

July 2020

Volume 15, Number 5

# Root Concerns

Notes from the underground

## Do You Really Know Black-Eyed Susan And Purple Coneflower?



*Echinacea* 'Fatal Attraction'

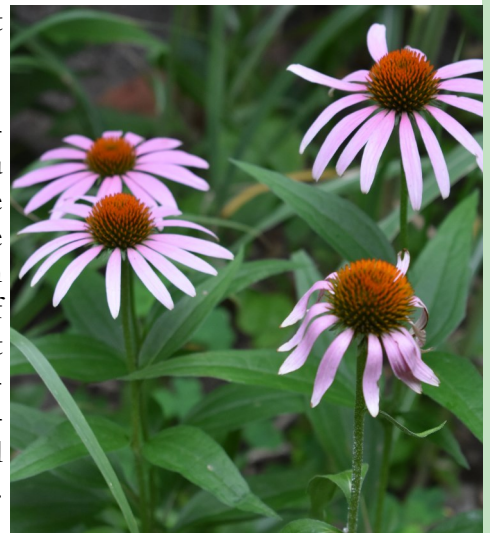
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From July through early September, the sunny perennial garden is full of eye candy as summer blooming plants come to bright, beautiful, peaks of color. *Rudbeckia* (black-eyed Susan) and *Echinacea* (purple coneflower) are often used together for an easy, beautiful combination that works. The traditional *Rudbeckia fulgida* 'Goldstrum' and *Echinacea purpurea* 'Magnus' are often used to help create this effect. They are closely related members of the daisy family and are hardy to USDA Zone 4. Most likely, you know that there are new colors of *Echinacea*. How well do they perform? Do you know about the new varieties of *Rudbeckia fulgida* (perennial black-eyed Susan)? What about the other varieties of *Rudbeckia*? Let's take a closer look at both plants!

*Echinacea* is a very versatile plant. It is native plant that grows in the United States, east of the Rocky Mountains, and in parts of Canada. It can be seen in meadows, prairies, and the edges of forests. It grows in most soil types, including clay, but doesn't like rich, fertile soil. It's deer, insect, and disease resistant. In fact, it creates its own antibodies to combat diseases. It is very hardy. It's widely used in gardens, herbal teas, and herbal medicine. It prefers to grow in full sun but will tolerate partial shade. It has a long season of bloom. It attracts birds, bees, and butterflies. It is a great cut flower. Well, that sounds like the perfect plant!

It has its quirks. It is reputed to dislike transplanting. Ok, here's the skinny on that. You have to catch it at the right time. It tends to wake up late in the spring, taking its time to produce top growth. You have to wait for that top growth of leaves to grow until it has at least 3 sets of leaves. Ideally, you should transplant before it sets a flower head. That keeps the plant concentrating on making roots. Transplanting when it just has a small rosette of leaves is not advisable. Water it enough to keep it alive but not wet. Remember, it's a



*Echinacea purpurea*: The native species

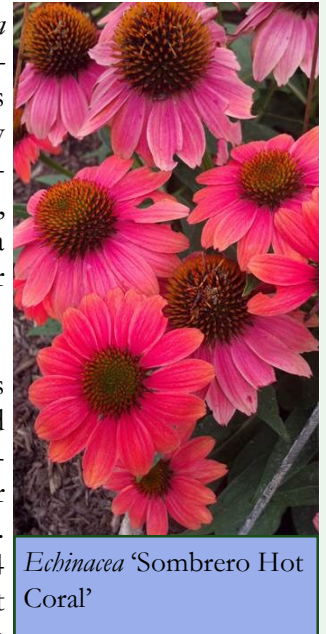


*Echinacea* 'Firebird'

meadow plant. If you purchase a pot of *Echinacea* that just has a rosette of leaves, let it grow in the pot until it gets at least three sets of leaves. *Echinacea* likes to self-seed. Good news/bad news. The seeds drop in the fall and new plants pop up everywhere in the spring. The birds often drop seeds elsewhere. Blue jays are known to “plant” the seed. The seed heads also provide food for the birds and look great in fall arrangements. It requires care when cutting back in the fall. When you cut it down, leave 3 to 4 inches of plant above the soil line. That provides protection for the crown of the plant. Let's move on to the newer colors.

In addition to many varieties of purple, *Echinacea* flowers can be white, yellow, orange, pink, lime, red, and a multicolor one. *Echinacea purpurea* can have purple, white, or rose to red flowers. The classic purple coneflower is *Echinacea purpurea* 'Magnus.' It is an award winner and very long lived. The native yellow coneflower is *Echinacea paradoxa*. The yellow varieties are native to south eastern Oklahoma and are not quite as vigorous. There are many varieties of the yellow *Echinacea*. So far, there doesn't seem to be a clear standout although, 'Sombrero' varieties appear to have a slight edge. I'll keep an eye out and continue to watch trials. It can take 3 to 5 years for one to make it as a front runner.

There are hybrids that may have a shorter life span. The orange color came from a cross of purple and yellow. 'Adobe Sombrero Orange,' 'Eye Catcher Atomic Orange' and 'Lakota Fire' (a Proven Winner) are all close contenders with no clear favorite. The multi-color variety, 'Cheyenne Spirit,' has won awards and is very popular. It is a fiery color combination of purple, white, yellow, red and orange that lights up the summer garden. 'Tomato Soup' seems to be leading the pack of the red varieties. Mine has survived 4 years but is still not large enough to divide. They need regular watering to establish but don't like wet feet for any length of time. Varieties also include double flowers that have a pompom look. The doubles don't have the flat rays that large butterflies prefer. Doubles will still attract hummingbirds and sometimes baby butterflies. The pretty new colors of doubles are fun but a little fussier. They are slower to grow in clump size. There are many other varieties of *Echinacea* that can be added to our gardens. Some can be started from seed. Have fun experimenting!



*Echinacea* 'Sombrero Hot Coral'

*Rudbeckia* is native to the eastern United States from New York to Florida, west to Illinois and the states of Texas and Arizona. You'll see it growing in moist woods, and meadows. It spreads by rhizomes and forms small colonies after about 3 years. It is not considered invasive. The perennial varieties of *Rudbeckia* all have the same gold-orange ray flowers and brown to black cones. *Rudbeckia* is very easy to grow and is hardy to USDA Zone 4. It grows in average garden soil and will adapt to clay soil. It is a fairly low maintenance plant. It attracts butterflies, bees, and birds. It is deer and rabbit resistant. It benefits from division every three to four years. Dividing the plants increases air circulation and discourages foliar diseases. Leaf Spot (*Septoria*) can occur in hot humid weather.



*Echinacea* 'Milkshake'



*Rudbeckia* 'Goldsturm'

There are over 30 varieties of *Rudbeckia*. What can make things confusing is there are annual varieties of *Rudbeckia* (*Rudbeckia hirta*) that freely reseed. Popular annual varieties include 'Irish Eyes,' 'Gloriosa Daisy,' and 'Indian Summer.' There is also a biennial (flowers every other year), *Rudbeckia triloba*. While it is more persistent than most biennials, it may not return in the same spot. It's not usually offered by catalogs or garden centers. It prefers to grow in a sunny meadow.

The most common perennial variety of black-eyed Susan is *Rudbeckia fulgida* 'Goldstrum.' It is the classic workhorse in the garden. It grows to about two feet tall. It is a sturdy plant. All varieties of *Rudbeckia fulgida* flower from about mid-July to early

September or longer. 'Goldstrum' is an award winning variety that has remained very popular over the years. In recent years, three new varieties have been introduced. 'Little Goldstar' is a great one to add to a small garden or the front of flower bed. It is a short (15 inches), bushy plant that maintains a compact shape. It starts flowering a little earlier than 'Goldstrum.' It has been available for at least four years and remains a good selection. 'Viette's Little Suzy' is another smaller plant maxing out at about ten to twelve inches tall. It tends to have a spreading form as opposed to compact. It has smaller flowers. It is a cute plant but is not widely grown because it is not as showy. New for 2020, is 'American Gold Rush.' This one looks very promising and is once again being offered for 2021. That's a good sign. It has hairy leaves that provide excellent resistance to leaf spot. Trial garden conditions of wet, hot, humid conditions showed no signs of the fungal leaf spot disease. It has the same growing and flowering habit as 'Goldstrum.'



*Rudbeckia* 'Little Goldstar'

There are taller varieties of *Rudbeckia* that are the native perennial, *Rudbeckia lacinata*. Ready for a little more confusion? These varieties are often referred to as coneflowers. They grow in grassy roadsides and moist fields. The most recognized varieties are 'Goldquelle' that can reach a height of 4 feet, and 'Herbstsonne' (sometimes listed

as *Rudbeckia nitida*) that, at 7 feet, is one of the tallest. 'Goldquelle' has a double yellow flower and sturdy stems. 'Herbstsonne' is an award winner with yellow flowers that have drooping petals. It is a thriller in the wildflower garden. These are a bit hard to find because they don't like to conform to growing in a standard, one gallon pot. Native plant nurseries usually carry them.

*Rudbeckia* is a great choice for butterfly gardens, cut flowers, and wildlife gardens. It is a long blooming addition to any flower garden. Bloom time can be extended by removing spent flowers (deadheading) but that removes seeds that birds savor.



*Rudbeckia* 'American Gold Rush' Photo from All-americanselections.org

# BRINGING IN THE GARLIC!

This year's theme at the Vegetable Demonstration Garden at the Parker School in North Greenbush was alliums. Master Gardeners volunteers from Cornell Cooperative Extension of Rensselaer County planted garlic and ornamental alliums last fall. The garlic bulbs were broken into cloves and planted pointy side up into the prepared beds about 1-2 inches deep and about 6 inches apart. This allowed the roots to form before the cold weather set in. Once the warm weather arrived in the spring, the plants sent up their leaves.

Hardneck garlic is a daylight sensitive plant, so when the days began to get shorter again after the end of June, the loss of light signaled to the plant that it was time to mature. As a result, it was time to start harvesting in late July. Some people like to wait until the leaves are all brown on the plant. This could bring the harvest into August and at that point, the papery coating on the bulb can begin to break down. The garlic will still taste fine, but there's more of a chance of the bulb breaking apart. It also means some of the garlic will rot and not store as well.

Resist the urge to just pull up the plants. Use a garden fork to pull away the mulch, and push into the dirt a few inches from where you think the bulb will be. Some varieties can get pretty large, maybe 5-6 inches in diameter. Pull down on the fork, and pop the bulb out of the ground. Knock off as much dirt as possible and gather in bunches of about 6-10 bulbs. Wrap with rubber bands, or a loop of twine. Hang in a cool, airy place for about 2 weeks. I put mine in the garage, which is not all that cool, but it is airy and shady. After 2 weeks you can trim the roots off the bottom, brush off any loose dirt, and clip off the stem. At no point should you wash it off. Store the bulbs in a mesh bag or some other container that will allow good airflow. Do NOT store in a plastic bag or sealed container, as it will rot.

If some of the cloves break apart or are damaged, use them first. And if you are lucky enough to have more garlic than you can use in 3-4 months, you can freeze it. Just break it into cloves and put it in a freezer bag. Squeeze out the extra air and toss in the freezer. Once it is defrosted, it will be a little mushy, but just fine and tasty for cooked dishes. Enjoy!



**Text and Photos By Rensselaer County Master Gardener Nancy Scott**

# A Good Time To Get Dirty



The year 2020 has been like no other, but you can't keep good gardeners down. Last Monday, eleven Master Gardeners opened their plots to our in-house Pandemic Garden Tour. Since our tour for the public had to be cancelled, this members-only event at least got a few friends together, masked and socially-distanced, for the first time since the Pandemic hit in March. It was nice to see the gardens in their mid-summer glory, and great to see folks I've only had a glimpse of on Zoom. At the end of the day, my heart held a flicker of joy and a spark of hope.

The Master Gardeners agree that the act of gardening has been a lifesaver during these overwhelming days. Weeding, plucking and pruning allows one to have at least a resemblance of order over a tiny spot in a chaotic country. Hard work makes one forget about the national news. There are no restrictions on getting outside in the fresh air and sunshine. Nurturing a bit of nature releases positive feelings, and even disappointing results are seen in a new light: next year will be better. Gardening is often a solo affair – most of the family members disappear when it's time to spread mulch – so we've got that covered, too.

Master Gardener volunteers take care of a variety of public gardens, and those are being brought back into bloom, too. Initially, caution cancelled all activities, but eventually we wrote a plan which allows us to work in gardens safely. Our Demonstration Garden at the Robert C. Parker school is in good shape and open to visitors, but we skipped mulching it this year as that takes a tremendous group effort. The City of Troy closed all parks, but we were allowed back to the 9/11 Memorial Garden in Lansingburgh in late June, and the Master Gardeners have been busy ever since. Leslie's Garden in downtown Troy, cared for by a team involving us, neighborhood volunteers and TAP, Inc., continues as a neat and colorful spot in the city. We'll be returning the Hospice Garden soon. It's all about keeping our plants, as well as our community partnerships, growing.

Mother Nature hasn't exactly given us the easiest gardening season, either. It wasn't so long ago I was interviewed by an Albany TV station as we all worried about a late frost. Since then, the temperatures have climbed and we've had a few heat waves, too. Spring rains have given way to summertime dryness, with lawns toasty and corn leaves curling. We're officially in a moderate drought now, and I'm awfully glad of the one inch of rain which fell last night.

Anyone shopping at a local garden center discovered another phenomenon – plants and paraphernalia are selling like hotcakes, welcome news for the local economy. Reports are that Americans are picking up a hoe and getting dirty in record numbers. Let's hope this year's new gardeners, especially those of the youngest sort, stick with the green scene when good times return.



*Text and photos by David Chinery*

# More Than Just A Pretty Garnish

Does not every gardener grow parsley (*Petroselinum crispum*)? Answer: Probably, either the curly leaf or the flat leaf kinds. Both types are used extensively as garnishes, but there is also a third type, a root parsley, that remains common to eastern, central and southern European cuisines but remains less popular in Western Europe. All three parsleys derive from a wild variety commonly found around the Mediterranean region.

Parsley has been cultivated for centuries and the wild versions probably eaten for millennia. An approximate translation of the botanical name is "rock celery." The wild variety resembles our familiar flat leaf types. Although the Puritans most likely brought parsley seeds with them, according to Judith Sumner in her book *American Household Botany*, the first written mention of parsley only dates to 1804, but it has remained in seed catalogs ever since.

Root parsley resembles parsnips, and goes by many names: Arat parsley, Hamburg or Dutch parsley, Rooted parsley (see photo at left). Its carrot shape clearly reminds us that parsley is a member of that plant family. Its tops are stronger tasting than the leaf varieties but it can also be used for garnishes. The roots, I understand, are milder and taste more like celery. They are usually added to soups and stews.



Arat parsley requires a long growing season, but the seeds can be started indoors and transplanted outside when they are three inches tall. Root parsley is a winter crop. Dig it up at the end of the growing season and store it in sand like carrots.

*Adopted from an July 30, 2019 post of the Rensselaer County Vegetable Blog by Irv Stephens, Rensselaer County Master Gardener. You can visit the Blog at: <https://rensselaercountyvegetable.blogspot.com/>*

## Chestnuts And A Few Imposters

One breezy morning, whilst still home in my pajamas, I could tell the Chinese chestnuts down the road were in bloom. Although various books call the smell “noxious,” “unpleasant,” or (most kindly) “heavy,” I rather like getting a whiff of the late June air that signals this annual event. That’s because not every neighborhood has these interesting trees, and they remind me of the muddle of plants we call chestnuts.



So let’s start with the aforementioned stinker, known botanically as *Castanea mollissima* (see photo at left). It’s a handsome, broadly rounded tree, growing to perhaps sixty feet, with heavily toothed, elongated leaves. The early summer flowers give rise to prickly pods that contain beautiful chestnut-brown chestnuts, an inch or more across, which are edible and prized by those lucky enough to have at them. The tree is hardy in our area, tough and adaptable. Best of all is that Chinese chestnut is resistant to the fatal chestnut blight.

But yo! Whadda ‘bout dem nuts down in New York?

Many wintertime tourists in Manhattan seek the wares of street vendors who sell a different nut, *Castanea sativa*, or the Spanish chestnut. In addition to roasting, chestnuts in general (and this species specifically) has been eaten in breads, cakes and candies for centuries. Unfortunately, *Castanea sativa* is neither as hardy nor as blight resistant as the Chinese type, so its cultivation in the eastern U.S. is very limited. In other words, forgetaboutit.

At one time, the American chestnut (*Castanea dentata*) was an important food and lumber tree, a key part of the eastern forests. Tragically, four billion members of this species were decimated in the early twentieth century by the chestnut blight, a fungus imported into New York City on foreign plant material in 1904. American chestnuts can still be found in the wild, but are extremely rare and often die back from the blight as they reach nut-bearing age. Scientists, special interest groups including The American Chestnut Foundation and other nut-o-philes are working on developing resistant trees. Research is ongoing, so stay tuned.

Poking into the more obscure corners of botany, one comes across several other American chestnut species, including the Alleghany chinkapin (*Castanea pumila*) which is recorded as living on Long Island but is primarily found to our south and west.

How about the “chestnuts” which are not chestnuts at all? Consider the chestnut oak (*Quercus prinus*) which has leaves resembling a true chestnut but bears acorns like any other self-respecting *Quercus*. More confusing is the common horsechestnut (*Aesculus hippocastanum*) which features palmately compound leaves and a candelabrum of flowers, nothing like a *Castanea*. It does, however, bear a spiny fruit containing large chestnut-like nuts; don’t be tempted to taste them, however, as they are poisonous. Among this tree’s close kin is my alma mater’s favorite,

*Text and photos by David Chinery*

# *Held Hostage By Hostas*

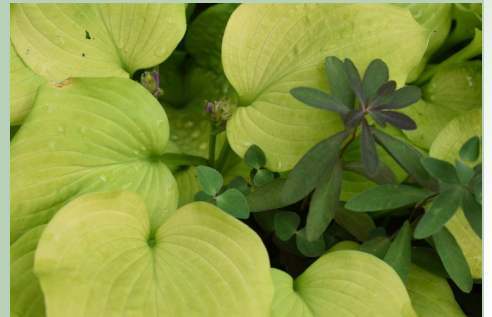


I once attended a meeting in a church basement. It went something like this.

A man stood up. “My name is John, and I am a hosta-a-holic. It started three years ago when a friend gave me two plants whose names I didn’t even know. As I started buying hostas in our local nursery, the lawn, then the vegetable garden, gave way. I have 150 hostas now, and I feel that I need each new leaf color and pattern that comes out. My life is not my own, but for some reason I am happy.” He sat down.

Then a woman spoke. “Hi John. I’m Mary. I’m addicted to internet hosta shopping. The UPS truck comes to my house twice, three times a day. I’m in debt to my hostas. I even tried growing some in my living room over the winter. Wanna make some trades?”

Hostas mean different things to different people. Landscapers plant multiples of odd numbers of inexpensive hostas in shady spaces. Gardeners think hostas are great companions for other shade plants, such as epimediums, ferns, and astilbes. Hostas look good from spring emergence to frost, have few pests (if you either don’t have slugs or can handle them) and require little maintenance. Older varieties, which have passed the test of time, can be had in the ten to twenty dollar range, and there is little reason to pay over thirty.



But hostas make a psychic connection to some folks that sets off a collecting gene. Each variety’s variation in leaf texture, size, shape, or coloration creates a new must-have plant. A burning desire to grow each novel introduction develops, and with nurseries cranking out dozens offerings each year, the pace to keep up is hectic. Only when space is limiting (i.e., everything is covered in hostas except where the house sits) will out-of-date types be moved into friends and neighbors yards in favor of incoming purchases. These can be \$50, \$100 or more per plant; bidding at a hosta society auction reportedly once topped \$1,200, a real Sotheby’s moment.

Collectors do not tell their spouses how much their hostas cost or share financial statements unless the spouse is also a hosta-a-holic. They would also rather have one new special plant than three less special ones for the same money. Needless to say, in the collector’s garden the perfect companion plant for a hosta is another hosta.



If you are new to hostas or want to see if you have the collecting gene, here are some ways to get started. Since many hostas look similar, use the ten foot rule: each hosta you acquire should look distinct from that distance. Experts estimate there are maybe 500 ten foot hostas, providing plenty to choose from. Or, seek out the American Hosta Growers Society’s “Hosta Of The Year” (for 2020 it is called ‘Dancing Queen’). If nothing else plant my old favorites: ‘Striptease,’ ‘Krossa Regal,’ ‘Sum and Substance’ and ‘Patriot’ will never let you down.

*Text and photos by David Chinery*



# What to do in JULY

\*It's the last chance to prune evergreens and fertilize roses.

\*Cut and preserve fresh herbs; they can be frozen or dried.

\*Since July is usually the hottest month, your garden plants are going to need some extra help. Eliminate all the weeds which are robbing valuable moisture from your plants and providing insects places to hide.

\*Keep weeding and re-apply mulch as needed.

\*Stake tall, tender plants.

\*Order bulbs for fall planting.

\*Divide bearded iris after flowering.

\*Since it has been hot and dry, raise your mower's height to highest setting to minimize turf damage, or skip mowing altogether.

\*Hand pick and destroy pineapple-shaped galls on spruce (spruce gall adelgid) before August.

\*Cut out and destroy brown, damaged leaders on white pine and spruce before late July to control white pine weevil.

\*Keep pinching off the seed pods of hollyhocks and phlox so they will bloom again in the fall.

\*"Deadhead" your annuals to encourage them to produce more flowers. This removal of spent blooms, accompanied by an application of fertilizer, will extend the beauty and pleasure of your planting farther into the autumn.

\*Container plants may also require pinching back. Even if there is a lonely flower at the end of a straggly, leggy stem, prune it! The plant will respond promptly with new, thicker growth and a much more attractive appearance.

\*It might be a good time to take a closer look at your houseplants. Whether they are inside or vacationing outside, they will respond nicely to grooming and feeding.

\*The insect world is thriving at this time of year. Be observant! If you already know these predators and how to treat them, go bravely into battle. If you have an insect pest that you either don't recognize or are unsure of the treatment, call someone who knows, such as your Cornell Cooperative Extension. The offices are listed at the end of this publication.



# Green Shots: The Gardening World in Pictures

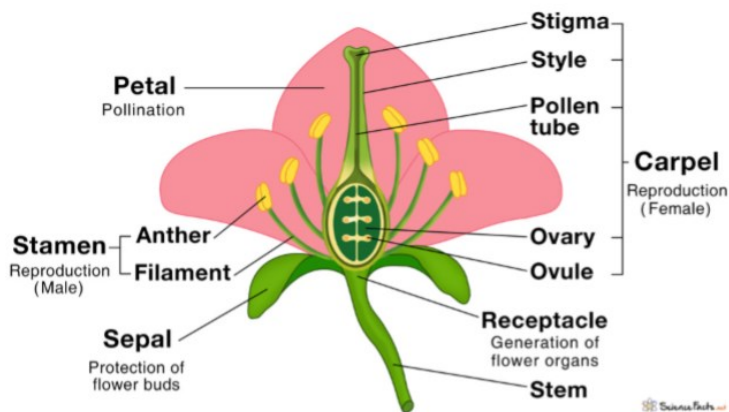


This month's photographs come to us from the garden of David Chinery, editor of "Root Concerns: Notes From The Underground." David writes, "The hot, sunny days of mid-July seem made for daylilies. Thanks to plant breeders, we now have daylilies in a myriad of colors and sizes, some with stripes, ruffles, and sparkles. Known botanically as *Hemerocallis*, daylilies thrive in full sun and rich soil, but will survive some light shade and dry soil, making them easy to grow. After flowering, most daylilies can be cut back severely, and they will then make a new clump of attractive foliage for the fall. A few will continue blooming well into August and September. They are best divided after blooming, when one daylily plant will yield offspring enough to populate a large garden bed. Enjoy their spectacular blossoms as the summer season reaches its zenith."



# Fruit, Veg or What?

Now, the first ripe tomatoes are being harvested. Yum! Botanically speaking, the tomato is a fruit, not a vegetable. How come? How can you tell the difference? A fruit is a mature ovary, whereas a vegetable was never a part of a flower. Let us pause and take a look at the diagram of a flower. The diagram of a flower labels “pollination” under the petal, but pollen is actually produced in the anther.



The female part of a flower is called the carpel/pistil). What, if anything, is the difference between a carpel and a pistil? I checked my botany book, the dictionary, Taylor’s encyclopedia and Wikipedia. I decided the best description of the difference is that a pistil may have more than one carpel (Wikipedia). See the carpel in the diagram of a flower (above). The carpel has an ovary, ovules, a stigma and a style. The sticky stigma traps pollen and the style elevates the stigma. After fertilization, an

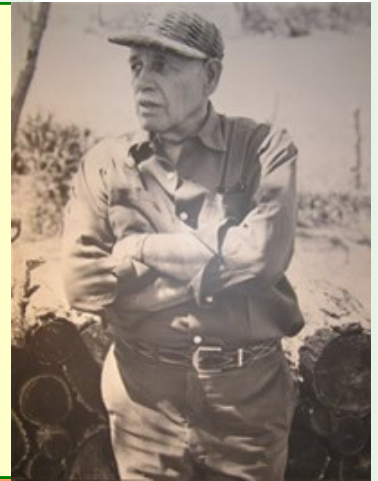
ovary matures into a fruit and the ovules mature into seeds. Fertilization requires an egg and a sperm. Where do they come in? Each ovule contains an egg. The sperm is brought to the flower inside a pollen grain. Pollen lands on top of a carpel, and a long pollen tube grows down (through the style) to the ovary. Once the pollen tube grows into the ovary, the sperm will be discharged into the ovules. So, if you count 27 seeds in a tomato, does that mean there were 27 fertilizations and 27 ovules in the ovary? Yes! So, if you see seeds in any plant structure, the structure is an ovary.

It seems strange to think of a green bean and a zucchini, etc. as a fruit, but, again, botanically speaking, anything containing seeds is a fruit. I think mankind has applied the word fruit to plants or plant parts that are eaten with sweets, whereas those plants or plant parts that are eaten with meat and potatoes, are called vegetables. There are some things (e.g. broccoli) that are difficult to classify botanically. In general we call them fruit or vegetable according to the food accompaniments.

I don’t care if you, as a botanist, call a tomato a fruit, or if you, as a gourmand, call it a vegetable. It’s still the same thing and most welcome to my taste buds as it comes fresh out of the garden.

*“You can’t be suspicious of a tree, or accuse a bird or squirrel of subversion or challenge the ideology of a violet.”*

*Hal Borland*



**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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