Trumpet Vine

Knowledge for the Community from Loudoun County Master Gardeners

Winter 2018

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LOUDOUN COUNTY MASTER GARDENER LECTURE SERIES

FIRST THURSDAY OF EACH MONTH
FREE AND OPEN TO THE PUBLIC
7 P.M.
RUST LIBRARY
380 OLD WATERFORD RD NW
LEESBURG, VA 20176

Jan. 4, "Beginning Bonsai" by Tim Ohlwiler, Fauquier County Horticulture Extension Agent. Everything you need to know to grow a graceful miniature tree in your own home.

Feb. 1, "A Visit to Monet's Garden" by Margery Erickson, garden lecturer. Escape the gray days of February with a visit to artist Claude Monet's spectacularly colorful garden at Giverny in France.

For March and April lectures check our website
For more information, please visit our web site at
loudouncountymastergardeners.org

Visit us on Facebook: Master Gardeners of Loudoun County, Virginia.

A Gardener's Winter

Winter provides the home gardener a wonderful opportunity to refocus and replenish after three seasons of working in our gardens with the vegetables and ornamentals that grow locally.

To refocus, visit a Botanical Garden to see tropical plants, cactus, orchids and other plants you don't see in Northern Virginia gardens. The US Botanic Garden, D.C., Lewis Ginter Botanical Gardens, Richmond and Longwood Gardens, Kennett Square Pennsylvania, are all feasible day trips.

Take free online horticulture training; a quick web search will turn up a number of opportunities from well-known educational institutions. For a whole library of tree-related webinars from Cornell University see www.urbanforestrytoday.org.

Attend lectures, conferences and symposiums. There are monthly lectures at Rust Library, the Piedmont Landscape Association annual seminar in Charlottesville in February and our annual Master Gardener Symposium at Ida Lee in March.

You can also refocus from a comfortable chair and a window. Put up some simple bird feeders with black oil sunflower seed and some suet, and sit back and watch. Are you in touch with the bird world in your back yard?

Replenish by cleaning and organizing your gardening equipment at an enjoyable pace. Assess you key tools and replace where needed. Empty out your garden tote, get the soil out of the bottom, and reorganize the contents. Clean, sanitize and organize pots. Do you really need all those pots? You can recycle your black plastic pots at Lowe's garden centers.

It's time to give your houseplants some TLC. Clean the leaves, prune and check the soil. Some plants can be put in the shower for a good soaking in the "rain." Healthy house plants help the air quality in your house.

Now sit back and contemplate spring.

2018 "Let's Get Growing" Annual Symposium

The Loudoun County Master Gardeners are sponsoring a one day gardening symposium, **Saturday, March 10th**. Three prominent speakers will provide inspiration, ideas and information to prepare you for this upcoming growing season. Please join us at the Ida Lee Center in Leesburg to learn more as this year's outstanding speakers share their expertise.

Doug Tallamy: Professor, University of Delaware, author and lecturer

Making Insects: A guide to restoring the little things that run the world

How do we build landscapes that support the pollinators, herbivores, detritivores, predators and parasitoids that run the ecosystems we depend on? Tallamy informs us of the many essential roles insects play, and describe the simple changes we must make in our landscapes and our attitudes to keep insects on the ground, in the air and yes, on our plants.

Restoring Nature's Relationships at Home

Specialized relationships between animals and plants are the norm in nature rather than the exception. It is specialized relationships that provide our birds with insects and berries, that disperse seeds, and that pollinate flowers. Tallamy will explain what we can do to make our landscapes living ecosystems once again.

Doug Tallamy is a professor in the Department of Entomology and Wildlife Ecology at the University of Delaware, where he has authored numerous publications and taught for 36 years. His book *Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens* was published by Timber Press in 2007 and was awarded the 2008 Silver Medal by the Garden Writers' Association. http://www.bringingnaturehome.net/

Ellen Ogden: Author, lecturer and kitchen garden designer

The Art of Growing Food

Ellen will offer fresh ideas for how to bring more artful touches to the vegetable garden, focusing on how to turn work into play and how to grow a more interesting kitchen garden. She will cover six steps to success starting with a plan and overview of your yard, then walking you through beds, paths, gates/fences, plants, and finishing with personality and fine touches you can make.

As a food and garden writer, Ellen's kitchen gardens have been covered in a wide range of magazines including: Garden Design, Eating Well, Organic Gardening, Country Gardens, The Boston Globe, The New York Times, and Martha Stewart Living, among others. http://www.ellenogden.com/

Scott Aker: Horticulturist, U.S. National Aboretum

Selecting and Planting Trees for Success

Trees are the largest plants in our landscapes, and the keystone plants in many garden. With careful selection and proper planting, they can thrive with minimal care, rewarding us with shade, energy savings, wildlife habitat, and beauty. Aker will examine how trees are marketed to consumers, give tips on proper planting techniques, and demonstrate quick and easy ways to determine trends in the health of any tree from a representative branch sample. Trees that are well-adapted to the Washington, DC area will be highlighted.

Scott Aker is Head of Horticulture and Education at the U.S. National Arboretum in Washington DC. He manages curators, technicians, educators, and horticulturists and provides oversight for some of the most notable plant collections in North America.

On-line registration is required and opens mid-January 2018 (mail-in payment available). Tickets that include a box lunch are $75, or $65 if you choose to BYO lunch.
See http://loudouncountymastergardeners.org/events/annual-symposium/

Gift of Growth

If you're reading this article, it's safe to say that at some point in your life you became interested in growing plants--flowers, vegetables, lawns, or houseplants. But can you recall exactly what sparked that? I challenge you to think back to the first time you learned to sow a seed or care for a plant. For me, it was likely many generations ago. My last name is Farmer, so it must be in my DNA somehow. But in this lifetime I can trace it back to the mid-1970s in Luray, Virginia, when my uncle made mounds of dirt for me to place potato eyes into. That field was filled with lush vines in a matter of months and by the fall, the treasure hunt was on. I was told to dig, not knowing what I was digging for and suddenly I found myself surrounded with what seemed like hundreds of big, beautiful potatoes. To this day, they are my favorite vegetable of all. And for a short, magical time I thought that putting anything in dirt made it multiply. Unfortunately, that didn't work with my Lincoln Logs, which did not multiply and remain in someone's backyard to this day.

Discovering an interest in gardening is often spontaneous but can also be cultivated. It's just a matter of exposure and encouragement. Gifts are easy ways to share those opportunities with friends and family, whether they are young, old, or somewhere in between. Here's a list of ideas suitable for any giving occasion.

- **Bulb Kits.** These are popular gifts, especially around the holidays. Amaryllis and snowdrop are just two types that come ready to plant in decorative containers. Just provide water and light, and plants quickly start growing. Blooms typically burst in a couple of months, fascinating children and delighting adults.
- **AvoSeedo.** This is something I ran across that would be a great teaching tool for children. It's a plastic container that holds and sprouts an avocado seed! Just eat a delicious avocado and use the seed to grow your own plant.
- **Mushroom Kits.** These have become widely available over the last few years and usually consist of a cardboard box containing sterilized soil inoculated with edible mushroom spores. Simply soak in water and keep moist and you'll be harvesting in no time. If your child thinks he or she doesn't like mushrooms, help them grow their own and see if they develop a taste for them.
- **Terrarium and Fairy Garden Kits.** These contain a variety of seeds to be planted in decorative containers and grown in an enclosed or partially enclosed environment. They create a dynamic ecosystem of plant growth and moisture exchange and come in a variety of shapes, sizes, and themes.
- **Hydroponic Systems.** The best known is probably the Miracle-Gro AeroGarden, in which seeds are planted in pods that are nourished (watered and fed) from below. It also provides broad-spectrum lighting to complete the system and comes in many sizes, from small holding just a few pods to large, digitally automated ones that hold many (many) more.

These are just a few things that came to mind, but there are infinitely more opportunities for you to share your passion with others. Give it some thought, be creative, and you too can spread the gift of growth.

Steve Farmer, Loudoun County Extension Master Gardener

What's that Tree? – Winter Tree ID

We usually identify trees by their leaves. But when the leaves drop we have to rely on other markers. Bark, buds, habit and residual fruit and seeds are some markers we can use. Some trees have notable markers that allow us to spot them from a distance. Others require closer observation.

The bark of some trees is unmistakable but on others it's very difficult. The bark of some young trees is very different in appearance from the bark of the same species but on an older tree and different again on a very mature tree. In other cases the bark at the bottom of the trunk is very different from the bark high on the trunk.

Learning tree ID requires practice. It's best to start with trees in your neighborhood and trees that you can recognize in the summer. Often we know a tree because it's in our yard, but we never closely observe it. Winter is a great time to ratchet up your observation skills.

Dogwood bark,
Photo by C. Ivory

We all know the stunning spring flowers of the native dogwood, *Cornus florida.* Now that leaves, flowers and berries are gone, note the bark broken into small blocks and the twigs with prominent buds turned upward. For me it's this upward growth habit of the twigs that make a positive winter ID for me.

Dogwood twigs
http://bioimages.vanderbilt.edu/baskauf/17553.htm

American sycamore
Photo by C. Ivory

American sycamore trees *Planatus occidentalis* are easy to spot even from great distances due to their striking white bark created by exfoliating bark higher up on the trunk. These big trees are often seen along river banks and in stream valleys. Trees that appear similar to the American sycamore planted in parking lots and along neighborhood streets are usually a close relative, the London Plane tree which is a hybrid of the American sycamore (*Platanus occidentalis*) and the Oriental plane (*Platanus orientalis*). These trees do not have the striking white bark, but are more grayish-green in hue; however, the bark exfoliates almost to the ground. They are also not as prone to sycamore anthracnose that makes the American sycamore very messy if it's in your yard.

Sycamore fruit
Photo DePauw U.

River birch
Photo by C. Ivory

The distinctive bark of the river birch *Betula nigra* makes it easy to spot whether it is a three-trunked planting in a yard or a single trunked tree growing in the wild along the Potomac River. In addition to being very attractive the peeling bark provides cover for many insects in the winter. Woodpeckers, White-breasted Nuthatch, and other birds search the loose bark for insects in the winter.

Another tree with very unique bark is the common hackberry, *Celtis occidentalis.* Tree trunks of all sizes display this remarkable pattern of corky ridges and warts.

Hackberry,
Photo by C. Ivory

Mockernut hickory bark Photo by C. Ivory

A tree that may require closer examination to ID is the mockernut hickory. Bark is dark gray with shallow furrows and narrow, flat ridges forming a net-like diamond pattern. Thick twigs have fat terminal buds and large leaf scars. There may be nuts on the ground under the tree. Nuts are small with a thick husk. These hickory nuts are edible

Squirrels crack and eat the nuts and the birds come behind to get the pieces.

Hickory bud
Photo by C. Ivory

Young oak tree holding its leaves long after mature oaks have dropped theirs.
Photo by C. Ivory

There are dozens of species of oak trees native to Virginia. Sometimes it's enough to be able to say "Oh that's an oak!" The next step is to be able to categorize an oak as a member of the white oak family or the red oak family. Remember that oaks hybridize naturally so is perfectly OK to stop after identifying the family. If there are a lot of acorns under a tree it's usually safe to declare it an oak.

Young oak trees and young beech trees tend to hold on to their leaves long into the winter. This is called marcescence. Young oak trees planted along a street may be holding on to their brown leaves long after the older oaks have dropped them. Young beech trees are especially noticeable in the forest where pale tan leaves in the winter make them very attractive.

These are just a few tips for identifying trees in the winter. Observe the trees in your neighborhood that you know. Look closely at the bark and the buds. Observe its leafless shape. Then try to find other trees of the same species based on your observations. If you want to hone your skills, you may want to use the following resources:

Winter Tree Finder: A Manual for Identifying Deciduous Trees in Winter by May Theilgaard Watts this is a pocket-sized book that is organized as a dichotomous key.

Woody Plants in Winter: A Manual of Common Trees and Shrubs in Winter in the Northeastern United States and Southeastern Canada by Earl L. Core, Nelle P. Ammons

Winter Botany: An Identification Guide to Native Trees and Shrubs by William Trelease.

Carol Ivory, Loudoun County Extension Master Gardener, Tree Steward

Planning Your Vegetable Garden

How do you make sense of all those garden catalogs?

The weather has turned cold, the garden has been tucked away for winter, the days are short, and the nights are long. What is a gardener to do? Throw another log on the fire, tuck yourself under your blanket, and snuggle up with a stack of brightly colored seed catalogs! But there are so many of them! And they all have so many vegetables and so many varieties of each one! So how to make sense of this information overload? Here are some suggestions for how to decide what you want to grow in your garden next year and how to choose which seeds to order.

What to grow?

The first thing you need to decide is what vegetables you would like to grow. The questions to ask yourself are:
First: What do you and your family like to eat? If only one of you likes broccoli, but everyone likes beans, easy choice. Doesn't mean you can't grow broccoli, just that you will save only a small spot in your garden for that and order more bean seeds.
Second: How much space do you have for your garden? If you only have a few sunny spots (most veggies need full sun) within your ornamental beds or if you have a small garden plot, you may need to select bush plants or trellised plants. You can always buy pumpkins at the farmers market rather than plant a space-consuming pumpkin vine. Many people with small plots just stick to tomatoes and peppers and go to the farmers market for everything else.
Third: **Do you have the interest, ability, and facilities to start seeds indoors?** This is important because some plants have a long growing season or prefer cool weather. The best chance for a good harvest comes from starting these seeds four to six weeks before they can be set out in the garden or from buying transplants that have been started by others like the Master Gardeners (shameless marketing plug). Peppers, tomatoes, and broccoli are good examples of plants that are best purchased as transplants or started ahead indoors. Plants that are best if direct seeded include peas, beans, lettuce (though starting lettuce seeds indoors will give you a jump on the first salads), chard, carrots, beets, squash, cucumbers, onions (seeds can be started indoors; sets or plants should be direct seeded), and potatoes (eyes of seed potatoes).

Fourth: Are you willing and able to freeze or can any excess harvest? Do you want excess to donate to the hungry? The answer to these questions will tell you whether you want to buy seeds for determinate or indeterminate plants, and they will also help you decide how many plants of each vegetable to grow.

Determinate and indeterminate are terms that you find most commonly associated with tomato plants, but the terms can be applied to other plants as well. A determinate variety will grow to a "determined" size and then stop growing. For example, most tomato varieties that are recommended for patio or containers are determinate and only grow to a manageable height versus their indeterminate cousins who will grow over the roof of your house if they are allowed. Determinate plants will usually put out a large flush of fruit all at once, and then will fruit only sparingly after that. So, if you will be canning tomato sauce you might want determinate plants so you have a big crop at one time. If you would like tomatoes to keep coming all summer for salads, you would want indeterminate plants. Likewise with beans. Bush beans will stay low to the ground and will produce a large crop for a short time. Pole beans will keep growing all summer and will put out a smaller quantity of beans, enough for a meal or two, over a much longer period. If you want bush beans all season, the option is to order more seeds and plant successive crops every 2 weeks.

Many seed catalogs, such as *Johnny's Selected Seeds* (www.Johnnyseeds.com), provide charts and tables to help with harvest predictions. For example, they may tell you the average seeds needed to plant a 100-foot row and the average yield per 100-foot row. You then just need to extrapolate to the size of your row (e.g., assume 10 percent of their volumes if you are planting a 10-foot row) to determine how many seeds you need and how much output you can expect. And if you do have excess beyond what you can eat or preserve, you can always donate it to Interfaith Relief, as we do at our Demonstration Garden.

How to choose varieties?

Okay, so now you have a list of what plants you want to buy seeds for versus plants and an idea about how many seeds you will need. But there are a million varieties of tomatoes and every other vegetable. And all the catalogs have beautiful pictures and wonderful descriptions of all their products. How do you decide which green bean or which sweet pepper will do the job?

Look for disease and insect resistance--Some tomatoes will be listed as resistant to a number of diseases that typically attack tomatoes, e.g., Fusarium wilt, Tomato Mosaic Virus, or Verticillium wilt. Some cucumber varieties will have resistance to powdery mildew or scab. Most heirloom varieties will not have these disease resistances bred into them, so you will **need** to weigh this factor against some of the other strengths of heirloom crops, such as better flavor. If you have had any diseases in your garden in past years, disease resistant varieties are your best bet for limiting the chemicals, organic or other, you will have to use for control measures.

Look for organic seeds, if possible--Organic seed comes from fruit grown under strict organic growing conditions. These seeds are more likely to be able to prosper **without** as much chemical support. This is especially important if you are planning an organic garden.

Look for the features that are important to you--Seed companies will usually highlight the outstanding characteristics of one of their varieties with an eye-catching name, like Early Girl tomato, or Cut-and-Come-Again lettuce. The product descriptions will help you to find the varieties that you want. When the Master Gardeners choose varieties for their spring plant sale, they like to choose one early tomato, several heirlooms that are known for their great flavor, a modern hybrid tomato that is disease resistant, a plum tomato for sauce-making, and one or two (or three last year!) cherry tomatoes so we can fill a wide range of customer desires. Likewise, our pepper selections will include green-to-red, green-to-orange, a couple of specialty peppers that we have found grow well here, a few with mild heat, and a few scorchers. We look for those that ripen early and that are prolific producers.

Look for varieties suitable for our growing environment – It only makes sense that seeds from produce that is grown locally will more likely prosper in your garden because they have adapted to our high summer heat and high humidity. In our Demonstration Garden and for our Plant Sale, the Master Gardeners try as much as possible to use a Virginia-based seed company. Our favorite is Southern Exposure Seed Exchange (www.SouthernExposure.com) out of Mineral, Virginia. This is a smaller company and they sometimes run out of popular varieties, so it is best to order early from them. Their catalog is chock full of information about their product, such as best culture, germination temperatures, how and when to harvest, insects and pests to watch for, and maturity dates.

Random Thoughts

Here are the top five vegetable seed companies according to a survey conducted by *Mother Earth News* from a few years back: 1. Johnny's Selected Seeds (Maine), 2. Seed Savers Exchange (Iowa) 3. Baker Creek Heirloom Seeds (Missouri), 4. Burpee Seeds and Plants (Pennsylvania), 5. Territorial Seed Company (Oregon). Southern Exposure Seed Exchange was listed #8.

Be cautious about using the leftover seeds from previous year's purchases. Seeds that have been stored properly may still be viable for several years, depending on the type of seed. Proper storage means that your seeds have been kept in an airtight container in a cool, dark location, such as in a sealed glass jar in the vegetable drawer of your refrigerator. The average number of years that seeds may be saved is**: beans, broccoli, carrots**--**3**, **cucumber**--**5, lettuce**--**6**, **onion**--**1**, **pepper**--**2**, **tomato**--**4**. For a complete list, go to www.ext.vt.edu and search for publication 426-316, *Seed for the Garden*. If you are not sure if your saved seed is useable, you can do a germination test to find out. (Ten seeds in moist paper towel, in reclosable zip bag, check for germination percentage.)

Finally, you can save yourself the time and bother of sorting through all those catalogs to choose good vegetable varieties for your garden by simply buying your plants from the Master Gardeners booth at the Leesburg Flower and Garden Show April 21 and 22, 2018. We have done all the work for you! This is the primary fund-raiser for the MG Association, which receives no operating funds from the town, county, or state. We appreciate the continuing support of our Trumpet Vine subscribers. Throwing another log on the fire and looking forward to seeing you all in the spring.

Barbara Arnold, Loudoun County Extension Master Gardener

Pest Spotlight

What's Eating My Plant?

We are now entering the slow time of year when most gardeners are finally at a place to kick back and read up on information to arm themselves with for the upcoming year. Most of us who have been at it for a few years know there are a few pest issues that tend to crop up year after year. The following is a list of the most common issues. So, come in from the cold, grab a hot cup of tea, and learn what to look for in 2018.

Not All Pests Have Six Legs!

When talking pests, particularly in this county, deer and rabbits are just as problematic! Here are a few bad habits they tend to display in the garden and tips on how to deter them.

Oh, Deer!

Once you know what you are looking for, deer damage is easy to identify. Given the shape of their heads and their gnawing teeth, they are not going to take big chunks out of leaves. Instead, they tend to tear into your foliage, leaving jagged edges behind. Another telling sign deer have been visiting? Hoof prints left in the soft dirt in your yard as well as plants ripped at "deer eye level."

Pesky Rabbits

Rabbits, though cute, are common visitors to and foes of the garden. Their signature trademark is stems cleanly bitten off at a distinct 45-degree angle. Unlike deer damage, rabbit damage usually occurs close to the ground due to the animals' short stature. They are also famous for causing "girdling" on trees as a result of gnawing on the bark.

By David Whelan [CC0], via Wikimedia Com

The Bugs!

There are many insect pests of the garden to be on the lookout for. For sanity's sake, I have grouped them according to their method of destruction.

- **Leaf Chewers:** caterpillars, grasshoppers, beetles
  - **Symptoms**: Holes and/or jagged edges left on leaves.
  - **Remedy**: Soapy water rinse, removal by hand (for the not so squeamish).
- **Sap Suckers:** scale, aphids, whiteflies, spider mites
  - **Symptoms**: Stripling effect that blanches color on upper surface of leaves, curling of leaves on ends.
  - **Remedy**: Soaps and oils work well for most.

- **Borers:** beetles, caterpillars
  - **Symptoms**: Holes present in woody plant trunks.
  - **Remedy**: Unfortunately, pests invade woody plants when they are already weak. Removing the plant is often the best treatment. Consult a professional.

- **Root Feeders**: grubs
  - **Symptoms**: Holes in corms and bulbs, rings of dead turf.
  - **Remedy**: Thinning beds as dictated for your bulbs really is the best measure for reducing issues. For lawn, check with your extension turf grass specialist for the latest and greatest.

- **Nuisance Pests**: wasps, hornets
  - **Symptoms:** Nests too close to home or other structures for peace of mind.
  - **Remedy:** In order to best take out wasps, you need to get them while they are home and preferably at dark. Find entry to nest and soak with the recommended insecticide. Remove nest once it is clear there are few to no survivors.

Paper Wasp By Paulpadam at English Wikipedia, Public Domain

- **Fruit and Vegetable Feeders:** caterpillars, stinkbugs, aphids
  - **Symptoms**: Holes in fruits, reduction in crop of vegetables, holes in vines.
  - **Remedy:** Some horticultural oils and soaps are effective as are Bt-based insecticides.

Resources:

http://www.insectid.ento.vt.edu/fact-sheets/

A great source for handy insect pest knowledge:

Flint, Mary Louise. Pests of the Garden and Small Farm. San Francisco. 1999.

Amanda Rose Newton, BCE. Entomologist and Loudoun County Extension Master Gardener

Using Greenhouses and Conservatories for Houseplants and Orchids

Recently, I had the good fortune to spend several weeks in Great Britain with a focus on Scotland. It became apparent, after only several hours of travel, how many private homes had some type of attached conservatory or greenhouse. The conservatory is often built into the home, usually on one side, and is not a detached building.

Conservatories originated in the 16th century when wealthy landowners sought to cultivate citrus fruits. At one point, they were called orangeries and were often built of wood, brick, or stone with tall vertical windows on the south walls. It was not until the 18th century that sloped glass was used to bring in additional light for the plants instead of using the taller, more vertical windows.

The golden age of conservatories is thought to have been the 1800s, and most conservatories were found in England. They were the product of the English love of gardening and new technology, at that time, in glass and heating. The building of conservatories pretty much stopped during World War II, but both England and the United States have since seen a resurgence.

Both greenhouses and conservatories are glass rooms in which plants can be grown. It is the way in which a conservatory is used that distinguishes it from a greenhouse, which is designed exclusively for the nurturing of plants. Conservatories, or garden rooms, can also be used for dining, for fireside conversations, or as private spas. They have uses other than the nurturing of plants and often create year-round living spaces that are unlikely to be realized with just the common greenhouse.

Garden room Photo by Heather Keith Swanson

A conservatory can be simple or elaborate--from glass shelves across a large window to a glassed-in window box to a partially or completely enclosed porch or balcony. The heyday of the conservatory was in the late 1800s and early 1900s, but there is a growing trend for the addition of conservatories, sun rooms, lean-to greenhouses, or home extensions to existing homes.

Advantages of the greenhouses include the fact that as people grow older they are less able to do the fairly heavy work in all weathers in the garden. The warmth of a greenhouse is welcome, and the work is mostly carried out by someone seated or standing at a bench at chest height. In addition, the increasing cost of bedding plants, potted plants, cut flowers, fruits, and vegetables is another good reason to possess a greenhouse.

Plants in a conservatory are usually happiest when grown close together so their foliage forms a canopy over the ground upon which they are growing. In a sunroom, charming effects can be created with interesting and modern types of lighting.

Orchids, the most highly coveted of ornamental plants, have been grown in greenhouses since the beginning of the 19th century. Tropical orchids will thrive and flower in a sunroom if the

necessary heat, light, and humidity are provided. These are the most important factors, approximate to those in their natural habitat, for the well-being of the orchid. Some orchids are easier than others to grow inside, and over the years, the more difficult type of orchid has given way to the easy.

A lower temperature during the hours of darkness is exactly what most orchid plants need to function properly. Most orchids suitable for living in a sunroom or living room like the same temperatures that are appreciated by humans. The aim is to create a little local climate for the plants while at the same time allowing the rest of the air to be healthful and dry for the people living in the home.

Phalaenopsis also known as Moth Orchids because of their shape. Photo by Heather Keith Swanson

Ideally, orchids prefer a north-facing window in summer months and a south-facing window in winter. They should be moved away from any window in winter if there is a risk of frosty drafts coming through the window. Orchids like to have ten hours of daylight, but this could be extended if necessary by the addition of artificial light within in the room.

Orchids can be found throughout the world. They can survive in different kinds of habitats, even close to the Arctic Circle. Most species of orchids live in tropical rainforests, in warm and humid climates.

Two things to consider when thinking of orchids in a home setting are: is it easy and is it available? Since more than 20,000 species of wild orchids and 100,000 hybrids exist, it would seem there are plenty to choose from. Only a tiny fraction of these huge numbers meet the criteria of being easy and available. Several orchids would fit into these criteria, including: Cattleya, Cymbidium, Miltonia, Odontoglossum, Oncidium, and Paphiopedilum. The orchid is thought to bring prosperity and good luck to the owner.

Heather Keith Swanson, Loudoun County Extension Master Gardener

Backyard Conservation: Every Little Bit Counts!

So, why do we need to conserve soil and water? Soil and water are bountiful resources from Mother Nature. Everybody just expects them to be there, clean and abundant. Well…the short answer is quite simple--they are vital to humans, and essentially to all life on Earth, but they often get overlooked or unintentionally abused. And if you think about it, they are not unlimited, but rather are quite finite and quite vulnerable if used irresponsibly.

Don't Abuse the Soil! Soil that is most fertile, organically rich, and provides most of the food we consume sits on top of the Earth's crust. This layer is aptly named the "topsoil layer." This precious soil is typically only three to eight inches deep. Topsoil formation is an incredibly slow process (typically it takes 100 to 500 years for every inch of soil to form), but topsoil can be depleted or washed away in no time. Poor practices such as causing compaction, leaving soil bare to natural elements, sealing soil with impermeable surfaces, or even experiencing overly harsh weather events can all reduce the amount of useable topsoil available.

Studies have shown soil quality has a direct effect on water quality. Healthy soil that is organically rich has the ability to filter and purify water and allows water to slowly percolate downwards to generate wholesome groundwater. Conversely, depleted soil lacking organic matter does just the opposite, wreaking havoc on water quality and consequently the entire environment.

Urbanization Impacts Soil and Water Quality: Land that has never been disturbed and is still covered in virgin soil, when coupled with deep-rooted plants, can naturally enable water infiltration and purification. However, because of urbanization, more and more of our natural permeable land is being covered by impervious (soil-sealing) surfaces. For instance, housing developments and their associated infrastructures such as streets, parking lots, and shopping centers all have their impact. Impervious surfaces prohibit water percolation, and activities such as soil stripping and compaction from heavy equipment greatly inhibit water from easily sinking into the ground. Much of this water simply flows right over the surface, resulting in erosion and sediment and excessive nutrient loading in streams and rivers. Furthermore, disturbed soil left uncovered is simply beckoning invasive plants to move in. Control of these weeds generally is done with harmful chemicals, thus increasing the pollution burden on our water.

Backyard Conservation: It's Easy! A lot of farmers have made great strides in improving soil health through a system of conservation practices. But, conservation shouldn't be the responsibility of only farmers, ranchers, or soil science professionals. Each of us may inadvertently contribute to some or all of the environmental issues extant today. Fortunately, each of us can help reduce further degradation of our soil and water by incorporating conservation practices into our lifestyles. Most of those are simple yard or minor lifestyle modifications that everybody can do. Every little bit counts! And results should be extremely satisfying to most people--knowing that you have done something good for the sake of the Earth is a rewarding feeling. The size of the land you care for doesn't matter at all. What matters is that the land we own is intelligently managed to ensure a healthy ecosystem for future generations. Here are some easy positive steps:

- Use a soil test: Test your soil every three years to determine the pH and the nutrients already present. Take advantage of the Soil Test Service provided by the Cooperative Extension Office of a Land Grant University in each state (such as Virginia Tech in the state

of Virginia). The report you will get will also provide information about the right amount of fertilization to use and nonchemical alternatives.

- Fertilize at the right time and use the right amount: Follow the Soil Test Report suggestions. Don't overuse fertilizer and pollute local waterways!
- Set your mower at its highest setting: Taller grass builds deeper roots, which enables the plants to better find water and nutrients. Taller grasses also are more tolerant of heat and in drought conditions.
- Use a mulching mower: Grass clippings will slowly break down and return their nutrients to the soil.
- Sweep fertilizer and grass clipping off driveways, sidewalks, and streets: Return them to the lawn instead of letting them wash down into the drainage system, where they will eventually pollute our waterways.
- Harvest your rainwater in a barrel or cistern: This leads to a reduction in stormwater runoff, erosion, and sedimentation. It has the added benefits of saving water for landscapes during dry spells and potentially reducing your cost of water for your garden.
- Create a rain garden: Installing a rain garden is one of the best stormwater management practices that homeowners can do, but it must be installed properly and maintained regularly.
- Top-dress your lawn with ¼ inch of compost in fall: Clay soil is hard on plants because nutrients are locked up in the hardened soil. Compost can reverse compaction, improve soil infiltration, and increase moisture holding capacity while greatly increasing beneficial microbial activity in your lawn.
- Keep leaf litter, pet waste, and any garden debris out of storm drains: These eventually result in additional unwanted nutrients in our waterways.
- Keep up with your septic system maintenance schedule: Inspect your system every three to five years to make sure it operates properly. A leaky septic system is extremely damaging to water quality.
- Dispose of used motor oil, antifreeze, paints, and other household chemicals responsibly: These are considered hazardous waste--do not drain them into storm sewers or drains. Check your local county website for official hazardous waste collection locations and dates.

Rain Garden Problems: If you have minor erosion problems on your property, a rain garden with a good infiltration rate serving as a stormwater management feature is possibly the best solution to alleviate the situation. Location and soil preparation are keys to successful end results. Amending the soil (particularly clay soil) to increase soil infiltration is sometimes necessary, but it is not as simple as most homeowners typically perceive. Some useful information can be found at: https://cfpub.epa.gov/npstbx/files/MassAudubonRGBrochure.pdf

If you have a serious erosion problem, or if the eroded area is near a pond, a creek, or a stream, you might need to consult a licensed professional for a longer-lasting solution. This newsletter article by Dr. Dan Schwartz, soil scientist, provides some helpful insights: https://www.fairfaxcounty.gov/nvswcd/newsletter/rgresearch.htm

Erosion Problems: This brochure (https://www.loudoun.gov/DocumentCenter/Home/View/966) captures most of the pertinent information residents of Loudoun County need when they encounter sediment issues such as: Why is sediment an issue? What is the county doing to control erosion and sediment problems? How can a citizen help? It also tells you who to contact if you see soil eroding away into water bodies or being tracked onto public streets.

Another link of possible interest regarding Urban Water Quality Management is https://pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/426/426-046/426-046-PDF.pdf
If you have more questions, feel free to contact your local Master Gardeners Help Desk. For Loudoun County in Virginia, email us at loudounmg@gmail.com , or call us at 703-777-0373.

Ling Lay, Loudoun County Extension Master Gardener

Various oak leaves and 2 sycamore leaves Photo by C. Ivory

A Community Effort

Does your HOA have common property that could support additional trees? I want to share with you a success story about a tree-planting project in Westgreen, a small 17-home neighborhood in the historic district of Leesburg. My purpose is threefold:

- To inform you about a great program in Virginia that may provide assistance for planting native trees in appropriate areas, or for turning a turf area into a native meadow
- To point out that there are educational benefits to initiating such a project in your HOA. Likely, the HOA Board members and other residents are aware of all of the benefits of adding trees, and particularly native trees, to a community
- To highlight the added bonus of new friendships among neighbors that develop when they work together with a common purpose.

“Wouldn’t it look great if there were dogwood or redbud trees along the Market Street fence?” That was a question or suggestion from one of our residents more than two years ago. A seed was planted!

Months later, Master Gardener and Tree Steward Carol Ivory spoke at our 2016 Master Gardener Kickoff about the correct method of planting trees. She also mentioned that there might be grant funds available for HOAs who had available space for trees on their common land. The seed began to sprout!

I contacted Carol after the event and she pointed me to the Piedmont Environmental Council. It turned out that they had recently been turned down on a grant that might have assisted us. However, I was told that the Loudoun Soil, Water, and Conservation District (SWCD) had matching funds for a cost-sharing program through the state called the Virginia Conservation Assistance program (VCAP). I contacted Chris Van Vlack at SWCD.

The VCAP program encourages “conservation landscaping” designed to convert turf areas to native meadows, and/or planting projects using native trees, shrubs, and other native plants. They stress that such conversions can have a “significant beneficial impact on local water quality and that of the Chesapeake Bay.” The use of native plants requires the least amount of amendments and cultivation for maintenance. In contrast, turf and non-native species generally require continual maintenance and periodic fertilization. We were opting for tree planting only, so the requirements of the grant included using a minimum of three species and adhering to best practices.

In early spring of 2017, Chris and a colleague came to look at open community property at the west end of our Westgreen community. They agreed it would be a good site for additional trees.

My Westgreen HOA Board was supportive from the start. I informed them first that I wanted to look into the possibility of getting funds for new trees, and they approved the funding for as much as $250 for our share of the costs. Several members volunteered to help with whatever was needed, and they did! Talking with the Board was also an opportunity to educate about the benefits of trees and why native trees are the best choice.

Chris sent me a grant application, but it wasn't until late spring and into summer that I completed it along with a plan for the placement of the trees. In late August Chris let me know our grant application had been approved and funded.

My personal travel plans necessitated making October the month for everything to come together, but that is actually a very good time for planting. We picked October 21 as our date. We purchased nine native trees (six Eastern Redbud, two White Oak, one Fringe Tree) and three shrubs (fragrant Sumac) from Watermark Woods, a native plant nursery in Hamilton. The trees were small container plants that frequently have a better chance for early growth and survival than larger container or balled and burlapped stock.

Community volunteers plant trees and shrubs
Photo by Joanne Jessen

I recruited my husband and three younger men from our neighborhood to do the digging and planting. Our community landscape company (Saxton Landscaping from Purcellville) sent a load of mulch along with Daniel, a staff member with expertise in correct planting, to help. The company also gave us a 50% discount on the mulch and Daniel's time. The resident who lives closest to the site volunteered use of her water for that day and as needed in the future. And, in two and a half hours the trees were planted and mulched!

As we planted and later gathered for lunch, it became apparent to me that a side benefit to this project was bringing neighbors together to visit, discuss common interests, and forge friendships.

Fortunately, we've had significant rain almost every week since the planting and we've only had to water once. I am keeping my fingers crossed that our trees thrive and that, in a few years, drivers heading east on Market Street will admire our beautiful redbuds.

Joanne Jessen, Loudoun County Extension Master Gardener

A Few Facts About Rhubarb

Rhubarb--*Rheum rhubarbarum*, a perennial in the buckwheat family, has a long history of cultivation. It appears in the Chinese writings of *The Divine Farmer's Herb-Root Classic* about 2,700 years ago. Commerce in the medicinal rhubarb root became firmly established in Islamic times (8th to 13th centuries). It was imported along the Silk Road, reaching Europe in the 14th century. It was then taken overland to Russia, where Russian rhubarb was the most valued rhubarb (because of the Russian Empire's strict quality control).

Rhubarb became several times more valuable than saffron, cinnamon, and opium. *Gerard's Herbal* (British-1633) states the roots were good for all "griefes" of the stomach. To this day, rhubarb is thought to be a traditional spring cathartic.

Culinary rhubarb is an immigrant. It was brought to New England and the mid-Atlantic by the 18th century Europeans and to Alaska by the 18th century Russian fur traders.

John Bartram, an early colonial botanist, was growing culinary and medicinal rhubarbs in Philadelphia in the 1730s from seeds sent to him from either botanist Peter Collinson in London or Benjamin Franklin in Scotland, (I've read both versions.) Thomas Jefferson planted it at Monticello in 1809 and 1811.

It is unsure when people began eating rhubarb petioles (leaf stalks), but its popularity soared in 1815 when "forcing" rhubarb was accidentally discovered in the Chelsea Physic Garden in England. More on forcing later.

It wasn't until the end of the Civil War when rhubarb's merit went from the exotic to the everyday, from *Rheum rhubarbarum* to "pie plant." Rhubarb also has environmental significance. Chemists have discovered that ozone-depleting CFCs can safely and inexpensively be destroyed by passing them through sodium oxalate, which is found in rhubarb leaves. Oxalic acid also makes rhubarb leaves poisonous to eat, yet they are safe to compost. Save the World--Plant Rhubarb!

Rheum rhubarbarum is designated as a species, although all our rhubarb cultivars are hybrids, the result of centuries of cross pollination. Technically, it is a vegetable, yet it is usually treated as a fruit in our kitchens. One rhubarb plant can take up a lot of space, but it is usually all one family needs.

It is simple and fairly trouble-free to grow, and it is well-suited to cool temperature climates. Here in Northern Virginia, at our Loudoun County Extension Master Gardeners Demonstration Garden, we have three plants growing in our vegetable garden. We planted them in 2015, and they are doing quite well. The only problem we have had is that the Japanese beetles seem to love them. We hand pick them off the leaves into soapy water. Fortunately, their cycle is usually a little over a month long.

Plant rhubarb sets or crowns in October and November or in February and March. Also, divide plants that are at least three years old in winter. The bud or top of the crown should be just below the surface. Firm the soil after planting. Sets can be grown in pots for a few months before planting to give them a better start. Plant sets three feet apart. Water well until established. Be sure to remove flowers and stems as they appear.

Cultivars differ in color. Leaf stems or petioles can be green, pink, or red. Flavor differences are subtle. Our Demonstration Garden cultivars are Victoria, which are green, but they will produce red stalks if they are forced in total darkness.

Forcing is growing out of season. To force rhubarb, dig a medium-sized plant, or take a division in late fall before the ground freezes. Replant the rhubarb in a large container filled with an enriched potting mix with the buds one inch below the surface. Water and place the container outdoors with the temperatures around or below 40° for about eight weeks. Then, cover container with a box or basket and move it into a garage or a cool, totally dark place indoors. Keep the soil moist, and in about six weeks, you will have red stalks. Plant them outdoors again in spring, but give them a year to recover before harvesting again.

I have divided one of our green Victoria cultivars and planted it in a container. The temperatures are not exactly as cold as instructions imply, so there is a small stalk already growing. I have it covered in straw, and that bit of darkness has turned the stalk red!

Well-tended plants can live 20 years or longer, so it is best to situate them in a separate bed or on the edge of the garden. Rhubarb will grow in partial sun, but it thrives in full sun. Amend the plants generously with organic matter such as compost or leaf mold. Once it is established, little care is needed. If planted in a container, make sure it has drainage and is 24 inches deep. Water frequently and feed every two weeks.

Watching for seed stalk production is important. Once plants produce seed, the petiole production declines, so remove the seed stalks as soon as they appear. This picture is a flower on a plant right before its removal.

Rhubarb. Photo by Normalee Martin

Do not harvest rhubarb during its first year in the ground, and harvest sparingly in the second year. By the third year, you can "gather with freedom." Begin harvesting when the stalks are about the width of a finger.

After about eight years, rhubarb plants may become crowded and produce smaller or fewer stalks. Divide in early spring, while they are dormant. Don't worry about severing the deep roots. Make sure each division has at least one bud. They can be stored in the refrigerator if they can't be planted right away. Rehydrate by soaking in water for at least six hours.

Keep new plants heavily mulched to control weeds. Controlling weeds also discourages two pests--rhubarb curculio and potato stem borer. Mites can thrive in hot, dry conditions and suck on the plant leaves. They can be controlled by spraying vigorously with water.

Phytophthora crown rot is rhubarb's most common ailment. It attacks the crown and causes the stalks to rot at their base.

Rhubarb is harvested selectively, stalk by stalk, for up to and sometimes more than two months. We water our plants in the Demonstration Garden regularly and cut the seed stalks as soon as we

see them. That has given us harvest for three months. Remember to twist stalks off at the base, rather than cutting them off.

After harvesting, stalks should be cooled in ice water before storing them in the refrigerator. Rhubarb can be diced and stored in the freezer for various recipes including muffins and bread.

Here is my favorite **Rhubarb Bread Recipe**.

Cinnamon sugar sprinkled over the top of this loaf creates a tasty, colorful crust. Toasted rhubarb bread makes a wonderful teatime treat.

Ingredients

1 cup milk

2 teaspoons lemon juice

2 cups all-purpose flour

3/4 cup light brown sugar

1 teaspoon baking powder

1/2 teaspoon baking soda

1/2 teaspoon salt

1 large egg

1/3 cup vegetable oil

1/2 teaspoon vanilla

1/2 pound rhubarb, diced (about 1 cup)

1/2 cup chopped pecans

2 tablespoons granulated sugar

1/2 teaspoon ground cinnamon

Instructions

1. Preheat oven to 375°. Generously grease a 9x5-inch loaf pan. In a small bowl, combine the milk and lemon juice. Set aside for 10 to 15 minutes or until the milk has soured or become slightly thickened.

2. Combine the flour, brown sugar, baking powder, soda, and salt in a large mixing bowl. Whisk to blend thoroughly. In a separate bowl, whisk together the soured milk, egg, oil, and vanilla. Add to the dry ingredients and blend well. Stir in the rhubarb and pecans. Pour into the prepared loaf pan.

3. Whisk together the granulated sugar and cinnamon. Sprinkle over the unbaked loaf. Place in the oven and bake for 50 minutes to 1 hour or until a wooden pick inserted in the center comes out clean.

Normalee Martin, Loudoun County Extension Master Gardener

Growing Tomatoes in Iceland

I am an avid tomato grower and each year I struggle to overcome the obstacles nature throws at me in my pursuit of the perfect, juicy backyard tomato. Hot weather, not enough rain, too much rain, cold weather, insects and disease. However, we in Northern Virginia are usually able to bring in a satisfying harvest even in the worst conditions. But how do they grow tomatoes in a country with volcanoes and glaciers and long, cold, dark winters? On a recent visit, I was able to learn about how it is done just by going to lunch.

Meet Knutur Armann who, with his wife Helena Hermundardottir and their 5 children, owns and operates the Fredheimar Greenhouses and restaurant in Selfoss, Iceland, on the Golden Circle tour route from Reykjavik. We were lucky enough to have Knutur explain the workings of their operation as my husband and I sat in their restaurant inside the warm greenhouse and enjoyed a tomato-inspired lunch.

At Fridheimar, they grow tomatoes year round in an environmentally friendly way, using green energy, state-of-the-art technology, and organic pest controls. They have been in business since 1946 and produce 300 tons of tomatoes annually which is 18% of the Icelandic market.

Environmentally Friendly

The 5,000 square meter (53,820 sq. ft.) greenhouses use glass that is only 4mm thick to make optimal use of the limited natural light. But, this means that they have to use a tremendous amount of heat to maintain temperature, especially during the cold Icelandic winters. Luckily, they have a bore hole tapping 2 geysers just 200 meters (656 feet) away, The geysers provide hot water which enters the greenhouse at 203 degrees F. They need to use 100,000 tons of water per year for heat, but it comes freely from the ground.

Fridheimar uses a lot of electricity in lighting its greenhouses all year - 1.2 megawatts or the equivalent of the domestic use for a town of 3,000 people. Iceland, however, has an abundance of green electricity that is affordably produced through hydroelectric and geothermal power stations. Volcanoes and melting glaciers galore!

The greenhouses need to supplement the available C02 in their indoor environment to optimize photosynthesis and growth. They ship in 100 tons of CO2 derived from local natural steam using tanker trucks.

Fridheimar uses pumice, a volcanic rock, from a local source as a growing medium for their plants. The pumice makes it easier to control moisture and fertilization and it can be reused for several years.

Knutur said that they import 600 bumblebees from Holland to do the heavy lifting of pollinating the tomato plants. I asked why they needed to do that as I thought tomatoes were self-pollinating. He said that was true where there was wind to help, but indoors they used to have to shake the plants individually by hand to distribute the pollen. Bees sound like a better solution. They use a predatory mirid bug (Macrolophus pygmaeus), also from Holland, to control pests that attack tomatoes. They also count on their good horticultural practices (carefully managed temperature, humidity, fertilizer, and water), to grow healthy plants that are not as susceptible to insect damage.

Technology Helps

"Each greenhouse is equipped with a climate-control computer system for temperature, humidity, carbon dioxide and lighting. The computer is connected with a fertilizer mixer, which waters the crop according to a programmed system. On the roof a weather observation unit provides data on wind speed and direction, temperature and light. When the sun comes out, and natural light reaches a certain level, the lights are automatically switched off - and come on again when the light level falls. All the systems are liked into a mainframe computer connected to the internet - so Knutur and Helena can monitor and adjust the systems at Fridheimar wherever they are in the world" according to their website www.fridheimar.is. Knutur said that he can make micro adjustments to fertilization using his cell phone as he tours the greenhouses.

Growing Method

At Fridheimar, they have been trying to expand the varieties of tomatoes that are available in Iceland. They grow their tomatoes from seed in the nursery and bring them out into the greenhouse at 6 weeks. In 7-8 more weeks they will have their first tomato from each plant. The plants can last and produce for up to 9 months. They interplant new plants with the old so that the new plants are ready to take over when the old plants are finished. They also graft their tomatoes; they join the tops of flavorful tomatoes to the root systems of hardy, robust tomato stock to get the benefits of each. They have also been growing cucumbers at Fridheimer since 2011.

Graft on base of tomato plant

New plants at left interplanted with old plants

Ripening tomatoes

Restaurant

If you are lucky enough to get a seat in the restaurant for lunch, you will have a choice of three main dishes: Tomato soup with sour cream, Ravioli with homemade tomato sauce and pesto, or grilled tortilla with tomato, basil, and mozzarella. The buffet has homemade breads and cucumber salsa. On your table is a beautiful, healthy basil plant with a pair of scissors for you to snip off some of the fresh herb for your meal. Dessert consists of green tomato and apple pie, homemade

tomato ice cream, or cheese cake with green tomato, cinnamon, and lime jam. They also have a large selection of drinks and cocktails that feature tomatoes or cucumbers. How about a Healthy Mary, a drink made of green tomato, lime, honey, and ginger. Or add gin and it becomes a Happy Mary.

As you leave the greenhouses, you pass through the gift shop which displays for sale the many varieties of tomatoes produced there. If you don't buy them at the shop, you are almost certain to be sampling them in your salads elsewhere in Iceland. Visiting this restaurant, one comes away with a full belly but also a head full of new information. And an appreciation for the ease of producing tomatoes in Northern Virginia! A highly recommended stop for some warmth and comfort food on your next visit to Iceland.

All photos by Barbara Arnold

Barbara Arnold, Loudoun County Extension Master Gardener

A Fall Showstopper: The Thanksgiving Cactus

My houseplants really take a backseat from spring through fall, when I spend all my time gardening outside. As the weather warms up, I usually bring them outside on our porch where they stay until the cold weather sets in. I try to remember to water them, but I do miss some days. And fertilizing them? Well, that's hit or miss when I'm busy in the yard. So it's always a pleasant surprise when I bring them inside in October and find one blooming.

The real eyecatcher now is the flowering "Thanksgiving" cactus. I always called it a "Christmas" cactus, but upon investigating, I discovered that there are two that flower at the end of the year: The Thanksgiving cactus (*Schlumbergera truncata*) and the Christmas cactus (*Schlumbergera bridgesii*). You can tell the difference between the two by looking at the leaves. *Truncata* has two or three jagged points on every leaf segment and its bloom time is late October through November. *Bridgesii* has smooth, not jagged, leaf segments and usually flowers in January or February. The Thanksgiving cactus comes not from the desert but from the mountains of Brazil, where it grows, like the orchid, in the crotches of trees. It puts on a real show with dozens of flowers–red, rose, or pink–blooming from the leaf tips. The Thanksgiving cactus needs bright light with some direct sunlight in winter. I seemed to do all the right things by accident for this plant. I keep this indoor plant in a room that we don't use at night. Lo and behold, I discovered that to promote flowering, it's best to keep this plant away from artificial light at night a few months prior to flowering! If you miss the colorful outdoor flowers at this time of year, do stop by a florist or greenhouse and ask for a "Thanksgiving" cactus. It will add a festive touch to your home this holiday season.

Photo by Carol Ivory

Schlumbergera truncata, the Thanksgiving cactus often mistakenly called Christmas cactus. Note the jagged points on every leaf segment.

Photo by Kevin Lee Jacobs, A Garden for the House | Delicious Living

Schlumbergera bridgesii, the true Christmas cactus. Note the narrow, smooth leaf segments. The Christmas cactus is difficult to find. The flowers are smaller and more pendulous in form than the Thanksgiving cactus.

Beatrice Ashford, Loudoun County Extension Master Gardener

Winter Blahs? Try Forcing Bulbs for Color!

It's all in the planning. You can force tulips, crocuses, daffodils, scillas, and grape hyacinths to bloom from December to March indoors with the proper planning. The planning is necessary because these bulbs are subject to a "cooling off" period before they can be forced to bloom. That equates to 12 to 15 weeks in the fridge (or in a 35 to 45-degree dark cellar). For the calendar's sake, starting the bulb cooldown in mid-October will allow colorful blooms in mid-February. We missed the window of opportunity for the "fridge treatment," but we are still in luck because paper white narcissus bulbs can be forced without cooling. Total time is four to six weeks. Here's how:

1. Use a clean decorative bowl, vase, or non-holed container of your choice. Glass allows you to watch the roots grow!
2. Fill to within one inch of the top with pebbles, pea gravel, or coarse sand. Add water to just below the surface of the medium.
3. Place narcissus bulb on top and cover with more medium--about ¼ of bulb covered.
4. Keep in a cool 50 to 55-degree room under low light until roots form and shoots appear--about two to three weeks. Maintain water level below bulb.
5. Slowly expose container to light and warmer temperatures in a southern exposure until blooms appear-– another two to three weeks. Move to indirect light to maximize bloom time.
6. Plant bulbs in two-week intervals using several different containers so you can enjoy them for months! Discard after blooming. (Photo above from White Flower Farm).

To Start in October 2018:

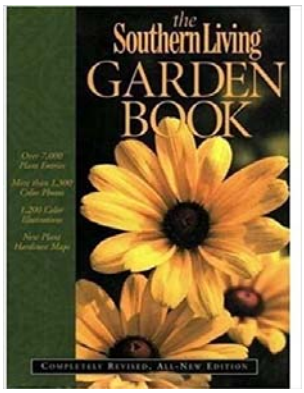
1. Purchase top quality, good-sized bulbs and handle with care at all times.
2. Use clean sterile plastic pots with drainage holes and a good soil mixture of potting soil, sphagnum peat moss, and perlite. (You can use clay pots, but they draw moisture away from the soil mixture so soak clay pots in water before continuing).
3. Decide what bulbs to plant in what pot. Consider colors. For example, a six-inch pot will hold six tulips, three hyacinths, six daffodils, or fifteen crocuses.
4. Place soil mixture loosely in pots. Place bulbs in next, being careful to not push bulbs down. Then cover bulbs with soil mixture.
   - Plant tulips with flat side of bulb against the container.
   - Tulips and daffodils can have tips showing out of dirt.
   - Smaller bulbs should be covered completely with soil mixture.
5. Water thoroughly and mark date on pot (so you remember when to take them out). Plant in intervals for staggered blooming.
6. Place pots in fridge or dark cellar for 12 to 15 weeks.
7. Remove from cold storage and place in 60 to 65-degree area until shoots turn green. Indirect sunlight is best. Keep soil moist.
8. Move to a warmer location with more light to stimulate bud growth--should be three to four weeks before it blooms. Again, remember to water.

For more details on varieties of bulbs to force and method, see VCE Publication:
Fooling Mother Nature: Forcing Flower Bulbs for Indoor Bloom

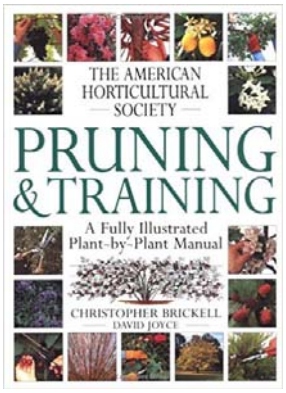
Barbara Bailey, Loudoun County Extension Master Gardener

Notes From the Help Desk

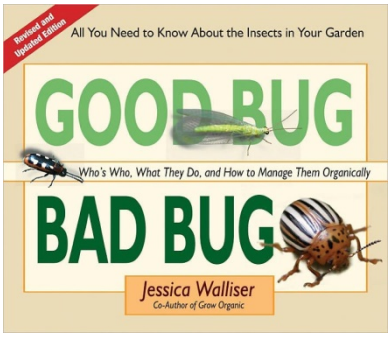
Christmas is coming soon. Why not ask Santa for a gardening book? I have listed three that I reference frequently to answer clients' questions.



The Southern Living Garden Book describes more than 7,000 plants, has many charts (such as "Plants for Ground Cover"), and gives practical guidance to gardeners (including a visual guide to identify weeds). I have used it to determine the differences between the oakleaf and French (i.e., bigleaf) hydrangeas that a client questioned. For another client, I provided the chart of crepe myrtle selections and hybrids because it lists, among other things, each specimen's form and height, mildew resistance, flower color, and days in bloom.



For those of us who want to learn more about pruning, the American Horticultural Society's ***Pruning & Training*** book is a great resource. It addresses how plants grow, the principles of pruning and training, and tools and equipment. It has sections on ornamental trees, ornamental shrubs, tree fruits, climbing plants, and roses to address special pruning guidance. Plant forms, basic techniques, initial training, renovation descriptions, and all other pruning advice are suitably supplemented with excellent illustrations.



Good Bug, Bad Bug is a wonderful book that describes 48 bugs that are frequently found in our gardens. This small book devotes two full pages of information as well as pictures to each bug, and it groups the bugs into beneficials and pests. In addition to descriptions, author Jessica Wallister has included other information that she has titled "Spot the Damage," "Live Biological Controls," "Preventive Actions," "Plants They Attack," "Organic Product Controls," and "More About." Overall, I find this to be a very useful reference for identifying some common bugs.

Happy gardening in 2018!

Margie Bassford, Loudoun County Extension Master Gardener

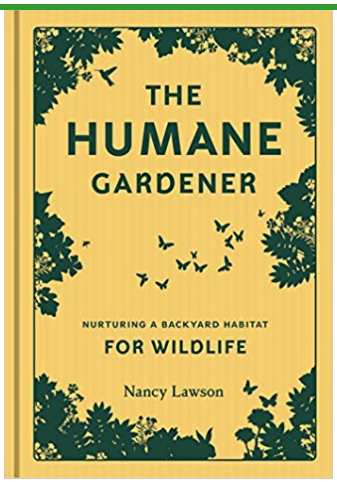
Book Review: The Humane Gardener. Nurturing a Backyard Habitat for Wildlife

If you garden, you encounter wildlife as huge as deer and as small as insects of all kinds. And then it all seems to be much more than having a garden. It becomes no longer merely going for lush and colorful, manicured or rustic, edible and/or ornamental. You become drawn, eventually, into something more challenging, more consequential, and hopefully, as satisfying. Look at the book's six chapters that say it all:

A New Kind of Dream Home: Plant Native Plants
The Beauty of Letting Go: Let Nature Guide Your Garden
Is Your Yard Family Friendly? Provide Baby Food and Nesting Sites
Safety Zones: Create Sanctuary in a Treacherous World
A Harvest for ALL: Share the Bounty Through Peaceful Coexistence
The Gift That Keeps on Giving: Encourage Life in the Decay.

By Nancy Lawson, Princeton Architectural Press, 2017

Bio: Ms. Lawson is a writer, editor, naturalist, and also the founder of *Humane Gardener*, "an outreach initiative to help people live in harmony with the animals in their backyards." She worked for 15 years as an editor of Humane Society of the United States publications and is a Maryland Extension Master Gardener.



If you garden and do not yet consciously relate to these concerns, one day you will find that you do, or at least that you have to. Have you ever found an earthworm on hardscape that you just had to help get on soil? Had you been beaten to a blueberry harvest where an awaited bounty on the branches did not become a bounty on your table? If you garden, you are bound to come face to face with the concerns covered in this book. And you would care.

Ms. Lawson recognizes where most backyard gardeners start their journey in tackling this so-called place of our own: Planning for perfection and order. After all, there is so much to manage in our living spaces, and the more manageable we get our gardens at the outset, good for us. Creating garden paths, for example, is like coloring within the lines, she says. One can just imagine veteran gardeners chuckling. Really. Good luck!

The book is not espousing defeatist surrender to the wild, with arms raised in frustration, but promotes active recognition of wildness' place in home gardens. Such belonging of wildlife in gardens and backyards may even be described as allowing them their rightful place, where rather than tolerated, Ms. Lawson posits that wildlife existing in our properties are deserving of being allowed there, even nurtured. It is definitely not surrender but nurture to establish nesting sites and safety zones for wildlife in our backyards, for example.

The book's premise does not make a clear distinction between beneficials and pests because, as will soon be realized by the hapless gardener, the distinction among wildlife in home gardens need not be between good and bad, wanted or unwanted, but between nature and do-we-really-want-to-keep-fighting nature in pursuit of artificial perfection? If home gardeners stay open-

minded, the answer will get clearer sooner or later. One thinks of aphids and ladybugs, for example, where the supposedly bad is good as food for the preferred bugs.

Each chapter of the book features an actual home garden that has embraced and practices the ideas put forth in the specific chapter. Backyards are as unique as what their owners make of them. Whatever the set-up, these featured backyards commit to nurturing not just the flora there but the incidental fauna as well.

Some Chapters and Notable Passages

A New Kind of Dream Home: Plant Native Plants. There has to be more awareness among gardeners about the coevolution of native plants and wildlife, along with the interest to allow that relationship to continue and flourish where we garden. How? We can do this by planting more natives in our own backyards to help along the survival of the wildlife and backyard creatures that depend on them.

Ms. Lawson pointed out the seduction from exotic and novelty plants that promise enviable gorgeous blooms and lushness in our gardens. Plant wanderlust, as she calls it, made horticulturists go on plant acquisition trips around the world and breed and introduce such finds through magazines and slick marketing that tickle our coveting impulses. Gardeners succumb, but then soon realize the relative emptiness of it all--perhaps because any satisfaction from this is short-lived. Seductive beauty and prized acquisitions, yes, but there are tiresome rules to follow to ensure success. And that extra work can frustrate because the processes, according to Ms. Lawson, do not have much "heart" behind them. At some level, gardeners seek more sense and meaning in their efforts.

"Most wasteful of all, I looked beyond my borders for beauty, rather than taking the time to understand the potential already there in my backyard."

Native plants support a sustainable lifecycle for the wildlife in our backyards, providing food and sustenance or allowing successful pollination with less fussing on the gardener's part. Ms. Lawson lays out what may be done; for example, remove and replace invasive flora at our own pace to avoid being overwhelmed by the task, plant green mulch, trade cultivars for straight species, and, as some kind of relief for the obsessed gardener, "don't love your plants to death."

"… species indigenous to your region will know how to grow there; they did so long before anyone came along with a bag of fertilizer and a hose."

A Harvest for ALL: Share the Bounty Through Peaceful Coexistence. Gardeners grow ornamentals and edibles for themselves foremost. So, when the deer chomp on gorgeous blooms meant for our vases or squirrels steal the corn meant for the dinner table, the gardener seethes and may choose to take drastic action.

"More often than not, coexistence requires only a simple attitude adjustment about what constitutes a problem in the first place."

Ms. Lawson discusses how human attitudes toward wildlife in suburban-urban locales tend to change, or have in fact changed, through time. Attitudes seemingly cycle back and forth, from these creatures being reviled one day and revered the next. So, what is right?

As it goes, it is the human's perspective at any given time that takes precedence, even if that means inhumane, unnecessary destruction of wildlife that dare invade what we consider our space or dare take what is supposedly ours alone. Misplaced disdain for and/or shortsighted fear of wildlife cause thoughtless human actions that are far from humane. Choosing to evict wildlife, if necessary, need not be a win for us and fatal for them.

Ms. Lawson even presents a caveat: are we sure we have correctly identified the culprit to deter? She makes a case of the scapegoated deer, the "current objects of our collective disdain," "accused of causing a host of ills, from Lyme disease to garden demolition to loss of forest undergrowth." She points out it is in fact a much more complex dynamic. For example, who would have thought that earthworms are the ones adversely changing forest ecology? By now, people are becoming aware that Lyme disease transmission involves other wildlife like mice.

Humans must not condemn these creatures that happen to be in our backyards just trying to live and survive. Most people's disconnection from the natural world, matched with big business (e.g., pest control) and cultural biases contribute to a lack of consideration by humans to try to coexist with wildlife creatures in our properties.

> "In the end, all of our backyard visitors bring many more gifts than they take away."

Closing Review

Considering the author's background having worked for the Humane Society of the United States, her caring for wildlife in whatever context is palpable. She brings that sensibility to the backyard gardening world, in which she is also entrenched as a self-selecting Master Gardener. The book addresses the realities that we are bound to experience wildlife in that defined environment of our backyard, manicured or not. Then what do we do? Care, that is, **eventually**. Caring means doing. We should be aware of what there is to deal with and then tackle it. One way or another, anyone who gardens cannot remain immune to the need to stop and care for the wildlife trying to make a life or just make it in our backyards.

This is a wonderful book to read when one wants guidance on what exactly to care about and how. Ms. Lawson provides solutions and alternatives to the otherwise quick fixes of inhumane wildlife control, for example. Oh, those systemic insecticides! The neonicotinoids, so unnecessarily destructive! This is a book with heart. It is substantive, guided by research, and passionate, too.

Ms. Lawson also addresses the mocking perspectives from those who have different sensibilities. For one, she is puzzled by the backlash from those calling native plant advocates such as herself "xenophobic" or "extremist." She then relays that when one comes to think about it, we are a nation of immigrants who eradicated those that were here before us (people, animals, plants) and as such also did away with what they could teach us. Why not try to regain that which may be lost for good, she offers. Can we then all agree that some efforts to understand problems and decide courses of action could benefit from revisiting origins and reintroducing their worth?

As a Master Gardener, she is a disseminator of the knowledge and practices that sift through that expertise-guided community-education endeavor. She is bothered by some. For example, she mentions the disconnect between the needs of the monarch butterfly and her Master Gardener program scoffing at milkweed, still listing it as a problematic invasive (note: must be an unintentional misinterpretation).

When Ms. Lawson at the beginning of the book lamented the lack of "heart" in the gardening instructions and rules that guided her own mainstream gardening days, she did succeed in including heart in this book. Unlike the instructions on "how to keep the voluptuous cottage garden flowers thriving," for beauty's sake only (flower porn, she calls it), she ensured that the instructive parts of the book encompass a holistic view of why do something. The full title reveals her intent. Let us try to be humane gardeners, and to be one is not merely to tolerate and accept wildlife in our backyards but to actively put in the efforts to nurture a habitat for them.

The book is not the glossy coffee table type. Its look matches the subject matter that is inherently natural and unpretentious. The many photographs, not glossy as well, are substantially evocative of the subtitle—backyard habitat for wildlife. Reading the book gives that unified experience of appreciating what is more natural.

The following paragraph is welcome lightheartedness (to stifle those times when we seethe at wildlife issues) to help us understand wildlife in action in our backyards. In human interactions, this calls for empathy:

"Tree squirrels are frequent diggers in part because they must constantly regulate stowed food supplies … just about every minute of every day is a careful behavioral decision that they're making in order to survive. Squirrels evaluate seeds to learn which are better eaten immediately and which can be stored underground."

Just how can we fault and thus hate squirrels for that? We can still keep out wildlife where they are not wanted or stop them from causing menace, but there is a humane way to do it. And finally, a fitting quote:

"We moved into their backyard—they didn't move into our backyard. They're really just seeking the same things that we are seeking, and that is a place to raise our family, food to eat …"
(quoting Linda Searles, Southwest Wildlife Conservation Center.)

Maria Daniels, Loudoun County Extension Master Gardener