



University of California Cooperative Extension - Riverside County

21150 Box Springs Road, #202
Moreno Valley, CA 92557-8781
(951) 683-6491 x231

81077 Indio Blvd., Suite H
Indio, CA 92201
(760) 342-6437

Website

www.ucanr.edu/sites/RiversideMG

Email

anrmgriverside@ucanr.edu

anrmgindio@ucanr.edu

UC Master Gardener Program Mission

The purpose of the UC Master Gardener Program is to extend to the public research-based information verified by UC experts about home horticulture, pest management, and sustainable landscape.

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**ARE WE ACCOMPLISHING
OUR MISSION AS
MASTER GARDENERS?
Check Out Our 2021-2022
Numbers!**

**Garden Views is published bi-monthly by
Riverside County UC Master Gardeners.**

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Thank you, Pam Clarke, for your crawly critter photos to use as page fillers in Garden Views!

Master Gardeners Celebrate These New Recognition Awards!

Desert

1000 Hour Gold Badge

Jerry L'Hommediu

750 Hours Pruners Pin

Jan Seaman

Brad Hardison

500 Hours Watering Can Pin

Burt Boss

Carolyn Daniels,

Mary Ann Egan

Cynthia Morris-Sotelo

Smoky Ziedel

250 Hours Gardeners' Trowel Pin

Patricia Claves

Marsha McNamara

Jax Patterson

Vilma Raettig

Vivian Yturalde

100 Hours Bumble Bee Pin

Cary Glenrock

Freddie Hooper

Jim Huberty

Rita Kraus

David Lahti

Patricia Malone

Rose Morisoli

Susan Panitch

Sherry Parkos-Martinez

Virginia Roberts

Bernice Rummons

245

Active MGs

Master Gardeners Celebrate These New Recognition Awards!

West County

2500 Hour Platinum Badge

Karen Fleisher

1000 Hour Gold Badge

Janis Binam

Melody Knox

Duke Petersen

750 Hours Pruners Pin

Marsha McDaniel

500 Hours Watering Can Pin

Adrian Ceja

250 Hours Gardeners' Trowel Pin

Pamela Blue-Frajo

Pamela Elias

Christal Ferlisi

Clifford Morrison

Jane Payne

Kathy Steckman

Cyndi Yancu

100 Hours Bumble Bee Pin

Erica Bowlin

Pamela Elias

David Frelinger

Laura Lampers

Steven Moreno

Rose Morisoli

Clifford Morrison

Judi Newby

Marta Lieu Nguyen

Jasmine Ocegueda

21,796

Volunteer Hours

4,211

Continuing Ed Hours



All Cactus Are Succulents...Or Are They?

Contributed by UCCE Master Gardener Smoky Zeidel

We've all heard the saying, "All cactus are succulents, but not all succulents are cactus." We've probably even passed the saying on a time or two.

Trouble is, it's not true.

As docent coordinator for Moorten Botanical Garden in Palm Springs, one of the first things I ask my tour groups as we head down the trail is, "What makes a cactus a cactus?" I get all sorts of close-to-correct answers. They live in the desert, people say. True, I answer. But there are also members of the opuntia (prickly pear cactus) family that live in the sandy dunes of the Great Lakes. Thorns, people say. Not thorns, I reply. Thorns are modified stem tissue; spines are modified leaf tissue.

But once we get to the difference between thorns and spines, we arrive at what sets cactus apart from other members of the plant kingdom, especially other stabby-jabby plants (as I like to call them), such as many members of the euphorbia family.

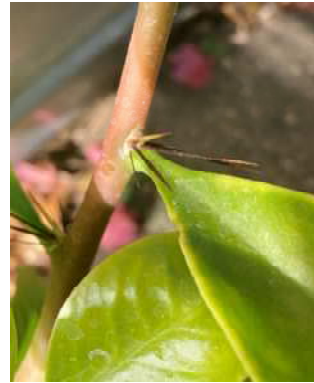
Cacti have spines that grow out of areoles. It's pretty much as simple as that.

And that factoid is why a beautiful shrub native to Brazil is a true cactus. Meet *Pereskia grandiflora*, the sometimes deciduous, non-succulent cactus that breaks almost every rule we know about what makes a cactus a cactus.



I got my little pereskia as a gift from another master gardener when I was babbling on to her about my "discovery" of the cactus that broke the rules. It was a shiny green stick with four waxy leaves and no spines.

Research told me it needed very well drained soil, so I put it in a pot with a 60:40 mixture of cactus soil and perlite.



It grew! And it grew, and it branched out, then it grew some more. And as it grew, I could see the areoles form at the leaf base. Soon, spines appeared, and these things are *wicked!* Some on my plant are nearly two inches long.



Then, the first flower head appeared, a group of tight pink buds. Beautiful in itself, but when the first flower opened up, it took my breath away. A bright bubblegum pink. It was easy to see why some people call it a cactus rose.



Like most cactus blooms, the flower lasts just one day before dying. But because each flower cluster has 12-15 buds, the dead bloom is soon replaced with another. Each branch of the plant produces a flower head. Once those blooms have all died, the branch seems

to rest a short while before starting all over again. Because of this, the pereskia is in bloom practically all season long.

When the weather cools, pereskia goes semi-dormant in the desert. They can lose all or some of their leaves. (Mine lost all but three leaves.) I placed mine in my greenhouse over the winter to protect it from cold desert nights, but it probably would have been fine in a sheltered spot in my garden. Come spring, new leaves appeared, and soon the bloom cycle began again.

There are other members of the pereskia family. *Pereskia aculeata*, also known as Barbados gooseberry, has white flowers, edible fruits, and is more of a vine than a shrub. I am so enchanted with my *Pereskia grandiflora*, I just might try growing this other variety.

Because I've always been a bit of a rebel myself, why wouldn't I fall in love with a rebel plant that breaks all the rules!

537

Helpline Inquiries

193,207

Facebook Reach

Up 60.9%

7,341

Instagram Reach

Up 150.3%

4,247

Facebook Followers

1,003

Instagram

What's New at the West County Grow Lab? Part 2

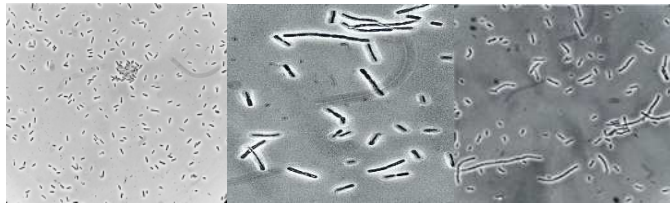
Contributed by Pamela Elias, UCCE Master Gardener and Dr. Clifford Morrison, UCCE Master Gardener

(Part 1 of this article in the last issue described how UCCE Master Gardeners initiated in January 2022 a new composting project at the Grow Lab spearheaded by Adrian Ceja, Grow Lab Project Coordinator, and Dr. Clifford Morrison, First Year Master Gardener. Many volunteers, including trainees, contributed materials and hard work to create rich compost according to the composting method inspired by *The Rapid Composting Method* by Robert D. Raabe, Professor of Plant Pathology, UC Berkeley. He outlined a protocol to achieve finished compost in as few as 2-3 weeks. The Berkeley method suggests aerating the pile by turning every day to achieve finished compost in 2-3 weeks. Volunteering opportunities for the Compost Lab come only twice per week so turning does not occur every day. Regardless, by experience, it was found a finished and mature batch of compost can be achieved in as few as 6-8 weeks with only one major turn per week.)

Part 2

So, what happened throughout the eight weeks? The carbon and nitrogen in the pile supplied various microorganisms with all the materials needed to break down organic waste into a product absolutely nutrition-rich. In other words, innumerable aerobic bacteria worked hard to decompose the organic matter in the compost pile. The pile will naturally go through different temperature phases as it matures, eventually warming up very little even after a turn. With each step-down in temperature week-after-week, different types of microorganisms get their turn to thrive when their preferred temperature range is reached. When the pile is eventually cool enough to comfortably host arthropods and earthworms, the composter will benefit from the influx of biodiversity as the various insects that inevitably colonize the pile help to continue breaking down larger bits of material yet to be

fully decomposed by various microorganisms. Microorganisms present in compost include *Actinomyces* spp., *Streptococcus* spp., *Bacillus* spp., *Pseudomonas* spp., algae, molds, yeasts, protozoa, rotifers, and nematodes. Macroorganisms present in the later stages of the compost process include mites, centipedes, rove beetles, ants, spiders, pseudoscorpions, and earwigs. These feed on the smaller organisms that were present in the earlier stages of the process.



Pictured above: Microorganisms found by Dr. Clifford Morrison in compost produced by the Compost Lab, likely species of *Bacillus* and *Pseudomonas*.

It is no mystery that compost is “black gold” for gardeners because it supercharges plants with nutrition, lightens heavy soils, and increases water retention. But exactly how nutritious can it be versus a standard, commercial potting mix? Dr. Morrison set up an experiment to find out.

Various ratios of perlite to pure compost were mixed and planted with radish seeds. The control groups were the standard potting mix used by the Grow Lab and a pot of 100% perlite. The experimental groups included increasing ratios of either sifted or unsifted compost, from 25% compost/75% perlite; 50% compost/50% perlite; 75% compost/25% perlite; and 100% compost. The radish seedlings were allowed to grow for 5 weeks, and the results were stunning. One result particularly stood out, below.



Pictured below: The standard potting mix used by the Grow Lab (i.e. GL mix) was compared to a 50/50 mixture of sifted compost and perlite, among other mixes.

The leaves in the compost/perlite mix were much larger than in the GL mix, and the heights of the plants were also much greater. This highlights the benefits of nitrogen as a macronutrient for plants. Nitrogen is a major component of a plant’s chlorophyll, which allows it to perform more photosynthesis. As a result, a surplus of nitrogen helps plants achieve larger leaves and bigger stems, as found in this experiment.

Now, what can be done with finished compost?

- Mulch your garden
- Prepare a compost tea for your plants (dilute for seedlings)
- Use as a soil amendment to add nutrients to plants
- Apply as lawn top-dressing
- Start seeds (mixed with soil or perlite)

We achieved so much at the Compost Lab in such a short amount of time. Many hard-working volunteers are instrumental to its sustained growth, and the project would not be at this point without them. Special thanks go to Dr. Clifford Morrison for his contributions to the project. He not only took the lead but also gave a thorough education to volunteers. The knowledge he shared with all of us is invaluable.

Pictured below are just a small selection of the Master Gardeners who worked to make the Compost Lab such a success.



**Pictured left: Adrian Ceja and Steven Moreno
Pictured right: Pam Elias**

Garden Views

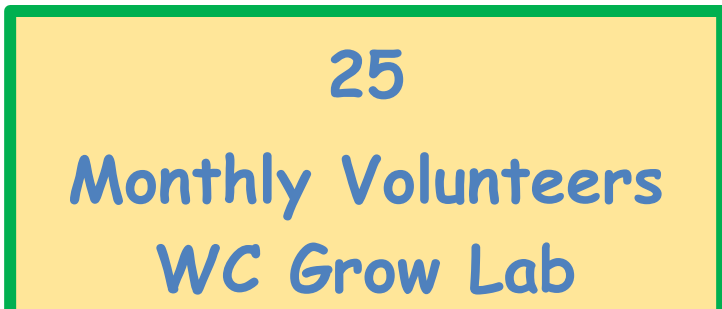
July/August 2022

The UCCE Grow Lab is located at 3555 Crowell Avenue in Riverside.

For information regarding the new State Law SB1383, please visit: SB 1383 Resources – CalRecycle, Home Page.

References:

- *The Rapid Composting Method* by Robert D. Raabe, Professor of Plant Pathology, Berkeley (https://vric.ucdavis.edu/pdf/compost_rapid_compost.pdf).
- *California Master Gardener Handbook* Second Edition by Dennis R. Pittenger
- *Home Composting Made Easy* by C. Forrest McDowell, PhD & Tricia Clark-McDowell
- *Vermicomposting - Composting with Worms - What's Growing On*, San Joaquin UC Master Gardeners - ANR Blogs (ucanr.edu)



Providing Infrastructure to Support Successful Fall and Spring Plant Propagation for School and Youth Gardens

Contributed by Brad Hardison and Kim Coons Leonard UCCE Master Gardeners

Currently, the Master Gardener School and Youth Garden Project partners with 15 school or youth gardens across Riverside County to provide plant starts twice per year. Approximately 1,200 seedlings are grown in the Fall and again in the Spring. The seedlings are generally vegetables, flowers and herbs.



In the Spring of 2022, we faced some challenges with our growing area at the WC Grow Lab. Our plant propagation occurred

outside the shelter and did not have an automatic watering system. This impacted sprouting, growth, and development of these plants. Our February

Garden Views

July/August 2022

planting was impacted by cold, wind, sudden heat and irregular watering. As a result, we lost 233 plants of the 1,071 we planted. They either sprouted late, died due to the wind and sudden heat, or bolted repeatedly due to the heat.

We knew we had to come up with a long-term solution that would address protection from the elements as well as reliable watering. We started looking into options for some type of growing structure that would accommodate four 4' by 8' tables. We initially considered three options: a cold frame, carport type cover with steel frame, and small portable cold frames to cover each table.

After meeting with Lucy Heyming, property owner, it was decided that a less permanent structure like the carport design would be better as it would meet the original goals but could be moved or dismantled more easily if the need arose in the future.



Work then began on researching and ordering the materials for the actual structure (thanks to West County School Liaison Janice Rosner).



However, the site, which had been a former garden area, needed to be prepped and cleaned of all debris. This was a two-day process which included leveling the area.



Construction of the metal supports for our growing area was accomplished in one morning thanks to advance work on cutting the metal pieces. It went together like an erector set with poles inserted into plastic connectors which were then secured with screws. The eight poles holding the structure up were set in cement buckets so the entire structure did not blow away in the strong winds that Riverside sometimes sees.



We then attached the top shade cloth to the structure using bungee cords inserted through grommet holes. It began to look like a growing area for our plants.



Next, we had a load of bulk pea gravel delivered to the site. Once we had the "pile" in place, we would move it with

wheelbarrows to our site and spread it on the ground. Before we did that, we used old lumber and stakes to create a frame to contain the pea gravel.

It was time to shade the sides with black shade cloth again secured with bungee cords through grommets. The next step in our construction

process will be ordering more black shade cloth for the front and back sides of the structure.



We received our four metal tables, needed to transport them from the Moreno Valley Office to the Grow Lab and assemble the legs on each table.



Irrigation parts have been delivered and will be installed next since the tables are in place. Our goal is to have the

structure up and working by the first week of August when we will start propagating our seedlings for the youth and school gardens for the Fall.

It has been a great collaborative project with the leads on the School and Youth Garden Team (Brad Hardison, Kim Coons-Leonard and Janice Rosner). We could not have done it without the help of Master Gardeners Steven Moreno, Jasmine Ocegueda, and David Frelinger who have done a lot of the physical labor. In addition, we have had the advice, support and assistance of Master Gardeners Lucy Heyming, Adrian Ceja, and Clifford Morrison.

Now our plant seedlings for school gardens will have the best start!



25
Projects
Countywide
Youth/School
Gardens

14
Home Gardening
Classes

Clearly, A Labor of Love!
Contributed by UCCE Master Gardener Jan Seaman

In December 2020, the President of the Board of Directors of the Palm Springs Animal Shelter (PSAS) mentioned to Janet Hartin that the shelter’s landscape “needed help.” As luck would have it, maybe the Master Gardener didn’t “need help,” but could readily benefit from an outside project given the pandemic conditions at the time and eagerness of trainees and veterans to obtain required volunteer hours. A team of veteran Master Gardeners toured the facility and realized that before the landscape could be revitalized to its original glory, a great deal of catching up was needed to clear weeds, remove dead and neglected plants, and become familiar with the original landscape plans, irrigation system, and desires of the board.

Marcia Stone initiated the invitation to Master Gardeners and formed an advisory committee of herself, Linda Mayo, and Jan Seaman, a MG and shelter volunteer. We worked with a committee

of the shelter at first to define the scope of the task but came to realize that it was overwhelming. PSAS's three acres of land had not been maintained for nearly a year and with limited oversight of irrigation function, growth, or invasion of weeds was pretty rough.

Dr. Cameron Barrows walked the property with the advisory committee to point out ways to save water, places for natives, trees and other suggestions for how to manage the property. Linda Mayo assumed the leadership and word went out—here's a place where you can volunteer, get your hours, and be safe by following COVID protocols. Shelter volunteers were recruited as well. Work began in late January 2021. Pictures below give you an idea of the daunting task.



Linda created a dynamic set of section maps identifying tasks and goals needed for each area. A healthy stand of invasive fountain grass was removed by Ralph and Jim Thompson that first year. Over 200 irrigation risers and emitters were capped off to prevent water waste and erosion in areas where vegetation was gone. Marcia led the effort to clear sections of hesper aloe parviflora, making a path for dog walkers around the North side of the building.

A cadre of 12 Master Gardeners was recruited to nurture plants over the summer that were either liberated as pups or young plants or as seeds. The intent was to re-introduce the plants into the landscape the following year according to the original landscape design. A total of 195 volunteers (with repeats) worked on the project that first year, including the shelter volunteers.

The vision of the advisory committee aligns with the Master Gardener Mission and includes the following benefits to the community:

- The facility has 3 acres of grounds which the board wants to make accessible to the public for tours, demonstrations, memorial events, and informal gatherings such as picnics. We would be able to advise on design and best landscaping practices.
- PSAS has weekly vaccination & spay/neuter clinics where the public sits and waits while medical procedures are performed on their pets. Here is an opportunity for them to learn more about desert plants and wildlife habitat. Docent led tours, YouTube Companion tours, short self-guided tours of the property, or *ad hoc* demonstrations on best gardening practices could be offered.
- The public can be educated on the threat to the Monarch Butterfly population and tour the Monarch Waystation planned for the property by a new Master Gardener. They can also learn about planting butterfly gardens at home.
- The administrative team and board members are supportive of developing a community Native Seed bank, allowing the acquisition and/or storage of plant seeds and a nursery that would be available to the public.

This past season (January-June 2022) saw the volunteer force drop off considerably (total volunteers of 104) because other opportunities opened for Master Gardeners and trainees to obtain their hours. The shelter volunteers, there because of their love for the animals, and Master Gardeners, their love of animals notwithstanding, saw a huge change in the landscape this year. Because of the accomplishments the previous year, the work this year made remarkable changes from one week to the next, with other shelter volunteers remarking about their observations. Some of the plants that were in the propagation program came back and were planted; a butterfly path was laid out with the beginnings of butterfly-attracting plants being put into the ground. An open view of the entrance from the street was cleared and six diseased

[*dasyilirion wheeleri*](#) (spoon *Yucca*) were removed. Over a dozen agave were planted along the North side of the building replacing those that had died.



Some of the logistics for continuing the program have been or are in the process of being worked out with the shelter’s administration and board. A storage shed for tools was provided along with a more convenient dumpster for debris. A new shade structure is being erected at the back of the property in a secured location to begin developing the seed bank and keeping a nursery. It is hoped that the shelter will be able to re-establish an on-going maintenance service for the property, so Master Gardeners can be free to do the things we do best—educate the public, propagate plants to go into the landscape, and restore and enhance the beautiful property that was established there 10 years ago.

Project leadership is currently waiting for approvals of the project application and the MOU between the UCCE Master Gardener Program and the PSAS Board to consider the project fully established.

Moorten Botanical Gardens: Docent Training Opportunity

Contributed by Smoky Zeidel UCCE Master Gardener

The docent program at Moorten Botanical Gardens in Pam Desert is seeking volunteers with a passion for desert plants.

“The Moorten docent program was hard hit by closure during most of the pandemic and the loss of many volunteers who moved out of area in recent years,” says Master Gardener and Desert Project Coordinator Smoky Zeidel. “We need to train enough new volunteers to staff tours at least five days a week.”

Training will begin in early September. On hiatus over the summer, tours will begin again in mid-October. Smoky’s goal is to have new volunteers trained and ready before Thanksgiving.

Training requires dedication and commitment. New volunteers will begin by studying the newly-revised docent manual to learn the basics about many of the garden’s plants. They will need to attend an in-person training and tour with Smoky, as well as observe tours by two other trained docents. Trainees will practice leading tours with a trained docent observing, before leading a tour on their own with Smoky observing. Only then will these volunteers earn their docent ribbons and be able to lead tours on their own.

It sounds grueling...and it is. But Moorten docents are passionate about leading tours, educating the public about desert plants, and the importance of the desert ecosystem. Smoky has worn many hats as a Master Gardener, and she often says being a docent is her favorite one to wear.

“So often I hear people say, ‘Why should I care about the desert? There’s nothing there,’” she says. “At Moorten, I teach them just how alive the desert is, and show them just how much there is to care about, to love. And what we love, we want to protect.”

853

Contacts

Desert Farmers' Markets

440

Contacts

Desert Event Tables

If you are interested in becoming a Moorten Botanical Gardens docent, please contact Smoky at smokyzeidel@gmail.com.



Smoky Zeidel at Moorten Botanical Gardens

Butterfly Corner: Western Tiger Swallowtail

Article and Photos contributed by Ann Platzer, UCCE Master Gardener, Platinum Badge Holder

The Western Tiger Swallowtail (*Papilio rutulus*) is a large (3 1/2 - 4 1/2 inch), yellow butterfly which, as the name implies, has vertical black "tiger stripes." It has a widespread habitat, but normally frequents canyons, watersides, trails, roadsides and gardens. It is a familiar sight throughout Southern California from March through September. In fact, its range is from British Columbia throughout California to Baja California and Western North America.

In early July, while Ed, my husband, and I were eating lunch outside, a newly emerged Western Tiger Swallowtail gracefully glided to nectar on our large lantana plant. Although there was no need to rush inside for our cameras, we did. It posed like a star model, slowly fluttering hither and thither for about five minutes as we clicked off about 200 photos. What makes it a perfect model? Unlike most other swallowtails, that flutter continuously when feeding, the Western Tiger Swallowtail nectars with its wings open and almost motionless (below).



Since the Western Tiger Swallowtail favors canyons in addition to suburbs, hikers cannot help but notice this large, conspicuous butterfly when it glides by. Although it is a powerful flyer, it is relatively easy to approach while nectaring. Also, since it is an avid mud-puddler it can be found on a quiet dirt road or trail with damp puddling spots.

358

Contacts

Desert Speaker
Bureau

52

Weekly Columns
"Ask a Master
Gardener"
Press Enterprise

The green, spherical **egg** is laid singly on host leaves. For most of its life the **larva** is green but turns brown just before pupation. Like other swallowtails, the larva has an **osmeterium**, a forked, foul-smelling, fleshy gland behind the head that repels predators. It has one to three broods yearly. The last one over winters as a **pupa** which resembles a dark brown chip of wood.

Their host plants include many genera of woody trees and shrubs, especially native California sycamore (*Platanus racemosa*), poplars and aspen (*Populus spp.*), willows (*Salix spp.*), and alders (*Alnus spp.*). Do not fret if you do not have a host plant, since one is likely growing in your suburban neighborhood or in a nearby, uncultivated area. If you have a large pond or stream you can consider planting willows. What must be present in your garden are plenty of tall-flowering nectar plants, such as *Lantana*, *Buddleia* and wild sunflowers. Then this magnificent Lepidopteran will visit you.

Please plant California native and butterfly friendly plants in your garden to help restore our native habitat. **Happy Butterfly Gardening! AP**

100 Hours Pins: 35
 250 Hours Pins: 25
 500 Hours Pins: 9
 750 Hours Pins: 6
 1000 Hours Badges: 8
 2500 Hours Badges: 2
 7500 Hours State Recognition: 1

Cactus Insect, a Side Story and an American Back Story

Contributed by UCCE Master Gardener Mary Ann Egan

One of the most recognizable cacti in Coachella Valley gardens is the purple Santa Rita prickly pear cactus (*Opuntia santa-rita*). The cactus is native to southern Arizona, Baja California, and other areas in Mexico surviving beautifully in our desert environment. The distinctive purplish color of the pads, shaped like friendly Mickey Mouse ears, makes the plant an appealing accent plant in our gardens.



19,168
 Attendees
 WC Goldminers
 Projects

417
 Attendees
 WC Community Gardens
 Projects

Cactus Insects: This desirable cactus also appeals to an insect with its own distinctive characteristic. Cochineal insects (*Dactylopius* spp.) are small oval-shaped scale insects that feed on the moisture and nutrients in the pads of the prickly pear. Adult females, which form a cochineal scale on the cactus pad, are 1/16 to 1/4 inch long and are covered with a cottony-looking sticky wax. If plucked from the cactus pad and squished, the insect leaves a vibrant red splash of color on the fingers or across the palm of the hand. The red stain left on your hand is carminic acid which the insect produces to deter predators.

The insects that form the cochineal scale on the Santa Rita prickly pear in the Coachella Valley usually appear in groups which are clustered around the spines on the pads. Of the 3 types of cochineal scale identified in UCANR's Integrated Pest Management occurring in California, it is the species *Opuntia cochineal scale (D. opuntiae)* that clusters around the spines on the cactus.



From a gardeners' viewpoint, cochineal scale is an undesirable presence on the cactus. In sufficient numbers the insects can severely damage and even kill a prickly pear. To get rid of cochineal scale, trim off any heavily infested pads; then use a forceful spray of water to wash away the bugs' waxy covering. Follow up by spraying the exposed insects with an insecticidal soap.

Side Story: Another cochineal species *Dactylopius coccus*, a close relative to our Coachella Valley species, is a valued commodity. The insect-produced carminic acid is used to make carmine dye. These insects are currently bred and harvested in Peru, Mexico, and other

areas to produce a vibrant red dye. This natural dye which can produce colors ranging from pink to the deepest reds and burgundies can be found in fabrics, foods, and cosmetics today as E120 or Natural Red 4.

American Back Story: Dye from the cochineal species has been used by the Aztec and Mayan people since 2000 BC. The Spanish Conquistadors discovered the vibrant red dye when they landed in Mexico in the 15th century. The color red was historically recognized in Europe as a cultural symbol of wealth and status, the brighter and more intense the color the better. Because there was no dye available in the Old World that approached the intensity and versatility of the color that came from the cochineal insect, these dead bugs became a highly desired and valuable commodity in Europe. It took about 70,000 cochineal insects to produce a pound of dye, and the Spanish shipped tons of the dried insects back to Europe. The total value of the cochineal export was second only to that of silver. The highly desired vibrant red dye was used on clothing worn by kings, nobles and clergy.

By the 1600's cochineal was used to give the uniforms of British military officers their vibrant red color. When the British general in the distinctive British "Redcoat" uniform surrendered to George Washington and the American colonists in 1781 to end the Revolutionary War, the New World cochineal insect had, most certainly, found its way back to the Americas in a slightly different form.

Research sources:

- UCANR IPM (<http://ipm.ucanr.edu/search/?q=cochineal>) identifies three different species of cochineal insects that occur in California: California cochineal scale (*D. confusus*); *Opuntia cochineal scale (D. opuntiae)*; and Tomentose cochineal scale (*D. tomentosus*)
- *America's red gold: multiple lineages of cultivated cochineal in Mexico*, Feb 2015, National Institute of Health Library of Medicine, by Michael G. Campana et al.

- *The insect that painted Europe red*, British Broadcasting Corporations Culture series, by Devon Van Houten Maldonado, 2nd February 2018
- *The Bug That Had the World Seeing Red*, Smithsonian Magazine, by Amy Butler Greenfield, December 29, 2016
- *Cochineal*, Wikipedia,
<https://en.wikipedia.org/wiki/Cochineal>



Janet's Jottings

Janet Hartin

The Top Ten Ways to Conserve Water

in Your Landscape and Garden in Riverside County



1. Select drought-resistant plants that grow well in your climate zone and microclimate (sun, shade, etc.). Recommended search engines with multiple searchable criteria are:
<https://selecttree.calpoly.edu/> (top choice for tree selection based on multiple criteria!)
<https://calscape.org/> (California Native Plant Society)
<https://waterwisegardenplanner.org/plant-finder/> (Robert Perry's list for the inland valley: note not for desert or mountain areas)
<https://ucanr.edu/sites/WUCOLS/> (UC's plant list based on water use categories for various zones throughout the state)
https://web.cvwd.org/conservation/lush_book/index.html (desert dwellers)
2. 'Hydrozone': Place plants with similar water needs (very low, low, medium, high) together and water the hydrozones on different valves (or, if hand watering, water plants requiring the most water longer but not necessarily more often than other plants).

88%
MG Retention Rate
"Rooted" Project

681
Attendees
WC Diverse
Community Projects

ARE WE ACCOMPLISHING
OUR MISSION AS
MASTER GARDENERS?

YES! WE ARE!

Check Out Our 2021-2022
Numbers!

3. Make sure your irrigation system is operating properly (pressure, spacing, no weeds around heads, no broken parts, etc.).
4. Irrigate based on species and seasonal water needs (highest in summer) and soil type (sandy loam, clay loam, etc.).
5. Irrigate slightly below the current root zone depth of your plants to encourage deep rooting into cooler soil:
 - 6"-8" for annuals, perennials, and turf
 - 8"- 1' for shrubs
 - 1' or deeper for trees
6. Water early in the morning when soil evaporation is minimal.
7. Control weeds. They compete with your garden plants for water.
8. Spread and maintain 2-4" of mulch around garden plants and trees (3-4" for wood chips, 2" for pebbles, decomposed gravel, etc.) keeping it a few inches away from tree trunks.
9. Avoid over-fertilizing. Too much nitrogen creates weak growth and the need for more water.
10. If you have a lawn, consider letting it go dormant during the drought, favoring trees and edibles instead. After the drought, most warm season lawns can be revived.

Can You Name These Crawly Critters?



Riverside County UC Master Gardeners			
UCCE Riverside County Director		Rita Clemons	
UCCE Riverside MG Program Director		Janet Hartin	
Volunteer Services Coordinator		Rosa Olaiz	
West County Advisory Board		Desert Advisory Board	
Chair	Dave Brandtman	Chair	Jim Thompson
Chair Elect	Patti Bonawitz	Chair Elect	Brad Hardison
Past Chair	Darrilyn Erickson	Past Chair	Smoky Zeidel
Secretary	Judi Newby	Secretary	Open
Treasurer	Jonathan Crook	Treasurer	Jim Huberty
Fiscal Officer	Jim Huberty	Fiscal Officer	Jim Huberty
Community Gardens	Thurman Howard	Coachella Valley Preserve Docents	Marcia Stone
Diverse Community Projects	Thurman Howard	Continuing Education	Carolyn Daniels
Equipment & Inventory	Debbie Leuer	CREATE	Barbara Kay Levin
Gold Miners	Thurman Howard	CREATE	Vivian Iyтурralde
Grow Lab	Adrian Ceja	Desert Home Gardening Class	Smoky Zeidel
Help Line	Jane Payne	Farmers Markets	Open
Home Gardening Class	Linda Powell	Helpline	Ralph Thompson
Home Gardening Class	Georgia Renne	Job Descriptions	Patty Reed
		Job Descriptions	Marcia Stone
Mentoring Program	Alba Good	Membership	Cynthia Morris-Sotelo
Membership	Sharon Sharpe	Moorten's Botanical Gardens Docent Program	Smoky Zeidel
MG Logo Merchandise	Jennifer Hopper	Moorten's Botanical Gardens Propagation	Barbara Kay-Levin
Newsletter	Georgia Renne	New Projects	Marcia Stone
Parliamentarian	Dave Brandtman	Newsletter	Georgia Renne
Parliamentarian	Cindy Peterson	Publicity-eBlast	Barbara Kay-Levin
Public Relations eBlast	Susan Cline	Publicity-Social Media	Pat Malone
Public Relations Social Media	Pam Elias	Raices Cultura's Tierra de Raíces	Cesar Lopez Barreras
RCRCD Monarch Habitat	Linda Powell	School Gardens	Brad Hardison
Rooted	Patti Bonawitz	Social Events/Recognition	Kathy Miller
School Gardens	Kim Coons-Leonard	Speaker's Bureau	Pat Clays
School Gardens	Brad Hardison	Website	Ralph Thompson
School Gardens	Janice Rosner		
Social Recognition	Yvonne Wilczynski		
Speaker's Bureau	Lynn Coffman		
Tours	Linda Carpenter		
Training Class (2021-2022)	Melody Knox		
UCR Botanic Gardens Liaison	Yvonne Wilczynski		
Website (Countywide)	Ralph Thompson		
WEL Liaison	Janice Rosner		

What do you call a plain potato that talks a lot?

A common-tator.

