



Trumpet Vine

*Knowledge for the Community From Loudoun County Extension
Master Gardeners*

Fall 2023

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LOUDOUN COUNTY EXTENSION MASTER GARDENER LECTURE SERIES

FREE AND OPEN TO THE PUBLIC
7 P.M.

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COUNTY MASTER GARDENERS

Free Virtual Presentations via
WebEx.

October 5, 7-8 pm, Cemeteries
as Gardens by Maria Stewart

November 2, 7-8pm Companion
Planting by Katie Connaway

January 11, TBD

February 01, 7-8pm Beneficial
Insects, Jane Kirchner

March 06, TBD

April 04, 7-8pm Growing a
Better Garden, Jennifer
Lumley

May 02 7-8pm, Managing Trees
and Public Spaces, Marne
Titchner

Check the event calendar on
our website for updates on
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Extension Master Gardeners of
Loudoun County, Virginia.

Fall – Endings and Beginnings

Spring and fall are my favorite seasons. Spring can break your heart with lots of false starts and late freezes but it finally finds its footing and moves us seamlessly into summer. Fall is bittersweet, the weather is beautiful, the humidity clears, the skies are bright, the air is crisp, but you know what's coming and then suddenly its just too cold and dark to garden.

You know the fall chores! I plant all those native perennials, bought at sales, and still in my yard waiting to be planted. I try to find good homes for odds and ends. I continuously rake and shred as many leaves as my aching back allows. Since I live in the woods this is a season-long process. I move my big pots of hosta from my deck to a sheltered place on the ground next to a fence and bury them in mulched leaves. I weed, weed, weed to prevent stilt grass, nimblewill, knotweed, Japanese clover and my special nemesis, mulberry weed, from going to seed. I identify my weeds so that I can properly curse them as I pull them up.

I carefully and selectively prune my perennials so that the garden is tidy, by my standards, and still provides good habitat for all the critters over the winter months.

Finally, I look ahead and sow native plant seeds for next year. The seeds of most native plants must go through a cold, moist period, sometimes two, before they will germinate. This can also be accomplished in your refrigerator, requiring some monitoring and good timing or sow them outside in the fall and let nature take over. I like to protect my seeds from the critters, know where they are and know that they have come up, so I use the milk jug method or larger containers that I protect with row cover and hardware cloth. The seed for lobelias is fine dust and impossible to sow successfully in a container. I simply sow it in the general area where I think they will be happy and let nature take over. I'm sowing hope for next year.

Wishing you a productive fall season in the garden!

Extension Master Gardener 2024 Training Class

How would you like to make a difference in your community--and our world--through stewardship of the Earth? Virginia Cooperative Extension (VCE) Loudoun 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 will be accepting applications for the 2024 EMG Volunteer training class starting September 22nd. Everyone who has been through our program loves the incredible learning experience we provide. Each volunteer receives a minimum of 60 hours of 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 area programming 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. Many have found several interests within the program!

The **2024 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 work full-time? We have an option to complete the training outside of standard work hours!**

Class begins on **January 23 and ends April 13, 2024 (no classes during Loudoun County Public Schools spring break)**. The fee for the course is \$225 and includes a digital copy of the 500+ page Virginia EMG Handbook, instructor fees, a T-shirt, 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.



The mission of Master Gardeners is to encourage and promote environmentally sound horticulture practices through sustainable landscape management education and training.

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

Please join us for a virtual [Information Meeting on Thursday September 21, starting at 7 p.m.](#) You must RSVP to gain access to the session (click link for details). **We will be accepting applications until the max is met or until October 20, 2023, whichever is first.**

For more information about the training program, see:

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

Loudoun County Extension Master Gardener Training Team

Preserving Summer

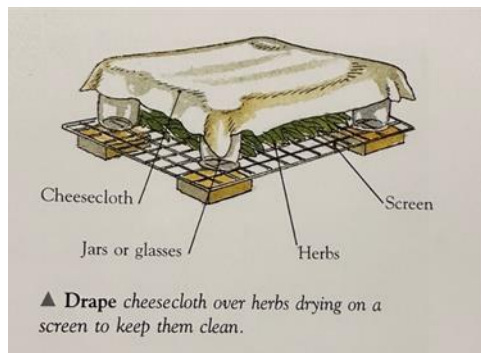
When we hear the word “preserve” along with the word “summer,” many of us conjure up visions of Mason jars full of tomatoes or other summer fruits and vegetables. There are many ways to keep the warm sunny days of summer alive as we head into the fall and winter months. Some of the easiest--and most aromatic--ways are drying the herbs and flowers that are still growing in the garden.

Herbs:

While tomato season may be over, there's no reason that the vibrant taste of basil, oregano, and other summer herbs needs to disappear from the dinner table. There's nothing as tasty as freshly picked herbs; however, dried and frozen herbs come pretty close to that “just picked” flavor. Annual herbs such as basil can be harvested up until the first frost.

The goal is to pick the leaves or herbal flowers when their flavors are at their greatest. One way to ensure this is by harvesting young leaves either several times during the summer, or late in the growing season, taking leaves from the newest growth. Another is to harvest when the plant is still “cool” in the early morning. The concentration of oils that give herbs their fantastic aromas are at their peak before the plant warms up later in the day. Remember--herbs grown for their foliage are best when harvested before they flower, and this is especially true for chives.

Drying is an easy way to preserve herbs. After time in the garden, herbs will need to be cleaned before harvesting. This can be done by hosing off mud and insects the day before you plan to harvest, so they are dry the next morning. To maintain flavor, it is recommended that herbs be dried rapidly, without using unnecessary heat, and avoiding sun exposure.¹ This can be accomplished by gathering cut stems into small bunches, tying them together, and hanging in a well-ventilated dark room. If the herbs will be used for cooking, place the gathered stems in a paper bag before hanging to dry--this will keep the dust off. Another way to slowly dry herbs is by placing them on an elevated screen and covering them with cheesecloth. Both of these methods take



Drying rack [Your Backyard Herb Garden](#), Miranda Smith; Rodale Press, Inc.

approximately two weeks to complete. If you don't want to wait, drying can also be accomplished by placing stripped leaves in a shallow baking pan and oven drying at 110 to 130 degrees F for three to four hours. This method works well for mints and sage.

Make sure that herbs are completely dry before storing; otherwise, mold can form. Store the dried herbs in airtight containers. To maintain flavor and color it is best to use a container that doesn't let light in, like dark glass. Be sure not to crush the herbs until use in order to protect the essential oils.

Freezing herbs is another quick and simple way to preserve flavorful herbs. In fact, some of the most widely grown herbs lose some flavor when dried and maintain their best taste when frozen.

¹ [Herb Culture and Use | VCE Publications | Virginia Tech \(vt.edu\)](#)

These include basil, chives, cilantro, and parsley.² For most herbs, give a quick rinse in cold water, remove excess water, and chop them up. Small batches can then be placed in ice cube trays filled with water and frozen. Once frozen, cubes can be removed and stored in airtight bags or containers in the freezer.³ Another way is to simply strip the leaves, place them on a cookie sheet, and freeze. If maintaining color is important, leaves will need to be blanched before freezing. This is especially true of basil, which will turn black unless blanched. For more information on blanching, click here: [How to Store Fresh Herbs \(eatingwell.com\)](http://eatingwell.com).

For further information on growing and harvesting herbs, check out this Virginia Cooperative Extension publication [Herb Culture and Use | VCE Publications | Virginia Tech \(vt.edu\)](http://vt.edu).

Flowers:

Drying flowers is another great way to continue enjoying their beauty both as stand-alone bouquets and for use in crafts. As kids, many of us can remember pressing treasured flowers between the pages of a heavy phone book. While it worked, colors faded and the flowers crumbled. And seriously, who has a phone book anymore?

Flower presses are an easy and practical way to dry flowers for use in crafts--for example personally created note cards.



Spring pansies preserved via flower press; notecard example. Photos by Jan Lane

Presses consist of two wooden boards on the outside held together by bolts and wing nuts. In between are layers of thin cardboard--and between the cardboard layers--blotting paper to draw moisture out of the petals. Presses are readily available for purchase online, or you can make your own. There are a number of videos and tutorials online such as this one: [DIY Wooden Flower Press \(and How to Use It!\) - Green in Real Life](http://greeninreallife.com)

The best time to pick flowers for pressing is mid to late morning when flowers are dry from the previous night's dew. A traditional press will dry flowers anywhere between three weeks and several months, depending on the thickness of the petals and stems being preserved. However, a fun and

² Your Backyard Herb Garden, Smith, Miranda; Rodale Press, 1997

³ [Harvesting and Preserving Herbs for the Home Gardener | NC State Extension Publications \(ncsu.edu\)](http://ncsu.edu)

quick way to dry flowers involves microwaving them! Microfleur™ is a new and popular way to dry petals in minutes, with the added benefit of maintaining brilliant colors. A Microfleur™ works like a press but is made of plastic outer layers with lambs' wool and cotton for blotting moisture. It takes some experimentation to get optimal results but is definitely worth it if you are "pressed" for time. Here are the results of using the Microfleur™ to save mandevilla flowers and begonia petals:



Mandevilla and begonia petals. Photos by Jan Lane

It took less than a minute to dry these petals: microwave for 30 seconds, open and wipe moisture from the plastic outer layers, and microwave for another 30 seconds.

If the goal is to use stems of dried flowers in an arrangement, the method to use is hanging stems upside down after cutting. Celosia and yarrow do well with this method. Use sharp cutting shears to remove stems late morning, strip the leaves, gently bundle together several stems with a rubber band, and hang to dry.



Photo: [Sew Many Ways...](#)

Finally, some of the most popular flowers kindly do the drying for us. Hydrangeas are gorgeous mid-summer when the blues and purples are deepest. Unfortunately, cutting them then and trying to air dry doesn't work well--the flowers will simply wilt. By waiting until August through October and allowing the flowers to dry naturally, some color is sacrificed but the flower and its remaining color will be better preserved. Simply cut stems with dried blooms, remove the leaves, and arrange in a vase without water. If the stems are weak, tie them together and hang to dry.

The calendar may prove that fall and winter are quickly approaching but preserving herbs and flowers is a great way to remember warm summer days in the garden.

Jan Lane, Loudoun County Extension Master Gardener

Five Favorite Fall-Blooming Native Perennials

Did you know that Virginia has the greatest diversity of native flowering plants compared to its size in the 50 US states? In our region there are hundreds and hundreds of plant species that have evolved naturally over thousands of years and are adapted to the soils and climate here, along with being an important part of our local, natural ecosystem. Besides requiring less watering or fertilizer than non-natives, our locally native plants also help provide crucial food, shelter and a place to raise young for the wildlife they've co-evolved with—including butterflies, native bees and bumblebees, birds, turtles, and salamanders.

Following are five fall-blooming native perennials that are increasingly being planted in local gardens and landscapes.

Black-eyed susan (*Rudbeckia* family)



Rudbeckia triloba close-up – photo: Jean Fenwick

Full sun to part shade, dry to moist soils, variable - 1-4.5' in height

These golden-yellow flowers start blooming in late summer and can be seen through October. Black-eyed susans are easy to grow, low maintenance and tolerant of most soils. They occur naturally in fields, meadows and roadsides—some are shorter lived, but all re-seed and establish clumps and will often make their way to other parts of your garden! Black-eyed susan flowers provide nectar for butterflies, moths and bees, their seedheads are a favorite for birds like chickadees and goldfinches and the plant serves as caterpillar host for more than 20 butterflies and moths.



Black-eyed Susans

Joe-pye-weed (*Eupatorium* family)

Full sun to part shade, moist to wet, variable - 2-11.5'

The stately and often show stopping joe-pye-weed is a substantial plant that needs some space, but when planted in groups it provides spectacular flowering and architectural height in the rear of gardens. The large, pinkish and or lavender-hued flower clusters can be seen blooming through October atop stems sometimes towering up to 11 ½ feet tall, and attracting many butterflies, moths, native bees and bumblebees. The shorter Three-nerved (Coastal Plain) joe-pye-weed, *Eutrochium dubium*, grows up to five feet tall. Joe-pye-weeds are generally considered relatively deer and rabbit-resistant.



Joe-pye-weed blooms

Asters (*Symphyotrichum* family)

Full sun to part shade, variable - dry to wet, variable - .5-6'

You can find our native asters in differing heights, and in a variety of colors from white to soft



lavender, to a deep bluish-purple. Asters provide fall nectar for butterflies, moths, bumblebees and native bees, and are the caterpillar host for more than ten butterfly and moth species—and the nectar is also needed by 13 specialist bees to raise their young. Some gardeners cut back taller asters by one-third to one-half in May to keep plants shorter and more compact and to time fall blooms for September and October. Asters are known to be deer-resistant, but they can be eaten by rabbits!

New York Aster - photo: USFWS



White wood aster photo Jean Fenwick

Blue mistflower (*Conoclinium coelestinum*)

Partial shade to shade, moist to wet, 1-3'

Fuzzy tufts of blue-violet flowers emerge from the oftentimes bright green leaves of blue mistflower starting in August and can persist for five weeks or more. This fall-blooming native will spread if you give it room and can be used as a dense ground cover in partially shaded settings. Deer typically avoid it! Several moth caterpillars depend on the plant as a host and it provides nectar for butterflies, moths, bumblebees and native bees such as cellophane and masked bees.



Goldenrod (*Solidago* family)

Sun to part shade, variable - dry to moist, variable - .5-5'

Besides providing a brilliant golden hue to gardens and landscapes in late summer and fall, studies have shown that goldenrods provide food and shelter for 115 butterfly and moth species in the U.S. Mid-Atlantic alone. And in winter, songbirds find nourishment from goldenrod seed heads long after the blooms have faded. A generally tough and deer-resistant plant whose genus includes roughly 90 to 110 species, you can likely find one that fits in your garden and landscape.



Stiff goldenrod *Solidago rigida*



Can you spot the monarch chrysalis hanging from goldenrod in this pollinator garden?

I recommend going with straight species over a cultivar when you can, and definitely avoid any hybrids when buying native plants. The best place to buy native plants is a nursery or grower that specializes in native plants, does not use pesticides, and sources/grows them locally. Lastly, as I have found in my native landscaped yard, over the years the beds evolve, with new native species—that I did not plant—showing up and adding to the diversity and my enjoyment!

Background/sources

<https://blogs.ext.vt.edu/arl-alexvce/2014/03/28/the-flora-of-virginia-what-are-our-native-plants/>

“Planting for wildlife in Northern Virginia” Loudoun Wildlife Conservancy

<https://vnps.org/wildflower-of-the-year-2023/>

<https://mgnv.org/plants/native-plants/perennials/eutrochium-dubium/>

Photos other than mine are credited/with permission.

Jane Kirchner, Loudoun County Extension Master Gardener

Sassafras: The All But Forgotten Tree

Sassafras (*Sassafras albidum*) is a medium sized quick-growing deciduous native tree in the laurel family that grows in sun and part shade. In the same family as the Northern Spice Bush, its leaves and stems are highly aromatic.

The sassafras tree was named Tree of the Year by the State Arboretum of Virginia at Blandy Experimental Farm on Arbor Day, April 24, 2020. The sassafras tree is considered by the Blandy arborists and Virginia Department of Forestry to be "a tree perfectly suited to many landscapes because it's a fast-growing tree native to the eastern U.S., grows to a height of 30 to 60 feet, and is available at many area nurseries."

The tree shape has several characteristics:

- Rounded
- Horizontal branching in cloud-like tiers
- Branching in a whorled pattern from the trunk with lateral buds. Young branches growing vertically, giving the branches a zig-zagged look.
- The branches are gracefully layered, with horizontal branches that are wider near the bottom and gradually narrower as they near the top.



Photo by State Arboretum at Blandy Farm



Photo by Stefan Bloodworth, courtesy of Wildflower.org H.L. Blomquist Garden of Native Plants collection

Sassafras has bright medium green leaves of three shapes: entire (ovate), two lobed mitten-shaped (both left- and right-handed), or trident (three lobe) shaped. All shapes appear on the same tree. Leaves turn yellow, deep orange, scarlet and purple in the fall.



Photo by Julie Makin, courtesy of Wildflower.org Wildflower Center Digital Library

Sassafras will form a colony from root sprouts, or if the root sprouts are trimmed can be grown as a single tree. Colonies can provide screens, or single trees can be used as specimens.

Sassafras can be found in virtually all soil types within its range. It is a pioneer species in abandoned fields, along fence rows, and on dry ridges and upper slopes, especially following fire. It is an appropriate tree to introduce into disturbed sites with infertile soil and is considered a good choice for restoring depleted soils in old fields. It grows most quickly in fertile soil. Although it prefers well-drained situations, it will tolerate soggy feet. Sassafras is allelopathic and can discourage the growth of certain other plants within its root zone.



Photo by Julie Makin
Courtesy of Wildflower Center Digital Library,
www.wildflower.org

When introducing sassafras into your area, avoid cultivated varieties (cultivars). Plant small trees that have been seed grown in containers by a reputable native plant grower. Sassafras trees can be easily home grown from freshly collected seed.

Small plants adapt better to transplanting from containers. To support genetic diversity, collect seeds from several trees. Sassafras should never be dug from the wild as it does not tolerate transplanting due to its deep tap root.

Sassafras flowers are small and greenish-yellow. Blooms appear March through May in stalked, branched clusters about 2 inches long, at the tips of twigs.

Wildlife Support

The leaves are larval host for thirty-four butterflies and moths, including the spicebush swallowtail, tiger swallowtail, Palamedes butterfly, and Pale Swallowtail. It is a nectar source for the spicebush swallowtail and Promethia silk moth, and mining and sweat bees. Spicebush swallowtail caterpillars, sometimes called "leaf rollers," spin silk onto a leaf surface. The silk contracts as it dries, and the leaf folds up, creating a shelter for the caterpillar to hide in by day. At night, the larvae feed on sassafras leaves.



Photo by Paul Cox Wildflower.org
Courtesy of Wildflower Center Slide Library

Sassafras fruits in late August through October. The fruits are berrylike, about ½ inch long, dark blue and shiny, widest at the middle, the tip is pointed or rounded, the base is tapered.

Fruits are attached to a swollen stalk. The stalk is about 1½ inches long and red. The fruit is eaten by many species of birds, including bobwhite, woodpeckers, mockingbirds, catbirds,



Photo by Sally and Andy Wasowski, courtesy of wildflower.org Wasowski Collection

flycatchers, brown thrasher, warblers, and wild turkey. The leaves and twigs are browsed by woodchucks, deer, rabbits, and bears. Rabbits may eat the bark in wintertime.

Sassafras is a common component in fence rows and thickets, and thickets are an important habitat and cover for a wide range of animals.

Wood Uses

In the state of Louisiana, the floors in the cabins of enslaved people were often made of sassafras wood, as the scented wood was believed to repel bedbugs. Sassafras was once popular for making bedsteads, for the same reason. The orange wood has been used for cooperage, buckets, posts, and furniture.

Sassafras wood is considered easy to work with both hand and machine tools. It is rated as durable to very durable. It glues, stains, and finishes well. It is used primarily as utility lumber, fence posts, boatbuilding (especially canoes), and furniture. It can be found in interior and exterior moldings, millwork, cooperage, fencing and posts, and drawer making.

Sharon Perryman, Loudoun County Extension Master Gardener

Sources

Arborday.org

Missouri Dept of Conservation: [Sassafras | Missouri Department of Conservation \(mo.gov\)](#)

USDA: [Sassafras albidum \(Nutt \(usda.gov\)\)](#)

www.wildflower.org

Ohio Dept of Natural Resources: [Sassafras | Ohio Department of Natural Resources \(ohiodnr.gov\)](#)

[Sassafras \(Sassafras albidum\) – Wild Seed Project](#)

[Sassafras | The Wood Database \(Hardwood\) \(wood-database.com\)](#)

[2020 Tree of the Year: Sassafras | Blandy Experimental Farm \(virginia.edu\)](#)

Gardening in a Warming Climate

Gardening is more than a hobby for millions of people—it's a passion. Have you noticed, though, that the outside world is changing? This has been one of the hottest years on record, not only here in Loudoun County but for the entire world. Plants just wilt in the unrelenting sun. Wildfires are burning across Europe, North Africa, Canada, and the U.S. The recent fire on Maui has killed over 100 people, pretty much destroyed the island, and is the worst wild fire in this country in 100 years. Much of the mid-Atlantic area is experiencing a severe drought while other parts of the country are drowning in rain. So, what's going on with this weird weather? **CLIMATE CHANGE!** Those two words have come to infiltrate all parts of our lives. Greenhouse gases in the atmosphere have created a warmer world. Our use of fossil fuels and unsustainable farming and forestry practices has produced an overload of carbon dioxide (CO₂) and other heat-trapping gases in the atmosphere. As the atmosphere warms up, Earth's historic climate patterns are changed. The natural order of plants and animals is thrown out of whack. How has climate change impacted Loudoun County? How will it affect us in the future? Can we make the necessary changes to our yards and gardens that we are going to have to make in order to move forward? What can gardeners do to help?

What Is Climate Change?

Climate is defined as, "long-term averages in daily weather." Climate change is the term scientists use to describe "long-term alterations in our average weather patterns." Human activities, primarily burning fossil fuels, have significantly increased the level of carbon dioxide and other greenhouse gases in the atmosphere. Since the late 1700s, the amount of carbon in the atmosphere has increased by 40 percent, mostly because of our misuse of fossil fuels. These greenhouse gases trap heat in the atmosphere that, in turn, warms the Earth's surface temperatures by several degrees. The warmer surface temperatures can cause long-term climate pattern changes. As our atmosphere continues to warm, every living thing will experience some kind of impact. Increases in water temperature and changes in the seasonal runoff patterns will disturb fish habitats and negatively affect the recreational uses of lakes, streams and wetlands. The historical ranges of some animal and tree species will also likely change in response to a warmer climate. Hardiness zones will shift northward. If climate change continues on the present course, it threatens to reduce biodiversity in tree and plant communities, disrupt ecosystems, and further the spread of highly invasive plant species. It's easy to believe that climate change is happening somewhere else, someplace far away. But the truth is, it's happening everywhere. It's happening here in Loudoun County. It sounds pretty scary doesn't it? It is pretty scary. Read on.

The Local Effects of Climate Change

Most of Virginia has warmed about one degree Fahrenheit in the last century, and the sea is rising one to two inches every decade. This sounds insignificant but, over time, higher sea levels will erode beaches, submerge lowlands, increase coastal flooding, and increase the salinity of estuaries and aquifers. If nothing is done, sea level along the Virginia coast is likely to rise over two feet in this century. When this happens, the lowest of the dry lands are submerged and become either tidal wetlands or open water. As the sea level rises, beaches erode. Beach houses and other structures are damaged or destroyed. A higher sea level makes it more likely that storm waters can completely wash over a barrier island, creating a new inlet. Seventy years from now, temperatures are likely to rise above 95 degrees for 20 to 40 days per year in Virginia, compared

to about ten days per year now. Warmer temperatures will increase the use of air conditioning, which will increase electricity consumption. Health-wise, higher temperatures can cause heat stroke and dehydration and affect human cardiovascular and nervous systems. Climate change affects everything.

Tropical storms and hurricanes have become more intense in the last 20 years. The warming ocean provides the storms with more potential energy, resulting in a bigger storm with high winds and torrential rain. Between 1958 and 2012, the amount of precipitation during “very heavy” storms increased by 27 percent, and this trend toward more severe rain storms is likely to continue. The loss of tidal marshes due to the rising sea level could harm fish and birds that depend on the marsh for food. Are we having fun yet? Read on.

In Loudoun County, seasons are changing in length and timing with an earlier spring, a delay of fall, and a shorter winter. Although a longer frost-free period can benefit some crops and even allow a second planting later in the growing season, it can also limit plant diversity, encourage invasive species, and threaten our health and that of the local ecosystem. By 2070, the frost-free period in Loudoun County will average four to seven weeks longer. Milder winters will help mosquitoes and ticks survive through the winter. Do you have seasonal allergies? An earlier arrival of spring can cause trees and flowers to bloom earlier, making your allergies last weeks longer than they do now. Warm weather in late winter or early spring causes crops and plants to grow early, making them more susceptible to frost. Reduced snowfall increases the risk of drought. Warm weather also helps pests and invasive species to grow and survive. On a happy note, you’ll be able to grow so many beautiful flowers as perennials rather than annuals—lantana, hibiscus, verbena.

Rainfall in some parts of Loudoun County is increasing in intensity and frequency causing septic problems, property damage, contamination, mold, and indoor air quality issues. Water quality in local streams and the Chesapeake Bay will be adversely affected by higher temperatures. Stream and river health and infrastructure are all threatened by higher temperatures. Heavy rain overwhelms infrastructure and drainage systems. By 2050 to 2079, annual rainfall in Loudoun will likely increase by an average of two to three inches per year. Summers are getting hotter. When the outside air temperature is 95 degrees Fahrenheit, it’s hard to keep our bodies and indoor areas cool. Currently we see about five days a year with temperatures above 95 degrees. In the next 50 years, Loudoun County can expect a yearly average of 30 to 52 days above 95 degrees.

Gardening in a Changing Climate

How will these changes affect us here in Loudoun County? And what can we do as gardeners to help turn things around before it’s too late? Climate change is already having a significant impact on gardening activities here in Loudoun County. Higher average temperatures and uncertain precipitation patterns are causing plants to bloom earlier, which creates unpredictable growing seasons. The increased temperatures can even harm warm weather plants like tomatoes. Invasive, non-native plants are becoming larger and more likely to take advantage of weakened ecosystems. Some of the worst offenders—kudzu, garlic mustard, and purple loosestrife--will thrive and push into new areas. Major climate shifts could mean that many native plants might not be able to survive in parts of their historic range. Plant Hardiness Zones will move northward by several zones. Important connections between pollinators, breeding birds, insects, and other wildlife and the plants they depend on will be disrupted. Hummingbirds and bees may arrive either too early or too late to feed on the flowers they rely on.

Climate change predictions are dire, but they are not inevitable. Climate change requires smart gardening. We can help our gardens adapt to climate change and lower the accumulation of heat-trapping gases by growing native plants, planting trees and large shrubs, and building healthy soil. Plants use the sun's energy to pull carbon dioxide out of the air. They use the carbon dioxide to make sugar glucose, which is needed for plant growth. Plant roots secrete glucose and other carbon compounds to feed soil microbes that enhance plant health. The soil microbes also eat decomposing plant and animal waste. As the microbes die, their remains accumulate and create dark, carbon-rich humus, which is what makes soil fertile. The carbon-rich humus also keeps carbon out of the atmosphere for many years. Better soil management can capture and remove 21 percent of annual greenhouse emissions in the U.S., and every gardener can help. Climate- friendly gardening on the hundreds of millions of acres of residential land in the U.S. can make a big difference in reversing climate change. These gardening techniques can help you store carbon in your soil, plants, and trees:

- Home composting helps reduce methane and other greenhouse gases in landfills. Leaves, grass, woody clippings, dead plants, and food scraps all make excellent compost that feeds the soil microbes that hold carbon and improve soil fertility. Try vermiculture and biochar as well. Biochar is a charcoal-like residue left from the high-temperature firing of dead plants to make biofuels. Soils amended with biochar are better able to hold carbon and retain water and nutrients. And vermiculture of course is using worms to decompose plant wastes into castings.
- Practice no-till gardening and other land-friendly measures that don't disturb the soil. Do as little digging and tilling as possible. Rather than turning the compost into the soil, try layering it.
- Maintain a climate-friendly lawn. The manufacture of fertilizers and pesticides from fossil fuels produces carbon dioxide emissions. Application of those fertilizers on your lawn generates nitrous oxide, a potent greenhouse gas. You should also decrease how often you water and mow your lawn. You should cut the grass higher, and you should not bag the clippings.
- Plant trees and shrubs. Trees and large shrubs provide excellent carbon storage for many years. Trees in private yards and community areas store 1.4 billion tons of carbon and take up 26 million tons of carbon every year. Planting trees near buildings creates windbreaks, and the trees provide shade that reduces heating and cooling energy demands.
- Plant edibles like herbs, fruits, and vegetables. It will make your garden more climate-friendly, and growing your own food increases soil carbon and decreases carbon emissions from food packaging, refrigeration, and transportation. Not to mention that it's fun, nutritious, and cheaper than buying vegetables at the grocery store.
- Grow plants for pollinators because they pollinate the plants we need in order to get climate change under control. Flowering plants help attract and sustain our declining bee populations. Consider planting lavender, mint, borage, sage, thyme, oregano, onion, sunflowers, and roses. Choose drought-tolerant native plants because they require less use of water.

- Plant cover crops. They will suppress weeds, increase the soil's water-holding capacity, which can prevent erosion, and help the plants withstand drought. Nitrogen-fixing cover crops, when returned to the soil, provide carbon-containing organic matter and nutrients for subsequent plantings. Try planting peas, beans, clovers, and legumes and reduce the need for synthetic fertilizers.

It's also very important to reduce your own carbon footprint. You can decrease your carbon emissions while gardening by not using gas-powered equipment. Weed, prune, and rake leaves using hand tools. Great exercise! If you have a small yard area to mow, consider using a people-powered push mower or an electric mower. Did you know that the average gas powered lawn mower puts about 90 pounds of carbon dioxide (and about 50 pounds of other pollutants) into the air every single year! Minimize your use of synthetic fertilizers and pesticides. When mixed with soil, synthetic fertilizers emit the very potent greenhouse gas, nitrous oxide. And finally, use peat-free potting soils and seed starting mixes. Peat bogs store large amounts of carbon. Harvesting the peat disturbs the Earth and causes the release of all that carbon into the atmosphere.

Use These



Photo by Jayne Collins

Not These



Photo by Jayne Collins

SUSTAINABLE AND CLIMATE-RESILIENT GARDENING

Gardeners can be an important part of the climate change solution by using sustainable gardening practices. We need to minimize our impact on the Earth by avoiding the use of chemicals, preserving natural resources, and reducing waste. Sustainable gardening and landscaping can slow down future warming by reducing carbon emissions and increasing carbon storage in soil and plants. You can make your green spaces and gardens more resilient to climate change by adding some native plants, improving the soil, growing heat tolerant vegetables, and using good storm water management practices.

Our use of fossil fuels has without a doubt increased the amount of carbon dioxide, methane, and other deadly greenhouse gases in the atmosphere. Since the Industrial Revolution, atmospheric carbon dioxide levels have increased from about 280 parts per million (ppm) to more than 400 ppm. This increase has the potential to impact plants and gardening by making it easier for invasive plants to take advantage of the increased carbon dioxide. Carbon dioxide also traps heat near the Earth's surface, which could raise the average global temperature by 3.8 degrees Fahrenheit before the end of this century.

When talking about climate change, an often-overlooked aspect is that wintertime minimum temperatures are rising faster than overall average temperatures. Increasing winter temperatures has two negative impacts. First, warmer winters allow the northward spread of insect pests who

are now limited by cold winter temperatures. Second, warmer winters have resulted in longer growing seasons for trees and shrubs due to earlier bud-break. Earlier flowering increases the possibility of damage from spring frosts and the possibility that the pollinators will not be around at the right time to feed on the nectar. The other disconcerting part of climate change for gardeners is that weather patterns will not only become warmer, they will become increasingly more erratic and extreme—more intense and longer lasting droughts, more extremely heavy rainfall events, more and stronger hurricanes.

Here are a few things you can do now to adapt your garden and find climate-friendly solutions. Reduce greenhouse gas emissions that contribute to climate change by reducing the use of your gas-powered yard tools. Consider using an electric mower and leaf blower or a rake or a broom instead of a gas-powered leaf blower.

- Plant trees and landscaping to conserve energy. Trees provide a lot of benefits like helping to warm or cool buildings, storing carbon, improving air quality to name a few. Plant deciduous trees on the east, west, and southwest side of a building to block the sun during the summer, and allow the sun to penetrate and warm the house in the winter. Plant evergreen trees on the northwest side of a house to protect it from harsh winter winds. Provide shade over your air conditioning unit.
- Plant for more diversity—add native plants and remove invasive ones. Strive to have at least 70 percent native plants in your landscape. They usually need less water and fertilizer, and they provide essential food and shelter for native wildlife. Perennial native plants help store carbon and minimize soil erosion.
- Protect and improve soil. Improve soil health by adding organic matter to the soil and disturbing it as little as possible. Make compost from yard waste and food scraps, and use that compost to enrich your soil.
- Manage storm water runoff and conserve water. Help excess water to slow down, soak in, and reduce erosion by creating a rain garden, swale, or vegetated buffer. Use rain barrels to store rainwater for later use.
- Reduce food waste and grow some of your own fruits and vegetables. You can reduce emissions associated with long-distance transportation and storage of food by growing your own or buying locally grown food.
- Don't use peat moss. Harvesting it lets carbon dioxide into the atmosphere.

Interesting Statistics

According to the Pew Research Center, about two-thirds of Americans feel the federal government is not doing enough to counteract the effects of climate change.

- Attitudes toward climate change are split by generational differences, gender, race, ethnicity, socioeconomic situation, and proximity to a coastline where natural disasters have increased in frequency.
- Data from a 2021 survey by Stacker shows that 71.8 percent of the population thinks climate change is actually happening.

- Virginia has the eighth highest percentage of residents who think the governor should be doing more to address global warming.
- Loudoun County has the fourteenth highest percentage of residents who are worried about global warming.

In Loudoun County, people who:

- think global warming is happening--78.2 percent (4 percent higher than state average and 14th highest in Virginia)
- do not think global warming is happening--11.3 percent
- think global warming is caused mostly by human activities--63.5 percent
- agree that global warming is affecting weather in the U.S.--72.8 percent
- think global warming will harm them personally--50.7 percent
- support regulating carbon dioxide as a pollutant--75.4 percent
- think Congress should be doing more to address global warming--66.8 percent
- say a candidate's views on global warming are important to their vote--62.8 percent

A Final Word

Climate change is everywhere. Every living thing will eventually be affected by it if we don't do something now to reverse the damage already done and prevent additional damage. Most scientists agree that if we cut our carbon dioxide emissions to net-zero by 2050, we can avoid the most harmful effects of climate change—worsening human health, continued loss of plant and animal species, escalation of heat waves, droughts, crop failures, sea level rise, fires, and floods from super-storms. In addition to implementing solutions in your backyard and community, contact your elected representatives at every level and urge them to support a strong plan of action to combat climate change and safeguard people and wildlife from climate change impacts.

Gardeners are both stewards and guardians of the environment. We are great observers of what is required to grow healthy plants, and we are willing to try new strategies to deal with what Mother Nature throws at us. This is what makes us successful gardeners and what will see us through this latest and biggest challenge. One person, even 500 people, can't change the world, but if we work together and we each do what we can, we can begin to turn things around, one person at a time.

Jayne Collins, Loudoun County Extension Master Gardener

How You Can Help Beautiful, Bodacious, Busy Bumble Bees!

The world is home to more than 250 species of bumble bees, nearly 50 of them are found in the United States, and 14 of those are found in Virginia. Bumble bees are members of the family Apidae (pronounced *app-uh-day*), which is the same family as honey bees, squash bees, carpenter bees, and many others. A key characteristic of Apidae is their fluffy hair, which makes them appear fuzzy, most are also relatively large, and many are fast flying.

What is in a name? All bumble bees belong to the genus *Bombus* (pronounced *bomb-bus*) and are some of the most recognizable bees in North America, with bright yellow hair on their head, thorax (the middle section where the wings attach), and abdomen. The scientific name *Bombus* comes from a Latin word for a buzzing or humming sound, borrowed from the Greek word *bombos*. The common name bumble bee can be traced back to the Middle English word *bombelen*, which means to hum. This name dates to the 1500s, but as early as the 1400s they were also called humble bees, referencing their characteristic humming sound. Sometime in the 1920s, the name we know today seemed to stick permanently as the common name for these bees. **Fun fact:** The term humble bee is used in writing as diverse as William Shakespeare's *Midsummer Night's Dream* and Charles Darwin's *On the Origin of Species*.

While most of our native bees are solitary, many but not all bumble bee species are truly social, like honey bees, and can be part of colonies ranging from 50 to 500 individuals. Bumble bee colonies have three types of members: the queen, workers, and drones.

Gynes are future queen bees--female bees who have mated but haven't yet started a colony. After mating in the fall, these future queens will seek to bulk up with as much nectar as possible to give them the fat reserves they need to survive the winter. As the weather cools in fall, the queen bee, workers, and drones all die and only the gynes overwinter.

How can you help future queen bees (gynes) build up their fat reserves in fall? Help these future queen bumble bees (and all late-flying pollinators!), by planting fall-blooming plants, preferably native plants, to ensure you have rich nectar sources available to bumble bees as late in the season as possible to help these young ladies have the best possible start in spring.

How can you help gynes successfully survive the winter? In the fall, after they finish plumping up, gynes need to find a place to enter diapause (a period of suspended development due to unfavorable conditions) over the winter. Gynes will often dig into soft soil or tuck themselves under leaf litter, so you are encouraged to leave the leaves in your flower beds over the winter to help give next year's queen bees a protected place to hibernate. You can also leave bare patches of soft soil on the north side of your house or shed for them to burrow into--they prefer that kind of location so they don't accidentally warm up on a pleasant winter day and emerge too early. Unlike honeybees, they don't typically wake up in winter and go back to sleep.

Gynes emerge from their overwintering spots in early spring--some as early as February--but the timing varies among species. Their first and most critical need when they awake is to find nectar and pollen to replenish the energy and fat reserves they expended while waiting for spring, so this is a very vulnerable time for these future queens. Their next priority is to find a good place to nest. Bumble bees generally nest underground, often in abandoned rodent burrows, but they also nest aboveground in abandoned bird nests, rock walls, hollow trees, or under a tussock of grass.

Once these future queens find good spots for their nests, they go right to work foraging to find nectar and pollen to feed themselves and their developing offspring. (Once they have offspring, we call them queens.) Your early-blooming plants are critical to helping these queens' first broods to thrive; these become the worker bees that will support the colony. As adults, the workers will take over the tasks of foraging from the queen bumble bee, and the queen will remain in the nest to continue laying eggs and tending to the growing colony--with help from the worker bees.

How can you help future queen bees start off strong in the spring? Gardeners like us can help these future queen bees by planting early-blooming plants, including trees and shrubs, and using native plants whenever possible to ensure they have plenty of nectar and pollen available when they emerge in spring, and by leaving nests alone if we find them. **Fun fact:** Bumble bees have special adaptations to allow them to be more active in colder weather than most other bees that need minimum temperatures around 55° F to fly. Bumble bees have thick coats of hair that provide good insulation, and they can also warm up by basking in the sun before they fly. When those are not enough, they can generate their own heat by shivering their flight muscles, uncoupling wings from their flight muscles, which lets them contract those muscles without flapping their wings. The contractions raise the bee's internal temperature significantly above the outside air. Once they warm up their muscles to 80° F, bumble bees can forage when the air temperature is much too cold for other bees.

Once the colony grows to a healthy number later in the summer, the queen bumble bee lays some eggs that turn into drones and future queens instead of worker bees. Drones are male bees that eat but do not help with work in the colony, and once they become adults, they usually leave the colony and do not return. These drones will spend the rest of their lives out in your garden hoping for the chance to mate with a future queen bumble bee, which will be called a gyne once she mates. When you see bumble bees sleeping in your flowerbed at night, they are likely to be one of those hopeful bachelors! **Fun fact:** Queen bees (and some wasp and ant queens) decide whether each egg they lay will develop into a male or female bee. If they opt to fertilize the egg with sperm they have stored in an organ in their abdomen (the spermatheca), it will be a female (worker bee or future queen); if not, it will be a male (drone).



Sleeping bumble
bee

How can you help bumble bees to have a healthy colony? In addition to ensuring you have multiple species of plants in bloom throughout the growing season (which benefits all pollinators!) so the worker bees find lots of pollen and nectar to support the growing family, you can help bumble bees--and all pollinators and other beneficial insects--by carefully considering the use of pesticides in your garden. Bumble bees work some of the longest days of all bees and are generally the earliest to be active in the morning and the last ones to end their foraging at night. If you find that you must use pesticides, it is very important before you do so to check thoroughly for sleeping bumble bee drones hoping for a chance at romance and for hard-working worker bumble bees that are out foraging very early or late. Please be sure to keep a watchful eye out for them before you apply chemicals, and do your best to avoid doing so if they are present.

How can bumble bees help your plants? If you grow crops in the Solanaceae family such as tomatoes, peppers, eggplants, and potatoes, the Ericaceae family like blueberries and cranberries, or other plants that are buzz pollinated, you probably already know that you need bumble bees to visit your plants in order to have a good harvest. Buzz pollination (also known as sonication) occurs

when bumble bees grab onto the flower with their bodies and jaws and vibrate their flight muscles at just the right frequency--some experts say it is approximately the key of middle C--to shake loose pollen of certain plants that otherwise may not release it easily or at all. Though the worker bumble bees will relocate the pollen from where it lands on their fur to their pollen baskets so they can transport it, inevitably they miss some and these pieces can help fertilize the next flowers they visit. Some other species, like wild blue indigo (*Baptisia australis*), bottle gentian (*Gentiana andrewsii*), and others need bumble bees to pollinate them because they are the only bees strong enough to pry open their flowers to access the nectar and pollen inside. **Fun fact:** Not all bees can buzz pollinate—honey bees cannot, but in addition to bumble bees, carpenter bees, sweat bees, stingless bees, and others can.



Bumble bee with pollen basket

What else can we do to help bumble bees (and all pollinators)? Bumble bees, like all pollinators, are in decline, and one quarter are considered to be facing risk of extinction--the Rusty patched bumble bee (*Bombus affinis*) is listed as federally endangered and is one of several bees on the endangered species list. Main causes of bumble bee (and all pollinators) decline include habitat loss, pesticides, pathogens, and climate change. The good news is that creating habitat and reducing or eliminating use of pesticides are two key actions all gardeners can take!



On purple coneflower

Bumble bees are generalist pollinators that can forage for nectar and pollen on a wide range of flowering plants and don't need specific plants. That said, since bees can see purple, blue, and yellow flowers most readily, you may want to be sure to include those colors in your plantings.

Support bumble bees (and all pollinators) throughout the growing season:

Spring: Natives {perennials}: trout lily (*Erythronium Americanum*), bluebells (*Mertensia virginica*), spring beauty (*Claytonia virginica*), dutchman's breeches (*Dicentra cucullaria*), golden ragwort (*Packera aurea*), bleeding heart (*Dicentra eximia*), red columbine (*Aquilegia canadensis*), violets (*Viola spp.*), three-leaved stonecrop (*Sedum ternatum*), blue false indigo (*Baptisia australis*), serviceberry (*Amelanchier spp.*), maple (*Acer spp.*), willow (*Salix nigra* or *Salix sericea*), blueberry (*Vaccinium spp.*); non-natives {perennials}: grape hyacinths (*Muscari armeniacum*), snowdrops (*Galanthus spp.*), glory of the snow (*Chionodoxa luciliae*), crocuses (*Crocus spp.*), clover (*Trifolium repens*), {annuals}: dandelions (*Taraxacum officinale*).

Summer: Natives {perennials}: anise hyssop (*Agastache foeniculum*), dense blazing star (*Liatris spicata*), milkweed (*Asclepias spp.*), joe pye weed (*Eutrochium purpureum*), wild bergamot (*Monarda fistulosa*), threadleaf coreopsis (*Coreopsis verticillata*), mountain mint (*Pycnanthemum spp.*), blue cardinal flower (*Lobelia siphilitica*), New York ironweed (*Vernonia noveboracensis*),

hyssop leaved boneset (*Eupatorium hyssopifolium*), purple coneflower (*Echinacea purpurea*), and stokes aster (*Stokesia laevis*), {annuals}: partridge pea (*Chamaecrista asciculata*), annual fleabane (*Erigeron annuus*); non-natives {perennials}: English lavender (*Lavandula angustifolia*), meadow sage (*Salvia nemorosa*), and Brazilian verbena (*Verbenia bonariensis*), {annuals}: sweet alyssum (*Lobularia maritima*), wishbone plant (*Torenia fournieri*), zinnias (*Zinnia elegans* - single flowered), lantanas (*Lantana camara*), cosmos (*Cosmos bipinnatus*).

Fall: Natives {perennials}: asters (*Symphyotrichum spp.*), goldenrods (*Solidago spp.*), black eyed-susan (*Rudbeckia fulgida*), bearded beggarticks (*Bidens aristosa*), bottle gentian (*gentiana andrewsii*), obedient plant (*Physostegia virginiana*), blue mistflower (*Conoclinium coelestinum*), wingstem (*Verbesina alternifolia*), sneezeweed (*Helenium autumnale*), downy skullcap (*Scutellaria incana*), flowering spurge (*Euphorbia corollata*), ox eye sunflower (*Helianthus helianthoides*), American witch hazel (*Hamamelis virginiana*); non-natives {perennials}: sedum (*Hylotelephium spectabile*), balloon flower (*Platycodon grandiflorus*), {annuals}: borage (*Borago officinalis*).



Bumble bees on mountain mint

Barbara DeRosa-Joynt, Loudoun County Extension Master Gardener Trainee

All photos in the article were taken by Barbara.



Goldenrod for Your Garden

When the topic is goldenrod, *Solidago*, people sometimes express negative opinions based on the tall, weedy, aggressive, and very difficult to remove Canadian goldenrod, *S. Canadensis*, a common plant native to North America.

But there are many reasons to plant a goldenrod species on your property, and some species will fit beautifully in your ornamental gardens. Goldenrod does not cause allergies; goldenrod's bright yellow blossoms produce pollen too heavy to be carried by the wind; it relies entirely on animal pollinators. Goldenrod attracts many birds and mammals and a huge variety of insects. It's one of the best herbaceous native perennials for attracting and feeding wildlife. Goldenrod provides pollen in late summer and autumn when many other plants are past blooming. This extends the resources available for pollinators later in the season. Goldenrod is an important source of food for monarch butterflies migrating along the Atlantic coast. Tough goldenrod stalks provide great structure in the winter months as well as cover and protection to birds and mammals. Many insects will lay their eggs in the stems to overwinter. (See the [Winter, 2021-22 issue of the Trumpet Vine](#), *Goldenrod Galls: Thriving life in the seeming "dead" of winter.*) Goldenrod provides food and shelter for 115 butterfly and moth species in the U.S. Mid-Atlantic alone. More than 11 native bee species feed specifically on the plants, and birds feed on the seed heads long after the blossoms have faded. Either massed or growing singularly, goldenrod provides beautiful yellow color to your late summer and fall property. It is resistant to deer browse and is very low maintenance.

What's best for your garden and meadow? There are more than 20 goldenrod species in Piedmont Virginia ranging from one foot to five feet in height preferring full sun to light shade. Here are four for your consideration.



Golden Fleece [Courtesy Missouri Botanical Gardens](#)

***S. sphacelata*, 'Golden Fleece,'** grows from 12 to 18 inches in well-drained soil and full sun. Golden Fleece is more compact and better behaved than the straight species and makes for a better garden plant. It is low maintenance with showy flowers that attract bees and butterflies. It may create a mass through creeping rhizomes and self-seeding. Golden Fleece is available at native plant nurseries.

S. caesia, blue-stemmed or wreath goldenrod, grows from one to three and one-half feet and does well in a lightly-shaded woodland with dry or well-drained soil. Its arching greenish-purple stems hold tiny yellow daisy-like flowers that occur in each leaf axil along the entire stem. It forms attractive open clumps without spreading aggressively. This is graceful and easy to grow. It works well planted in a native garden, a cottage garden, a butterfly garden, or a woodland garden.



Blue-stemmed goldenrod [Courtesy VNPS](#) Photo by Denise Greene



Fireworks Courtesy of North Carolina Extension

***S. rugosa*, 'Fireworks,'** a variety of rough-stemmed or wrinkle-leaf goldenrod, grows three to four feet tall. The blooms appear along 18-inch arching stems held above the foliage to provide a stunning display of yellow flowers that resemble fireworks. 'Fireworks' is not aggressive and will not try to take over your garden because it spreads slowly by rhizomes. Divide every three to four years or as needed. Use as the border of a native plant garden or in a meadow.

***S. rigida*,** stiff goldenrod, grows three to five feet. Due to its size, it's not for every garden, but it is stunning when in bloom. It is distinguished by erect, flat-topped terminal clusters atop stiff, broad-leaved, hairy stems. It provides good color and contrast in late summer to early fall for the perennial border, wild garden, prairie, meadow, native plant garden, or naturalized area. Its stiff and upright habit makes it an ideal plant to provide vertical interest in gardens and landscapes. Its long tap root allows it to compete well with other plants during periods of drought. It grows in full sun to light shade.



Stiff goldenrod Photo Carol Ivory

Brighten your late summer and fall garden and treat the wildlife with a variety of goldenrod plants.

Carol Ivory, Loudoun County Extension Master Gardener

Fall Native Plant Sales

The native plant sales this fall are excellent places to purchase goldenrod and other native plants for your garden. See <https://www.plantnovanatives.org/local-native-plant-sales> for information on native plant sales in Northern Virginia.

Snapping Turtles in Our Backyard

You have probably seen a snapping turtle; they are abundant in Northern Virginia and are very distinctive in appearance from box turtles and other water turtles. Snapping turtles, *Chelydra serpentina*, are large freshwater turtles that make their homes in ponds, swamps, streams, rivers, and brackish water where they find plenty of room and food in the form of aquatic vegetation and wildlife. The snapping turtle's natural range extends from southeastern Canada, southwest to the edge of the Rocky Mountains, as far east as Nova Scotia and Florida. The common snapping turtle can weigh up to 75 pounds.

Snapping turtles spend most of their lives in water and generally leave only to mate and lay eggs. They tend to bask in water as opposed to land. In Virginia, snapping turtles typically lay eggs in June. After mating takes place, the female leaves the water to find a suitable spot to lay her eggs. She seeks areas of loose soil where she can easily dig. These might be open fields, sandy banks, the edges of ponds and lakes, or your backyard! She will dig a shallow bowl-shaped depression, usually in a sunny location. Female turtles lay a single clutch of 26 to 55 eggs annually on average, but most of the eggs fall prey to predators such as raccoons, crows, hawks, skunks, coyotes, dogs, foxes, etc. The eggshells are leathery and sensitive to moisture. They need to be kept damp but not wet. The eggs will hatch in 2 to 3 months. What to do if a snapping turtle lays eggs in your yard? Nothing. Attempt to protect the nest. There's good information on the Internet. Snapping turtles are now [protected in Virginia](#).

When in the water, snapping turtles are not fierce at all. They usually slip quietly away, bury themselves in mud, or hide among aquatic roots. But when a snapping turtle comes out of the water, it is important to pay close attention to its combativeness. It is not uncommon for it to bite a human in a purely defensive strike. Their pointed beaks are strong enough to inflict a wound and cause pain, although they cannot sever a finger or a limb as common folklore suggests. A snapping turtle will make a hissing sound when it feels threatened or stressed and release a musky odor from the base of its tail. The musk odor is greater in larger snappers. The most defining feature of the snapping turtle is its long, mobile, flexible neck, allowing it to reach surprising distances and placing you in danger if you are close to it.



Snapping turtle near a pond adjacent to the Ashburn Library. Photo Carol Ivory.

Snapping turtles have a unique appearance. They can be described as resembling a dinosaur, with their long tail and elongated snout like a beak. They have a large, muscular build with a rigid carapace (hard shell) that can grow up to 18 to 20 inches in adulthood although 9.8 to 18.5 inches is more common. The ridges tend to be more pronounced in younger individuals. Their weight can vary between 10 and 35 pounds. A snapping turtle is distinguished by a saw-edged crest on the upper side of its tail and averages 8 to 12 inches in shell length. They are tan to black in color and have a rough upper shell and a small cross-shaped lower shell. The small size of the lower shell prevents the turtle from withdrawing into its shell. Its legs, head, and tail are always exposed. The snapper's

legs are short, and there is a swimming foreskin between the toes. Be very careful when attempting to handle a snapper since long claws can deliver a bad scratch. Heavy gloves are advised.

Snapping turtles are omnivorous, but they prefer animal prey. They are active hunters using ambush tactics to prey on anything they can swallow, including many invertebrates, fish, frogs, other amphibians, reptiles (including snakes and smaller turtles), unaware birds such as baby ducks, and other small mammals. Snapping turtles are not agile or fast swimmers, so their prey is often slow-swimming fish, eels, and water snakes. They will eat dead animals and even other turtles.

These reptiles will sift through the ground while eating and separate insects and other small animals from dirt. They are clean animals and will avoid eating dirt and sand. Favorite foods for the common snapping turtle are sunfish, goldfish, tadpoles and frogs, snails, worms, mealworms, leeches, cockroaches, dragonflies, ants, salamanders, smaller and adult turtles, water snakes and snakes, and cattails. They can also ingest bird eggs. The snapping turtle does not use its claws for either attacking or eating but only as aids for digging and gripping.

Snapping turtles have long been valued as food and recent Virginia law has imposed a limit on the number of snapping turtles that can be taken. There are other factors that also have an impact on their populations. Road mortality can have a severe population decline in the snapping turtle in urbanized wetlands. They are also used as a traditional ingredient in turtle soup, but the use of turtles in soup can become a health concern due to potential concentration of toxic environmental pollutants in the turtle's flesh.

Males are larger than females both in weight and size. The common snapping turtle is considered to be the heaviest native freshwater turtle. The snapping turtle is ready to mate when its shell reaches 8 inches in length. They reach maturity between 8 and 10 years old.

The snapping turtle's lifespan in the wild is poorly understood. There has been some recapture data from Algonquin Park in Canada suggesting a maximum age of 100 years. They have few predators when older, but their eggs are in danger from crows, American mink, skunks, foxes, and raccoons. Juveniles and younger snapping turtles are at risk from herons, owls, hawks, fishers, large fish, and snakes. Coyotes, American black bears, American alligators, and river otters have also been known to prey upon the older snapping turtles.

It is against Virginia and federal law to relocate any wild animal, including snapping turtles. If you have one in your pond, please value it as an important part of the environment and recognize that it is not defensive when in the water. If you need to move one because it's in a bad spot such as on your front porch or in the road, do not grab its shell with your hands because it can easily stretch its neck back across its own shell to its hind feet and snap your fingers or scratch you with its sharp claws. It will probably move on if you leave it alone. But if it is in danger, there are strategies you can use. This [video](#) provides a good demonstration.

In summary, you may see a snapping turtle trying to cross the road. You can move it by using a car mat or other flat object. Carefully hold the turtle at the back of the shell to lift it onto the mat or object and then pull it across the road to safety.

Heather Keith, Loudoun County Extension Master Gardener

Sharing Your Backyard With Wildlife (Creating A Humane Habitat)

“Pave Paradise, put up a parking lot.” Joni Mitchell wrote these words in 1970 during her first visit to Hawai’i. She woke up one beautiful morning and opened her curtains and saw lush green mountains in the distance spoiled by the view of a dirty, dusty parking lot outside her window. Every day more and more wildlife habitat is lost to development. We’ve taken their homes and their food sources. They are being displaced with nowhere to go. We can give back a little by making our backyard a humane habitat for wildlife—animals, birds, insects. You can create a humane backyard anywhere; there are no rules. An apartment balcony or a big community park—any outdoor space, large or small, can be made into a safe and friendly place for wildlife, people, and pets to coexist.

Creating A Humane Habitat

What is a habitat? A habitat is defined as all the places that a animals need in order to survive and reproduce. It is where they find food, water, and shelter from weather and predators. A humane habitat is a natural habitat that provides food, water, and shelter in your yard. According to the Humane Society, “a humane backyard gives wildlife a safe place to live free from pesticides, chemicals, free-roaming pets, inhumane practices (such as trapping), and other threats.” Any size space can be turned into a humane habitat—a community park, a corporate property, even an apartment balcony can become a safe haven for wildlife. You can attract birds, bees, butterflies, and mammals by planting native flowers in a window box or arranging pots of native plants on your porch or deck. Native plants attract native wildlife. Consider reducing (or replacing) your turf grass lawn with a variety of native plants and grasses. Wildlife will use the plants for food, nesting materials, and shelter. Leave fallen leaves under shrubs, trees, and perennials to create a winter refuge for reptiles and insects. Don’t prune your plants to the ground; leave the hollow stalks and stems for chrysalises and bee larvae.

Here’s how to turn your backyard into a humane habitat. If you can convince your neighbors to do the same, a wildlife corridor can be created, giving the wildlife more space in which to move about.

- Do some research on trees and plants that are native to this area. Native trees and plants provide food and shelter for wildlife. And native plants are already acclimated to the climate and soil so they won’t require much maintenance. There are hundreds of native trees to choose from—red maple, ginkgo, river birch, honey locust, black gum, redbud, and magnolia to name only a few. Native plants include coneflower, black-eyed Susan, bee balm (monarda, bergamot), columbine, black snake root, turtlehead, and mountain mint.
- Make sure you have a water source such as a birdbath or, if you have a large property, a small pond. You can even put big bowls of water in the shade under trees so smaller mammals like rabbits and squirrels also have access to water.
- The biggest threat to birds is cats—cats whose owners allow them to run free. Not only is this dangerous for the birds (and other small animals), it’s also dangerous for the cat. Please keep your cats indoors.
- Plant combinations of perennials in groups so pollinators have the best opportunity to pollinate. Window boxes are a great idea to attract butterflies. Flowering plants attract winged insects. Many butterflies will lay their eggs in the leaves, which will later provide

them with food. Bees are probably the biggest group of pollinators in an ecosystem. Did you know that 26 percent of everything you eat and drink is connected to bees?

- Skip the lawn chemicals. Fertilizers, pesticides, and herbicides are full of chemicals that are harmful not only to wildlife but also to humans and pets. Also, the runoff flows into local creeks and rivers and eventually into the Chesapeake Bay.
- Don't forget to help out the bugs. Insects make up 70 percent of the animal kingdom and most are helpful and harmless. Try to attract beneficial bugs to your yard.
- Build a brush pile. Leaves, tree limbs, and other yard debris can be turned into a brush pile that provides shelter for animals.
- Make your swimming pool safe; pools can be deadly for wildlife.
- Plant a rain garden to absorb rainwater runoff from roofs, driveways, and walkways rather than allowing it to flow into storm drains and eventually into the Chesapeake Bay. It's best to plant native plants because they are more tolerant of the local climate and soil and their deep root systems enhance water filtration. Choose native wildflowers, rushes, ferns, shrubs, and small trees.
- Start composting. It's a great way to put nutrients back into the soil and improve the soil's water retention. It also reduces food waste and the amount of trash that you produce.
- PLANT TREES!! Reduce your carbon debt by planting trees. They also provide essential shelter and food for wildlife. Plant trees that have fruits or nuts to provide food for birds and insects. Trees also provide shade in the summer and shelter in the winter and can help you keep heating and cooling costs low.

In my humane backyard there's food, shelter, and water in a birdbath. Nearby are bird feeders, another birdbath, and my vegetable garden.



Photos by Jayne Collins

Pros and Cons

Turning your yard and garden into a humane habitat for wildlife can be a great thing to do, but it can also be quite controversial with your neighbors. Be aware of the pros and cons before you

commit yourself. Also, consider the space you have and decide how you want to use it—how wildlife-friendly do you want to be? Before you start, it might be a good idea to let your neighbors know what you're up to. Maybe they'll want to make their yards humane habitats as well!

Pros

- One of the biggest benefits is that you are helping out the local wildlife and migrating birds. Just adding a bird feeder or a few flowering plants, shrubs, or fruit trees to your yard provides wildlife with food and shelter. If you have a larger area, go a step further by adding water features, insect hotels, etc.
- Your wildlife garden should be a welcoming place for beneficial insects which in turn will help maintain the fragile balance between good and bad bugs in your garden. There is no need for chemicals to control pests; the good bugs take care of the bad bugs.
- If you've planned your wildlife garden correctly, it will mean less work for you. Beneficial insects provide pest control. Native plants reduce the need to water or weed because they are suited to your region and pretty much take care of themselves. Minimal pruning is needed because a wildlife garden should look a little wild and unkempt.
- Wildlife gardens can be very attractive. Native plants look good in their own right but you can add a little interest with some colorful flowering plants, fruits, and veggies.
- A wildlife garden provides a wonderful opportunity for getting up close and personal with wildlife and closer to nature. It's fun to watch butterflies and bees flitting from flower to flower, totally engrossed in obtaining nectar, or to watch the squirrels chasing each other and playing. The sound of birds chirping is very relaxing and a great stress reducer.

Cons

- The wildlife you encourage to come into your yard and garden certainly won't stay within the confines of your yard. So you risk getting the evil eye from your neighbors when the wildlife that you love sees some pretty tasty looking veggies in your neighbor's garden and tramps through their yard to have a little taste. You're going to have some angry neighbors if that happens.
- Your wildlife-friendly garden will look messy and unkempt, an overgrown jungle of downed logs, brush piles, leaf piles, tall grass, wildflower areas, and weeds. Some wildlife gardeners don't clean up their garden in the fall; they leave it messy so that it provides winter food and shelter for birds and animals. Your already unhappy neighbors with their orderly, well-manicured yards and gardens are going to be even more unhappy with you. You may even get the reputation of being a "lazy gardener." Nobody wants that!
- You could get a visit from a zoning code enforcement officer. Neighbors and passers-by may have reported you and your messy yard to the HOA and/or zoning officials and you may get a visit from an HOA and/or zoning official along with a citation for failing to maintain your property.
- Establishing a wildlife habitat in your yard can be expensive if you get too overzealous and start buying birdfeeders, birdhouses, bird baths, insect hotels, nest boxes, and water garden or rain garden supplies. A big expense that you will probably want to invest in might be fencing, especially if you have a vegetable garden—you definitely want to keep the wildlife out of your vegetable garden.

- While you're encouraging desirable wildlife to visit your yard, it's inevitable that you will attract undesirable wildlife as well, such as woodchucks, raccoons, opossums, and skunks to name a few. When this happens, your already-unhappy-with-you neighbors are going to totally freak out. It's challenging and frustrating to keep the undesirables out while encouraging the desirables to come in. You'll also want to make sure your garbage cans are secured and that there is no way a critter can set up housekeeping under your deck or in a tool shed.

National Wildlife Federation Backyard Habitat Certification Program

The National Wildlife Federation sponsors a Certified Backyard Wildlife Habitat certification program if you meet the following key components:

- **Water**--provide at least once source of water
- **Food**--provide at least two food sources
- **Shelter**--provide at least two sources of shelter
- **Places to Raise Young**-- provide at least two places for animals to mate and raise young
- **Sustainable Practices**--engage in at least two categories of sustainable practices

What are the benefits of a Certified Wildlife Habitat?

Having all the elements in place in your yard to qualify means:

- You are providing a much-needed wildlife habitat that was formerly lost to the suburbs.
- Your yard is more than just inhospitable grass. It provides water, food, and shelter to wildlife.
- By officially certifying your yard as a certified wildlife habitat, you can educate and encourage your neighbors to make improvements to their yards as well. If enough of your neighbors turn their yards into wildlife habitats, you can create wildlife corridors that give the animals more room in which to safely live.
- You can purchase a cool sign to put in your yard to let people know you are wildlife friendly.

Once you have the required components in your yard, the process to become certified takes only minutes:

1. Make sure your yard meets the criteria for each of the five components.
2. Head to the National Wildlife Federation (NWF) website and fill out the quick certification form. The form is honor based; there is no need to provide photos or other proof that you meet the criteria.
3. Pay the \$20 application fee and you are good to go. These funds go toward helping NWF's efforts.
4. Once you are officially certified, you'll have the option to purchase that cool sign to display in your yard identifying your yard as a NWF Certified Backyard Wildlife Habitat.

Why does your humane backyard matter? Because 85 percent of the world's flowering plants are pollinated by animals (mostly bees); 30 percent of the U.S. water supply is used outdoors (mostly for lawns); 96 percent of North American bird species rely on insects to feed their young. Everyone can encourage native wildlife into their yard even if they don't know anything about the wildlife or

gardening. You just need to care about the world around you and the creatures with which you share it.

Jayne Collins, Loudoun County Extension Master Gardener

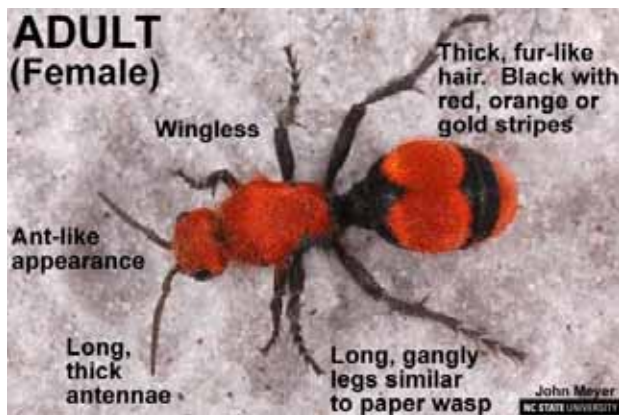


**Beautiful Native Virginia Bluebells along the Potomac River.
There is food, water, and shelter here. A humane habitat!**

Photo by Carol Ivory

Velvet Ants, Eastern Velvet Ants, Cow Killer Ants (*Dasymutilla occidentalis*)

You're in the garden, on hands and knees, weeding. And suddenly you see a large, bright red or red-orange, fuzzy ant scurry rapidly away from you. Look, admire, but *don't touch!* What you've just seen is a female velvet ant, also called a cow killer ant (although there's no record of any cow ever haven been killed by one), and it's not an ant. It's actually a wasp with a powerful, painful sting. It won't kill you (unless you're allergic to bee and wasp stings), but you'll be very uncomfortable until the effects wear off.



Adult female velvet ant.

<https://www.ces.ncsu.edu/wp-content/uploads/2018/11/Velvet-Ant-Adult-Female.jpg>

Although fairly common, they are adept at getting out of our way before we spot them. In over fifty years of gardening I've only actually seen two, once as I was weeding a mulched flower bed and once on our brick sidewalk, traveling from one side of the sidewalk to the other.

Velvet ants are members of the extraordinarily large Hymenoptera order (ants, bees, and wasps). Within this order, the Mutillidae family (velvet ants) alone consists of more than 4300 species worldwide in many subfamilies and genera. Of the 32 species known to exist in Virginia, the largest species, the one which we are most like to see in our gardens, is *Dasymutilla occidentalis*, the Eastern velvet ant.

Habitat:

Velvet ants are native and common throughout the East and in parts of the Midwest. They can be found in sunny areas on bare or sandy soil, on the surface of mulched flower beds, and in grassy areas and pastures, looking for spots to deposit their eggs. Males can be seen flying over areas where they believe they may find receptive females and on flowers, where they feed on the nectar.

They are active during daylight hours from July through October in our area.

Velvet ants are solitary. They don't congregate in hives or nests, gather together at night to rest, or lay eggs in a common area. You may be stung by one, and that one can sting you repeatedly, but her friends won't come to help her. They aren't aggressive and prefer to avoid trouble.

Description:

Velvet ant females and males differ in two major respects: The females don't have wings and can't fly and the males don't have a stinger and, therefore, can't sting.

Female velvet ants are easily recognized by their bright red or red-orange coloring and fuzzy appearance. They range from about ½ inch long to almost a full inch long, with most being about ¾ inch long.

If you see a male, you may not recognize it. As it flies about the lawn and garden, it looks very ordinary, like any other wasp except, if it lights on a flower and you get a good look at it. Then you can see that the males are similar in color to the females but more slender, and have two translucent, brown wings.

Life Cycle:

Velvet ants have four distinct stages in their life cycle: Egg, larval, pupa, and adult (which for females can be up to 1½ years).

The fertilized female, traveling over the surface of the soil, looks for a likely spot to deposit her eggs, specifically, among the mature host larvae of other solitary ground nesting insects, particularly wasps or bees, including occasionally bumble bees. Of necessity, since the female is laying one egg per pupa, she needs to travel widely in her area to find those widely scattered nests for all of her eggs. That's when we are likely to see them, and that is when they are most vulnerable to predators.

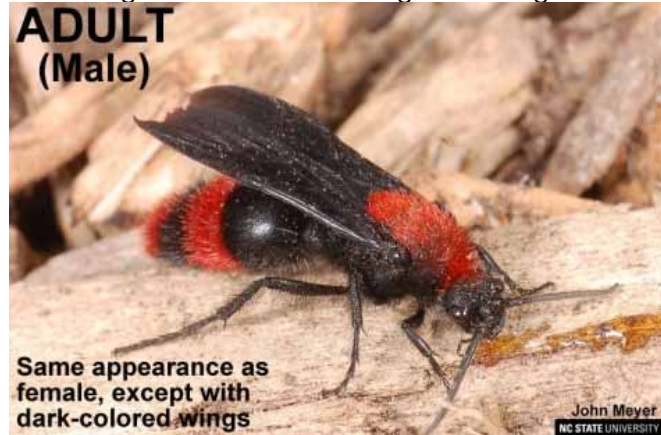
The eggs hatch, and the larvae feed on the host larvae, eating them, then pupate within the host's nest, emerging as adults who subsequently seek mates and begin the cycle anew.

Even though they lay their eggs in the nests of other ground-nesting bees and wasps, velvet ants aren't considered pests or threat to these other species, nor are they threats to people or pets.

Defenses:

Both male and female velvet ants, are diurnal, that is, they are active during daylight hours when they can easily be seen by predators. While the males can fly away to escape danger, the wingless females cannot. Instead, in order to survive they are equipped with several defense mechanisms, specifically:

- Aposematic red or red-orange and black warning color, which makes them highly visible and serves as a warning to predators, including curious humans, to be careful.
- Exceedingly hard, rounded exoskeleton, which makes it almost impossible to kill or grasp. With their tough exoskeleton, a fly swatter is basically useless. Stepping on one in mulch is also pointless, as is stepping on one with a tennis or other soft shoe. The exoskeleton is even hard to pierce by stainless steel insect pins used by entomologists. (The pins have been known to bend instead of penetrating the exoskeleton.) And by the time you get a wasp spray, the female will be long gone.
- Powerful legs and exceedingly fast running speed – up to 14 centimeters per second or 0.5 kilometers per hour (1,640.42 feet). Obviously, they can make a quick getaway!



Male velvet ant. <https://www.ces.ncsu.edu/wp-content/uploads/2018/11/Velvet-Ant-Adult-Male.jpg>

- Aposematic warning stridulation – a definite squeaking or chirping noise audible to the human ear.
- Aposematic odor – said to smell like fingernail polish remover.
- And, most notable, an extremely long stinger, up to 13.5 millimeters (a little over ½ inch), which delivers a highly painful sting that is actually low in toxicity (unless the victim is allergic to bee and wasp venom). Not only is the stinger extremely long, it is mobile, i.e., if the velvet ant is attacked from the rear, side, front, or below, the stinger can be rotated and aimed at the attacker.

The bright red to red-orange color alone is enough to warn potential predators, including gardeners and curious children, to be careful. Because of all of these warning and defense systems, although they are restricted to traveling along the soil surface, females are rarely attacked by predators such as lizards, birds, moles, spiders, and insects. They are highly visible. They stand out in the garden. If one is in your line of vision, you'll see it!



Stinger of Eastern velvet ant. Public domain.
<https://www.flickr.com/photos/usgsbiml/21286617219/>

The Sting!

There are two causes of pain from the sting: first, the mechanical damage of the stinger piercing the skin and, second, the chemical composition of the venom. The combination is extremely painful. And to make it worse, a velvet ant can sting multiple times, not just once.

The late Dr. Justin O. Schmidt, an entomologist at the Carl Hayden Bee Research Center in Tucson (part of the U. S. Department of Agriculture), developed a pain scale for the amount of pain caused by the stings of various Hymenoptera (bees, ants, and wasps) called The Schmidt Pain Scale for Stinging Insects. (To do this, Dr. Schmidt obviously had to be stung repeatedly by all 78 of the insects on the scale – ouch!) The scale has values that range from 1-4, with

level 3 being uncommon and level 4 being rare. Although Dr. Schmidt said that there might be a bee, wasp, or ant which causes level 5 pain, he never encountered it, although he did encounter one which he considered possibly a level 4.5.

As a point of reference, he assigned a base value of 2 to the honey bee, with some bees, wasps, and ants, like the potter wasp, being assigned a level .05, sweat bees coming in at a level 1 and a very few others, like the tarantula hawk (wasp) from the Southwestern United States measuring a level 4.

Dr. Schmidt described the sting of *D. occidentalis*, the Eastern velvet ant which we are most likely to encounter, as “a solid, unforgettable 3.”

Unlike the stings of honey bees, other wasps, and ants, the sting from a velvet ant doesn't leave a red puncture spot on the body and there is minimal to no swelling of the spot. It is, however, extremely painful.

Dr. Schmidt in his book, *The Sting of the Wild: The Story of the Man Who Got Stung for Science*, describes it like this: "The pain is instantaneous and searing, much like sticking a red-hot glowing needle into your thumb. The thumb recoils, but not the pain, which continues unabated for 5-10 minutes before gradually easing. This is in addition to a rashy-nettly pain reminiscent of a nasty brush with stinging nettle plants alongside a path near a stream. A natural urge to rub the rashy sting area increases the pain and the itch, a combination just shy of torture."

As mentioned earlier, unless you're allergic to bee stings, Eastern velvet ant venom isn't especially dangerous. In fact, it is less lethal than that of the common honeybee. As far as the name "cow killer" goes, even many stings

from a number of velvet ants isn't enough to kill either a human or a cow, and this isn't likely since they are loners. And eventually the one that is stinging you will run out of venom, if you don't drop it first!

If you are stung by a velvet ant, treat it like a bee sting, i.e., use an ice pack to reduce swelling and a steroid cream or lotion to speed up the recuperation process. And don't scratch it! That will only make it worse!



Female Eastern velvet ant on leaf. (Johnny N. Dell. Bugwood.org) licensed under Creative Commons, <https://www.insectimages.org/browse/detail.cfm?imgnum=5387778#collapseseven>



Eastern velvet ant face. Public domain. <https://www.flickr.com/photos/usgeologicalsurvey/21160239054/sizes/l/>

Lina Burton, Loudoun County Extension Master Gardener

From Garden to Soup in Sourdough September

Growing up on a dairy farm in rural northern Ohio meant a long ride home on the school bus. School always started after Labor Day, so by mid-September, I might be racing off the bus in the warm sunshine to be greeted by the aroma of my mom's vegetable soup simmering on the stove. My depression era parents let nothing from their large garden go to waste, and a variety of late season produce found its way into her soup.

There was nothing chichi about this very basic soup. Instead, it was hearty, nourishing, and usually bland, owing to my mother's high blood pressure, which kept salt out of her cooking, and my father's general dislike of anything that tasted vaguely of spices or herbs.

Still, I loved it! My grandmother and mother used to can the stuff. I can remember my mother taking her pressure canner every year to the local (Erie County, Ohio) extension office to have it tested for safety. While I may water-bath can my own jams and jellies and salsa (which have high-sugar, high-acid content, respectively), I am way too chicken to follow in my mother's footsteps and can my own soup. Better to just make it fresh, frequently.

Start with a foundation of basic all-season vegetables (onions, celery, carrots, potatoes) and add your end-of-season garden produce--anything goes, in any amount, really. This homey (or homely?) recipe is meant to be just a guide.

Mom's Vegetable Soup

1 pound stew meat or ground beef
1 large onion
4 or 5 strips of celery, cut fine
1 cup shredded or finely cut cabbage
1 1/2 pounds tomatoes
small can tomato juice or V8
1/2 cup catsup (I omit this)
2 to 3 cups mixed vegetables (green beans, lima beans, zucchini, whatever)
Salt and pepper to taste

Add water to cover meat, onions, celery. Simmer for 2 or 3 hours, until meat is tender.
Add vegetables and simmer until done.

Notes:

I don't use ground beef, and I sometimes don't use any meat at all.
I add pinches of herbs--rosemary, sage, parsley, oregano, etc.

If there was still sweet corn in the garden, my mother would throw that in, too. (The only time I was ever successful in growing sweet corn, I was unsuccessful in preventing racoons from beating me to the harvest.) Corn is the star of this *Bon Appetit* recipe that my late friend Sida shared with me in the early 1980s; it's become a family favorite.



My ill-fated 2013 garden when the sweet corn was still happy and safe from the racoons.

Sopa De Maiz

(Adapted from *Bon Appetit*, 1980s)

3 1/2 to 4 cups fresh corn kernels (or canned or frozen; fire roasted is good)
1 cup chicken stock
1/4 cup butter
2 cups milk (I prefer whole)
2 garlic cloves, minced
1 teaspoon oregano
salt and freshly ground pepper
1 to 2 Tablespoons canned green chiles, rinsed and diced and/or 1 jalapeno pepper
1 grilled chicken breast, diced
1 cup diced tomatoes
1 cup cubed Monterey Jack, Munster, Fontina, or Pepper Jack cheese
2 Tablespoons minced parsley or cilantro (I prefer cilantro)
Avocado, optional, for serving

Combine corn and chicken stock in food processor and puree. In a saucepan, combine butter and corn mixture and simmer slowly for 5 minutes, stirring to keep corn stock from sticking. Add milk, garlic, oregano, salt, and pepper and bring to a boil. Reduce heat, add peppers, and simmer for 5 minutes. May be frozen or stored in refrigerator at this point. To serve, reheat soup slowly. Divide chicken, tomatoes, and cheese among six bowls. Remove soup from heat, ladle into bowls and top with chicken, cheese, tomatoes, cilantro, and avocado.

To accompany your homemade soup, how about some homemade sourdough bread? During the pandemic, I jumped on the sourdough bandwagon and haven't jumped off yet. I'm here to tell you DO NOT BE INTIMATED by the prospect of making your own sourdough. It's not difficult to make, but it does take some time and patience. Instructions could fill several pages, so just let me share some links that took me from start(er) to finished loaf, one boule at a time--what better way to observe the 10th anniversary of Sourdough September than by learning to bake your own sourdough!

Sourdough Starter, The Pineapple Juice Solution Part 2 (scroll down)

<https://www.thefreshloaf.com/node/10901/pineapple-juice-solution-part-2>

The Clever Carrot

<https://www.theclevercarrot.com/2014/01/sourdough-bread-a-beginners-guide/>

168: How to bake SOURDOUGH in a DUTCH OVEN--Bake with Jack
<https://youtu.be/rHJMA2fMxQ8?si=82nhWp9XIMPmss3j>

Sourdough September
https://www.sustainweb.org/realbread/sourdough_september/



After overnight refrigerator rise in [banneton](#), flip onto parchment and score with [lame](#). Carefully load into Dutch oven preheated in a 450 degree for 45 minutes.



After baking 30 minutes with lid on, then 10 minutes with lid off. Use wooden spatula to lift bread onto wire cooling rack.



Cut after waiting at least one hour with serrated bread knife. Or don't cut, wrap in linen towel overnight.

Bon Appetit!

Jeanette Gandi, Loudoun County Extension Master Gardener

