



Rush Ranch: Photo by Melinda Nestlerode

Seeds For Thought

FLOWERING HEIRLOOMS

Darrell g.h. Schramm, U.C. Master Gardener, Solano County

Not every gardener desires flowerbeds splashed with the modern, bold, garish, or neon-colored flora commonly sold in big-box stores today. Not every gardener hungers for giant carnations that bloom almost non-stop. Not every gardener wants the latest unscented sweet peas or freesias. Granted, the newest hybrid flowers may be wilt- or rust-resistant, but does the form, the size, the color complement the other plants in the garden? Does the new, larger or more floriferous flower compensate for lack of fragrance? These questions the devoted gardener may well ask.



Crown Imperial in John Edwards 'The British Herbal' 1769

Many an American gardener, no doubt still in the minority, prefers at least some heirloom garden blossoms. What are heirloom flowering plants? By heirloom I mean those grown before 1900 or so, whose traits—with some exceptions—are pastel or soft colors, single blooms rather than double or many-petaled blooms, and fragrance.

Most long-stemmed flowers of today have lost their scent. For instance, the old, floppy yellow and white freesias are magnificently scented, whereas the modern, taller and more thickly stemmed freesias have no fragrance at all. Florist roses are another example. And double flowers are more likely to be sterile, whereas single flowers (four to eight petals) produce seed. It is easy to save seed, and thus money, from most heirloom plants. Nonetheless, some single flowers readily mutate into doubleness, such as marigolds, peonies, poppies, primroses, stocks, and zinnias. Nature retains its own laws.

In 1677 London, William Lucas of The Naked Boy nursery published what is probably the first list of seeds for sale. Among

that list were seeds of 140 flowers, such as aconites, amaranth, anemones, Canterbury bells, columbine, foxgloves, French honeysuckle, gilliflowers, impatiens, larkspur, lilies, lychnis, nasturtium, poppies, scabious, snapdragon, and wallflowers. I mention all these to indicate how old some of the non-hybridized flowers in our gardens are.

In the American colonies by 1655, the Dutch, who had founded New Amsterdam and New Holland, were growing tulips, crown imperial (*Fritillaria imperialis*), certain lilies, violets, anemones, and both red and white roses. By 1760 Britain could boast home to over a hundred plant and seed nurseries while the colonies could claim at least two, John Bartram's Botanic Garden nursery outside Philadelphia (c. 1730) and William Prince's nursery in Flushing, New York (c. 1750). Pelargoniums, for instance, were sent to our first nurseryman and botanist John Bartram in 1760. While the wealthier colonists ordered and exchanged seeds and plants from England and Scotland, the other colonists, understandably, exchanged seeds and cuttings mostly with each other.



Anemone quinquefolia
Photo by Alan Cressler

Lady Jane Skipwith (1748-1826) of Virginia, who lived through the American Revolution, kept lists of the plants she grew in her various garden beds. Some of her flowers still available today are *Anemone quinquefolia* and possibly two imported from France at that time, *A. coronaria* and *A. hortensis*; *Trillium sessile*, the native *Viola pedata*, the original *Hibiscus Syriacus*, the

Virginia cowslip (*Mertensia virginica*), *Phlox divaricata*, and various other now-antique crocus, pansies, portulaca, verbena, violets, bulbs, and wildflowers too numerous to mention.

(Continued on Page 2)

Flowering Heirlooms.....	1
Preservation Pointers: Unexpected Edibles	3
Spotlight on Common Beneficial Insects vs Pests	4
Pearl Eddy, A Lifelong Learner and Adventurer	6
Worm Composting Basics	7

UCCE Master Gardeners' Dunnell Demonstration Garden:	
Fairfield, CA.....	8
Plants Do Talk	9
Magnolia Pilgrimage	10
Winter Gardening Guide	11

(Continued from Page 1 - Flowering Heirlooms)



Lilium philadelphicum. Photo by Jason Hollinger

Old lilies grown in the colonies were *Lilium candidum* (alias Madonna lily or Belladonna), which Thomas Jefferson also grew in 1767 along with *L. superbum*, the native American Turk's-cap lily. In colonial gardens could also be found the scarlet Turk's cap (*L. chalcedonicum*), the little Turk's-cap (*L. pomponium*), the tiger lily

(*L. tigrinum*) and *L. philadelphicum*, a native called wood lily or wild red lily, sold at Bartram's nursery in 1730.

Jefferson also planted Sweet William (*Dianthus barbatus*) and *Viola tricolor* on his estate. In fact, violets go back to ancient Athens about 400 BCE. Romans used *Viola odorata* to make wine. But Parma violets, my favorites, are not so old. 'Marie Louise' is from 1865 and 'Duchess of Parma' from 1870, both named for Napoleon Bonaparte's second wife. 'Swanly White' (also called 'Comte Brazza') is from 1880. Today Parma violets are usually available only from specialty nurseries.

Canterbury Bells (*Campanula medium* or *media*) dates at least to 1597. A white form of Jacob's Ladder (*Polemonium caeruleum* 'Album') from the 18th century is still in commerce. A white variety of Monkshood (*Aconitum napellus* 'Alba'), grown in England since the 1500s, was also grown in colonial gardens. (Monkshood can be propagated by division, but wash your hands after handling the poisonous roots.)

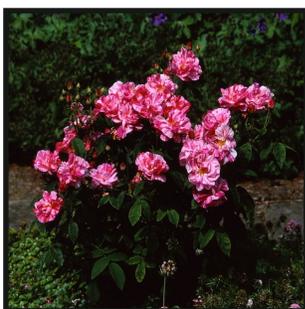
Of heirloom coleus, a decorative annual prized for its leaves, only one has survived, the Victorian variety 'Pineapple Queen'. Though most coleus prefer semi-shade, 'Pineapple Queen' is especially resentful of sun.

Gilliflowers—we Americans prefer to call them pinks or carnations—date to the 17th century. 'Bridal Veil' scented cottage gardens in the 1600s. By 1667, at least 23 varieties could be grown. 'Pink Inchmery' has been gardened since the 1700s, 'Batt's Double Red' since 1707, 'Cockenzie Pink' since 1720, 'Mrs. Sinkins' since 1868. Other heirloom pinks are available. Writer and garden columnist Vita Sackville-West considered 'Chaubaud', introduced in 1870, superior to all annual carnations.

I almost close with poppies, those wispy, crepe-textured beauties. Rather than Icelandic or Oriental poppies, I suggest growing Shirley poppies (*Papaver rhoeas*), developed in 1880: 'Sir Cedric Morris', for example, or the 1910 'Mother of Pearl'. These old strains will usually contain a pastel variation of the main color; thus, 'Mother of Pearl' among its silvery white blossoms

includes an occasional lavender or dove grey flower, as though an elegant bouquet by design.

But, being a rosarian, I must close with a few among hundreds upon hundreds of heritage roses. Like the other flowers mentioned, many of these roses bloom but once a year, in spring or summer. The red 'Apothecary's Rose' (*Rosa gallica officinalis*) dates back to the misty shadows of time. As early as 1633 it was growing in Virginia, and both Lady Skipwith and Thomas Jefferson grew it.



Rosa Mundi. Photo by Darrell g.h. Schramm

'Rosa Mundi', a red rose with white stripes (*R. gallica versicolor*) is a sport (mutant) of 'Apothecary's Rose'. Jefferson placed an order for it in 1791 from the Prince Nursery. The bright pink, deliciously scented 'Autumn Damask' (*R. damascena*) may date back to the time of Alexander the Great. As its name implies, after a springtime bloom, it displays its flowers again in

autumn. 'Great Maiden's Blush' (*R. alba*) is a thickly petaled, pale pink rose dating to about 1400. A deeper pink, very fragrant variety is called 'Cuisse de Numphe Emué', translated as Thigh of the Passionate Nymph.

A Moss rose, 'Nuits de Young', one of the darkest of all roses, a blackish-purple velvet, is a small and slender plant about two feet high. It does tend to sucker but can be grown in a large pot. The moss is most noticeable in the buds, and while the stems have no thorns or prickles, they are covered with a bristly, purplish-brown moss. The flowers, which bloom in summer, are fragrant.

Why plant flowering heirlooms? Because they display a subtle elegance, because they are usually fragrant, because they connect us to our history, because they are survivors. ❧



Nuits de Young. Photo by Darrell g.h. Schramm



UNEXPECTED EDIBLES

Pearl Eddy, U.C. Master Gardener and U.C. Master Food Preserver, Solano County

Surprises are always a lot of fun, especially when you are wandering around in the woods. It's fun to look for wild berries, mushrooms and other special edibles. In the summer you can look for the wild grapevines where clumps of muscadine grapes hang, ready to pick to be made into jelly. Wild blackberries can be eaten "as is" or frozen or made into jam or pies. Elderberries make tasty jams, jellies and syrups. Ripe rose hips make a lovely jelly. Bay leaves can be found on shrubs or small trees growing in the nearby foothills.



You do not have to leave home to find many unexpected edibles. In the early spring, look into your back yard or nearby vacant lots and you may find miner's lettuce, purslane, mustard greens, dandelion, lamb's quarters, and many other greens which are tasty and edible, and which provide many important vitamins and minerals. If you do not already recognize these and other edible wild plants, you should obtain a reliable book or look them up on the internet. Two helpful sites are <http://www.ipm.ucdavis.edu/PMG/WEEDS>, and <http://foragingpictures.com/plants>. Two excellent, illustrated books which are available on the internet are *Field Guide to Edible Wild Plants* by Bradford Angier, and *Edible and Useful Plants of California* by Charlotte Clarke. This latter book gives detailed suggestions and recipes for using the plants. A publication that I recently found might be useful too; it is entitled *Facts on Edible Wild Greens in Maine* and can be downloaded from this site: <https://extension.umaine.edu/publications/4060e/>.

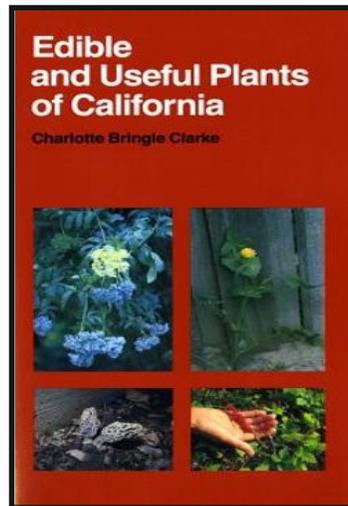
It is important to be able to identify plants which you intend to eat because some poisonous plants resemble edible plants. For instance, the poisonous water hemlock has flowers that resemble the edible cow parsnip. Some very useful plants have been introduced here in the past. These include the oyster plant (salsify) with roots that taste like oysters, the cardoon with stalks that taste like artichokes, and chicory which has beautiful blue flowers

in mid-summer. Chicory leaves can be used in salads, and the dried roots can be ground and used as a coffee substitute. Ground chicory was often added to the cans of coffee which I bought while living in the "deep south."

Some of the edible plants are excellent sources of nutrients, such as the miner's lettuce which is loaded with vitamin C and helped to prevent scurvy in the miners of the gold rush. Mustard greens are high in vitamins A, B, C, and antioxidants. The lower, young leaves are best, but more mature leaves can be used although they are stronger in flavor. One way to overcome the strong flavor is to simmer the leaves in water a few minutes, then pour off the water, and finish simmering in fresh water. Wild greens can be seasoned with salt, pepper and butter or bacon, or lemon juice or balsamic vinegar.

Another useful plant is the beavertail cactus which is found not only in our deserts but also in local rural areas and back yards. The flat green pads can be sliced and pickled or used as a cooked vegetable, such as the *nopales* used in Mexican recipes. The spines of the pads need to be removed with a paring knife or by holding the pads with tongs over flames from a gas burner, barbeque grill, or even a twisted up newspaper which has been set afire. The fruits (prickly pears) can be made into a jelly or syrup or candied.

There are dozens of useful and nutritious plants just waiting to be discovered and enjoyed. If eating them raw, don't forget to rinse them well in clean water. I hope you have as much fun as I do, "grazing" through our surrounding natural gardens. ☘



SPOTLIGHT ON COMMON BENEFICIAL INSECTS VERSUS PESTS

Paula Pashby, U.C. Master Gardener, Solano County

So...your garden is planted, everything is looking healthy, then the dreaded insect is spotted!

Many folks try to protect their precious plants from unknown insects by running down to the local hardware store to get some solutions. On impulse, they purchase some chemical product to kill the invaders before even knowing whether these guys are really pests for the garden, OR actually beneficial for the garden.

Prior to entering the Master Gardener program, I had a similar experience while spotting an insect on one of our new plum trees. It was black with orange spots and looked like a small alligator. My first thought was to somehow get rid of it and protect our new plumb tree. I had heard that I could purchase lady bugs locally, so thought I would do some quick research to see if lady bugs would take care of this problem. However, I quickly realized that I first had to identify what specifically was the problem or the insect that sparked an impulse alarm?



Larvae of **BENEFICIAL** Convergent Lady Beetle
Photo by Joyce Gross

I was surprised to learn that what I thought was a pest was in fact extremely beneficial to the garden, a Convergent Lady Beetle, *Hippodamia convergens* (aka Common Lady Bug) larvae. These small lady bug larvae are not pests at all! They are very useful to our gardens, feeding mainly on aphids, sometimes whiteflies, and other soft-bodied insects and insect eggs.

What other insects might we unintentionally eradicate, when not really necessary? It turns out that there are many beneficial garden insects that closely resemble our pest garden insects and should be encouraged to stay in the garden.

Some examples about this dilemma are how the Convergent Lady Beetle, *H. convergens* (aka Lady Bug) can be easily confused with the Multicolored Asian Lady Beetle, *H. axyridis*, or how the Spotted Cucumber Beetle, *Diabrotica undecimpunctata* differs from the Spotted Asparagus Beetle, *Crioceris duodecimpunctata*.

The tables on the opposite page show a quick distinction between the first four questionable insects:

BENEFICIAL Convergent Lady Beetle, *H. convergens* (aka Lady Bug)



Photo by Joyce Gross

Convergent Lady Beetles are very beneficial to the health of our gardens. They are native to North America and are an enemy of aphids, scales, thrips, and other soft-bodied insects. They are usually red or orange with black markings, and one of the most common local lady beetles.

INVASIVE Multicolored Asian Lady Beetle, *H. axyridis*



Photo by Joyce Gross

Asian lady beetles are invasive look-a-likes of common ladybugs. They were brought over to North America in the early 1900's to help control aphids, but have instead become somewhat invasive and tend to kick the beneficial ladybugs out of our gardens. These ladybug look-a-likes tend to be more pale and dark orange compared to the typical lady bug's bright red color and may, or may not have spots. Ladybugs have a head that is all black with little white cheeks, whereas Asian Lady Beetles have more white color on their "cheeks". And, beware – these guys can bite, exude a foul smell, and spot your walls with yellow chemicals! They also have a white "M" or "W" shape behind the head.

PEST Spotted Cucumber Beetle, *Diabrotica undecimpunctata*

This beetle could look similar to the common ladybug, however, it has much longer antennae than the ladybug and has a yellow back with black spots. They are **extreme pests** - when they hatch, the larvae feed on plant roots and feed on a wide variety of plants such as corn, legumes and grasses.



Photo by Gary McDonald

PEST Spotted Asparagus Beetle, *Crioceris duodecimpunctata*



Photo by Gary McDonald

Asparagus beetles are usually reddish orange with six black spots on each wing, have a larger head than the common ladybug. They are pests, feeding on tips of young shoots, and then continuing to eat the leaves of plant.

(Continued on Page 5)

(Continued from Page 4 - Spotlight on Common Beneficial Insects Versus Pests)

Now, here is a look at some other lookalike pest and beneficial insects – Stink Bugs!

BENEFICIAL Spined Soldier Bug, *Podisus maculiventris*



Photo by Gary McDonald

The spined soldier bug is a beneficial garden resident, easily confused with the pest; a brown marmorated stink bug. The visible distinction are the points on each shoulder of the spined soldier bug, compared to the more rounded shoulders of the marmorated stink bug. You may see this insect attached to plants, but they are usually just trying to get a drink. Otherwise, the spined soldier bug feeds on multiple pest insects in the garden, proving to be a huge beneficial resident.

PEST Brown Marmorated Stink bug, *Halyomorpha halys* (BMSB)

Brown marmorated stink bugs are pests and are a serious pest of many fruit and fruiting vegetable crops and many other plants, including cucumbers, pole/bush beans, raspberry, blueberry, and more. They are easily mistaken with the beneficial spined soldier bug. However, their shoulders are less pointy and somewhat rounded, otherwise very tough to differentiate. It can also be distinguished from the spined soldier bug by its two white bands on the antennae.



Photo by Al & Paula Avarado

BENEFICIAL Spined Assassin Bug, *Sinea diadema*



Photo by William Flaxington

Another lookalike is the spined-assassin bug, but despite their name, assassin bugs are quite **beneficial** in the garden. They feed on a wide variety of small to medium-sized insect prey, including caterpillars, leafhoppers, other bugs, and aphids. However, they can also prey on beneficial species.

BENEFICIAL Assassin Bug Nymph, *Sinea diadema*

The Assassin Bug Nymph is also **beneficial**, feeding on many pest insects, and could look like a small (beneficial) praying mantis nymph.



Photo by H. Vannoy Davis © 2005 California Academy of Sciences

(Mostly) BENEFICIAL Praying Mantis, *Mantodea*



Photo by Robert Pratts © 2002 California Academy of Sciences

Praying Mantis nymphs and adults are generally **beneficial** and feed on pest fruit flies, aphids and other small insects. They could also feed on garden beneficials, but tend to take more care of pest problems.

A ground beetle comparison:

(Mostly) BENEFICIAL Ground Beetle, *Carabidae*

Ground beetles are mostly **beneficial**, feeding on soil dwelling insect larvae and pupae, and other pests like snails and slugs. Their shape and color vary greatly. Adults are often black or dark reddish, although some species are brilliantly colored or iridescent.



Photo by Patrick Coin

PEST Darkling beetles, *Tenebrionidae*



Photo by Mark V. Leppin

Darkling beetles are dull bluish black or brown. They are less shiny than the beneficial ground beetles. They never have color patterns on the back. In most species, the segments at the tip of the antenna are slightly larger than segments at the base. Darkling beetles are found throughout California.

Darkling beetles are **pests** and chew off seedlings or feed on foliage of several different vegetable crops. Feeding in some fruit crops, such as figs, may also occur. They are most active at night but occasionally run on the ground in the daytime. They often hide under clods or debris during the hot parts of the day.

One last comparison: Often times we hear about the dreaded lace bug, a pest in our gardens, who feeds on the underside of leaves by sucking fluids from plants tissues. However, sometimes the “lace bug” is confused with the “lace wing”, not because of looks, but because of the name. ❧



Photo by Joyce Grass

Lace “Bug” is a **pest** who feeds on the underside of leaves by sucking fluids from plants tissues.



BENEFICIAL Green Lace Wing - Photo by Joyce Grass

Lace “Wing” adults and their larvae are **beneficial** insects that prey upon a wide variety of small insects including mealybugs, psyllids, thrips, mites, whiteflies, aphids, small caterpillars, leafhoppers, and insect eggs. ❧



BENEFICIAL Adult Brown Lacewing—Photo by Gary McDonald

PEARL EDDY, A LIFELONG LEARNER AND ADVENTURER

Kathy Low, U.C. Master Gardener, Solano County

"Life is either a daring adventure or nothing." – Helen Keller

You've seen her preservation articles each month in this newsletter, and you may have talked to her at a Master Gardener event. She's a Gold Badge Master Gardener and a Master Food Preserver. But how much do you really know about this fascinating resourceful woman? She graciously provided me with information on her background to share with you.

Pearl grew up in Vacaville and lived in the English Hills area with her grandparents on the old Hartley Fruit Ranch. It was there her gardening adventure began when she decided to single handedly take it upon herself to plant a lawn surrounded with perennial flowers and a single lilac tree. It became her "oasis" on hot summer days.

When she was twenty, she married a former classmate, John. Her husband was in the Air Force so for the next twenty five years she lived in various locations as a military spouse, but continued her gardening adventures. As she explains, "we tried gardening when we could stay long enough in one place, so my first effort was growing a patch of leaf lettuce in the sand in our Albuquerque back yard, but lost the battle with flocks of sparrows. At our first base in Mississippi, I discovered cockroaches that seemed the size of horses, but we failed at growing tomatoes. In Germany, I watched the farmers grow cool weather crops and potatoes in their fields, but they fertilized with 'night soil,' raw human sewage! Any local produce that we used had to be soaked in a chlorine solution. At a Texas border location, I managed to grow beautiful canna flowers, but discovered that a rattlesnake had taken up residence in the back yard. At another Texas location, near San Antonio, we successfully grew both peaches and bananas and were finally able to have a real vegetable garden while fighting an assortment of insects and mildew." Her most successful gardening experience was in Alaska. Despite having only a three month growing season, she was able to grow a variety of vegetables including sugar peas, broccoli and giant cabbages.

When her husband retired from the military, they decided to return to Vacaville. They planted an orchard and realized they



kumquat and loquat.

She has a collection of dozens of gardening books, but says she frequently uses the following University of California websites: Integrated Pest Management—<http://www.ipm.ucdavis.edu>, the California Garden Web—<http://cagardenweb.ucdavis.edu>, and the Home Orchard—<http://homeorchard.ucdavis.edu>.

Her food preservation adventures began as a child helping her grandmother can tomatoes and fruit, make pickles and process olives. Her preservation adventure continued while she was living in Alaska. There she learned from the University of Alaska's Cooperative Extension office how to make sauerkraut out of the huge cabbages she grew, freeze fresh moose (yes, moose!), and smoke, can and freeze fresh salmon.

After becoming a Master Gardener, she decided to expand her knowledge and become a Master Food Preserver. And again, she's constantly learning because of new ongoing research. Her favorite food preservation website is the National Center for Food Preservation <http://nchfp.uga.edu> which is considered the "go to" source for reliable information.

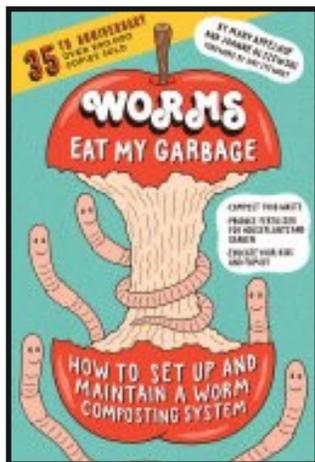
And, did I mention that during her lifetime of adventures she also earned degrees in home economics and business and taught those subjects in secondary school?

You can tell that Pearl enjoys volunteering and providing gardening and food preservation information to the public. As she says, "I really enjoy volunteering but often find myself saying: 'Just a minute—let me look that up.' Still learning!!!" ❖

WORM COMPOSTING BASICS

Tina Saravia, U.C. Master Gardener, Solano County

When I first started learning about worm composting, I was told that there was one, and only one book to learn from, Mary Appelhoff's Worms Eat My Garbage. She was the "expert" on worm composting. Fast forward to the present; there are now so many sources and so many 'experts' who've written articles, books, blogs, vlogs. There are numerous instructions for household worm composting and composting on a commercial scale. It's mind boggling.



Let's get down to basics. Worm composting is also known as vermicomposting (vermi is Latin for worms). The ideal earthworms to use are redworms - *Eisenia foetida*. They are smaller than the garden variety earthworms and are more suited to being in a contained space.

The earthworms we find in our gardens travel up and down the soil, opening up air space as they eat and digest dead roots, leaves and whatever organic matter they can eat, leaving trails of castings or poop. Redworms, on the other hand, travel more horizontally across the surface. We can find them at the edge of compost bins, especially when the compost is almost ready to harvest. They also show-up under potted plants.

Let's talk about containers. For household use, any covered plastic or wood containers with small holes on the sides and bottom will work. One important thing to remember is that worms don't have eyes. They sense light through their skin and don't like to be in bright light. (This trait is useful when harvesting worm castings, a.k.a. poop or fertilizer.) Containers need to protect the worms from bright light.

Bedding is used inside the container to help keep constant moisture. The worms' same light sensitive skin is also sensitive to dryness. Shredded newspaper is commonly used as it's readily available and easy to keep moist - have a container of water, dip the shredded newspaper for a minute or two, then take them out, squeeze like a sponge and spread in the bin.

Feed the worms vegetable and fruit scraps, breads - like pizza, without the pepperoni, used napkins, the list goes on. But, do not feed the worms animal products as they can attract rodents.

Now that we have the basics down, let's talk about a step-by-step direction for setting up a worm bin.

- * Get a worm bin. For a beginner, a covered rectangular plastic tote with 1/4" holes on the sides and bottom is an easy way to start.
- * Fill it with shredded (about an inch wide) soaked newspaper. This is also a good time to add a handful of soil, or plain dirt, to help the worms digest their food.
- * Add the redworms. 500 to 1000 worms is the usual recommendation to start with. After a day or two, start feeding a small amount of food scraps by setting aside the shredded newspaper/bedding, dropping the food scraps in, then totally covering afterwards. Keep in mind that 500 worms fits in a small 8 oz. yogurt container. So, your first feeding should not be too much more than what would fit in that cup.



Worm Composting Bin

Photo by Tina Saravia

The worms can eat the amount of their body weight in a day and they will start multiplying. Eventually, you can start giving them more food. Once the first batch is partially eaten, you can give them more food, right next to the first site by setting the bedding aside, dropping the food and

covering the scraps. This is very important to avoid fruit flies, bad smells and attracting animals, including pets in the area. Repeat this process until you get food scraps in the entire container. In about 2 or 3 months, you can start harvesting your worm castings.

I hope this article inspires you to get started with vermicomposting. You will likely have more questions and want more details. But no worries! There are plenty of resources to be had. Check-out your public library for books, go online, attend a Master Gardener class, buy a book, such as Mary Appelhoff's book. It's in it's 35th edition with up-to-date information both in print and digital format.

Most importantly, enjoy your worms. They're the most economical pets you'll ever have. They eat your "garbage." You don't have to buy feed, and they don't make a mess. Unlike my chickens... ✕

UCCE MASTER GARDENERS' DUNNELL DEMONSTRATION GARDENS: FAIRFIELD, CA

Sherry Richards, U.C. Master Gardener, Solano County

Solano County Master Gardeners Tina P, Melissa S and Sherry R completed renovation of a small demonstration garden at the Dunnell Nature Park and Education Center located at the corner of Hilborn Road and Hillridge Drive in Fairfield, CA. The Dunnell Nature Park is also known as the “Peacock Ranch”, or “Dunnell-Burton Ranch.” It’s a beautiful park open to the public and home to many peacocks, turkeys and other wildlife. There are woodlands, a grassland restoration area, a creek, overlook, adventure play area, demonstration garden and more.

The City of Fairfield makes the education center building classroom available each month for public education classes given by Master Gardeners. Additionally, Master Gardeners maintain the small enclosed garden demonstration area that has three raised-beds and a 3-bin compost system. The Master Gardeners plan to offer classes in the demonstration garden area, weather-permitting, throughout the year. Our first class in the demonstration area was held on October 19, 2019. More about that class below.

The demonstration area contains three raised planting beds: a pollinator garden; seeds, bulbs and plants bed; and, a dry creek bed. The three bin composting area has a working compost pile with lots and lots of worms and is composting nicely! (*Read more about worm composting on Page 5*). There are examples of bee houses and a bat house. We recently recycled a wood pallet into a planter. It was planted with *Graptopetalum paraguayense* “Ghost Plant” succulents, which grow well without being watered once established.

The pollinator and seeds, bulbs and plants beds are watered by a drip irrigation system we maintain inside the demonstration garden area. We removed irrigation from the dry creek bed because it is planted with succulents/cactus that need no watering except rainwater. Although, during a drought year the succulents/cactus might need a little additional water.

The pollinator bed has numerous plants attractive to pollinators: bees, butterflies, moths, hummingbirds, beetles, wasps, flies and bats. Some plants are: *Gaillardia aristata* (blanketflower), *Buddleia davidii* (butterfly bush), *Salvia ‘Mirage’*, and *Lonicera x heckrottii ‘Goldflame’* (honeysuckle). The seeds, bulbs and plants raised bed contains *Rosmarinus officinalis ‘Huntington’s Carpet’* (rosemary), *Trachelosperum jasminoides* (star jasmine - climbing vine), a variegated shorter type of canna lily (pink flowers), various types of flower bulbs and other plants. The dry creek bed is filled with succulents and cactus.

Master Gardeners held our first class in the demonstration garden on October 19, 2019, with about 30 attendees. The topic was dry creek bed installation and plant selection. The class included presentations by Master Gardeners Tina P, Melinda N and Torie K. Nancy F was also on-hand to assist. They provided information to the attendees about succulents or cactus which were then planted in the dry creek bed. The basic design, weed prevention landscape fabric, rock placement and sand and other material for the dry creek bed had previously been installed during the summer.

Some of the critters in the nature park are busy eating or “sampling” select plants. We think ground squirrels are doing most of the plant munching. We are not judging or pointing fingers at the squirrels – they are busy doing what squirrels do! Some flower bulbs were placed into wire gopher cages by Melissa S and it’s fun to see how many places the animals will dig down around the cage to see if they can get in to eat the bulbs! We don’t mind sharing a little and don’t mind a bite or two out of a plant, and we remain optimistic they won’t eat a whole plant or its roots!

The many peacocks who call Dunnell home can’t get in the demonstration garden because of fencing and overhead netting - they are innocent and sticking to their story! They do try to wander in occasionally when we are working out there when the gate is open.

We hope you will go by and visit the demonstration garden area and park, attend one of the Master Gardener monthly classes in the education center or classes in the demo garden area. For information about classes given by Master Gardeners at Dunnell and in other locations in Solano County please check our website at <http://solanomg.ucanr.edu>, or in the quarterly issues of this newsletter. ❖

Dunnell Demonstration Garden
“Before”



Dunnell Demonstration Garden
“After”



PLANTS DO TALK

Spring Tseng, U.C. Master Gardener, Solano County

Just for fun, every year, we would plant a few new types of vegetables in our small backyard. This year, we experimented yellow squash and sweet yam. And let me tell you, plants do talk!

The seed packet of yellow squash is a gift from CARE. Three seeds germinated and quickly grew flowers and fruits. Gold in color, the squashes stood out from their dark green leaves. Sizes ranged from tiny to six inches; each squash carried a unique look which was different from the others.



Family of Four

When the leaves flourished, so did the beautiful purple flowers. The pot turned out to be a lovely decoration in the yard. When we finally decided to harvest the yam, we found it all surprises.



Mommy I Love You

The daughters from the purple sweet yams turned out to be white and the shapes were so shocking. I thought the change of color might be due to local soil and water. As for the odd, twisting shape, it must be caused by

the clayish soil that hindered the growth. Although, without the hardship, we wouldn't have gotten this stunning harvest.



Dad, Can I Go Out to Play?

'Mommy I Love You' showed a small yam whispering into its mom's ear. It is so sweet! 'Can I Go Out Play' and 'Son, Be Careful Out There' were the dialogue between a father and his son. Look at those gentle eyes and posture and you can feel the love shared between them. 'Let's Go to Disney' is a family of three planning for a vacation. I wish them a memorable one!



Son, Be Careful Out There

This year, I walked into a secret garden where Plants Talk. What a wonderful gift from our nature. ☺



Let's Go To Disney!



Three's Company

All photos in this article by Spring Tseng

'Three's Company' reminded me of the popular TV show. I couldn't help wonder, which one was Jack and which one might be Janet? 'Lean on Me' showed one squash leaning on the other for comfort and support, and was very touching. Oh, wait, isn't there a song bearing this name by Bill Withers? Yes, we all have sorrow and moments of weakness. Lean on me, and we would all get better.

I shared "Family of Four" with my niece Jean. Jean was so amused because she and her husband Oscar had two small sons. And the photo of the squashes was like their family portrait but a vegetable version!



Lean on Me

We continued to harvest the squashes and shared them with our neighbors and friends. I also sent them my favorite recipes. This completed my mission of gardening. It has been a very good year.

We cut the sprouting sweet yam into small pieces and planted them in a large flowerpot. We had heard so much about the benefit of eating yam leaves, for fiber and all. Therefore, the plan was to harvest the leaves for food.

UC MASTER GARDENERS WILL ANSWER QUESTIONS AND PROVIDE INFORMATION THROUGHOUT THE SEASON

VALLEJO FARMERS MARKET

Saturday's 9:00am to 2:00pm
Georgia and Marin Streets
(Rain cancels)



SECOND ANNUAL SUCCULENT EXTRAVAGANZA Succulent Plant Sale and Education Event

May 2, 2020 — 9:00am to 1:00pm
University of California Cooperative Extension Office
501 TEXAS STREET, FAIRFIELD



The public is invited to this free event! Hundreds of beautiful, well-maintained, succulents and cactus (many rare and unusual) will be available for sale. Seminars on plant care Silent Auction. Cash or check only.

MAGNOLIA PILGRIMAGE

Patricia Matteson, U.C. Master Gardener, Solano County



A Garden Resident Exults

All photos in the article by Michael Zeiss

Each winter, lovers of genus *Magnolia* make a pilgrimage to the San Francisco Botanical Garden in Golden Gate Park to see the magnificent trees in bloom. Magnolia is the Garden's signature flower. The Garden has the world's most important collection of magnolias outside China—home of the majority of species—and the fourth most significant collection of species for conservation purposes. Many are rare and historic.

Magnolia is a big (over 200 species), horticulturally important genus of trees and shrubs. There are three main types: evergreen magnolias such as the American native and garden favorite, the southern magnolia *M. grandiflora*, with its glossy leaves and big white blossoms; deciduous magnolias often inaccurately called “tulip trees,” covered with saucer-like flowers on bare branches during bloom (*Liriodendron tulipifera*, another American member of family *Magnoliaceae*, is properly referred to as “tulip tree”); and deciduous magnolias with star-shaped flowers, such as the star magnolia *M. stellata* and its varieties. The natural diversity and beauty of magnolias are continually enhanced through hybridization. Most have large, showy blossoms that may be purple, red, pink, white, yellow, pale green or a combination of those colors.



Even Magnolia Buds Are Lovely

Magnolias are among the most ancient plants on earth. Family *Magnoliaceae* dates back 95 million years, and 20 million-year-old fossilized specimens of *Magnolia* have been found. They are older than bees! Botanists theorize that their exceptionally robust flower structures evolved to withstand damage from beetle pollination. Their great age also means that magnolias have survived all manner of natural upheavals including continental drift, the rise of mountain ranges, and ice ages. That probably accounts for their oddly disjunct natural range. The

main center of distribution is East and Southeast Asia, but there are also native magnolias in eastern North America, Central America and the Caribbean, and South America.

Accordingly, every magnolia pilgrim's quest takes them on a near-comprehensive tour of the San Francisco Botanical Garden collections, including the Ancient Plant Garden. *M. grandiflora* is one of the magnolias that grace the Garden of Fragrance with their perfume. Magnolias are on show in many other plant collections as well: Temperate Asia, Southeast Asian and Mesoamerican Cloud Forests, the Camellia and Rhododendron Gardens, and—perhaps the most exquisite—the Asian-styled Moon Viewing Garden. There, a still pond is surrounded by white-flowering tree and shrub magnolias, including *M. stellata*-type blooms with graceful, strap-like petals.



Blossoms of a deciduous “Tulip Tree” *Magnolia*

Magnolias in the San Francisco Botanical Garden bloom from mid-December through the end of March. At the ticket kiosk, pilgrims are given a Magnificent Magnolias Highlights Walk map of the gardens showing numbered locations of about two dozen species and varieties. Finding them can be like a treasure hunt. One often spots a spectacular canopy of blossoms from afar, but when the flowers have already dropped or are still only graceful furred candles, it can be challenging to locate mapped trees, each near a numbered sign and

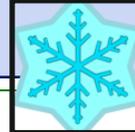
labeled with species information. Additional magnolias can be located using the Plant Finder interface on the Garden Web site: <https://www.sfbg.org/plant-finder>.

Even in winter the Botanical Garden is beautiful. Sunny benches offer rest and contemplation of sweeping garden views. A surprising number of plants besides magnolias are in bloom: the fragrances of Narcissus and Daphne sweeten the air; pale green flowers of the Christmas rose (*Helleborus*) crowd beds; cascades of pink blossoms dangle from freshly leafed-out branches of the native gooseberry *Ribes sanguineum*; reddish-purple-barked manzanita (*Arctostaphylos*) is covered with clusters of tiny urn-shaped flowers. Hummingbirds are everywhere. The magnolia pilgrim is rewarded with delight and balm for the spirit. ❖

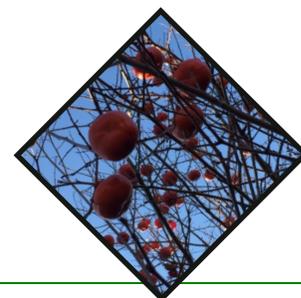




WINTER GARDENING GUIDE



	JANUARY	FEBRUARY	MARCH
P L A N T I N G	<ul style="list-style-type: none"> ◇ Sow California poppy (<i>Eschscholzia californica</i>) seeds for spring color ◇ Sow indoors cool-season edibles such as chard, kale, and lettuce ◇ Plant winter blooming shrubs; purchase now while in bloom to see what you are getting ◇ Harvest citrus as it ripens—taste for flavor 	<ul style="list-style-type: none"> ◇ Plant summer bulbs such as gladiolus, cannas, ranunculus, anemone, dahlia, lily, tuberous begonia and delphinium ◇ Plant leaf crops like lettuce, cilantro, beets, carrots, chard, peas, and spinach directly in the ground ◇ Indoors, start seeds of eggplant, peppers, and tomatoes. Transplant outdoors in 6 to 8 weeks ◇ Plant berries: raspberry, boysenberry, and blackberry 	<ul style="list-style-type: none"> ◇ Almost any plant (except tropical) can be planted now. Start seeds of old-fashioned favorites such as apricot foxglove, bachelor's button, blue flax and Oriental poppies. Summer sizzlers like cosmos and zinnias also grow more vigorously from a seed start and catch up fast to nursery-started plants ◇ Plant warm season annuals like ageratum, marigold, petunia and sunflower ◇ Switch out cool-season vegetables for corn, beans, peppers and tomatoes
M A I N T E N A N C E	<ul style="list-style-type: none"> ◇ Prune deciduous plants while dormant to keep grapes, roses, fruit and shade trees shapely ◇ Check mulch. Add more to paths and beds for weed suppression ◇ Protect tender plants when cold nights are predicted. Water well—dry plants are more susceptible to frost damage ◇ Fertilize azaleas after bloom; cymbidiums with 1/2 strength fertilizer every week or so ◇ Collect rain water to use on your garden 	<ul style="list-style-type: none"> ◇ Pinch fuchsias through March; for every stem you pinch, you'll get 2; for every 2 you'll get 4 ◇ Fertilize: citrus and fruit trees, cane berries, roses (only after you see new growth begin) ◇ Fertilize fall planted annuals and perennials, and established trees and shrubs with an all-purpose fertilizer. Wait on azaleas, camellias, and rhododendrons until after bloom ◇ Mulch exposed areas to prevent weed seeds from germinating ◇ Repot cymbidiums if necessary 	<ul style="list-style-type: none"> ◇ Fertilize almost everything ◇ Flowering and fruiting plants need phosphorus-rich fertilizer ◇ Green leafy plants such as lawns and lettuce require nitrogen ◇ Root plants such as potatoes, beets, and bulbs appreciate a handful of potassium. Read the labels. ◇ Once soils have dried out, give your irrigation system a tune up. Then set to water deeply and infrequently to encourage deep root growth
P R E V E N T I O N	<ul style="list-style-type: none"> ◇ Control snails and slugs by eliminating hiding places, or hand pick ◇ Use a dormant spray to control over-wintering insects on deciduous plants. Control peach leaf curl with lime sulfur or fixed copper. Follow directions for proper application ◇ Spray roses with dormant oil to control over-wintering insects such as aphids, mites and scale. Thoroughly coat trunk, branches, and twigs. 	<ul style="list-style-type: none"> ◇ Snails and slugs are dormant two times a year, during the hottest part of summer and during the coldest weeks in winter. This is about the time they head out for feeding. Get out early and hand-pick ◇ Don't prune out any frost damaged growth for another month or so—the outer dead foliage may protect healthy growth beneath from further frost damage 	<ul style="list-style-type: none"> ◇ Now is the time to get a jump on insect infestations; check for signs of aphids (distorted new growth and tiny, often green or black insects) and spittle bugs (under white foam on stems). Both can be effectively sprayed off with a garden hose ◇ Handpick snails at night, or use bait—follow all directions



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SEEDS FOR THOUGHT



**WINTER
2020**