Jan-Feb 2024

Garden Views

UC Master Gardener Program of Riverside County Newsletter

University of California
Agriculture and Natural Resources
UCCE Master Gardener Program

University of California Cooperative Extension

Master Gardener Program of Riverside County

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Advice to Grow By ... Ask Us!
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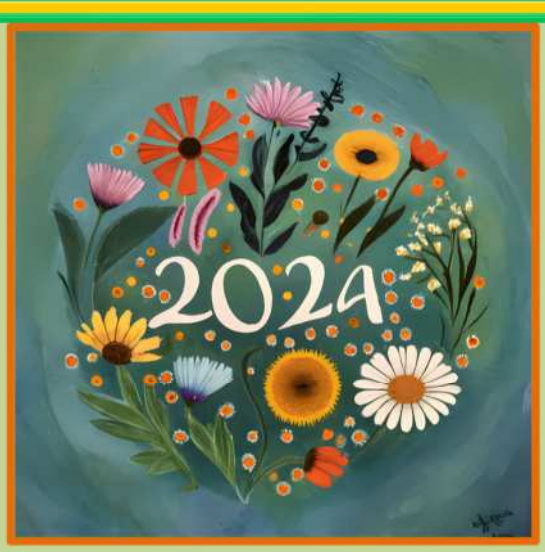
UC Master Gardener Program Mission Statement

"To extend research-based knowledge and information on home horticulture, pest management, and sustainable landscape practices to the residents of California and be guided by our core values and strategic initiatives."

UCANR Nondiscrimination Policy



Master Gardeners Celebrate the New Year!

Garden Views **is published bi-monthly by Riverside County UC Master Gardeners. In this issue:**

Hundreds Turn Out for Master Gardener Information Table, Speakers at Riverside Home & Garden Show

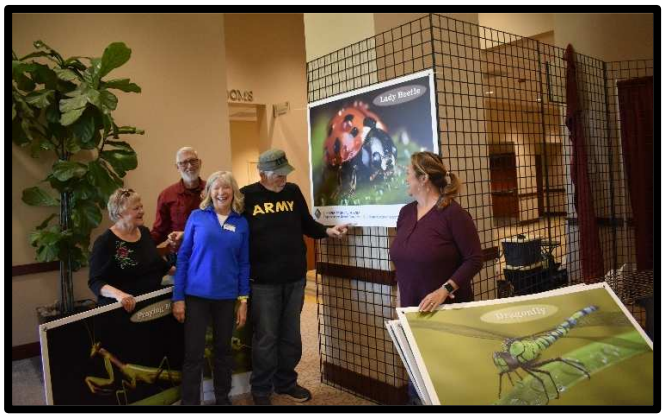
Contributed by Alex Groves, UCCE Master Gardener Trainee

The crew that helped to set up the information table booth at the Riverside Home & Garden Show poses for a photo at the Riverside Convention Center Thursday, Jan. 11. Pictured are Marilyn Howard, Debbra O'Brien, Jim O'Brien, Cyndi Yancu, Debby Leuer and David Frelinger. Photo by Alex Groves

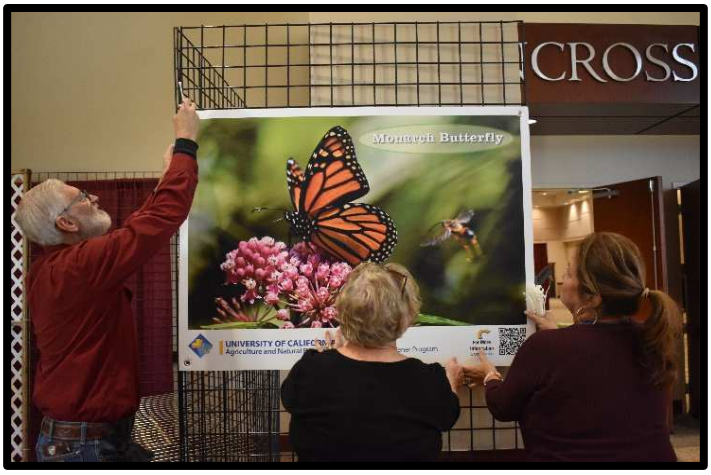
Riverside County Master Gardeners worked hard to provide research-based information to the public and support guest speakers at the Riverside Home & Garden Show at the Riverside Convention Center from Friday, January 12 through Sunday, January 14. More than 450 people visited the Master Gardener information booth, and nearly 100 attendees attended the speaker events over the three days.

The booth was much larger and included more informational resources than the tables typically set up for events such as the Riverside Downtown Farmers Market. In addition to numerous flyers and pamphlets, the booth had an interactive component: It featured informational posters with QR Codes on topics such as insects, hummingbird gardens, and succulent gardens. Visitors could scan the codes with their phones to be directed to a website where they could learn more.

On Thursday afternoon, Jan. 11, a team of Master Gardeners consisting of Thurman Howard, Marilyn Howard, Debbra O'Brien, Jim O'Brien, Debby Leuer, Christal Ferlisi and Cyndi Yancu set up the booth. They raised a metal framework and decorated it with wreaths, garden décor, and posters.



The setup crew for the Riverside County Home & Garden show admires their handiwork Thursday, Jan. 11, after the first informational poster has been put up. Photo by Alex Groves



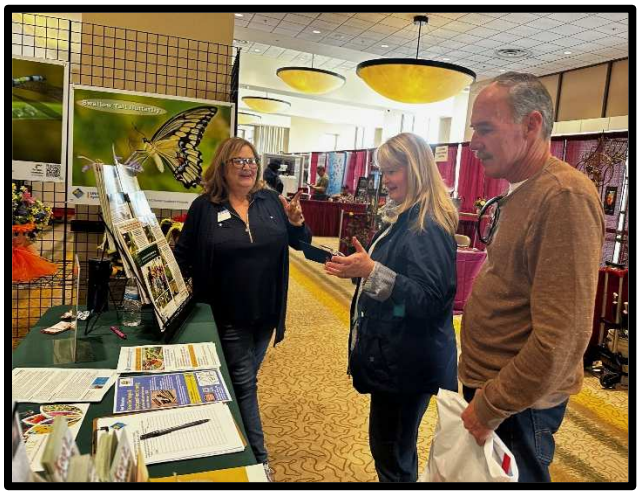
David Frelinger, Marilyn Howard and Cyndi Yancu put up an informational poster at the information table booth ahead of the Riverside Home & Garden show Thursday, Jan. 11. Photo by Alex Groves.

Yancu and a team of Master Gardener Trainees also helped assist speakers over the course of the event. There were speakers on each of three days at 2 p.m.

Larry Dodson, a member of the Board of Directors for the California Rare Fruit Growers Inland Empire chapter and a UC Master Gardener since 2014, discussed how to plant bare root trees and shrubs on Jan. 12. His talk addressed such topics as whether there's a trick to buying bare root trees and shrubs; what to look for when buying them; and whether gardeners need to have special soil at planting time.

Lynn Coffman, a UC Master Gardener and Environmental Protection Agency-Certified Qualified Water Efficient Landscaper, presented how to incorporate native plants into a water-wise garden on Jan. 13. Her talk specifically looked at how to create containers and small gardens of native plants to support bird, bee, and butterfly populations.

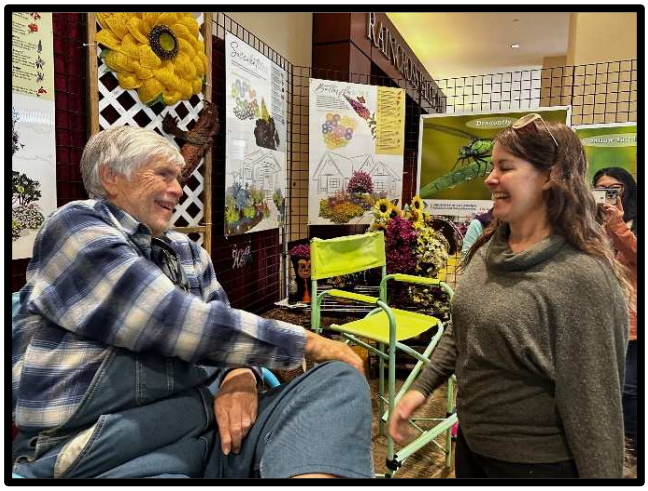
The bee and butterfly love continued on Sunday, January 14, with a presentation from Master Gardener Christine Lampe. Lampe not only discussed how to bring various pollinators into a garden space, but she also looked the part. She sported a cape that resembled a pair of bright orange butterfly wings.



Cyndi Yancu speaks with visitors to the information table at the Riverside Home & Garden show Sunday, Jan. 14. Photo by Christal Ferlisi.

Back at the information table, seasoned Master Gardeners and Trainees alike answered a myriad of questions from members of the public on everything from garden pests to drought-tolerant landscaping.

In some instances, Master Gardeners and Trainees were able to do a deep dive into visitors' questions. They took down notes as the visitors described their problems as well as the visitor's contact information. That way, a Master Gardener could follow up via email and try to help the visitor further through the *Ask a Master Gardener* service. The information table volunteers could also jot down their own contact information on the form so that they could be copied on the email response and learn some new information themselves.



Thurman Howard interacts with a visitor at the information table of the Riverside Home & Garden show Sunday, Jan. 14. Photo by Christal Ferlisi.

The expanded information table will again return at multiple other events this year, and the same set up crew members look forward to bringing an attractive and informational display to life for all to enjoy.

Butterfly Corner: Lorquin's Admiral

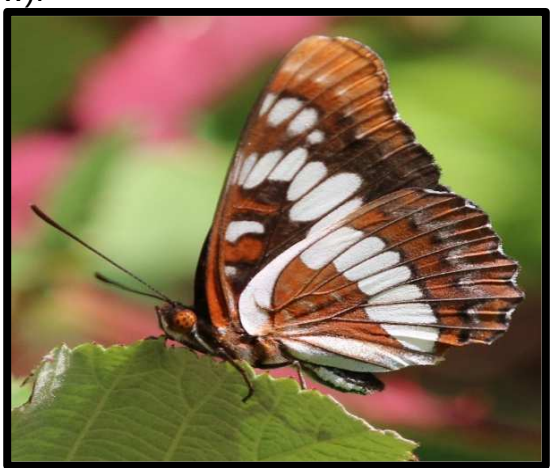
Contributed by Ann Platzer, UCCE Master Gardener

The name of the Lorquin's Admiral honors Pierre Lorquin, a French lepidopterist, who visited California during the Gold Rush Days and discovered many species of butterflies. It might surprise you to learn that not everyone who ventured west was out for gold!

The Lorquin's Admiral, *Limenitis lorquini*, which belongs to the family, Nymphalidae, has a

wingspan of about two to two and five eighth inches. It is a very showy butterfly. Dorsally, the ground color is velvety black with pure white bands on both the fore and hind wings with striking orange on the fore wing tips. An important diagnostic characteristic is that the **orange** goes all the way to the tip without a black band (photo 1: adult, dorsal view, below).

The underside of the wings has an orange-brown pattern with distinct white bands on fore and hind wings (Photo 2: adult, ventral view, below).



Like the other members of this family, the front legs are greatly reduced.

The males are said to perch on the tips of a branch, above eye level, with wings half open ready to pounce on a receptive female. The males are extremely territorial and will attack any intruder in their habitat including large birds, which may lead to their early demise. A certain life shortening pastime don't you think?

The female lays silvery-green, nearly spherical, eggs singly on the upper side of leaf tips of host plants. The caterpillars are brown and resemble bird droppings. These partially developed caterpillars overwinter rolled up in a leaf case of its host plant. In the spring the little caterpillars emerge from their leafy tubes to resume eating and continue their development.

Flight time is from April to October in Southern California with multiple broods. However, northward, the number diminishes to only one in British Columbia.

Its favorite host plant is willow, *Salix*, but others include wild chokecherry, *Prunus*, poplar cottonwood, *Populus*, and an assortment of orchard trees such as cherry, apple and plum.

Adult food includes nectar from California buckwheat, *Eriogonum fasciculatum,* yerba santa, *Eriodictyon californicum,* and privet, *Ligustrum ovalifolium*, and in addition bird droppings and dung.

Lorquin's Admiral is found at forest edges, mountain canyons, orchards, parks, stream sides, and groves of willow, cottonwood and poplar. We saw a beautiful Lorquin's Admiral visiting Oak Glen in July 2018. It was flitting in a mountain canyon near a stream. What a view as it poised just five feet away. This striking butterfly range is from southern British Columbia to California and then on south to Baja California, then east to Montana and Idaho. Fortunately, it is not yet endangered. We highly recommend that you visit Oak Glen and don't forget your close-up binoculars.

At first glance, this butterfly can be confused with the California Sister with which it often occurs. As mentioned above, the orange of the Admiral's wings extends all the way to the edge whereas the California Sister's large orange spot is nearly surrounded by black. In addition, the undersides are different. The Lorquin's Admiral has more orange and large white bandings while the California Sister has blue, green and purple sheens and less pronounced white bands. Both these butterflies fly with a few quick wing beats altered with gliding.

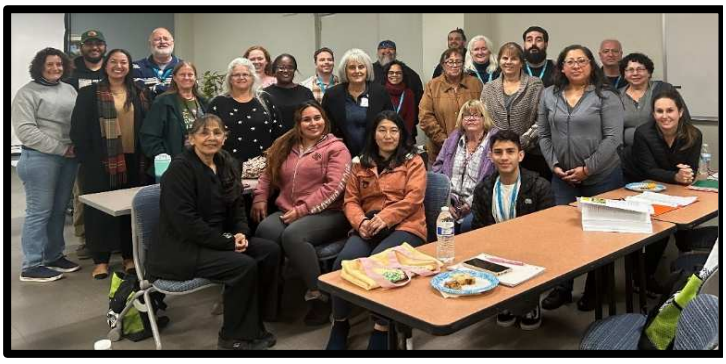
Thanks to Ed Platzer for proof reading.
Happy Butterfly Gardening! AP

Update: Master Gardener Trainee Class 2023-2024

Contributed by Debbie O'Brien, UCCE Master Gardener Trainee; photo credits, Riverside class, Jill Hishmeh, Desert class, Brad Hardison

The Master Gardener trainee class for 2023-2024 is comprised of fifty knowledge thirsty individuals eager to earn our official Master Gardener title. Thirty-one are in the West County (Riverside) area, and nineteen call the Desert cities their home. We've been busy attending classes via zoom and in-person plus working towards completing our required fifty Volunteer hours in various required training categories such as propagation, plant identification, and Information Tables.

Desert 2023-2024 Master Gardener Trainee Class



West County 2023-2024 Master Gardener Trainee class

Curious as to how our class size compared with previous class totals, I reached out to Melody Knox, 2021-2022 class coordinator. She said the previous class, 2021-2022, had thirty participants, twenty from West County (Riverside) and ten from the Desert. She indicated that this year's class is larger than usual to get back on track after skipping a year due to the challenges caused by COVID.

I moved to Palm Springs in late 2022 from Fort Collins, Colorado. While in Colorado, I volunteered with the City of Fort Collins Natural Areas Native Garden. Being new to California and the desert, I became interested in learning about desert and southern California plants. In late spring of 2023, I stopped by a Master Gardener Information Table. They told me about the program, and they were currently accepting applications for the upcoming class. Since I was looking for a new volunteer opportunity, I decided to apply. I'm very glad I did, because I've met some very knowledgeable plant people and learned so much in these past few months. That's my story but what about my fellow classmates?

Using the roster on VMS, I decided to reach out to ten or so trainees from all parts of the county-Temecula, Moreno Valley, Riverside as well as several desert cities to find out. I emailed them and asked them to answer five questions: how did you hear about the program; why did you sign up; what have you liked best so far; what have you found most challenging; and what volunteer activity that you attended have you liked best and why? After initially receiving only one reply (thanks Dan!), I did end up receiving a total of six replies. However, five of the replies were from the Desert, so West County folks might have different experiences.

Two of us heard about the program via Information tables; one found out about the program via an internet search; one learned about the program from the Master Gardener column in the Press-Enterprise; one participated in other gardening groups and has friends that are Master Gardeners in Northern California; one knew about it from her work; and one was a Master Gardener in other several states.

Thomas Weidemann signed up for the program because "after moving to the Coachella Valley, I sought the program out to update my knowledge and involvement from the desert perspective."

Dan Garrow signed up for the program “to sort of get back to my ‘roots’ in terms of my passion for gardening and my college degree in horticulture and also learn more specifically about desert gardening.”

Alex Groves signed up “because I love to garden, and every spring look forward to seed catalogs and figuring out what I will grow. I grow tomatoes, peppers, squash and other veggies. I also like to grow cacti and succulents. Like many gardeners I struggle with things such as pest pressures, weeds, and weather challenges. I wanted to join the Master Gardener program not only to expand my knowledge on how to deal with these things, but also because I love sharing information with the public. I want to help other gardeners meet their challenges head-on by providing them with research-based information.”

What Stephen Crouse liked best so far about the program is,” the passion that the MGs have for plants and gardening.” Xochitl Pena really enjoys “the volunteer work! I like interacting with the public at events and getting to meet my fellow Master Gardener trainees. I especially like the volunteer work that lets me get my hands dirty and provides that hands-on experience.” Shelly Westebbe appreciates the “willingness of experienced MGs to lend support.”

Besides trying to learn VMS, it seems several of us find the most challenging aspect is trying to keep on top of getting our required hours in the proper categories. For those working full time, it seems to be even more challenging to find a variety of volunteer events on the weekends. Fortunately, I have a great mentor, but not having an engaged, helpful mentor has also been a source of frustration for several trainees.

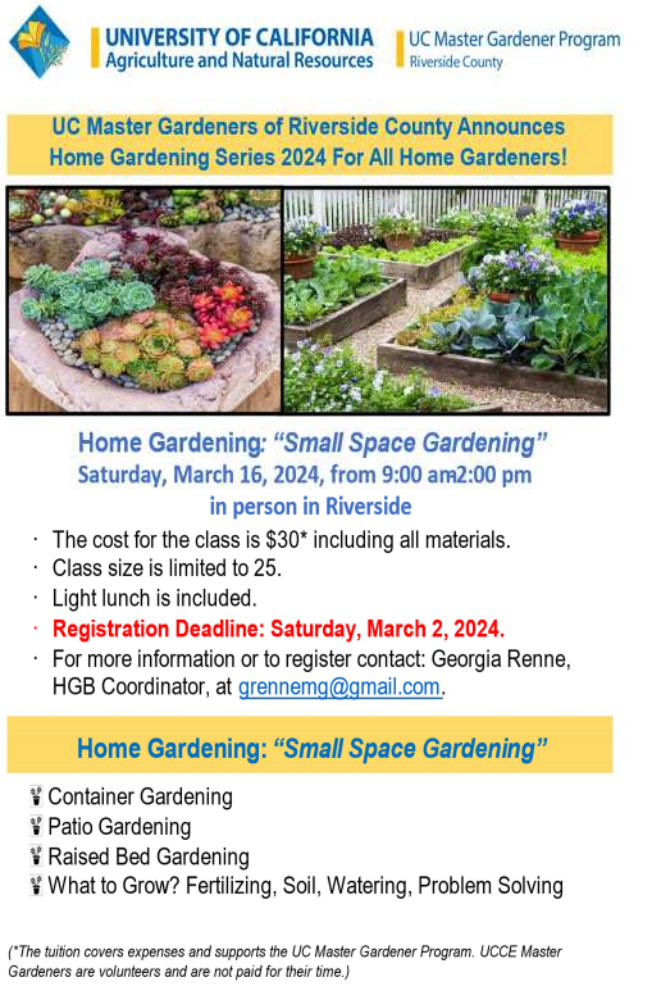
Some of our favorite activity/events so far have been plant ID at the Coachella Valley Preserve, propagation at Moorten’s Garden in Palm Springs, propagation and learning about native plants at 123 Farm in Beaumont, plant day and working as a Garden Steward at the UCR Botanic Garden in Riverside.

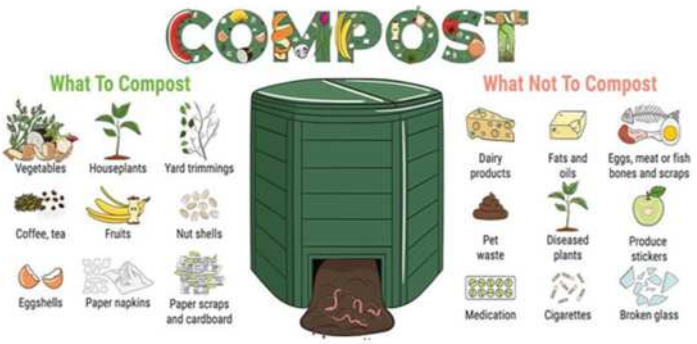
I’m excited to get rid of the “trainee” tag and become a full-fledged Master Gardener. I think we have a great group of people in this year’s class, and I hope at some point to get to meet all of you!

A special thank you to trainees Xochilt Pena, Stephen Crouse, Thomas Wiedemann, Shelly Westebbe, Alex Groves and Dan Garrow for sharing your experiences. Chris Gentile has had similar experiences but isn’t quoted because he answered my questions via a verbal interview. I didn’t record or write them down, and I didn’t want to misquote him!

Also, thanks to Jill Hishmeh and Brad Hardison for being our class coordinators this year and taking the group photos of our in-person January 9th class.

Invite your neighbors and friends!





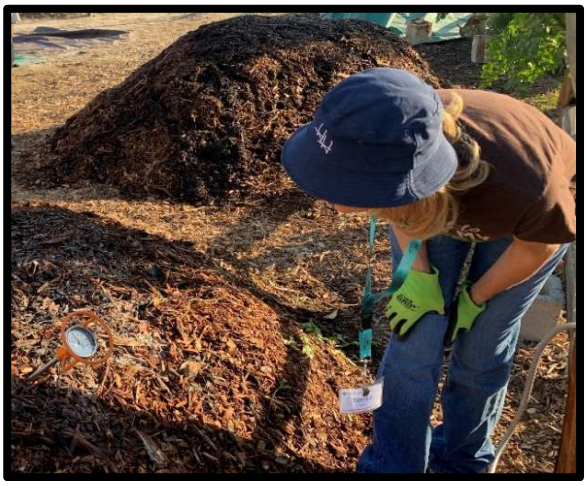
Update for the Desert Compost Project

Contributed by Dee Kongsile, UCCE Master Gardener

Many Master Gardener 2024 trainees have taken the on-site training for the Desert Compost Project held the first week of each month. It's offered by our partner, DesertCompost.org. This training gives Master Gardeners the needed information to become regular volunteers at any of the several DesertCompost community sites.

Tonya McAlpine, MG Trainee, taking temperature at the top of the compost pile.

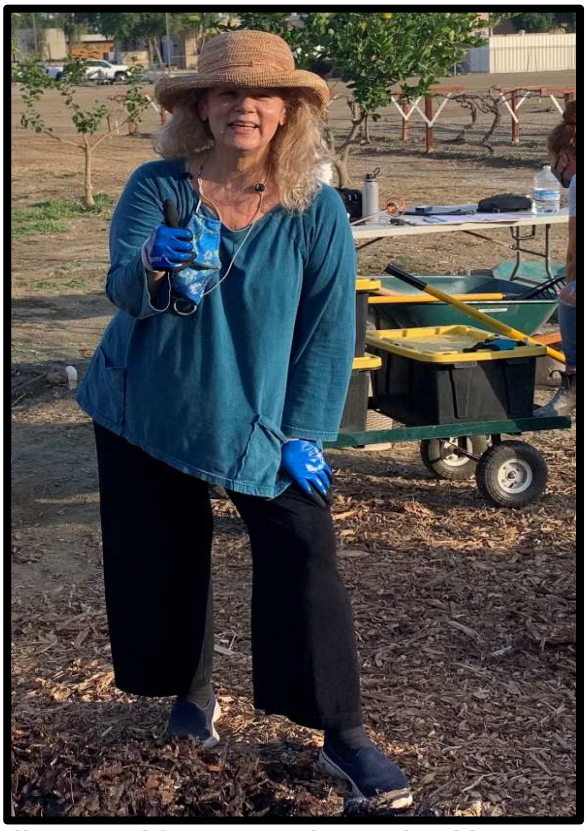
This center opened in October 2022 and has composted over 71K pounds of food scraps and yard trimmings. The Development Center composts all food waste from the daily food preparation at this facility as well as household organic materials donated by the MCFCDC families. The finished compost is put to use right there in the on-site Chef's kitchen garden and family garden boxes.



Tonya McAlpine, MG Trainee, reading the temperature at the top of the compost pile.

It's exciting to see this zero-waste program in action!

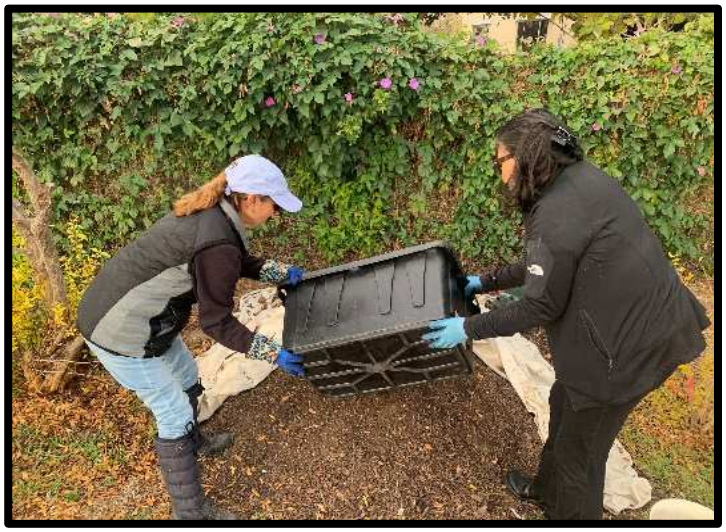
Master Gardeners are valuable weekly volunteers. Our support keeps this great research-based model going. We welcome all MGs to volunteer and learn about the process of hot composting on a large community scale.



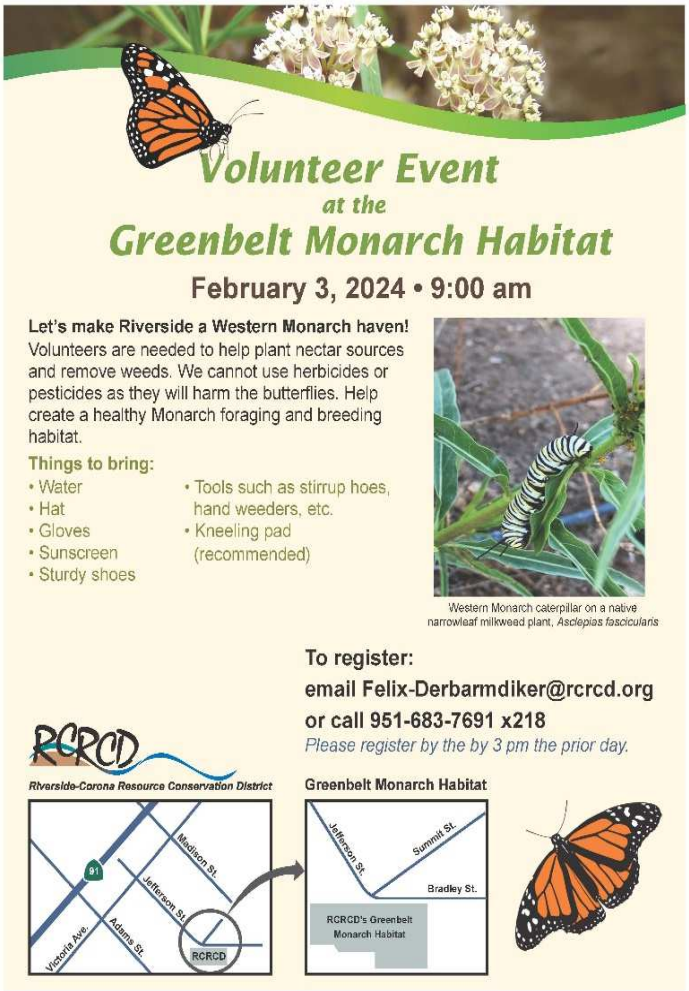
Shelly Westebbe, MG Trainee, checking compost at COD Community Compost.

Check the VMS website for volunteer opportunities.

Dee Kongslie, Co-coordinator Desert Compost
Rita Kraus, Co-coordinator Desert Compost



Rita Kraus and Joyce Mochizuki, MG Trainee D'24, admiring finished compost.



RIVERSIDE COUNTY FAIR & NATIONAL DATE FESTIVAL

Greetings, Master Gardeners of Riverside County!

We are in the process of laying down the groundwork to be a part of this year's Date Festival held at the Indio Fair Grounds.

I have dates and times posted on VMS for our "Ask the Master Gardener" information table. We also have opportunities for the School and Children Gardens info table.

This year's theme is "Rooted in History, Embracing the Future." We have our University of California Agriculture and Natural Resources rooted in Riverside County for over 100 years. We continue to bring research-based information to our farming and gardening communities.

Master Gardeners Ruben Aries, Susan Costa, Christal Ferlisi, and our Special Events team will be coordinating with Rosa and the festival coordinator to make this event full of volunteer opportunities.

I look forward to seeing you at the **Riverside County Fair and National Date Festival.**

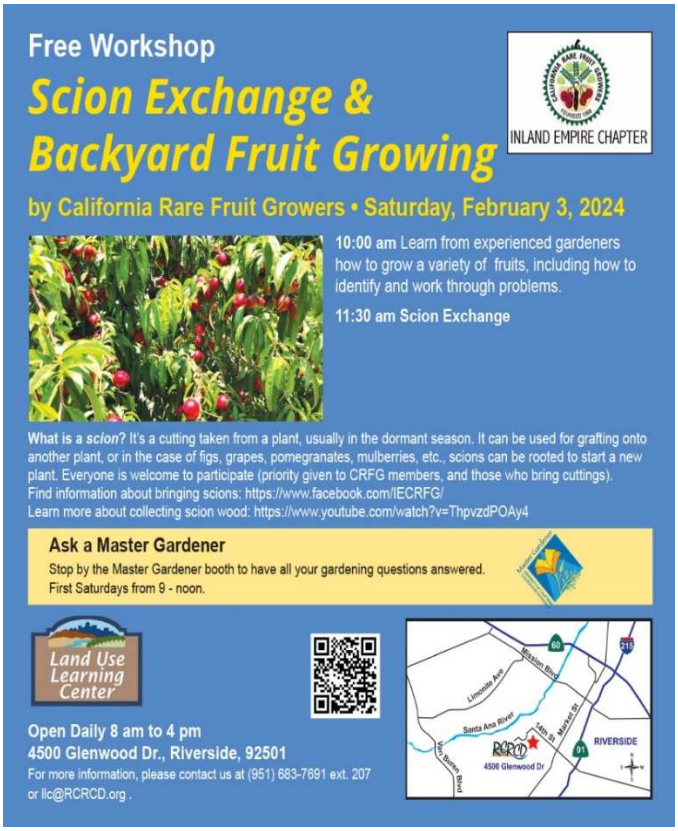
Thurman Howard
Coordinator
UCCE Master Gardener

RIVERSIDE COUNTY FAIRGROUNDS

Riverside County Fair & National Date Festival

Welcome to our desert oasis: the Riverside County Fairgrounds in Indio, California. Originating as a festival to celebrate the end of the annual date harvest, the annual Riverside County Fair & National Date Festival welcomes over 250,000 guests each February. The Fairgrounds hosts a variety of community-focused events all year long, ranging from multi-day festivals to private events.

The Fair & Date Fest returns February 16-25, 2024. Celebrate the very best of our community at the 76th annual Riverside County Fair & National Date Festival presented by Fantasy Springs Resort Casino!



Master Gardener Workshops

Western Municipal Water District partners with the University of California, Agriculture and Natural Resources, UCCE Master Gardener Program of Riverside County to host FREE monthly workshops that focus on gardening and efficient outdoor water use. Workshops are hosted on the second Saturday of each month. Replays of the workshops can be found at https://www.wmwd.com/539/Master-Gardener-Workshops

Next: Irrigation & Design – Landscape Design Part II,

Saturday, Feb. 10, 2024 | 10 a.m.

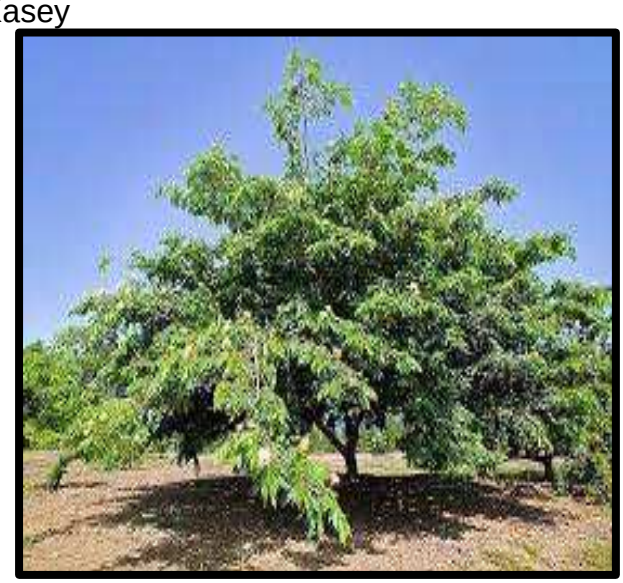
Speaker: Lynn Coffman, Riverside County Master Gardener

West County Helpline: Propagating a Fruit Tree Seed

Contributed by Jane Payne, UCCE Master Gardener

Every question we receive is different from previous ones. Occasionally, there are parts of the question which we have been asked before, or they are totally new like this question. I would like to share with you an actual Helpline question which reflects the diversity of questions and the research our volunteers do to find the answer. And one of the best parts of working on the Remote Helpline is the appreciation we get from helping our residents!

Hi,
I recently purchased seeds from an ice cream bean tree (*Inga edulis*) that I hope to start growing and producing fruit in a couple of years. I'm curious about how I start propagating the seed so that it'll sprout. I've been able to propagate fruit and vegetables like corn and watermelon using a zip lock bag and a damp towel by letting them sit in the sunlight, but I don't know if the same method would work on a fruit tree seed. What do you recommend doing and what should I do after it propagates? Thank you so much for your time and hope to hear back from you soon.
Best Regards,
Kasey



Ice cream bean tree (Inga edulis), native to Central and South America, up to 60 feet tall!

Greetings, Kasey,
Thank you for contacting the Master Gardener Program of Riverside County, and for giving me the opportunity to research information about a plant which I have heard of and seen, but about which I have not been very familiar. I applaud you for your openness to experiment with your *Inga edulis* seeds, as well as your desire to know the best ways to propagate them and what to do after the seeds sprout.

Unlike many familiar North American fruit trees which cannot reliably be grown from seed (see https://homeorchard.ucanr.edu/The_Big_Picture/Propagation/), the *Inga edulis* tree is leguminous and, according to the online research I've now done, it appears to reliably grow well and true when propagated from seed.

Here are a couple websites at which I've found reliable general information about *Inga edulis*, including information about propagation from seed:
https://pfaf.org/User/Plant.aspx?LatinName=Inga+edulis and

https://www.growables.org/information/TropicalFruit/IceCreamBean.htm

In regard to propagation, the latter website notes:

"The seeds are recalcitrant and sometimes begin to germinate in the pod, often within a few days of reaching the ground, where they need moisture to survive. The seeds can be stored for only 2 weeks. Best results have been achieved by removing the pulp and storing the seed in impermeable bags. Seed is best sown as soon as it is ripe. Sow in a lightly shaded position in a nursery seedbed. A high rate of germination can be expected, with the seeds sprouting within a few days. Transplant the seedlings to individual containers when they have 4-6 leaves, and they should be ready for planting out 4-5 months later."

And here's another website with good general information about *Inga edulis* and information about its propagation:
https://www.rarefruitclub.org.au/Inga.htm.

Regarding propagation, it notes:
"Exclusively by seeds which germinate rapidly and easily. However, they are recalcitrant and viviparous so need to be sown fresh. Amazonian farmers prefer trees that produce deep black seeds (which they call 'female') over lightly coloured ones (called 'male') as the former are more productive."

I hope this is helpful information for you, Kasey, and I wish you the best as you experiment with this plant. Feel free to connect back at this email if you have further questions about this or about other home gardening-related questions.

Kind regards,
Julie Weatherford, Master Gardener

Seed pods from ice cream bean tree (Inga edulis)

Hi Ms. Weatherford,

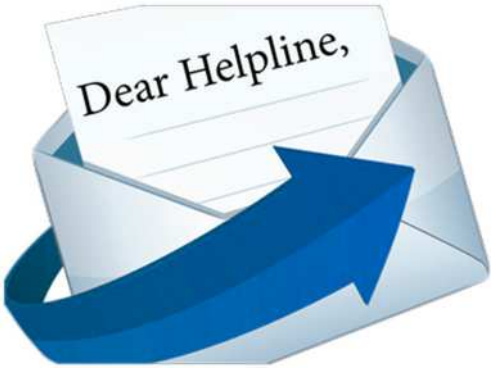
I apologize for not getting back to you right away. I want to thank you so much for your

email, and the information you provided was very helpful. I'm happy to tell you that I have received the seeds, potted them in shallow soil in a lightly shaded place, and they have started germinating. Thank you again and have a wonderful day.

Best Regards,
Kasey

Remind your neighbors and friends!

Advice to Grow By ... Ask Us!



Get help and advice with your garden! Master Gardeners are here to answer your plant, tree, and gardening questions throughout east county Desert areas and west county Inland Empire areas.

Ask us about saving water in your landscape, what's damaging your plants, how to make and use compost in your own backyard, what's ailing your trees, or any gardening-related question. We're here to help! Email or leave a message anytime.

Helplines ...

West County (Inland Empire):

- Email your question (preferred):
  anrmgriverside@ucanr.edu
  Include as much detail as possible and any photos that illustrate your problem/question.
- Leave a Voicemail:
  Clearly state and repeat your name and contact number and include as much descriptive detail as possible. Emailed photos showing the problem/question are very helpful.
  Note: the Help Desk is not staffed everyday, please be patient.

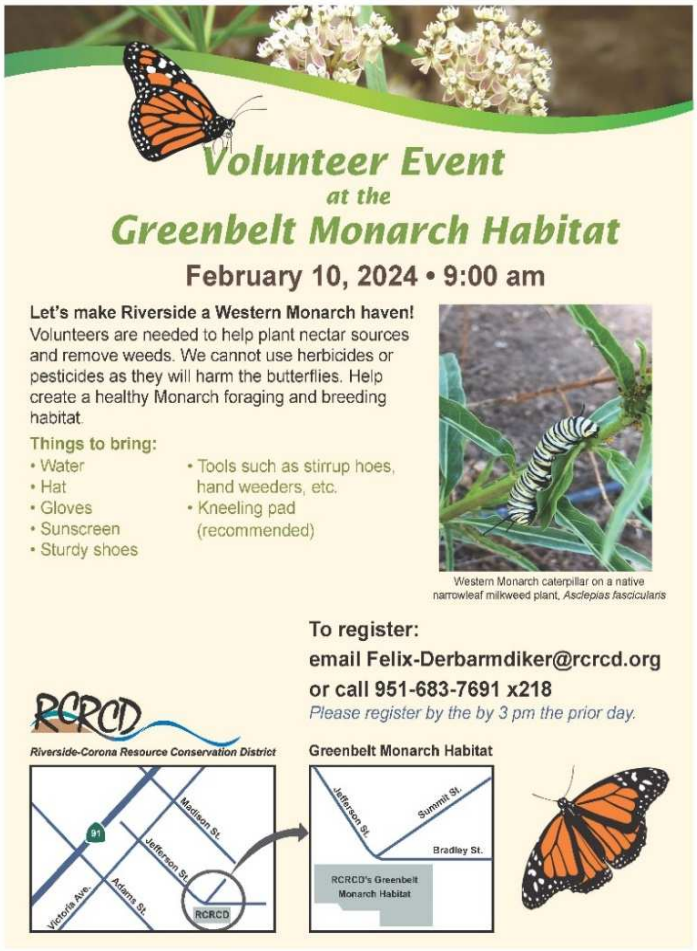
East County (Desert Areas):

- Email your question:
  anrmgindio@ucanr.edu
  Include as much detail as possible and any photos that illustrate your problem/question.

Master Gardeners Celebrate These New Riverside County Recognition Awards December-January

500 Hours Watering Can Pin
David Freelinger

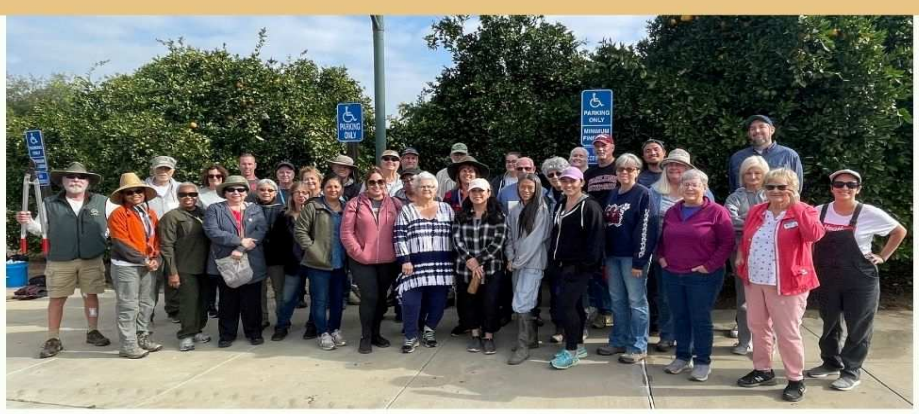
250 Hours Gardeners' Trowel Pin
Barry Martell
Steven Scott



Susan von Zabern, head of Friends of the California Citrus Park, wrote this article and took the photos.

PARTNERSHIP WITH THE UCCE MASTER GARDENERS OF RIVERSIDE COUNTY

Attendees at the October 25th workshop



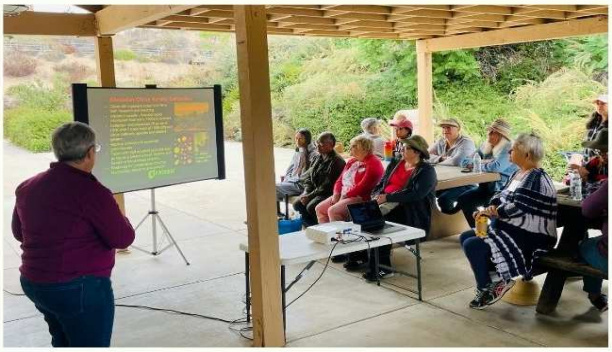
Friends' Board Member Tom Spellman has been partnering with Master Gardeners across Southern California for many years and promoted the idea of creating a partnership with the Riverside County Master Gardeners to foster educational and hands-on learning opportunities for them within the varietal grove at the park.

Beginning in the fall of 2021, Tom in partnership with fellow board member, Dr. Tracy Kahn, UC Riverside Curator and Givaudan Citrus Variety Collection Endowed Chair, and Thurman Howard, Community Garden Coordinator for the Master Gardeners of Riverside County, met to develop a series of workshops that began in November 2021. As we bring 2023 to a close, we have held 10 workshops and are developing the calendar for more workshops throughout 2024.

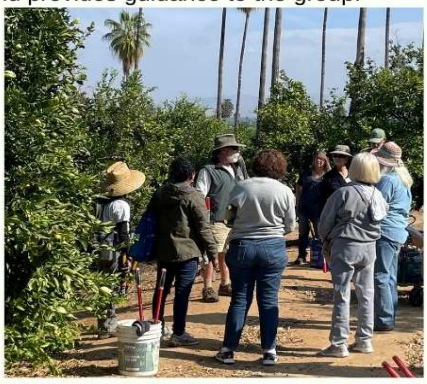
These workshops have featured presentations by Tom, Tracy as well as other experts and researchers from UC Riverside. Interest in the workshops continues to grow. The most recent workshop in October included members from the Master Gardeners of San Bernardino County.

After the presentation, the group heads out to the grove to practice their techniques for pruning, skirting, etc. and to learn about different issues that trees present with and what the underlying issues may be as well as treatment options, where appropriate.

Dr. Tracy Kahn shares information about UCR's Citrus History.



In the grove, Tom Spellman answers questions and provides guidance to the group.



Friends of California Citrus Park Instagram @Friendsofcalcitrus

Janet's Jottings
Janet Hartin

Trends for Plants: Artificial Photosynthesis and Gene Editing

As Master Gardeners, you are keenly aware of the process of photosynthesis, in which plants convert sunlight and water into usable energy in the form of glucose. To accomplish this complex task, chlorophyll, proteins, enzymes, and even metals are used.

We've all heard a lot about artificial intelligence, but what about artificial photosynthesis to convert solar energy into fuels? Astonishingly, the earth receives enough solar energy in a single hour to supply every human on earth with the energy they need for one year.

What is the problem then? While the theory of artificial photosynthesis is solid, the actual implementation is difficult, requiring computational approaches and models to guide it. Many challenges lie ahead for future scientists around the world to conquer in this regard. Some involve the intricacies of how to develop the assemblies to absorb light, transfer electrons, and catalyze reactions.

While photovoltaic technology (the process of solar cells converting energy from the sun into electricity using solar panels) the process is not very efficient, capturing only about 20 percent of total energy generated by the sun. Photosynthesis, conversely, can store 60 percent of the energy from the sun as chemical energy. Why the difference in efficiency? It's due to the semiconductors' inability to absorb light energy and the ability of cells to produce power. Enter the realm of synthetic photosynthesis which would not have these physical limitations and could, at some point, realize an 80 percent efficiency.

Dr. Yulia Puskhar, a biophysicist at Purdue University, and her research team are building leaf analogs that are able to collect light and split water molecules. The resulting hydrogen generated can be used as a fuel, added to other fuels like natural gas, or added to fuel cells to run vehicles and provide energy.

Also on the frontline of research is the process of CRISPR (clustered regularly interspaced short palindromic repeats) a type of gene editing. What is gene editing? A process to correct a mutation that leads to poor health in plants as well as animals by altering DNA (genetic material). The editing may change only a few genes or the entire gene sequence.

On the plant side of things, CRISPR is used to modify plant DNA to introduce new beneficial traits (like drought tolerance) and suppress undesirable traits (salt sensitivity, disease risk).

How does it work? CRISPR contains DNA sequences left over from unfriendly microorganisms and other materials along with repeating sections of genetic material. The repeating sequences are the building blocks of the gene editing process that create a blueprint allowing enzymes in genetic material to alter DNA sequences in cells.

With all the wonders of CRISPR, it's important to remember that original traits (superior taste, scents, and the release of volatile organic compounds to ward of pests) may be lost when we tamper with plants. I studied this during my graduate schoolwork, finding that the common garden pea (*Pisum sativum*) was able to kill invasive weeds by the release of phenolic acids. New work has rendered similar results regarding the ability of heirloom tomatoes to ward off pests that newer varieties may not be able to contend with. However, the introduction of VFN tomatoes through breeding is a case for tampering! As with most things in life, there exists a delicate balance. *(VFN means plants are resistant to Verticillium wilt, Fusarium wilt, and Nematodes.)*