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# Root Concerns

Notes from the underground

## Hostas In Your Garden



A beautiful perennial plant that I plant extensively in my garden beds is the hosta. They are native to China, Japan and Korea and are valued for their beautiful foliage, which can vary from shiny and smooth to puckered. Leaf colors include green, chartreuse, white, blue and gold. The narrow or wide leaves may be edged in white, gold or green. Dwarf hostas are only 6" tall. The biggest varieties approach 48". Growing hostas is fairly easy if you have partial shade and moisture retentive soil.

Morning or late afternoon sun is recommended for white variegated leaves to look their best. Gold leaves look their best with 2 hours or more of sun and may revert to green if they are in too much shade. In general lighter green leaves require more sunlight than the darker green leaves. Blue leaves will

bleach green if they get too much sun. So you may need to move your hostas for optimum color based on shade or sun. The classic gardening book

"The Perennial Gardener" by Frederick McGourty (I have a signed copy), owner of the long closed Hillside Garden in Norfolk, Connecticut, has an excellent chapter on using hostas in your perennial beds

and the best choices for varying amounts of sun and shade.



Hosta montana 'Aureomarginata'

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Hillside Garden was one of the earliest influences on my gardening style and I miss visiting the garden.

Hosta flowers vary from pure white to deep purple. Some varieties have a honeysuckle-like fragrance. Most hosta blossoms open in the morning but *Hosta plantaginea* flowers open in the late afternoon. They are pure white and very fragrant. "Aphrodite" is a beautiful variety that has double white blooms.



Hosta 'June'



Spoiler Alert: Enemies of your hosta plants include slugs and snails, but the most aggressive are the deer. My garden is enclosed with deer fencing so I am lucky. There are many deer sprays, commercial and homemade, that are quite effective.

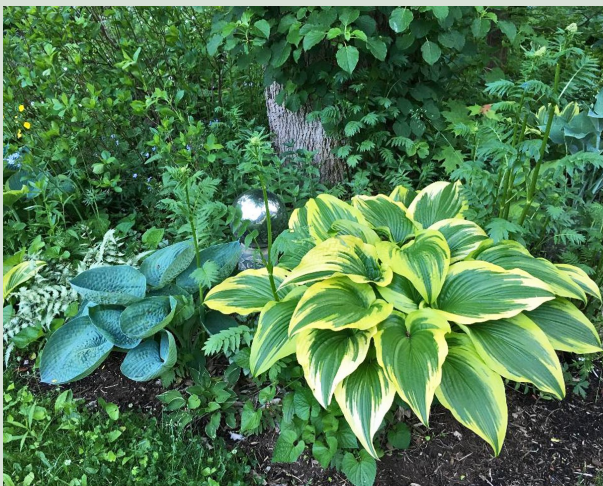
Visitors always ask about three hostas in particular, out of the many that I have in my garden.

1. 'Sum and Substance' is the biggest variety. It can grow to 10' wide and 4' tall. I have a very large specimen plant.

2. 'June' has beautiful blue-green heart-shaped leaves

splashed with bright yellow in the center on a neat compact plant.

3. *Hosta montana* "Aureomarginata" is a large vase-shaped plant with green and gold arching leaves.



I also have a green and white hosta

(probably *Hosta albomarginata*) from my childhood home. They gently surround a pretty statue that I lovingly refer to as my "Garden Madonna". They hold a special place in my heart!





# Spring's Blushing Beauty



Don't go by what people tell you, judge by what you see in the landscape. I learned this from the redbud. Some folks claim it isn't hardy hereabouts, but take a look in Chatham, in Niverville, and along Schodack's Brookview Road, and you'll see them now, in full spring color mode. Normally blooming after the shadbush but before flowering dogwood, this crazy year they're all overlapping, with the redbud the queen of the show.

While neither the buds nor the flowers are red on *Cercis canadensis*, it doesn't matter, since their hot pink-purple-magenta hues hint that Mother Nature might have spent time as a showgirl. Initially shaped like miniature Christmas bulbs and covering each twig, branch and the smaller trunks, the buds open into small pea-like flowers.

Since all this color happens well before the obscuring leaves emerge, redbuds can be identified a quarter-mile away. This makes a good pastime for us Yankees when we can travel south in April, since they're common understory and woodland-edge trees from Pennsylvania all the way to Texas.

Redbud's flash fades as spring rolls on, but it still retains charm. The overall habit ranges from vase-shaped to rounded, with the youngest branches exhibiting a distinct zig-zag growth pattern. The matte green leaves are heart-shaped, up to four inches across, and usually turn a handsome yellow-orange in autumn. The pea-like flowers yield pea-like pods that don't prove to be as obnoxiously prolific as a maple's. Growing to only perhaps 25 feet, it can fit into a small garden, in either a sunny or shady spot, in average soil.

One vice attributed to redbud is a propensity to split under a heavy ice load. I witnessed this three winters ago, when a sizable branch was peeled off the main stem of my young tree. Without the branch, the tree was essentially destroyed, so in a fit of optimism I trudged through the ice and fastened the limb back in place, using three two-and-a-half inch drywall screws. Heck, I reasoned, if a surgeon can screw bone back together, why can't a horticulturist fix living wood? The wound calloused over, the limb continued to live, and today the tree is still an attractive specimen. While this isn't a Cornell-approved remedy, faced with another injured woody plant I wouldn't hesitate to give it another try.

A cousin to our native tree, also called redbud but with the botanical name *Cercis siliquastrum*, figures large in a Biblical legend. This redbud grows in a wide range, from southern France all the way to eastern Asia, and is a bit taller, but similar in flower and foliage. The story goes that after betraying Christ, Judas Iscariot hung himself from this *Cercis*, which blushed pink in shame (it originally featured white blossoms). With this heavy cross to bear, it developed weak wood so that it would never be considered for such a dirty deed ever again. The tree was thereafter known as the Judas Tree, a name which some even apply to our own American redbud.



# Creating A Long-Blooming Perennial Garden

As I write this, it is April. Snow is falling outside my window. My Lenten Rose (*Helleborus*), colts-foot, spring flowering bulbs, and bird songs announce the arrival of spring. Perennials provide a changing scene from March through October. It's fascinating to watch flora and fauna in the garden change as perennial flowers come into bloom according to Mother Nature's plan. Perennial plants have their own time of bloom. The challenge is to pick different perennials to achieve a long season of interest. This doesn't have to cost a fortune. You don't need a green thumb, a computer design program, or a degree in landscaping. If you want a plan, you need a pencil, a notebook, the ability to draw circles, squares, and letters, and a camera (a picture paints more than a thousand words). You can make a rough layout on paper. A simple key of circles, squares, and letters represents plants. If you don't want to rough sketch something, we can just use the plants while they are in their pots. That works perfectly for impulse buys at the garden center. Set the pots out in the garden before you plant them. Step back and take a look. You need a good spade and shovel. Buy good, quality tools! Your hands and your back will thank you!



The thought of selecting plants for a long blooming perennial garden is a little daunting. We can simplify it! We can start with just 6 plants that flower at different times. You can add more according to your budget. Start with 2 for spring (maybe one early, one late), 2 for summer, 1 for late summer, and 1 for fall. You can add in shrubs to give it some bones and winter interest or plant with existing landscaping. Ornamental grasses are great fillers and add winter interest. This fall, let's remember to plant those spring flowering bulbs! Stretch those garden dollars by purchasing some plants with different leaf colors and interesting seed pods. It's not all about the flowers. White is a peace maker in a sunny garden and lights up the shade. If you have an existing garden, get out your camera. Take pictures at different times of the year. You'll see the gaps when you review the pictures. Don't stress over design. Do what looks good to you.



You can make a simple chart with a column for the plant, color of leaf or flower (you can use leaf color here for shade), height, and time (season or month) it blooms (see next page). If you want to go to more formal, you can add a column for shape (spike, round, cone, or filler). You may add shrubs and background trees. A glance at the chart tells you what's missing. You can put the chart plants on your paper plan.





Once you have your perennials and shrubs planted, you can add annuals for pops of color. Garden art is very popular now and adds a bit of whimsy. You can add sustainable plants like herbs, vegetables, and small fruit. I plant my lettuce in my garden by the mailbox. The woodchuck won't go out there! Here is a sample chart for a sun garden.

Keeping a simple notebook is your best tool for improvement. Write down what didn't work. Keep track of your purchases. You can add what really worked well or flowered beautifully. I like to add notes on wildlife. Did you see any Monarch butterflies? Keep your photo gallery for reference. Garden photos are great to view in January! Remember, Mother Nature puts all colors together. You really can't mess this up. Keep it simple to start and please yourself. Let the plants do the work.

In times of uncertainty, one thing remains unchanged. There isn't a better place to be than in a garden.



Check out these resources:  
[www.ccerensselaer.org](http://www.ccerensselaer.org)  
[www.perennialresource.com](http://www.perennialresource.com)  
[www.hummingbirdsociety.org](http://www.hummingbirdsociety.org)

**Text by Rensselaer County Master Gardener Carol Mastromarchi**



Plant	Shape	Color	Height	Bloom
Peony	Round	Red	Medium	Spring
Delphinium	Spike	Blue	Tall	Mid-summer
Daisy	Round	White	Short	Early summer
Creeping	Filler	Pink, purple,	Short	Spring
Aster	Round	Purple	Short	Fall

# Enjoying Early Greens and Saving Space

It certainly has been cold, windy and rainy these past few weeks. Veteran gardeners have been waiting for spring to really start. Inside, many people have been coddling tomato, pepper and other warm weather veggies, under lights. But hopefully, some of you have been able to get a few lettuce, spinach and pea seeds in the ground.

For the past 5 years I have been growing veggies in various sized planters. I looked to the guru of smaller planting spaces, Mel Bartholomew of *Square Foot Gardening* fame, for guidance. I've embraced most of his ideas, but for me, his tenet of just a few plants in a square wastes a lot of potential for some vegetables. When I plant greens, I've found sowing a bunch of seeds and then thinning them is a lot more fun and gratifying.



One example is lettuce seeds. In an area about 1 foot square, I widely sow at least 20 seeds. About 2 weeks later, I sow another area and continue as the season progresses. As the plants begin to come up and start to crowd each other, I start thinning them. Eventually, you'll be left with a few plants with the proper spacing. These can then be allowed to grow to maturity. The same can be done with spinach, beets, chard, kale, radishes, arugula, escarole, and probably many more. Yes, tiny radish seedlings are tasty.

When harvesting, simply snip the plant off, leaving the roots (and dirt). Wash the leaves, drain, refrigerate and add to your salads or stir-fries. This method does require frequent maintenance, but seeds are much cheaper than transplants and you get to harvest much more! Enjoy.

**Adopted from an May 14, 2020 post of the Rensselaer County Vegetable Blog by Nancy Scott, Rensselaer County Master Gardener. You can visit the Blog at: <https://renselaercountyvegetable.blogspot.com/>**



# I'm Trying Lingonberries

Recently I've been thinking about how I can reduce the size of my small lawn and make our landscaping more environmentally friendly. In deference to my neighbors, I don't feel compelled (yet) to create another vegetable patch in my front yard, but adding native plants that might also provide something edible would be ideal.

After exploring various options, I've determined that Vaccinium vitis-idaea (Lingonberries) might be the answer. It occurs naturally in northern parts of North

America and Scandinavia; and as an evergreen growing only to 12 - 18 " in height,

lingonberry would compliment the rhododendrons and mountain laurels already thriving in front of the house.

I considered its cousins, Vaccinium macrocarpon (American cranberry) and Vaccinium crassifolium (Creeping blueberry), but these are unsuited for my location. American cranberry needs a bog environment that ideally has layers of sand and peat to survive, and creeping blueberry seems relegated to the milder climes of the southeastern states. The Albany Pinebush might be suitable for it, but our winters are still too severe.

As a member of the genus Vaccinium, like blueberries, lingonberries need well drained, acidic soil. A check of soil pH showed that my laurels are now growing in moderately acidic soil (pH 5.6 - 5.8) while the immediately adjacent lawn area is slightly acidic (pH 6.4 - 6.5). Given these values, I plan to increase the acidity in the lawn area simply by adding peat moss into the soil along with sand to improve soil drainage. In the long haul, I will continue to add coffee grounds and Christmas tree needles as part of my mulching regime. As for being edible, although lingonberries are part of Scandinavian cuisine, I'm just hoping that some native fauna will take a liking to them. For more information about growing lingonberries, see this website by the University of Massachusetts Amherst: <https://ag.umass.edu/home-lawn-garden/fact-sheets/lingonberry-attractive-landscape-plant-unique-small-fruit>



**Adopted from an April 25, 2020 post of the Rensselaer County Vegetable Blog by Irv Stephens, Rensselaer County Master Gardener. You can visit the Blog at:**

**<https://renselaercountyvegetable.blogspot.com/>**

## Lilacs: Beyond The Standard

We third graders always knew when Mrs. Bouton, the substitute, was in school: the smell of lilacs. A woman of great age, large stature and ample bosom, she liberally applied some form of lilac perfume before she faced the munchkins. Perhaps it gave her stamina. This spring, with its abundance of long-lasting lilacs, Mrs. Bouton seems to be hiding in every hedgerow.

The standard common lilacs have their faults, however. They're large, wanting to grow twelve or more feet high, and working them into a small garden is like fitting an elephant into a Mini. Sometimes they take years to start flowering. Powdery mildew is often a late summer problem. Fortunately, other members of the lilac tribe offer answers.

Chief among my favorites of these alternative bloomers is the 'Miss Kim' Manchurian lilac, which opens during the second half of May. 'Miss Kim's' buds are medium lilac purple, with the open flowers a much paler shade. Dozens and dozens of the conical flower clusters hold scores of the small blossoms, ensconcing the shrub in purple. Plant tags sometimes list it as growing only three feet high and wide, while mine is now seven feet high and five across. A key point to remember is that plants don't read the tags. Powdery mildew is not a problem, and some years a good reddish-purple fall color develops. A new version, 'Baby Kim,' is more compact with a darker flower.

An extremely fragrant lilac is *Syringa meyeri* 'Palibin,' cuttings of which are making me woozy as I write. Palibin is a slow grower, perhaps stopping at five feet, but it flowers well when still small. I hesitate to tell you mine is blooming its heart out in partial shade, lest you go and plant one in darkness and have a failure, but it is true. Lilacs usually demand full sun for optimal flower production, in this case mostly following what the tags suggest.

I would like to have a later flowering Preston lilac (*Syringa x prestoniae*), the first of which were developed by a woman named Isabella Preston in Ottawa in the 1920's. She named many of her hybrids after Shakespearian women, but in the nursery trade you are also likely to find such notables as 'Donald Wyman' (deepest pink), 'Miss Canada' (bright rose-pink), and 'James MacFarlane' (bright pink and vigorous), all trying to attract the attention of shoppers. Flowers are formed on new growth and open two weeks after the common lilac, which blooms on last season's wood.



The last of the razzle-dazzling lilacs is *Syringa reticulata* subspecies *reticulata*. Its also the largest of the genus, often reaching twenty feet or more, hence its common name, Japanese tree lilac. Very cold hardy and fairly pest free, it could be useful in many landscapes and has even been successfully pressed into service as a street tree (the toughest job known to plants) in Troy. Only white flowered types are available, and common cultivars include 'Ivory Pillar,' 'Ivory Silk' and 'Snowdance.' Only one problem: all smell more like a privet than a lilac. Perhaps they should take a lesson from Mrs. B.



*Text and photos by David Chinery*



# Who's The *Fother*?



If there is any plant well-suited for the gardening needs of this new century, it might be *Fothergilla*, the shrub you've never heard of. At least a little of the rub lies in the name. In a world where marketing counts, the moniker *Fothergilla* has little sparkle or snap, and doesn't convey any of this species' charms. Likewise, the common name of witch-alder conjures up visions of Hogwarts and not something tasteful you might like to plant in the front yard.

There are two distinct species to consider. *Fothergilla major*, or mountain fothergilla, is a denizen of the southern Appalachians, living on both rocky ridges and cooler

hillsides. It is a large, multi-stemmed shrub growing up to 20 feet tall, and it has two peak seasons of interest. Spring finds *F. major* covered in white, spikey, bottle-brush flowers which exude the scent of honey. After spending the summer in anonymous green, the foliage turns to vibrant reds, oranges and yellows. Sounds great, but a 20 foot tall shrub next to the front door might engulf the house. Fortunately, nature has also provided us with the dwarf fothergilla. In looks, *Fothergilla gardenii* appears much the same as its bigger cousin, just in a pint size. Reaching to just 3 feet tall or perhaps a little taller, this gem can fit into many modern landscapes. It naturally occurs in acidic, dampish places from North Carolina's coast through the Florida panhandle, and is not plentiful anywhere in its range. Though both are southerners, they can readily adapt to the cold northern climate of the Capital District and beyond, and thrive with ease in soils that differ significantly from their mother earth. I've never seen mountain fothergilla outside of an arboretum, but dwarf is sometimes sold by local garden centers who have caught on to, as Jackie Gleason used to say, how sweet it is.

Growing in two distinct ecospheres, the two fothergillas probably didn't have a chance to meet, but an interesting thing happened in the 1970's when both types were being grown in nurseries. According to an article by plantsman Rick Darke, the two species crossed, although at the time no one knew that some horticultural hanky-panky had gone down. Nurseryman collected seed from the dwarf fothergilla plants, thinking that a new generation grown from that seed would also be pure *F. gardenii*. They then selected the best seedlings for further propagation, study and sale. These new seedlings, some with even better flowers, fall color, and vitality than the parents, were all somewhat carelessly (in retrospect) named dwarf fothergilla. Only later did someone ask, is that true? Scientists used a method called flow cytometry to count chromosomes. It was found that mountain fothergilla has 72 chromosomes, dwarf has 48, and these new questionable types had 60, making them truly children of the two species. Today, you can buy these exciting hybrids under the name *Fothergilla × intermedia*. I haven't heard if any paternity lawsuits have been filed.



Text and photos by David Chinery

## What to do in May



Prepare your tools if you haven't done so already. Clean and sharpen blades for optimum efficiency.

Tackle the garden beds. A premature winter last year sent a lot of us into an early hibernation, and a very cold April had us dragging our feet. Rake out remaining leaves, clean up perennial remains, and add them all to the compost pile.

Add compost OR fertilizer to your beds.

Mulch beds to prevent weeds and improve water retention.



Prune early flowering shrubs (e.g., forsythia, lilac) after they have bloomed.

Harden off plants that need to be brought outdoors.

Organize and disinfect containers with 1 part bleach to 9 parts water.

While prepping containers, create a shopping list of plants needed. This is a great way to avoid “impulse buying” of plants.

Add fertilizer to lawns in late May.

While busy in the yard and the garden beds, remember to be pro-active with tick prevention. Wear protective clothing and always do a tick check.





# Green Shots: The Gardening World in Pictures

This month's photographs come to us from Rensselaer County Master Gardener Barbara Nuffer.

"I've always been fascinated by abandoned farmhouses and the perennial plants that thrive in their yards. It was a great lesson to me coming from the overly tended properties of Long Island. I noticed three plants in particular at these forlorn homesteads; irises, day-lilies, and peonies.

When we purchased our country home 40+ years ago I mail ordered an assortment of peonies to plant along my driveway. They are still blooming and provide a beautiful week of pink and white lush blooms. I put my peony cages in place in April, remove the flower stems as they finish blooming, and cut down the dead foliage in the fall.

The biggest enemy of the flower is rain, as it will shatter the delicate single blooms and weigh down the heavy double blossoms. Be sure to stick your nose in the abundant flowers and enjoy their heavenly fragrance before the wind or rain cause them to fall into a puddle of petals on the ground.

I've also included a wild Peony, *Paeonia brownii*, I encountered in Grand Tetons National Park in Jackson Hole, Wyoming (photo at left). It ranges from southern British Columbia to the Sierra Nevada Mountains in California and east to Wyoming and Utah. There is only one other native Peony in North America, *Paeonia californica*, native to southwest California."



# Plants Get Viruses, Too



When teaching, one wants to present every topic as clearly as possible. When I taught, the challenges accompanying viruses were unique. Viruses have no metabolic machinery, they do not replicate....whoa, whoa...that does not seem to agree with current news. What I read, as I was preparing my lectures on viruses is the following: viruses, or at least virus genetic information, is taken in by host cells, and the host cell's enzymes (metabolism) are under the direction of viral genetic material. So, rather than making host molecules, the host cell makes viral components. I have checked to see if this information is still current, and it seems to be. So, once viral genetic information is in the host cell, the host cell no longer makes more host cells, rather it is busy producing more viruses. What does this have to do with plants? After all this is a plant article.

The first thing we need to look at is the microscopic structure of a thin plant structure such as a leaf or a petal. Even though the structure may be thin, there are several layers of cells comprising it. There are two epidermises, one toward the sun, the upper epidermis, and one toward the bottom, the lower epidermis. Both epidermises consist of a single layer of cells. Between the two epidermises is a multicellular layer of cells called the mesophyll (meso = middle; phyll = leaf) The epidermises contain pigments (e.g. anthocyanin, often red). If a virus, or its genetic material, enters an epidermal cell, the host cell is often destroyed. That means the epidermal pigment is no longer created and therefore that color is not expressed. If this occurs in a petal epidermal cell, the petal will lose some of its color. This is quite common in tulips and such tulips are known as broken tulips. Breaking tulips results in flowers that have petals of more than one color. Broken tulips, while beautiful and often very expensive, tend not to breed true during multiple generations. For example, during the seventeenth century, tulips were the rage in Holland (tulipomania) and one bulb of a variety known as "semper augustus" had the value of a young woman's dowery or close to the value of a house. (If you web browse "semper augustus," you can find pictures of this beautiful tulip. You will see that where the dark epidermal pigments would have been, only the white of the mesophyll cells is expressed.)

Back to the virus! A virus or its genetic material is usually responsible for broken tulips. How do the viruses enter epidermal cells? The viruses are transmitted by an aphid (vector). So, while broken tulips provide variety and beautiful new colors to a tulip bed, they are often not stable variations.

Do other flowers exist in the broken form? Yes, think of flowers that have petals of more than one color such as pansy, carnation, larkspur and wall flower. So, while we think of viruses as disease - causing organisms, sometimes the diseased (broken) organism may be more beautiful to the

human eye than the "healthy" organism.

**Text by Rensselaer County Master Gardener Inge Eley**



“There is nothing like the first hot days of spring when the gardener stops wondering if it’s too soon to plant the dahlias and starts wondering if it is too late.”

*Henry Mitchell, the Essential Earthman*



**Gardening Questions?**

**Call The Master Gardeners!**



*During the COVID 19 Pandemic, our offices are closed to the public, but you are welcome to contact us as directed below.*

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