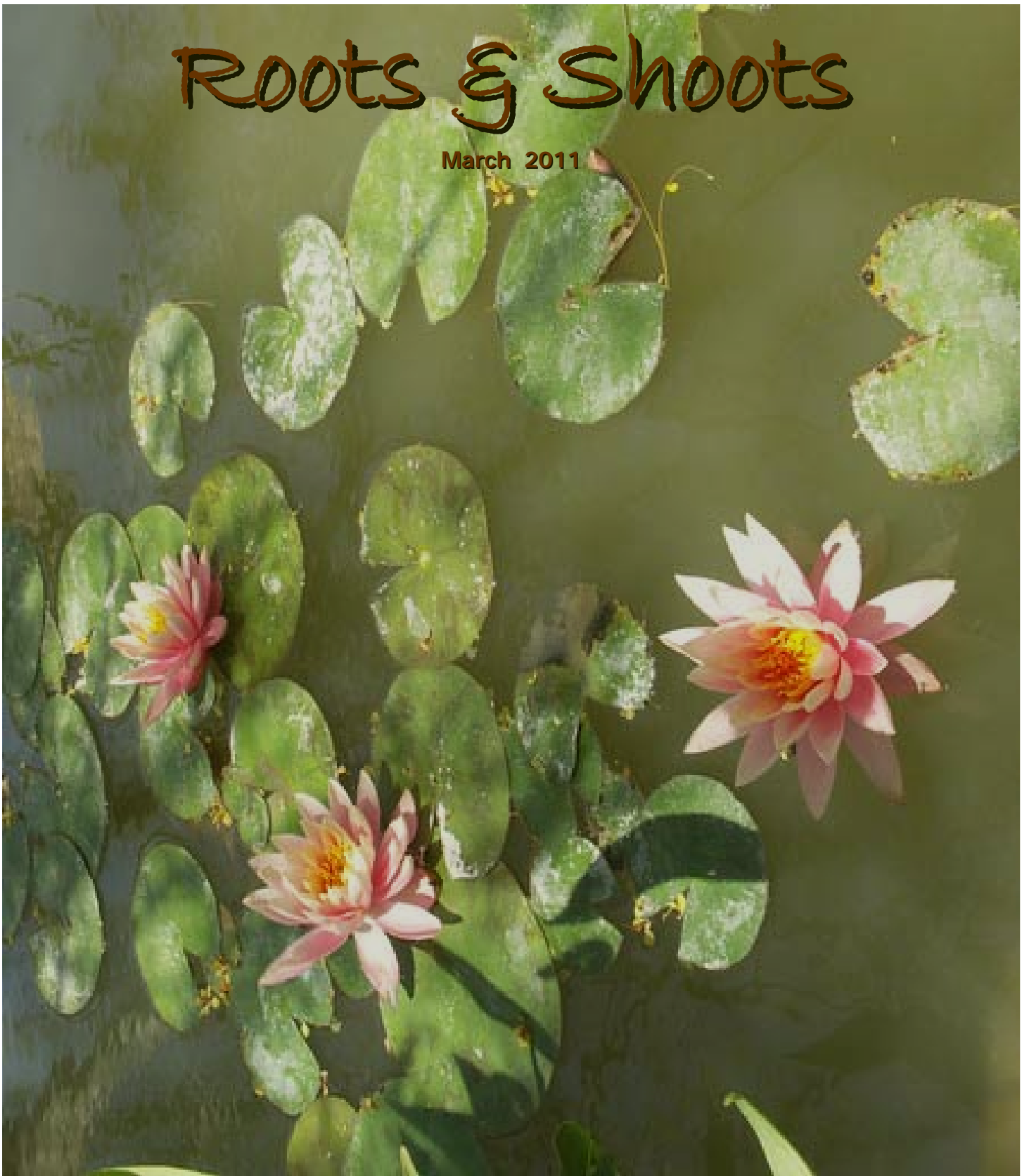


Roots & Shoots

March 2011



“Wildlife Welcome.” Image Courtesy RGRP Photography Committee., see inside for more details

ARIZONA COOPERATIVE
EXTENSION
Maricopa County

THE UNIVERSITY OF ARIZONA COLLEGE OF AGRICULTURE AND LIFE SCIENCES



Roots & Shoots

In this edition:

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Rust as a Design Element

Oleander leaf Scorch

Plant a Summer Vegetable Garden

A History of Botanical Drawing

And many more!!

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Deadline is the 18th of the month prior.

Roots & Shoots, published monthly by & for
Maricopa Co. Master Gardeners, is printed under the direction of:

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**REAL GARDENS
for REAL PEOPLE**

RGRP Garden Briefs
compiled by Mary Bossler

Wildlife Welcome

Paul and Barbi Holdeman's gardens include a Certified Backyard Wildlife Habitat which provides food and shelter for raising wildlife. The Holdemans are inspired by natural riparian areas in the desert, "Most people want to go out and hike in the mountains, but not me - I look for washes and riparian areas where the really interesting stuff happens."

When they moved in 11 years ago, the Holdemans had to deal with a six-foot deep layer of caliche. "A lot of heavy equipment" was required to excavate their ponds, which hold at least 30 fish and 2 dozen frogs. There are now two backyard koi ponds with waterfall and streams, a frog pond and another fishpond in the front yard linked to a state-of-the-art underground rainwater harvesting system. All are accented with boulders and native plantings and look as though they've always been there.

Paul's favorite thing about his garden is the wildlife that comes to visit daily. "There is always something out there eating something else for lunch or looking for fish in the ponds - hawks, herons, raccoons, coyotes, and snakes". His advice to Master Gardeners is to design their gardens from the inside out. "I designed the garden with the view from inside in mind. It's like a 'reverse terrarium,' where we can be inside and see and hear nature." His least favorite thing is that he occasionally loses some succulents to frost. After having had to remove a large Mesquite he points out the importance of knowing the mature size of your plantings, as well as the appropriateness of the microclimate in which you are planting them.



Agriculture Club Community Gardens of Sun City West

The starting point for this year's Real Gardens for Real People Tour, the Agriculture Club community Gardens of Sun City West feature a large selection of vegetables, herbs and even a few flowers tucked in among the greens.

The Ag Club was formed from the Sun City West (SWC) Garden Club when some members decided to grow vegetables which did not fit in the space occupied by the Garden Club. The Ag Club's present location is a 6.7 acre walled area that was used for heavy equipment and material storage during initial construction of Sun City West. The 287 16' x 38' plots are available to members of the Ag Club for a small annual fee. The land belongs to Sun City West but all improvements such as fencing, belong to the plot tenants and can be 'sold' when the current tenant no longer wants the plot. Some members tend multiple plots. There is a wide variety of gardening technology in use, from high-tech watering systems to repurposed and salvaged materials. On Tour Day, three outstanding plots will be showcased, but all the gardens will be open to the public and visitors may find AG Club members tending their plots.



Master Gardener experts will be on hand to answer questions. Mary Ann and Khem Garewal and June Wilde will talk about veggies, Jack Whitmore, irrigation and Linda Rominger will have information on community gardening. What a great opportunity to come out and see what's growing, meet fellow gardeners and be inspired!

Roots & Shoots

MG Update
By Deb Sparrow

The ASU Arboretum & Gardens:
Innovation & Tradition in the Arboretum's 20th Anniversary Year

WHO: Deborah Thirkill, Program coordinator for the ASU Arboretum and supervisor for the organic gardening internship, runs the Arboretum's volunteer program. With the volunteers, she takes care of the plants on the Tempe campus and the date palms at the polytechnic campus. Deborah also has a hand in the family animal wrangling business, the Sonoran Naturalist. She and, her husband, Luke Thirkill brings animals to birthday parties, trade shows, film shoots and schools.

Her interests in plants and animals are intertwined. Thirkill studied wildlife biology at ASU, where she surveyed the Verde river and did field work all over Arizona. She worked with Professor Pinkava, known for his study of cacti and with Professor Minckley, on native fish. She learned that plants go hand in hand with wildlife. Before her work at ASU, Thirkill took care of animals for the interactive exhibits at the Phoenix Zoo. She trained volunteers to handle the animals and had a big collection of invertebrates there, including some unusual and large walking sticks and a big millipede collection. At the Desert Botanical Garden she managed the volunteer side of the butterfly program. I remember seeing her present an impressive array of insects to garden guests, during the summer night time walks.

WHAT: The ASU Arboretum & Gardens, Innovation and Tradition in the Arboretum's 20th Anniversary Year

The ASU campus was made an arboretum by former ASU President Lattie Coor in November of 1990. The campus and many of its trees are much older. While some trees have been lost, many old ones remain and new ones planted. Gardens have been added and gardening methods adapted. Now, that many of the University's departments fall under the umbrella of the Global Institute of Sustainability, it's natural that ASU's grounds keeping follows suit. Under ASU's sustainability initiative, gardening practices are as organic as is practical. Rakes are used for clean up instead of blowers and hydrolyzed fish solution for fertilizer. Tons of green waste generated on campus is composted for campus use. Landscapes, ornamental and edible, coexist on campus. Campus dining halls make use of the sour oranges, herbs and vegetables grown on campus and harvested by students and other volunteers.

Deborah is an enthusiastic gardener. She has created opportunities for students to grow vegetables, by forming a student gardening club on campus, called "ASU Grow." They work at a community garden on campus. She shares her skills as a naturalist, too. Students can help Thirkill monitor bat roosts on campus, discover the roosts, count bats and rescue bats in distress. This is part of a nationwide effort to watch the progression of disease that is decimating some bat populations. The date palms on the Polytechnic campus are also under Deborah Thirkill's care. This collection contain many varieties and some are rare. The palms are young and reproducing by producing offshoots. These are shared with other collections, like the USDA's in Irvine, California.

The ASU Arboretum's main purpose is to create a good atmosphere for students, staff & faculty. ASU president, Dr. Crow, talks about the value of landscaping for study, relaxation and to make people feel at home. This has special meaning here since the students and professors come from all over the country and all over the world. Many local students may be living away from home for the first time. That's one reason there are so many different kinds of gardens, from cozy nooks and crannies, to large expanses of grass, to desert gardens. They can rearrange the rocks in the stacking garden, discover the secret garden, help harvest dates and sour oranges, stroll through the formal gardens by Old Main and appreciate a fine collection of trees. Come hear about the new and old gardens at the ASU Arboretum and the effort to manage them sustainably.

WHEN: Wednesday, March 9, 9:00 AM

WHERE: at the Extension Office, 4341 E. Broadway Rd., Phoenix

Diggings in the Garden

by Pam Perry

Interns again descend on the grounds, helping move mulch that remained after the big mesquite in the southwest corner of the property was removed. This augmented mulch in the vegetable garden, and some is now on the Desert Trail. We will see how this controls weeds out there. Narcissus bloomed in the bulb garden along with a few wildflowers. The weeds do and do not grow in the weed trials. Watching the effectiveness of several weed treatments at once is interesting. We hope the frost cloth is packed away for the season, it was down almost 4 weeks this winter! As it is UV permeable it can be left in place until a cold snap is well past. Spring crops are being seeded into the vegetable garden. Perennial basil in the herb garden may recover from the cold, and the rosemaries have been spectacular this winter! The fig is again pruned, citrus is harvested and fertilized and the peach is about to bust into bloom! Have you stopped to smell the roses, they are so fragrant. The apples suffered from irrigation challenges last summer and will be left to recover as they will. Annual weeds begin to overwhelm us again. Trail days will be scheduled around other MG activities; watch for announcements on the list serve. Weeding along the Desert Trail on the north side of the property is always welcomed, please check in at the front desk. Weeds can be put into the dumpster, and if you are in doubt about what is a weed limit your endeavors to the annual grasses that succeed in profusion!

Reports from Citrus Clinics

Compilation of reports by Burt Carney, Paula Scully, Marianna Hancin & Angel Martel

If you grew up in Phoenix in the 50's and 60's you were taught Arizona's five C's; Copper, Cattle, Cotton, Climate and Citrus. Citrus trees are coveted in the valley and the University of Arizona Master Gardeners Cooperative Extension organizes citrus clinics on both the east and west side to provide information on growing and nurturing citrus trees. The eastside citrus clinic was held at the Greenfield Citrus Nursery in Mesa and the West Valley Clinic was held at the Truman Ranch in Surprise.

At the east valley, eight numbered teaching stations were scattered throughout the citrus grove. Participants moved every thirty minutes to the next seminar of their choice. A seminar led by John Babiarz, from the Greenfield Nursery, gave practical advice on the planting, pruning, and bud grafting of citrus trees. He placed a lot of emphasis on the proper watering of the trees. Dr. Glenn Wright from the University of Arizona's Yuma Agricultural Center, slowly walked down a long table displaying close to 100 varieties of citrus fruit, explaining as he went along the various characteristics of each variety and its fruit. Dr. Edward Martin, a professor at the UofA and Extension Specialist, gave a seminar on citrus irrigation practices. James Truman, the retired farm manager of the UofA's Citrus Agricultural Research Center had various sample bags of fertilizer on display and proceeded to cover the basics for the crowd gathered at his station.

While succulent samples of every kind of citrus and stations on various aspects of growing them enticed many of the crowd at the 2011 Westside Citrus Clinic, off in a quiet, back corner of Truman Ranch, the very nice men of the Arizona Rare Fruit Growers Club beckoned to those who dream dangerously of every possible fruit tree that could feasibly grow in the desert. While not every Phoenician pines after figs, mangos, or guava, there are some that are always compelled to live on the edge of gardening exploration.

Marianna left the clinic feeling very empowered and full of knowledge. Burt was very impressed by the quality of the presentations and the organization of the event and would definitely recommend it to anyone who has citrus and would like to see optimum success in their growth. Paula thought the best part of the clinic was the tasting table. Angel thought the presenters at the deciduous fruit station informed, demonstrated, and encouraged us in all sorts of deciduous delights.

Real Gardens for Real People Tour
March 12, 9 am - 4 pm.

Happy March! Spring has definitely sprung, the 10th annual RGRP tour is coming up soon, and there is still time to sign up to volunteer for a shift on tour day. We could also use a couple of volunteers on March 11th to deliver supplies to the gardens the day before. Click here: <http://cals.arizona.edu/maricopa/garden/protected/ambassadors.php> to sign up. Don't forget, you are eligible for the pre-tour on March 6 if you work in the gardens before or on tour day. Thanks for coming out to help the cause!

If you are going to go on the tour with your fellow garden enthusiasts, you will need tickets! Tickets are on sale at the University of Arizona Cooperative Extension, Maricopa County office, [4341 Broadway, Phoenix, 85040](#) 602-827-8200, and are also available at 13 local area nurseries and garden stores. On the day of the tour, tickets will be available at all of the gardens, but the only address we are advertising to the public is the site of the community gardens:

Sun City West AG Club , [17800 N 137th Dr Sun City West, 85375](#)

Tickets are also available at the following locations:

A&P Nurseries

2645 W. Baseline Rd,
Mesa
480-839-5362

2601 E. Baseline Rd,
Gilbert
480-892-7939

6129 E. Brown Rd,
Mesa
480-396-8800

Baker's Nursery

3414 N. 40th St,
Phoenix
602-955-4500

Berridge Nurseries

4647 E. Camelback Rd,
Phoenix
602-952-8080

Harper's Nurseries

2529 N. Hayden Rd,
Scottsdale
480-946-3481
1830 E. McKellips Rd,

Mesa
480-964-4909

Linden Tree Nursery

11150 W. Beardsley Rd,
Sun City 85373
623-566-2248

McKeown Landscape

8028 W. Thunderbird,
Peoria 85381
602-889-4700

Melrose Pharmacy

704 W. Montecito Ave,
Phoenix
602-279-9510

PORA / Master Gardener Office

(9 am to 12 pm, M - F only)
13815 Camino Del Sol,
Sun City West 85375
623-546-1672

Southwest Gardener

2809 N. 15th Ave,
Phoenix
602-279-9510

Traveling Gardener, wandering, wondering, noticing...
A Small Garden

by Linda Larson

The Anthropologist Margaret Mead said, "Never doubt that a small group of thoughtful committed citizens can change the world." Substitute "committed gardeners" in this thought and the results DO change our world in immeasurable ways.

Master Gardener Park in Port Townsend, WA demonstrates the power of passionate committed gardeners. The city's smallest park, a small triangular shaped patch of earth bordered on all sides by intersecting streets, is now a beautiful garden. Disembarking from the Port Townsend Ferry to begin a perimeter drive of the Olympic Peninsula we had just begun to accelerate on Simm's Way, the highway leading to the rain forest drive. This little garden park caught our eye and had us putting on the brakes, making a u-turn to explore and enjoy this colorful garden overlooking the bay. In early August the garden was only a week away from its formal dedication to Master Gardener teacher Mary Robson. The garden has been transformed to a sustainable, colorful and inviting year round space. Robson has long been inspired by her Mother's saying "Brighten the corner where you are." These words from a popular hymn written in the early 1900's are echoed by the achievements of this small group changing a little part of their world.

Once a thirsty garden of dahlias with a seasonal burst of color, followed by a long dormancy period, the garden has been transformed by the shovels and skills of Master Gardeners. The Dahlias are still featured in their colorful splendor but now share the space with Russian sage, evergreen clematis and amethyst smokebush. A circular path takes you through the garden bringing you to a bench with a unique 3- cornered arbor curving over the top. The bench provides you a panoramic view of the bay and the boats below.

Many travelers and even many local residents will never explore this brightened corner. A world of hurry causes us to miss these mini marvels. Life's duties have most of us rushing on as we just can't make the time to enjoy a small garden. When the opportunity to tour a famous garden presents itself, it is easy to prioritize the time in our schedule. A tour of Longwood, Butchart, or Morton estate gardens is a fantasy experience. Such elaborate gardens were built with unlimited resources in staff, money and space. As a gardener, such fantasy is fun to experience. This is quite different from the gardens most of us live with from day to day. We work on a small patch of earth cultivating our space in nature. The truth is our small gardens can be simply glorious.

And so it is as garden tour season begins and our schedules fill up fast in these pleasant weather days. Our Real Gardens for Real People tour is March 12 and passionate master gardeners have been working hard to ready their little patch of earth to brighten your day. Other master gardeners have grouped together to assist these garden hosts to make sure every corner is carefully prepared. The RGRP tour gardens are ready and it has been no simple task after nights of freezing cold. The garden owners are excited and anxious for tour day. What is needed now is garden visitors. As a former RGRP garden host I know the delight owners feel when they share their gardens with others. After all the preparation I found myself lying awake the night before tour day wondering if anyone would come!



Roots & Shoots

Traveling Gardener Continued...

Enjoying a garden is not meant to be a speedy experience. In truth, gardening slows us down as we plant, water and wait for things to grow. We tend to the weeds and errant limbs doing good, important and constant work. Yet as important as this is, "Are you willing to reclaim time to simply enjoy a garden?"

If you are, then clear your schedule to assist, or tour your fellow gardeners little patch of earth. Bring family, friends and gardener want-to-be's and look to the corners for unique plants, new ideas, inspiration and simply enjoy the pleasure of exploring a garden. It is amazing what a group of thoughtful, committed gardeners can do!

Images by Rich Larson



Rust as a Design Element by Jeff Ross

Over twenty years ago when we visited the Sonoran Desert and specifically the Phoenix area, several people were all too happy to explain to us that things didn't rust in the desert because it was dry. Since moving to Maricopa County four years ago, I have discovered that isn't true. As a matter of fact quite surprisingly, I am convinced that rust is a design element. They love rust out here. Every time I turn around, I see something left to deliberately rust, adding its natural tone to the surrounding architecture, garden, etc.



Desert Broom Library Rusted Wall

Rusted Gazebo Entrance at DBG



While cars housed primarily in garages won't rust and perhaps some left to decay in the desert may rust more slowly, things actually do rust in the southwest desert of Arizona.

Images courtesy Jeff Ross, reprinted from gardeningonthemoon.com

Rusted Bus Waiting Area

Leaving Phoenix and taking Shea Blvd. eastward, one comes across a bus waiting area artistically garbed with rust tones.



Rusted Residential Address Sign

What's Wrong with My Oleander?

Prized for their evergreen foliage and showy tropical blooms, oleanders (*Nerium oleander*) found their place in Phoenix landscapes during the home-building boom of the 1940s and 1950s. Today, many of these very old and established oleanders, particularly ones in north central Phoenix, suffer from a deadly disease known as Oleander Leaf Scorch (OLS), and it's spreading. *Xylella fastidiosa*, the bacterium responsible for OLS, quickly spreads throughout the plant. But how does it get into the plant in the first place? Easy. Leafhoppers.

The Sharpshooter Vector

Smoke-tree sharpshooters, the leafhopper responsible for infecting oleanders in the Phoenix area, feed on an infected plant's xylem, then deposit the *X. fastidiosa* bacteria, which multiply in their mouth to other oleanders. Once *X. fastidiosa* enters the xylem, it quickly replicates and essentially starves the plant of life-sustaining water. (Wilén et al, 2008.) These ¼" long, fast-moving sharpshooters are easy to see, but hard to catch. And once adults are infected with the *X. fastidiosa* bacteria, they're infected for life. These two factors make it very difficult to eradicate and control sharpshooters which make it nearly impossible to control OLS. (Wilén et al, 2008).

Distribution of OLS

Oleander Leaf Scorch has fixated on an area in Phoenix bounded by 15th Avenue to 16th Street and Camelback to Greenway. These very old and established oleanders reside with turfgrass on large, flood irrigated lots, which may be a viable breeding ground for insects carrying *X. fastidiosa*. (U of A Extension Plant Pathology, 2010) Oleander Leaf Scorch has also been spotted outside this area, namely in Texas and California, and may be slowly spreading to other less dense oleander populations. There are also many strains of *X. fastidiosa*, and each strain affects different plants differently. (Dreistadt, 2004.)

OLS Symptoms

OLS symptoms often mimic those of water-stressed plants. Leaves turn yellow and droop, followed by browning and eventual leaf drop. But there are some distinct differences, including:

- Individual leaves initially turn yellow and droop on OLS-infected plants, while all leaves turn yellow and droop on water-stressed oleanders.
- Leaf tips and margins turn yellow, gradually moving toward the midrib on infected plants, while thirsty plants start yellowing at the midrib and move out to the tips and margins.
- Individual branches are initially affected on infected oleanders, while the entire plant will be affected by a lack of water.
- Warmer weather brings on more noticeable (and sometimes more severe) symptoms in OLS-infected oleanders whereas water-stressed plants will show symptoms at any time. (Dreistadt, 2004.)

Some of these symptoms may also indicate salt damage or a nutrient deficiency, although those issues are less common. But if the oleander still looks as if it's dying after giving it water, leaching the salt out of the soil, and applying the right nutrients, then it's probably Oleander Leaf Scorch (U of A Extension Plant Pathology, 2010).

Controlling Oleander Leaf Scorch

Unfortunately, there are no registered pesticides or practical controls for diseases caused by *X. fastidiosa*. Antibiotics may have some very short-term benefits at controlling the insects on a large scale, but are next to impossible in residential settings because of the year-round abundance of the sharpshooters (Wilén et al, 2008). Pruning out the part of the plant showing symptoms or cutting the oleander to the ground may elicit healthy new growth and improve the oleander's appearance. But it will not save the plant. By the time you

Roots & Shoots

Oleander Leaf continued...

see OLS, the infection has already spread throughout the plant via the xylem (Wilén et al, 2008). Even removing infected plants may be ineffective at controlling the spread of the disease. But it is also the best way to manage the spread of the disease today. (Wilén et al, 2008). While some cultivars do express less serious symptoms and may, ultimately, live longer, oleanders with Oleander Leaf Scorch usually die within three to five years—or sooner (Dreistadt, 2004).

Diagnosing Oleander Leaf Scorch

The only way to accurately diagnose Oleander Leaf Scorch is to perform serological or molecular assays in a laboratory environment. Contact the Cooperative Extension Office to learn more.

Alternatives to Oleander

The good news? There are some excellent low-water, low-maintenance native alternatives for Phoenix xeriscapes:

- Hop Bush (*Dodonaea viscosa*) – Grows to 8-10' tall and wide and acts as a privacy or sun screen. While its blooms are not nearly as showy, low-water Hop Bush offers dense, vibrant evergreen foliage with small blooms in the spring. Even better? *Dodonaea viscosa* requires little to no pruning and has very little litter.
- *Tecoma stans* – These low-water xeriscape favorites offer dense evergreen foliage with blooms nearly all year. Depending on the variety, *T. stans* can grow to 6-10' tall and 4-8' wide and will work very well as a border or screen in a sunny location. Look for Yellow Bells, Orange Jubilee, or the dramatic Sunset varieties.
- Arizona Rosewood (*Vauquelinia californica*) – A Sonoran Desert native, Arizona Rosewood works well in sun or part sun and low water, and slowly grows to 10' tall by 8' wide. Its dark evergreen foliage contrasts well with clusters of white blooms in early summer.

The loss of established oleanders to OLS can be traumatic. But it's also an excellent opportunity to welcome non-toxic, low-water, low-maintenance natives to Greater Phoenix landscapes.

Sources:

Dreistadt, SH. (2004). *Pests of Landscape Trees and Shrubs: An Integrated Pest Management Guide*. Oakland, CA: Statewide Integrated Pest Management Program, University of California, Division of Agriculture and Natural Resources, Publication 3359.

Extension Plant Pathology (2010). *Diseases of Oleander (Nerium oleander) in Arizona: Oleander Leaf Scorch (OLS)*. University of Arizona Extension Plant Pathology. Retrieved from <http://ag.arizona.edu/plp/plpext/diseases/trees/oleander/oleleaf.htm>

Wilén CA, Hartin JS, Henry MJ, Blua M, & Purcell AC (2008). *Pest Notes: Oleander Leaf Scorch*. University of California, Division of Agriculture and Natural Resources, Publication 7480. Retrieved from <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7480.html>

Desert Botanical Garden to Host Cactus and Succulent Show

Expect to see amazing, beautiful and bizarre examples of cacti and succulents as members of the Central Arizona Cactus and Succulent Society display potted specimens of desert plants from around the world. For many years this show has been an annual tradition at the botanical garden and is free with garden admission. In connection with the show, there will also be a sale featuring plants and pots from southwestern growers and artists.

The show will be in Dorrance Auditorium and the surrounding courtyard April 1-3. On the 1st and 2nd, hours will be 9-5, and on the 3rd the show will open 9-4. The Desert Botanical Garden is located at 1201 N. Galvin Parkway in Phoenix. For more information, go to www.centralarizonacactus.org or call Beth Kirkpatrick at 480-275-4833.

Design Charrette

The March Design Charrette will be held in the East Valley on March 26 from 9:00 AM to noon at the Queen Creek home of Sherry Land. If you would like to enjoy a pleasant morning in the company of fellow Master Gardeners and give Sherry some ideas for her garden join us for this Charrette. Experienced Master Gardeners, Associates and Interns are welcome to participate; all you need to bring is your imagination, writing materials and a dish to share for lunch.

Here is what Sherry has to say about her garden:

"I'd love to have some design help with my yard. I've lived in Queen Creek for just a little over a year. My house has view fencing in the back which faces Queen Creek Wash. I'd like to incorporate protected areas for herb & vegetable gardening as well as areas for entertaining and relaxing. One feature I want to include is a labyrinth. I've visited several and I recently saw a couple of labyrinths in a presentation by Scott Calhoun. There is some existing landscaping I'll keep, like a grass area with sprinklers and concrete curbing, but about 2/3 of my yard is a blank slate."

If you are interested in attending this Design Charrette e-mail us at designcharrette@hotmail.com or call Beth Kirkpatrick at 480-275-4833.

What is a Design Charrette...And How Can I Participate?

A Design Charrette is a forum hosted by a Master Gardener to develop design ideas for a chosen landscape. As a Master Gardener, you can host a Charrette for your own property or any other. This is a 3-hour event that includes a tour of the grounds, potluck and design discussion. The number of attendees is usually limited to 12.

HOSTS: Receive the benefit of free design ideas. As the host, you will provide a tour of your property which includes plant identification and information, researched or experimental. The host provides a letter of intent for the property that prioritizes goals, needs and problems to be solved. A simple drawing of the property must also be provided to the group to use in their landscape design. Lastly, the host provides cups, plates, utensils, napkins and water. Guests will bring the food.

GUESTS: No formal landscape design education is required. But we do require that you bring your imagination! Come and enjoy the garden tour, identify plants and have the opportunity to learn from fellow Master Gardeners as we share our design ideas. Each guest will need to bring a potluck dish. Design Charrettes are held on Saturday mornings and the date is determined by the host and Design Charrette team. If you are interested in hosting a Design Charrette or have any questions, please contact us at: designcharrette@hotmail.com



*January Design Charrette at the home of Kathy Leix
Sue O'Brien is presenting her teams' design to Kathy
Leix, the homeowner (in orange shirt)*

Your Design Charrette Team

Beth Kirkpatrick, Sue Lanker, and Matt Murman

Roots & Shoots

Plant a Summer Vegetable Garden

by Pam Perry

Last fall, while putting the summer 2010 summer garden to rest, I fielded several questions from many anxious volunteers. I think about planning and planting the summer garden early on! Prepare soil in anticipation of springing into the summer vegetable garden (all puns intended!) and make a plan for the spring-into-summer garden, planted in March, April, and as time and space allow, even May! Refer to AZ 1005 for specifics and select varieties in terms of when you want to harvest!

NOTE: If this is a new garden or you have consumed your salad fixings, you can still plant and harvest many of the salad crops. Check AZ1005. Select heat tolerant varieties if that is an option. As these mature, plantings of black-eyed peas, yard long beans, melons, Armenian cukes or sweet potato plants can fill in the space.

Things to do or consider as plan the spring and summer Vegetable Demo Garden:

1. I need to either order sweet potato starts, or buy an 'organic' sweet potato or two of the varieties I want to grow. NOW. These tubers, placed in water in a warm sunny window, will grow roots, and then grow shoots of stems and leaves. When the shoots are 5 inches or so big I will remove them from the mother potatoes, place them in some water. As soon as nubs of roots show I then plant them in 3 inch pots with good potting soil. They must at all times remain warm with lots of sun. Late April or May, when the pots have a nice root ball plant them into the garden allowing several square feet for each plant. Mark this plant with a stake or flag.
2. Existing perennials; asparagus, artichoke, and Jerusalem artichokes in the demo garden are not going anywhere! Each follows its own seasonal pattern for growth, production and energy storing. Harvest, mulch, fertilize each according to suggestions in the mg manual or pubs. The artichoke benefits from a rambunctious vine planted to grow over it and shade it after harvest.
3. I can plant the I'toi onions somewhere else if the spirit moves me or not. The planting protocol for keeping them going is to replant a few from each bunch harvested. To relocate them, I just start the new patch somewhere else as I harvest.
4. Trellises for climbers, cukes, climbing beans, maybe gourds or melons need to be erected and secured. Add compost and fertilizer to the soil as needed in preparation for planting.
5. Slicing cukes are short lived. Planted in late February and early March, they wind down as temperatures reach triple digits and hot afternoon winds happen in June. The space they vacate can be filled by later plantings or the expansion of vigorous summer plants, such as sweet potatoes, gourds or Armenian cukes planted near by.
6. Crops of Christmas limas or other light sensitive crops will grow well all summer and begin to flower to set a crop in late fall. They occupy their space for a very long time! Where I plant them I will follow with lettuces or even February crops. They are legumes and help enrich the soil even as they make a crop of beans for harvest.
8. Tomatoes, peppers, potatoes, eggplant should not be planted where they grew last year, reduc-

Summer Garden continued...

- ing the likelihood of soil born disease. February into early March plant young, healthy *plants*: Tomatoes go in earliest. After harvest, the tired vines are removed to make space for monsoon planted crops. Transplants of peppers and eggplants will last will last all summer into fall, when they will get a new lease on life, and bear new crops! Protect them all from frosts. Set your shade support in place as tomatoes and peppers benefit from shade by late April.
9. Plant Jerusalem artichokes from tubers, or young plants. These are perennials, so this is a long term commitment of space in the garden. They are members of the sunflower family and grow 6 or more feet tall, bloom with 3-5 inch flowers to cut for bouquets. Tubers are most easily harvested in late fall after the foliage dies after frost. Roast them or eat them raw in salads.
 10. The Cole crops, salad and other winter greens will be harvested, begin to wear out, get bitter, feel the heat, bolt, become buggy. Commit what is left to compost. Add soil amendments to the garden and plant from seed or transplants: beans-- limas, snap, pole, yard long, and black eye peas! Plant pop corn, sweet corn, or ornamental varieties, too. Cukes: Armenian, picklers, slicing, your choice, and melons, summer squash, winter squash, can go in as well. Allow some scallions to remain in the ground; they will form nice 1-2 inch onions by mid summer! Carrots will keep in the soil for quite a while. You can even allow some to go to seed. The flowers will attract good bugs!
 11. The soil is much warmer in late April. Plant okra, Hibiscus sabdariffa, peanuts, and pumpkins. Be sure to allow plenty of space as they have the potential to become large plants. Basil will tolerate summer in containers or raised beds quite happily. They struggle in March and early April, especially if we get a cool snap! Use transplants or seeds. There are so many flavors, scents, growth habits of basil to choose from! They tolerate less fertile soil and love the heat. One cannot have too much basil! Plant them where you can enjoy them as flowering plants. Flowers will attract bees and other beneficial insects to the garden. They make good cut flowers and are great when cooking all sorts of dishes! Gourds can be planted in April. Grow your own luffa sponge, or birdhouse gourds. These are a great way to shade a pergola or patio, any sun drenched wall, or hide the artichoke which becomes more and more unsightly! The shade will benefit the artichoke as well during the heat of the summer!
 12. Harvest and use cilantro leaves now while it is actively growing. As temperatures reach into the 80's expect this plant to bloom, make seed, and die! It is an annual, the seed is coriander. Often parsley will do much the same thing. These flowers also invite many beneficial insects!
 13. Plant flowers in the garden. Hibiscus sabdariffa, Tithonia, or Mexican sunflower, zinnias, cosmos, coreopsis, and black-eyed Susie's can replace the winter's calendulas, sweet peas, poppies larkspur, hollyhocks, pansies, and nasturtiums. Sunflowers can be seeded as soon as threat of frost is over. They will sprout almost any time, but run the risk of freezing if they pop up too early. Check the Flower planting guide, AZ1100 for more information.

The summer garden will have ripening crops of tomatoes, peppers, tomatillos in a good year, Armenian cukes will fill in as the slicing cukes wimp out, okra should be harvested often, young, and ten-

Roots & Shoots

Summer Garden continued...

der. Try the burgundy okra for the aesthetic impact, or the 'Nescafe' variety offered at Native Seed Search for excellent flavor and robustness! Eat it raw, roast or grill it as alternatives to frying in the traditional manner! Pick eggplants and zucchini when small and tender. You will need more to make a meal, and not be so overwhelmed by their success! Melons ripen best on the vine, watch them daily for indication they are ready to part company from the mother plant. Use mulch to keep them off the soil, high and dry, to keep bugs from beating you to the harvest! Black-eyed peas can be harvested as snap or green beans, the seeds allowed to mature a little, for butter beans or fully as a dry soup bean. Harvest often, adjust irrigation to keep up with the increasing temperatures and the growth of your plants. Enjoy the bounty!

Growing Communities - One Garden at a Time

Southwest Regional ACGA Conference April 1-2, 2011

Rio Salado Conference Center

Tempe, Arizona

(Learn about community gardening and earn MG education hours!)

The Southwest Regional ACGA Conference will bring together people from the southwest and beyond with sessions covering community gardening basics, community garden start-ups, and up-to-date information for school garden organizers to help combat the issue of childhood obesity and provide better health for all children. Tours of school and community gardens will give a first-hand look at how these ideas are being put into practice. There will be a selection of breakouts for both the new and seasoned community gardener. Meet other community and school garden organizers through networking evenings filled with southwestern entertainment and hospitality. This conference is open to ACGA members and the general public.

For more info and registration please visit:

<http://www.communitygarden.org/learn/training/annual-conference/regionalconference.php>

Facebook page: <http://www.facebook.com/pages/2011-American-Community-Gardening-Association-Southwest-Regional-Conference/113135052084281>

ORCHIDFEST

The Desert Valley Orchid Society (DVOS), dedicated to the love and advancement of orchid growing in the greater Phoenix area, and in association with Baker Nursery, will sponsor a free and family friendly Orchid Show and Workshop on **Saturday, April 9, 2011** from 9:00 a.m. to 4:00 p.m. and **Sunday, April 10, 2011** from 10:00 a.m. to 4:00 p.m. at Baker Nursery, 3414 N. 40th Street, Phoenix.

There will be orchid displays, a plant sale, orchid judging by a team of national American Orchid Society judges, workshops on "Growing orchids in the desert", "Growing orchids in your home", "How and when to repot orchids", and other orchid culture topics. Visitors to the show will be asked to vote for the "Best in the Show".

For further information, please contact Sandra Walters, DVOS Show Chairman at (home) 602-404-6008 or (cell) 602-625-1174.

A Short History of Botanical Drawing

by Sheryl Stradling

Humankind has used plants as food, medicine, and in ritual for eons. As long as 23,000 years ago during the Upper Paleolithic era, early people may have processed and eaten wild cereals. Rock art, cave paintings, beads and other early evidence of art also dates from this period. Although some researchers note that animal forms were produced long before plant forms, others have found rudimentary paleolithic leaf forms, buds and grasses, which may indicate early Eurasian peoples lived in primarily grassland areas.

Agriculture developed around 10,000 years ago. As knowledge of medicinal and herbal uses of plants evolved, so did decorative representations. An unusual series of limestone bas-reliefs from the 15th century BC in the Egyptian Great Temple of Thutmose III at Karnak show more scientific representations of 275 different plants, many recognizable. This collection compares in scientific detail to that of early printed herbals done nearly 3,000 years later. In early Egyptian, Cretan, Greek and Roman art, plants and trees are represented stylistically and with varying degrees of realism. Herbals, descriptions and drawings of medicinal uses of plants, were among the first literature produced in many ancient cultures. In the first century AD, two famous botanical works were written. Pliny the Elder, a Roman, published his *Natural History*, an encyclopedia, in AD 77-79. It included a section on botany, about all known cultivated crops, vegetables, herbs and remedies derived from them. Dioscorides, a Greek physician, pharmacologist and botanist (c. 40-90 AD), wrote *de Materia Medica* ("Regarding Medical Materials"), a five-volume encyclopedia on herbal medicine which was used until around 1600. Although it may not have been illustrated originally, a number of later illustrated versions survive. One of the most famous was produced in Constantinople around 512 AD and is well-known for its beautiful, detailed illustrations.

Herbals continued to be valued throughout the middle ages. The first printed herbals were woodcuts. Later technology included etching and metal engraving. They were among the first books printed with the invention of movable type in 1439. The 1500's - 1700's produced many well-known botanical illustrators in Europe who produced books of beautiful watercolor drawings. Three of the greats were Besler (1561-1629), Ehret (1708-70) and Redoute (1759-1840), the most famous flower painter of his time. However, many of the illustrators of botanicals in this period were women who rarely received credit for their work. See www.studiobotanika.com for a fascinating exhibit on women and the art of botanical illustration. During the Victorian Era (1837 – 1901), it was common for women to take up "flower painting" as a genteel and appropriate pastime. American artist Georgia O'Keeffe used botanicals as subject matter, even though she was hardly a flower painter or botanical artist. Her flower paintings of the 1920's caused a sensation and still evoke both the mystery of flowers and of nature overall.

The popularity of illustrated botanical publications in the 18th and 19th centuries created a large audience for botanical art as well as an explosion in plant breeding and interest in growing unusual specimens. Sir William Jackson Hooker (1785-1865), the first director of the Royal Botanic Gardens Kew, wrote *Garden Ferns; or Coloured Figures and Descriptions*, illustrated by Walter Fitch with amazingly detailed drawings, it can be viewed on line at www.books.Google.com. Sources for modern botanical enthusiasts abound on the Internet. For botanical drawing and painting, *The Art of Botanical* illustrations by Agathe Ravet-Haevermans are wonderful. For fabulous photos, see the Botany Photo of the Day at the University of British Columbia's site, www.ubcbotanicalgarden.org. As plant and garden enthusiasts, we can continue to enjoy botanical illustration in many forms!

The Art of Botanical Illustration, An Illustrated History by Wilfrid Blunt, 1994

The Art of Botanical Drawing, An Introductory Guide, by Agathe Ravet-Haevermans, 2009

Pamphlet, "What Is A Fossil?," Black Hills Institute of Geological Research, Inc., 1991

The Nature of Paleolithic Art, by Russell Dale Guthrie, Internet page, www.books.google.com, accessed 2/21/2011

*Garden Ferns; or Coloured Figures and Descriptions...*Internet page www.books.google.com, accessed 2/21/2011

Georgia O'Keeffe: A Question of Harmony, Master's Thesis, Sheryl Stradling 1995

Roots & Shoots

Grand Canyon's Green Heart: The Unsung Legacy of Plants

by Gail Cochrane

In the Grand Canyon, geology is center stage, but did you know that the Canyon is home to more plants than any other national park? Or that nearly half of all plants that grow in Arizona can be found in the Canyon?

An exhibit at the historic Kolb Studios perched on the South Rim pays homage to the plant life of the Canyon. In the cozy downstairs studio, a table holds potted native plants that have been grown from seeds collected in the Canyon. On the walls hang beautiful botanical illustrations of many of the rare natives that grow in the park. Seven large display panels provide extensive information on the Grand Canyon's botanical riches. The Marriage of Art and Science panel is a celebration of the intensive scientific research and intricacies involved in the art of botanical illustration.

The lost art is being brought back by a small group of dedicated artists whose botanical illustrations support the preservation of rare and endangered plants. "What Grows Here" examines the plant studies that have been conducted in the canyon. How many and what kinds of plants grow here? How do plants with a broad distribution survive temperature extremes? Which plants adapt to certain niches and how? Plants can develop into new species in isolation and nine endemic species have been identified in the Grand Canyon. An example is the Sentry milk-vetch, a tiny plant that grows only in Kaibab limestone.

Merriam's Life Zone model describes broad bands of growth: plant and animal species associated with specific niches, elevations, latitudes and exposure. Of the seven life zones in Arizona, five occur in the Grand Canyon. The direction a slope faces, or the exposure, affects the plants growing there. Some north facing alcoves on the South Rim form cool "window boxes" where deep snow collects and slowly melts, providing moisture for plants. Ancient plants from the Pleistocene flourished here when glaciers covered 30% of the earth's surface. Some of these relics survived thanks to window boxes. The Western redbud is an example.

Illustrating the impact of water in plant communities, the fourth panel features photographs of desert scrub environments which appear arid, but are teeming with life. Common species are listed for the Sonoran, Mojave and Great Basin deserts. Seeps, springs and waterways provide riparian refuges for plants and are a source of water, food and shelter for wildlife. Although 750 tributaries grace the park, only a few flow year round. One panel describes forests, woodlands and meadows that beautify the Grand Canyon, while another panel is entirely photographs of common and rare plants, detailing their adaptation to their surroundings. And the final panel explains the Canyon's Vegetation Management programs. These include programs around mapping, endangered species, fire management, restoration, exotics and the volunteer program.

I was at the Grand Canyon to hike, and it was an added bonus to come across this wonderful exhibit sponsored by the Grand Canyon Association, the Grand Canyon National Park and Desert Botanical Gardens. You can go online to www.grandcanyon.org to read more about the Kolb Studio exhibits.

Images courtesy Gail Cochrane



Sentry Milk Vetch



Engelmann's Hedgehog

The Heritage Rose Garden

by Susan Higgins

There is a gem of a rose garden at the northwest corner of the Extension gardens lot that you might have missed. The Heritage Rose Garden is a sweet retreat for rose lovers and those who are curious about how to grow roses in the desert. Long time master gardeners and husband/wife team Steve and Debi Young are the directors in charge of this little plot. It contains 80 different classes of roses that include climbers, low bushes and a huge hedge of roses. But be aware, that hedge may soon be cut back very low if Steve remembers to bring his power tools the next work day! If you would like to earn some volunteer hours, get your name on Steve's email list (az1steveyoung@msn.com) for announcement of work days.

Heritage roses are unique because they originate from propagation before the year 1867. Yes, roses have been around since biblical times and perhaps before. The origin could have been Persia, the Middle East or even North America, nobody is quite sure. In the late 1700s and early 1800s, European botanists joined the age of exploration to find new varieties in China and the Far East. The classes known as "Chinas" and "Teas" came from this era. Some of the roses in the Heritage Garden at MCCE are classified by names such as Tea, Floribunda, Damasks, Gallicas, Noisettes, Bourbons, Polyanthas and many others. In the 8 different beds you will find the different species labeled on the garden edging, so look down as you travel through. The nametags have recently been updated and cleaned, one of the tasks in keeping the garden primed. There are tips about how to prune the various bushes according to the seasonal conditions, as well as a list of basic chores. Last year we lost a good number of the bushes to the infernal heat, but the space was filled by new purchases from a reputable source in Brenham, Texas for Zone 6-9.

The most interesting historical rose in the garden is the Autumn Damask bush near the back of the Fruit Growers greenhouse. This species tolerates the heat very well, having been grown in the desert of the Middle East and may originally have been bred in 30 BC. This rose, according to one source, may be the plant that writers long ago described as the "Four Seasons Rose of Paestum" (Antique Rose Emporium, Reference Guide). It is a repeat bloomer throughout the year, with a rich scent. It displays a light pink color that is often doubled, but given the intense Arizona sun, it may look almost white. It may be a hybrid with *R. chinensis*, and a parent of both Bourbons and Hybrid Perpetuals. It is dated to before 1819. But as one anonymous rosarian reminded us, it is more pleasurable to enjoy the foliage, color, perfume and shape of the roses than to identify the class and species of each of them.

When working with the roses, it is important to wear proper clothing. Long sleeves, sunglasses or protective eyewear, and gloves to protect against the thorns are all advisable. Heritage roses are hardier and require less work than the modern hybrid varieties. Getting to know roses will allow a greater enjoyment when you don't expect each plant to perform equally – some bloom only once, some bloom several times a year, or within a season. Some have heavenly fragrance, others look spectacular and are silky smooth to touch. Some of these plants do require a lot of work, but the rewards are out of this world for the aromas, colors and shapes that they bring to admirers of the Heritage Rose Garden.

For more information about Heritage Roses see www.heritagerosefoundation.org, or visit the American Rose Society page on Facebook.

March 2011 Events Calendar

Submit events to [Karen Sankman](#)

Register/Purchase Now for Upcoming Event		
Apr 1,2	Growing Communities-One Garden at a Time	At Rio Salado College, 2323 W. 14 th St., Tempe. Conference sponsored by Southwest Regional ACGA. Cost is \$165 for ACGA mem/\$195 for non-mem. Info/Register
Apr 3	Phoenix Home and Garden Magazine's Grand Tour of Gardens	10 am-4 pm, self-guided tour of 6 residential landscapes in Scottsdale and Phoenix. \$45/person with a portion of proceeds benefiting the Desert Botanical Gardens. Tickets available by filling out form in current issue of magazine or call Karen (480) 664-3960, Ext. 132. by March 23. Tickets/tour book/maps will be mailed to you.
Apr 4-8	Greenhouse Short Course	Register now for this April course on greenhouse crop production and engineering design at Westward Look Resort, Tucson. \$499. Connie Hackathorn (520) 626-9566. Info/Register
Apr 6	Spring Turf Grass Seminar	9 am-noon, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. \$25. Register by April 1. Info/Register
July 12- November 1, 2011	Summer 2011 Master Gardener Training Class	Apply now for Master Gardener Training Class. 6:30-9:30 pm, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. \$275. Info/Register
March 2011		
Tue 1	Landscaping in the AZ Desert	9-10 am, Peoria Development & Community Services Bldg, Point of View Room, 9875 N. 85 th Ave., Peoria. Free. Info/Register
Tue 1	NE Valley Satellite Diagnostic Clinic	No Diagnostic Clinic
Tue 1	Master Gardener Training Class	10:30 am-1:30 pm, Glendale Public Library-Foothills Branch, 19055 N. 57th Ave, Glendale. Topic: Herbs with Carolyn Hills

Items in green denote an event sponsored by the Maricopa County Cooperative Extension Service, and/or an opportunity for volunteer hours. Underlined words are links to websites or e-mail addresses.

Tue 1	Tuesday in the Garden	2 pm-dusk, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring gloves and tools that you like to help with maintenance in the demo garden. <u>Pam Perry</u> (602) 279-6250
Tue 1	Down to Earth Toastmasters	6-7:15 pm, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. <u>Olivette Aviso</u> (480) 235-5989. <u>Down to Earth Toastmasters</u>
Tue 1	Groundcovers and Vines for the Desert Landscape	6-9 pm, <u>Desert Botanical Garden</u> , \$30 mem/\$38 non-mem. <u>Info/Register</u>
Tue 1	Sun Country Iris Meeting	7 pm, Valley Garden Center, 1809 N. 15 th Ave, Phoenix. <u>Ardi Kary</u> at (480) 949-0253, <u>Sun Country Iris Society</u>
Tue 1	Phoenix Bonsai Society Meeting	7:30 pm, Valley Garden Center, 1809 N. 15 th Ave, Phoenix. <u>Elsie Andrade</u> (602) 995-3870. <u>Phoenix Bonsai Society</u>
Wed 2	Landscaping in the AZ Desert	5:30-6:30 pm, Peoria Development & Community Services Bldg, Point of View Room,, 9875 N. 85 th Ave., Peoria. Free. <u>Info/Register</u>
Wed 2	Plant Care in the Desert	6-8:30 pm, Granite Reef Senior Center, 1700 N. Granite Reef Rd., Scottsdale. Free to Scottsdale residents. <u>Info/Register</u>
Wed 2	Heirloom Vegetable Gardening	6-9 pm, <u>Desert Botanical Garden</u> , \$30 mem/\$38 non-mem. <u>Info/Register</u>
Thu 3	NW Satellite Office Diagnostic Clinic	10 am-noon, 13815 Camino del Sol, Sun City West. <u>MaryAnn Garewal</u> (623) 546-1672. Bring plant or pest samples for ID and advice.
Thu 3	Landscaping Watering 101	5:30-7 pm, Peoria Development & Community Services Bldg, Point of View Room,, 9875 N. 85 th Ave., Peoria. Free. <u>Info/Register</u>
Thu 3	Program Your Irrigation Controller	6-8:30 pm, Granite Reef Senior Center, 1700 N. Granite Reef Rd., Scottsdale. Free to Scottsdale residents. <u>Info/Register</u> . One volunteer needed, contact <u>Robyn Baker</u> (480) 312-5651.
Thu 3	Irrigation Maintenance	6:30-9 pm, Gilbert Public Works, 900 E. Juniper Ave., Gilbert. Free. <u>Info/Register</u>
Thu 3	Arizona Herb Association Meeting	7-9 pm, Maricopa County Cooperative Extension, 4341 E. Broadway Rd., Phoenix. <u>Carolyn Hills</u> , <u>AZ Herb Assoc.</u>

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Thu 3	East Valley Garden Club Meeting	7-9 pm, Mesa Community College at 1833 W. Southern, Kiva Room in the basement of the Clock Tower Building. Judy Smith (480) 539-0381, East Valley Garden Club .
Thu 3	Rose Society of Glendale Meeting	7 pm, Glendale Women's Club, 7032 N. 56 th Ave., Glendale. Rose Society of Glendale , Gerry Mahoney (602) 616-3137
Fri 4	Explore the Gardens of Tucson Trip	7:30 am-6:30 pm, Desert Botanical Garden , \$124 mem/\$149 non-mem. Info/Register
Fri 4	Main Office Diagnostic Clinic	8 am, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring plant or pest samples for ID and advice.
Fri 4,5,6	Maricopa County Home and Garden Show	10 am-6 pm Fri, Sat, 10-5 pm Sun, University of Phoenix Stadium, 1 Cardinals Drive, Glendale. Info/Discount Ticket
Fri 4	Desert Designers Meeting	10 am-noon, Pyle Adult Center, 655 E. Southern, Tempe. Wanda Collins or (480) 882-2569.
Sat 5	Arizona Herb Association Weed and Feed	8 am, Maricopa County Cooperative Extension, 4341 E. Broadway Rd., Phoenix. Everyone is welcome! Fun, hands-on experience. Carolyn Hills, AZ Herb Assoc
Sat 5, Sun 6	Tres Rios Nature and Earth Festival	9 am-4 pm, Estrella Mountain Regional Park, 14805 W. Vineyard Ave., Goodyear. Celebrate the ecology, history, and wildlife of the Gila, Salt, and Agua Fria Rivers. Free. Info
Sat 5	Irrigation Maintenance, Troubleshooting, Repair	9:30 am-noon, Scottsdale Xeriscape Garden, 5601 N. Hayden Rd., Scottsdale. Free to Scottsdale residents. Info/Register . Two volunteers needed, contact Robyn Baker (480) 312-5651.
Sat 5	Master Gardener Q&A Session	10 am-2 pm, Northwest Regional Library located in the Surprise Recreation Complex, 16089 N. Bullard Ave, Surprise, AZ. Marianna Hancin. Bring plant or pest samples for ID and advice.
Sat 5	Bonsai of Scottsdale Meeting	1:30 pm, Granite Reef Senior Center, Rm 6, 1700 N. Granite Reef Rd, Scottsdale. Pat Mitchell (480) 575-5649. Info
Sun 6	Salvia	1-4 pm, Desert Botanical Garden , \$30 mem/\$38 non-mem. Info/Register

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Sun 6	Plants of the Bible Guided Tour	1:30 pm, Boyce Thompson Arboretum , 37615 U.S. Highway 60, Superior, AZ. Learn about botany, history, and scripture on this slow-paced walk. Info
Mon 7	Desert Pointe Garden Club Meeting	9 am-noon, Ahwatukee home. Contact for address: Judy Tolbert (480) 961-1768, Desert Pointe Garden Club
Mon 7	Ask a Master Gardener	10 am-noon, Sun City Library, Bell Branch, 16828 N. 99th Ave, Sun City. Bring plant or pest samples for ID and advice. Cherie Czaplicki or Antje Schneider
Mon 7	Scottsdale Garden Club Meeting	11:30 am, RSVP for luncheon to Karen Kelley (602) 942-4848, Scottsdale Garden Club Cottonwoods Resort, 6160 N. Scottsdale Rd., Scottsdale. RSVP for luncheon to Judy at (480) 964-4789.
Mon 7	Valley of the Sun Gardeners Meeting	6:30 pm, Valley Garden Center, 1809 N. 15 th Ave, Phoenix. Orvalita Hopkins , Valley of the Sun Gardeners
Mon 7	Orchid Society of AZ Meeting	7-9 pm, Arizona State Veteran Home, 4141 Herrera Way, Phoenix. Julie Rathbun (602) 843-0223. Orchid Society of Arizona
Tue 8	Desert Sun African Violet Society Meeting	10 am, for location contact: Ann Stoetzer (623) 872-9020. Desert Sun African Violet Society
Tue 8	Master Gardener Training Class	10:30 am-1:30 pm, Glendale Public Library-Foothills Branch, 19055 N. 57th Ave, Glendale. Topic: Turf Management with Sharon Dewey
Tue 8	Tuesday in the Garden	2 pm-dusk, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring gloves and tools that you like to help with maintenance in the demo garden. Pam Perry (602) 279-6250
Tue 8	Phoenix Permaculture: Starting a Community Garden	6-8 pm, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. \$15 donation. Info/Register
Tue 8	Arizona Native Plant Society Meeting	7-9 pm, Webster Auditorium at Desert Botanical Garden . Arizona Native Plant Society , Mike Plagens (602) 459-5224
Tue 8	West Valley Rose Society Meeting	7 pm, Landscape Mart, 8028 W. Thunderbird Rd, Peoria, AZ Heidi Leavitt (602) 971-0179, West Valley Rose Society

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Tue 8	Phoenix Bonsai Society Meeting	7:30 pm, Valley Garden Center, 1809 N. 15 th Ave, Phoenix. Elsie Andrade (602) 995-3870. Phoenix Bonsai Society
Wed 9	New River Gourd Patch Meeting	8:30 am-1 pm, Pioneer RV Park, 36408 N. Black Canyon Hwy, Phoenix. Karen Friend
Wed 9	Master Gardener Update	9 am-noon, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Topic: ASU Arboretum & Gardens. Deb Sparrow
Wed 9	Saguaro Garden Club Meeting	9:30 am, Pyle Adult Center, 655 E. Southern, Tempe. Mary Trick at (480) 829-7972.
Wed 9	RGRP Meeting	12:15-2:15 pm, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Marlies
Wed 9, 23, and Apr 6	Landscape Design Basics	6-9 pm, Desert Botanical Garden , \$75 mem/\$95 non-mem. Info/Register
Wed 9	Plant Selection: Right Plant, Right Place	6-8:30 pm, Granite Reef Senior Center, 1700 N. Granite Reef Rd., Scottsdale. Free to Scottsdale residents. Info/Register
Wed 9	Scottsdale Rose Society Meeting	7:30 pm, Eldorado Community Center, 2311 N. Miller Road, Scottsdale. Michael Levitt (480) 206-3806
Thu 10	Tolleson Gourd Patch Meeting	2:00-4:30 pm, Tolleson Senior Center, 9555 W. VanBuren, Tolleson, AZ. Lana Hinde (602) 843-9015
Thu 10	Spirit of the Desert Gourd Patch Meeting	4:30-6:30 pm, Sewing Room at the Sun Lakes Oakwood Arts & Crafts Center, 24201 S. Oakwood Blvd, Sun Lakes, AZ. Sally Kiste (480) 895-7638, Spirit of the Desert
Thu 10	Vegetable Gardening	5:30-7:30 pm, Peoria Development & Community Services Bldg, Point of View Room,, 9875 N. 85 th Ave., Peoria. Free. Info/Register
Thu 10	Maximize Your Irrigation	6:30-9 pm, Gilbert Public Works, 900 E. Juniper Ave., Gilbert. Free. Info/Register
Thu 10	Mesa East Valley Rose Society Meeting	7-10 pm, Mesa Community College Library, 1833 W. Southern Ave, Mesa. (480) 807-3475. Mesa East Valley Rose Society
Thu 10	AZ Rare Fruit Growers Meeting	7:30 pm, Palo Verde Room at Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. AZ Rare Fruit , Monte Palmer (480) 688-2087

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Fri 11	Main Office Diagnostic Clinic	8 am, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring plant or pest samples for ID and advice.
Fri 11, 12 through 27	Boyce Thompson Spring Plant Sale	8 am-4 pm, Fri 11 for members only, Sat 12-27 open to the public. Boyce Thompson Arboretum , 37615 U.S. Highway 60, Superior, AZ. Info
Fri 11	Washington Garden Club Meeting	9:30 am, Valley Garden Center, 1809 N. 15 th Ave, Phoenix. Orvalita Hopkins , Washington Garden Club
Fri 11	Old Town Garden Club Meeting	10 am, Harper's Nursery, 2529 Hayden Road, Scottsdale. Jen Donovan
Sat 12	Carraro Cactus Gardens Volunteer	8-11 am, Carraro Cactus Gardens at Tovrea Castle, 5041 E. Van Buren St, Phoenix. Info/Sign up
Sat 12	Phoenix Pond Society Meeting	9 am, Member home. Contact for address: Dave Nelson (480) 357-7205. Phoenix Pond Society
Sat 12	Wildflower Walk	9-11 am, Desert Botanical Garden , \$20 mem/\$25 non-mem. Info/Register
Sat 12	Real Gardens for Real People Tour	9 am- 4 pm, Surprise, Sun City West, Peoria, Glendale area. Info
Sat 12	Sunrise Garden Club Meeting	9:30 am, Member home in Tempe. Contact for address: Julie at (480) 838-2414.
Sat 12	Maximize Landscape Watering Efficiency	9:30 am-noon, Granite Reef Senior Center, 1700 N. Granite Reef Rd., Scottsdale. Free to Scottsdale residents. Info/Register
Sat 12	Vegetables, Tomatoes, Herbs	10-11 am, Gardener's World , 3401 E. Baseline Rd., Phoenix, Reservations at (602) 437-0700
Sat 12	Irrigation Principles (Drip, T-tape, Flood)	11:30-12:30 pm, Gardener's World , 3401 E. Baseline Rd., Phoenix, Reservations at (602) 437-0700
Sat 12	Wildflower Hand Tied Bouquets	1-4 pm, Desert Botanical Garden , \$60 mem/\$75 non-mem. Info/Register
Sat 12	Edible/Medicinal Desert Plant Guided Walk	1:30 pm, Boyce Thompson Arboretum , 37615 U.S. Highway 60, Superior, AZ. Learn about native desert plants have fed, clothed, and healed indigenous peoples for a millennia. Info
Sun 13	Plant Sale Preview Walk	1-3:30 pm, Desert Botanical Garden , \$20 mem/\$25 non-mem. Info/Register

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Sun 13	Pruning Trees and Shrubs	1-4 pm, <u>Desert Botanical Garden</u> , \$30 mem/\$38 non-mem. <u>Info/Register</u>
Sun 13	Phoenix Permaculture: Citrus Gleaning	1-4 pm, pick oranges from a private residence in Old Downtown Scottsdale for donation to the food bank. <u>Info/RSVP</u>
Sun 13	Raving About Rosemary	2-4 pm, <u>Desert Botanical Garden</u> , \$45 mem/\$56 non-mem. <u>Info/Register</u>
Mon 14	Carraro Cactus Gardens Volunteer	8-11 am, Carraro Cactus Gardens at Tovrea Castle, 5041 E. Van Buren St, Phoenix. <u>Info/Sign up</u>
Mon 14	Phoenix Permaculture: Citrus Gleaning	1-4 pm, pick oranges from a private residence in Tempe ASU area for donation to those in need. <u>Info/RSVP</u>
Tue 15	Master Gardener Training Class	10:30 am-1:30 pm, Glendale Main Library, 5959 W. Brown, Glendale. Topic: Watering by the Numbers with Jo Miller.
Tue 15	Volunteer at the Glendale Xeriscape Demonstration Garden	1:30-4:30 pm, Garden located at the Glendale Main Library, 5959 W. Brown St., Glendale. Wear sun protective clothing, sunglasses, close-toed shoes. Bring water bottle. Gloves, tools, orange safety vests, and refreshments provided. RSVP to <u>Joanne Toms</u> (623) 930-3535.
Tue 15	Tuesday in the Garden	2 pm-dusk, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring gloves and tools that you like to help with maintenance in the demo garden. <u>Pam Perry</u> (602) 279-6250.
Tue 15	Down to Earth Toastmasters	6-7:15 pm, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. <u>Olivette Aviso</u> (480) 235-5989, <u>Down to Earth Toastmasters</u>.
Tue 15	Pruning and Maintaining Your Landscape	6:30-8:45 pm, Chandler Senior Center, 202 E. Boston St., Chandler. Free to Chandler utility customers. <u>Info/Register</u>
Tue 15	Phoenix Bonsai Society Meeting	7:30 pm, Valley Garden Center, 1809 N. 15 th Ave, Phoenix. Elsie Andrade (602) 995-3870. <u>Phoenix Bonsai Society</u>
Tue 15	Phoenix Rose Society Meeting	7:30 pm, Valley Garden Center, 1809 N. 15 th Ave, Phoenix. <u>Phoenix Rose Society</u> , <u>Jeannie Cochell</u> (602) 363-6444

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Wed 16	Gourd Art Class	10 am-2 pm, Boyce Thompson Arboretum , 37615 U.S. Highway 60, Superior, AZ. \$30mem/\$37.50 non-mem. Info/Register
Wed 16	Southwest Gourd Society Meeting	7-9 pm, Maricopa County Cooperative Extension, 4341 E. Broadway Rd., Phoenix. Lana Hinde (602) 843-9015, SW Gourd
Thu 17	NW Valley Gourd Patch Meeting	3:30-5:30 pm, Nadaburg School, 21419 W. Dove Valley Rd in Wittmann, AZ. Judy Moody (623) 544-6866, NW Valley Gourd Patch
Thu 17	Desert Valley Orchid Society Meeting	6:30 pm, Scottsdale Senior Center, 10440 E. Via Linda, Scottsdale. Steve Grass (602) 508-1808, Desert Valley Orchid Society
Fri 18, 19, 20	Desert Botanical Garden Spring Plant Sale	7 am-5 pm Fri, Sat, and 9 am-5 pm Sun. Fri is members only. Desert Botanical Garden
Fri 18	Main Office Diagnostic Clinic	8 am, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring plant or pest samples for ID and advice.
Fri 18	Carraro Cactus Gardens Volunteer	8-11 am, Carraro Cactus Gardens at Tovrea Castle, 5041 E. Van Buren St, Phoenix. Info/Sign up
Fri 18	Usery Park Wildflower Walk	8 am-noon, Desert Botanical Garden outing, \$30 mem/\$38 non-mem. Info/Register
Fri 18	Tempe Garden Club Meeting	9:30-11:30 am, Pyle Adult Center, 655 E. Southern Ave, Tempe. Josephine Vincze , Tempe Garden Club
Sat 19	Mesa East Valley Rose Society Deadheaders	8:30 am, Mesa Community College Rose Garden, 1833 W. Southern Ave, Mesa. Bring gloves and pruners/shears. Training provided. Mickey Kundrat, Deadheaders
Sat 19	Container Gardening	10 am-noon, Surprise Public Safety Bldg Auditorium, 14250 N. Statler Plaza, Surprise. Free. Info/Register
Sat 19	Desert Sun African Violet Society Meeting	10 am, for location contact: Ann Stoetzer (623) 872-9020. Desert Sun African Violet Society
Sat 19	Ask a Master Gardener	10:30-1:30 pm, Civic Center Library, 11350 W. Civic Center Drive, Avondale. Bring plant or pest samples for ID and advice. George Salamunec
Sat 19	Bonsai of Scottsdale Meeting	1:30 pm, Granite Reef Senior Center, Rm 6, 1700 N. Granite Reef Rd, Scottsdale. Pat Mitchell (480) 575-5649. Info

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Sat 19	Plants of the Bible Guided Tour	1:30 pm, Boyce Thompson Arboretum , 37615 U.S. Highway 60, Superior, AZ. Learn about botany, history, and scripture on this slow-paced walk. Info
Sat 19	Echoes of Eden: The Garden as Refuge	2 pm, Phoenix Art Museum , 1625 N. Central Ave, Phoenix. Lecture included with admission. Info
Sun 20	Phoenix Permaculture: Citrus Gleaning	1-4 pm, pick oranges from a private residence in South Tempe for donation to the food bank. Info/RSVP
Sun 20	Tree Tour	1:30 pm, Boyce Thompson Arboretum , 37615 U.S. Highway 60, Superior, AZ. Terry Mikel will take you on a tour of the trees at the arboretum. Info
Sun 20	Phoenix Chrysanthemum Society Meeting	2-4:30 pm, member home. Contact for address: George Chi (480) 248-7685. Phoenix Chrysanthemum
Tue 22	Master Gardener Training Class	10:30 am-1:30 pm, Glendale Public Library-Foothills Branch, 19055 N. 57th Ave, Glendale. Topic: Composting and Container Gardening with Pam Perry/Cherie Czaplicki
Tue 22	Tuesday in the Garden	2 pm-dusk, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring gloves and tools that you like to help with maintenance in the demo garden. Pam Perry (602) 279-6250.
Tue 22 and 29	Propagating and Cultivating Herbs	6-9 pm, Desert Botanical Garden , \$60 mem/\$75 non-mem. Info/Register
Tue 22, 29, and Apr 5	Smart Landscaping I,II, and III	6:30-8:45 pm, Chandler Senior Center, 202 E. Boston St., Chandler. Free to Chandler utility customers. Info/Register
Wed 23	Landscape Makeover	6-8:30 pm, Granite Reef Senior Center, 1700 N. Granite Reef Rd., Scottsdale. Free to Scottsdale residents. Info/Register
Wed 23	Cooking With Saguaro Seeds	6:30-8:30 pm, Desert Botanical Garden , \$45 mem/\$56 non-mem. Info/Register
Wed 23, 30, and Apr 6, 13	Beginning Floral Arrangement	6:30-8:30 pm, Desert Botanical Garden , \$200 mem/\$250 non-mem. Info/Register

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Thu 24	Edible Plants for Desert Gardens	5:30-7 pm, Scottsdale Civic Center Library, Copper Gallery, 3839 N. Drinkwater Blvd, Scottsdale. Mary Irish will present and sign books which are available for purchase. \$10 donation at door, \$5 at door for Friends of Scottsdale Library, proceeds benefit the library. Beverages and snacks provided. Reserve at Suzanne (480) 289-5761
Thu 24	Low Desert Herb Gardening	5:30-7:30 pm, Peoria Development & Community Services Bldg, Point of View Room,, 9875 N. 85 th Ave., Peoria. Free. Info/Register
Fri 25	Main Office Diagnostic Clinic	8 am, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring plant or pest samples for ID and advice.
Fri 25	Volunteer at the Glendale Xeriscape Demonstration Garden	1:30-4:30 pm, Garden located at the Glendale Main Library, 5959 W. Brown St., Glendale. Wear sun protective clothing, sunglasses, closed-toed shoes. Bring water bottle. Gloves, tools, orange safety vests, and refreshments provided. RSVP to Joanne Toms (623) 930-3535.
Sat 26	Design Charrette	9 am-noon, Charrette at a Queen Creek home. Reserve at Beth or (480) 275-4833.
Sat 26	Desert Garden Institute: Landscape Design	9 am- noon, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Free to Master Gardeners/ \$25 for the public. Info/Register
Sat 26	DBG Volunteer Orientation Class	9 am-1 pm, Desert Botanical Garden . Info: Nancy White (480) 481-8197
Sat 26	Concepts of Landscape Design	10-11 am, Gardener's World , 3401 E. Baseline Rd., Phoenix, Reservations at (602) 437-0700
Sat 26	Landscape Maintenance Practices for Homeowners	11:30-12:30 pm, Gardener's World , 3401 E. Baseline Rd., Phoenix, Reservations at (602) 437-0700
Sat 26	Glendale Green Festival	Noon-4 pm, Glendale Main Library and Xeriscape Demonstration Garden, 5959 W. Brown St., Glendale. Info
Sun 27	Edible/Medicinal Desert Plant Guided Walk	1:30 pm, Boyce Thompson Arboretum , 37615 U.S. Highway 60, Superior, AZ. Learn about native desert plants have fed, clothed, and healed indigenous peoples for a millennia. Info

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Sun 27	Central Arizona Cactus and Succulent Society Meeting	2 pm, Dorrance Hall at Desert Botanical Garden . Central Arizona Cactus and Succulent Society . Judy Braun-Brody (480) 481-8129
Sun 27	A Taste of the Sonoran Desert	2-5 pm, Desert Botanical Garden , \$25 mem/\$32 non-mem. Info/Register
Mon 28, 30, Apr 3	Native Plants-The Elegant Solution	6-9 pm Mon, Wed, 1-4 pm Sun, Desert Botanical Garden , \$75 mem/\$95 non-mem. Info/Register
Tue 29	Master Gardener Training Class	10:30 am-1:30 pm, Glendale Public Library-Foothills Branch, 19055 N. 57th Ave, Glendale. Topic: Entomology 101 with Stacey Bealmear
Tue 29	Tuesday in the Garden	2 pm-dusk, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Bring gloves and tools that you like to help with maintenance in the demo garden. Pam Perry (602) 279-6250.
Thu 31	Landscape Container Gardening	5:30-7:30 pm, Peoria Development & Community Services Bldg, Point of View Room,, 9875 N. 85 th Ave., Peoria. Free. Info/Register
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Fri 1,2	Growing Communities-One Garden at a Time	At Rio Salado College, 2323 W. 14 th St., Tempe. Conference sponsored by Southwest Regional ACGA. Cost is \$165 for ACGA mem/\$195 for non-mem. Info/Register
Fri 1,2,3	Central AZ Cactus and Succulent Society Show and Sale	9 am-5pm on Fri, Sat, 9 am-4 pm on Sun., Desert Botanical Garden , Dorrance Hall. Central Arizona Cactus and Succulent Society
Fri 1	Japanese Friendship Garden Tour and Tea Ceremony	9:30-12:30 pm, Desert Botanical Garden , \$40 mem/\$50 non-mem. Info/Register
Sat 2	Urban Farm Tour	7:30 am-2 pm, Desert Botanical Garden , \$45 mem/\$56 non-mem. Info/Register

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Sun 3	Phoenix Home and Garden Magazine's Grand Tour of Gardens	10 am-4 pm, self-guided tour of 6 residential landscapes in Scottsdale and Phoenix. \$45/person with a portion of proceeds benefiting the Desert Botanical Gardens. Tickets available by filling out form in current issue of magazine or call Karen (480) 664-3960, Ext. 132. by March 23. Tickets/tour book/maps will be mailed to you.
Mon 4-8	Greenhouse Short Course	Course on greenhouse crop production and engineering design at Westward Look Resort, Tucson. \$499. <u>Connie Hackathorn</u> (520) 626-9566. Info/Register
Mon 4	Eat Local, Eat Fresh, Eat Well	6-8 pm, <u>Desert Botanical Garden</u> , \$45 mem/\$56 non-mem. Info/Register
Tue 5	Master Gardener Training Class	10:30 am-1:30 pm, Glendale Public Library-Foothills Branch, 19055 N. 57th Ave, Glendale. Topic: Plant Propagation with Terry Mikel
Wed 6	Spring Turf Grass Seminar	9 am-noon, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. \$25. Register by April 1. Info/Register
Thu 7	Vines and Groundcovers for Desert Landscapes	5:30-7:30 pm, Peoria Development & Community Services Bldg, Point of View Room,, 9875 N. 85 th Ave., Peoria. Free. Info/Register
Fri 8	Boyce Thompson Arboretum Tour	7 am-noon, <u>Desert Botanical Garden</u> , \$40 mem/\$50 non-mem. Info/Register
Sat 9	Tree Talk and Walk	9-11 am, <u>Desert Botanical Garden</u> , \$20 mem/\$25 non-mem. Info/Register
Sat 9	Xeriscape: Desert Fusion Garden Lecture/Walking Tour	9-11 am, Peoria City Hall, Pine room, 8401 W. Monroe St, Peoria. Free. Info/Register
Sat 9	Desert Garden Institute: Container Gardening	9 am- noon, Maricopa County Cooperative Extension, 4341 E. Broadway, Phoenix. Free to Master Gardeners/ \$25 for the public. Info/Register
Sat 9	Watering and Controller Programming	9 am-noon, <u>Desert Botanical Garden</u> , \$30 mem/\$38 non-mem. Info/Register
Sat 9	Landscape Design and Installation	9 am-1 pm, South Tempe Police Substation Auditorium, 8201 S. Hardy Drive, Tempe. Free. Info/Register

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Sat 9, 10	Desert Valley Orchid Society Show and Workshop	9 am-4 pm Sat, 10 am-4 pm Sun, Baker Nursery, 3414 N. 40 th St, Phoenix. Free. There will be workshops, plant sales, and orchid judging. <u>Desert Valley Orchid Society</u> , Sandra Walters (602) 404-6008.
Sat 9	Discover the Junque Garden	10 am-noon, <u>Desert Botanical Garden</u> , \$20 mem/\$25 non-mem. <u>Info/Register</u>
Sat 9	Introduction to Home Aquaponics	10 am-3 pm, <u>Desert Botanical Garden</u> , \$175 mem/\$212 non-mem. <u>Info/Register</u>
Sat 9	Herb Festival	11 am-3 pm, <u>Boyce Thompson Arboretum</u> , 37615 U.S. Highway 60, Superior, AZ. <u>Info</u>

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