



Trumpet Vine

Knowledge for the Community from Loudoun County Master Gardeners

Winter 2015-2016

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LOUDOUN COUNTY MASTER GARDENER LECTURE SERIES

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Jan. 7. *George Washington's Trees* with J. Dean Norton, Director of Horticulture for Mount Vernon. Rust Library.

February 4. *Victorian Arts and Craft Gardens of England* with Margery Erikson, garden lecturer. A photo journey to 10 English gardens. Rust Library.

March 3. *All About Water Gardening* with Richard Koogle, Vice President of Lilypons Water Gardens. A water garden can be easy and inexpensive. Rust Library.

April 7. *Herbs: Heirlooms from the Past, Grown Today at Smithsonian Gardens*, with Erin Clark, Smithsonian Garden horticulturalist. Rust Library.

For more information, please visit our web site at loudouncountymastergardeners.org

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Master Gardeners of Loudoun County, Virginia.

Winter – What Does It Hold for Us?

While gardeners often wonder what to expect of the coming summer – excessive heat and drought or a great growing season – *everyone* wonders about the coming winter – mild or excessively cold, rain, heavy snows or destructive ice storms.

Native plants generally make it through hard winters with no problem as long as they aren't newly planted. Non-native plants may have a hard time. Crape myrtles were hit hard this past winter.

But there are benefits to a cold winter especially if it is accompanied by snow. A "blanket" of snow is an excellent insulator and protects plants from damaging freezing and thawing. Slow melting snow replenishes the water table.

On the other hand, warm winters may kill off fewer problem insects such as mosquitos, fleas and ticks and early springs allow them to come roaring back in greater numbers.

Remember to water new plantings all winter if it's dry and the ground is not frozen.

Ornamental grasses and deciduous holly brighten the winter landscape. The deciduous holly is a beautiful native that provides food for the birds. Be aware that you need at least one male holly nearby or you won't have any berries. Check with your garden center for male and female varieties.

Ornamental grasses are intended to add interest to the landscape all winter long. Do not cut them down until early spring.



Photo by Barb Bailey

2016 "Let's Get Growing" Annual Symposium

The Loudoun County Master Gardeners are sponsoring a one day gardening symposium, Saturday, March 12st. 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.

Rick Darke: Rick lectures internationally on sustainable landscape design, planning, and conservation. A broadly knowledgeable botanist and horticulturist, his special areas of focus include ecological and cultural landscapes of North America, deciduous woodland ecology and garden design. As a staff member of Longwood Gardens, Kennett Square, Pennsylvania for 20 years, he served as Curator of Plants there from 1986-1997. A prolific writer and photographer, Rick's talks are filled with incredible pictures of landscapes and gardens. In this two-part presentation, Rick will illustrate how the art of observation of natural landscapes' rich layers can be put to practical use in the design and maintenance of gardens that are biologically diverse, and joyfully livable.



Rick's website is <http://www.rickdarke.com/>

Craig LeHoullier: Craig, a PhD chemist by training, developed a passion for growing heirloom tomatoes in 1986 while living in Pennsylvania. He is responsible for naming, developing and introducing many varieties, such as Cherokee Purple and Lucky Cross. He co-leads unique all-volunteer project to create new dwarf-growing varieties of tomatoes. A Seed Saver Exchange's tomato adviser, Craig will be your guide to tomatoes with great flavors and even greater stories. He will share numerous techniques discovered and perfected over the years to help you succeed in cultivating your own epic tomatoes.



Craig can be found at: <http://www.epictomatoes.com/>

Tim McCoy: Tim is a Research Specialist in the Virginia Tech Pesticide Programs and has been a member of VT Entomology Department for 13 years. A growing interest in native pollinators, specifically bees, is partially a result of massive public awareness about the decline of European honeybees world-wide. Tim will provide an accurate update on honey bee health and discuss native pollinators that are beneficial to our environment. Learn how pesticide misuse can inadvertently harm pollinators and why proper storage and disposal of pesticides will help the pollinators thrive.



More information on Tim's work in the Virginia Tech Pesticide Programs can be found at <http://vtpp.ext.vt.edu/>

On-line registration opens January 15th (mail in payment available). Tickets that include a box lunch are \$70 or \$60 if you choose to BYO lunch. This symposium is sure to sell out as we did last year!

See our website for more information and registration
<http://loudouncountymastergardeners.org/events/annual-symposium/>

Lasagna Gardening in an Existing Bed

Lasagna gardening techniques offer home gardeners a way to achieve substantial crop yields with limited time investment, but most published articles focus on using this method to establish new garden beds. How could these techniques be applied to existing beds, where you may not be able to add two-to-three feet of layers, especially in a raised bed? What about communities with Home Owner Association (HOA) regulations that restrict materials used and the bed's appearance? Here is one approach to using lasagna gardening techniques in an existing raised bed garden that complies with our HOA guidelines.

First, some basics: lasagna, or sheet or no-dig, gardening involves spreading alternating "green" nitrogen-rich and "brown" carbon-rich layers of organic matter (see lists below). It is key that all material used, green or brown, be cut into small pieces, the smaller the better, and certainly no longer than three to six inches. The smaller the pieces, the quicker they will decompose.

- "Green" layers include kitchen vegetable and fruit waste (no animal material) with seeds removed, fresh grass clippings, garden waste and weeds that haven't gone to seed, seaweed and kelp, fresh manure, coffee grounds and filters, tea leaves loose or in bags (but no staples), corn cobs and stalks, shrub clippings, and *fresh* leaves.
- "Brown" layers are built using *dry* leaves, straw and hay (preferably with no seeds), pine needles and cones, chopped twigs and branches, wood ash, shredded newspaper and brown paper bags, and crushed eggshells.
- The alternating layers should be a couple inches thick; if you want, the brown, or carbon, layers can be up to four inches thick, or double the green layer (it's a good way to use all those dried leaves available in the fall!)



Leaves can be used in lasagna gardening. [Photo by Tamara Hill-Tanquist OSU Extension Service](#)

The challenge many of us face is we want to improve the soil quality in existing beds as rapidly as possible to improve yields – gardeners can be an impatient lot! I wanted to use lasagna gardening to improve the soil quality in a raised bed garden at the end of its first growing season. Constructed this past spring, I filled it with a blend of 50% top soil and 50% compost. Over the summer the soil compacted so that it was almost four inches below the top of the wood frame and became quite dense, not 'fluffy' or loam-like. I wanted to incorporate substantial organic matter deep into the 12-inch deep bed over the winter so I'd have noticeably improved soil by spring.

I began by removing two to three inches of the soil so that the bed was about half full. I spread two-inch-deep layers of green and then brown layers followed by about half of the removed soil (it was good soil that I didn't want to lose); then repeated the green, brown, and the remaining removed soil layers. I finished with the final green and brown layers, resulting in a mounded bed topped off with a few inches of straw and shredded newspaper mulch. Water the bed thoroughly and you are done. The Oregon Extension Office recommends loosely covering the bed with black plastic to protect it from becoming water-logged; it also will keep the material from blowing away during winter storms, and will help hold in heat to speed decomposition. As the organic matter decomposes, the pile will decrease in height.

Garden pests gave me pause at this point, as I didn't want my yummy compost to draw mice, skunks, groundhogs, squirrels, chipmunks, or any of the other small mammals and deer abundant in our

neighborhood. I spread sturdy netting over the black plastic to deter easy access to the organic matter and secured the coverings to eye hooks around the lower part of the raised bed frame. If your garden bed is not framed, weigh down the plastic and any other protective layer with rocks, bricks or any other available heavy objects.

Our community HOA's architectural guidelines prohibit the use of 'chicken wire', which is defined to include any metal mesh materials, and defines a raised bed with a permanently installed deer fence as a prohibited permanent structure, so the deer fence I used to keep critters out of my vegetable garden through the growing season had to be removed for the winter. Since deer do not like to jump into confined spaces, I am hoping the inexpensive low decorative fence I installed after taking down the seven foot deer fence will deter deer from walking through the bed as they had when it was under construction in the spring.

With that, my vegetable garden plot was ready for the winter, and I'll have to patiently wait to enjoy the results next spring.

Sources for this article:

1. <http://extension.oregonstate.edu/gardening/layer-compost-lasagna-style-no-till-gardening> "Layer Compost "lasagna style" for no-till gardening", by Denise Ruttan, February 1, 2013.
2. <http://organicgardening.about.com/od/startinganorganicgarden/a/lasagnagarden.htm> "Lasagna Gardening: No Till, No Dig Gardening".
3. <http://organicgardening.about.com/od/startinganorganicgarden/qt/Making-A-Great-Lasagna-Garden.htm> "Making a Great Lasagna (Garden)", by Colleen Vanderlinden
4. http://anr.ext.wvu.edu/lawn_garden/vegetable_gardening/lasagna_gardening "Layer Garden by "Lasagna" Method" by Mary Beth Bennett, West Virginia Extension Agent

Christa Leman, VCE Master Gardener

Common Ground Soil Stories

USDA-NRCS, Virginia Cooperative Extension, and VABF have teamed up to tell the story of "ecoganic" farmer Ellen Polishuk who has successfully addressed the challenge of keeping soil healthy while tilling it for efficient vegetable production. [Seven short, interesting YouTube videos.](#)

Raised Bed Garden What to Plant and How to Build One

(The second of a series of seasonal articles about gardening with big containers)

As promised in the last issue of the Trumpet Vine, this installment of the four part series on raised bed gardens concerns the actual construction. The boxes can be built of stone, simulated stone (concrete stacking pavers for example) or wood. I'll cover building them from pressure treated wood.

Before you begin construction, you should think about the typical preferred plantings. My family goes for seasonal vegetables, annual and perennial herbs and perennials like rhubarb, asparagus, blueberries and gooseberries. The initial question should be: Will it fit in the raised bed? I ruled out the fruit bushes. I also ruled out corn and rhubarb, and should have ruled out summer squash, okra and tomatillo. Big, spreading plants will crowd out their neighbors. Perennial herbs and plants like asparagus and strawberries will occupy the same space for several years to come, preventing those beds from serving as a new growing area for plants that should be rotated every year, like tomatoes.

Locating the beds involves the usual factors: available sun or shade and source of water. To create a bed like ours, plan on having a three foot margin so that it is fully accessible.

When it comes to construction, you have options: DIY or ready to go from a catalog. Gardner's Supply has a variety of ready-to-assemble raised beds/containers. You can find them at

<http://www.gardeners.com/search?q=raised%20beds> and there are probably many other sources.

If you go the DIY route, here's the basic recipe for a bed that will measure 8-feet long, 3-feet deep and 2-feet high:

- six 4x4 pressure treated posts cut in 4 foot lengths
- four 2x12 pressure treated boards cut 8 feet long for the two long sides
- four 2x12 pressure treated boards cut 3 feet long for the short sides
- two 1x6 pressure treated boards cut 8 feet long for the seating ledge's long sides
- two 1x6 pressure treated boards cut 3 feet for the seating ledge's short sides

Mark the ground and dig six post holes 1 foot deep. Place four where the corners of the box meet and two at the 4-foot mark, in the middle between the corner posts.

Sink the six posts one foot into the ground, and tamp the dirt firmly around the posts.

Cover the ground with black plastic out to 3 feet beyond the rim of the boxes. In the 14 foot x 9 foot sheet of plastic cut holes where the posts are so you can slip the plastic over



Construction detail. Photo By: Eileen Swicker

the installed posts.

Nail into the posts two of the long boards to one long side. Then nail two of the short boards on the adjoining short side and repeat for the other long and short side.

Mitre-cut the 1x6 boards to form a seating ledge and nail them in place.

Once the boxes are assembled, paint them with a sealer such as Thompson's Water Seal. Gravel or mulch on top of the black plastic is a nice finishing touch.

It's early December as I write this, and today I harvested a pound of Neon Lights Swiss chard, a good handful of Tuscan Kale, some parsley, rosemary and coriander from the raised beds. The deer like the Swiss chard, too, but fortunately they seem to prefer the bigger, tougher leaves. The garlic that was planted on Halloween is coming along nicely.

Stay tuned for the spring edition where I will cover how to work the soil for early spring planting and consider whether big containers have a place in your garden.

Eileen Swicker, Extension Master Gardener



The harvest. Photo By: Eileen Swicker

A Garden with a View – Even in Winter

Cooler winter temperatures have settled in for the foreseeable future, and garden chores have thankfully come to an end. Like me, you may have already curled up with your favorite gardening magazines and are wistfully dreaming of spring. But don't overlook the opportunity the winter garden provides as you view it from your window and the warmth of your favorite chair. With a little planning, landscapes and gardens can be beautiful and interesting all year long, and as an added bonus, provide food and shelter for our feathered friends when they need it most.



Cranberrybush, *Viburnum trilobum* Photo by [mwms1916 at Flickr](#)

Sapphire Berry, *Symplocos paniculata* Photo by [Kristine Paulus at Flickr](#)

American Beautyberry, *Callicarpa Americana* Photo courtesy of Wikipedia

The shrub viburnum, for instance, offers beautiful springtime flowers, interesting fall foliage, and winter berries that birds adore. Viburnum is easy to grow in either sun or part shade, and there are many cultivars to choose from. Two native plants to consider are the Maple-Leaved viburnum and the American cranberrybush. Maple-Leaved viburnum reaches 4 to 6 feet in size with flat white flower clusters in the spring followed by dark blue berries. Its dark green foliage turns yellow to wine red in the fall. The American cranberrybush grows 8 to 12 feet tall and wide with white mid-spring flowers, red autumn leaves and vivid red berries.

In fact, there are many fruiting shrubs that have year-round appeal, and there's something to suit every gardener and garden size. A few more to consider are the chokeberry such as 'Brilliantissima' with its gorgeous fall foliage and bright red berries, the American beautyberry that lives up to its name with shiny, bright purple fruit, and the blue sapphireberry, or Asiatic sweetleaf.

While we're all familiar with the evergreen hollies that are synonymous with winter beauty, gardeners are just rediscovering our native deciduous hollies. Winterberry hollies, native to our region, are a great example. Growing up to 15 feet tall and wide, the winterberry has small, serrated leaves and tiny white flowers. The showy berries begin to ripen in late summer and easily last past New Year's. Not only are they beautiful in the winter garden, the berries are also a favorite snack for bobwhites, flickers and thrushes.

Evergreens and conifers add structure to the winter landscape when deciduous trees and shrubs have faded into the background. They also provide winter shelter and food for a variety of birds and small mammals. But you don't have to settle for the usual spruce or white pine, says garden author and blogger [Margaret Roach](#). She looks for eye-catching colors, as well as a diversity of textures and habits. Some of her favorites are the [golden hinoki cypress](#) with its lacey golden texture, the [Japanese umbrella pine](#), and the nearly turquoise [concolor fir](#). For more inspiration, visit Roach's website [A Way to Garden](#).

We may not be outside toiling in the sun, but that doesn't mean we can't be working on next year's garden. Now is the perfect time to view the landscape with a critical eye, and see where you might add more year-round interest. You'll be rewarded with the view all year long.

Nancy Caldwell, VCE Master Gardener

Tale of the New Hobby Farmer

This is a story about deep ties to land and to agriculture that spans generations. It's a story about an innate passion for growing things that a Midwestern city upbringing could not suppress, and about a desire for a stronger connection to who and what feeds us. This is a story about the challenges, heartaches, successes and failures of becoming a small scale farmer later in life. This is also a tale of naiveté, the hazards of poor planning and the whimsy of nature. The story begins long ago on the snowy North Dakota plains.

Farming in My Blood

On July 6, 1896, my great grandfather received his first 168 acres of the North Dakota prairie in a Land Patent, which in those days marked the initial transfer of land titles from the Federal government to individuals. My mother was raised on this "homestead" farm along with her eight brothers. That land remains in the family today, supplemented by many additional acres, all actively farmed by my cousins. My most cherished childhood memories are of visiting the farm, playing with some of my 70+ first cousins, driving a tractor, chasing the chickens, and plunging into the swimming pond. The best memory is of picking and eating fresh peas and strawberries right in the garden--the idyllic life in the country. Hard work was expected and accepted.

Growing up in Louisville, Kentucky, my family always kept a small back yard garden. It was an extremely modest affair, but it was also the first place I witnessed the magic of planting a seed in the soil, and seeing leaves and stems emerge days later in that very spot. Having a garden taught me the virtue of patience, for harvest was always weeks if not months away. It taught me diligence, since harvest would never occur if you failed to attend to the plants' needs. Finally, the garden taught me how to analyze and solve problems, because (as any two-bit gardener knows) it turns out thousands of pests enjoy what we grow just as much as we do, and perhaps more.

Just the Two of Us and a Dream

My wife Eleanore and I kept a small garden at our Alexandria townhouse. It was not nearly big enough. We planted a larger garden at our Falls Church house; however, it was still not enough--we wanted some LAND. When the nightly roar of Fairfax County police helicopters hovering over our neighborhood became too much to bear, early in 2000 we began to think maybe five acres near Ashburn would be nice. Silly us. Lots of people thought five acres near Ashburn would be nice. They still do. Sticker shock! So we recalibrated our search a little further west, mindful of potential commutes to Crystal City (me) and Rockville (Eleanore).



Sunrise at the farm

Then one summer day, our real estate agent showed us a property under development a few miles south of Lovettsville. The land was in pasture and nearly perfect, with gently rolling terrain. The soil was deep and fertile.

The house was framed out and matched our needs. But oh my goodness, it was so much further from our full time jobs than we intended. We kept returning to the Lovettsville property, noting progress on the house, admiring the fine mountain views, and soaking in the serenity. Everything just felt right. In mid-September, we signed the contract.

Just before Christmas 2000, we took occupancy of the new house in Lovettsville. Had we taken the time to think about what we might actually *do* with 10 acres? No. Did we have a *plan* for figuring out what we would

do with 10 acres? No. Admittedly, I didn't think we had to do anything but watch the grass grow. That's when we learned the legal meaning and financial ramifications of "roll back taxes." For those unaware, Loudoun County had instituted land use policies intended to keep all land zoned agricultural in some type of agricultural production. Ceasing production was accompanied by severe tax consequences. In our situation, if we did not grow or raise something to derive \$1,000 of annual income, we would not only have to begin paying the much higher residential rate on all 10 acres, but were also on the hook for higher taxes covering the FIVE PREVIOUS YEARS. Ouch!

It was Eleanore who came up with the brilliant idea to plant Christmas trees; she passed a tree farm on her daily commute. So there we were, planting seedlings in the drizzle of January 2002. I dug the holes. She planted the seedlings. We both froze. Later, we learned that it's OK, even preferred, to plant tree seedlings in the spring. Hallelujah, we didn't have to freeze again! We also discovered that lining out a tree field grid with a 100' cloth measuring tape in windy conditions was enormously frustrating. Nevertheless, we were right proud of ourselves seeing the first 300 seedlings tucked into their semi-straight rows. We had arrived. We were FARMERS! Then we had a most disturbing thought. Since it takes 7-10 years for a typical seedling to reach sellable height, could we wait that long to derive the required income to keep our land taxed at the agricultural rate? Answer: No. Now what.

New Adventures and Challenges Beyond Trees

It was my turn for a brilliant idea. In summer 2001, my father-in-law and I had great fun picking raspberries and blackberries at Patowmack Farm. Berries produce a crop quickly, some in the first year, and boy do they



Blueberry bushes and Christmas trees in the background

taste good. Maybe we could grow and sell some of them! But who would buy them? Who knows? Never mind that minor detail, just get them in the ground and see what happens. So that's we did. A few rows of raspberries and blackberries at first, plus my sister-in-law donated six starter blueberry plants. Did we test the soil first to see if we had the correct pH or nutrient distribution? No. Did we prepare the rows a year in advance like the experts recommend? No. Damn the torpedoes, full speed ahead. Our learning curve would have been so much shorter had we known about and taken advantage of free VCE advice.

Without even having learned how to grow the berries very well, I now had to figure out how to sell them. Great, exactly how does one market their produce? How do you package berries? How does one determine pricing? First, I visited a few nearby farm stands to see if they sold berries. If they did, I noted the pricing. If they didn't, I showed them what I had to offer. My first big break was selling to the old stand on Main Street in Purcellville. The owners were both very kind hearted people; I think they took pity on me. Sadly, the land they were using was developed, and they moved their stand away. Then one day I learned of the "Fresh n Local" initiative in the gas station parking lot at the intersection of Route 9 and Clarks Gap Rd. Perfect! Unfortunately, the venture only lasted a year. On another day I took a 12 pint tray of beautiful blackberries to the old Lowry's store at the east end of Hamilton, but was informed they grew their own. Dejected, I got back in the car with the tray of berries, and had driven a short distance when I noticed it. There on the right. I'd seen it before. That little natural foods store. Maybe they would like my berries. Inside the Natural Mercantile of Hamilton I met proprietor and local farm supporter Sue Phillips. Sue became and remains one of my best clients. Sue and her staff eagerly await my first delivery of blueberries each June, and herald their arrival on the chalkboard outside. I have since gained enough confidence in my berry supply and quality to

approach and sell to several area restaurants. It took a few years, and more rejections than finding a high school prom date, but marketing my produce no longer seems as daunting.

So What Happened to All Those Trees?

Meanwhile, those little Christmas tree seedlings we had planted grew a little bit each year. We continued to plant an average of 300 seedlings each spring. Eleanore assumed the unenviable task of shaping the trees each summer, limiting each one to about 12" of vertical growth annually to encourage lateral fullness. Let me tell you something, it takes a special determination to commute all week to a brutal day job, and then trim trees all weekend in July heat and humidity. Her efforts were invariably rewarded with a rash of poison ivy blisters. Yet her eye for pruning and shaping was undeniable, and learned by watching demonstrations at area farms sponsored by the Loudoun Valley Christmas Tree Growers Association.



Tree Farm Proposal

We finally opened to the public for Christmas 2010. Being such a small tree farm has one advantage: you don't have to advertise. A few hand painted signs strategically placed on Rt. 287 sufficed. One of the most unexpected pleasures of selling Christmas trees was getting to know and visit with families. Seeing old traditions renewed and new ones begun was joyful. Watching families laugh and play while selecting the perfect tree was heartwarming. Seeing the same groups year after year, noting each child's growth and maturation, was rewarding. Hearing their effusive praise for Eleanore's pruning skills was gratifying. Our small scale operation makes it possible for people to linger to enjoy conversation, some warm cider or hot chocolate, and sit around the fire pit. We even helped one aspiring groom propose to his girlfriend by staging the engagement ring as a tree ornament. How cool is that?

Learning the Hard Way

You would think that by now we would be selling about 300 trees each year. After all, that's how many we planted each year, right? Well, nearly $\frac{3}{4}$ of them succumb to one of the dreaded three Ds: draught, deer and disease. It completely stopped raining for weeks on end during several summers, causing seedlings to perish. Antlered deer particularly like to "rub" young saplings during the fall rut to scrape away the velvet and mark their territory, destroying the tree in the process. The pines, firs and spruces we plant are also susceptible to various fungi, bacteria and viruses that could wipe out the crop if not promptly addressed. We might have reduced the high mortality rate IF we had asked the right people or conducted informed research.

Merely identifying the problem does not preclude loss. In fact, solutions often have tradeoffs. You might keep seedlings alive during a drought, but would you take time to water them by hand when berries need to be picked? You could erect a fence to keep the deer out, but would you absorb the expense when the return on investment would take decades? You could spray fungicides on the trees, in spite of your desire to farm organically, but would you spray knowing fungicide residue could persist in the soil and enter the ground water that supplies your house's well?

Advice for Future "Farmers"

Problems tend to proliferate when nature gets out of balance. For example, the disappearance of predators such as wolves and big cats from this part of the country, coupled with chopping up forests for development and agriculture, has created the perfect environment for deer. They thrive in "edge forest" habitat, so it should come as no surprise that the deer population has exploded. The resulting overabundance of deer not

only causes havoc on the Christmas tree farm, but it also contributes to the spread of Lyme disease. Unbelievably, area body shops get most of their business from collisions with deer during the fall rut.

Today's global economy and its trans-ocean trade bring us the full spectrum of imported goods. But along with the Chilean fruit and Chinese kitchen utensils, we're also importing menacing new pests. The brown marmorated stink bug (BMSB) is believed to have hitchhiked across the Pacific Ocean in shipping crates from either China or Japan in 1998. Now the BMSB has become a major cause of fruit damage in the eastern United States, including my blackberries, apples and peaches. The BMSB infestation has increased the cost of doing business for the farmer, which not only raises costs for the consumer, but also adds an ecological cost by increasing pressure on farmers to use more powerful pesticides more frequently. The spotted wing drosophila (SWD), another Asian import, was first noticed in California in 2010. In five short years, it has spread across the country. While most drosophila (also known as fruit flies) feed on overripe fruit, the SWD lays its eggs in ripening fruit. Currently, only two organic insecticides have proven effective against the SWD, and both are toxic to bees. Now I spend at least one or two nights each week, from July through August, spraying after the sun has gone down to preserve my crop. Is there any wonder why organic fruits and vegetables cost so much?



Ribbons from Eleanore's County Fair entries

Throughout our journey, sources of education were available. More often than not I have waited too long to ask for assistance when more timely intervention could have eliminated a problem or lessened its severity. Several tree farmers have graciously mentored us in how to plant seedlings, pruning techniques, and when and what to spray to treat diseases. The County Extension Office, particularly Commercial Horticulturist Beth Sastre, has provided invaluable assistance and occasional hands on tutoring. I became a Master Gardener in large part to educate myself on best agricultural practices. The internet is now full of gardening advice, some good and some bad, most confusing and contradictory. *The fact is, those involved in agriculture form a community, a community fairly*

optimized for mutual support and advancement. There are few trade secrets or cut throat competitions here. Farming is too hard, and too important, not to pull together for the common good.

So where to from here?

What is next for the *Blue Ridge Tree and Berry Farm*? My dilemma has become should we get bigger or stay small. Eleanore and I have provided 100% of the labor to this point, something that will have to change going forward. Small time farmers like us struggle mightily to find reliable labor willing to work part time.

We will just have to see how it plays out. In the meantime, our freezer full of berries and peaches, shelves full of Eleanore's tasty canned goods, and winter squash and potatoes will sustain us through the winter months. We will continue to enjoy seeing old friends and meeting new ones during Christmas tree sales. Hopefully we will continue to have many satisfied customers. We will give back to the community by sharing information and advice. And we will use the network of resources at our disposal to solve our most vexing problems, and keep this wonderful land in agricultural production for many years to come.

Story and photos by David Hubbuch, VCE Master Gardener

A Winter Walk at Morven Park

Morven Park, on the north side of Leesburg, is a 1,000 acre preserve open to the public with historic buildings, museums, and much more. It has been the home of 2 governors-Thomas Swann, governor of Maryland 1866-1869, and Westmoreland Davis, governor of Virginia 1918-1922. Davis and his wife Marguerite planted extensive landscaping. These plantings have matured and make it a great place to explore any time of the year. In winter, the structures of the trees and the textures of their bark are more noticeable.

To get to Morven Park, turn north on Morven Park Road from West Market Street. Turn left on Old Waterford Road, and right on Southern Planter Lane. Go ½ mile to the parking area. The right hand side of the lot is bordered by southern magnolias, *Magnolia grandiflora*. This tree is native to the southern states, but some varieties such as this one show hardiness to the cold. This tree produces beautiful large flowers, and its bright red seeds are eaten by squirrels, opossums, quail and turkeys. Its dense foliage provides winter shelter for small birds.



Oak Alley

Photo by Cathy Anderson

Walk to the far end of the parking lot and turn right on the path. On the left is a long row of majestic willow oaks, *Quercus phellos*, framing a large lawn. This oak, in the red oak family, has leaves that resemble a willow, about 5" long by 1" wide. This oak transplants better than most, has a medium growth rate and excellent overall texture and form. Consequently it is a popular landscape tree. It is native to the Eastern U.S., and is widely planted along city streets. The small acorns are eaten by many mammals and birds.

On the right side of the walkway are many American hollies, *Ilex opaca*. This is a slow-growing native tree, usually found in the forest understory. It has smooth, light gray bark and matte green leaves. Some of the trees are laden with red berries, while others have none, because this tree is dioecious, meaning each tree is either male or female. One male tree can pollinate several female trees. The pollen is carried by bees attracted to the sweet scent of the flowers. Holly berries are bitter-tasting but mockingbirds, bluebirds, and thrushes will eat them when other food sources have run out.

Continue on the walkway as it turns left. Past the willow oaks you will see a tree that looks like a Christmas tree without any needles. This is a dawn redwood, *Metasequoia glyptostroboides*. Similar trees were widespread in North America during the Paleocene and Eocene periods, but became extinct at least 33 million years ago. A grove of dawn redwoods was rediscovered in China in 1944, and specimens were brought here in 1948. So this tree is 66 years old at most. It has soft needles, about ½" long, that turn reddish brown in the fall and drop. The bark peels off in



American Holly

Photo by Cathy Anderson



Dawn Redwood Photo by Cathy Anderson

long vertical strips, and mature trees have prominent buttresses as can be seen on this tree. Its seeds are borne in small round capsules about 1" around. This tree can grow to up to 100 feet.

Turn right on the path and walk a short distance until you see an opening in the hedges to your right. Walk down the path between the hedges. These hedges are American boxwood, *Buxus sempervirens*. Mrs. Davis propagated these plants for sale. This plant actually originated in Europe, and is faster growing than English boxwood. It is resistant to deer because of its odor.

At the end of the path across the road you will see an Osage orange, *Maclura pomifera*. This tree is native to the Ozark Mountain area of

the Midwest, but was widely planted by farmers to create living fences for livestock due to its sharp thorns. The bark has deep vertical grooves, and the orange inner bark can be seen in the furrows. Like the holly tree, this tree is either male or female. The female tree produces chartreuse, softball-sized fruits in the fall. Thousands of years ago they would have been eaten by large mammals such as mastodons, now extinct. Now very few animals eat them because of their bitter taste and large size. This tree has several other names such as hedgeapple, horseapple, and bowdark. The wood is very hard and rot-resistant, and was used by Native Americans to make bows.



Osage Orange

Photo by Cathy Anderson



Red Maple

Photo by Cathy Anderson

Turn right on the road and walk back towards the parking area. On the right are several smaller red maples, *Acer rubrum*. They have light gray bark and wide branches. This is one of the most common trees in the U.S. Due to environmental changes, the maple is moving into forested areas once dominated by oaks. In early spring *Acer rubrum* produces tiny red flowers, followed by red seeds. The emerging leaves are reddish, and then turn green. The leaves have 3 lobes and are smaller than other maple leaves. In the fall the leaves turn brilliant red or yellow before dropping.

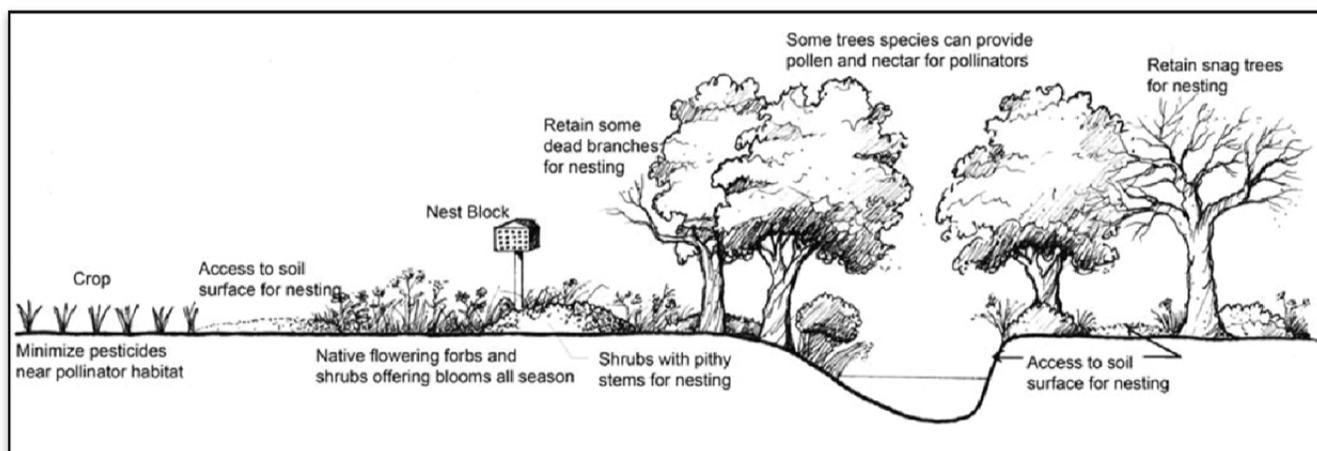
These are just a few of the notable trees and shrubs growing at Morven Park. If you follow the road past the mansion to the administration building, you will find the start of trails that lead up the mountainside, which is the southern end of the Catoclin Mountain ridge.

Betty Hedges, VCE Master Gardener, Tree Steward

Bees Need Homes Too!

We can provide food for them; we can avoid pesticide use; but if we don't provide appropriate nesting and overwintering sites for them, the pollinators we attract to our gardens may be just passing through. However, if we take care of the nesting and overwintering needs of our native bees, they'll be happy to take up residence with us. In addition, most other pollinators (butterflies, beetles, bugs, flies, hummingbirds) will also be happy in our lawns and gardens.

Much is unknown about the overwintering needs of our native bees, but applying what we do know is a start. For instance, nesting sites need to be relatively close to sources of pollen and nectar. Otherwise, it takes too much of a bee's time and energy to travel between foraging sites and the nest. Ideally the nest site should be no more than a half a mile from good foraging sites, but 50 feet to a few hundred yards is preferable.



Cross section of an ideal environment conducive to nesting by all kinds of bees. Drawing from Agroforestry Notes, AF Note 34, USDA, http://plants.usda.gov/pollinators/Enhancing_Nest_Sites_For_Native_Bee_Crop_Pollinators.pdf

Begin your process by evaluating whether or not you already host bees. There are three primary ways to categories bees by their nesting preferences: bumble bees; tree nesters; and ground nesters. You can look for their nests in the ground, in dead tree branches, in shrubs with pithy stems, in abandoned chipmunk and mouse burrows, in woodpiles and sheds and in leaf litter. Ground-nesting bees make quite small holes and the nests resemble ant hills. Look for a bee hovering just above ground when there are no flowers present, flying back and forth as if looking for something, and watch to see where it goes. Locating the nests of wood nesting bees is not much easier. The best time to look for both is mid-morning through the afternoon.



Burrow of a ground nesting bee
Photo by Whitney Cranshaw, Colorado State University, Bugwood.org.

The rest of us may have to provide sites for nests or overcome our "neatness" gene and allow things in our gardens and lawns to be, well, just a little messy around the edges! Consider this permission to be not quite so tidy, put the rake, mower, trimmers, and pruning shears away, and relax with a glass of iced tea instead!

Bumble Bee Requirements

Bumble bees have requirements for two different kinds of housing: one for hibernation and one for nesting. Bumble bee queens usually hibernate over the winter in soft humus and leaf litter, where they can burrow for

protection against the weather, although occasionally you may find a hibernating queen in a woodpile or shed. In the spring the mated queen emerges and starts her nest. At this point her requirements are totally different from those of a hibernating queen or from the needs of other bees as well.

Bumble bee queens generally prefer to nest at or just below ground level in existing cavities such as abandoned mouse or chipmunk burrows. They frequently will also nest under tussocks of grass or even in abandoned bird nests or bird houses, old compost piles, under sheds and outbuildings, or in rock (not gravel) piles. Grassy thickets and unmowed grassy areas at least five feet wide where lawns meet woods or cultivated fields meet hedgerows are ideal. If you have sites such as these, try to mow them only once every two-to-three years, waiting until fall or winter to do so, when the nests have been vacated and the newly mated queens have burrowed into the soil. If you don't have a grassy verge, you can create one bordering a fence or woods by planting native bunch grasses and wildflowers such as black-eyed-Susans, Joe-Pye weed, milkweeds, and goldenrod, to name a few plants which are suitable. Provide these sites on your property and you'll make bumble bee queens and their offspring very happy.

Although you can buy or build nesting boxes for bumble bees, the occupancy rate is discouragingly low, ranging from 2% to 30%, depending on the researcher. Generally, you'll be much wiser to simply provide suitable natural spots on your property. Nevertheless, those who want to try can buy nesting boxes from an online source or build one from plans available online.

An excellent resource on bumble bee conservation, *Conserving Bumble bees: Guidelines for Creating and Managing Habitat for America's Declining Pollinators* at http://www.xerces.org/wp-content/uploads/2012/06/conserving_bb.pdf, contains a box plan, including instructions for placing and maintaining it, on p. 28, "Appendix C. Nest Box Construction".

Another easy-to-make, homemade nest can be made from flowerpots, preferably plastic. Instructions for making flowerpot houses can be found at www.bumblebee.org/nestbox_plans.htm.

Whatever kind of bumble bee nest box you might create, place it in full or partial shade in a protected, dry spot that is at or just below the soil's surface.

All the Other Bees

Other native bees are divided into two different groups: wood nesters (about 30%) and ground nesters (about 70%). The nest requirements for each are radically different.

Wood Nesters

Wood nesters typically, nest in tunnels in dead trees and tree stumps left by wood boring insects. Some nest in the soft center pith of twigs and woody stems of trees and shrubs such as box elder, dogwoods, elderberry, raspberries and other brambles, and sumac. In the case of carpenter bees, they may also bore into shutters, window frames and windowsills, fence posts, building eaves, decks, porch railings, wood siding and other wood surfaces, preferring those which are weathered or unpainted (although painted wood is not immune).



Wood nesting bees lay their eggs in a line within tunnels.

Photo courtesy of UNC Bee Lab

Whether you purchase a nesting block or create a nesting site, the openings for the bees should be placed on the south or southeast side of the nest site to provide protection from weather and allow the sun to warm the nest in the morning. If possible, the holes should be drilled three-to-five feet above the ground. If you mount a box or twig bundle, it should also be mounted three-to-five feet above the ground and be tightly secured so that it doesn't blow in the breeze.

Creating sites for wood nesters is easy, using either Mother Nature's bounty or a synthetic material:

- **Dead trees:** If you have a dead tree (snag) in an out-of-the way place where it isn't dangerous, leave at least a part of it standing. If no naturally occurring tunnels exist, drill smooth holes of several different widths in the tree, ranging from 3/32" to 3/8", leaving at least 3/4" between holds. Holes in the 1/4" and smaller range should be about 3-4" deep; those larger than 1/4" should be about 5-6" deep. The idea is to simulate beetle holes and appeal to different size bees. Slant the holes slightly upward to prevent water from entering and standing in the tunnels. With a variety of hole sizes, each different bee species will be able to select the size which best suits its nesting requirements.
- **Rotting stumps:** If you have a soft, dry, rotting stump or log, leave it alone, if possible, for those few species who prefer nesting in rotting wood.
- **Old fence posts:** Drill holes in just as you would drill holes in a dead tree trunk (above).
- **Containers:** Take a rectangular milk carton, small piece of PVC pipe capped at one end, plastic bucket or some other container and fill it with bundled nesting materials. The materials should be roughly six to eight inches long; 15-20 (or even more) can be placed in a container. If you're in a hurry, you can simply tie a bundle together with twine or duct tape. Instructions for the bundle on the right are at <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/plantmaterials/home/?cid=stelprdb1193588>



A simple and easy to make nest made from PVC pipe and reeds. Note most of the reeds are occupied. Photo from Natural Resources Conservation Service, USDA.

Some of the materials you can use to create your bundle include:

- Dry (not green), hollow stems, such as those of bamboo and reeds cut below the nodes, or teasel, sealed at one end
- Fresh twigs with soft, pithy centers, such as sumac
- Ordinary paper (not plastic) drinking straws, sealed at one end
- Hollow paper tubes especially designed for nesting, available from bee nest suppliers.

Whatever you make your bundle from, place it horizontally in a protected site facing south or southeast, securing it firmly in place so it doesn't swing about in the breeze or risk being blown down by the wind. After the bees have emerged in the spring, discard the bundle and start over.

- **Bee houses:** You can provide bees with a nesting block. Nest boxes for wood nesters can be purchased at some nurseries, garden centers, or wild-bird stores or online (Google "bee nest for sale"). The holes in purchased houses typically are 5/16" wide, the size preferred by blue orchard bees, one of the best pollinators. A number of online sites offer nesting blocks, and others have plans for making your own. Bee houses are easy to make, using materials you may already have on hand. For example, the mason bee nest box on the right is very simple to make if you're even slightly handy. See <http://www.ces.ncsu.edu/depts/ent/notes/Other/note109/note109.html> for directions for building for this house. If you buy a wood block at the lumber yard, it requires little skill beyond



A common style of nesting box Photo by North Carolina Extension Service, NC State University

being able to use an electric drill. When buying lumber for the block, be sure to specify preservative-free wood. Douglas fir is ideal.

Because bees in blocks are close to each other, they are more likely to be attacked by diseases and parasites than those in naturally occurring cavities. To prevent problems, clean or replace blocks at least once every two years after the bees have emerged in the spring. Instructions for cleaning nesting blocks are on pages 4-6, Tunnel Nests for Native Bees: Nest Construction and Management, at <http://www.xerces.org/wp-content/uploads/2009/11/tunnel-nest-management-xerces-society.pdf>.

For more information about nesting blocks and sites, see pages 27-32 of *Pollinator-Friendly Parks* at http://www.xerces.org/wp-content/uploads/2009/05/pollinator_friendly_parks_21ed_xerces_society.pdf

Ground nesters

Seventy percent of our native solitary bees prefer nesting in the ground, preferably in dry soil containing little organic matter. The nests of ground nesters consist of an entrance tunnel with one-to-ten individual brood cells in small tunnels branching off from the main entrance tunnel and reaching 6-36" below the surface of the soil, with the biggest concentration of tunnels in the 6-12 inch range.

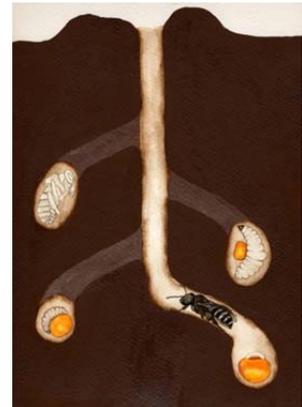
Ground nesters have very few requirements. Basically, they are happy with a sunny south or southeast-facing plot of bare or nearly bare ground, preferably on a slope or embankment for good drainage. Flat areas are acceptable *provided however* that they are well drained. A hot, dry, hillside of sand or sandy/loam is perfect, but bees will accept other soil types to a certain extent. However soils with a clay content of 40% or more aren't attractive to most bees; if this describes your soil, you'll need to amend it to attract the most species. You cannot expect bees to nest in lawns which are irrigated during the nesting season, areas covered with thick grass, areas where people walk, or in heavily mulched garden beds. They *must* have an area where they have direct access, to the soil itself. And it *must* be dry.

If you don't already have a suitable site available for ground nesters, you can strip a small south or southeast facing area of all or most of the grass and then leave it alone. The area may be only a few inches in size or several feet. With luck, bees will discover your site and move in. Because pupae overwinter in the nest, the area must remain undisturbed until the next year, after the bees have flown.

Some Additional Necessities

In addition to nesting sites, most bees need other materials to create a nest such as pieces of flower petals and leaves, sap and plant resins, plant down such as the fluff from milkweed pods, and mud. All are readily available in the garden with the possible exception of clean, pesticide-free mud, which you may have to provide, perhaps by stripping a small area of grass, hollowing it out slightly, and letting a garden hose drip into the clean dirt basin you've created. Such things as upholstery's cotton may also be used, but if you're placing materials out for bees, do not use any synthetic materials.

If you provide all of these things – places to nest and materials for nest building, your garden won't lack for happy pollinators!



Simplified illustration of a ground bee nest. Illustration courtesy of Sarina Jepson, The Xerces Society

Lina Burton, VCE Master Gardener

Common Pests of Indoor Houseplants

Just because your outdoor garden has “closed for the season” doesn’t mean the problems with pest come to a screeching halt! Many of us tend to be perpetual gardeners who keep plants going year round by bringing them in doors. Even some of the easiest to maintain houseplants can develop pest problems. This article explores pests of common houseplants, how to prevent them, and methods of control. We will tackle the top 3 in this article.

Mealybugs

Many of us are already familiar with mealybugs as outdoor pests but they also have a taste for indoor houseplants as well. Luckily, they are fairly easy to control naturally through the use of insecticidal soaps, oils, and other natural techniques. There has to be a large population of Mealybugs present on a plant before significant damage is done.

Identification

- 1/10-1/4 inch long
- Soft, oval and segmented
- White or gray mealy wax
- Wingless
- Group into white cottony masses on leaves and stems
- Feed by piercing-sucking mouthparts (stylet)

Damage

- Leaf yellowing
- Curling Leaves
- Release honeydew, which causes mold on plants and attracts ants

Plant Preference

- Ornamentals (Bird-of-Paradise is a favorite)
- Houseplants
- Avocados
- Fruit trees (think small citrus that does well indoors)

Control

- Hose off plants or alternatively use a spray bottle
- Insecticidal soap that has potassium salts of fatty acids will penetrate the exoskeleton and cause damage to insect
- “Leaf Shine”- A neem oil product that aids in discouraging feeding and ability to adhere to plant
- Mealybug Destroyer- A cryptolaemus beetle (in the same family as ladybug) that consumes large amounts of mealybugs. Works best in small greenhouses with large infestations.



Photo by John Cummings

Fungus Gnats

This pest is particularly notorious as both the larval and the adult stage cause damage to the plant. They tend to invade homes where the humidity and moisture are particularly high. They usually go unnoticed until they are adults and able to fly around.

Description

- Adults
 - Fragile
 - Mosquito-like in appearance
 - 1/8 in long
 - Long legs and clear wings
- Larvae-
 - ¼ inch long
 - Shiny black head and white body



Photo by Erik Burton

Damage

- Plant wilt
- Loss of vigor
- Poor growth
- Larvae eat and destroy roots

Plant Preference

- Poinsettias
- Geraniums
- African Violets
- Carnations

Control

- DO NOT OVER WATER! They love moisture and are attracted to overly damp soil
- Peat moss encourages egg laying (as do other organic media) so use caution in selecting media
- Allow soil to dry out between watering to kill larvae off
- Choose one of these insecticides: Gnatrol, Permethrin, Pyrethrin, neem. Treat the soil with a light watering
- Use sticky fly traps horizontally at soil surface to catch adults
- Mosquito bits sprinkled on soil are a good, selective option
- Predatory nematodes applied to soil may also help heavy infestations

Spider Mites

Usually found on the underside of leaves and feed on many different kinds of plants. These arachnids (not insects) are a threat both indoors and out! They are quick breeding and are able to build populations up fast, meaning quite a bit of potential for plant destruction.

Identification

- Pale to reddish-brown in color
- 1/50 inch long
- Nymphs closely resemble adults
- Live in groups, rarely solitary



Photo by: Charles Lam

Damage

- Feed by piercing-sucking mouthparts that produce marks on the undersides of leaves
- Leaves often yellow and may drop off
- Leave fine webbing around plants

Preferred Plants

- Roses!
- Anything in the rose family
- Indoor fruit and vegetable plants
- Herbs

Control

- Prune leaves, stems, and other infested parts of plants
- Use a hose or spray bottle to push insects off plants
- Neem oil is effective with small infestations
- Indoor fruit trees benefit from horticultural oils to destroy overwintering eggs
- Dust with diatomaceous earth
- Water stress is big factor with pest population build up. Be sure to water appropriately.

Prevention

All the above pest have more than a few things in common. Light, Humidity, and Temperature play a large role in drawing insects into homes once the weather cools. The best management skill you can have in your "tool box" is observation! Be aware of what is going on with your plants, look for changes, and monitor overall health on a regular basis. Other key techniques:

- **Soil moisture.** All pests like moist soil! Be sure you are not overwatering your plants and choose a media that allows for proper aeration.

- **Media.** Select the right media for your plant. Be aware that organic media is favorable for insects as it retains moisture and is an ideal incubator for eggs. Choose sterile media as used media may already have pest eggs just waiting to hatch indoors!
- **Research.** Be aware of pests likely to be interested in your chosen plant(s). Just like you are hopefully doing for you outdoor garden, keep an indoor notebook to record pest issues and what you have tried. This will be valuable in years to come.
- **Monitor.** After you identify a pest problem, act on it, and it dissipates, don't stop observing! Keep up the routine and implement treatment as needed.

References:

Clemson Cooperative Extension:

http://www.clemson.edu/extension/hgic/pests/plant_pests/indoor/hgic2252.html

University of Maryland Cooperative Extension:

https://extension.umd.edu/sites/default/files/_images/programs/hgic/Publications/HG60_IPM%20Houseplants.pdf

Amanda Rose Newton, BCE, VCE Master Gardener

Notes from the Help Desk:

Q: What is the Million Pollinator Garden Challenge and how can I help?

A: The Million Pollinator Garden Challenge is a campaign initiated by the National Pollinator Garden Network (NPGN) to register public and private gardens/landscapes to support all pollinators. The challenge “Invites participation from organizations and individuals both inside and outside the NPGN. The objective is to increase nectar and pollen providing landscapes of every size in order to address one of the significant threats to pollinator health - the dearth and degradation of forage for pollinators. The goal is to promote and count 1 million such forage locations across the United States”.



Photo by John Bailey

Winter is a great time of year to plan for your pollinator garden(s). You can start small with a few containers on a patio or go large and plant an entire garden to support butterflies, bees and more. Remember to plant sustainably by planting flowers that require the same maintenance together, thus reducing the amount of water necessary over an entire garden. If pests become an issue, contact our Help Desk for an integrated pest management solution where most effective and least toxic options can be detailed.

A pollinator garden has the following attributes:

- ✓ A wide variety of plants blooming from spring to fall
- ✓ Avoid modern hybrids with double blooms (lack pollen)
- ✓ Integrated pest management
- ✓ Don't forget the larval host plants
- ✓ If allowable, leave dead limbs for native bee nesting sites
- ✓ Add nectar sources for hummingbirds with a feeder
- ✓ Additional butterfly resources like rotting fruit can be left out

When it gets warmer, come out to our Ida Lee Demonstration & Teaching Garden to view our Butterfly and Native Flowering Gardens. We are a certified Monarch Waystation and are listed in the Plant NoVa Native's guide at <http://www.plantnovanatives.org/>.

Source Information: <http://millionpollinatorgardens.org/>

More resources:

<http://www.fs.fed.us/wildflowers/pollinators/>

http://offices.ext.vt.edu/chesterfield/programs/anr/Pollinators/NAPPC_herbs_and_vines.pdf

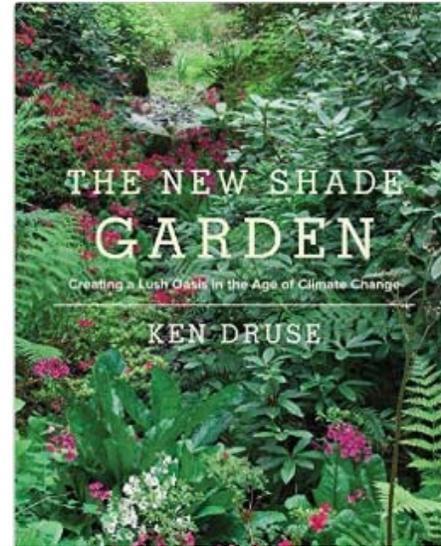
http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/plantsanimals/pollinate/?cid=NRCS143_022326

Barb Bailey, Extension MG

Winter Introspection and a Book Review

The New Shade Garden: Creating a Lush Oasis in the Age of Climate Change by Ken Druse

Once, I found a stepping stone inscribed *Lose Yourself in Nature and Find Peace*. For me, winter is for reading about gardening and leafing through beautiful and informational gardening books. This year I have chosen a new book by Ken Druse, a shade garden master called “the guru of natural gardening.” Druse has authored and photographed several shade and natural gardening-themed books over 25 years and has received many accolades. “In 2013, the Smithsonian announced the acquisition of the Ken Druse Collection of Garden photography comprising 100,000 images of American gardens and plants.” “The American Horticultural Society listed his first large-format work, *The Natural Garden*, among the best books of all time.”



Commonly, one picks up a hardcover gardening book to enjoy the stunning images. Because Druse is a serious gardening photographer, one is not disappointed. There is something about photographs of shade gardens that are calming, and reassuring that everything is well in the world. Getting lost in the photographs of this book is soothing, especially when it is too bone chilling (or too hot) to be outside.

Seasoned gardeners may already be aware of the wide variety of plants that can thrive in a shade garden, including colorful blooms. For those just learning, Druse’s gallery of shade plants inspires. Once inspired by the photographs in the book, it is time to learn what Druse has to share about shade gardening: how to design, care for, plant, and visualize how it all comes together. He explores why we need shade gardens, and, of course, how we maintain one. All of these are addressed in the book, and will not disappoint.

Surprisingly, this book even has a section one would not expect from a shade garden tome: “Want a Vegetable Garden Too?” Yes, Druse assures, a shade vegetable garden for home use can produce leafy greens (such as kale and Swiss chard), root crops, winter squash, and herbs such as thyme, parsley, and mint. He also includes Alpine strawberries, gooseberries, and rhubarb too! The book gives suggestions on exactly how (clue: use mylar and other reflective material, or red plastic mulch).

This latest book from Ken Druse actually makes a statement beyond merely extolling the serene beauty or the utility of shade gardens. In fact, as I moved from viewing photographs to actually reading the text of this book, I had quite a jarring reaction that affected my pleasant garden daydreaming. There is a worrisome, bigger reality – the reason shade gardens will even be more precious, and also why we are now enjoying even more plant choices for our zone-limited gardens. That reality is climate change, what was once referred to as global warming.

It is the reality that made the USDA amend its Plant Hardiness Zone Map in 2012. We enjoy, little wondering why, that we are increasingly able to plant marginally hardy crape myrtles and camellias—here, in Zone 7. And this will make you wince, according to Druse, “Some insect pests wake up earlier than in the past, just in time to destroy the emerging growth on their hosts.” And even worse, “Invasive plants, which are often cold-season species, get going earlier to take over land before our warm-season North American plants have a chance.” We definitely have challenges ahead.



The Afterword section in Druse's book is called "A Word on Sustainability." As a Master Gardener, I can definitely "do sustainability" without missing a beat or even dowsing my enjoyment of gardening.

Druse warns that establishing a shade garden in the context of climate change will no longer be just a design preference, a gardening indulgence for those with large lots, or the only option because of the layout of some homeowners' properties. Or in Druse's case, he was inspired by a childhood experience after being introduced to the beauty of the woods, and a jack-in-the-pulpit in particular. *Establishing a shade garden in the context of climate change becomes a necessity.* A shade garden soon may be all we desire and welcome because of the needed low-stress environment, low-water requirements, and shelter from scorching sun and heat it provides.

Druse pointed out that the southeastern United States is second only to China in the number of indigenous cold-hardy species. This variety can help with how we proceed to sustainably garden in shade, which it can be much cooler, and where we can replicate nature as close as possible with our fortunate wide choices of native plants.

Druse addresses the nuance between his gardening mantras of "natural" and "native." Natural or naturalistic planting means "friendly to nature in its appearance, planting, and maintenance," but does not always mean using solely native plants. But native plants are best for a sustainable garden because of their co-evolutionary relationships with birds, butterflies, and other organisms, sustaining an ecosystem that makes desirable natural gardens.

Let me go pick up that book again, relax, and imagine my shade garden at its winter rest (still with a certain charm) which will come to life in the spring.



Maria Daniels, VCE Master Gardener