



Trumpet Vine

Knowledge for the Community from Loudoun County Extension Master Gardeners

Summer 2017

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LOUDOUN COUNTY EXTENSION MASTER GARDENER LECTURE SERIES

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September 7, "*The Geology of Loudoun County*" by USGS research geologist Randall Orndorff.

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We are Entering the Summer Season

As we move into summer the bed preparation and planting tasks have quickly switched to weeding, watering and maintenance.

Stiltgrass and other annual weeds should be pulled and disposed of before they go to seed. Stay ahead of the weeds this year and next year should be easier.

Spring flowering shrubs should be pruned before mid-July. These include azaleas, lilac, deutzia, mockorange, weigela, forsythia, viburnum, St. Johnswort and redbud and yellowtwig dogwood.



Summer-blooming perennials should be maintained and prolonged through deadheading and regenerated through pruning. Most perennials can be pruned to half their height mid-summer to encourage new growth and blooms. Remove any dead plants.

Monitor rainfall and don't depend on "the perception of rain." Use a rain gauge or local sources of rainfall measures. When possible, early morning watering is preferable but anytime is preferable to not watering when plants are stressed.

Enjoy your summer garden.

Briar Patch Park Constructed Wetlands

As part of the Clean Waters Initiative by Loudoun County, Briar Patch Park in Sterling, Va., was chosen as a site for constructed wetlands. The wetlands are one of many Loudoun County General Services projects initiated to handle stormwater. This particular site manages water from 80 acres in the surrounding vicinity. The goal of the wetlands is to help filter the stormwater from sediment, phosphorus, and nitrogen as it travels through Sugarland Run and ultimately into the Chesapeake Bay. Loudoun County Extension Master Gardener Water Stewards were asked to partner with Loudoun County to educate residents and advise the county on proper maintenance of the wetlands plantings.

The wetland area is made up of many parts. First, a forebay was created at the immediate exit of the storm drain next to the road. This is where much of the sediment can be trapped prior to exiting from that bay into the pond area over a weir. A weir is a small dam built across the water exit to create the holding bay. At this point, the surging water can be managed and slowed down, stopping much of the sediment coming with it from a strong deluge.



Photo by S. Plante, Chief, Stormwater Management

The second area of the wetlands is where the water is filtered again, more for phosphorus and nitrogen (runoff from fertilizers). The elongated pond area is divided into several different zones and labeled from 1 to 4. Zone 1 is constructed mini islands within the pond, where trees and plants occupy the space.

Zone 2 is the bottom of the pond, and Zones 3 and 4 are up along the sides. Each zone has specific plants and seed mixes that can tolerate the amount of water the area will have from time to time. There are turf grass seeds, upland meadow seeds, and wetland meadow seed mixes planted in the appropriate zones. There are canopy trees, understory trees, perennial grasses, and such planted in all the appropriate zones as well. All to filter the water as it percolates into the ground and any overflow that passes is cleaner leaving than when it entered. Above is a photo of the pond area with the plantings prior to water fill (the forebay is at the top of the photo).

A second weir was constructed at the east end of the pond area where the water flows out and down into the Sugarland Run stream. This weir will trap more sediment and trash and keep it out of the tributaries that flow into the Chesapeake Bay.

The Extension Master Gardeners are visiting the site quarterly to advise the county on plant health, analyze pond weeds and algae, and recommend solutions as necessary. In addition to this partnership, the Master Gardeners will be educating the residents in the surrounding area on the importance of lawn and garden care. Proper use of fertilizers, pesticides, and herbicides is key to keeping any stormwater runoff from properties as clean as possible.

The photo below shows the same area with water in the pond area indicating successful trapping of water by second weir.



Photo by S. Plante, Chief, Stormwater Management

Barb Bailey, Loudoun County Extension Master Gardener

Keep Those Container Summer Vegetables Growing Strong!

Summer weather signals the arrival of the summer vegetable season, with anxious gardeners counting down the days until mouthwatering harvests begin. While growing vegetables in containers is an excellent way to grow fresh food, it does require more care to keep those vegetables growing strong.



Patio tomato and sage as a companion plant in a cloth grow bag.

Photo by Denise Palmer

All summer fruiting vegetables--whether grown in a container or a garden bed--need at least eight hours of sun to fruit well. However, containers placed in this much sun can be tricky, especially smaller containers, containers made of a porous material that takes water from the soil, or containers with a dark or black coating. All containers with direct afternoon sun and sustained temperatures in the 90s can quickly dry out or burn up vegetable plants and their roots. You should always choose a location that receives at least eight hours of sun no matter the type and if you notice plants wilting on very hot days, *even with plenty of water*, you may want to move the container out of the direct sun during

some of the hottest part of the day until high temperatures subside a bit or consider covering with a summer-weight shade cloth or row cover. *Cucumbers are particularly susceptible to wilting on very hot days but with enough water will perk back up when temperatures cool.*

It is no secret that containers require more frequent watering. Keeping up with this task is a must for vibrant produce. Make sure to have a watering can on hand and place in an area where you will see it as you enter or exit the house to remind you to water. Check the soil for moisture with your finger or observe the color (dry potting mix is lighter colored) before watering to avoid overwatering and root rot problems. During very hot days, check plants twice daily--especially those in smaller containers and plants that have gotten large and have started fruiting. Water the soil--not the plant--to minimize wet leaves and prevent disease issues. If using a self-watering container, keep the reservoir filled with water. *Self-watering containers are great for saving time and keeping soil more evenly watered and are considered a valuable asset in a container vegetable garden.*

Also consider purchasing a commercial container irrigation system if you have trouble remembering to water.

Another method to help keep soil moist is to use a mulch, which also helps keep roots cool. Mulch materials can be straw, shredded leaves, dried *untreated* grass, compost, pine needles, or a commercially available plastic mulch.

If your container plants love where they are located, you will find them suddenly growing by leaps and bounds, and the small adorable seedling will become tall and floppy or will sprawl everywhere. Sprawling is great if you have a place for it such as with a cucumber or squash but a sprawling tomato will most likely break or, worse, tip over and come out



Eggplants in a self-watering container with plastic silver mulch. Photo by Denise Palmer



Irish potato vines in a cloth grow bag with straw as a mulch. Stakes to hold vines as they grow.

Photo by Denise Palmer

of the container entirely. Install trellising before it is needed and before the plant becomes too big. You risk setting back potential harvests by pruning the plant or breaking stems to install trellising later when the plant is big. Additionally, driving stakes or trellises into the soil with a larger plant may damage a well-established root structure.

There are many types of trellising and choosing one will depend on the type of vegetable, the container size, and where the container is located. An available fence could easily be used as a trellis for a vining vegetable. Container tomatoes can be caged with a commercial cage purchased locally or with stakes and rows of twine secured tightly. Always secure cages with garden staples or additional stakes to make sure the cage stays secure in the pot and a sudden gust from a strong wind does not topple the container when the plant reaches maturity. Peppers should be staked with two-foot stakes and tied with garden twine to the stakes so the stems do not break when the fruit load is heavy. Most vining cucumbers will readily climb a trellis made of twine and stakes or a commercial metal or wooden trellis, but vining squashes, pumpkins, and watermelons will have to be trained daily. Bush, compact, or container vegetable varieties may not need a trellis.

Into the summer months, you may start to notice that leaves are yellowing or that the plant is not growing vigorously. Summer vegetables grow very fast and the potting soil may run out of vital nutrients before the vegetables are ready to call it quits for the season. Most potting soil mixes already have a fertilizer incorporated into the mix, but daily watering will leach fertilizers over time, and large vegetables will require more and more nutrients to sustain growth and fruiting. In mid-to-late July it may be necessary to supplement nutrients by purchasing a commercial organic or conventional fertilizer suitable for summer vegetables. Water-soluble fertilizers that are diluted with water in the watering process may be the most convenient to use for containers. Read label directions and do not overuse because this may create lots of green leaves but little fruit.



Container tomato with cage as trellis and shredded leaves as a mulch material.
Photo by Denise Palmer



Peppers in a wooden waist-high container to keep animals from browsing leaves and fruit. Stakes and twine have been installed to keep peppers from breaking their stems as they grow.
Photo by Denise Palmer

During July you should start to notice fruits beginning to form on the plants. In many instances you may not be the only set of eyes watching for the first ripe tomato.

Deer, groundhogs, squirrels, or other critters may also be watching carefully and will pounce when least expected. If critters are a part of your home landscape, be aware that a container located on a deck, patio, or front porch will not dissuade critters from seeking out your prized vegetables. Use row cover, wedding tulle, or bird/deer netting and drape it over your containers when the plants have grown bigger. You could also fashion a makeshift "cage" with stakes and netting or purchase a commercially available vegetable protection cage online.

Lastly do not forget to harvest your vegetables when they are ripe. Some vegetables require harvesting in order to continue producing. *Why let all that effort go to waste!* Fresh vegetables from your home garden are the best, so enjoy your summer bounty.

Denise Palmer, Loudoun County Extension Master Gardener

Assessing Your Summer Tomato Plants

It's probably early summer as you read this article. No doubt you are busy pruning your growing tomato plants and waiting for those yellow flowers to become ripe tomatoes. I encourage you to keep a record of how your tomato plants developed this year, along with a copy of this article, to reference for next spring's planting season.

Did you buy plants or start your tomatoes from seed? If you like starting from seed, it's worthwhile to invest in trays, grow lights, and warming pads to ensure the seedlings get the best possible indoor conditions and then are gradually introduced to the outdoors ("hardening off").

Did you plant a little too early and had the plants nipped by the cold weather, despite the unusually warm winter? Although our region is supposed to have April 15 as its last frost-free date, many tomato planters wait until Mother's Day to set out the plants. Last year we had an unexpected frost on Mother's Day night, and I scrambled to get the tomato bed covered. If the damage is severe enough, it may be necessary to start over. It's a good idea to identify tomatoes by their maturity time so that late-planted tomatoes are ones with a shorter maturity.

Methods of cultivation can use a review. Tomatoes need calcium to avoid blossom end rot. I save egg shells in the freezer all winter, give them a good time in boiling water to ensure they are sterile, and drop one in each planting hole. Mulch is important to retard weeds and retain moisture. Some people advocate for silver or red plastic mulch--silver to repel creatures like stink bugs, red as a means of accelerating growth. Compost or shredded leaf mulch will do double duty and improve the soil.



Raised bed with red plastic mulch over a Red Zebra tomato, with marigold accompaniment, June 26, 2016.

Photo by Eileen Swicker.

What types of tomatoes were chosen? There are hundreds of varieties from around the world, but the arguments seem to come down to hybrids versus heirlooms. Heirlooms have survived over a long period and may have the delicious "summer tomato taste." They may not have the disease resistance bred into hybrids. Did you consider plant size characteristics so that you planted your tomatoes to fit and grow well in an allocated space? Patio or dwarf tomatoes, frequently grown in a pot, tend to produce their whole crop over a short period. Determinate types grow to a particular size, have their tomatoes ripen, and then die back; most of the early ripening varieties are determinate. Indeterminates are the energizer bunnies of the tomato world, producing tomatoes until the plants are killed by frost or disease. Many of the heirlooms are indeterminate, and they tend to grow bigger and sturdier than the supports originally envisioned for them.

According to Virginia Cooperative Extension (VCE), tomatoes are heavy feeders of fertilizer. VCE recommends sprinkling about three tablespoons of fertilizer beside the plant ("side dressing"), first a week or so after the first tomatoes begin to develop, then two weeks after the first ripe tomato, and once a month after that.

If you are looking for additional details, try www.ext.vt.edu for publication 426-418. It's all about tomatoes!

Eileen Swicker, Loudoun County Extension Master Gardener

Look for the Blooming Trumpet Vine

It's blooming season for trumpet vines, their bright orange to orange-red blooms can be seen in hedgerows, thickets, and trees along the roadside. The trumpet vine is a large, aggressive, woody vine that is native to the mid-Atlantic and Southern United States. Trumpet vines spread by underground runners, as well as by seed. This makes them tough to control. But this growth habit also makes them useful in preventing soil erosion on hillsides.



A hummingbird eyes trumpet vine flowers Photo by Carol Ivory.



Roadside trumpet vine
Photo by Carol Ivory

Trumpet vines may not be for your garden. If you want a vine that attracts hummingbirds, try the native honeysuckle, *Lonicera sempervirens*.

Appreciate the roadside plants and the stunning flowers that have started to bloom. As you drive around Loudoun County, keep an eye out. You'll be surprised to see so many of these blooming vines along the roadside.

Summer Lawn Tips

We all know how hot summers in our area can be, and we all want our yards to look good throughout the year. When it comes to grass, our yards look lush and green during spring and autumn due to abundant rains and cooler temperatures. Mother Nature just sort of takes care of things for us. However, then there's summer. Oh boy, does it get hot! Like every season, summer has a few lawn requirements, but how many depends on the individual homeowner.

There are a couple of things like mowing and weeding that continue to require some attention for most of the year. When you mow, try to cut no shorter than three or four inches. Taller grass height blocks sunlight from weeds, thus minimizing their presence. Taller blades also mean more "leaf" to perform the photosynthesis that all plants do, and grass is no exception. Cutting high maximizes this process and helps feed nutrients to the roots. This leads to healthier grass, and it helps your lawn to better tolerate the stress of hot weather. And keep your mower blades sharp to keep your grass blades undamaged and as healthy as possible.



Weeding is another activity that requires some attention. Many weeds love the hot weather. They can thrive in poor soil, and if left unchecked, they can spread uninvited into the weed-free green carpets cherished by homeowners. Really, how rude. As you did in spring, you can continue to treat for broadleaf weeds any time they are actively growing. Just be careful not to harm your lawn. Some spray products claim to attack only weeds while doing no harm to grass. Generally, this is correct. However, one should not spray in the heat of the day, because this could damage the lawn. Yep, many of us have made that mistake, though it can be avoided with a little caution. Remember that all products differ, and it is important to follow the manufacturer's directions. Please consult the website below to formulate an appropriate weed-control strategy. As you know, all herbicides are toxic when applied in excess and--for the sake of our children, pets, and the environment--should be used strictly in accordance with the instructions on their labels; so, please use weed killers carefully.

Postemergence Broadleaf Weed Control Options in Lawns: <http://www.ext.vt.edu/topics/lawn-garden/turfgrass/turfandgardentips/tips/spring-postemergent-Lawn-weed-cont.html>.

Homeowners seem to be of two varieties in their approach to summer lawn watering. Some water and some don't. Either way is fine. Those who choose not to water lawns, likely prioritize water to plant and vegetable beds and accept that cool season grasses, like most of us have, will go dormant in summer drought conditions and bounce back after a rain or in the fall. They're right. The other type of homeowner wants a green lawn during the summer and waters it. After all, it feels good to walk barefoot on cool green turf on a warm day.

If you choose to water your lawn during summer, the general rule is to water deeply and infrequently. An inch per week promotes a deeper healthier root system and reduces weed infestation. More frequent, shallow watering promotes shallow root growth and weeds. Using a rain gauge to achieve the right watering depth is very useful. Your gauge does not have to be store-bought either. A shallow food tin or other item that is about an inch tall works just fine. However long it takes to accumulate one inch of water is how long you should water one section. That being said, the slow infiltration rate of our Virginia soils may make it difficult to soak the root

zone to a four-inch depth in one watering. Smaller amounts every three or four days may be necessary to avoid water runoff. If you have an automated lawn irrigation system, adjust your settings to achieve the right amount without overwatering. Watering too much can lead to fungal diseases and excessive blade growth at the expense of root development. It also wastes water.

Lastly, a word about lime, one should not apply lime unless a soil test shows the pH level is lower than optimal for growing cool season grass. Too much lime can damage your turf, and one should follow Virginia Cooperative Extension (VCE) guidelines for proper application. Not all lawns require lime, and for those that do, one complete application is sufficient for several years. For a soil analysis and a personalized lawn nutrient management plan, contact the Master Gardeners at your local VCE office.

For more tips and detailed explanations on summer lawn care, see our [Virginia Cooperative Extension publication 430-010](#).

Joseph Sanchez, Loudoun County Extension Master Gardener

Spotted Spurge a Common Lawn Weed



Spotted spurge, native to the eastern United States, is found close to the ground, with small dark green opposite leaves. Frequently, a red spot marking can be found on the leaf halfway down its center vein. A poisonous white sap is secreted when stems or branches are broken. It can be a skin and eye irritant and toxic to some animals, so wear gloves when handling this plant.

This summer annual weed can be found in sparse turf areas and low-growing ground covers. It invades gardens, landscapes, and gaps in sidewalks and patios. It is a host for fungal diseases. A single spotted spurge plant can produce 1,000 seeds that can remain dormant in the soil until temperatures

are 75 to 85 degrees F. A dense mat can grow up to three feet in diameter, and growth is rapid with a single plant producing seeds as soon as five weeks after germination.

Hand pulling new spotted spurge plants before they produce seeds is effective. In your ornamental gardens, applying two inches of mulch can keep light from reaching the seeds and thus prevent germination.

Easy Annuals for Your Bee Garden

When we think of flowers suitable for pollinators, especially bees, we usually think of perennials, particularly perennial herbs. And, in fact, the bee-friendly plant list is extremely heavy on perennials. Many annuals, however, are also bee-friendly and are useful for filling in a spot in the young perennial garden before the perennials mature and require the space. And, of course, a row or two can almost always be found in the vegetable garden for bee-attracting annuals if you aren't fortunate enough to have an entire cutting garden (a real luxury)! Many annuals can even be grown in pots on the patio, deck, or porch. Generally most bee-friendly annuals are easy to grow in our area. And at the end of the season you simply pull them up and toss them on the compost pile.



Zinnia. Photo by Daniela Costa, licensed under Creative Commons at <https://www.flickr.com>

Although there are exceptions, most annuals require a good garden soil such as you have in a vegetable garden, a minimum of six hours of sun a day (preferably more), about one inch of water a week if rainfall is insufficient, and to prolong bloom, deadheading. To prevent plant diseases, don't crowd the plants—give them room to grow.

As a general rule of thumb, annuals are suitable bee-friendly plants if you can see the stamens (consisting of the anther, which produces pollen, and the filament, which holds the anther up). If you can see the stamens, a bee can see them too. In double flowers, the stamens frequently aren't visible to either you or the bees. These double flowers simply won't attract any hungry bees. Different bees prefer different kinds of flowers; some prefer flowers with a "landing strip," such as cosmos; others like a tubular structure, such as snapdragons. If you grow both shapes in your garden, you'll attract and feed a variety of bees. As to color, bees can see blues, purples, yellows, oranges, whites, and ultraviolet light. Bees *cannot* see red flowers unless the petals are marked with UV cues. You'll attract far more bees if you keep their preferences and visual abilities in mind when you plant.

Lots of annuals meet these preferences. Most are easily grown from seeds planted directly in the garden in the spring after the soil has warmed. You can buy transplants, but if you do, make sure the plants you purchase weren't treated by any pesticide-containing neonicotinoids either at the nursery or prior to shipment to the garden center. If you don't check, instead of buying plants that are healthful for bees, you may be signing their death warrant. For a brochure about neonicotinoid insecticides, their brand names, the formulations, and the plants they frequently are used on, see <http://www.xerces.org/wp-content/uploads/2013/06/NeonicsInYourGarden.pdf>.

Zinnia cultivars. Zinnias, native to Central and South America and the southwestern United States, probably are one of the first annuals most new gardeners grow. They're attractive not only to bees, but also to butterflies and hummingbirds. Zinnias are deer and drought resistant, and while they can be prone to mildew in damp weather, giving each plant plenty of space for air circulation will help prevent this problem. Both the Zahara Series and the Profusion Series are mildew resistant and there are single-flowered selections available of both. Most zinnias are

cultivars of *Z. elegans* (common zinnia). They range in size from the diminutive six-to-eight-inch-tall "Thumbelina," perfect for an edging, to the three-to-four-foot-tall varieties suitable for cutting, such as the old-fashioned "State Fair" and "Come-and-Cut-Again" zinnias. Flowers come in a number of different forms such as single, semidouble, double, cactus-flowered, and dahlia-flowered; for the purpose of attracting bees, it is best to stick to cultivars with single flowers or with flowers whose stamens are clearly visible. Depending on the cultivar, flowers can range from



Cosmos, by Cristina Sanvito, licensed under Creative Commons at www.flickr.com

about one inch in width to up to four to six inches wide if particularly well grown. While they do benefit from deadheading, the Zahara series is self-cleaning so no deadheading is required. This is a real bonus if deadheading isn't your favorite garden occupation.

***Cosmos bipinnatus* and its cultivars.** Cosmos flowers remind me of brightly colored butterflies fluttering around on the summer breeze. They are native to Mexico, drought and heat tolerant, deer resistant, easy to grow, and make great cut flowers. They have a tendency to reseed; if you don't want self-sown seedlings next year, deadheading will prevent this and promote

continued bloom well into the fall. In any case, self-sown seedlings are easy to weed out in the spring. Because they are so easy to grow from seed, there simply is no excuse to purchase cell packs of plants; sowing your own is easier on both the plants and your wallet. Most available cosmos cultivars grow three to four feet tall. At this height, they tend to sprawl a bit and if you're a tidy gardener, you may want to give them some support. Breeders have been busy, and some shorter cultivars, in the 20-to-24-inch range, are now available, such as "Cosimo," "Xanthos," and "Capriola." Breeders have also been busy with the flowers, and cosmos now come with flowers from two to three inches across and include flowers with bicolored, frilly, and fluted, seashell-shaped petals. The color range has been extended from the traditional pink, red, white, lilac, and lavender to include both bright and soft yellow, bronzy orange, and bright orange shades. Cosmos are also attractive to butterflies, an additional bonus.

***Cleome* (spider flower).** *Cleome* is a native of Argentina, Paraguay, Uruguay, and southeastern Brazil. It's a true back-of-the-garden flower, an airy, deer-resistant plant that grows rapidly to three to five feet tall. Because of its height, it sometimes can topple over in high winds; staking is the obvious solution if you're a tidy gardener. The strong-smelling flowers with spidery two-to-three-inch-long stamens are a magnet for bees, beneficial insects, butterflies, and hummingbirds. Although they are beautiful in flower arrangements, they rarely are used for this purpose because of the smell. Some plants also have



Cleome. Photo by Karen Hine, licensed under Creative Commons at www.Flicker.com.

spines on the stems, which makes them unpleasant to handle. Cleome tends to self-sow aggressively; to prevent this, you'll either have to deadhead the plants or locate them in a garden area where self-sown seedlings will be welcome. Definitely sow this one yourself directly in your garden; purchased plants frequently become crowded in their cell packs and never prosper in the garden.

***Tithonia rotundifolia* (Mexican sunflower).** *Tithonia* is native to Mexico and Central America and as you would expect, it loves hot summers and is drought tolerant. It would be happy in a spot in your garden where the soil is a bit on the poor side; in very rich soil it tends to have weak stems and fewer flowers. It is deer resistant and has few pests. The species grows four to six feet tall. Its brilliant orange, yellow, or red flowers grow up to three inches across and are attractive to bees, butterflies, and hummingbirds. As with other very tall flowers, *tithonia* does have a tendency to blow over in the wind; staking will prevent this. Or, you could grow one of the shorter cultivars, such as 24-to-30-inch-tall "Goldfinger," with orange flowers up to three inches. *Tithonia* is good as a cut flower. As with most annuals, deadheading prolongs the bloom period.



Tithonia. Photo by Samantha Henneke, licensed under Creative Commons at www.flicker.com

***Salvia farinacea* (mealy cup sage).** *S. farinacea*, although grown as an annual in our area, is actually a tender perennial native to Texas and Mexico. It generally grows from 12 to 36 inches tall, although shorter cultivars are available. It is deer resistant and tolerant of both droughts and clay soil. The deep blue, violet, or white spikes laden with small flowers are wonderful in either fresh or dried flower arrangements. In addition to bees, it is also attractive to butterflies. Seeds of *S. farinacea* should be started indoors ten to twelve weeks before the last frost date and tended until they may be safely set out into the garden. Buying transplants is by far the easier route to go, especially if you only want a few plants. "Blue Bedder," if you can find it, grows to 32 inches tall. The most commonly found cultivar, "Victoria Blue," is just 15 to 24 inches tall and has deep purplish-blue flowers; it blooms without fail all summer long, providing plenty of flowers for bees, butterflies, and the flower arranger.



Salvia. Photo by Cuyahoga, licensed under Creative Commons at www.flicker.com.

Of course, there are many other annuals that are suitable for bees. Some you may want to consider include *ageratum*, snapdragons, *Scabiosa atropurpurea* (pincushion flower), larkspur, nasturtiums, single French marigolds, and *Gaillardia pulchella* (blanket flower). *Helianthus annuus* (the common sunflower) is also an excellent choice but only if you select a cultivar that makes pollen; not all do. With a selection of these annuals in your summer garden, you're sure to have plenty of bees buzzing around.

Lina B. Burton, Loudoun County Extension Master Gardener

Companion Planting

All of us who garden use “companion” plants whether we know it or not. If you have a perennial bed that includes bushes, trees, and flowers you have combined different plant species that interact with each other in several ways. Some plants attract beneficial insects that are predators of insects that can damage your plants. Other plants release chemicals through their root systems that inhibit or improve the growth and flavor of their neighbors. Plants can be used as lures to provide a trap crop for harmful insects to attack so that they are less likely to damage the plants you plan to harvest or just admire. Crops in the same botanical family share cultural needs and often have problems from similar pests and can benefit from being neighbors. In addition, plants with similar needs for nutrients and amounts of sun and water do well together. Gardening using companions is a space saver and is a big help for small gardens.



Nasturtium and squash.

Beneficial insects are priceless to your success in the garden. Plantings that attract and provide cover and habitat for beneficials are not only useful; they are beautiful in their own right. The tachinid fly is a worthwhile insect to attract, acting as a parasitoid. They are attracted to Queen Anne's lace and most herbs. You will find their white eggs appearing on many garden pests such as caterpillars, cabbage moths, cutworms, Colorado potato beetle, stink bugs, squash bugs, and cucumber beetles. Nasturtium plants also attract predatory insects and help repel cucumber beetles.

The onion plant family is known for deterring many pests such as carrot rust fly, Colorado potato beetle, Japanese beetle, and aphids. So plant onions, leeks, garlic, and chives throughout your garden amongst your other plantings for this to be effective. Note: plants in this family *should not be planted next to asparagus* because they can acquire asparagus rust from these neighbors.

Making good use of your space and cutting down on weeds makes a lot of sense. A good combination includes okra (tall), pepper (medium) and lettuce (short) together in a bed. By the time your okra plants are full grown, the peppers will find the shade from them is perfect for keeping the fruit from sun scald. And summer lettuces will benefit from the cooling shade the other plants provide.

Another good combination is to plant alternating rows of potatoes and bush beans. By planting these together you can greatly reduce the number of Colorado potato beetles and Mexican bean beetles.

Providing a good habitat for beneficials is as important as providing food for them. Planting petunias and German chamomile among your onions, leeks, and garlic will keep the weeds down while providing a perfect home for small spiders and ground beetles. It is worthwhile to attract these insects because they are slug predators, and no one has use for slugs in their garden!

Finally we have trap crops. These crops are designed to be thrown away, allowing the pests to attack these plants instead of the crops you hope to harvest. A good example is to plant four o'clock flowers anywhere Japanese beetles are a problem. The leaves are toxic to the beetles and the flowers are attractive. Another good trap combination is the nasturtium and mustard. They both contain mustard oil, and aphids and flea beetles are attracted to lay their eggs on them. The key is to remove the trap crop and throw it away before any eggs hatch.

The following are resources that you may find useful: [Beginner's Guide to Companion Planting](#); [Organic Gardening](#), [List of Companion Plants](#), “Great Gardening Companions” by Sally Jean Cunningham, and “Carrots Love Tomatoes” by Louise Riotte.

Sally Hewitt, Loudoun County Extension Master Gardener

The Herb Reference: Creating an Herb Wall

My article this issue aims to share with everyone an innovative idea I came across in the May-June 2017 issue of Midwest Living magazine. The article was written by Hannah Agran and titled Hang Time (<http://www.midwestliving.com/garden/ideas/how-to-build-a-wall-of-potted-herbs/>). Photos are by Blaine Moats. The article explains how to create a privacy screen with a wall of potted herbs along your patio or deck. It can be any size that works for you. This project is perfect for someone who has a limited amount of planting space.



Photos by Blaine Moats, <http://www.midwestliving.com/garden/ideas/how-to-build-a-wall-of-potted-herbs/>.

This is how they did it.

Materials Needed

Six-Inch by Six-Inch (6 x 6) Posts (Cedar was recommended,)

Concrete Plastic Pots Solid Pipes

S-Hooks Herb Plants Screws

Installation Tools

1. Since herbs are sun loving, try choosing a sunny location, preferably south-facing.
2. Set 6 x 6 posts in concrete to your preferred height, in approximately 4 foot sections, as wide as you want your screen to be. My recommendation would be to choose your pots first. Plastic pots are best since they will be hung from the rims by S-hooks. Figure out how many pots will hang per section, and do the math to achieve equally spaced sections. (You can embellish the top of the posts as you wish, prior to setting them in the concrete.)
3. Let the concrete set completely. For the hanging bars, install a solid pipe or bar, ½ inch or more in diameter between the posts. In the article, they chose to use ½-inch diameter pipes, cut into lengths that were ½ inch shorter than the width between the posts, and they asked

the hardware store to thread them at each end to accommodate plumbing flanges. The flanges were installed onto the ends of the pipes and screwed into the sides of each of the posts. Presto—a hanging bar!

4. The distance between tiers of hanging bars should be enough to accommodate the size of the hanging pot and the growing plant.
5. The pots are hung by S-hooks from the rims of the plastic pots. You will need to drill holes into the rims of your plastic pots first.

When choosing your herbs, think about their unique qualities of aroma, texture, size (consider dwarf varieties for herbs that get large), growth habit, color, and appearance. I prefer the method of hanging each section with the same potted herb, as was mentioned in the article. For example, one tier would have a section of four hanging pots of thyme, four hanging pots of oregano, and four hanging pots of parsley.

Be sure to water often, especially during hot spells, and feed each herb as needed. Trimming frequently is important to reduce plant legginess and maintain the best appearance. This herb-growing system is a perfect way to enjoy fresh summer herbs and also have an attractive living privacy screen.

Karen Olgren, Loudoun County Extension Master Gardener

From the Tropics to Summer Gardening in Loudoun County

Come summer in our Zone 7 Northern Virginia gardens, we are tempted by the **tropical** and **subtropical** plants on display at the garden centers. We may find it hard to resist bringing some home to create an exotic ambiance as we enjoy our iced drinks, sun umbrellas, and other summertime indulgences in our own homes and gardens. As we do with annuals, we enjoy these usually big, bold, and bright tropicals knowing they will be done and gone by season's end. But no, one-summer wonders they need not be!

Imagine a young man who was gifted a **hardy banana tree** (*Musa basjoo*), planted it in a huge pot, and then year-in and year-out does the seasonal dance of bringing it in and out of a sheltered location, anxious that he does not lose it. There were teetering years, but the plant stayed alive. Should he have garden space, he will be pleased to view, and be inspired by the resident hardy banana tree at the Loudoun County Master Gardeners' own Demonstration Garden at Ida Lee Park. That hardy banana reliably gives a stunning showing each summer.

Do not fear raising this giant in Loudoun. Have you even thought about uses for its huge leaves? (Grilling fish or veggies? Wrap them in banana leaves for Hawaiian luau-like aroma, or line picnic plates with them.)

Now imagine a novice gardener one October day feeling fortunate to grab from the bargain racks a still-beautiful hibiscus, unaware that she will have only a few fall days left to enjoy it in her garden. Unless of course she brings it inside and cares for it properly. She may not have realized she got herself a **tropical hibiscus** (*Hibiscus rosa-sinensis*) that will die if left outside in a Zone 7 garden.

One needs to know the differences among hibiscus varieties sold in garden centers. It helps for realistic expectations, proper garden placement, and oh, those extra uses! (Heard of hibiscus syrup or tea?)

Whether inside our homes for their air-purifying and decorative uses or outside in our summer gardens to enhance a "staycation," tropical flora contributes exotic flair to our garden environs. Actually, it may surprise most to know that these global tropicals contribute to good eating too.

HIBISCUS. From the Malvaceae or mallow family. Native to East Asia.

Tropical Hibiscus (*H. rosa-sinensis*). These are usually seen in Hawaii and other Pacific islands with their red flowers, growing lush in the ground where temperatures remain above 50 degrees F. Attractive in containers too where summer gardens are warm, this hibiscus has edible flowers and medicinal uses.



Hardy Banana at Ida Lee Park.
Photo: Normalee Martin.



Young banana in the tropics.



Hardy Hibiscus (*H. moscheutos*). Enamored with the hibiscus look? Zone 7 gardeners who want hardier and perennial hibiscus have this variety to fill the need. Also called swamp rose mallow, it is shrub-like but herbaceous, dying back to the ground when the weather turns cold. It is quite late emerging in the spring but worth the surprise once it finally comes to its own that year and back fuller each passing year. The nonglossy leaves and the spherical buds are different from the tender tropical variety.



Rose of Sharon (*H. syriacus*). Also known as Shrub Althaea (*A. syriacus*), this woody hibiscus is hardy as well in temperate regions. The three-lobed and coarsely toothed leaves are much more noticeably different from both the tropical and the hardy hibiscus, but the rounder bud shape is closer to the hardy *moscheutos*. Available in more colors, Rose of Sharon flowers are edible and its leaves are brewed into herbal tea.



Hibiscus Notes: (a) The southern vegetable okra (*H. esculentus* or *Abelmoschus esculentus*) is from the same mallow family, as hinted by its similar-looking flowers. (b) Although the red tropical hibiscus is commonly encountered in the Pacific islands including Hawaii, it is not wild or native in the area; neither is it Hawaii's state flower, as many assume. It is only a cultivated

ornamental garden plant in the islands. Hawaii's state flower is the native yellow hibiscus (*H. brackenridge*).

ELEPHANT EAR. From the Araceae or arum family. Native to Southeast Asia, the Pacific islands, and tropical Americas. Increasingly found in garden centers and from bulb and corm purveyors, there are three arum genuses referred to as Elephant Ears: *Colocasia*, *Alocasia* (Asia), and *Xanthosoma* (tropical Americas).

Taro, Eddoe, Gabi (*Colocasia esculenta*). Hybridizers have been coming up with new colors, shapes, and sizes to enhance the colocasia's tropical quality. Long cultivated in Asia and Polynesia, its large heart-shaped leaves are bold and attractive in the summer garden, but its history of cultivation around the world is more about its importance as a food source. The leaves may be cooked like substantial greens, but only after careful preparation. The edible corms are used to make the luau dish poi and now may be found in mainstream groceries as taro frozen treats, desserts, and trendy taro chips.



Colocasia naturalizes in its favored high moisture areas and is becoming invasive along the Gulf Coast. Yet remember that it is an edible staple where it is native, but not in the U.S. yet where, incidentally, culinary tastes continue to evolve and expand toward global norms. You may dig up the corms at the end of the growing season, just like ornamental canna that gets put away in peat moss in an unheated garage for the winter, or just like potatoes for storing as a root crop. A notable feature of this edible elephant ear is that the large tropical colocasia leaves point downwards.

Upright Elephant Ear (*Alocasia macrorrhiza*, *A. odora*). Grown as a decorative plant for outdoors in the summer and indoors in the winter as a houseplant, what distinguish this non-edible elephant ear are its upward-facing giant leaves. Corms may be dug up and kept dormant in a dry, sheltered location during the winter. Grown plants may be kept alive indoors or enjoyed as a mere annual of the summer garden.



Arrowleaf, Dasheen, Malanga, Coco Yam (*Xanthosoma sagittifolium*). This is the elephant ear known to the Americas south of the United States. It has edible yam-like starchy corms and arrow-shaped downward-facing leaves eaten as root and leafy vegetables where they are grown

as subsistence crops. There are other xanthosomas best used as ornamentals only until more is known about them.

Elephant Ear Notes: (a) Edible colocasia/taro and xanthosoma/dasheen may be planted at the edge of or in a pot submerged in a pond. Both are good selections for rain gardens as well. (b) WARNING! Elephant ears are primarily grown in temperate zone gardens for their bold tropical look. Should you try them for eating, know which ones are edible (Colocasia, Xanthosoma) and which ones are not (Alocasia).



X. sagittifolium

Several images courtesy of fair-use Wikimedia Commons; some images taken by Maria Daniels

Maria Daniels, Loudoun County Extension Master Gardener



Light Requirements

You're looking at your plant tag to see if it's a plant you can grow. It tells you your plant wants partial sun. Do you know what that means? There are a lot of different definitions of sun levels. Frequently used categories are **Full Sun**, **Partial Sun/Partial Shade**, **Dappled Sun**, **Full Shade**.

Monitor your garden beds every hour from 9 a.m. to 5 p.m. to understand how much sun or shade your garden receives. Below are some common standards for sun exposure.

- **Full Sun:** Full sun means six full hours of direct, unfiltered sunlight. Those six hours could be from 8 a.m. to 3 p.m. or from noon to 6 p.m.--any time during the day. These hours can also be three morning hours, plus three afternoon hours. "Full sun" definitely means at least six hours per day, but some plants such as vegetables really need eight to ten hours per day.
- **Part Sun/Part Shade:** When you see "part sun" used, the grower is stressing that the plant requires at least four hours of sun and will likely do better with closer to six hours. When you see "part shade" used, the grower is stressing that the plant should not receive more than six hours of sun and will likely do better with less.
- **Dappled Sun:** Dappled sun is similar to partial shade. The plants are getting partial sun as it makes its way through the leaves of a deciduous tree. Woodland plants and under plantings, even many mosses, prefer dappled sunlight more than partial shade.
- **Full Shade:** Full shade means less than three hours of direct sunlight each day, best if it's morning light. But in the absence of direct sunlight, full shade can be a bright light. Plus, full shade likes filtered sunlight the remainder of the day. Every plant needs some sun, even those that thrive in full shade.

Plants and Drought

Drought or “moisture deficiency” is the most common stressor for landscape plants. This is often a temporary condition, but significant rainfall shortages have become more frequent and may persist for multiple years. Woody plants are typically more tolerant of water stress than herbaceous plants because they can store more energy in their roots and woody tissues. However, trees may die as many as five years after a drought ends due to diseases caused by the drought.

A plant's first response to moisture deficiency is to close its leaf stomata to reduce the loss of water through transpiration. But this causes its own set of problems. When the stomata are closed, a plant cannot absorb carbon dioxide, causing photosynthesis to shut down and cutting off the plant's food supply.

When our flow of resources (money) stops we have to cut back and reprioritize. Plants do the same thing. Normally plants produce chemicals to protect themselves against pests and disease. Producing these chemicals takes a lot of energy. When drought is severe, plants will reduce the production of these compounds, increasing their susceptibility to attack by disease and pests. Just as stressed humans are more prone to sickness, so are plants. Pests and diseases that commonly attack drought-stressed plants include borers, bark beetles, armillaria root rot, Dutch elm disease, pine wilt nematode, verticillium wilt, and canker fungi such as *Botryosphaeria* (redbud, rhododendron, etc.). Plants with any kind of root disease will be more rapidly and severely damaged by drought. Dead and dying limbs should be removed because they may harbor pests and disease that may spread. Typically disease will not become apparent until a year or two after the drought; therefore, it is often difficult to identify drought as the primary cause of plant disease or death.



Leaf scorch from drought on flowering dogwood,
<https://extension.udel.edu/ornamentals/tag/drought/>.

Some insect species simply prefer hot, dry weather. Their populations will be high during drought. Spider mites are attracted to and proliferate on drought-stressed plants.

Thus plants suffer drought damage both directly and indirectly. Direct damage is caused by the drying out of foliage, buds, bark, and roots. The edges of leaves brown and the leaves curl. Evergreen needles brown from the tip downward. If the drought continues, shoots and leaves die from the top of the plant down and from the outside in. Growth slows or stops, leaves get smaller, the flowering period is shorter, and fruit drops early. Suckers develop

on branches and trunks. Plants may leaf out and then die later in the growing season due to depleted food supplies. This may occur even a few years after a drought.

How do plants adapt to handle drought? Drought-tolerant plants typically have thick waxy or hairy leaves that minimize water loss. Consider the hairy leaves of *Rudbeckia* that are very drought tolerant. Wilting can also be a strategy to minimize water loss. Drooping leaves are at a

different angle to the sun, reducing the amount of solar heat they intercept. Some plants wilt daily in the afternoon sun and then bounce right back. Some plants such as turf grass can go dormant for the duration of a drought. Others, such as spring ephemerals, complete their life cycles before the annual summer drought.

The impact of drought on plants varies with the severity and duration of the drought as well as other factors including the plant species, soil conditions, stresses, and pests that may affect the plant. A comprehensive approach that includes regular watering, proper mulching, proper pruning, and integrated pest management can help mitigate the impact of drought.

Carol Ivory, Loudoun County Extension Master Gardener

Coreopsis verticillata 'Zagreb'

The Mt. Cuba research team uses its Trial Garden to evaluate native plants and related cultivars for horticultural and ecological value and to highlight the ecosystem services native plants provide.

Coreopsis, commonly known as tickseed, is one of the most popular, best-selling perennials



Photo: Mt Cuba [Trial Garden](http://mtcubacenter.org/research/trial-garden/).

available today. Numerous cultivars are available in a wide array of colors and habits. However, there is a great deal of confusion among gardeners because some perennial cultivars do not perform as well as advertised. They may be short-lived perennials, or in fact, act like annuals.

Coreopsis verticillata 'Zagreb' is the epitome of uniformity and precision. This cultivar's habit is shorter than other selections of *C. verticillata*, reaching only about 20 inches tall, and beginning in June, the plant is covered with bright yellow flowers. Because 'Zagreb' has such a uniform habit,

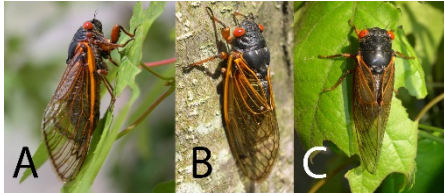
all of the flowers are held at the exact same height, creating a floating carpet of gold. The fine-textured foliage gives the plant a very soft, attractive look, even when not in bloom. While the exceptionally dense habit can encourage powdery mildew to develop, it is hardly noticeable on such finely dissected leaves. *C. verticillata 'Zagreb'* spreads rhizomatously by approximately two feet over three years. Many native plant landscapers consider Zagreb a highly desirable cultivar.

For more information from the Mt Cuba Trial Garden, see <http://mtcubacenter.org/research/trial-garden/>.

Pest Spotlight

Cicada Cascade: Understanding the Patterns of Emergence

There has been significant “buzz” this year regarding cicadas and the odd emergence patterns they are displaying. Some of us have yet to see one while others have had to designate their yards as standing room only! According to Cicada Experts (yes, there is such a thing) at Purdue University, this is due to two theories.



17 year Cicadas: A) *Magicicada septendecim* female (Brood X), (B) *Magicicada cassini* female (Brood X), (C) *Magicicada septendecula* male (Brood IX) by: Fontaine K, Cooley J, Simon C (2007)] via Wikimedia Commons

- 1) Early Emergence
- 2) “Staggered” Emergence

Both of these patterns will influence numbers seen in yards across the state this summer.

A Quick Recap of Cicada Biology

Cicadas engage us with their presence every 13 to 17 years by digging out of underground burrows, splitting their skin, and emerging as creepy white red-eyed nymphs ready to take on the world. It takes about an hour to get into “fighting” shape as their bodies rapidly expand and the blood starts pumping. In some areas, it's not unusual to have millions emerge. This is generally thought to be a clever reproductive strategy they put in place to ensure at least some of the species can avoid predation by birds, insects, and the occasional family dog. A week after their debut, males can be heard serenading females from the trees for hours at a time, much to the delight of many of us. All in all, cicadas are only around for about a month, often times leaving trees in less attractive shape on their departure. In seasons of high numbers, it's not unusual to see trees with broken limbs and little to no new growth as the result of egg oviposition of the females. When new cicadas first hatch, they burrow into the ground beneath and continue to feed on the tree from the root end. This behavior will go on for the next 13 to 17 years, depending on what time frame they are subscribed to. Cicadas are usually only a few inches below ground, so their presence can be easily determined by the activity of moles and cicada killer wasps in your yard.

Some like it hot

One of the likely reasons for the influx of cicadas this season is the warmer temperatures we have been experiencing earlier and earlier in the year. When soil temperatures reach 64 degrees, cicadas emerge as a mass group. The growth of most insects is dependent on temperature, and proceeding through each of their scheduled molts is triggered by this variable. In the 13 to 17 years cicadas are in the ground, they will go through five instars, or nymph stages, before molting one last time to become an adult. Each of these instars lasts about four years, which has been changing due to rise in soil temperature. Rising temperatures cause them to grow bigger faster and when they reach the “ideal” size, it is one of their triggers to emerge. Experts at the University of Indiana believe this is causing emergence up to four years ahead of schedule!



U.S. National Park Service, Public Domain

Will travel for food

Cicadas, like most animals, are driven by the availability of food resources. As gardeners, we are aware of the role warmer temperatures can have on bloom time for plants. Early blooms mean early bugs and more of them! Since cicadas do most of their dining below ground, they rely on plant fluids for nourishment. The amount of xylem (the vessel that transports fluids through plant) is used as a gauge of time for the insects. When a certain amount is present and flowing, it is time for the cicadas to make their grand entrance. This was proven though a study at the University of Illinois in 2000, when the bloom cycle of a peach tree was sped up, thus speeding up fluid production. Cicada emergence patterns sped up in

correlation with the fast-flowering peaches.

Late to the party

So, we now know cicadas are coming out earlier due to temperature and food availability. Generally, they like to do this as a mass group since they are all triggered by the same factors. However, once some of the cicadas are reaching the desired threshold size (correlated to temperature), they are busting out of the ground and not necessarily waiting on their buddies to get with the program. Some of the cicadas that would have normally come out a year or even more ago, are showing up a bit late to the action this year. This is resulting in a phenomenon known as “staggered” emergence. This also accounts for strange instances where one may be visited by only two or three cicadas, as opposed to the usual dozen or more.

Making use of a large population

For those of you lucky enough to have an overabundance of cicadas this year, a plethora of cicada recipes exists. The University of Maryland Entomology Department produced a particularly good cicada cookbook several years ago. If you can track this down, your search will be well worth it! In the meantime, here are a few quick methods to make use of your harvest.

- **Sautéed Cicadas:**

Heat two tablespoons butter or olive oil in a frying pan with a clove or two of garlic. Adding some basil is also a great idea. Add about 30 clean cicadas to the pan and stir fry. Great in tacos!

- **Deep-Fried Cicadas:**

Preheat and add oil to a deep fryer based on the manufacturer’s recommendations. Make your own spice blend by adding a teaspoon or so each of paprika, salt, pepper, and garlic powder to a cup of flour. Combine an egg with milk in a separate bowl and proceed to dip cicadas in before rolling in the flour mixture. Deep fry for two to three minutes. Serve with extra salt and ketchup.

If the numbers and the unusual emergence patterns of 2017 have you interested, there are several citizen science projects going on to collect data. www.magicicada.org is a great place to

start and consider getting your neighborhood or the kids involved. Between frying up some cicadas and counting numbers in your yard, you should be all set with summer projects. You are welcome!

Resources:

www.magicicada.org

Speer, J. H., K. Clay, G. Bishop, and M. Creech. 2010. The effect of periodical cicadas on growth of five tree species in midwestern deciduous forests. *American Midland Naturalist* (in press).

Clay, K., A. L. Shelton, and C. Winkle. 2009. Effects of oviposition by periodical cicadas on tree growth. *Canadian Journal of Forest Research* 39: 1688-1697.

Flory, S. L. and W. B. Mattingly, 2008. Response of host plants to periodical cicada oviposition damage. *Oecologia* 156(3): 649-656.

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

Native Plant Spotlight: *Monarda Punctata*

Want to attract more pollinators to your native garden or meadow? Monarda is a great choice! There are several different species of monarda, which is an herbaceous plant in the mint family. Featured here, in bloom, is *Monarda punctata*--also known as spotted bee balm, dotted mint, or dotted horsemint--an eccentric beauty in form and color.

**Requirements:**

Light: full sun to part shade

Water: drought tolerant once established

Height: one to three feet

Spread: nine to twelve inches

USDA Hardiness Zones: 4 to 9

Location: meadow, pollinator garden, cutting garden

Bloom: July through September

Description:

The flowers and colorful bracts occur in two or more tiers around the upper stems, almost resembling miniature pineapples. This unusual flower arrangement is called a "verticillaster," which occurs in only a few mint family species. The pale pink bracts last much longer than the actual flowers, up to six weeks, extending their period of "bloom" considerably. The leaves have a

pleasant odor, similar to oregano when brushed, and the flowers have fragrance as well. These aromatic leaves and stems are said to be unpalatable to deer and rabbits.

Medicinal:

The genus was named after a Spanish physician and botanist, Nicolas Bautista Monardes (1493-1588) who studied the medicinal value of plants. *Monarda punctata* has a high content of thymol, which is an antiseptic and fungicide and was used historically to treat upset stomach, fever, backache, and digestive, nerve, and kidney ailments in humans and also horses. Because of this high content of thymol, it is believed to be resistant to mites that negatively impact bees.

Benefits to wildlife:

Butterflies, hummingbird moths, hummingbirds, honeybees, bumblebees, and other native bees sip nectar from the flowers, and caterpillars of several moth species feed on the foliage. Bees, butterflies, moths, and birds pick up pollen from one flower, and deposit it on another flower, not only pollinating that flower but contributing important genetic diversity to plants. According to the Xerces Society for Invertebrate Conservation, this plant is recognized by pollination ecologists to attract large numbers of native bees and also predatory or parasitoid insects that prey upon pest insects.

Cons:

This plant only lives about three years so should be planted where it can readily, and will happily, reseed for you. Powdery mildew can be a problem for all species of monarda, and while powdery mildew does not affect the health of the plant, it can be unattractive.

Sharon Smith, Loudoun County Extension Master Gardener
With Julie Borneman, Owner Watermark Woods Native Plant Nursery

Sweetbay Magnolia: Tough, Beautiful, and Beneficial

The name “Sweetbay Magnolia” calls to mind a pretty, delicate plant that might not be able to hold its own under difficult conditions. But magnolias are among the oldest tree species on earth, and toughness is embodied in this typically 15 to 20-foot tree or shrub. *Magnolia virginiana* can be found from Massachusetts, where it is deciduous, to Florida, where it is evergreen. Here in the mid-Atlantic it is semi-deciduous. In the wild, sweetbay magnolia is a climax species, meaning it grows unchanging in a stable environment. It is happy in full sun, part shade, and full shade and prefers mesic to moist soils. Unlike the *Magnolia grandiflora*, the sweetbay tolerates flooding and wet, heavy clay as well as drought conditions. It has been shown to survive flooding and severe drought without significant loss of root mass. Sweetbay is also resistant to fire and can recover from top-kill due to fire, resprouting from root crowns, roots, and lignotubers (rounded woody growths at or below ground level containing masses of buds and food reserves).



Flowers on a young plant. Photo by Carol Ivory.

The sweetbay magnolia was introduced to Europe as early as 1688. The American naturalist William Bartram (1739–1823) often wrote about sweetbay because of its beauty and its importance to indigenous tribes. The leaves were used as a spice in gravies, and tea was made from the leaves and/or bark. It was used by physicians in the 18th century as well as by the Rappahannock, the Choctaw, and the Houma to treat a variety of illnesses and was even inhaled as a mild hallucinogen.

The sweetbay magnolia has a creamy white, lemon-scented flower, two to three inches in diameter. It blooms May through July. The flowers are pollinated by bees and beetles and are visited by hummingbirds. The pollen is high in protein.

The sweetbay also hosts four species of lepidoptera. We normally associate the tiger swallowtail with pawpaw trees. But if you can't accommodate unruly pawpaw trees in your yard, you can still have tiger swallowtails. The sweetbay is host to the tiger swallowtail, the spicebush swallowtail, the palamedes swallowtail, and the sweetbay silkworm.

The fruit, a very attractive red berry, emerges in September or October. It's eaten by songbirds, wild turkeys, quail, and small mammals such as squirrels and mice. The seeds are very high in fat and are a good food source for migrating birds. The sweetbay magnolia was named the 2016 Audubon Society Bird Friendly Native Plant.

This is a moderately fast-growing and easy-to-grow plant. Its size makes it a good patio tree, and it is less messy than other magnolia trees. It would also be a good choice for rain gardens because it can tolerate periods of saturated soils as well as periods of drought.



Sweetbay magnolia fruit. Photo by VTTree.

Sweetbay may be propagated through bare root, stem cuttings, grafts, and seeds. Seeds can be collected in the fall, soaked in water and baking soda for several days (to prevent fermentation), depulped, and stored for three months at 45 degrees F for the requisite period of cold-stratification. Afterwards, it can be directly planted in a well-prepared seedbed in early spring.

Try a sweetbay magnolia in your landscape. It's beautiful, tough, and a great wildlife-friendly plant.

Carol Ivory, Loudoun County Extension Master Gardener Tree Steward

Japanese Stiltgrass



Japanese stiltgrass is a summer annual that was introduced into the United States in Tennessee around 1919, as a result of its use as a packing material for porcelain. Stiltgrass is currently found in 16 Eastern states, from New York to Florida. It threatens native understory vegetation by invading disturbed shaded areas. The plant resembles bamboo, and mature plants can grow 2 to 3 feet tall. It can spread by seed and vegetatively by rooting at joints along the stem with a new plant emerging from each node.

Since its roots are shallow, stiltgrass can be controlled by hand pulling, which is easier when the soil is wet. Pulling up the adult plants in summer before they drop their seeds will help depress next year's infestation. For larger areas, use a mower to prevent seed production. After the stiltgrass is removed, plant native plants to stabilize the site.

Since stiltgrass is an annual, growing from seed each spring, it gets a slow start. It can be crowded out with aggressive native perennials such as sea oats (*Chasmanthium latifolium*), obedient plant (*Physostegia virginiana*), pink turtlehead (*Chelone lyonii*), meadow anemone (*Anemone canadensis*) and golden ragwort (*Packera aurea*).

Notes From the Help Desk:

Q: A county resident called and asked how to get rid of a stand of bamboo.

A: Bamboo is a very aggressive, invasive plant. It is a type of grass that grows so densely that it prevents native plants from growing with it. Controlling bamboo is very difficult. If it is the clumping type, which grows slowly, it can usually be dug up; however, this will be a challenge if the clump is quite large. The running types spread underground by thick rhizomes that can spread some distance from the mother plant. Most bamboo stands that have invaded yards and roadsides are the running type. Although they can be removed by digging up the plants, all of the rhizomes have to be removed or the plants will grow back. Because this is difficult to achieve, you should plan to continue digging up new shoots over the long term.

Some bamboos may be controlled by mowing, which over time will eventually kill the plant.

Another method of control is to spray new growth (that is, new leaves) with a nonselective herbicide with the active ingredient glyphosate. Established stands should be cut down, allowed to sprout new leaves, and then sprayed. A single application will not eradicate the bamboo, so you should plan to repeat this action for two to three years.

Once the bamboo is cut and the regrowth is sprayed, some homeowners prefer to control the regrowth with a cut and “paint” routine. Using a small paint brush and glyphosate in a jar, paint each stump. This prevents any drift and damage from spraying with a very potent herbicide.

For more information on bamboo control, see the following publications:

<http://www.clemson.edu/extension/hgic/pests/weeds/hgic2320.html>

<https://henrico.us/assets/Bamboo.pdf>

<http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=10577>



Joey Williamson, ©2012 HGIC, Clemson Extension
Dense stand of golden bamboo (*Phyllostachys aurea*).

<http://www.clemson.edu/extension/hgic/pests/weeds/hgic2320.html>.

Margie Bassford, Loudoun County Extension Master Gardener

Sneak Preview

The Ninth Annual Gardening Symposium is scheduled for March 10, 2019, and two nationally known speakers will present.

DOUG TALLAMY--Professor , University of Delaware



Doug Tallamy is a professor in the Department of Entomology and Wildlife Ecology at the University of Delaware. Chief among his research goals is to better understand the many ways insects interact with plants and how such interactions determine the diversity of animal communities.

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 Writer's Association. Tallamy was awarded the Garden Club of America Margaret Douglas Medal for Conservation and the Tom Dodd Jr. Award of Excellence in 2013. Tallamy also coauthored, with Rick Darke, *The Living Landscape*.

ELLEN OGDEN--Author, Lecturer, and Kitchen Garden Designer



Ellen Ecker Ogden is the author of five books, including *From the Cook's Garden*, based on the catalog she cofounded in Vermont, and *The Complete Kitchen Garden*, which features theme designs for cooks who love to garden. Her kitchen garden and articles have been featured in national publications, including *Eating Well*, *Horticulture*, *The Boston Globe*, *Country Gardens*, and *Martha Stewart Living*.

She is dedicated to growing ornamental edibles and has been a guest chef on PBS's *Victory Garden*, and HGTV's *Garden Smarts*, where she is known as the "baroness of basil." She combines her love of good food with a background in fine art to create kitchen garden designs that turn work into play.

The full symposium schedule will be announced in the winter issue of *The Trumpet Vine*.