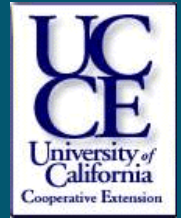




Garden Notes

with the San Joaquin County
Master Gardeners



APRIL - JUNE 2015

San Joaquin County Master Gardeners

INSIDE THIS ISSUE

[Garden Chores](#) 2

[What is an Heirloom?](#) 3

[Pests and Plants](#) 4
Manroot, Black Vine Weevil & Sooty Mold. Canterbury Bells, Popcorn Viburnum, California Buckeye.

[Safe Food Preservation](#) 6

[Beneficial Insects](#) 7
Dragonflies

[Growing Knowledge](#) 8
CA Bees & Bloom

[Yard for the Birds?](#) 9

[The Garden Gate](#) 12
Jerry Roek Memorial Garden

[Internet Explorations for Young Gardeners](#) 13

[The Help Desk](#) 14
Lemon Fruit Drop

[Horticultural Terms—](#)
Pollination 15

[Taste of the Season](#) 16
Lemon Recipes

[Coming Events](#) 17

Photo: Kathy Keatley Garvey

Master Gardener Training - 2015

Marcy Sousa, Master Gardener Coordinator

Spring is probably the busiest season for a gardener and likewise, the Master Gardener Program is as busy as ever. We are in the middle of our bi-annual Master Gardener training, with 40 students eager to graduate in June. Our weekend workshops have been in full gear since January and fill up quickly each month. We are currently getting ready for many local fairs, festivals and farmers' markets and have even begun thinking about our next Smart Gardening Conference on September 26th. Water conservation is on everyone's radar including ours. Be on the lookout for water talks in your communities hosted by the Master Gardeners. As the weather gets nicer, we are seeing an increase in our hotline calls. Remember if you have a gardening question give us a call; we are here to help! Our number is 953-6112. Our website, blog, Facebook and Twitter is full of information as well.

We hope you find this issue of Garden Notes informative, educational and entertaining.

Happy Gardening!

Marcy



MG trainees testing soil pH in class (above). MG info table at Peterson Park in Lodi celebrating Arbor Day (below).



Non-Bee Pollinators

Kathy Ikeda & Julie Schardt, Master Gardeners

Spring has arrived (although warm temperatures did long ago!), and with the season comes a profusion of beautiful blooms. Hives full of honeybees are a common sight in local orchards as they perform their yearly pollinating services, and native bees are busy visiting flowers in our open spaces and gardens. Bees are usually the first creatures that come to mind when the word "pollination" is mentioned, and they are the most efficient polli-



Photo: Kathy Keatley Garvey

nators. However, many other members of the animal kingdom perform invaluable service as plant pollinators. According to a University of California publication, "Approximately 90% of flowering plants, 75% of human crops, and 33% of human foods depend on animal pollinators."

Non-bee pollinators fall into two separate categories: invertebrates (such as flies, beetles, wasps, ants, butterflies and moths) and

You can click on any of the blue underlined words in any of the articles to go to a webpage and learn more about that topic!



Salvia microphylla

Spring means we get to be outside more often and have many opportunities to update and enjoy our gardens. **Keep in mind we are in the 4th year of a drought and water restrictions are being imposed which could impact your planting decisions.**

April Ideas

Plant –

New trees and shrubs need a hole about twice the width of the root ball. Build a cone of soil in the center of the hole tall enough so the new plant will be level with the surrounding soil when placed on top of it. Gently knock the plant from its pot. Use your fingers to uncoil and separate any bunched-up roots. If the root-ball is solid, use a knife to score four 1/2-inch-deep cuts around the sides and one on the bottom (don't do this on bougainvillea). Set the roots atop the cone, refill the hole, and water thoroughly to eliminate air pockets. You should be able to see the beginning of the root flare on trees at or above the surrounding soil. Add a 2- to 3-inch layer of mulch around the plants, keeping it away from trunks and stems. This is a good time of year to plant citrus trees.

Salvias (sage) are available now in nurseries if you're looking for an easy-to-grow perennial. One that does well in our area is "Hot Lips" (*Salvia microphylla*).

Freshen up your container gardens with new plantings of colorful annuals such as marigolds and petunias for sunny areas or impatiens and fuchsias in shady areas.

Tomatoes, peppers, eggplant, leeks, carrots, cucumber, corn, green beans, and squash can be planted in mid-April when the soil stays warm overnight.

Maintenance –

Add a layer of rich compost as you plant fruits and vegetables. It will give them a good start and help produce a larger yield.

Continue composting as you groom your garden. Add trimmings to the compost pile along with fruit and vegetable waste. To process your compost pile quickly, keep it as damp as a wrung-out sponge and turn it frequently. If you don't have time to turn your compost as frequently as you'd like, don't forget that the "let-it-rot" method also works; it just takes longer.

Thinning improves the size of fruit, reduces the risk of broken branches, and keeps trees producing annually rather than in alternate years. Before apples, Asian pears, nectarines, plums, apricots, and peaches reach an inch in diameter, gently twist off enough fruit to allow 4 to 6 inches between remaining fruit.

Weeds will flourish in spring if you don't keep after them. Remove them while they're in the small rosette stage before they set down a tap root.

Feed your houseplants on a monthly basis from March through October.

Check your sprinklers to be sure they are working properly and not wasting water. There is a comprehensive spring tune-up guide for sprinklers in the 2010 April - June Master Gardener Newsletter [which can be found here](#). As **temperatures rise**, increase the frequency of irrigation. Deep-water established plants often enough to prevent wilt and promote deep rooting, but save water by being sure you don't over-water. Check soil moisture around roots by using a moisture meter probe or by digging down with a trowel. Soaker hoses apply water directly to the soil with very little evaporation.

Winter's lack of rain has been hard on many lawns, making them look bleached. To maintain your lawn this year, fertilize now with a balanced slow release or organic fertilizer according to directions on the package. Organic fertilizers react more slowly, but will eventually provide a lush result. If crabgrass has been a problem in past years, you may want to consider treating lawn with pre-emergent/fertilizer mix. These are available at retail outlets to homeowners and through licensed professional applicators. Help preserve our waterways by avoiding getting granules on hardscape.

Great tips for drought watering [can be found here](#).

In May

Plant -

If drought conditions permit, annuals planted in May provide good summer color. Flowers in six packs are a good buy. They'll catch up quickly to those growing in 4-inch pots and jumbo packs. (To produce instant color for a special event, use 4-inch plants.)

[Cont. pg. 18.](#)

What is an Heirloom and Why Plant Them?

Lee Miller & Jeff Ramsey, Master Gardeners

Heirlooms are grown from seeds produced by open-pollination (in contrast to modern hybridized varieties where the seed is produced by a controlled cross-pollination) and have often been handed down from past generations like furniture or family jewelry. Most have never made it into a seed catalogue, until recent interest has sparked a commercial market for them. Some people declare heirlooms to be varieties that are over 50 years old, others 100, and still others as cultivars that date prior to 1945. One approach is to categorize two types of heirlooms, one of commercial heirlooms that are older cultivars in commerce; and the second, the family heirlooms handed down through generations of farmers and gardeners.



“Mortgage Lifter” Tomato

Whether we call them heirlooms or heritage plants, they often have an interesting history which is part of our fascination with them. For example, M.C. “Charlie” Byles of Logan, West Virginia, did some tomato breeding during the Depression and came up with an outstanding, meaty tomato which became known as “Mortgage Lifter” because he sold the plants for \$1 each and paid off his \$6,000 Mortgage. It is fully described as “Radiator Charlie’s Mortgage Lifter” and is still a popular variety among tomato aficionados.

It is hard to miss the displays of heirloom seeds, plants and vegetables these days. It has become a great marketing tool in the last few years. I think that the Seed Saver’s Exchange had a lot to do with this. The founders wanted to save some heritage seeds handed down from grandparents and thus Seed Saver’s Exchange was born. Interest in heirlooms has grown greatly since this organization started. The story is told in *Gathering: Memoir of a Seed Saver*, by Diane Ott Whealy, one of the founders. This book was reviewed in a previous issue of [Garden Notes](#).

There is a garden-to-table food revolution happening in America and heirloom vegetables have become more exciting. Farmers’ markets are popping up everywhere and people are going out of their way to discover where their food comes from and to try new food experiences.

Heirlooms are “open” pollinated which means that if you save the seed by following the correct protocols and plant them the following year they will grow “true,” i.e., they will be like their parents. Conversely, hybrids will revert to one parent or the other. Of course hybrids are good, productive, and have included disease-resistant characteristics, but their seeds cannot be saved and planted as heirlooms can. Hence, planting heirloom seeds is a more sustainable gardening practice and there is increased interest in seed saving among gardeners.

Heirlooms taste great! The vegetables in grocery stores are invariably sold at a stage that requires the least amount of labor to harvest and the most convenience for packing, shipping, display and shelf-life. Strawberries are picked before maturity and consequently are not as tasty and sweet; tomatoes are often picked green and ripened with ethylene gas and though red, are hard and tasteless. A “Dr. Wyche’s” or a “Big Rainbow” tomato from the garden is much better in a sandwich than a super-market version of a tomato.



“Moon & Stars” Watermelon

People all over the world have been growing crops and saving seeds from their best plants for the following season. These people did not have a degree in horticulture, but what is important is that these gardeners knew what they needed, what grew well, and what they liked.

Today approximately 90% of the vegetable varieties that existed at the beginning of the twentieth century are extinct, never to return. Saving seeds, sharing them with friends and family and growing our heirlooms will ensure that we will have a secure supply of treasured varieties in the future.

[Click here](#) (on page 7) to find our list of some of the tomato, melon and other heirlooms that will do well in San Joaquin County. There are many more to try and enjoy, so don’t be restricted by our list.

Pests and Plants of the Season

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.

You can click on any of the blue underlined words in any of the articles to go to a webpage and learn more about that topic!



WEED: Man-root, *Marah spp*

Man-root, or wild cucumber (*Marah spp*), is a fast-growing California native vine considered to be invasive in some landscapes. While primarily found along riparian areas in the past, Man-root has recently appeared in some rural home landscapes. With its extremely fast growth rate and ability to climb over and bury shrubbery 10 ft. high, it may be considered a problem by some gardeners. If control is deemed necessary, you may have to dig up and remove underground tubers, which can exceed the size of a football. You should also be aware that California Native Plant Society experts claim that various *Marah* species do support an endangered moth, *Melitta gloriosa*.

[Click here for more](#) information.

PEST: Black Vine Weevil, *Otiorhynchus sulcatus*

If you find chewing-type foliage damage in your early morning gardening inspections that was not present the previous day, the Black Vine Weevil could be a prime suspect. It feeds nocturnally on a wide variety of plant types; typical symptoms include notched leaf damage, as shown in the picture below.

Your best chance of finding this pest is very early in the morning, before sunrise. As indicated by the literature notes below, damage caused by this pest does not usually require control. If

deemed necessary, control may be achieved through picking weevils by hand, but apparently you'll have to get up early. Additionally, parasitic nematodes referenced below can be effective for control of grubs, but this control would be necessary before the weevil reaches the adult stage. Properly timed insecticidal use also noted in below literature should be used only as a last resort. What the UC-IPM site refers to as "timed Insecticides" are generally not selective and therefore may harm beneficial insects as well. They are also persistent in the environment and therefore may cause off-site damage if not used properly. [Click here for more info](#).



DISEASE: Sooty Mold

Insect pests such as aphids and scale vex many a gardener with their voracious, sap-sucking appetites. Even worse, they leave behind a sticky substance called honeydew. This secretion becomes a breeding ground for certain kinds of fungi, causing a black "sooty" substance to coat foliage, twigs, fruit, and even patio furniture. This substance is called, appropriately enough, sooty mold.

Sooty mold, although aesthetically unappealing, will not kill an otherwise healthy plant; but it does coat the foliage, inhibiting a plant's ability to photosynthesize. It can sometimes be removed from foliage with soap and water, though this is not guaranteed. Vegetables or fruits with sooty mold can be washed and eaten. Prevention is the best way to manage sooty mold. Ants place and protect honeydew-producing insects on plants to collect the secretions. [Managing ant populations](#) will help curb this source of aphids.



Sucking insects love tender, new growth, so avoid overwatering and high nitrogen fertilizers to keep growth at a reasonable rate. Encourage natural enemies such as lady beetles and parasitic wasps by avoiding toxic insecticides. Read more about natural enemies on the UC IPM website, [Pest Notes 74140](#).

Aphids can be washed off with a spray of water. Insecticidal soaps and oils are also safe and effective; they work by coating foliage and suffocating sucking insects. Less selective insecticides containing chemicals such as permethrin or malathion should be used sparingly, as they kill beneficials. [See the UC IPM webpage](#) on aphids for more information.

PERENNIAL: Campanula medium (Canterbury Bells)Family: Campanulaceae

PLANT IDENTIFICATION: *Campanula medium* is a non-invasive biennial. This variety is a low growing basal rosette of wavy-margined 6-10" long green leaves in the first year. In the following year, upright racemes of bell shape flowers arise 2 to 3 feet tall in the late spring through the early summer. Flower color can range from purple, violet, blue, and lavender, to pink and white. It is a good cottage garden companion to other biennials such as Foxglove (*Digitalis purpurea*) and Delphinium. *Campanula medium* is an excellent cut flower, but also can be left to reseed.

OPTIMUM CONDITIONS FOR GROWTH: This campanula has similar sun exposure needs as other campanulas. It should be planted in an area that receives partial shade or morning sun. It prefers a cooler climate, so it will need protection from heat, with afternoon shade, mulching, and placing among other plants with similar needs. This campanula appreciates moist, good draining soil, with a neutral to slightly alkaline pH. It can be started from seeds or with transplants.

**SHRUB: Viburnum plicatum f. plicatum 'Popcorn' (Popcorn Viburnum, Japanese Snowball)**Family: Adoxaceae

PLANT IDENTIFICATION: The Popcorn Viburnum is a multi-trunked, deciduous shrub. It can also be trained as a small tree. The branches can grow somewhat horizontally, with a mature shrub reaching 5-8 feet tall and 4-7 feet wide. Showy, snow-white orbicular inflorescences, 2-3" in diameter, bloom along the branches in mid to late spring. The flowers are attractive to butterflies. The striking leaves are dark green, ovate, pleated and strongly veined, and turn burgundy red in fall. No berries are formed on this cultivar.

OPTIMUM CONDITIONS FOR GROWTH: *Viburnum plicatum* can be grown in full sun to part shade and prefers a moist loamy soil. It needs average water, doesn't like to be overwatered, and becomes drought tolerant with age. It can tolerate a range of soil conditions and pH, and it is frost tolerant to -20° F.

**TREE: Aesculus californica (California Buckeye)**Family: Sapindaceae

PLANT IDENTIFICATION: The California Buckeye is a true California endemic not occurring elsewhere in the world. Its growth habit is a spreading, multi-trunked, low canopy tree. It is particularly well adapted to the summer drought conditions of this region, going dormant and losing its leaves during the hot summer months to conserve moisture. It's most spectacular time is in spring from the new emergence of expanding leaf buds in late winter, opening to large, rich green palmate leaves, followed by large showy conical trusses of fragrant white flowers in spring. Attractive, large glossy brown fruits resembling buck's eyes, are 2-3" in diameter, and hang in fall, decorating the dormant tree. Lovely silvery gray bark is prominent during bare months. It can grow up to 24" per year reaching 10-25 feet high and 20-30 feet wide at maturity.

OPTIMUM CONDITIONS FOR GROWTH: Prefers slightly moist to dry soil, and tolerates summer drought. *Aesculus californica* will hold leaves longer into summer when grown in moister soil. It is an excellent choice for a low water use garden, and tolerates a wide range of soil conditions, from clay to loam to sand, and slightly neutral to highly acidic pH.



Safe Food Preservation Just Can It...or freeze it, pickle it or dry it!

Susan Mora Loyko, Master Gardeners

In January, while the rest of us were busy putting away Christmas decorations, a small group of women and men were eagerly spending their Saturdays learning how to safely preserve food.

The month-long program was the second round of day-long classes for the Master Food Preserver Program (MFP), part of the University of California Cooperative Extension program, which also supports the San Joaquin County Master Gardener Program.

It's not a coincidence that many of the MFPs are also certified Master Gardeners. The program was designed to be similar to the Master Gardener Program. Many of their fellow classmates just love gardening. Whether Master Gardeners or people who just love gardening, their common bond was to learn to learn how to safely preserve their bounty. It's also not a coincidence that the coordinator and teacher for this group is Master Gardener and MFP, Linda Driver, who has been canning and preserving food "since she was old enough to stand on a stool to reach the kitchen counter top."

The number of MFPs now stands at 15. Ms. Driver said the efforts of the MFPs will now be to coordinate more classes in the future to increase their numbers, since there is a growing public demand for preserving food safely. Like the Master Gardeners, each MFP had to formally apply for the program, be interviewed by outside sources and finger-printed and attend classes.

The MFP program has been going strong since 1976 when it was developed by Washington State University, and has further advanced in other states since that time. The scope was later expanded to include more information on food safety to prevent botulism, viruses, parasites, toxins and other potential food contaminants. The recent resurgence of interest in home food preservation is reflected in the initiation of MFP programs throughout the State. The concept of all the master volunteer programs is that in exchange for receiving extensive training, the volunteers donate time to either answer consumer questions or teach particular subjects to others.

Food spoilage is the process of food becoming unsafe or unacceptable to eat. Food preservation is the maintenance of safe and nutritious food for an extended period of time. The seven methods of food preservation include: refrigeration, freezing, canning, sweetening and acidifying jellies and jams, pickling and fermenting, drying, and salting.

The January classes focused on the history of MFP, food safety, terms and definitions, fermentation, dehydrating, freezing, pickling, pressure canning, and preparing foods for emergencies. The classes were not all lecture, but real hands-on opportunities in making jams, jellies, curds, sauerkraut, pickling, and dehydrated fruits. Most classes provided offered the students learning opportunities to prepare jars of wonderful foods, safely prepared to take home.

The cadre of 15 will be a big part of this year's daylong Smart Gardening conference slated for Sat., Sept. 26, 2015, at the Robert Cabral Agriculture Center.

With this training and information under their belts, the newly initiated MFPs will now begin their volunteer opportunities to answer questions from the community, provide demonstration classes, and teach what they have learned to the public through various events. To maintain their certifications, the new MFPs are required to perform 50 hours of volunteer time this year and 25 hours of continuing education beginning next year.

So don't be surprised if the next time you are at a local farmers' market, community event or festival you see a few MFPs alongside Master Gardeners --both anxious to share their knowledge of gardens and preserving food safely.

Anyone interested in learning more about becoming a Master Food Preserver, call (209) 953-6100 or visit [our website](#).



January 2015 Master Food Preserver class - (left to right) front row: Maryjohn Bledsoe, Bill Loyko, Susan Small, Eric Firpo; back row: Ellen Powell, Jennifer Ghiglieri, Adria Afferino, Noreen Roche, June Mary Betschart, Sharon Seegmiller, Carole Smith

Beneficial Insects—Dragonflies

Kathy Ikeda, Master Gardener

Dragonflies have been represented as evil or threatening in the folklore of many cultures, and some people are still frightened by their appearance and large size. However, dragonflies are harmless beneficial insects that serve a vital role in our ecosystem.

Dragonflies are truly ancient creatures; fossil insects closely related to today’s dragonflies are known to be over 300 million years old, and some had wingspans 30 inches across! Modern-day dragonflies belong to the insect order Odonata. Over 100 species have been found in California in families with evocative names such as Darners, Skimmers, Emeralds, and Clubtails.

Dragonflies are “ambush predators,” which means that they actively hunt and intercept live prey. Their huge multifaceted eyes, exceptional aeronautic abilities, and highly sophisticated nervous systems enable them to catch other insects in flight, and they typically eat their victims while in the air.

Although dragonflies are non-specific feeders and will eat any insect they can catch (including other beneficial insects), they help keep populations of many insect pests under control. Dragonfly larvae are aquatic, and have oversized, extendable jaws that they use to snare their food, including mosquito larvae, tadpoles, and even small fish. Dragonfly adults usually catch small insects such as mosquitoes and flies, but they sometimes eat larger insects and even other dragonflies.

Their life cycle is known as “incomplete metamorphosis,” since they undergo transition from egg to larva to adult without a pupal stage. Adults lay their eggs in shallow, calm water or sometimes on plants near lakes, streams, and wetlands. An egg hatches into a larva (or “nymph”), which grows and develops in the water until the final larval stage (known as a “darker”) crawls out of the water and clings to a rock or nearby plant. There, its exoskeleton splits along the back and the adult insect emerges to slowly unfurl its long wings.

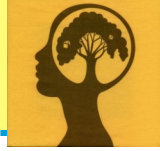
Since dragonflies depend on water, ponds with shallow edges are ideal for attracting them. If your yard lacks a water feature, you can still protect dragonflies by helping preserve local waterways and wetlands.

For more information: [Introduction to the Odonata](#), [National Wildlife Federation: Dragonflies are Dangerous Beauties](#), Excerpt from [Dragonflies and Damselflies of California](#)



Heirlooms for San Joaquin County (cont. from page 3)

<p><u>Orange/Yellow tomatoes</u>: Amana Orange, Azoychka, Golden Jubilee, Golden Queen, Jaune Flamme, Valencia, White Wonder.</p>	<p><u>Bi-colored tomatoes</u>: Big Rainbow, Gold Medal, Hillbilly, Marvel Stripe, Marizol Gold.</p>
<p><u>Purple/Black tomatoes</u>: Black from Tula, Black Krim, Black Giant, Carbon, Cherokee Purple.</p>	<p><u>Winter Squash</u>: Waltham Butternut, Musquee de Provence, Kikuza. <u>Summer Squash</u>: Yellow Crookneck, Black Beauty zucchini.</p>
<p><u>Red/Pink tomatoes</u>: Abraham Lincoln, Aker’s West Virginia, Brandywine, Bulgarian#7, Cuostralee, Crimson Carmello, Crnkovic Yugoslavian, Druzba, Eva Purple Ball, German Pink, Italian Heirloom, Mortgage Lifter, Ozark pink, <u>Pruden’s Purple</u>, Kosovo, San Marzano, Sioux, Soldacki, Thessaloniki, Zogola.</p>	<p><u>Watermelons</u>: Klondike Blue Ribbon Striped, Kleckley Sweets (also known as “Monte Cristo”), Orange Flesh Tendersweet, Moon and Stars. <u>Muskmelons and Cantaloupes</u>: Petit Gris De Rennes, Charentais, Emerald Gem, Hales Best, Jenny Lind, Hearts of Gold, Pride of Wisconsin.</p>



California Bees and Blooms: A Guide for Gardeners and Naturalists

By Gordon Frankie, Robbin Thorpe, Rollin Coville, and Barbara Ertter
2014, Heyday (Berkeley)

California has myriad native bees, many of which are endangered due to habitat loss and heavy pesticide use. The urban dweller might feel a strong desire to help, but where to begin? What are the best plants? What kind of bees can I attract? What do healthy bees need besides food?

Fortunately, all these questions are answered in California Bees and Blooms: A Guide for Gardeners and Naturalists by entomologists Gordon Frankie, Robbin Thorp, Rollin Coville, and Barbara Ertter, curator at the [University and Jepson Herbaria](#) at UC Berkeley. In studies conducted by professors, students, and volunteers at the UC Berkeley [Urban Bee Lab](#) and other sites around California, various plants have been tested for pollinator value, along with which bee species are found most often in urban gardens.

The result of all this research is an amazing compendium of UC-tested, bee-approved knowledge. With so many habitat garden books out there focused on honeybees and water-hungry plants unsuitable for Mediterranean regions, California Bees and Blooms is refreshingly relevant to California's climate and native bee species. The content is easy to read and well-organized, with a simple, no-nonsense layout. There is a wonderful lack of clutter, and the diagrams are clear and informative. The beautiful photography work, by Rollin Coville, is one of the book's best features.

Chapters 1 and 2 talk about general bee anatomy, behavior, life cycles, and how to observe them in your garden. I particularly like the vignette on urban bee myths, which addresses assumptions that are made about native bees based on the habits and traits of European honey bees (*Apis mellifera*). For example, honeybees die after stinging once, whereas native solitary bees retain their stingers, though they are docile and unlikely to attack unless provoked.

Chapters 3-7 take a closer look at 5 major bee families, profiling species within these families that you are most likely to find in the home garden. Unlike honeybees, the majority of bee species are not social, so it helps to know their "lifestyle" to provide the proper food and nesting habitat to attract them.

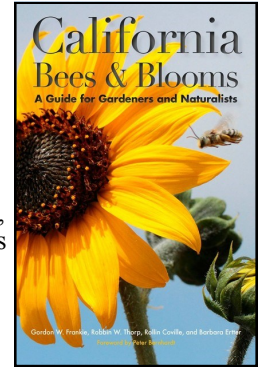
Chapter 8 examines bee enemies, including pathogens, predatory wasps, assassin bugs, and parasitic insects. Bees, like all other creatures, are part of a food chain, and are preyed upon by micro- and macro-organisms alike. The book did not specify whether it's necessary to manage predators, which would have been helpful, but if you want to identify them, this chapter is for you!

On a happier note, chapters 9 and 10 are all about plants. The authors tell us to "think like a bee" when it comes to flowers; there is a whole chapter on plant anatomy and how this affects bee-plant relationships. What follows is my favorite part: a glorious chapter on plant species and relevant information such as flowering season, cultural tips, forage type (pollen, nectar, or both), photographs, and more.

Chapter 11 talks about planning a habitat garden. There are plenty of factors to consider, such as plant diversity, having nectar and pollen sources almost year-round, planting in large swaths rather than isolated patches, avoiding pesticides, and so on. The average home gardener often lacks previous experience in design, so the authors provide several examples for inspiration. These examples consist of plant species (divided by bloom season) and a theme, such as California natives or low-maintenance gardens.

Chapter 12 takes us beyond the home garden and into the realm of community action. There are still so many unknowns in the native bee world; gathering data is crucial to successful conservation efforts as habitat is swallowed up by agriculture and housing developments. Fortunately, there are organizations that compile and disseminate information about native bees, of which several are described in this final chapter.

This is a terrific book for anyone interested in helping to provide for and spreading the word about native bees. It is easy to use and is filled with amazing photography and reliable information that will be a valuable addition to your gardening library.



Is Your Yard for the Birds?

Betty Liske, Master Gardener

Birds bless us with much joy and beauty with their great variety of color and behavior. Birdsong has entranced and inspired us through the ages. Avid birders invest in the best scopes and cameras and often travel great distances on the chance that they will be able to observe a rare bird or the spectacle of thousands traveling to a migration stop on their annual trips north and south.

If you are not about to hop on the next jet to go bird trekking in the Amazon, it's good to know that all of us can get great pleasure from the birds that we invite to our backyards and gardens. They enhance the human connection with nature. David Yee, a long-time San Joaquin County birder, points out that so much has been taken away from our urban and even rural environments that bringing more of nature into our yards, including wildlife, is a way of giving some of this back. Plus it creates a healthier environment overall.

Before setting out on developing your bird-friendly garden, it is vital to understand which birds are local, what their needs and habits are, and which of those are likely to inhabit or visit a backyard environment. Keep in mind that all birds need three basic things: shelter, water, and food.

Shelter can mean anything from planting an entire bird-friendly garden which provides appropriate nesting places, to planning feeder locations in areas protected from predators and which provide perching areas for those waiting in the "food line."

Be thoughtful about methods used for providing water given our current drought conditions in California. If you have a pond or water feature that recycles water and has shallow areas (3"), birds will gravitate to that for drinking and bathing. It is a delight to observe the bathing process and each bird's idiosyncratic style!

In terms of feeding birds, note that different birds favor different types of food or seed. Provide a variety in appropriate types of feeders. Three should cover the basics: hummingbird liquid, a mixed seed blend including shelled sunflower seeds, and a finch feeder for Black Thistle seed. You can also put out a hanger with suet alone or suet mixed with seeds and nuts. It's also important to be consistent in your feeding. You don't want to have birds come to depend on your feeders and then have that food source disappear. To get started, birds need to be able to see the seed. Hang feeders where they are visible and help them along at first by scattering some food on the ground where it is clearly visible. Once they find it there, they will soon discover it in your feeders.

Being aware of the habits of the bird species in your locality will guide you as to what you buy, repurpose, plant, or build to attract them. For example, some birds are ground feeders, some will eat from elevated platform feeders, and some peck at berries or seeds on trees and bushes. Note that any feeder provided for birds should be cleaned on a regular basis.

Yee provides key information to facilitate your adventure into inviting birds to your yard. The more you know about our local birds, what they look like and their habits and migration patterns, the better you will be able to plan for a garden that attracts them.

Birds that you may see year round at feeders: hummingbirds; Gold, American, and Lesser Finches; House Finches; House Sparrows; and Spotted California Tohees.

Birds that may come for other food sources such as berries and insects: robins and Cedar Waxwings (spectacular when they converge on pyracantha branches in food frenzies!).

Birds that may appear in "winter"-- September to April: Golden Crowned and White Crowned Sparrows; the Dark Eyed Junco; and less often, White Throated and Fox Sparrows.

Yee points out that all birds are attracted by other birds in your garden. In addition, if you have a water source appropriate for drinking and bathing you may well see a wider variety of birds drawn by that rather than a food source, including the Yellow Rumped Warbler, the Black Phoebe, and the Hermit Thrush.

Use this information to create your bird friendly garden and look in a future issue for some fun DIY ideas for you, the kids, and the birds!



Figure 1 Cedar Waxwing on Pyracantha

vertebrates (birds and bats). These creatures can sometimes be dichotomous, affecting plants as both pollinators and harmful pests (such as a chewing caterpillar that matures into a beneficial butterfly). The continued survival of many butterflies and moths depends in part upon our willingness to tolerate some caterpillar damage in our gardens.

Flowering plants and the organisms that pollinate them have evolved together over time, so that many flowers have structures and other characteristics specifically adapted to their pollinators, and vice versa. Each of these bloom traits—color, nectar (presence and/or consistency), shape, scent, and more—are collectively called “pollinator syndromes,” and they are associated with specific kinds of pollinating organisms.

Flies: It’s difficult to imagine wanting to attract flies to the garden, but there are numerous pollinating fly species. When the major bee pollinators are absent, flies take over. Unlike bees, they don’t have hairy bodies, so they’re not as efficient at transporting pollen, but for many plants flies get the job done. Flies tend to favor nectarless flowers with strong or unpleasant odors, funnel- or trap-like shapes, and colors such as pale or dull brown and purple.

Syrphid flies, or hover flies, are estimated to be second only to bees in pollinating the world’s plants. They have taken over the job of pollinating in some California avocado orchards as the honeybee population has dwindled. The Mexican sunflower (*Tithonia rotundifolia*), popular in bee gardens, is visited by two different fly pollinators: the drone fly (*Eristalis tenax*) and the Mexican cactus fly (*Copestylum mexicanum*).



Adult syrphid fly

The fungus gnat (family Mycetophilidae) pollinates the native California Pipevine (*Aristolochia californica*). These flies like the unpleasant smell emanating from the flowers; they crawl in and are trapped sometimes for days, leaving behind the pollen they’ve brought from a previously visited blossom. When the stamen of their host flower matures, the flower opens up and the fly is free to carry pollen to another bloom.

Beetles, Ants, and Wasps: These three types of insects are not widely known as pollinators, but they make some incidental contributions to pollination.

Some non-carnivorous beetle species are considered “mess-and-soil” pollinators. They move among flowers consuming nectar, pollen, petals, and other flower parts, leaving their waste behind within the flowers. Their voracious appetites carry them from plant to plant, and the pollen left behind in their droppings and carried on their bodies helps to ensure pollination of the blooms they visit. Beetles tend to prefer white or dull green flowers with large bowl-like shapes and lots of pollen. Some examples of beetle-pollinated plants are the lovely California native Spicebush (*Calycanthus occidentalis*), which is pollinated by beetles in the Nitidulidae family, and plants in the *Magnolia* genus.

Ants tend to pollinate low-growing plants with inconspicuous flowers that grow close to the stem. California natives such as broadleaf stonecrop (*Sedum spathulifolium*) and cliff spurge (*Euphorbia misera*) are ant-pollinated. Ants can also transfer pollen when they feast on aphid-laden plants.

Although wasps are generally thought to be less efficient pollinators than their bee cousins, there are a few hard-working wasp pollinators. Sand wasps (collectively known as Bembicines) simultaneously pollinate buckwheat plants (*Eriogonum* species) while searching for a meal of insects. The Calimyrna fig, widely grown in our Central Valley, is pollinated by the tiny fig wasp (*Blastophaga psenes*).

Butterflies and Moths: Butterflies and moths, both of which belong to the insect order Lepidoptera, are also pollinators of our local flora, although their role is less important than that of native bees and honeybees. Lepidopterans have a single sucking mouthpart called a proboscis, which is usually very long and is kept tightly coiled when not being used. When feeding, a butterfly or moth will unfurl its proboscis, insert it into a tubular-shaped flower, and use it to suck up the nectar. While feeding, some of the flower’s pollen is transferred to and adheres to the insect’s body, and it is then carried to the next flower. Despite this general similarity, however, butterflies and moths differ greatly in their specific feeding habits.

Butterflies are diurnal (active during daylight hours), and visit flowers that provide a suitable “landing pad” on which they must rest while feeding, preferring flowers borne in clusters or ones with large, flat surfaces. Butterflies also have excel-

lent vision and prefer vibrantly-colored (yellow, orange, pink, red, and purple) but odorless or lightly scented flowers. Only a few examples of butterfly-pollinated flowers that grow in our area are the yarrows, manzanitas, *Lantana*, *Cosmos*, and *Verbena*.

One of the most widely recognized and celebrated butterfly pollinators is the migratory Monarch Butterfly (*Danaus plexippus*). Unfortunately, their populations have plummeted in recent years due to two primary factors: (1) destruction of large portions of their overwintering habitat; and (2) loss of their favored larval food plants (native milkweeds) and nectar source plants along their migration corridors.

Moths are primarily nocturnal (active at night), and unlike butterflies they are able to feed while hovering in front of a flower. Since they feed while in flight, they prefer flowers with backward-curved petals for easier access. Moths have a highly developed sense of smell and are attracted to strongly- and sweetly-scented flowers, particularly those that emanate their scent at night. Moths also prefer pale blooms (white, pink) since those are most visible at night, or colors such as purple and pale/dull red, since these hues are most evident using their ultraviolet vision (a sense that we humans don't possess). Night-blooming flowers depend heavily on moths for pollination.

One unusual moth pollinator is the Snowberry Clearwing or "Bumblebee Moth" (*Hemaris diffinis*), a large type of sphinx moth that is active during the daytime. The adult moths eat nectar from milkweeds, lilacs, thistles, *Salvias*, and *Monardellas*, while their caterpillars feed almost exclusively on the leaves of snowberry and honeysuckle plants.

Hummingbirds: Hummingbirds are the primary birds that play a role in pollination in North America. The species most often seen in Central Valley gardens during the spring include Anna's (*Calypte anna*), Black-chinned (*Archilochus alexandri*), and occasionally the Allen's (*Selasphorus sasin*). They expend huge amounts of energy hovering and darting around at speeds of up to 60 mph, and this makes them efficient pollinators. To maintain their energy level, hummingbirds must eat every ten to fifteen minutes and visit up to 2000 flowers each day.



Hummingbirds usually seek their nectar from red flowers (although the sugar content of the nectar takes precedence over color) because bees cannot see the color red. Hummingbirds have also co-evolved along with their favorite flowers; their long beaks and tongues are well-suited to long, tubular-shaped blooms. Pollen from the flowers sticks to their beaks and feathers and is deposited at their next flowery stopping places.

Bats: Although none of the bat species in California act as pollinators, bats nevertheless serve a crucial role in the world's ecosystem. Pollinator bats are typically found in desert or tropical ecosystems. They are commonly active at night, visiting flowers that are large, pale-colored, and fragrant; they feed upon flower nectar, flower parts, and insects in or near the flowers. Two well-known plants—the Saguaro (state cactus of Arizona) and the Blue Agave (from which tequila is made)—are "chiropterophilous," meaning they depend entirely upon bats for pollination. Bats also pollinate more than 300 types of fruits worldwide!

Several studies have documented that, "of the hundred or so crops that make up most of the world's food supply, only 15% are pollinated by domestic bees, while at least 80% are pollinated by wild bees and other wildlife."

As we go about our daily lives, it's vital that we remember how dependent the human race and our food chain is upon an intricate natural environment and our many non-bee pollinators.

To learn more about pollinators:

USDA: [Pollinator Syndromes](#)

[The Simple Truth: We Can't Live Without Them](#)

UC Davis: [Pollinator Information and Resources](#)

Xerces Society: [Fact Sheets](#)

National Wildlife Federation: [Attract Butterflies](#)

The Jerry Roek Memorial Garden...Sustaining Healthy Living



We are lucky to be living in a rural county that is the envy of many American farms, a land that is bountiful in agricultural production. As a leading supplier of fruits and vegetables at home and abroad, the irony is that we have to look no further than our own backyards to find the many who go hungry. When Robert Kennedy went on his “poverty tour” in 1968, he found that the most extreme poverty existed within rural America. While we are producing the grapes, nuts, milk, tomatoes, and cherries that nourish our nation, many of our own are struggling to be food secure.

With an eye toward supporting the fight against hunger, a forgotten plot of soil is evolving into a secret garden of dreams. On a formerly unused piece of property owned by St. Joseph’s Medical Center in Stockton, the earth is giving back to the community one garden bed and fruit tree at a time! The Jerry Roek Memorial Garden is a tribute to a family that has been committed to many of the Medical Center’s construction projects over the years. The Roek family has been long time supporters of the hospital and our community. It is through the generous donations of our community, along with the hours of tireless labor of local volunteers, that this garden grows. Corinne Bachle, Laura Levitt, Gary Hansen, and Jeff and Chris Roek, as well as members of the Medical Center staff, Lincoln High School students, the Dominican Sisters, and members of the community have volunteered countless hours in developing, maintaining, and harvesting the rewards of their efforts.

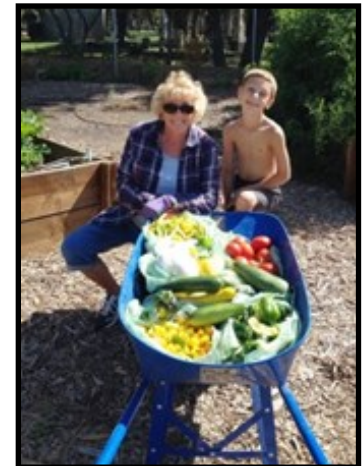
With an aim to provide the hungry the opportunity to acquire fresh fruits and vegetables, all harvested produce is delivered to St. Mary’s Dining Room within hours of it being gathered. “They get the freshest of the fresh,” stated Corinne Bachle, volunteer and Master Gardener. In 2014, St. Mary’s Dining Room averaged over 1,100 meals a day, seven days a week including breakfast, lunch, and a sack meal to those who otherwise would have no evening meal. The homeless and the underserved are given a chance to participate in healthy, fresh food choices.

So, now a bit about the memorial garden: though in the truest sense, the garden cannot be termed “organic,” it clearly encompasses sustainable gardening practices. The 21,000+ square foot plot consists of 32 garden beds with 16 raised beds arranged in two wagon wheels and 16 ground level beds situated between the raised beds. The irrigation system is drip and is installed on timers for efficiency of water usage. Pesticide usage is very minimal. Wild flowers are planted along the back fence to encourage beneficial insects in the fight against plant disease and pest damage. The practice of composting utilizes garden waste, and areas currently not planted are layered in wood chips donated by local tree trimmers to keep weeds in check.

The garden seeks to provide the variety of produce that St. Mary’s Dining Room requests in feeding the community. They grow an assortment of peppers, tomatoes, zucchini, onions, and garlic along with squashes, celery, beets, broccoli, chard and kale. Over 30 varieties of fruit and nut trees have been planted including pear, peach, nectarine, citrus, and cherry, truly a farm in the making! The mission of the garden is to have year-round produce available to be harvested and delivered to help fight the epidemic against hunger.



If you would like to make an impact in promoting food security within our community and share your talents and labor, the Jerry Roek Memorial Garden is looking for your help. Please contact Corinne Bachle at cbachle@sbcglobal.net or Laura Levitt at laura.levitt@dignityhealth.org. Remember that statistics are more than faceless numbers, they are our neighbors!



Like so many things, gardening is a way of life that is learned and passed on from one generation to another. Children often spend their early years watching mom and dad, grandparents or a friendly neighbor working in the garden. Maybe they get to taste fresh fruits and vegetables or pick flowers for a special bouquet. It is then that the foundation and love of gardening is “planted” in their lives. There may be children in your life that you can mentor and develop that same nurturing life-long love for gardening. Share the Internet links below with your future gardeners. They will provide an abundance of quick and clever ideas to spark interest for both children and experienced gardeners.



Use Google to expand your investigations in gardening adventures. Simply go to the Google site and type in specific groups of words that describe what you are looking for. You can fine tune searches by adding a + sign with no spaces. Here are several *examples* to get you started. Go to www.google.com and try some of the following “search strings.”

- Best Internet sites for gardening with children,
- Award winning sites for gardening activities with children
- Gardening with kids+activity books

Anytime you use the Internet with children, you should always take time to preview the sites to make certain they are appropriate and safe. Avoid potential links such as pop-ups, ads and blogger comments that can take children away from the original site. The Internet needs to be a guided, family activity. Share your interest, knowledge, skills, fascination, and love for gardening with everyone both young and old. It’s contagious! Enjoy!

[Junior Master Gardener](#)

[Kids Gardening. Helping Young Minds Grow](#)

[My First Garden – top of page activities only](#)

[UCB Botanical Gardening](#) – two wonderful resource books for young gardeners

[Gardening Know How](#)

[Pictures+Kids in the garden](#)—Click on an image to visit related site

Useful Garden Websites



San Joaquin County Master Gardeners:

Our site is full of information on gardening. We are continually adding information to this site. Have questions? We have answers!

Northern San Joaquin UC Master Food Preservers:

The Master Food Preserver (MFP) program is a public service community outreach providing up-to-date information on food safety and preservation.

Pollinator Partnership Planting Guide:

is a non-profit organization headquartered in San Francisco, California. P2 works to protect the health of managed and native pollinating animals vital to our North American ecosystems and agriculture.

Xerces Society—Pollinator Conservation

Offers practical technical support on habitat restoration and land management for pollinators.

If you have a gardening question, call the Master Gardeners Tuesday-Thursday 9:00 am-12:00 pm at 209-953-6112 or by e-mail anrmgsanjoaquin@ucanr.edu

My 30 year-old Meyer Lemon tree suddenly dropped a lot of its ripe fruit this winter. What's going on?

If the fruit is ripe and tastes fine--with no sign of pest or disease damage, odds are the culprit is our crazy winter. Sudden changes in temperature and heavy rains can often cause premature fruit drop. In our San Joaquin Valley, mid-December temperatures were unseasonably warm followed by a two-week period with several nights at or near freezing. Top that off with a few days in December and February where we had excessive rain. The temperature swings and excessive moisture may be blamed for your fruit drop.

Meyer Lemons, a hybrid between a lemon and a mandarin or an orange, are one of the most popular citrus trees for the home garden. It is fine ornamental tree known for being hardy and productive, with relatively good frost tolerance. In fact, unlike true lemons, such as Eureka and Lisbon, Meyer lemons can withstand temperatures into the mid-20's F.

Generally, some fruit drop is normal. It is nature's way of thinning a tree when more fruit has set than the tree can support. When fruit drop is excessive and not easily attributed to crazy weather, it is usually the result of improper watering or fertilization, excessive pruning, or insect infestations. Unlike weather which is out of your control, this problem can be prevented with proper [citrus care](#).



For more information on citrus management, pests and frequently asked questions visit the following web-sites.

[The California Backyard Orchard—Citrus](#)
[UC IPM—Citrus](#)
[UC Photographic Guide to Citrus Fruit Scarring](#)

References:

California Master Gardener Handbook, University of California Agriculture and Natural Resources, Publication 3382, 2004.

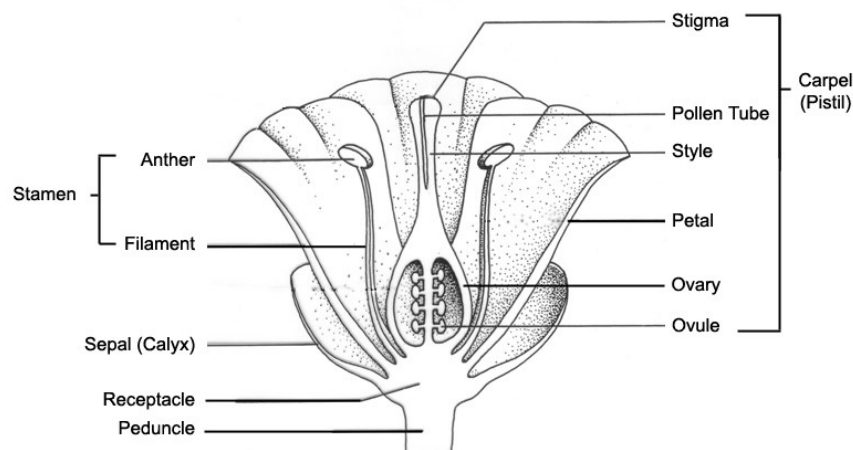
Citrus – Complete Guide to Selecting & Growing More than 200 Varieties for CA, AZ, TX, The Gulf Coast and FL, Lance Walheim, 1996.

Horticultural Terms Explained—Pollination

Kathy Ikeda & Julie Schardt, Master Gardeners

The plant pollination process describes the vital method of sexual reproduction in plants. It enables a plant to bear fruit and seeds, many of which are not only eaten by humans, but also by other living species from birds to mammals. There are some important terms to understand that we will define here.

- abiotic pollination: pollination that occurs without the assistance of living organisms (such as by wind and water); common in trees and grasses
- biotic pollination: pollination that is accomplished by living organisms (honeybees, bumblebees, native bees, butterflies, moths, beetles, pollen wasps, hummingbirds, and other insects and vertebrates); common in flowering plants
- cross-pollination: when pollen from a plant pollinates another plant of the same species (the most common type of pollination)
- dioecious: having distinct male and female plants of the same species (such as with hollies, junipers, and Ginkgo trees)
- monoecious: having both male or female parts at different locations on the same plant (e.g. separate male and female flowers in oaks and members of the squash family, or different pollen and seed cones on a conifer)
- nectar: a sugary fluid secreted by special nectary glands in flowers (and sometimes other plant parts) to attract pollinators and other beneficial insects. The fluid is 95% sugar and 5% amino acids and other important nutrients.
- perfect: having both male and female parts in the same flower (the most typical arrangement)
- pistil: female part of flower that receives pollen. Consists of a stigma, which receives pollen, a style, through which the pollen travels, and an ovary, where fertilization occurs.
- pollen: fine, grain-like structures that carry a plant's sperm nuclei
- pollinizer: a plant that provides pollen for fertilization
- pollination: a process that occurs in flowering plants (Angiosperms) and cone-bearing plants (Conifers) in which pollen is transferred from the male part of a plant to a female part of a plant, without which fertilization and plant reproduction would not be possible
- self-pollination: when pollen from a plant pollinates a flower from the same plant (occurs in beans, eggplants, peas, peppers, and tomatoes)
- stamen: male part of flower. Consists of anthers on the ends of filaments. The anther bears pollen for pollination.



Julie Chardt & Corinne Bachle, & Trish Tremayne Master Gardeners

Lemon trees can be prolific bearers of beautiful, tasty fruit. But what can you do with ALL those lemons? Preserving lemons allows you to enjoy their tart sweetness (tempered with salt) in Mediterranean recipes or served as is with a creamy mild cheese and crackers. Recipes for preserved lemons are abundant online and in Mediterranean cookbooks.



inch from the bottom. Stuff each lemon with 1 tablespoon of the sea salt and place in the jar. Push the lemons into the jar so they are squeezed tightly together. Seal the jar and leave it in a cool spot for at least a week.

Remove the lid and press the lemons in the jar to squeeze out as much of the juice as possible. Add the rosemary, chili, and lemon juice. (The lemons should be completely immersed in lemon juice.) Cover with a thin layer of olive oil. Re-seal the jar and leave in a cool place for at least four weeks. The longer you leave them, the better the flavor.

Preserved Lemons

Ingredients:

6 unwaxed lemons (Meyer, Eureka, or Lisbon)
6 tablespoons coarse sea salt (Don't use table salt.)
2 rosemary sprigs
1 large red chili (optional, but adds spunk to the recipe)
Juice of 6 lemons
Olive oil

Sterilize a jar just large enough to accommodate all the lemons. To sterilize it, fill the jar with boiling water, leave for a minute, then empty it and allow to air dry.

Wash the lemons and quarter them from the top to within $\frac{3}{4}$

Once opened, they can be stored in the refrigerator for 6-12 months. To use, remove a lemon and rinse thoroughly to remove the excess salt. Many recipes call for using only the rind, but the pulp is equally delicious.

Jerusalem: A Cookbook, Yotam Ottolenghi and Sami Tamimi, Ten Speed Press 2012 (edited)



Lemon Curd

Yield: about 3 cups

Ingredients:

4 teaspoons grated lemon peel
2/3 cup lemon juice (bottled or fresh)
5 eggs
1 cup sugar (add 1 additional Table-
spoon if using Meyer lemon juice)
1/2 cup melted butter



- In a blender, blend the first four ingredients until smooth.
- With blender motor running at lowest setting, gradually add melted butter, pouring in a steady stream.
- Transfer the mixture to a small, heavy, non-reactive (i.e. stainless steel) saucepan.
- Cook over medium heat, stirring continuously until mixture thickens.
- Make sure temperature reaches 170°.

Serving suggestions: excellent as a topping on pound cake, shortbread, croissants, scones, pancakes, waffles, tea biscuits, crepes, etc. Pairs very well with summer berries (blueberries, blackberries, raspberries, strawberries) from your local farmers' market.

Freeze leftover lemon curd in serving size portions.

Recipe Source: Northern San Joaquin Master Food Preservers Training 2013

Meyer Lemon Bars

Corinne Bachle

Ingredients:

1 cup butter, softened
2 cups flour
1/2 cup powdered sugar

Cream together and press into a 9x13" glass baking dish. Bake @ 350° for 20 minutes.

2 cups sugar
4 T flour
1 t baking powder
4 eggs (beaten)
6 T fresh Meyer lemon juice (2 lg. or 3 sm. lemons)

Mix above ingredients together and pour over crust. Bake @ 350° for 25 minutes.

Dust with powdered sugar while still warm. Cool and cut into squares.

Coming Events April – June 2015

Friday and Saturday, April 17 and 18 San Joaquin Delta College Spring Horticulture Event

Plants grown by students in the Horticulture program will be for sale, with all proceeds going back into the program. Local garden clubs and other horticulture-related organizations will be in attendance.

Enter campus via N. Burke Bradley Road, park in the Shima 1 (S1) lot, and walk north on the paved drive between the HVAC central plant and the Horticulture Center. [See the Horticulture Center map.](#) Cost: \$2.00 for daily parking permit. The event is free.

Saturday, April 18 San Joaquin Master Gardener Workshop: Tips and Tricks for Drought Friendly Landscaping

10:30 – 12 noon

Learn some easy ways you can conserve water in your existing landscape. Classes are free. All participants must register a week prior to the class by calling (209) 953-6100.

Manteca Library, 320 W. Center, Manteca

Tuesday, April 21 RSVP by April 16 Open House and Watershed Field Day

Tuesday April 21, 2015 10 am – 3 pm
Soil Health Speakers include: Dennis Chessman, State Agronomist Sid Davis, Assistant State Soil Scientist, Chris Locke, Farmer. Session will include methods for monitoring soil health and strategies, including cover crops and conservation cover, to increase soil organic matter. Pollinators Speakers include: Jessa Cruz, Xerces Society; Athena Pratt District Conservationist. Session will highlight PMC Pollinator Plantings establishment and maintenance and pollinator monitoring FREE

Lockeford Plant Materials Center
21001 N. Elliott Rd., Lockeford,
For more information, to RSVP, or to arrange for any special needs contact: Margaret.Smither-Kopperl@ca.usda.gov or 209.727.5319 x 102 .

Friday April 24th,
Monrovia Nursery's Director of New Plants Nicholas Staddon
7:00-8:30 p.m.

Nicholas Staddon will give an extraordinary visual look at the Chelsea Flower Show in London, England, the greatest garden show on the earth.

Alden Lane Nursery
981 Alden Lane
Livermore, CA 94550
\$5.00

Saturday, April 25 Dancing with the (Plant) Stars!

1:00 p.m.

Join Nicholas Staddon, Director of New Plants for Monrovia, as he passionately guides us through some great plants for our unique climate and conditions as well as new trends on the horizon. Don't miss it! Only \$5.00!

Alden Lane Nursery, 981 Alden Lane, Livermore

Sunday, April 26 27th Stockton Earth Day Festival "Bee Aware"

10:00 a.m.—4:00 p.m.

Victory Park, Stockton
Free

Sunday, May 3 Bringing Back the Natives Garden Tour

10:00 a.m. – 5:00 p.m.

This is a free, self-guided tour of 30 Alameda and Contra Costa county gardens. A variety of bird- and butterfly-friendly, pesticide-free, water conserving, and low maintenance gardens will be showcased. On Saturday and Sunday, May 2 and 3, a Native Plant Sale Extravaganza will take place from 10:00 to 5:00. During this Extravaganza, many nurseries specializing in California natives, many not normally open to the public, will carry large quantities of hard-to-find California natives for sale. [Register here.](#)

Saturday, May 9 San Joaquin Master Gardener Workshop: Kidding Around in the Home Garden

10:00 – 11:30 a.m.

Turn children on early to the joy of gardening.

Class size is limited to 30. All participants must register by the Wednesday

before the class by calling (209) 953-6100.

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

Saturday, May 16 San Joaquin Master Gardener Workshop: Kidding Around in the Home Garden

10:30 – 12 noon

Turn children on early to the joy of gardening.

Manteca Library, 320 W. Center, Manteca
Classes are free. All participants must register a week prior to the class by calling (209) 953-6100.

Saturday, May 16 UC Davis Arboretum Spring 2015 Plant Clearance Sale

9:00 a.m. – 1:00 p.m.

Many homeowners are in the process of developing their "New Front Yard" by replacing high-water use plants with low-water alternatives. This year you will find just what you need at our "New Front Yard" Spring Plant Sales. We are going to have the area's largest selection of attractive, drought-tolerant, easy-care, region-appropriate plants including lots of California natives and Arboretum All-Stars. Click to [Download the NEW FRONT YARD plant list:](#) our list of 40 attractive, low-water plants that also support wildlife.

Arboretum Teaching Nursery, Garrod Drive, UC Davis campus

Summer-blooming vines, grown up a narrow structure, add color and height to even the smallest gardens. Before planting, set a sturdy structure with enough height and heft to support your vine (adding a structure later is difficult). As shoots grow, train them to the support with self-gripping Velcro, plant tape, or twist ties.

Vertical accents in borders can be achieved by growing tall, upright bedding plants behind shorter ones.

Chrysanthemums will provide beautiful fall flowers if you start seeds this month.

Tomato and pepper transplants can be planted this month. Seeds of pumpkins, beans, corn, squash, cucumbers, and melons can be sown in the garden around the middle of this month. For interesting and unusual fall decorations, consider growing pumpkins or winter squash that are not your ordinary Jack-o-lantern.

Zucchini tastes best if you harvest before it exceeds 8-10 inches.

Carrots become sweeter with age, but harvest them before they take on a woody texture.

Snow peas are ready to be picked when the peas are just beginning to swell in the pods. Snap peas taste best when the pod is plump, but the skin is still shiny, not dull.

Maintenance –

Bulbs should be left in the ground until the foliage is dry and crisp.

Aerate lawns that get a lot of heavy foot traffic and have compacted soil, making it difficult for water, fertilizer, and oxygen to reach the roots. If you can't push a screwdriver up to its handle into the turf, it's time to aerate. Besides compaction, lawns on heavy clay soil, or those on a steep slope (10:1) to the street should be aerated. Use an aerator that either produces a core or a water wash to dig holes. Spike aerators just add to compaction. If you are using a machine aerator, be sure to mark and avoid all sprinkler heads. Some machine aerators require a lawn to be moist, but not soggy. Irrigate a day or two before aeration if soil is dry.

A mower set at the highest or next-to-the-highest blade setting will help keep your fescue lawn healthy and use less water through the summer. Mow your lawn regularly so that no more than 1/3 of the height is removed at a time.

Water your lawn in the morning to discourage fungal diseases. You'll also lose less water through evaporation.

June Notes

Plant -

There's still time to get beans, corn, cucumbers, eggplant, peppers, pumpkins (start now for Halloween), summer squash, and tomatoes in the ground. These warm-season plants grow

well as soil heats up but need lots of irrigation. Conserve water by only growing what your family can consume.

Instead of growing thirsty annual flowers in pots this summer, consider colorful perennial succulents that don't need a lot of water. Be sure to plant in fast-draining cactus potting soil.

Plant Thai basil and cilantro now and you'll have fresh herbs all summer. Both annuals love sun and ample water, and do well in pots so it is easier to control the water you use. Start basil from seedlings. Sow cilantro seeds directly in the container – it germinates quickly. Begin harvesting when plants reach 6 inches tall.

Attract bees with a variety of flower shapes and colors. Look for flowers and plants that are native to our area for growing ease and as an attractant for honeybees.

Maintenance -

Support tomato vines with wire cages, stakes or a trellis so the fruit won't rest on the ground and spoil. Feed the plants with a low-nitrogen fertilizer when the fruit starts to develop (too much nitrogen encourages rampant foliage rather than more fruit). Keep the soil damp but not soggy and mulch the tomato plants to conserve moisture.

Harvest garlic and onions this month as well as potatoes at the end of the month.

Water plants early in the day to conserve water, ensure maximum growth, and minimize disease problems. Plan to water deeply every 7 to 10 days or whenever the soil is dry at a depth of 3 inches.

Apply a 2-inch layer of mulch to conserve water. Wood chips used as mulch around plants can suppress weeds, conserve soil moisture, and enhance the plants' root growth.

Fertilize both warm and cool season lawns this month.

Most lawns only need to be watered two or three times a week. A deep, thorough watering could lower that total to once per week.

During the summer heat, lawns need about two inches of water per week. To find out how much water your sprinklers output, place several flat bottomed containers (such as tuna fish cans) around your lawn, turn on the sprinklers for a half hour and then measure the water in the containers. Adjust your sprinkler coverage if needed and reset the amount of time you water according to the results of your timed test.

Save the Date!

Our Smart Gardening Conference will be Saturday,
September 26th, 2015



UC Master Gardeners

2101 E Earhart Ave

Suite 200, Stockton, CA, 95206

Phone: 209-953-6112

E-mail: anrmgsanjoaquin@ucanr.edu

Web-site: <http://sjmastergardeners.ucdavis.edu>

[Find us on Facebook!](#)

Coordinator: Marcy Sousa 953-6100

For nondiscrimination policy, [click here](#)



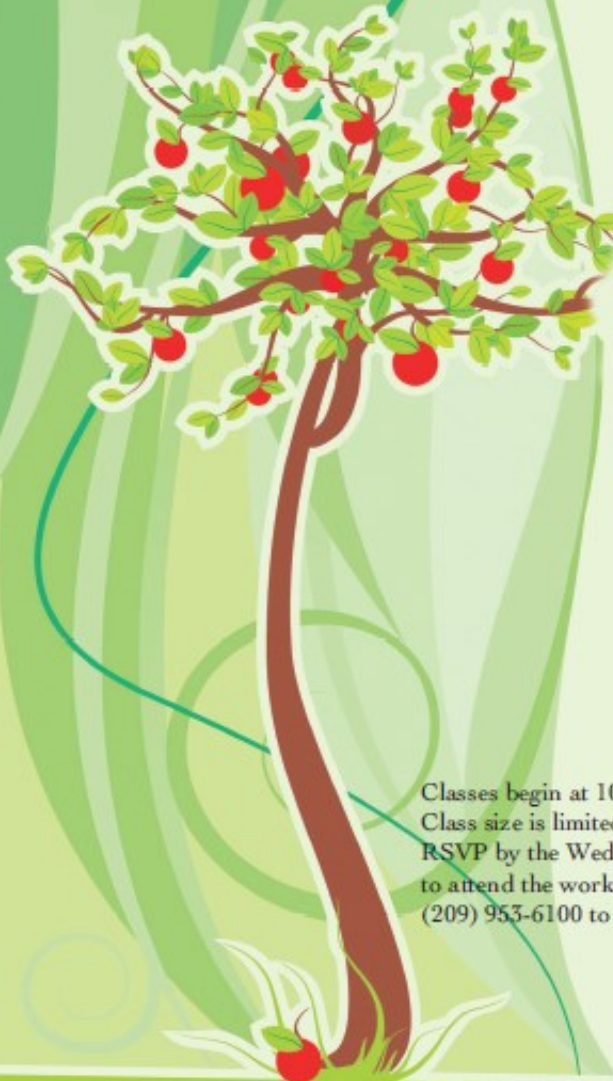


San Joaquin Master Gardeners 2015 Workshop Schedule

City of Stockton
Delta Water Supply Project Building

Classes will be held at the
**City of Stockton Delta
Water Supply Project**

11573 North Lower Sacramento Road
Lodi, CA 95242



**January 10:
Yardscaping with
Fruit Trees**

How to plant and grow fruit trees for a productive backyard orchard.

**February 14:
Big Flavor Small Spaces**

Growing edibles in small spaces and containers with big results.

**March 14:
Handling Garden
Enemies**

Dealing with common garden pests and invasives in an environmentally friendly way.

**April 11:
Tips and Tricks for
Drought Friendly
Landscaping**

Easy ways you can conserve water in your existing landscape.

**May 9:
Kidding Around
in the Home Garden**

Turning children on early to the joy of gardening.

**July 11:
Rethinking your Lawn**

Turf alternatives for today's landscape.

**August 8:
Growing Root Flowers
for Beauty**

How to successfully plant and grow tubers, corms, bulbs and rhizomes.

**September 12:
Creating beauty with
California Native plants**

Tips and tricks in successfully planting and growing CA natives.

**October 10:
Don't Toss It,
Compost It!**

Learn how to turn kitchen and yard waste into the ideal soil amendment for your garden.

**November 14:
House Plants
Made Easy**

Learn how to be successful growing indoor plants.

Classes begin at 10:00 am and end at 11:30 am.
Class size is limited to 30. You will need to
RSVP by the Wednesday before the class
to attend the workshop. Please call
(209) 953-6100 to guarantee your seat.





San Joaquin Master Gardeners

2015 Workshop Schedule

Manteca Library Time

10:30 am -12:00 pm

Classes will be held at the Manteca Library

320 W. Center Manteca, CA 95336
(209) 937-8221



January 17: Yardscaping with Fruit Trees

How to plant and grow fruit trees for a productive backyard orchard.

February 21: Big Flavor Small Spaces

Growing edibles in small spaces and containers with big results.

March 21: Handling Garden Enemies

Dealing with common garden pests and invasives in an environmentally friendly way.

April 18: Tips and Tricks for Drought Friendly Landscaping

Easy ways you can conserve water in your existing landscape.

May 16: Kidding Around in the Home Garden

Turning children on early to the joy of gardening.

July 18: Rethinking your Lawn

Turf alternatives for today's landscape.

August 15: Growing Root Flowers for Beauty

How to successfully plant and grow tubers, corms, bulbs and rhizomes.

September 19: Creating beauty with California Native plants

Tips and tricks in successfully planting and growing CA natives.

October 17: Don't Toss It, Compost It!

Learn how to turn kitchen and yard waste into the ideal soil amendment for your garden.

November 21: House Plants Made Easy

Learn how to be successful growing indoor plants.

Classes begin at 10:30 am
and end at 12:00 pm.

Classes are free.

All participants must register
a week prior to the class at
(209) 953-6100.

