
6. **Small but mighty:** Ruby-throats are tiny, growing to only 3.5 inches tall and weighing less than ¼ ounces (7 grams), a little more than a penny. Despite their diminutive size, they can travel up to 20 miles a day over land, and during migration can fly nonstop for 18 to 20 hours across the Gulf of Mexico, a trip of about 500 miles.
7. **Speedy:** Hummingbirds can fly 25 to 30 miles per hour, and some males have been recorded at speeds close to 60 miles per hour.

Ruby throated hummingbird on mexican sunflower
Photo credit: abbeyprivate (public domain)



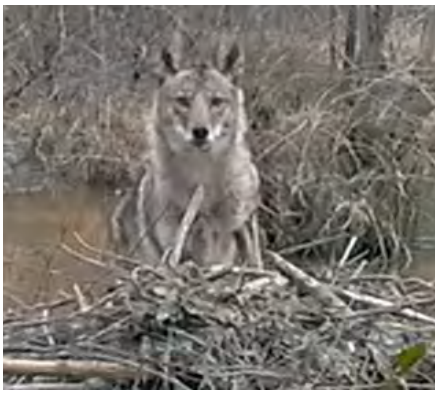
Juvenile male ruby throated hummingbird
Photo credit: Shenandoah National Park (public domain)

8. **Doing the work:** Despite popular myths, hummingbirds do not migrate on the backs of geese or other birds, though they sometimes fly over water in flocks mixed with other birds. How can we be sure? Geese fly at high altitudes, around 20,000 feet off the ground, while hummers fly just over the treetops or low over water. Hummingbirds would not be able to survive at the heights that geese and many other birds fly.

Coyotes in Northern Virginia

Heather Keith, Loudoun County Extension Master Gardener

Coyotes are wild animals native to North America. They are found from Alaska southward into South America. These are the original "western coyotes." Before settlers from Europe arrived in the colonies, wolves dominated the eastern seaboard, and coyotes dominated the Great Plains. The much larger wolves kept the coyotes from spreading eastward. Coyotes have now expanded their range and can be found throughout the continental United States and Canada. Coyotes are thriving in diverse environments from rural landscapes to urban areas. But there is now a physical and a DNA distinction between western and eastern coyotes.



Eastern coyote
Photo credit: Occoquan Bay National Wildlife Refuge webcam.

As European settlers moved westward, wolves were hunted to near extinction, and the dwindling wolf population saw western coyotes as potential mates. A coyote-wolf hybrid began to inhabit the northeastern United States. Sometimes called a coy-wolf or eastern coyote, this hybrid has distinct physical differences from the western coyote. It has a larger jaw, smaller ears, longer legs and body, and a bushier tail. Western coyotes range from 3 to 4 feet tall and weigh 20 to 25 pounds. Eastern coyotes are 4 to 5 feet tall and weigh 30 to 50 pounds. DNA testing shows that eastern coyotes, on average, are 64 percent western coyote, 26 percent wolf, and 10 percent domestic dog.

The mid-Atlantic states were the last to be inhabited by eastern coyotes. These animals came from the north via Canada and Michigan and from the south via Texas and Florida, arriving in Virginia roughly in the 1980s or early 1990s.

How can we coexist with coyotes? We already do. Unlike the inquisitive and friendly fox who strolls down the sidewalk and steals shoes off porches, coyotes are like ghosts who live among us, but we never see them. They prefer areas with forests and large parks and try to avoid residential areas. They like to stay in out-of-the-way areas as much as possible, well away from the eyes of humans. It is not likely that you will stumble upon their homes while hiking or walking through your neighborhood because their dens are usually tucked away in parks, washes, culverts, golf courses, preserves, and similar spaces. They will move their dens if they feel threatened to protect themselves and their litters.

Coyotes mate for life and are 100 percent monogamous. The mates work together to raise their litters. Coyotes are very social and may live as part of a pack, which usually consists of an alpha male and an alpha female, one or two of their offspring from an earlier litter, plus their current litter of pups. They may also welcome a single traveler into their pack.

There are also coyotes that prefer to live a solitary life. Coyotes that lose their mates often live alone. Studies have shown that between one-third and one-half of coyotes are solitary. They are usually between six months and two years of age.

Coyotes are territorial and will keep other unrelated coyotes out of their range. Ranges are usually anywhere between two square miles and ten square miles. Territories are marked with urine and feces, and it is

believed that howling may serve to indicate occupancy of a territory. Coyotes with their remarkable intelligence and adaptability can survive and thrive in a small territory. They are cunning and swift with keen senses, making them very efficient hunters.

Coyotes howling
Photo credit: Occoquan Bay National Wildlife Refuge webcam

Coyotes can be active at any time of the day but are primarily nocturnal and are most likely to be seen around dusk and dawn. When a coyote is seen during daytime hours, it is often assumed the animal is ill, injured, or overly bold. There is not necessarily anything wrong or odd about this behavior. During spring and summer, daytime sightings will rise because this is the time pups are born and the adult coyotes need to find more food and so they may be spotted more often.

They are considered to be opportunistic omnivores and will eat what is available to them. Their preferred diet is 90 percent meat, with an abundance of small mammals, garbage, livestock, or even pets. The most common food of eastern coyotes are small rodents (42 percent), fruit (23 percent), deer (22 percent), and rabbit (18 percent). The larger eastern coyotes are able to kill young or injured deer. Coyotes also prey on Canada geese eggs. Studies have shown that they do not rely on pets or garbage for their diets, but occasionally they will prey on cats and even small dogs. However, this is not the usual case. Note that coyotes can run up to 40 miles per hour and can outrun any dog. Coyotes play a beneficial role in keeping down the population of deer, rodents, and Canada geese.

Just as you would do to avoid bears, remove food to keep coyotes away. Coyotes have a natural fear of humans but will lose that fear if they are being fed. Pet food needs to be removed from porches; trash contained; scattered seeds below a bird feeder removed as well as fallen fruit. Also remove water sources. Becoming comfortable in a neighborhood can cause a coyote to lose its natural fear and become bolder and more visible during the daytime. They will move to another territory or area if there is no food and if they are regularly frightened.

Coyotes enjoy no legal protection. They can be shot in any Virginia county where gun laws permit it. Despite offering bounties in some counties, trapping, killing, or relocating coyotes does not seem to have any effect on reducing the number living in an area. Trapping causes severe injuries, pain, and suffering. Traps are cruel and inhumane not only for the coyote but for other wildlife, pets, and even children who might be inadvertently caught in a trap.

Eastern coyote
Photo credit: Alan Mitchnick/Occoquan Bay National Wildlife Refuge

The easiest way to reduce the urban coyote population is to allow existing coyotes to work out their own territories, which in turn stabilizes the population. There will never be more coyotes in an ecosystem than the ecosystem can support so an area will never become overpopulated with coyotes. People must remove all human related food sources.

With fewer resources a coyote will increase its territory, pushing out other coyotes and reducing the overall population.

Don't panic if you see a coyote near your home. Coyotes rarely attack people, but it's a good idea to keep an eye on your pets and frighten the coyote with loud noises. As long as the coyote's behavior is normal, you shouldn't be concerned. But there are times when it may become necessary to remove them when they lose their natural wariness. Removal at this point should be left to animal control officers. If a coyote seems aggressive or unafraid of people, contact local animal control immediately.

Coyotes may live up to 21 years in captivity but the wild coyote rarely lives more than 6 to 8 years. In the wild, they usually die from infectious diseases such as mange, canine distemper, and rabies.

Our goal is to coexist with the coyote in our home settings. They are here to stay and removing them is not an option.

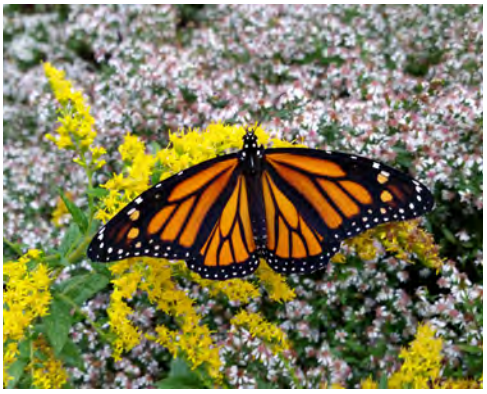
Great Late-Blooming Native Plants

Barbara De Rosa-Joynt, Loudoun County Extension Master Gardener

We all want our gardens to be full of flowers as long as possible, but doing so is not just important to humans; it is vital to the survival of monarchs and other migratory butterflies, as well as nonmigratory butterflies and queen bumblebees and other bee species that remain on your property. At this time of year, they all need a diet that has lots of protein (pollen) and carbohydrates (nectar), which are critical for fueling up for both those species getting ready to migrate and those preparing to overwinter in your garden.

Bumblebee gyne on asters
Photo: Barbara De Rosa-Joynt

So how can you help these pollinators and have beautiful flowers to look at too? Sure, there are pretty annuals that bloom late into the season and those that can even tolerate some cold snaps; however, according to the National Wildlife Federation, studies have shown that native perennials provide pollinators with significantly more pollen and nectar than annual plants. We all want pollinators to have the quality and quantity of nutrition required to produce the fat reserves they need to fly thousands of miles or sustain themselves while they are tucked safely underground or under leaf litter in our gardens until spring. In our area we are fortunate to have an autumn that sometimes extends quite late and a number of late-blooming natives can shake off early cold spells and keep blooming until frost.



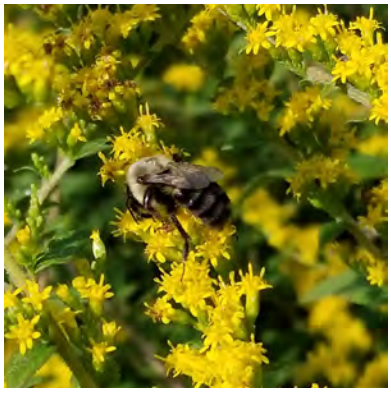
Monarch on asters and goldenrod
Photo credit: Barbara De Rosa-Joynt

Note: Plants marked with an asterisk can be found at the Loudoun County Master Gardener's Demonstration Garden at Ida Lee Park in Leesburg. Native status designated per the Digital Atlas of the Virginia Flora.

First, three of the keystone genera in our area—goldenrods, asters, and sunflowers—have late blooming species that are valuable for pollinators. They all include many wonderful species, but I am highlighting just two late bloomers from each, though I highly recommend considering adding others from these genera to your yard as well since all three are pollinator powerhouses and important host plants.

***Goldenrod (*Solidago spp.*):** There are more than 100 species of goldenrod native to North America, with 50 native to Virginia and 17 of those native to Loudoun County. There are plants for sun, shade, and conditions in between. Goldenrod is a pollinator magnet and provides a rich source of pollen and nectar late into the season. As many people now know, goldenrod does not cause seasonal allergies—it has sticky pollen that needs pollinators to move it so unless you poke your nose into its flowers it will not make you sneeze, and maybe not even then. The real culprit for those fall allergies is ragweed (*Ambrosia artemisiifolia* and *Ambrosia trifida* are found in Northern Virginia), which has lightweight pollen in its inconspicuous flowers and those flowers are **wind pollinated** and bloom at the same time as goldenrod. So if you didn't already know, now you know. Please do plant goldenrod! Two awesome late-blooming goldenrods that

are native to Loudoun County are **wrinkle-leafed or rough-stemmed goldenrod (*Solidago rugosa*)** and **wreath or blue-stemmed goldenrod (*Solidago caesia*)**. Wrinkle-leafed goldenrod grows from 1 to 6½ feet tall, and its yellow flowers dazzle from August-October or as late as November. This species spreads by rhizomes and can be aggressive, but you will forgive it for that because its flowers will be completely covered with very happy pollinators if you plant it in full sun to part shade. Wreath goldenrod spreads more modestly, growing to 2 to 3 feet tall and blooming yellow from August to October in full sun to part shade.



Wrinkle-leafed goldenrod
Photo: Barbara De Rosa-Joynt

*__Aster (*Symphyotrichum spp.*):__ There are some 180 species of aster native to North America, with 34 native to Virginia and 16 species native to Loudoun. There are options for sun and shade, dry and moist, and in colors including white, blue, pink, and purple. They are floriferous plants—a single plant can have 100 daisy-shaped flowers. They are all fabulous, but among the latest to bloom are the striking **aromatic aster (*Symphyotrichum oblongifolium*)** and **frost aster (*Symphyotrichum pilosum*)**, and both are native to Loudoun County. Aromatic aster provides a stunning show with purple-blue flowers on 1- to 3-foot stems, flowering abundantly from September to October or sometimes November in full sun to part shade. Frost aster blooms late, growing 2 to 4 feet tall in full sun to part shade featuring white flowers with yellow centers that turn reddish-purple, blooming from September to November, and sometimes even into December. In some years it may start blooming too late to help your monarchs but since it is one of the last plants flowering before a heavy frost, it is an important source of very late nectar and pollen for many pollinators fueling up prior to overwintering in your garden.

Aromatic aster
Photo credit: Scott Zona

*__Sunflower (*Helianthus spp.*):__ There are 20 gorgeous native sunflowers that are native to Virginia, and five of those are native to Loudoun as well. Sunflowers typically feature cheerful yellow blooms and **woodland sunflower (*Helianthus divaricatus*)** and **thin-leaved sunflower (*Helianthus decapetalus*)** are two that bloom later in the season and are native to Loudoun County. Woodland sunflower blooms July to September, growing 2 to 6 feet tall in part shade and can be vigorous in the right conditions. Thin-leaf sunflower grows about 3 to 5 feet tall in part shade, and its yellow blooms will brighten your garden and support your pollinators from July to October. Thin-leaf sunflower is also aggressive, so site either of these beauties thoughtfully. Your pollinators will thank you.

Woodland sunflower
Photo credit: Toni Genberg

More excellent options to support late-flying pollinators include:

*__Black-eyed Susan (*Rudbeckia hirta*):__ Many species of black-eyed Susans exist, and they can be difficult

to tell apart. Rudbeckia hirta is a common one in our area, and it blooms from June to October with cheery yellow flowers with a black or brown center on plants growing 1 to 3½ feet tall in full sun to part shade. Black-eyed Susan is native to Loudoun County.

Black-eyed Susan
Photo credit: Toni Genberg

Bottle gentian (*Gentiana clausa*) has fascinating blue flowers that never actually open, blooming in full sun to part shade on 1- to 2-foot tall plants in August to October. The only pollinators strong enough to pry open these tightly closed flowers are bumblebees, and it is really neat to watch them doing so in your garden. This plant is not native to Loudoun County, but is native to Fairfax, Fauquier, and Prince William Counties and will add a pretty pop of blue to your autumn garden.

Cutleaf coneflower
Photo: Barbara De Rosa-Joynt

*__Cutleaf coneflower (*Rudbeckia laciniata*)__ grows 3 to 10 feet tall in full sun to part shade, featuring yellow flowers with green centers mid-July to October. This plant can be somewhat assertive in optimal growing conditions, but it really makes a statement and its height lends itself to use for screening or a stately back-of-the-bed plant. Native to Loudoun County.

Great blue lobelia (*Lobelia siphilitica*) boasts spikes of gorgeous deep blue tubular flowers blooming August to October, growing 1 to 5 feet tall in full sun to part shade. Bumblebees really love this plant in my garden. Native to Loudoun County.

*__Hollow joe pye weed (*Eutrochium fistulosum*)__ has lovely soft pink fuzzy clumps of tiny flowers and will be very popular with your local butterflies and bees when it blooms from July to September or October. Mine are frequented by my local tiger swallowtails, with several visiting at a time when in bloom. Joe pye will grow 4 to 8 feet tall in full sun to part shade. Native to Loudoun County.

Joe pye weed
Photo credit: Kerry Woods

Mistflower (*Conoclinium coelestinum*): These fuzzy purple flowerheads bloom July to October on plants growing 2 to 3 feet tall in full sun to part shade. Mistflower will assertively move to fill in areas, but it is shallow-rooted and easily dug up and relocated elsewhere when needed, and it brightens up shady spots in my garden. Native to Loudoun County.

*__NY ironweed (*Vernonia noveboracensis*):__ This beauty features deep magenta-purple flowers August to October on plants that are 3½ to 8 feet tall in full sun to part shade. This is yet another butterfly magnet in my garden and is a particular favorite of my tiger swallowtails and monarchs. Native to Loudoun County.

NY ironweed
Photo: Barbara De Rosa-Joynt

*__Sneezeweed (*Helenium autumnale*):__ Sneezeweed grows 2 to 5 feet tall in full sun and will be covered with yellow flowers from September to as late

as November in the right conditions. Despite what its name suggests, this plant has heavy pollen that needs pollinators to move it and does not cause sneezing or allergies. Instead, the common name refers to the practice by some Native American tribes of drying the leaves and using them for snuff to deliberately cause sneezing, which they believed would rid the body of evil spirits. I encourage you to consider giving this lovely plant with an unfortunate name a try. Your pollinators will thank you! Native to Loudoun County.

Sneezeweed
Photo credit: Barbara De Rosa-Joynt

White turtlehead (*Chelone glabra*) blooms white on 2- to 3-feet tall stems from July to October in full sun to part shade. Hummingbirds will visit turtlehead's tightly closed tubular flowers, but similar to bottle gentian, it takes an insect with the strength of a bumblebee to pry open this flower and pollinate it, and it is really fun to watch them do so. Native to Loudoun County.

Wingstem (*Verbesina alternifolia*): Wingstem grows 4 to 8 feet tall in full sun to part shade conditions, blooming with charming clear yellow flowers in August to October. It is readily identifiable by looking for the wing-like ridges of plant tissue that give the plant its common name; they extend out and grow parallel to the stems. Native to Loudoun County.

Obedient plant
Photo credit: Delaware Master Gardeners

Cardinal flower (*Lobelia cardinalis*) and **obedient plant (*Physostegia virginiana*)** are also excellent choices for later-flying pollinators and bloom July to October and August to November respectively. Both are profiled in the article on attracting hummingbirds to your yard in this issue of the Trumpet Vine.

Sources for native plants:

There are a number of native plant nurseries in Virginia, including in Loudoun County, and some growers from elsewhere also come in for native plant sales. In addition to these sales, most native plant nurseries have open hours for shopping and some sell their plants at farmers markets or other venues that aren't included in the list above. Please check the nurseries' websites for details, including lists of plants they grow. You are always encouraged to plant straight species. While regular bench nurseries and big box stores sometimes carry straight species of native plants, 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 butterfly caterpillars 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.

Fireflies in Northern Virginia: Threatened or Thriving?

Carol Ivory, Loudoun County Extension Master Gardener

When we think of summer, we often think back to those evenings of our childhood that were bespangled by hundreds of fireflies, low flying and easy to catch, flashing their lights on and off. They were magical. But now, depending on where you live—towns, suburbs, or rural areas—the number of fireflies may appear to be in decline. In 2023 and 2024, perhaps you saw none at all. Species of fireflies exist in temperate and tropical areas all over the world, but because they require moisture and prefer humid conditions, they are generally absent from very dry regions. In the United States, approximately 175 species can be found; some are endangered, and others appear to be doing well.

Common eastern firefly
Photo credit: Kerry Bzdyk

Before we look at causes of decline and things we can do to keep our firefly population healthy, let's take a quick dive into firefly facts and lifecycle. Fireflies are also known as lightning bugs and glowworms. Although all fireflies glow as larvae, only some of the 2,000 worldwide species produce light in their adult stage, and the location of the light organ varies among species and between sexes of the same species. Fireflies produce their "light" through bioluminescence, a chemical reaction within the organism. Bioluminescence is relatively rare in terrestrial organisms but incredibly common in the ocean, with many marine creatures, from bacteria to fish, utilizing it for various purposes.

Like butterflies and all other beetles, fireflies undergo complete metamorphosis: egg, larvae, pupa, and adult. Their lifecycle from egg to adult can take from a couple of months to two or three years depending on various environmental factors such as temperature, moisture, and availability of food. The majority of the life cycle is spent in the larval stage. Adult fireflies have three main body parts: head, thorax, and abdomen. They have two pairs of wings, chewing mouthparts (mandibles) in both larvae and adults, noticeable antennae in adults, and three pairs of legs attached on the thorax. Other beetles in the same family as fireflies are soldier beetles and click beetles.

Goldenrod soldier beetle
Photo credit: David Cappaert, Bugwood.org

In Northern Virginia, the species of firefly we see most often is *Photinus pyralis*, the common eastern firefly. This species is found east of the Rockies, from Maine to Texas. The head has a rounded cover that is dark brown with a yellow edge and two orange spots. Females have fully formed wings like the males, but females rarely fly. The last segment of the abdomen is the part that lights up through bioluminescence with a bright yellow-green flash. The males will begin flying around sunset and complete their displays about an hour later. They fly low to the ground using their flashing lights to attract mates. Their flight path is vertically looping, with a single long flash on the forward and upward portion of each loop, resulting in a "J" pattern. This has resulted in them also being called "the Big Dipper." The females remain on the ground and respond to

the males with a single delayed flash, typically after a 1- to 2-second pause. After mating, the female will lay up to 500 eggs in damp soil. Eggs hatch after four weeks. The larval stage lasts one to two years. Larvae are sometimes seen glowing on the ground near streams. While adult fireflies use their flashing lights to attract mates, the larvae use their glow to warn predators to stay away. Larvae taste very bad, and predators soon associate the glow with a terrible taste.

Photinus pyralis larvae
Photo credit: Katja Schulz, Flickr Creative Commons 2.0

Firefly larvae are voracious predators of soft-bodied invertebrates such as earthworms, snails, slugs, and other insects. They typically hunt for prey in moist soil or marshy areas. Think about the conditions under which slugs thrive. Consequently, droughts will impact their ability to feed, prolonging their larval stage, and reduce their numbers when the droughts are prolonged. Firefly larvae pupate underground or in rotting logs. Adults emerge in late spring and live for only about 30 to 60 days, providing their magical show. Adult common eastern fireflies primarily focus on reproduction rather than eating. While some may consume nectar or pollen, many don't eat at all as adults, relying on energy stored during their larval stage. The fireflies that do consume pollen and nectar inadvertently pick up pollen on their bodies and transfer it to other flowers. They are important nocturnal pollinators, complementing the work of daytime pollinators like bees and butterflies.

Firefly populations are dependent on local conditions. Here are the key reasons for firefly decline:

- **Habitat loss and degradation.** Urbanization, agriculture, and land development are destroying firefly habitats such as meadows, forests, and wetlands.
- **Light pollution.** Artificial light at night from street lights, homes, and vehicles disrupts the fireflies' communication used to attract mates. This hinders their reproduction and leads to population decline.
- **Pesticide use.** Broad-spectrum insecticides are lethal to fireflies and also to their prey--slugs, snails, and worms.
- **Climate change.** Droughts reduce the moisture that fireflies require during their egg and larval stages. Conversely, increased flash flooding can wash away firefly populations. Warmer winters and hotter summers can also negatively impact firefly breeding cycles and development.

There has been very little research on firefly conservation. But property owners have some control over the elements that contribute toward favorable firefly habitat.

- Set aside a part of your yard or garden where grasses, sedges, and other plants can grow taller. Keep some rotting wood on your property.
- Avoid pesticide use.
- Turn off your outdoor lights at night, especially in the summer.
- Spread the word on how to help fireflies.

Now that you know a little more about fireflies, take some time next summer to observe them, their flashing

patterns, when they start to appear, when they finish for the evening, and where they are. Think about how you might help improve their habitat.

Wishing you beautiful firefly displays next summer.

Photinus pyralis in flight
Photo credit: Terry Priest

Grow Mushrooms at Home: Homegrown 'Shrooms

Julia Rutland, Loudoun County Extension Master Gardener

Growing mushrooms at home appeals to gardeners for many reasons. Harvesting a crop of mushrooms at peak freshness means they are plump and flawless and often offer complex and delicate flavors not found in store-bought options. Home cultivation also offers the opportunity to try exotic and hard-to-find varieties that are often unavailable at the market.

Mushrooms can be grouped in different ways but for growing, shopping, and cooking purposes, there are three main categories: cultivated, exotic, and wild.

Cultivated mushrooms: These are the everyday varieties grown on farms or indoor facilities with carefully managed environments. Temperature, humidity, and light are monitored to ensure a consistent product that is available year-round. The most common include white button, cremini (baby portobello, sometimes labeled as baby bellas), and portobello. They are affordable and easy to find.

Exotic Mushrooms: This label applies to mushrooms that stand out for their unusual flavors, textures, or appearances. They are less common in markets and shine in gourmet dishes or traditional dishes from around the world. This category includes shiitake, maitake, lion's mane, and oyster mushrooms. Some growers package these as "wild" mushrooms, but they were cultivated under precise conditions.

Wild (Foraged) Mushrooms: Despite the allure of discovering edible treasures while hiking through the woods, basket in hand, this is not recommended. Some mushrooms are highly toxic and can resemble edible species. Foraging requires deep knowledge and training. Never attempt to hunt or forage mushrooms you find outside without expert guidance. **Note: Master Gardeners are not trained to identify wild mushrooms for consumption.**

Home Cultivation

Unlike most edible crops that require large spaces, warm days, full sun, and ample water, mushrooms thrive in cool, somewhat dim environments with little care. They thrive in small, confined spaces and can be quite a bit less expensive than buying by the pound at markets.

Growing mushrooms at home has been popular thanks to the availability of ready-to-use kits. They take much of the guesswork out of the process by providing everything you need in one package: a pre-inoculated substrate (the growing medium already infused with mycelium or spores), instructions, and spray bottle misters to provide even moisture. The most difficult and expensive part of cultivating mushrooms is the sterilization of the medium and inoculation. These kits have that process completed, making the experience of growing mushrooms simple and affordable.

Most kits are offered in varieties such as oyster, shiitake, and lion's mane and follow similar growing directions:

- A plastic covered block of compressed substrate is delivered already colonized by mycelium. Some versions appear to be coated in a white cotton or mold and this is normal. The block may remain in a

box with sections cut away for growth.

- An "X" is cut in the plastic covering the block. This creates an opening where the mushrooms will grow.
- The provided spray bottle (or your own) is filled with clean tap water, and the open area is misted several times a day. Increase misting if your home is very dry. If mushrooms appear shriveled, cover the kit loosely with a clear plastic bag to create a simple humidity tent.
- Place the kit in a spot with indirect or filtered light, good airflow, and high humidity. Do not place in direct sunlight since it causes mushrooms to shrivel.
- Within 5 days to 2 weeks, small "pins" or baby mushrooms will begin to form. Once they appear, the mushrooms grow rapidly and can double their size each day. The brighter the indirect light, the faster they will grow.
- Harvest mushrooms approximately 2 to 5 days after "pinning" by gently twisting or cutting them away at their base.
- If you are not eating or cooking the entire harvest, place the mushrooms in a paper bag and store in your refrigerator's crisper drawer, which has consistent humidity.
- Grow-your-own kits will often produce several flushes of mushroom crops. Cut another "X" in a different location, following the same directions.

Lion's Mane

A lion's mane mushroom kit is particularly rewarding since these mushrooms are not easily found in basic markets and can be expensive. These mushrooms are very unique in appearance: the big white-to-beige shaggy clusters look like pom-poms, cauliflower, or a coral reef. These mushrooms are usually cooked prior to consuming since heat transforms their texture and flavor. Raw, they can be slightly bitter or metallic with a noticeable chewiness. When cooked, lion's mane mushrooms develop a tender texture and a mellow, savory-sweet flavor that is often compared to seafood like crab or lobster.

Lion's mane mushroom
All photos by Julia Rutland

Lion's Mane Mushroom "Crab" Cakes

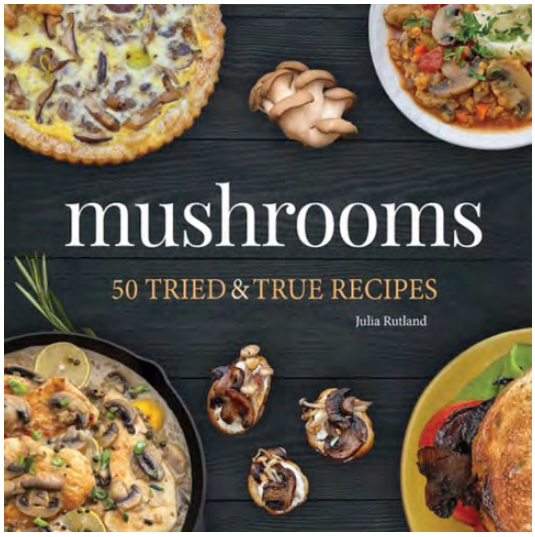
With their mildly sweet flavor, tender texture, and pale color, lion's mane mushrooms make an excellent substitute for crab and seafood in many recipes. Quickly cooking before assembling the cake reduces the amount of water the mushrooms hold while improving digestibility. Season lightly so as not to overwhelm their delicate flavor. Serve as is for an appetizer, or place over salad greens and serve with an herbed vinaigrette for a small entrée or heartier side dish.

Recipe on next page

"Crab" cake

Makes 4 cakes

8 ounces lion's mane mushrooms
1/4 cup minced red bell pepper
3 to 4 Tablespoons water
1 large egg
2 green onions, minced
2 Tablespoons chopped fresh parsley, cilantro, or dill
2 Tablespoons mayonnaise
1 teaspoon Worcestershire sauce
1/2 teaspoon Dijon mustard
1/2 teaspoon seafood seasoning
1/4 cup seasoned or plain fine breadcrumbs
Avocado or olive oil
Lemon wedges



Mushrooms: 50 Tried and True Recipes Cookbook

1. Shred mushrooms into fine pieces similar to crab meat. Combine shredded mushrooms, bell pepper, and water in a saucepan over medium heat. Bring to a boil. Reduce heat, and simmer, covered, for 4 to 5 minutes until mushrooms and pepper are tender. Set aside to cool.
2. Drain mushroom mixture. Squeeze to remove excess water.
3. Whisk egg in a large bowl. Stir in green onion, parsley, mayonnaise, Worcestershire sauce, Dijon mustard, and seasoning. Stir in breadcrumbs. Gently fold in mushroom mixture. Shape mixture into four patties.
4. Pour a thin layer of oil in a large skillet over medium-high heat. Add mushroom cakes and cook 2 to 3 minutes on each side until golden brown. Serve with lemon wedges.

Recipe from Mushrooms: 50 Tried and True Recipes (Adventure Press, 2025) by Julia Rutland

Forcing Spring Bulbs

Wendy Hiller, Loudoun County Extension Master Gardener

As gardeners, we all eagerly await the first signs of spring. If you're like me, when the first spring flowering bulbs begin to poke through the snow, your spirits are lifted and you joyfully celebrate the beginning of the end of winter.

Did you know we don't have to wait for Mother Nature to start the show? For those of us who want to experience the beauty of spring flowering bulbs even earlier, we can successfully encourage bulbs to bloom indoors according to our own schedule. It's called forcing, and with a little bit of planning and care, we can enjoy spring flowers indoors from late November through early April.

Forcing bulbs is easy and can be accomplished with all types of bulbs (Easter lily, anyone?); however, this article focuses on spring flowering bulbs.

The easiest bulbs to force are crocuses (*Crocus* species), daffodils (*Narcissus* species), hyacinths (*Hyacinthus* species), and tulips (*Tulipa* species). Others that can easily be forced include Dutch iris (*I. x hollandica*), snowdrop (*Galanthus* species), and grape hyacinth (*Muscari* species). Specific varieties of each type of bulb that have been identified as better suited to forcing can be found in this excellent article from the University of Missouri Extension Office; however, if you would like to try with other varieties, go for it!

To force bulbs, you must simulate both winter and spring. Most bulbs must experience temperatures from 35 to 50 degrees Fahrenheit to trigger the winter growth cycle in which roots form and the stem begins to elongate. Therefore, you will need a location that consistently maintains temperatures in that range. The location could be a garage or shed, a cold frame, a shaded north-facing spot outside, or a refrigerator. I used my refrigerator, which allowed me to easily monitor the process as I went about my day-to-day activities. If you don't have a suitable location, you can still grow paperwhite narcissus and amaryllis. They are tender bulbs that do not require a cold period. But be forewarned, while pretty, paperwhites have an unpleasant fragrance.

If you do have a place in which to chill bulbs for forcing, continue reading for a list of required materials and a step-by-step guide to achieve spring flowers indoors.

Required Materials

- Clean pots with drainage holes; shallow pots are preferred.
- Potting soil that drains well and is substantial enough to keep bulbs in place.
- Bulbs!

Step-by-Step Guide

Forcing hardy bulbs involves four stages:

1. Selecting appropriate bulbs
2. Planting

3. Cooling
4. Forcing into flower

Selecting appropriate bulbs

Choose healthy bulbs that are large for their type. Avoid damaged or moldy bulbs. If you are not able to pot them up right away, place them in a mesh or paper bag with holes in it and store them in a cool spot for a few weeks. If you put them in the refrigerator, do not put them in the crisper drawer with ripening fruit or vegetables. The ethylene gas may harm the bulbs. Caution: Some bulbs are poisonous, so if your household includes small children, do not put bulbs in the refrigerator.

Planting

Plant your bulbs anytime from mid-September to December, depending on when you want them to flower. To prolong your indoor display, stagger your planting times so you will have new flowers ready to enjoy when the old ones have faded. As a guideline, plant in mid-September for late December flowers, mid-October for February flowers, and mid-November for March and April flowers.

All the bulbs in the same pot should be of the same type and variety for uniform flowering. Place soil loosely in the pot to allow roots to easily grow down into the soil. Allow at least two inches of soil under the bulbs and a half inch of space between the soil line and the top of the pot. Cover bulbs with soil according to the type of bulb.

- Daffodils: Plant so about one-half of the bulb shows above the soil line.
- Hyacinths and Tulips: Allow only the tip of the bulb to show above the soil line.
- Small Bulbs (crocus, snowdrop, grape hyacinth): Plant so they will be about one inch below the soil line.

Make sure the pointed tip of the bulb faces upward. If you are unsure of which end is up, lay the bulb on its side.

Potted bulbs can be grown closer together than those planted outdoors, so fill up the pot. For example, a six-inch diameter pot can hold five daffodils, six tulips, or fifteen crocuses. For future reference, label the pots with bulb type, variety, and date to remove from the cooler.

Pro tip: Place tulip bulbs with the flat side facing the outside of the pot. The first and lowest leaf will extend over the pot's rim for an attractive appearance.

After planting, water thoroughly so the water drips out the drainage holes, then empty the saucer so the pot is not sitting in water. Now you are ready to start the cooling process. Roots should develop soon after planting.

Cooling

The optimum cooling period is from 12 to 16 weeks. If the bulbs were kept for more than three weeks in the refrigerator before planting, subtract three weeks from the target cooling time. The length of the cooling period will impact the length of the stems, and too short a period may also stop the flowers from forming. 14 to 15 weeks is considered the optimal range; however, keep an eye on your bulbs because they may grow

faster than expected. If the stems are long enough, take them out a little sooner.

Bulbs in refrigerator
All photos provided by Wendy Hiller

While cooling, keep the bulbs moist at all times, but take care not to overwater, which can cause bulbs to rot. Unglazed pots will absorb moisture from the soil, so take extra care to keep bulbs moist in unglazed pots.

Observe bulbs for signs of growth. Watch for bulbs heaving out of the soil. This occurs if the growing roots struggle to penetrate the soil beneath them. If you can, gently guide the bulbs back down into the soil; otherwise, add more soil on top. As the stems form, do not be concerned if they are pale. They will turn green soon after they are removed from the cooler.

Forcing into flower—with a few paperwhites that snuck into the mix

Forcing into flower

After the bulbs have been cooled, they are ready to be forced into flower. Here's where you simulate spring. To trigger the formation of leaves and flowers, move the pots out of the cooler and into an area that is 60 to 65 degrees F with indirect sunlight.

When the shoots turn green, move the pots to warmer temperatures and provide more light to stimulate growth and flowering. Flower buds should form in about three weeks. Observe your plants and move them sooner if they show they are ready. When the flowers begin to open, move them to indirect light to prolong the bloom period.

After flowering

After your forced bulbs have flowered, you may be able to see them bloom in subsequent years in your garden, but there's no guarantee. Generally, tulips aren't salvageable, but smaller bulbs like crocus and larger daffodils and hyacinths can be reused, but their clocks need to be reset.

To attempt to salvage forced bulbs, first cut off the spent flower stems. Allow the foliage to continue growing until it dies off naturally, then cut it off at soil level. Allow the soil to dry out, then place the pot in a cool dry location until fall planting time. Remove the bulbs from the pot and plant in well-draining soil amended with compost. Fertilize with a "bulb booster" type fertilizer according to package directions. Water them and be prepared to fertilize them again in the spring. While previously forced bulbs are unlikely to bloom the first spring in the ground, the foliage they produce will feed the bulb and prepare it to produce flowers in future years.

Spring has sprung in February!

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