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Coordinator Corner

Marcy Sousa, Master Gardener Coordinator

Trying to find something to do to beat the heat? Our Master Gardener newsletter is jammed packed with helpful tips and articles. Grab a glass of iced tea, sit down and relax with the newest issue of *Garden Notes*.

If you have been thinking about becoming a Master Gardener, now is the time to get your application in for the 2017 training. Applications are due by October 14th. We only offer the trainings every other year, so don't miss out!

Our Master Gardener volunteers have been hosting information booths at the local farmers' markets in Stockton and Tracy. If you are there, swing on by and say hello! Our weekend workshops are in full force, and we are working on many projects throughout the county.

July marks the beginning of a new calendar year for our program. Since July of 2007, our Master Gardeners have volunteered over 40,000 hours and have earned close to 12,000 hours of continuing education. We are growing in our outreach and projects that we are involved in. Make sure to give us a call if you need help with a local gardening project.

We hope you are enjoying those summer fruits and veggies that are starting to ripen in your garden! Perhaps you are eating a fresh juicy tomato as you are reading this issue of *Garden Notes*. Happy Gardening!



The Magic of Gardening

Susan Price, Master Gardener

Enriching lives and forging connections with family, neighbors and communities

Unlike politics and religion, the shared love of gardening brings people together. It is a universal language that unites people of different ages and backgrounds. Its magical powers extend to your over-all health, with improved well-being just one of the many benefits of social gardening.

Neighbors and acquaintances often become friends when sharing seeds, cuttings, plant divisions, and crops. How good do we feel when we give or receive home-grown tomatoes or bags full of freshly picked peaches? What could be more appreciated than a jar of homemade salsa

or chutney? These gifts often come with recipes and advice, ideas and inspiration, many times leading to lasting friendships.

There are countless examples of neighbors extending their generosity to help their fellow gardeners. For example, a group of neighbors with limited space for growing vegetables might allocate different crops with the idea of sharing the bounty. Likewise, one person might grow a particular fruit tree that's necessary to pollinate a nearby neighbor's tree. This level of sharing and cooperation is not hard to find amongst neighbors with a strong sense of community and a passion for gardening.

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Garden Chores

Sue Davis, Master Gardener

Keeping your garden and landscape healthy and attractive with less water during hot, dry weather can be a challenge. Here are a few ideas about summer chores that may help.

July Ideas

Plant –

If you are [growing your own vegetables](#), keep your vegetable plot healthy by planting flowers nearby that attract beneficial insects. Good options include Coreopsis, Cosmos, goldenrod, marigolds, sunflowers, and yarrow. Dill, golden marguerite, coriander, and Queen Anne's lace are especially attractive to lady bugs. Plant the flowers in clusters near your vegetable plot and water with a drip line. If you haven't already set up a drip system with a controller, you'll want to do so right away to save water and still have delicious edibles.

Broccoli, cauliflower, cabbage, and Brussels sprouts should be seeded in flats around July 1. They can be transplanted to the garden at the end of August or early September.

Maintenance –

Mulch if you haven't already done so. Spread a 2- to 4- inch layer of organic matter (such as fine or shredded bark) over garden beds now to conserve moisture, cool plant roots, and discourage weeds. To prevent rot, don't pile the mulch against stems and trunks of plants.



Summer watering can kill mature native California oaks. If you can't keep the entire area under the tree dry, be sure no water gets within 10 feet of the trunk. The danger of root rot is greatest when the area near the trunk is wet.

Every other week (14 days), deeply irrigate mature fruiting and most ornamental trees if you have clay-loam soil; more often if you are in an area with sandy or sandy-loam soil. Mature, drought tolerant trees need deep watering only once a month or so. Check your container plants daily.

Apple, peach, pear, and plum trees may be laden with fruit this month. To prevent limb breakage, use wooden supports to brace sagging branches. Regularly clean up and discard fallen fruit to discourage diseases and pests.

Mophead Hydrangeas (those with the big, round blooms) produce flowers on the previous year's growth – the "old wood." To shape and control a mature (5 years or more) plant's size and to avoid cutting off next year's flower buds, prune stems back to

12 inches right after the blooms fade this month. Fewer, but larger flowers will grow next spring if you cut some of the stems back to the base of the plant.

Prune flowering vines such as wisteria, passion vine, or Hardenbergia. Summer pruning of new growth keeps vines under control and increases flowering next spring. To extend the height or length of the vine, select some of the new streamer-like stems and tie them to a support in the direction you wish to train the plant. Then cut back the rest to within 6 inches of the main branches.

A quick irrigation audit of your lawn area will be worthwhile to determine if your sprinklers are working properly and giving good coverage. There have been numerous efficient sprinklers introduced in the last few years. Some only require a change of the nozzle, not the entire sprinkler head, when repairs are needed. Check with your local water provider to see if they are offering partial or complete rebates for changes to efficient sprinklers.

Lawn disease or pest problems will usually appear as spots that have a defined edge to the damaged area. If a pest is the problem, it will most likely be found along green grass just outside of the damage. Evidence of caterpillars (or their scat). If pest problems persist, look into what cultural changes you could make to reduce susceptibility in the future.

Shocking your lawn with a high nitrogen fertilizer at this time of year can cause negative results. [Fertilize](#) only if needed with either a slow release or an organic fertilizer.

In August

Plant –

Choice perennials for late-season color in our area include Aster, Chrysanthemum, Coreopsis, daylily, Gaillardia, sage (such as *Salvia guaranitica*), summer Phlox, and Verbena.

Sow root vegetable seeds for fall and winter harvest. Beets, carrots, turnips, and fast-maturing potatoes planted now should yield a crop by Christmas.

Beet varieties that do well in our area are those with 60 days or less from seed sowing to maturity (as listed on the seed packet). Carrot lovers might try growing white, yellow,



orange-red, or purple varieties from seed. Lee Miller's article, [Planning and Planting a Cool Season Vegetable Garden](#), in the 2013 summer issue of this newsletter, provides additional information.

[Continued on pg. 15](#)

Savvy, Sassy, Succulents!

Marcy Sousa, Master Gardener

Finding the right gift for plant lovers can be tricky, especially when they already have more plants than they need. Succulents thrive in the simplest of environments as one of the easiest plants to take care of. These unique gifts will last much longer than a store bought flower arrangement and will be sure to make the recipient happy for months and years to come!



Many succulents take to unusual, non-plant containers – so much better than typical houseplants. Look for containers at antique stores and thrift shops, such as vintage tins and the beds of toy trucks. A hollowed out piece of wood or log makes an attractive centerpiece. Drainage is very important for the root system of succulents. You may need to punch holes or add an initial bottom layer of pebbles, rocks, or sand before adding the recommended cactus potting soil.



Succulents make a unique and attractive wreath. These require a few months to become established and fill in. Instructions can be found just by searching the internet. [Click here](#) to find easy DIY instructions for the wreath we have pictured.

A succulent sphere (see below) is an eye catching piece to add to any garden. This project requires some time and patience to allow the succulents to fill in. [Click here](#) for easy step-by-step directions.

Terrariums look beautiful and there are so many options to make them easily and inexpensively using any number of items. A glass bowl is a good base and you can select different shapes. [Click here](#) for some great resources on making your own terrarium.

There are so many fun options when it comes to finding a succulent gift. The sky is the limit with what you can create with these wonderful plants.



Pests of the Season

Julie Schardt, Master Gardener

Raccoons and Opossums

In the middle of the night, your backyard motion sensor light clicks on, but you can't spot what might have caused the disturbance. The next day, your garden soil is pocked with small holes and the cat's water dish is clouded with dirt. Stealthy urban interlopers - opossums and raccoons - have entered your yard in search of an easy meal. And if they find fruit or vegetable gardens, they've hit the jackpot.

Raccoons have a special love for sweet corn. They will make themselves a nuisance by toppling the stalks and gnawing on the ears. Both raccoons and opossums also devour summer squash and fallen tree fruit, leaving big bite scars as evidence of their presence.

To reduce your garden's attractiveness to these pests, make your yard a less appealing habitat. Thin out overgrown shrubbery to reduce cover. Eliminate easy snacking by removing pet dishes at night and picking up fallen produce. These resourceful creatures can easily find their way into garbage cans; secure can lids with a bungee cord to thwart their exploration. Install a spark arrester to keep these clever climbers out of your chimney. Cover pet access doors or open spaces under porches with tight screening to keep them from nesting in these tempting spots.

Unfortunately, there are no effective commercial chemical repellents available for raccoons or opossums. If modifying their habitats is unsuccessful, consult a professional wildlife control operator to trap and remove them. Or, how about adopting a canine friend to help scare these critters away? For more information on controlling [raccoons click here](#), [opossums click here](#).



Raccoon damage on zucchini

Oxalis corniculata (Creeping Woodsorrel)

You've probably seen it in your yard - under ornamental plants, around garden vegetables, and in sidewalk cracks. Creeping wood sorrel (often simply called *oxalis*) is a perennial plant that resembles clover. It grows low to the ground in both sun and shade and forms roots and stems where nodes contact even tiny amounts of soil.

Oxalis leaves are green to purple and made up of 3 heart-shaped leaflets attached to the end of a long stem which fold inward in intense light or at night. Its small clusters of yellow, five-petaled flowers grow on short, slender stalks, blooming throughout the year, but primarily in spring.

This insidious weed is difficult to control. In most gardens, removing established plants is enough to manage woodsorrel, as long as plants are controlled before they flower. In difficult cases, you may need to carefully apply pre- or post-emergent herbicides. In turf grass, *oxalis* presents a special challenge: It can survive and set seed even when mowed as short as 1/4 inch. Consult the [UC IPM pest management guide](#) for details about managing *Oxalis corniculata*.



Mature Oxalis with flowers

Leaf Spot

If you're lucky enough to have blackberries growing in your garden, summer is the time to anticipate a juicy harvest. But your crop might be endangered by *Mycosphaerella rubi*, a fungus awaiting the right conditions to appear as Leaf Spot lesions on the leaves and canes of the blackberries.

Leaf spot lesions are small (3-4 mm in diameter) spots with brown or purple margins and a whitish center. When mature, they exhibit miniscule black fruiting bodies. Symptoms usually appear late in the growing season. Affected plants have reduced vigor and may lose leaves prematurely, leading to sunburn of canes.

To limit the disease's spread via wind and water splash, avoid overhead irrigation. Prune away and destroy old wood after harvest and before fall rains. If chemical controls are necessary, look for fungicides used to control anthracnose and Botrytis gray mold, or a fixed copper fungicide labeled for use on berries. [For more info, click here](#).



Leaf spot on raspberry

Plants of the Season

Sue Davis, Master Gardener

LARGE SHRUB

Bush Anemone (*Carpenteria californica*); Family: Philadelphaceae (mock orange)

Plant Information: This California native and [UC Davis Arboretum All-Star](#) is common in dry granite ridges in the southern Sierra Nevada foothills. It's a large evergreen shrub that grows up to 8 feet tall and wide. During late spring through early summer, it bears numerous, sweetly fragrant, 3-inch-wide, bright white flowers with prominent yellow stamens. It's attractive even when not in flower, having 4- to 5-inch-long, lance-shaped, dark glossy green leaves. Bush anemone makes an excellent understory planting under tall trees, or it can be used in multiples as a screen. The compact variety 'Elizabeth' has larger flowers and reaches 5 feet tall and 3 feet wide.

Optimum Conditions for Growth: The Bush anemone needs a location with light dappled shade or full afternoon shade. It requires well-drained soil and performs best when planted in sandy soil, but will tolerate clay in a raised bed or on a slope. It prefers only occasional deep irrigation once established, and will suffer in wet soil conditions. This shrub has a naturally open habit; prune back by one third after bloom to encourage fuller appearance. Do not fertilize, since this will lead to rangy growth. Drip irrigation is best, since overhead spray can encourage fungal problems.



SUB-SHRUB

Russian Sage (*Perovskia atriplicifolia*); Family: Lamiaceae (mint)

Plant Information: The common name of this plant is misleading: it doesn't come from Russia (it is actually native to south-central and southwestern Asia) and it's also not a true sage (but it is closely related to plants in the *Salvia* genus). It's an attractive and vigorous plant, producing numerous, upright, 3- to 4-foot-tall stems with a feathery appearance. The foliage is grayish-green, pleasantly aromatic, and pest-resistant; the tiny, fuzzy blooms are lavender-blue and appear in long sprays at the ends of the stems. Russian sage is wonderful for a pollinator-friendly garden since it attracts honeybees, butterflies, and other beneficial insects. It's also an excellent selection for the back of a perennial border. The most common Russian sage cultivar is the award-winning 'Blue Spire.' Some smaller garden selections with varied foliage or bloom color are 'Lissvery,' 'Lisslitt,' 'Little Spire,' and 'Lacey Blue.'

Optimum Conditions for Growth: Russian sage is adapted to well-drained, nutrient-poor soils, and it's very tolerant of heat and low-water conditions when established. Do not fertilize, and irrigate only lightly in summer. Plants are partly deciduous and should be cut down to a few inches above ground in late winter or early spring (after last frost), for regrowth in spring.



GROUNDCOVER

Silver Carpet (*Dymondia margaretae*); Family: Asteraceae (sunflower)

Plant Information: This is a durable, fleshy-stemmed, evergreen groundcover that grows slowly but eventually forms a thick, cushiony 3-inch-tall mat that can handle light foot traffic. Its common name comes from the foliage, which is narrow and arched, grayish to bluish-green on top, and cottony white on the underside. It blooms sporadically from late spring through summer, having daisy-like bright yellow flowers that remain at the surface of the leaves. It can be used as a large-scale groundcover, as a filler between large stepping stones, or even as a surface-covering accent in large planters. Although it's native to South Africa and has little wildlife value here, it's still a great landscaping option.

Optimum Conditions for Growth: *Dymondia* thrives in full sun to light shade. The deep taproots make it very resistant to drought stress, and although it does well with little water, it will grow and fill in more quickly if watered regularly. It prefers well-drained soil, but it can also tolerate many soil types including clay. This groundcover is virtually maintenance free, and it needs only occasional trimming back around the edges to control its spread. It is also usually pest and disease free, but it can be bothered by gophers.



Epiphyte Plants Can Add Variety Indoors & Out

Susan Mora Loyko, Master Gardener

Looking for an interesting houseplant or something different in the garden, but you don't have the time to devote to gardening? Maybe a few epiphytes could be just right for you.

Found in both tropical and rainforest settings, epiphytes (sometimes referred to as air plants) dangle from trees or cling to rocks or other plants with no firm grip on the ground. Like a parasite, epiphytes grow on a host, but unlike a parasite, they rely on nutrients from the air, falling rain, and compost that lies on tree branches.

Epiphytes use the host plant, rock, or any other structure for support, but produce their own energy from photosynthesis. They are usually found on the branches, trunks and leaves of trees. Some even live in desert terrain gathering moisture from fog. The name 'epiphyte' comes from the Greek word 'epi' - 'upon' and 'phyton' - 'plant.'

The competition for light, air, water, nutrients, and space is fierce. Therefore, some plants have evolved to become epiphytes to take advantage of high spaces and upper story light as well as moisture-laden air. Leaf litter and other organic debris catches in tree crotches and other areas, making nutrient-rich nests for epiphytes.

Their epiphytic way of life gives these plants advantages in the rainforest, allowing them access to more direct sunlight, a greater number of canopy animal pollinators, and the possibility of dispersing their seeds via wind. Different types may grow on the same tree, including orchids, cacti, bromeliads, aroids (philodendrons), lichens, mosses, and ferns. They begin life in the canopy from seeds or spores transported by birds or the wind.

There are literally thousands of epiphytes throughout the world, as well as numerous un-cataloged species. Orchids are the most diverse group of flowering plants, with over 18,000 species, representing about 8 percent of all flowering plants found worldwide.

Epiphytes are superbly adaptable to the often-harsh conditions of the canopy, which can include the serious lack of water and the shortage of minerals and nutrients. Many species, like the orchids, have developed structures to conserve water. Some have thick stems that store water; others have leaf hairs that effectively close the plant stomata when it is dry.

To counter the lack of nutrients, plant species have either developed symbiotic relationships with animals or have mechanisms, like a basket shape, for catching fallen debris (which decomposes and provides sustenance). Nutrients are also provided by falling rain.

Epiphytes produce far more seeds than their grounded counterparts because many of their seeds fail to reach places to grow. Epiphytes grow most readily in cracks, grooves, crannies, and pockets where organic debris has collected providing nutrients for initial growth. There is an abundance of canopy compost created by the decay of fallen leaves, wood, and animal waste. The layer of mulch provides moisture and trace minerals for epiphyte growth.



Fallen tree leaves and insects which have drowned in the water pooled in the center of a bromeliad.

In rainforests, giant philodendrons wrap themselves around trees but are still not tethered to the ground. The adaptations of epiphytes allow them to grow and flourish in areas where the ground is difficult to reach or is already populated by other plants. Epiphytic plants contribute to a rich ecosystem and provide canopy food and shelter. Not all plants in this group are tree epiphytes. Plants such as mosses are epiphytic and may be seen growing on rocks, the sides of houses, and other inorganic surfaces.

Another commonly grown epiphyte is the bromeliad, probably the most well-known is Spanish moss, which uses its roots as anchors. The roots grasp and fasten securely to the substrate. Bromeliads have special scales on their leaves called trichomes to take in water from the air. Many epiphytic bromeliads (the tank bromeliads) also have a rosette shape that forms a central cup or tank. The central cup collects water and debris that decomposes and provides nutrients.

Many species of epiphytes are becoming more common as houseplants and in the garden due to their unique beauty and ease of care. Epiphytes for the home interior are often mounted, generally on bark, wood, or cork. It is creative and fun to learn how to mount epiphytic plants. Mounting provides the best way to view them, giving the plant the aerial situation it requires, and assists in epiphyte plant care. Choose mounts that are porous and free of chemicals and salts. The mounting medium will depend upon the size of your plant, the weight of the medium and durability. For the most part, driftwood, cork and large pieces of hardwood or bark will provide adequate homes for the plants

For any epiphytic plant, try to mimic its natural habitat. For example, epiphytic orchids grow in shredded bark and need average light and moderate moisture. Take care not to overwater epiphytes since they supplement their moisture needs from the air. Humid conditions often provide all the moisture a plant will need. Since the plants gather much of their moisture from the air, place them in moderate light in the bathroom where they can get water from shower steam. Assist the plant by misting the air around it or putting the pot in a saucer of rocks filled with water.

Beneficial Insects—Ladybird Beetles

Kathy Ikeda, Master Gardener

Past articles for this column have covered some fairly unusual insects, but the series wouldn't be complete without mentioning what is probably the all-time favorite: the lady beetle or ladybird beetle, commonly referred to as the "ladybug."

According to popular lore, this insect's name has its origins in the Middle Ages when Catholic farmers prayed for relief from crop-destroying insects. When pest-eating beetles arrived and began devouring the pests, it was thought to be an act of the Virgin Mary, and the rescuers were named "Beetles of Our Lady." The rest is history! (For simplicity, I'll use the typical name for the rest of this article.)

Entomologically speaking, the ladybug really isn't a "true bug" (i.e. belonging to the order Hemiptera); it's a member of the order Coleoptera, which includes beetles and weevils. Coleopterans comprise nearly 40% of all insect species; their name means "sheath winged," and most of them are helpful hunters of harmful insects.

Ladybugs undergo complete metamorphosis, passing through four different life stages: egg, larva, pupa, and adult beetle. Although fully-grown ladybugs are the subject of much affection and are widely sold by nurseries and garden stores for use in pest control, the most effective predator is actually the larval stage of the ladybug.

Ladybug larvae are small but rather fearsome looking, and it's important to recognize them so as not to squash them in a moment of panic or revulsion! They are often about 1/4 to 3/8 of an inch long, dark to black in color, with bright spots or bands; some are even light-colored or covered by a whitish secretion. Many ladybug larvae have bumpy or spiny exoskeletons. They are highly mobile hunters, and they use their large mandibles (chewing mouthparts) to feed upon their favorite prey: aphids, mealybugs, scale insects, mites, and other soft-bodied insect pests. A single larva can consume hundreds to thousands of insects from the time it hatches until it begins to pupate.



Convergent lady beetles aggregating during a recent winter at the U.C. Berkeley Arboretum (Kathy Ikeda)



Larva of convergent lady beetle (*Hippodamia convergens*) feeding upon an aphid

For many people, it's very tempting to buy a bag full of squirming, hungry ladybugs. It's definitely entertaining to open a bag and watch the little critters crawl away, looking like half-dome-shaped hovercrafts. Unfortunately, when adult ladybugs are released in a garden, most of them usually fly away to other locations to find food, so the benefits to the hopeful purchaser are often minimal. One way to encourage ladybugs to stay put near your home is to plant flowers rich in nectar and pollen, since adults feed on these substances (and on honeydew) in addition to aphids.

There are nearly 200 different species of ladybugs in California alone. One of the most common here and throughout North America is the convergent lady beetle (*Hippodamia convergens*). The adults of this species have black heads, legs, and antennae, and two red-colored elytra (wing covers) with black spots. Other ladybug species can vary greatly in appearance; some have orange, yellow, or even black elytra, and some are spotless. The common names of ladybugs often reflect the number of spots on their shiny "backs," while others have far more interesting origins. (One example is *Chilocorus orbus*, a ladybug native to California that has jet-black

elytra and two large red spots; its common name is Two-Stamped Lady Beetle.)

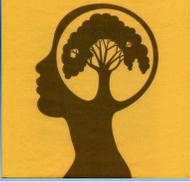
After mating, a female ladybug lays small clusters of oblong, yellowish-colored eggs over several months in spring and summer. She deposits them near aphid colonies or other pests, so that her "babies" will have a handy source of food when they emerge. A single female can lay up to 1,000 eggs in a single season! If you're lucky, you might find eggs or larvae in your own yard, and be able to witness another part of this amazing insect's life cycle!

For more information:

[UC IPM: Lady Beetles](#)

[Marin County Master Gardeners: Ladybugs](#)

[University of Florida: Convergent Lady Beetle](#)



Growing Knowledge

Pegi Palmes, Master Gardener

Asheville NC and Herbs

In April, I joined fellow SJ Master Gardener, Jody Lacey, at the [Herb Society of America's \(HSA\)](#) annual conference in Asheville, North Carolina. After taking the redeye from Sacramento to Asheville, we hit the ground running, touring the Biltmore House and Gardens until our lack of sleep caught up with us.



The following days found Jody, an HSA board member, attending multiple meetings while I went sight-seeing. A highlight for me was the North Carolina Arboretum. One notable feature there was the Appalachian crafts gardens, with plants crafters use in papermaking, yarn dyeing and broom making. The main attraction at the Arboretum was the “quilt garden,” which from the ground looked like any other planting of annuals, but when viewed from the overlook bridge was an amazing butterfly quilt pattern.

The HSA was founded in 1933 by a group of women in Boston, Massachusetts. Their original intent and purpose was to study and research herbs. Membership is open to anyone interested in herbs, and many scholarships, grants and educational opportunities are available through the HSA. Members participate in many projects: fostering plant collections, investigating promising herb plants and supporting an intern at the National Herb Garden. This 2.5-acre public garden, located at the National Arboretum in Washington, D.C., was a gift from HSA to our nation in 1980.



Appalachian Craft Garden

The conference hosted four speakers. The first was Charlie Williams, who presented *Andre Michaux Live* for his talk. Michaux was appointed by Louis XVI as Royal botanist; the king sent him overseas in 1785 to make the first organized investigation of plants that could be of value in French building, carpentry, medicine, and agriculture. Michaux traveled through Canada and the United States from 1786 to 1796, describing and naming many North American species during this time and shipping cases of plants and seeds to France. At the same time, he introduced many species to America from various parts of the world, including *Camellia*, tea-olive, and crape myrtle.

The second speaker at the HSA conference was Doug Elliott, who studies the human connection to plants. He has been featured on PBS and has written many books, including *Wild Roots*. He is a championship harmonica player and a member of the National Storytelling Network. As part of his presentation he sang the Hank Williams song “Jambalaya (On the Bayou)” that mentions fillet gumbo, and explained that this green, soup-thickening substance is made from the sassafras plant. He also sang “Poke Salad Annie” by Tony Joe White. The greens known as poke, (American pokeweed, *Phytolacca americana*)

are picked when young, but because they’re so toxic, must be washed in water seven times, then cooked in three different batches of water before they can be eaten. Mr. Elliot closed with a riddle: What’s white as snow, green as grass, red as blood, and black as coal? (Answer: Blackberries).

The final two speakers were from the Arboretum. George Briggs, Executive Director, spoke about the establishment and growth of the arboretum, stating the arboretum hosts between 450,000 and 500,000 visitors per year. Mr. Briggs then introduced Joe-Ann McCoy, Ph.D., head of the Germplasm (seed) Repository within the Arboretum. She discussed American ginseng, a plant native to eastern North America, which is being poached, sold for up to \$900 a pound, and is threatened with extinction. American ginseng takes several years to grow from seed and the Arboretum is the only place in the U.S. currently storing its seeds (which must be stored in liquid nitrogen).

Saturday we attended the 27th Annual Asheville Herb Festival, the largest of its kind in North America. Approximately 40 thousand people visit the 60+ vendors selling everything herbal. On Sunday, we drove the Blue Ridge Parkway to Mount Mitchell Peak, the tallest peak east of the Mississippi River. (6,684’). It was a great way to end our Asheville NC and Herbs week.



27th Annual Asheville Herb Festival

Community Connection—Teaching Gardens

Tim Viall, Master Gardener

Master Gardeners assist Emergency Food Bank and Taylor Leadership Academy with teaching gardens



Did you know the University of California Master Gardeners have a large and active school and community gardens committee?

Here's an update on activities involving two of these projects. The first is the community teaching garden at Stockton's Emergency Food Bank. The second is the school garden at Taylor Leadership Academy on Stockton's south side.

Master Gardener Sheila Beauchamp has been working steadily with the **Emergency Food Bank** and clients of the Valley Mountain Regional Center under the guidance of the JBallelos Corporation. Sheila's charges are "learning gardening skills, improving their self-image, and gaining confidence in working with others in the community", notes their mentor, Florence Yalung of JBallelos.

Several days of the week, the student gardeners work both with Sheila in the garden, and assisting food bank clients in other ways, such as working the food distribution line.

The food bank started their demonstration/teaching garden shortly after the opening of the Thomas Wilson Nutrition Education Center in 2012. The Leadership STOCKTON program (of the Greater Stockton Chamber of Commerce), the local Habitat for Humanity organization, and Lowe's Home Improvement assisted in gathering components, building raised beds and an irrigation system, along with a covered gazebo to host gardening classes.

A year ago, JBallelos approached the Master Gardener program and Sheila went to work, developing workshop materials, and handouts, curriculum. She also oversees garden improvements including planning, irrigation upgrades, weeding, and planting. Sheila began working with food bank staff in 2015 and has lofty goals and high standards for the project.

The program goal is to offer those with disabilities, persons who are food insecure, and children the opportunity to learn gardening techniques and actually grow food at the Food Bank. Long term, it is anticipated that agency client families will learn to cultivate and grow food at home, improving their diets with quality produce.

Classes include 6 to 8 one hour sessions held at the food bank's Nutrition Education Center and surrounding garden. Topics include introduction to vegetable gardening, soil and composting, and methods to grow a vegetable garden (including containers, vertical gardens, raised garden beds, and in the ground).

Other topics include integrated pest management (good bugs and bad bugs), fruit trees, meal and budget planning, meal preparation and more. Sheila plans to enroll Master Gardener volunteers to assist in many aspects of the garden to include: fixing the irrigation, teaching irrigation classes, teaching gardening classes, and other garden areas on an as needed basis.



The **Taylor Leadership Academy** garden was designed in 2015 by Master Gardeners Tim Viall and George Retamoza, and George has been working steadily with students, teachers and families on the evolving school garden. Students have learned many gardening skills and many have caught the bug of home gardening and improving their diets with tasty and healthy produce.

In both programs, class materials typically come from the University of California, providing researched and proven subject matter. Classes provide hands-on activities and materials to take home so that the students can share with the family the practices they have learned.

For more insight into the food bank project, contact Sheila Beauchamp, sbeauchamp4450@gmail.com, or for Taylor Leadership Academy garden, contact George Retamoza, [\(209\) 478-4978](tel:2094784978).

The Help Desk

Lee Miller, Master Gardener

How can I grow blueberries successfully?

Blueberries require more planning than most fruits. They thrive best in acid soils and most of our Central Valley soils are neutral (7.0) or alkaline, i.e., greater than 7. Consequently, to be successful we need to change the pH of our soil before planting. Having the wrong pH is the most common cause of failure to establish blueberries in the home garden. The best way to do that is to mix soil sulfur into the soil several months before planting. A pH of 5.0-5.5 is desirable. You can find soil sulfur at garden centers and at Lockhart's Seed Store in Stockton. Blueberries thrive best in organically enriched soils as well, so adding compost is good too.

UC Cooperative Extension recommends the following: To acidify soil for blueberries, incorporate soil sulfur (not dusting sulfur) in the top 8 in. at a rate of about 3 to 7 lbs. per 100 square feet. The amount to use depends on soil texture (use higher rate in clay soils, lower rate in sandy soils), calcium carbonate content (use higher rate where soil analysis shows high levels), and existing pH. Mix the sulfur and compost into a strip about 3 ft. wide in the row in the top 6 in. of soil. This should preferably be done 6 months to a year prior to planting since sulfur is slow to break down.



Test the soil pH at planting and every year thereafter with a kit available at local nurseries to be sure it remains acidic. If additional sulfur is needed in later years, side dress and lightly incorporate additional sulfur into the soil.

One other thing to consider is keeping the plant's roots moist. Blueberries thrive in moist, well-drained soil and they are shallow rooted. They require frequent irrigations; the intervals between irrigation are determined by soil type, with more frequent irrigations on sandy soils. Roots will spread about 3-4 feet.

The varieties to plant here are southern highbush and rabbit eye, which require less chill hours than northern varieties. Here are some that were successful in Master Gardener trials in Santa Clara in terms of crop size and flavor: 'Reveille,' 'Misty,' 'Sunshine Blue,' 'Bluecrop,' 'Georgia Gem,' and 'O'Neal'. Other varieties that may also work well include 'Blue Ray,' 'Cape Fear,' 'North Blue,' 'Ozark Blue,' and 'Sharp Blue'.

Blueberries are best planted during the dormant season (mainly December and January), but can also be planted in the spring when they are most available at nurseries. They should be planted on a small mound or berm if the soil is poorly drained. Set the soil line on the trunk of the plant at the same level as the soil, or slightly above if settling is expected. If the plant is older and root-bound, the outer roots should be loosened or pulled away before planting. After planting, irrigate and cover the soil with 4 to 6 in. of mulch. Blueberries should be spaced 3 ft. apart for a hedge, or 4 to 5 ft. apart for shrubs.

For more information:

[Growing Blueberries in the Sacramento Region](#)

[UC CA Garden Web—Blueberries](#)



[UC IPM website](#)

Integrated pest management, or "IPM," is a process you can use to solve pest problems while minimizing risks to people and the environment. IPM can be used to manage all kinds of pests anywhere. [Click here for more info.](#)

Horticultural Terms—Drip Irrigation

Corinne Bachle, Master Gardener

Understanding the many terms associated with a drip irrigation system will help you assemble a system to meet your specific needs. By designing a system customized to your garden's needs, you will save time, money, and the frustration of plants dying from not enough or too much water. A well designed system will also keep you out of trouble with the water watchdogs because you can set it to run on your assigned watering days for the proper length of time at the right time of day. Here is a brief description of some of those terms:

Controller or Automatic Timer – optional component attached to the water source which manages your system to water automatically on a schedule. While a controller is optional, it truly is the backbone of water conservation in your garden.

Anti-syphon device – Prevents backflow and possible contamination of your water source. Required by most health codes. Must be at least 6" higher than the highest watering device (sprinkler or emitter).

Pressure Regulator – Maintains correct water pressure for the system. Strongly recommended for all installations.

Filter – Prevents foreign objects such as sand and silt from entering and clogging the system.

Main Line – Section of solid tubing starting below the pressure regulator and leading to branch lines.

Manifold – Section of tubing connected to the main line and having multiple branches.

Fittings – Tees and elbows that connect sections of tubing to each other or other components.

Branch Line – Section of hose or tubing connected to a manifold.

End Cap – A fitting that closes off the end of a tube line.

In-Line Drippers – Evenly spaced built-in drippers connected by solid tubing which are often used to water vegetable gardens and plants in rows.

On-Line Drippers – Can be mounted directly onto the solid tubing or connected to a branch line using a "pig tail" branch. Often used in hillside applications and hanging pots.

Drip Tubing – Tubing with emitters already in place, usually spaced 12" or 18" apart.

Bubblers – Inserted into solid tubing using a punch tool or mounted on a stake and connected by a branch to the main line.



Summer in the Demo Garden

Cherie Sivell, Master Gardener

In the Master Gardener's Demo Garden at the Ag Center summer is bursting forth. Three sections are alive with color and should continue to bloom through July & August. In the Pollinator section the Mexican Bush sage (*Salvia Leucantha*), Russian Sage (*Perovskia atriplicifolia*), Texas Rangers sage (*Leucophyllum frutescens*) Coral Yuccas (*Hesperaloe parvifolia*), Goldenrod *Solidago californica*), and Gaillardia are in full bloom bordering the pathway.

Meanwhile in the cutting garden the hybrid tea roses (Tahitian Sunset, Julia Child, & Hansa), purple coneflowers (*Echinacea purpurea*), various colors of penstemon (red flame, pink, purple), digiplexis (hybrid foxglove) and Rudbeckia are enlivening the scene. If you are interested in flowering trees there are three eye catching ones in full bloom, two Chaste trees (lavender & white)(*Vitex agnus-castus*) In the Mediterranean section and a Desert willow (*Chilopsis linearis*) with dark burgundy flowers in the California Natives area. The garden is open 24/7 and you are welcome to come and stroll through.



A Taste of the Season

Julie Hyske, Master Gardener

Fruit Salsa and Cinnamon Chips

Ingredients

2 kiwis, peeled and diced
2 apples, peeled and diced
1 cup raspberries
1 cup blueberries
2 cups strawberries
2 tbsp. white sugar
1 tbsp. brown sugar
3 tbsp. fruit preserves
Chips:
10 (10 inch) flour tortillas
Butter flavored cooking spray
2 tbsp. cinnamon sugar

In a large bowl, thoroughly mix kiwis, apples, raspberries, blueberries, strawberries, white sugar, brown sugar and fruit preserves. Cover and chill in the refrigerator for at least 15 minutes. Preheat oven to 350° F. Coat one side of each flour tortilla with butter flavored cooking spray. Cut into wedges and arrange in a single layer on a large baking sheet. Sprinkle wedges with desired amount of cinnamon sugar. Spray again with cooking spray. Bake in the preheated oven 8 to 10 minutes. Repeat with any remaining tortilla wedges. Allow to cool approximately 15 minutes. Serve with chilled fruit mixture.
Serves: 6



Summer Vegetable Tian

Ingredients

1 tbsp. olive oil
1 medium yellow onion
2 cloves garlic minced
1 medium zucchini
1 medium yellow squash
1 large potato
1 large tomato
1 tsp. thyme
1 tsp. salt
1 tsp. pepper
1 cup Italian shredded cheese

Preheat the oven to 400° F. Finely dice the onion and mince the garlic. Saute both in a skillet with olive oil until softened (about five minutes). While the onion and garlic are sauteing, thinly slice the rest of the vegetables. Spray the inside of an 8x8 inch square or round baking dish with non-stick spray. Spread the softened onion and garlic in the bottom of the dish. Layer the thinly sliced vegetables in the baking dish vertically, in an alternating pattern. Sprinkle generously with salt, pepper, and thyme. Cover the dish with foil and bake for 30 minutes. Remove the foil, top with cheese and bake for another 15-20 minutes or until the cheese is golden brown. Serves: 6



Street Corn on the Cob

Ingredients

4 ears corn, shucked
¼ cup melted butter
¼ cup mayonnaise
½ cup crumbled cotija cheese
4 lime wedges

Preheat the outdoor grill to medium-high heat. Grill corn until hot and lightly charred all over, 7 to 10 minutes, depending on the temperature of the grill. Roll the ears of corn in the melted butter, and then spread evenly with mayonnaise. Sprinkle with cotija cheese and serve with lime wedges.
Serves: 4



Coming Events

Corinne Bachle, Master Gardener

July

Saturday, July 9

San Joaquin Master Gardener Workshop: Conserving Water and Keeping Plants Alive

10:00 – 11:30 a.m.

City of Stockton Delta Water Supply Project, 11373 N. Lower Sacramento Road, Lodi

Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.

Classes are free.

Saturday, July 16

San Joaquin Master Gardener Workshop: Conserving Water and Keeping Plants Alive

10:30 – 12 noon

Manteca Library, 320 W. Center, Manteca

Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.

Classes are free.

Sunday, July 31

Boggs Tract Community Farm Workshop: Growing and Using Herbs

8:00 – 10:00 a.m.

Learn how to raise herbs and take advantage of their culinary and medicinal qualities.

Boggs Tract Community Farm, 466 S. Ventura Avenue, Stockton

August

Saturday, August 6

Sacramento Master Gardeners' Harvest Day

8:00 a.m. – 2:00 p.m.

Join the UCCE Master Gardeners of Sacramento County at their ultimate gardening event featuring, speakers demonstration gardens, grape tasting, and educational tables. Hear mini-talks on composting, worm composting, native rain gardens, and ultra-water efficient landscaping.

Ideas for saving water in the home landscape are unlimited at Harvest Day.

Fair Oaks Horticulture Center, 11549 Fair Oaks Blvd., Fair Oaks.

Admission is free.

Saturday, August 13

San Joaquin Master Gardener Workshop: Beneficials and Pollinators

10:00 – 11:30 a.m.

City of Stockton Delta Water Supply Project, 11373 N. Lower Sacramento Road, Lodi

Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.

Classes are free.

Saturday, August 20

San Joaquin Master Gardener Workshop: Beneficials and Pollinators

10:30 – 12 noon

Manteca Library, 320 W. Center, Manteca

Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.

Classes are free.

September

Saturday, September 10

San Joaquin Master Gardener Workshop: Lasagna/Lawn Removal

10:00 – 11:30 a.m.

City of Stockton Delta Water Supply Project, 11373 N. Lower Sacramento Road, Lodi

Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.

Classes are free.

Saturday, September 17

San Joaquin Master Gardener Workshop: Lasagna/Lawn Removal

10:30 – 12 noon

Manteca Library, 320 W. Center, Manteca

Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.

Classes are free.

Sunday, September 25

Boggs Tract Community Farm Workshop: Natural Pest Management

8:00 – 10:00 a.m.

Learn how to identify common pests and diseases in plants and manage them without the application of synthetic chemicals.

Boggs Tract Community Farm, 466 S. Ventura Avenue, Stockton

The Magic of Gardening continued from page 1

Susan Price, Master Gardener

Gardener-to-gardener connections are as broad and as deep as they come. Many start with the one we had with our parents or grandparents, who might have taught us to appreciate home-grown produce and the work that created it. The variety of flowers and vegetables my father grew in his 200 square foot garden in the “concrete jungle” of San Francisco boggles my mind to this day. My visits always included a tour of his garden to see the latest developments, usually followed by a collection of goodies (salvia cuttings, garlic bulbs, tomatoes, etc.) to take home. As long as something was growing, there was never a lack of conversation!

Sentimentality can also play a role in social gardening. One Master Gardener friend uses an old, split-oak basket that his mother once used to harvest garden produce when he was a child, reminding him of his farm roots. Several plants in his garden were gifts from now-deceased friends, enriching his garden with a sweet mix of warm memories. Many gardeners have heirloom plants such as peonies, hostas, or special roses that were handed down from a parent, or a plant they grow because it reminds them of a childhood garden. How many of us grow plants that are not suited to our climate zone because we (stubbornly) “need” to grow them? Even non-living garden elements such as bird baths, tools, or stepping stones can have special significance.

Relationships between children and their parents or grandparents are often enhanced by time spent in the garden. In their early years, children love to “help” with planting, digging, and watering. So often this bonding time leads to closer ties and lasting memories, not to mention the creation of future gardeners! Having a child pick strawberries, blueberries, or peas fresh from the garden makes them appreciate healthy food and connects them to the seasons and—more broadly—the earth. The emotional and physical benefits arising from these inter-generational garden activities make these relationships all the more valuable.

Community gardens promote public engagement and pride and have the particular ability to connect different cultures and ethnicities. The common language of gardening unites diverse groups and creates opportunities to discover new plants, tools, and techniques.

Garden clubs and societies are popular places for garden-lovers to gather and share their knowledge and ideas. San Joaquin County has several active garden clubs that meet monthly, providing an opportunity for like-minded folks to gather, share resources and knowledge, and get involved in the community. Guest speakers, workshops and field trips are just some of the regular offerings. Typical activities may include tree plantings, plant sales, garden tours, and civic beautification projects, like flower pot plantings and rose pruning. To find a garden club near you, click [here](#).

Planting, harvesting, and clean-up days bring groups together with a common purpose. This kind of social gardening turns hard work into a more joyful experience. Many hands make lighter work, but they also make work more fun! Most gardeners look for any excuse to socialize with fellow gardeners, whether it’s gathering with a group to visit a public garden, or to attend a garden workshop or flower show. Garden lovers are finding even more opportunities to socialize these days with pruning and lawn removal “parties”. Why not turn your canning and preserving project into a social occasion by inviting your gardener friends to share in the work and the bounty?



The Master Gardener Program offers a wonderful opportunity for folks to get together with other gardening enthusiasts. It is here that I met my “tribe,” a group just as crazy about plants and nurseries as I am. Master Gardeners share University of California knowledge about sustainable home gardening and pest management with San Joaquin County residents. The 19-week training program is offered every other year, with the next session scheduled for 2017. It’s a great way to increase gardening knowledge, gain experience, and make new friends.

Not to be overlooked are the many websites that connect gardeners across the world. Sites have “sprouted” all over the Internet to allow gardeners to share information and learn from others. There are gardening forums and blogs for every gardening topic; these online communities allow people with common interests to compare notes and share experiences. Some sites provide users a chance to swap plants and seeds, share landscape design how-tos, and upload photos.

Of course, nothing beats face-to-face communications—especially when it comes to gardening. The exchange of ideas, shared experiences, and sensory treats you get from visiting a friend’s garden can’t be matched by books or Internet resources. Physical interaction brings us closer to our fellow gardeners and is far more rewarding! The love of gardening brings people together. Share your plants, harvest, or ideas with someone today and experience the magic.

Garden Chores continued from page 2

Sue Davis, Master Gardener

Lettuce, kale, and Chinese cabbage planted now will mature for fall salads. Try some of the heirloom lettuces now to brighten both your garden and your salads.

Maintenance –

Mature citrus trees planted in the ground can generally go about 10 days between watering in the summer heat. Potted citrus trees will need water at least once a week during the summer. Although the soil surface doesn't need to be damp, the soil needs to remain on the dry side of moist. Check soil moisture at the root level – 18 or more inches down – with a moisture meter. Water slowly and deeply when water is needed.

Before fall planting, amend soil with compost and soil conditioner. Worm castings, though expensive, are worth the price. Choose pure castings or a mix of castings and compost. Now is also a good time to start a worm bin to provide castings for spring soil amending. Information on worm composting can be [found here](#).



Prune cane berries. Canes of single-crop blackberries and raspberries that have finished fruiting should be cut to the ground. Thin out the new growth. Remove all but 5 to 8 of the strongest blackberry canes and 8 to 12 strong raspberry canes per plant. Wait until after the fall harvest to prune ever-bearing varieties.

September Notes

Plant –

Set out transplants of campanula, candytuft, catmint, Coreopsis, Delphinium, Dianthus, foxglove, Penstemon, Phlox, Salvia, hollyhocks and yarrow.

Plant spring flower bulbs now. Bulbs appear in nurseries right after Labor Day. They are most effective in big flower pots and in kidney-shaped drifts at the front of garden beds. Some excellent choices include bluebells, daffodils, hyacinth, grape hyacinth, and tulips. Bulbs should bloom beautifully in spring with just rain water.

Shrubs, trees, and groundcovers get a head start when planted in fall. Plants send out roots in fall and winter while nature does most of the watering for you. Plants will be well established by the time new growth starts in spring.

Plant a tree on the southwest side of your home where it will

provide welcome shade during the summer months. Use a deciduous tree for summer shade and winter sun. Chinese hackberry, Chinese pistache, ginkgo, Japanese pagoda tree, “Raywood” ash, and red oak can be good choices depending on the space available. Note the mature size of the tree before you purchase it to be sure there is ample room for it to grow into the beautiful specimen you expect.

Organic mulch applied several inches thick around plants will help keep roots moist if rainfall is sparse this year. Keep the mulch 3-5 inches from the trunks of your plants to avoid problems with rot.

Plant lettuce every few weeks to extend your harvest over a longer season. Tasty blends of leaf lettuce are easy to grow from seed.

Maintenance –

Harvest cantaloupe when it slips off the vine easily. A watermelon is a bit more difficult, but good indicators of ripeness include a pale yellow ground spot (where the melon laid on the ground), the tendril opposite the stem of the melon has dried and withered, the skin is dull rather than shiny, and, there is a dull “thunk” when you rap the melon with your knuckles in the morning.

If you still have lawn, now is the [time to fertilize](#) in order to thicken top growth, crowd out weeds, and strengthen grass roots for winter. Combination lawn fertilizers are a good choice. They contain a small amount of fast-release nitrogen for quick greening, and a larger portion of slow-release nitrogen. By regularly using a mulching mower, which chops the grass blades into fine pieces, and leaving your grass clippings on the lawn to decompose and release nitrogen into the turf, you can eliminate one lawn feeding or more per year.



Have a gardening question? Call our hotline!

San Joaquin County Master Gardeners

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2101 E. Earhart Ave.

Suite 200, Stockton, 95206



E-mail: anrmgsanjoaquin@ucanr.edu

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Garden Notes is published quarterly by the University of California Cooperative Extension Master Gardeners of San Joaquin County.

For nondiscrimination policy, [click here](#)

2017 Master Gardener Training

Becoming a Master Gardener



Do you enjoy gardening? Do you live in San Joaquin County? Are you willing to volunteer your time and talent?

The San Joaquin UC Master Gardener Program is currently accepting applications for our next training that will begin January 25th 2017 - May 31, 2107.

Applications are due October 14th, 2017 by 5:00 p.m.



[Click here for more information.](#)

