FALL 2017

The Garden Beet

University of California
Agriculture and Natural Resources | UCCE Master Gardener Program

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This newsletter is provided by the UCCE Master Gardener Program of Orange County. We are UC trained Master Gardener volunteers ready to answer your gardening questions. Master Gardeners extend research-based information to the public about home horticulture and pest management through classes, hotlines, community events and demonstration gardens. Whether you want to know what to plant when, how to manage a pest, or how to become a master gardener, you can find it by visiting our website at http://mgorange.ucanr.edu

ATTRACTING MONARCH BUTTERFLIES

Nothing lends a garden more beauty and charm than having butterflies fluttering about, especially the regal and colorful Monarchs. But these beautiful creatures are struggling, as reported by the PBS Newshour in January of 2015:

> The Monarch butterfly population declined by approximately 90 percent or nearly a billion (970 million) since 1990 due to numerous threats, according to a **U.S. Fish and Wildlife Service** report. Those threats include loss of habitat due to agricultural practices, cropland and development conversion. This loss comes from farmers and gardeners spraying herbicides on milkweed plants, a food source, nursery and home for butterflies.


Photo by Susan Hughes

But gardeners can support these gentle and beneficial insects. In order to understand how to attract Monarchs and other species of butterflies to our gardens and how to provide the conditions they need in order to reproduce, it helps to understand the phases of a butterfly's life. Butterflies are insects of the order Lepidoptera, and they transition through complete metamorphosis. In other words, the immature stages look nothing at all like the adult butterfly. The four stages of a butterfly's life are the egg, the caterpillar (larva), the chrysalis (pupa), and the adult butterfly. Each stage has its own requirements which, when provided in the garden, attract Monarchs and other butterfly species and allow them to reproduce.

The first of these requirements is the presence of **host plants**. Host plants are the specific plants on which the female adult lays her eggs and on which the larva (caterpillars) feed. For the Monarch, only one plant will do: milkweed. There are several varieties of milkweed, and Monarchs like them all. The variety of milkweed most commonly seen in nurseries is *Asclepias curassavica*, or tropical milkweed. *Asclepias fascicularis*, or narrow leaf milkweed, is a California native. Other varieties include *A. fruticosa* (South African milkweed), *A. physocarpa* (balloon plant), and *A. speciosa* (showy milkweed). In addition to providing


Photo by Susan Hughes

Continued from Page 1

nourishment for the Monarch caterpillars, milkweed contains **cardenolides,** a chemical that causes the caterpillars and adult butterflies to taste terrible to birds. According to Dr. Art Shapiro, Distinguished Professor of Evolution and Ecology and UC Davis butterfly expert, "The Monarch acquires protective chemicals (cardenolides, "cardiac glycosides") from its host plants. Because different milkweeds differ greatly in their cardenolide content, Monarchs do also. Our commonest milkweeds (*Asclepias fascicularis* and *A. speciosa*) are low in cardenolides and produce innocuous butterflies; some relatively rare species, like the serpentine-endemic *A. solanoana*, are very nasty."


Photo by Sandi Ban


Photo by Susan Hughes

The second requirement for Monarchs is **shelter and cover**. Once the caterpillar has eaten its fill of milkweed, it needs a safe place in which to form its chrysalis, sheltered from predators and the elements. Once Monarchs begin reproducing in the garden, it is fascinating to see all the places that chrysalises can be found. Favorite spots include dense plants, such as boxwood and lantana, under eaves or the horizontal beams of wooden fences, along trellises, and on patio furniture. Children and adults delight in finding these beautiful green chrysalises with their shimmering gold stripe and dots.

The third requirement, **nectar sources**, is for the adult butterflies. Once the mature butterfly emerges from the chrysalis, a very quick process known as **eclosing**, it must find nectar to eat. So many lovely flowers provide both beauty in the garden and food for the adult butterflies. Some of our common, traditional flowers include lantana, salvia, yarrow, Echinacea (coneflowers), Queen Anne's lace, zinnia, verbena, marigolds, asters, and so many more. Native nectar flowers include California sunflower, Cleveland sage, ceanothus, buckwheats, mallows, poppies, coyote brush, deerweed, mulefat, and many others.


Photo by Susan Hughes

In caring for host plants and nectar sources in the garden, it is essential to note, and probably pretty obvious, that insecticides of any kind pose a serious threat to caterpillars on host plants and butterflies on nectar sources. These should be used very sparingly and carefully, if at all. For example, milkweed plants attract milkweed bugs (*Oncopeltus fasciatus*) and the golden oleander aphids (*Aphis nerii*). The milkweed bugs are harmless and feed primarily on the milkweed seed pods. Small numbers of oleander aphids can be controlled by releasing lady bugs onto the milkweed plants. Pruning the milkweed and disposing of the cuttings is effective for more serious infestations of oleander aphids.


Photo by Susan Hughes

When choosing a spot in the garden for the host and nectar plants, try to find a sunny location and one that is sheltered from strong winds, if possible. Butterflies need a body temperature of 85 – 100° F in order to fly efficiently. When the weather is cooler than this range, butterflies engage in a behavior known as *basking*. Some species spread their wings completely and face them toward the sun. Others fold their wings and turn, so that the sun warms them from the side. This is

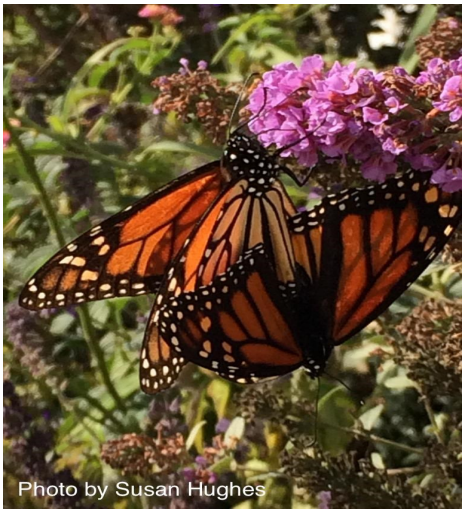


Photo by Susan Hughes

often a wonderful time to observe or photograph butterflies. Favorite spots for basking include sun-warmed rocks, open ground, or plants that are in a sunny, sheltered location.

Monarchs can be attacked or become infected at the various stages of their life cycle. Wasps and spiders sometimes sting the caterpillar or adult butterfly, and Tachinid flies may lay their eggs in the chrysalis. While Tachinid flies are generally considered to be beneficial insects, they are not beneficial to the Monarch chrysalis. Indications that the chrysalis has been attacked by a Tachinid fly include brown discolorations, shrinking, or shriveling. Rings around the top of the chrysalis darken, holes may appear, and long strings hang down from the chrysalis, which eventually turns yellow or white.

Milkweed can host a parasite called *Ophryocystis elektroscirrha* (OE). As caterpillars, Monarchs ingest the parasite when eating the milkweed, and when they eclose from their chrysalises they are covered in spores. The butterflies are often too feeble to fly, and may be unable to expand their wings, says Professor Shapiro. But he adds that "there is an easy 'fix' that nobody talks about for some reason: just cut the plants to the ground a few times a year. This will encourage new growth, which will be cleaner, prettier, more nutritious, and uncontaminated with OE."

By planting flowers and plants that not only bring beauty to the garden, but also attract and support the Monarchs, gardeners can help to ensure that these graceful and iconic butterflies continue to survive, bringing delight to us and to future generations.

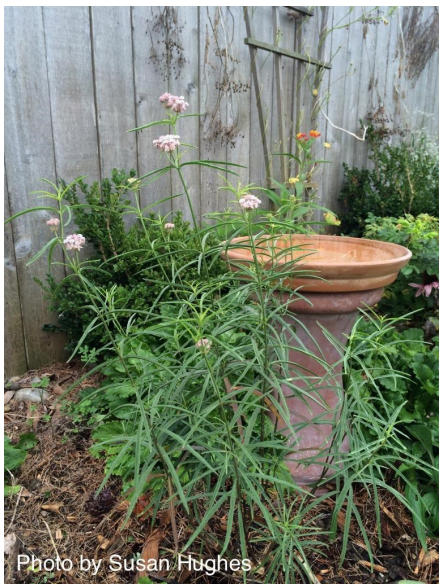


Photo by Susan Hughes

Be alerted about coyote encounters in your neighborhood with the new UCCE Coyote Encounter Tool, **Coyote Cacher**. This coyote app has been created by University of California Cooperative Extension, Orange County to allow you to report coyote encounters and receive alerts of encounters. When you sign up for alerts in your neighborhood, you will be alerted in real time by email.

Sign up for alerts and report encounters at

http://ucanr.edu/CoyoteCacher

Read more about Coyote Cacher on the UC ANR Green Blog at: http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=23229

GO NATIVE

By Giana Crispell, UCCE Certified Master Gardener

Thinking about spicing up your garden next Spring? Are you tired of the same old offerings that every nursery carries? While lovely Spring annuals and perennials offer irresistible color and variety, what if you literally could have it all: a beautiful, low maintenance garden that attracts wildlife, uses very little water, has few or no pest problems, is suitable to California's soil and climate, only requires a bit of deadheading, and once established is almost "hands off?" No we're not talking about plastic in Paradise, but California native plants where the palette is amazing and any landscape design is possible from Japanese to Modern to Mediterranean.


California Poppies

California's native plants offer a unique opportunity to diversify your landscape while using plants that require no fertilizer and are easy to plant, as they generally require no soil amendments. In summer, your watering requirements actually go down as natives enter a sort of semi-dormancy for which overwatering can be a death knell. A native landscape is far from brown, scruffy and monotonous. When correctly designed, a native garden can include flowering trees and shrubs, ground covers, and an amazing array of familiar perennials such as poppies, monkey flowers (Mimulus puniceus), Penstemon spectabilis, Dudleya brittonii, Lupinus succulentus (Lupine), Epilobium canum (California fuchsia), Iris douglasiana, Heuchera (different varieties of Coral bells), and Galvezia speciose (Showy Island Snapdragon).


Red Buckwheat

If going "all in" is too overwhelming, then perhaps the next time you are replacing some annuals or perennials you'll give consideration to incorporating natives into your existing landscape. These plants will return year after year with little or no pruning and just some deadheading. The exception to this is if you have clay, compacted or overworked soil in which case you'll need to add about 25% organic compost to the soil before planting. Then water like crazy to remove the air pockets around the root ball. The first watering is the most important a native ever receives. After applying pre-emergent, lay down a 3-4 inch layer of redwood bark as mulch, pulled back 4-6" from the base of each plant. 75 % of your garden should be plantings in evergreens. This avoids the dead/dormant appearance. Suggested trees for this region are: Catalina Ironwood, Box Elder, Redbuds, Island Oaks, Coast Live Oaks, Desert Willows, and White Alder. Popular native groundcovers are Ceanothus 'Centennial' and 'Yankee Point.'


Penstemon

Of course a garden is incomplete without shrubs and screening plants. Natives reveal a rich abundance and diversity here in Manzanita, Wild Lilacs, Toyon, Elderberry, Island Mountain Mahogany, Coastal Sage, Flannel Bush, Coffeeberry, and the Island Bush Poppy. Note that not all California natives work in all areas so it is best to find which work best in your microclimate. You can input your address at http://www.cnps.org/ to find natives conducive to your area.

Irrigation of natives is not complicated. They prefer moisture that is similar to rainfall. So a micro spray, not drip system is best. If you have a drip in place it can easily be retrofitted. If your plantings are next to a lawn, very likely you need do nothing. One caveat: more natives are killed especially in the summer by over watering. This is their semi-dormant time and they may only need water every 7-10 days (even in heat).

So if you are ready to take the plunge or just put your toe in the water, check with your local nurseries.

HOW TO CHECK YOUR CITRUS TREES FOR A DEADLY DISEASE

The incurable citrus tree disease huanglongbing, or HLB, has been detected in Los Angeles and Orange counties and most recently in Riverside.

The citrus disease is spread from tree to tree by Asian citrus psyllids, the insects that move the bacteria that cause huanglongbing.

Citrus trees infected with huanglongbing develop mottled leaves and produce fruit that is misshapen, stays green and tastes bitter. There is no known treatment for the disease, which usually kills the tree within three to five years, according to UC Cooperative Extension specialist Beth Grafton-Cardwell.

Huanglongbing, which is also known as citrus greening, has already devastated the citrus industries in Florida, Georgia, Louisiana, South Carolina and Texas.

You can help prevent this disease from destroying California's citrus as well as your own trees.

Look for yellowed leaves on citrus trees. Nutritional deficiencies can also cause citrus trees to have yellow leaves so it is important to know the difference. Nutrient deficiency causes a similar pattern of yellowing on both sides of the leaf. HLB causes blotchy yellow mottling and is not the same on both sides of the leaf.

To identify the Asian citrus psyllid and the disease symptoms of HLB, see the fact sheets, videos in English and Spanish and other resources at http://ucanr.edu/acp.

If you see any trees that display symptoms of

huanglongbing, contact your local agriculture commissioner.

There is a program offered by California Citrus Mutual (CCM) to homeowners in the HLB quarantine zones to remove their citrus trees at no cost to the home gardener. There is a map of quarantine zones at the California Department of Food and Agriculture (CDFA) website (https://www.cdfa.ca.gov/plant/acp/regulation.html). The contact person is Becky Carter beckyc@cacitrusmutual.com. Visit their website for more information www.removemycitrus.com

To learn about the latest research, visit UC ANR's new Science for Citrus Health website at http://ucanr.edu/sites/scienceforcitrushealth.

QUICK TIPS FOR YOUR FALL GARDEN

1. **Fall is a wonderful time for growing vegetables!**
Many folks think that spring is the 'right' time to plant vegetables. But because of our mild winters, Southern California gardeners can grow vegetables year round. Many varieties of vegetables only thrive in cool weather. The fall/winter garden can produce an abundance of delicious cool weather veggies!

2. **September is the month to plan and prepare.**
In general, the first weeks of September may still be too hot in Southern California for the cool weather vegetables of fall and winter. It is a great time to plan your fall garden. Take some time to stroll through your garden, making lists and notes of what you want to plant and what you'd like to accomplish this fall. This is also the time to clean and prepare your garden areas. Remove waste from the summer garden, clear weeds, and cultivate the soil. Add compost and organic vegetable fertilizer and mix thoroughly into the soil. Enhance the soil in raised beds with raised-bed soil and fertilizer. Empty and clean containers and fill with fresh potting soil. And September is the time to start seeds in small pots or 6-packs to transplant into the ground in October.

3. **So much to do in October!**
For many Southern California gardeners, October is the busiest month of the year. In the vegetable garden, this is the time to plant broccoli, cauliflower, cabbage, Brussel sprouts, lettuce and other greens (kale, chard, spinach, bok choy or pak choy and other Asian greens), parsley, cilantro, peas (snap, sugar, or shelling), carrots, beets, turnips, radishes, garlic, and leeks. Try planting a few broccoli and cauliflower plants every two or three weeks throughout October and November for a continuous supply.

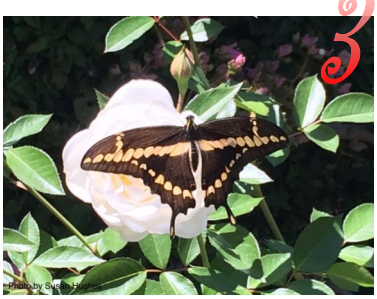
4. **There is still time to plant vegetables in November.**
November is still a terrific time to plant cool weather vegetables. Put in second or third plantings of your favorite veggies (or first plantings if October went by too quickly!). And the first ten days in November are the best time to plant onion seeds into the ground. If you prefer to plant your onions from seedlings, this is best done in January.

5. **Beautify your vegetable garden with cool weather annuals.**
Vegetables and flowers play beautifully together in the garden! Just as veggies can be planted in the flower garden, flowers make a fall/winter vegetable garden even prettier. Snapdragons, pansies, delphiniums, stock, and calendula all thrive in cool weather and can be tucked in among your vegetables for a lovely effect.

BUTTERFLIES OF ORANGE COUNTY

According to the Butterflies and Moths of North America (BAMONA) database, Orange County is home to over 110 species of butterflies! Due to our mild weather, many of these can be found almost year-round in our neighborhoods, parks and urban areas. A few that are frequently found here are the Mourning Cloak, Gulf Fritillary, Giant Swallowtail and Cloudless Sulphur butterflies. To provide a habitat for their larva (caterpillars), plant:

1 **Mourning Cloak, *Nymphalis antiopa***	**Various species of willows (Salix), poplars (*Populus*) & elm (*Ulmus*)**
2 **Gulf Fritillary, *Agraulis vanillae incarnate***	**Various species of passion flower vine (*Passiflora*)**
3 **Giant Swallowtail, *Papilio cresphontes***	**Citrus**
4 **Cloudless Sulphur, *Phoebis sennae marcellina***	**Cassia species in the pea family (*Fabaceae*)**



Having a selection of flowering plants in your yard will attract many varieties of adult butterflies, most of which feed on flower nectar. The adult Mourning Cloak will feed on occasional flower nectar, but prefers tree sap and rotting fruit.

For a great reference on butterflies of Orange County and their larval food plants, visit: http://mamba.bio.uci.edu/~pjbryant/biodiv/bflyplnt.htm

BACKYARD BEEKEEPING PART IV

By Karine Pouliquen, Beekeeper, Educator & UCCE Master Gardener

This is the fourth and last article in the series on backyard beekeeping. For reference on the earlier information, please visit the UCCE Orange County Master Gardener website at http://mgorange.ucanr.edu

Ideally, after installing the bee package and queen in the hive, the queen is laying well and settling in nicely. During the first weeks, the open brood — eggs and larvae, and the capped brood — pupae in cells that have been capped with a little lid of wax were visible.

The four-week mark is an important event. Besides seeing eggs and larvae, some pollen, nectar and honey can be observed. This is the work of the forager bees going out every day collecting food supply for the whole colony. An important task for the beekeeper is to check the feeder every week to see if it needs to be refilled with 1:1 sugar syrup. This syrup stimulates the bees to make wax in order to build the wax combs. Feeding is needed until every frame of the brood nest and honey supers is drawn out (wax combs).

Inspection should be done in the same manner as it was performed previously, smoking the entrance and under the inner cover. Having a routine to approach and smoke the colony is a good way to be confident. Practice!

When eight of the 10 frames are drawn out, add a second hive box. This addition gives the honey bees and the queen more room to expand their nest. Adding a box too early will make it difficult for the bees to keep the brood warm enough. Adding a box too late may cause the bees to feel crowded, and result in them swarming to look for a new location. Timing is very important.

To add a second box, use the smoking routine: remove the cover and inner cover, and place a new hive box directly on top of the first one. Move the feeder into this second story. Add some syrup if needed, and close the hive as usual. Use the same technique while adding a super. Remember to add a queen excluder between the top brood box and the super.

Throughout the course of the summer months, the bees will use this upper box as a nursery. The queen will lay her eggs, and the brood will be raised there as well as in the first box. As fall or cooler months arrive, the top box will be used as a "pantry." Honey bees will store pollen and honey that will be eaten during the winter when plants do not produce enough nectar and pollen to be collected in great quantity.

During weeks five and six watch the frames carefully for eggs. The presence of eggs indicates a queen is in the hive. You may witness the birth of a honey bee. This is always fascinating, and a great moment to pause and observe the bee hatching. Notice that the new bee is paler in color than her older sisters. Her hairs are still wet, and she cannot fly for a few days. This observation is amazing every time.

During this time, the entrance reducer should be placed at the medium opening of three to four inches. This will improve ventilation during the warm months. Drill a one-inch hole in hive boxes prior to adding the bees to provide additional ventilation. This technique is useful in keeping the colony comfortable during the hot days of July, August and September.

Remove the entrance reducer after about eight weeks because the number of bees is greater than at the beginning and they can now defend their nest efficiently. In addition, the larger entrance helps the bees' comings and goings and provides more ventilation.

Notice that some frames, especially the one on the side of the box, are sometimes not drawn out. Bees have a tendency to "forget" to go to those far away frames. If this is the case, move those frames of foundation in between the freshly drawn out comb. This manipulation will encourage the bees to finish the work. However, NEVER place those frames in the middle of the brood nest. Brood frames must ALWAYS stay together so the bees can regulate the temperature-sensitive brood.

To inspect a two-story hive, inspect the lower hive box first. Remove the second hive box, and inspect as usual. Replace the top box and inspect frames in the same fashion. Always look for eggs, and good laying pattern containing nectar, pollen and capped honey.

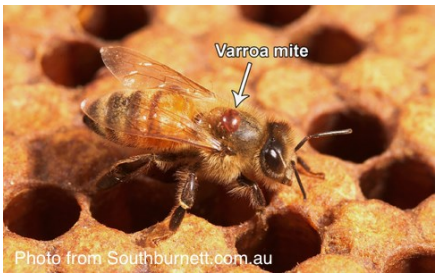
When the second brood box has eight of the 10 frames drawn out, add a queen excluder (to prevent the queen from laying eggs in honey supers) and add one honey super. This box will be the point of honey extraction when full.

At the end of summer when the hours of daylight are reduced, the queen will start laying fewer eggs, reducing the population slowly, ultimately stabilizing it during the winter months. Therefore, after harvesting the honey, test the colony to assess the level of Varroa mites.

Varroa mites are the most damaging pests of the honey bees. They are parasites that feed on the bees' hemolymph (blood) with their piercing mouthpiece, while injecting viruses, which

cause wing deformation and death. If this parasite is not controlled, it can decimate a colony in a few short weeks.

The level of Varroa mites acceptable for a colony will vary during the year depending on the season and hive's bee population. A free guide, *Tools for Varroa Management,* is available from the Honey Bee Coalition to help beekeepers manage Varroa mites. Print it and read it carefully.. This is the guideline used in teaching beekeeping to Master Gardeners and the public at South Coast Research and Extension Center (South Coast REC) in Irvine, CA.



http://honeybeehealthcoalition.org/wp-content/uploads/2017/01/HBHC-Guide_Varroa-Mgmt_5thEd_Jan-10-2017.pdf

To accurately know the level of mite infestation, take a sample of bees from the colony and count the mites. The number of mites per 100 adult bees is the percentage of mite level for that colony. As a rule, four mite tests per year should be performed in order to monitor the level of Varroa mites.

Sampling Method: Powdered Sugar Shake.

This is one of the methods recommended by the Honey Bee Health Coalition. It is also the method taught and used at South Coast REC apiary. This non-lethal method of sampling consists of removing the mites from the bodies of adult bees, then counting the mites to establish a standard percentage measure of mite numbers. In other words, count the number of mites per 100 adult bees.

Equipment. Wide mouth jar (e.g.: quart Mason canning jar), solid lid replaced by a #8 screen mesh, powdered sugar, ½ cup plastic measuring cup, rubbing alcohol, white paper plates, water mister, and a white rectangular plastic container.

Collecting the sample. About 300 bees need to be collected from 1-3 brood frames. DO NOT collect the queen!

1. Shake the frames of bees into the white container.
2. Using the measuring cup, scoop ½ cup of lightly packed bees (the equivalent of about 300 bees), and pour them in the quart jar. Replace the unused bees in the hive box.
3. Close the jar with the screen mesh lid.
4. Add 2 tablespoons of powdered sugar to the jar.
5. Shake the jar vigorously for about a minute to cover all the bees and to dislodge the mites from their bodies.
6. Set the jar in the shade for 3-5 minutes, to get a better mite count.
7. Invert the jar and shake it like a saltshaker, capturing the falling mites onto a white paper plate, until no more mites fall out.
8. Use the spray water bottle to dissolve the powdered sugar on the paper plate.
9. Count the mites on the plate.
10. Add an additional tablespoon of sugar to the jar, and shake again. This will improve the accuracy of the mite count.
11. Return all bees coated in sugar back to the colony.

Calculating the sample. Example of calculation: 10 mites on the plate.

10 mites/300 bees= 0.033 x 100= 3.33% This means the colony has slightly more than a 3% mite infestation.

Determining action. Usually when the mite levels are below 2%, no further control is needed. When the mite levels are between 3-5% a control effort may be needed depending on the beekeeper risk tolerance. When the mite levels are above 5%, apply a control immediately. (Please refer to the section Interpreting Sample Finding on page 8 of *Tools for Varroa Management*) Each beekeeper should select a control method that is right for him/her. It is very important to integrate many different methods of control, so there is less resistance by the mite populations.

"Chemical controls must be used according to their label. Misuse or not used in accordance with the label may result in colony loss or damage, and IS a VIOLATION of FEDERAL LAW. Always read and follow the safety instructions from the label during handling and application of these control products and work in a safe environment." (*Tools for Varroa Management,* page 13)

Information regarding different approaches to treat for Varroa mites are outlined in the Tools for Varroa Management from the Honey Bee Coalition website.

Stay informed about honey bee and beekeeping news, resources and opportunities by subscribing to the bi-monthly UC Davis Apiculture Newsletter at: https://lists.ucdavis.edu/sympa/subscribe/ucdavisbeenews

Enjoy your bees!

Good Brood Pattern

CALENDAR

Norman Murray Community Center Gardening Series

6:00 p.m. - 7:30 p.m.

24932 Veterans Way, Mission Viejo, CA

- Cool Season Vegetables, Sept. 7th
- Pumpkin Succulent Centerpiece, Oct. 5th
- Holiday Container Planting, Nov. 2nd

Food + Farm Lab Garden Workshops

10:00 a.m. - 11:00 a.m.

Great Park Farm + Food Lab, Orange County Great Park, 6990 Marine Way, Irvine, CA

- Salad from Seeds, Sept. 9th
- California Natives, Oct. 28th

Yorba Linda Public Library Gardening Series

7:00 p.m. - 8:30 p.m.

18181 Imperial Hwy, Yorba Linda, CA

- Cool Season Vegetables, Sept. 13th
- Attracting Pollinators, Oct. 12th

Osher Lifelong Learning Institute Gardening Series

1:00 p.m. - 2:30 p.m.

Ruby Gerontology Center, 800 N. State College Blvd, Fullerton

- Bed Preparation, Sept. 14th
- Edible Landscape, Sept. 28th
- Grow It Now Cool Season, Oct. 12th
- Drought Tolerant Gardens, Oct. 26th
- Bare Root Fruit Trees, Nov. 9th
- Create a Wildlife Habitat, Nov. 30th

Shipley Nature Center Lecture Series

10:00 a.m. – 11:00 a.m.

17851 Goldenwest St., Huntington Beach

- Growing Bulbs, Sept. 23rd
- Growing Herbs, Oct. 28th

Fascination of Orchids Show

Sept. 23th & 24th

10:00 a.m. – 5:00 p.m.

South Coast Plaza Village, 1631 W Sunflower, Santa Ana

Urban Landscape and Garden Education Expo

Sept. 30th 9:00 a.m. – 2:00 p.m.

South Coast Research and Ext Center

7601 Irvine Blvd, Irvine

Goin Native Fall Fest

Oct. 14th, 10:00 a.m. – 5:00 p.m.

Reata Park and Event Center

28632 Ortega Hwy, San Juan Capistrano

Goin Native Therapeutic Gardens & UCCE Master Gardeners will host workshops, demonstrations, pumpkin patch, kids' crafts, food & music.

September 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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October 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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15	16	17	18	19	20	21
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29	30	31				

November 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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12	13	14	15	16	17	18
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26	27	28	29	30		

Cultivating Gardening Skills – Fruit Trees Winter Pruning Methods

Nov. 4th 8:00 a.m. – 12:00 p.m.

South Coast Research and Extension Center

7601 Irvine Blvd, Irvine CA

For cost, class description and registration, go to: http://ucanr.edu/survey/survey.cfm?surveynumber=20806