

COOPERATIVE EXTENSION MARICOPA COUNTY

JOURNAL



HORTICULTURAL NEWS & RESEARCH • JANUARY/FEBRUARY 2005



THE UNIVERSITY OF
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COLLEGE OF AGRICULTURE
AND LIFE SCIENCES



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Maricopa County Master Gardeners: Cultivating Plants, People & Communities since 1980 Master Gardener volunteers are trained by University of Arizona faculty and staff during a 17-week course. They provide educational leadership to the community with research-based horticulture knowledge. Volunteers promote efficient use of water, fertilizers, and pesticides, and preservation of our desert environment.

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Northwest Valley Satellite location: Property Owners & Residents Association (PORA) Office
13815 Camino del Sol Blvd., Sun City West, AZ 85375. Phone 623-546-1672. Hours: 9 a.m.-1 p.m. Monday-Friday.

East Valley Satellite location: East Mesa Multigenerational Center

7550 E. Adobe Rd., Mesa, AZ 85207. Phone 480-985-0338. Hours: 9 a.m.-noon, Mondays and Thursdays.

Northeast Valley Satellite location: Via Linda Senior Center

10440 E. Via Linda, Scottsdale, AZ 85258. Phone 480-312-5810. Hours: 9 a.m.-4 p.m., Tuesdays and Thursdays.


Urban Horticulture Staff:

Lucy K. Bradley, Extension Agent, 602-470-8086 Ext.323, bradleyl@cals.arizona.edu

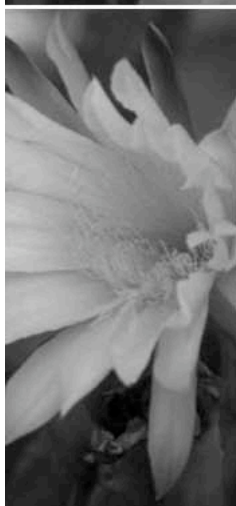
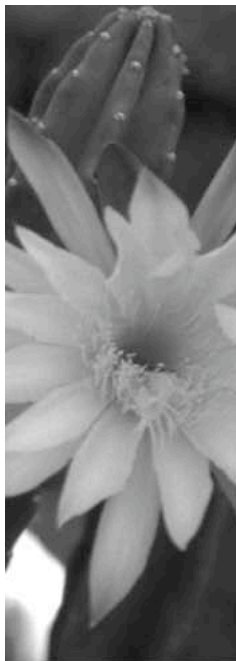
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Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, at all events sponsored by the University of Arizona. Call 602/470-8086. Requests should be made as early as possible to allow time to arrange the accommodation.

Cover Photos: (clockwise from top left): *Vauquelinia californica*, Mountain States Wholesale Nursery; Desert vignette, Jo Cook; *Guaiaecum coulteri*, Mountain States Wholesale Nursery; *Ericameria larsifolia*, Mountain States Wholesale Nursery.



Lucy Bradley, Extension Agent, Urban Horticulture



Calendar Of Events

by Debora Moritz, Master Gardener

January 2004

Garden Tours Daily beginning 1/2 8:00 am - 8:00 pm Walk through the Garden at your own pace and visit docents on the trails and at designated "Sensation Stations" to learn about the secrets and wonders of our Sonoran desert. Hands-on demonstrations by knowledgeable volunteers will reveal the remarkable adaptations of plants, animals, and people living in the desert. Desert Botanical Gardens. (480) 941-1225 www.dbg.org

1/8, 1/15, 1/22, 1/29 1:00 pm Join docent "Cactus Jack" and walk "back through time" when desert dwellers had to live off the land utilizing native plants for food, tools, and building materials. The tour concludes with sampling some of the desert's delectable foods. Desert Botanical Gardens (480) 941-1225 www.dbg.org



1/8 Vegetable Gardening Workshop 8 am-12:00 noon Get a head start on planning your spring vegetable garden with this informative workshop taught by DBG horticulturist, Kirti Mathura. Learn about soil preparation, planting seasons and strategies, and great places to purchase seeds. Take advantage of this opportunity to get your garden growing right in the desert. Limit 30. #WI04-500 Desert Botanical Gardens Requires Advance Registration Member: \$48 / Non-Member: \$60 (480) 941-1225 www.dbg.org

1/8 The Herbal Harvest: Tips from the Professionals on Harvesting Preserving and Cooking with Herbs 9:00 am – 12:00 noon Arizona Herb Association sponsors this public workshop with experts Madalene Hill and Gwen Barclay. The authors will also sign their book and lead a tour of the herbal demonstration garden. Registration required. Send check payable to Arizona Herb Association, P.O. Box 63101, Phoenix, AZ 85082-3101. Price \$15 Non-members, Members free. Location: 4341 E. Broadway Road, Phoenix. Contact Cathy Cromell at ccromell@ag.arizona.edu. (602) 470-8086 ext. 830. Website www.azherb.org

1/8 Cacti and Succulents for Southwestern Gardens 9:00 am-12:00 noon Desert Botanical Gardens in partnership with City of Phoenix Water Conservation Office (602) 261-8367 Workshop #WI04-08 Requires Advance Registration \$10 (480) 941-1225 www.dbg.org

1/10 – 4/1 Sammy's Seedlings Preschool 9:30 - 11:00 am Nature is the teacher in this program taught just for preschoolers, led by our enthusiastic and knowledgeable Garden educators. 'Desert Discovery Hikes', age-appropriate activities, stories, musical lessons and puppet shows bring the desert to life for you and your preschooler. Each week is full of new surprises, songs to sing, and friends to make. Sessions are limited to 15 children, ages 3-5 (with an accompanying adult). Come join us. Call 480-941-1225 to register, or 480-481-8123 for more information. Desert Botanical Gardens Members: \$60 for 12 class sessions (\$40 for each additional sibling) Non-members: \$75 for 12 class sessions (\$50 for each additional sibling) Choose one day per week, for 12-week semester

1/11 The Dirt on Compost

6:00 - 8:30 pm Compost is the "black gold" essential to successful gardening with many herbs and vegetables. Discover how easy it is to produce your own magical soil amendment and save space in our landfills. DBG horticulturist, Kirti Mathura, will share all the composting basics. Limit 30. Desert Botanical Gardens Workshop #WI04-501 Requires Advance Registration Members: \$30 / Non-Members: \$38 (480) 941-1225 www.dbg.org

1/13 The Arizona Trail

9:00 am-12:00 noon Join Wendy Hodgson, the Garden's Director of Herbarium, as she reports on the exciting progress made on the Arizona Trail Project. Wendy is working to complete the flora of the trail areas and will share her stories and findings on this large-scale endeavor. As this historic trail travels north, research discoveries and adventures abound. Limit 30. Desert Botanical Gardens Workshop #WI04-502 Requires Advance Registration Members: \$24 / Non-Members: \$30 (480) 941-1225 www.dbg.org

1/18 Contain Your Herbs

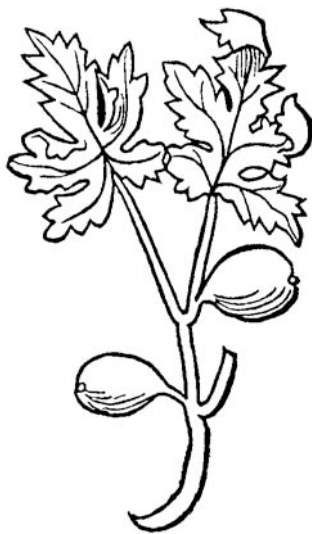
6:00 - 9:00 pm Would you love to have an herb garden, but don't have the space? Maybe you would like to add some herbal accents to a patio? A variety of herbs do well in containers in our desert environment. DBG horticulturist, Kirti Mathura, will share some fun ideas to get you going. Limit 30. Desert Botanical Gardens Workshop #WI04-503. Requires Advance Registration Members: \$36 / Non-Members: \$45 (480) 941-1225 www.dbg.org

1/19 Seasonal Color Combinations for Your Landscape

6:30 -8:30 pm Desert Botanical Gardens in partnership with City of Phoenix Water Conservation Office (602) 261-8367 Workshop #WI04-20 Requires Advance Registration \$10 (480) 941-1225 www.dbg.org

1/20 Landscape Plants for Shade, Color, and Wildlife

6:30 - 9:00 pm City of Mesa Landscape Workshop. Utilities Department Building - Community Room, 640 North Mesa Drive. Free, but advance registration is required. Call (480) 644-4400, or e-mail your name, address, phone number and workshop name to conservation.info@cityofmesa.org. Additional info, call (480) 644-3334



1/22 Master Gardener East Valley Citrus Clinic

8:30 am - 12:00 noon 2558 East Lehi Rd., Mesa, AZ 85213-9711, Maricopa County. Topics: citrus pests, disease, fertilization, irrigation, pruning, tasting and more. Contact Travis Tonzi - tatonzi@cox.net, (480) 837-5888 Registration required. \$5 in advance, \$8 at the door.

1/22 Herbal Entertaining 1:00 - 4:00 pm Herbs are one of the most versatile plants we use every day as food, seasoning, decoration, and even art. Kay Benson leads this interactive workshop on how to grow, care for, and utilize common herbs for entertaining. Use herbs such as basil, tarragon, lemongrass, and rosemary for decorating and creating fun foods, crafts, and more. Limit 15. Desert Botanical Gardens Workshop #WI04-25 Requires Advance Registration Members: \$18 / Non-Members: \$22 (480) 941-1225 www.dbg.org

1/22 Australia Day

9:00 am - 12:00 noon Paul Chambers, of Australian Outback Nursery in Tonopah, AZ, one of Arizona's best-known authorities on eucalyptus and other species, will lead an 11 a.m. tour through the Arboretum. Boyce Thompson Arboretum (520) 689-5248 <http://Arboretum.ag.Arizona.edu/>

1/29 Propagation/Seed Starting

9:00 am 12:00 noon Desert Garden Institute workshop taught by Master Gardener, Pam Perry. Learn how to propagate and properly start seeds. Bring your own seeds from home or we will provide some for you. Price: \$20. Registration required. Location: 4341 E. Broadway Road, Phoenix, AZ 85040, Maricopa County, Contact: Ainsley LaCour at dmauldin@cals.arizona.edu, (602) 470-8086.

February 2005

1/29 Master Gardener North West Valley Citrus Clinic
8:30 am – 12:00 noon Citrus Agricultural Center, Waddell, AZ, Maricopa County. Topics: citrus pests, disease, fertilization, irrigation, pruning, tasting and more. Tickets \$5 advance sale, \$8 at gate. Contact: Sam Pryfogle at Ravensdad@cox.net, (623) 907-8250

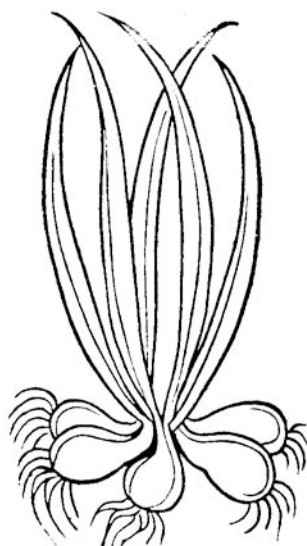
1/29 Artistic Pruning of Desert Trees 9:00 am-12:00 noon Have you seen some of the pruning done to our desert trees? Scott McMahon, tree horticulturist and certified arborist will teach and demonstrate the correct pruning techniques that will enhance the appearance and health of your desert trees. Limit 30. Desert Botanical Gardens Workshop #WI04-504 Requires Advance Registration Members: \$36 / Non-Members: \$60 (480) 941-1225 www.dbg.org

1/29 Agaves for Arizona Gardens 9:00 am – 12:00 noon Desert Botanical Gardens, in partnership with City of Phoenix Water Conservation Office (602) 261-8367 Workshop #WI04-30 Requires Advance Registration \$10 (480) 941-1225 www.dbg.org

1/30 Drip Irrigation
1:00 – 4:00 pm Experienced Master Gardener and DBG's own "Cactus Jack" Blake will give an introduction to drip irrigation. He will cover basic facts of botany, soils, and prepare you to install low water use, efficient drip systems for your desert landscapes. He will introduce drip irrigation equipment and get you started on your new system. Limit 30. Desert Botanical Gardens Workshop #WI04-505 Requires Advance Registration Members: \$36 / Non-Members: \$60 (480) 941-1225 www.dbg.org

Garden Tours Daily beginning 2/1 8:00 am – 8:00 pm Walk through the Garden at your own pace and visit docents on the trails and at designated "Sensation Stations" to learn about the secrets and wonders of our Sonoran desert. Hands-on demonstrations by knowledgeable volunteers will reveal the remarkable adaptations of plants, animals, and people living in the desert. Desert Botanical Gardens (480) 941-1225 www.dbg.org

2/5, 2/12, 2/19, 2/26 1 pm Join docent "Cactus Jack" and walk "back through time" when desert dwellers had to live off the land utilizing native plants for food, tools, and building materials. The tour concludes with sampling some of the desert's delectable foods Desert Botanical Gardens (480) 941-1225 www.dbg.org



Scallion

2/9 Attracting Butterflies and Hummingbirds to Desert Gardens 6:30 pm - 8:30 pm Desert Botanical Gardens, in partnership with City of Phoenix Water Conservation Office (602) 261-8367 Workshop #WI04-36 Requires Advance Registration \$10 (480) 941-1225 www.dbg.org

2/12 Project WET – Teacher Training Workshop
8:00 am - 4:30 pm Project WET (Water Education for Teachers) is all about WATER and the ways you can teach related concepts in the classroom. You will learn and take part in activities that emphasize water conservation. All participants receive the Project WET textbook and activity guide, along with other great take-away materials. Teachers will receive a certificate for 8 hours of continuing education upon completion. Limit 25. Desert Botanical Gardens Workshop #WI04-40 Requires Advance Registration Members: \$8 / Non-Members: \$10 (480) 941-1225 www.dbg.org

2/16 Landscape Plants of Baja California 6:30 pm - 8:30 pm Desert Botanical Gardens in partnership with City of Phoenix Water Conservation Office (602) 261-8367 Workshop #WI04-46 Requires Advance Registration \$10 (480) 941-1225 www.dbg.org

2/19 Rose Gardening for Spring
1:00 pm - 4:00 pm Desert Garden Institute workshop taught by Master Gardener, Marylou Coffman. Learn how to choose, plant and care for your roses. Price: \$20. Registration required. Location: 4341 E. Broadway Road, Phoenix, AZ 85040, Maricopa County. Contact: Ainsley LaCour at dmauldin@cals.arizona.edu, (602) 470-8086.

**2/23 Color Your World –
Landscaping for Color**

6:30 pm – 9:00 pm Does your landscape need a makeover? Perhaps just a tune up? This class will show you how to have fabulous color in your landscape year-round. Learn what to plant for an extended blooming season with plants that thrive here in the valley. You will learn money saving tips that will result in spectacular color in your landscape. Price: Free. Registration required. Restriction: None. Location: Southeast Regional Library in Gilbert, AZ on the southeast corner of Greenfield and Guadalupe Roads, Maricopa County. Subject: Landscape Plants. Contact: Lisa Hemphill at lisahem@ci.gilbert.az.us, (480) 503-6098. Website: <http://www.ci.gilbert.az.us/water>

2/24 Pests that Bug You

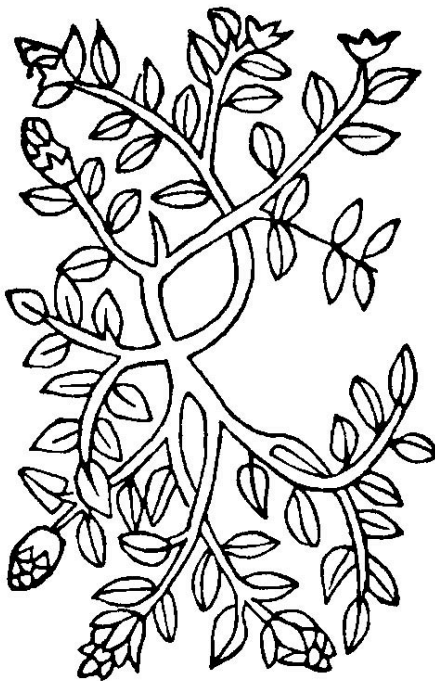
6:00 – 9:00 pm Our yards are full of interesting creatures, some good and some bad. Learn how to identify common insects that bother our desert landscape plants. “Cactus Jack” Blake, Master Gardener, will discuss ways to help you control these pests. Limit 30. Desert Botanical Gardens, Workshop #WI04-507 Requires Advance Registration Members: \$36 / Non-Member:s \$45 (480) 941-1225 www.dbg.org

2/26 Aloes for Arizona Gardens

9:00 am – 12:00 noon Desert Botanical Gardens in partnership with City of Phoenix Water Conservation Office (602) 261-8367 Workshop #WI04-56 Requires Advance Registration \$10 (480) 941-1225 www.dbg.org

2/28 Decorating with Butterflies

6:00 - 8:30 pm What could be more enchanting than butterflies fluttering through your garden? Discover the best plants for your landscape to attract exquisite adult butterflies, as well as those that allow them to complete their life cycle. DBG horticulturist, Kirti Mathura, will give you tips on specific plants and overall habitats suitable for decorating your garden with butterflies. Limit 30. Desert Botanical Gardens, Workshop #WI04-508 Requires Advance Registration Members: \$30 / Non-Members: \$38 (480) 941-1225 www.dbg.org



THINGS TO EXPECT & DO

From the Maricopa County Agriculture Extension web site:
<http://cals.arizona.edu/maricopa/garden/html/t-tips/t-tips.htm>

January

Turf

- Fertilize winter lawns monthly with ammonium nitrate, potassium nitrate or calcium nitrate. Follow instructions on package as needed to maintain good color (usually once every three weeks).
- Identify and correct problems with winter lawns quickly. Check our web site for more information: <http://ag.arizona.edu/maricopa/garden/html/t-tips/cultural/wntr-lwn.htm>

Vegetables

- Prepare garden soil for spring planting.
- Plant Seeds: Beets, bok choy, carrots, chard, collard greens, lettuce (head and leaf), leek, mustard, green onions, peas, potatoes, radishes, rutabagas, spinach and turnips.
- Plant Transplants: Artichokes (globe and Jerusalem), asparagus, broccoli, cabbage, Chinese cabbage, cauliflower, chard, kohlrabi, lettuce (head and leaf).

Roses

- Prune roses.
- Transplant bare root roses.

Fruit and Nut Trees

- Prune deciduous fruit trees and grapes. Attend pruning demonstrations hosted by Valley rose societies, garden clubs, nurseries and the Cooperative Extension.
- Transplant bare root deciduous fruit trees. Select varieties that require less than 400 hours of chilling.

Landscape Plants

- Protect plants from frost damage if the temperature is projected to drop down to the 20's for more than an hour.
- Prune nonnative deciduous shade trees. Attend pruning demonstrations presented by Valley rose societies, garden clubs, nurseries and the Cooperative Extension.
- Transplant bare root plants.
- Move living Christmas trees outside to a shaded, cool location until transplanted into permanent location.
- Water at least once a month, unless rains provide adequate moisture.
- Control weeds while they are young, tender, and their roots are manageable, or before they sprout. Be sure to remove before they set seed. Remove London Rocket and other weeds in the mustard family now to prevent large populations of False Chinch bugs in April.
- Winter watering schedules should be adjusted to about 1/3 of the summer frequency for deciduous and dormant plants, but water deeply each time. Winter lawns and growing flowers may require once to twice per week watering depending on the weather.

Herbs

Plant borage, catnip, chamomile, chives, cilantro/coriander, dill, fennel, feverfew, garlic chives, horehound, lavender, parsley, rosemary and thyme.

Don't List . . .

- DO NOT prune frost sensitive plants, especially if they have been damaged by frost.
- DO NOT over water or over fertilize winter lawns as this will encourage rapid succulent growth that is vulnerable to fungal diseases.
- DO NOT water turf at night when the temperatures are coolest as this fosters the growth of fungal diseases.



Continued on next page.

THINGS TO EXPECT & DO

From the Maricopa County Agriculture Extension web site:
<http://cals.arizona.edu/maricopa/garden/html/t-tips/t-tips.htm>

February

Turf

- Winter lawns may require once to twice per week watering, depending on the weather.
- Fertilize winter lawns monthly with ammonium nitrate, potassium nitrate or calcium nitrate.
- Identify and correct problems with winter lawns quickly. Check our web site for more information: <http://ag.arizona.edu/maricopa/garden/html/t-tips/cultural/wnt-r-lwn.htm>

Vegetables

- Prepare garden soil for spring planting.
- Plant Seeds: Beets, bok choy, carrots, chard, collard greens, corn, cucumbers, leaf lettuce, melons (cantaloupe, muskmelon, watermelon), mustard, green onions, peas, potatoes, radishes, spinach, summer squash, sunflowers and turnips.
- Plant Transplants: Artichokes (globe and Jerusalem), asparagus, chard, kohlrabi, lettuce, onion sets, peppers (bell, jalapeño) and tomatoes.

Roses


- Finish pruning roses by the middle of the month.
- Transplant bare root roses
- Begin fertilizing established roses with granular fertilizers about the middle of the month. Remember to water the day before application and the day after.

Fruit and Nut Trees

- Finish pruning deciduous fruit trees and grapes by the middle of the month.
- Transplant bare root deciduous fruit trees. Select varieties that require less than 400 hours of chilling.
- Fertilize deciduous fruit trees with nitrogen when they leaf out.
- Prune frost sensitive citrus after it begins to leaf out with new spring growth.

Landscape Plants

- Protect plants from frost damage if the temperature is projected to drop down to the 20's for more than an hour.
- Finish pruning nonnative deciduous shade trees, and grapes by the middle of the month.
- Transplant bare root plants
- Water at least once a month, unless rains provide adequate moisture.
- Control weeds while they are young, tender, and their roots are manageable, or before they sprout. Be sure to remove before they set seed. Remove London Rocket and other weeds in the mustard family now to prevent large populations of False Chinch bugs in April.
- Winter watering schedules should be adjusted to about 1/3 of the summer frequency for deciduous and dormant plants, but water deeply each time. Growing flowers may require once to twice per week watering depending on the weather.
- Prune frost sensitive plants like bougainvillea after they begin to leaf out with new spring growth.
- Make plans for Arbor Day.



*Gardening is the art
that uses flowers and plants as paint,
and the soil and sky as canvas.*

- Elizabeth Murray




Photo by Janice Austin.

Flowers

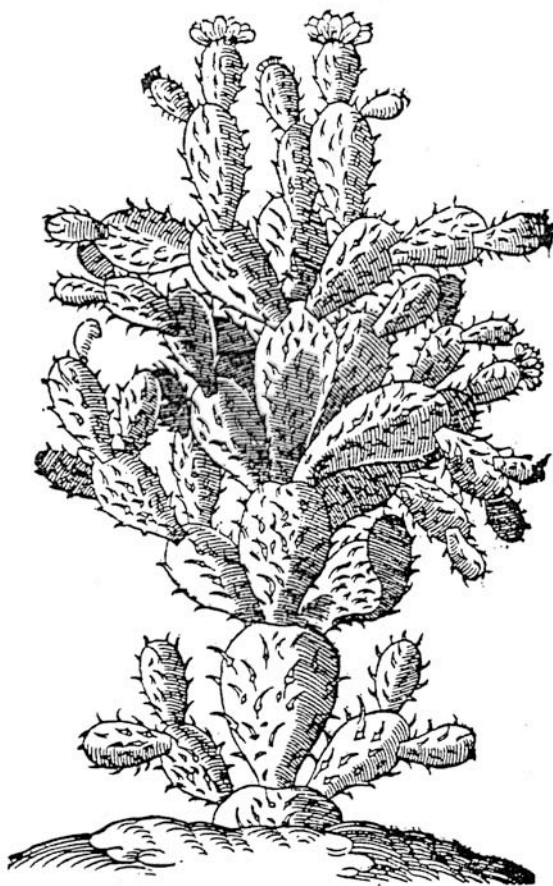
Plants seeds of Bee Balm (*Monarda* sp.), Black-eyed Susan (*Rudbeckia hirta*), Celosia (*Celosia* sp.), Cosmos (*Cosmos* sp.), Desert Marigold (*Baileya multiradiata*), English Daisy (*Bellis perennis*), Gilia (*Gilia* sp.), Firewheel/Indian Blanket (*Gaillardia*), Hollyhock (*Alcea* sp.), Marigold (*Tagetes* sp.), Mexican Hat (*Ratibida columnifera*), Mexican Sunflower (*Tithonia rotundifolia*), Portulaca (*Portulaca* sp.), Primrose (*Primula* sp.), Safflower, (*Carthamus tinctorius*), Sage (*salvia* sp.), Snapdragon (*Antirrhinum majus*), Sunflower (*Helianthus* sp.), Sweet Pea (*Lathyrus* sp.), Verbena (*Verbena* sp.), Wild Hyssop (*Agastache* sp.), Zinnia (*Zinnia* sp.)

Herbs

Plant Anise, Basil, Bay, Caraway, Catnip, Chamomile, Chives, Curry, Epazote, Fennel, Feverfew, French Tarragon, Garlic chives, Germander, Gorehound Gyssop, Lavender, Lemon Balm, Lemon Grass, Lemon Verbena, Marjoram, Mint, Oregano, Parsley, Rue, Safflower, Sage, Salad Burnet, Santolina, Savory (winter and summer), Scented Geraniums, Tansy, Thyme and Yarrow.

Don't List . . .

- DO NOT prune frost sensitive plants, especially if they have been damaged by frost.
- DO NOT fertilize frost sensitive plants.
- DO NOT over water or over fertilize winter lawns as this will encourage rapid succulent growth that is vulnerable to fungal diseases.
- DO NOT water turf at night. Moisture and cool temperatures invite fungal diseases.
- DO NOT mow when turf is wet. By wounding the plant (mowing) while it is wet you increase the likelihood of fungal infection. In addition, you increase the likelihood of spreading the fungus on the tires of the mower and on your shoes.



Field Guide to Garden Hazards for Your Pet: Doggone Dangerous

By Janice Austin, Master Gardener and Pet Lover

With indiscriminating and voracious appetites, many dogs tend to be opportunistic omnivores, and pet owners need to be aware of the dangers that may be hiding their yard, garden, or compost bin for their, unsuspecting canine companions. While busy working in the yard, it is easy for passionate gardeners to overlook possible toxicity in what is so commonly cultivated.

Be especially alert if your pet is at a stage in life focused upon exploring, chewing and gnawing on things, or teething, for it is far more likely such a dog will ingest a toxic garden plant. It's time for you to be your dog's best friend.

Here are a few garden hazards to keep away from those inquisitively foraging pets:

POTATOES:

Raw, sprouting potatoes are a source of solanum alkaloids, toxic to both humans and pets. Those round, moldy seed potatoes could be dangerous. (Of course, once peeled and cooked, they are safe and nutritious for dogs.)

ONIONS AND GARLIC:

Onions, especially raw onions, and garlic, too, constitute a pet hazard and can cause hemolytic anemia in dogs.

NUTS:

Many nuts, such as almonds, are not good for dogs; in particular, walnuts that have moldered on the ground can cause severe seizures when ingested by dogs.



VEGETABLES:

Keep your pet away from rhubarb, spinach, and tomato vines.

FRUITS:

Peaches, apricots, Japanese plums, and cherries can make your dog sick.

BULBS:

Popular, commonly cultivated bulbs like amaryllis and daffodils are dangerous to your dog when ingested. These become especially enticing when planted with bone or blood meal.

HOLIDAY PLANTS:

Good gardeners often plant holiday plants in the yard and some of the toxic plants to beware of include poinsettias, chrysanthemums, and philodendrums.

LANDSCAPE PLANTS:

Other popular plants that can make a dog ill include the following:

Jasmine
Asparagus fern

Sprangeri fern
Periwinkle (*Vinca*)
Bird of Paradise (*Strelitzia*)
Angel's Trumpet (*Datura*)
Foxglove (*Digitalis*)
Delphinium (*Ranunculaceae*)
Boston Ivy (*Parthenocissus*)
Elephant Ear (*Alocasia*)
Mock Orange (*Choisya ternate*)
Lupine (*Lupinus*)
Castor Bean (*Ricinus*)
Chinaberry (*Melia azedarach*)
Wisteria (*Fabaceae/Leguminosae*)

These are a sampling of common plants of which the diligent dog owner should be aware. Dogs experience different reactions to toxins, and the reaction varies according to the size of the dog and the amount ingested. Some toxins cause cardiac arrhythmia and can precipitate a myocardial infarct, which could be fatal to the dog. Others affect the gastrointestinal tract and can cause internal bleeding. Affected dogs may appear listless, experience excessive drooling, vomiting or diarrhea, may experience a rash or mouth irritation or swelling, in some cases, requiring a tracheotomy before asphyxiation. The dog must receive immediate medical attention if it is experiencing prolonged symptoms of distress.

Caring gardeners who love their dogs need to assess how to keep them safe in their yards; by becoming aware of what may harm the health of their pets, they make their gardens even more beautiful by being safer places for their pets.

Photo by Janice Austin

ASK A MASTER GARDENER

by Judy Curtis, Master Gardener

Can any shrubs, besides oleander, be used as a tall screen in my yard?

There are two shrubs native to the Sonoran Desert and one borrowed from the Chihuahuan Desert that are good substitutes for oleander. All three of them are more drought-tolerant than oleander and while they are somewhat slower to establish themselves, they will be much better behaved when they are mature. They are cleaner, require less pruning, and their roots are not invasive. Sound good to you? Here they are:



Arizona Rosewood (*Vauquelinia californica*) A common shrub in canyons from the southern part of the state into Mexico, it grows slowly the first two or three years but then speeds up as the roots establish themselves. Its leaves are somewhat similar to those of an oleander, but its white flowers and seeds are seasonal and do not make a mess. It is a good plant to situate near a pool. It will eventually grow to about 12 feet high.



Guayacan (*Guaiacum coulteri*) Native to the western part of Mexico, this shrub or small tree is a bit more frost sensitive than the others and is best for warmer areas of the valley, as damage to tips will occur below 30°F. It is a lush, bright green bush with beautiful, small, deep blue flowers. The mature height is 15 to 20 feet.



Texas Olive (*Cordia boissieri*) We've borrowed this one from its native states of Texas and New Mexico. You have probably seen it around but it looks so much like white oleander from a distance that you may have overlooked it. It also has a long blooming period, from spring through autumn. The common name refers to the olive-sized fruits it produces.

All three of these shrubs are evergreen and easy to maintain. So if you can be patient with them the first few years, your payoff will come later, as you sip iced tea on your patio while your neighbor hacks away at his oleander, trying to keep it at bay.

Photos: Mountain States Wholesale Nursery.

Before the Well Runs Dry

By Donna DiFrancesco, Master Gardener and Water Conservation Specialist, City of Mesa

You've read the headlines in the paper, seen or heard about the dwindling reservoirs, and the Governor has appointed a task force to discuss it. I'm talking about DROUGHT! The western United States, including Arizona, is experiencing a drought that is the result of well-below-average precipitation levels – especially in the higher elevations. The bad news is that no one knows how long it may last, and scientific speculation predicts that it could be a 20-30 year event. The good news is that the Valley cities and water providers have planned for these dry periods so that we could better manage during drought conditions – at least for a while.

Let's not forget that we live in the Sonoran Desert, and deserts are defined as being arid places where water is limited most of the time. So what's the difference between living with desert conditions and living with desert conditions during a drought? If only we could ask the Hohokam. Speculation is that severe drought may have been the reason they suddenly disappeared after living on the land for over 1000 years.

Here in the Valley, drought conditions aren't just measured by what is happening in our immediate surroundings. However, if you look at our recent rainfall amounts, you'll see that we have experienced some severe dry conditions ourselves (Table 1).

Year	Rain in Inches
1995	7.94
1996	3.99
1997	5.55
1998	10.59 (El Niño)
1999	5.01
2000	6.95
2001	6.00
2002	4.18
2003	8.12
2004	8.35 (so far)

Table 1. Rainfall for the past 10 years. According to AZMET weather data.

Our average rainfall is typically 7-8 inches per year, but rainfall has been well below normal in 5 of the last 10 years. But drought is also measured by what is happening in the watersheds that supply water to the Valley. There are two of them: Salt and Verde River watershed located north and east of us is experiencing a 9-year drought; second is the Colorado River watershed, which is in its fifth year of drought. While snowfall in the mountains is currently looking good this winter, the National Oceanic and Atmospheric Administration (NOAA) estimates that even if drought conditions ended today, it could take the west 5 to 10 years to fully recover.

Even though SRP has cut water supplies to water providers in the Valley for the third year, other available sources have made it so that none of the providers have implemented water restrictions at this time. Most of the cities have required a 5% water reduction for themselves and have asked for voluntary measures by their customers (like not overseeding with winter grass). However, Phoenix may be implementing more serious measures some time next year, depending on the severity of the situation.

So what can we do as responsible gardeners? In the 4th century B.C., Aristotle noted that mankind consists of two kinds of people: those who are as thrifty as if they expect to live forever, and those who are as extravagant as if this was their last day on Earth. Well, I don't think things have changed much since his time. Any environmentally conscious gardener will fit in with the former group, and being water thrifty outdoors is one of the easiest ways we can do our part to save water. There is never enough water to waste, no matter how well we have planned for the dry times. In a desert, water conservation must be an ethic—a way of life—as opposed to an action in response to drought. With thoughtful planning and careful management, we can still have beautiful landscapes while being environmentally responsible. See the list of suggestions below, and then keep your fingers crossed for some rain and snow.

Drought Water Saving Measures

Plan appropriately – When planning a new landscape or making renovations to an existing landscape, consider ways you can save water. Analyze the site for sun, wind, drainage and traffic patterns and plan accordingly. Grade the yard to harvest rainwater. Group plants with similar water needs. Minimize or eliminate lawn areas. Consider water efficiency of other outdoor water using features like pools, ponds, and fountains. Get a copy of *Xeriscape: Landscaping with Style in the Arizona Desert* is a free design booklet from your water conservation office.



Direct rainfall to your plants, not the street.

Harvest rainwater and graywater – Collect beneficial rainwater that runs off your roof or other hard surfaces and direct it to your plants. With thoughtful grading of the yard, you can capture a great deal of free water.

For more details download *Harvesting Rainwater for Landscape Use*

<http://ag.arizona.edu/pubs/water/az1052.pdf>. Graywater, which is used household water from bathtubs, bathroom sinks, showers, and clothes washers, can also be used to water your landscape. You must follow state and local guidelines. Call ADEQ at 1-800-243-5677 for more information, and download an informative booklet at <http://www.watercasa.org/pubs/Graywater%20Guidelines.pdf>.

Prioritize your landscape – If water were limited or restrictions were put into place, what plants would you try to save at the expense of others? Typically, trees are your greatest investment. Food plants may be important. Grass and flowers are easiest to replace. While the situation isn't quite as serious right now, you may still want to consider whether you need a winter lawn or to select high water use tree for planting.

Spot water – Hand water plants that dry out faster than others on the irrigation line. This may also be necessary if you replace a plant after others are established. If trees and shrubs are on the same valve, consider plugging emitters around the trees and using a soaker hose to deep water them periodically.

Use your controller manually – Only use the programming features on your timer when you are away from home. Otherwise, manually turn on the irrigation when you see that the soil is starting to dry out. Most controllers have a 'manual' option available where you can turn on a valve for the programmed amount of time.

Everyday Water Saving Measures - Drought or No Drought

Don't over water your plants – Give your plants enough water to stay healthy, but not too much. Recent studies from U of A and ASU have found that landscapes are watered 2-5 times more than needed. Make sure you water thoroughly at each watering, but allow the soil to dry out in between irrigations (days in between watering can reach 30 days or more for some desert plants). To help better determine how much water is needed for your plants, get a free copy of *Landscape Watering by the Numbers: A Guide for the Arizona Desert* from your city water conservation office, or visit www.wateruseitwisely.com for an online version.

Adjust your irrigation schedule with each season – As temperature, sun intensity, and humidity change, so does your plant's water needs. Landscapes with automatic controllers tend not to be adjusted as often as they should. Change your irrigation controller schedules at least 4 times each year with seasonal weather changes. Sign up for a monthly landscape watering e-mail reminder by visiting cityofmesa.org, select 'E-mail News Lists', then choose 'Landscape Watering Reminder' and follow instructions.

Turn your irrigation controller off during rainy periods – Use the 'off', 'stop', or 'rain' setting on your controller to stop the watering cycle without disturbing your programs. Keep an eye on your landscape to determine when you need to turn the controller back on.

Limit watering – Run sprinklers only during the evening or early morning so less water will be lost to evaporation.

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Perform frequent irrigation system checks – Your system needs to be functioning properly and uniformly to be efficient. Check sprinklers for proper operation, clogging and pattern consistency; check drip emitters to see if they are working properly; check valves and pipes for leaks.

Select low water use plants – If you select native or other desert-adapted drought tolerant plants, they will need very little supplemental water once established. Get a free copy of *Landscape Plants for the Arizona Desert* from your city water conservation office.

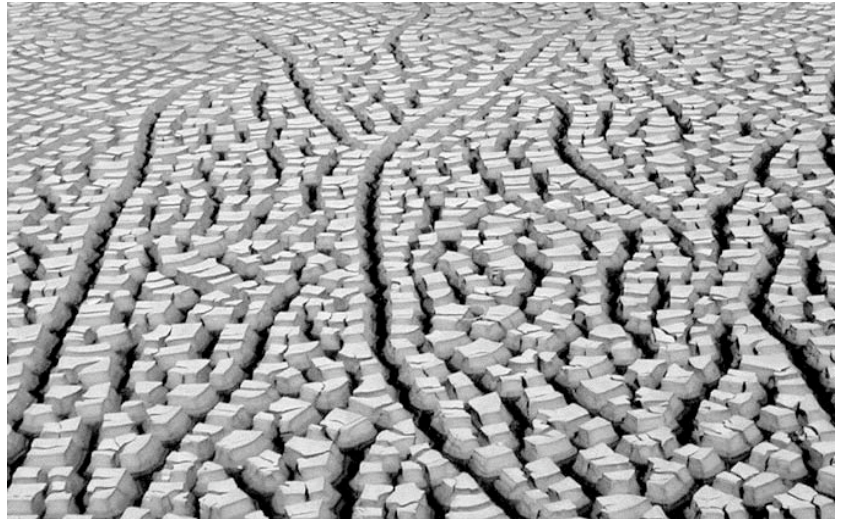
Use organic mulches – Cover the soil with compost or other organic mulches to keep soil cooler and help to retain moisture longer (even better than granite mulches). Replenish frequently and cover with granite if you prefer.

Prevent runoff – Retain water by building up a basin around plants, or water at a slower rate if necessary. If water runs off your turf when running your 30-minute irrigation cycle, split the irrigation into two 15-minute cycles (30-60 minutes apart or longer if necessary).



You can harvest over 7,000 gallons of water a year from a 1500 sq. ft. roof with only eight inches of rain.

Control weeds – Weeds will compete with landscape plants for water. If hand pulling established weeds, wait until after a good rain for easier removal and a better chance to get the whole plant, roots and all.



Photos by Donna DiFrancesco.

Resources available at your city water conservation office:

Xeriscape: Landscaping with Style in the Arizona Desert published by the State of Arizona Department of Water Resources Conservation Assistance Fund.

Landscape Watering by the Numbers: A Guide for the Arizona Desert

Landscape Plants for the Arizona Desert

www.wateruseitwisely.com web site

Harvesting Rainwater for Landscape Use publication available at:
ag.arizona.edu/pubs/water/az1052.pdf

Graywater information booklet available at:
www.watercasa.org/pubs/Graywater@30Guidelines.pdf

City of Mesa landscape watering e-mail reminder signup at:
www.cityofmesa.org

The Fragrant Landscape

By Sandra Turico, Master Gardener

Give me odorous at sunrise a garden of beautiful flowers where I can walk undisturbed.
~ Walt Whitman

What gardener does not enjoy spending time in his or her special garden space, time to relax and escape from everyday pressures and problems, time to share with family and friends? When choosing plants, we give a considerable amount of thought to how our landscape will look as it matures. The color and the eventual size and shape of the plants we select will, of course, greatly affect the appearance of our garden. However, there is another important element we should bear in mind as we design our landscapes: fragrance.

Our sense of smell is a very impressive phenomenon. A person can detect up to 10,000 different odors that can affect emotion and mood. Fragrance can stir up vivid memories and induce strong feelings of nostalgia...does the scent of roses take you back in time to Grandma's garden where you played as a youngster? Perhaps the aroma of pine calls to mind childhood memories of a festive holiday? Most of us at one time or another have had this type of experience.

Certain aromas have a calming effect, while others have the ability to energize. Consider the popularity of aromatherapy, the use of the essential oils found in plants to promote physical and emotional well-being. Lavender, for instance, is a mood balancer well-known for its tranquilizing effect. Rosemary, on the other hand, has a pungent scent that is energizing. Humans have used the power of fragrance to alter their moods and enrich their lives for eons.



Ericameria laricifolia

The scent of a plant may come from its flower or its foliage. Sometimes, as in the case of the Mt. Lemmon Marigold, the leaves, stem and flower are all fragrant. There are plants whose perfume permeates the air, drifting through the entire landscape. Other specimens are delicately scented and one has to lean over and take a whiff in order to appreciate the aroma. Still others must be rubbed against, trod upon or crushed to release their fragrance.

Plant scents come in assorted "flavors". Use various plant fragrances to achieve a unique atmosphere in your landscape. Datura, citrus, star jasmine, and heliotrope are examples of sweet-scented plants guaranteed to charm you and the guests you invite to your garden sanctuary. Tantalize your senses with spicy plantings of nasturtium, carnations or stock. Lemon balm, passion flower, lemon verbena and sweet olive with its apricot scent offer fruity aromas guaranteed to lift up your spirits. Floral-scented sweet violets, sweet peas, freesia and ever-

popular roses have floral scents which are soothing to the soul. Finally, have some fun with fanciful fragrances; make room for the Sierra Bouquet™ variety of the Texas Ranger which emits a scent of grape bubble gum, Texas Mountain Laurel with its grape Kool-Aid aroma or chocolate flower which will delight kids of all ages.

Locate fragrant plants where they will be appreciated. An obvious place is near entryways. Line the walkway to your front door with honey-scented sweet alyssum or flank the doorway with containers of aromatic annuals you can change seasonally. Establish an herb garden near the kitchen entrance. The fragrance will be intoxicating and the convenience of having fresh thyme, basil, or oregano ready to harvest will delight the resident chef.

The backyard patio is the perfect spot for hanging baskets of violas, petunias or nasturtiums. Dress up the patio table with a centerpiece of scented geraniums. Other entertainment centers, such as barbeque and pool areas, will be more welcoming to guests when enhanced with enticing scents. Make use of decorative pots, trellises and raised beds to complement the plants you choose. Do some research and make sure you steer clear of specimens that litter excessively or attract bees in these areas.

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Be aware that some plants emanate fragrance after the sun goes down. White evening primrose, flowering tobacco, datura and four o'clock are some specimens that bloom and release scent at night. Many of these late-bloomers have white or light-colored blossoms that shimmer in the dark. Create a magical, moonlit garden by incorporating some of these plants into your landscape.

Spoil yourself by including a cozy spot in your landscape, just for you. Fix up a shady niche with a comfortable chair for lounging and a table at hand for a refreshing drink. Surround your personal space with your favorite scented plants and flowers and set aside some time for relaxation.



Datura innoxia

Remember that scent is a very personal thing. What may be a pleasant fragrance to one person may be annoying to another. Use this list of fragrant plants to get started, but make sure you sniff before you purchase. If the scented part of the plant is the flower, wait until it is in bloom before you make up your mind.



Sophora secundiflora

Trees:

Acacia constricta (Whitethorn Acacia)
Acacia farnesiana (Sweet Acacia)
Acacia salicina (Willow Acacia)
Bursera fagaroides (Fragrant Elephant Tree)
Cercidium floridum (Blue Palo Verde)
Chilopsis linearis (Desert Willow)
Citrus sp.
Dalea spinosa (Smoke Tree)
Elaeagnus angustifolia (Russian Olive)
Eucalyptus cinerea (Spiral Eucalyptus)
Eucalyptus citriodora (Lemon-scented Gum)
Eucalyptus leucoxylon petiolaris (Pink Flowered Ironbark)
Eysenhardtia orthocarpa (Kidneywood)
Fraxinus cuspidata (Fragrant Ash)
Laurus nobilis (Sweet Bay)
Pithecellobium flexicaule (Texas Ebony)
Pittosporum phillyraeoides (Willow Pittosporum)
Prunus caroliniana (Carolina Laurel Cherry)
Sophora secundiflora (Texas Mountain Laurel)

Shrubs:

Aloysia triphylla (Lemon Verbena)
Aloysia wrightii (Bee Brush)
Brugmansia Datura (Angel's Trumpet)
Buddleja davidii (Butterfly Bush)
Carissa macrocarpa (Natal Plum)
Chrysactinia mexicana (Damianita)
Ericameria laricifolia (Turpentine Bush)
Gardenia augusta (Gardenia)
Hyptis emoryi (Desert Lavender)
Jasminum humile (Italian Jasmine)
Larrea tridentata (Creosote Bush)
Lavandula angustifolia (English Lavender)
Lavandula x intermedia (Hedge Lavender)
Leucophyllum frutescens (Texas ranger)
Leucophyllum laevigatum (Chihuahuan Sage)
Leucophyllum pruinatum (Sierra Bouquet™)
Myrtus communis (Myrtle)
Osmanthus fragrans (Sweet Olive)
Philadelphus coronarius (Sweet Mock Orange)
Philadelphus x lemoinei
Philadelphus x virginialis
Pittosporum tobira (Tobira)
Poliomintha maderensis (Mexican Oregano)
Rhaphiolepis indica 'Majestic Beauty' (Indian Hawthorn)
Rosa sp. (Rose)
Rosmarinus officinalis (Rosemary)
Salvia apiana (Bee Sage)
Salvia clevelandii (Cleveland Sage)
Salvia greggii (Autumn Sage)
Salvia officinalis (Garden Sage)
Santolina chamaecyparissus (Lavender Cotton)
Santolina virens (Green Lavender Cotton)
Tagetes lemmonii (Mt. Lemmon Marigold)

Groundcovers:

Lantana montevidensis (Trailing Lantana)
Melampodium leucanthum (Blackfoot Daisy)
Oenothera caespitosa (White Evening Primrose)
Rosmarinus prostratus (Prostrate Rosemary)

Vines:

Beaumontia grandiflora (Herald's Trumpet)
Clematis armandii (Evergreen Clematis)
Gelsemium sempervirens (Carolina Jessamine)
Jasminum officinale (Poet's Jasmine)
Jasminum polyanthum (Winter Jasmine)
Lonicera japonica (Japanese Honeysuckle)
Passiflora x alatocaerulea (Passion Flower)
Rosa sp. (Rose)
Trachelospermum asiaticum (Asiatic Jasmine)
Trachelospermum jasminoides (Star Jasmine)
Wisteria brachybotrys (Silky Wisteria)
Wisteria floribunda (Japanese Wisteria)
Wisteria sinensis (Chinese Wisteria)

Bulbs, Corms and Tuberoses

Roots:

Crinum
Freesia
Hemerocallis lilioasphodelus (Lemon Daylily)
Hyacinthus orientalis (Common Hyacinth)
Hymenocallis
Iris
Narcissus (Daffodil)

Perennials:

Agastache sp.
Berlandiera lyrata (Chocolate Flower)
Chamaemelum nobile (Chamomile)
Centranthus ruber (Jupiter's Beard)
Cymbopogon citratus (Lemon Grass)
Dianthus caryophyllus (Carnation)
Dianthus gratianopolitanus (Cheddar Pinks)
Dianthus plumarius (Cottage pinks)
Helichrysum italicum (Curry Plant)
Iberis sempervirens (Evergreen Candytuft)
Manfreda maculosa (Texas Tuberoses)
Melissa officinalis (Lemon Balm)
Menta sp. (Mint)
Monarda didyma (Bee Balm)

Origanum sp. (Oregano)
Pelargonium (Scented Geranium)
Thymus (Thyme)



Berlandiera lyrata

Annuals & Perennials Grown as Annuals:

Centaurea moschata (Sweet Sultan)
Coriandrum sativum (Cilantro)
Dianthus barbatus (Sweet William)
Heliotropium arborescens (Common Heliotrope)
Iberis amara (Hyacinth-flowered Candytuft)
Lathyrus odoratus (Sweet Pea)
Lobularia maritima (Sweet Alyssum)
Matthiola incana (Stock)
Mirabilis jalapa (Four O'Clock)
Nicotiana glauca (Flowering Tobacco)
Nicotiana glauca (Flowering Tobacco)
Ocimum basilicum (Basil)
Papaver nudicaule (Iceland Poppy)
Petunia x hybrida (Petunia)
Phlox drummondii (Phlox)
Reseda odorata (Mignonette)
Salvia splendens (Salvia)
Tagetes erecta (American/African Marigold)
Tropaeolum majus (Garden Nasturtium)
Viola odorata (Sweet Violet)

Desert landscapes should be a pleasant sanctuary appealing to all of one's senses; fragrance will add a welcome dimension to yours.

Photos: *Ericameria larcifolia*, Mountain States Wholesale Nursery; *Sophora secundiflora*, Mountain States Wholesale Nursery; *Datura innoxia*, Jo Cook; *Berlandiera lyrata* Mountain States Wholesale Nursery,

ANNOUNCEMENT

SMARTSCAPE TRAINING

Anyone concerned with effectively maintaining landscapes and irrigation systems, while keeping expenses under control, is encouraged to attend SMARTSCAPE. This is a training program for landscape and nursery professionals, enabling them to provide quality service to their customers. By learning horticultural practices compatible with the Sonoran Desert they will be able to create and maintain beautiful energy and water efficient landscapes.

This four-week class series reviews landscape water management, irrigation maintenance, desert adapted plants, landscape design, pruning, plant diseases, pest management, and much more. The eight 2 1/2 hour workshops will be offered on Mondays and Wednesdays, February 28, 2005 through March 23, 2005 from 4:00 p.m. to 6:30 p.m. at the U of A Extension Office near 44 Street and Broadway in Phoenix. Instructors are experts in their fields and include Judy Mielke, Landscape Architect; Dr. Ursula Schuch, U of A Plant Sciences; Terry Mikel, U of A Commercial Horticulture Agent; Lucy Bradley, U of A Urban Horticulture; Steve Priebe, Certified Arborist; Jeff Lee, Certified Landscape Irrigation Auditor and more. The nominal fee of \$60.00 covers the entire workshop series, including notebook, materials, and refreshments. Registration is limited.

This training is only offered once each year through the Arizona Municipal Water Users Association. AMWUA represents nine of the municipalities in the Greater Phoenix Area. Check the AMWUA website for updates and encourage those responsible for your landscapes to attend. www.amwua.org/conservation/ev ents.htm

Protecting Yourself from the Sun

By Sue Hakala, Master Gardener

My friend, Brian, was helping a neighbor dispose of a storm-fallen tree. All the bending and stooping made the top of his balding head visible. The neighbor insisted that Brian see her doctor the next day. The doctor confirmed what Brian's neighbor suspected. Brian had skin cancer. A 2" X 4" strip of skin was removed, giving him a sort of facelift, and a very big scare.

Skin cancer is the abnormal growth of skin cells. The two most common types of skin cancer are basal carcinoma or squamous carcinoma. Both are slow growing and very treatable if found early. Melanoma, a more serious kind of skin cancer, affects the deepest layers of the skin, and can spread, or metastasize, throughout the body. Scientists believe the main cause of skin cancer is exposure to ultraviolet (UV) radiation. Direct or reflected sunlight and tanning booths are common sources of UV radiation. Genetics also plays a major role.

Early detection and avoiding overexposure to the sun are two of the best ways to protect yourself from skin cancer. The Skin Cancer Foundation offers these suggestions.

- Do not sunbathe or use tanning devices.
- Avoid unnecessary exposure to the sun, especially between 10:00 am and 2:00 pm, when the sun is most intense.
- Use sunscreen rated SPF 15 or higher, and apply liberally, uniformly, and re-apply often. Apply sunscreen 30 minutes before going out into the sun.

- Use sunscreen lotions approved by the American Cancer Society, and follow all label directions to assure adequate protection.
- Keep in mind that protective clothing such as long pants, long sleeved shirts, broad brimmed hats, and UV-protective sunglasses can block the sun's harmful rays. Baseball type hats do not cover the tops of your ears, or the sides of your face and neck.
- Teach your family about good sun protection.
- Examine your skin from the top of your head to the bottom of your feet and between your toes and fingers, every three months.

Not all changes in your skin are skin cancer. Your primary health care provider or a dermatologist should check out all changes to be safe. The Skin Cancer Foundation at www.cancer.gov/cancertopics/types/skin, provides directions on how to examine yourself and your loved ones. Look for small growths, a sore that bleeds, crusts over, heals, and opens again. Be on the lookout for pearly or waxy bumps, flat, flesh-colored lesions, firm red nodules, a large brown spot with darker speckles, lesions with irregular borders, rough, scaly brown to pink patches, or anything that is different from normal pigmentation. Don't wait: have any changes looked at by a professional.



Those most susceptible to skin cancer have fair and/or fragile skin, a personal family history of skin cancer, excessive sun exposure, or exposure to environmental hazards. More information may be obtained at www.mayoclinic.com - search topic - skin cancer. Both the Mayo Clinic website and the Skin Cancer Foundation website listed above provide extensive information and pictures for further study.

Photo Illustration by Janice Austin.

Herb Gardening In the Desert

By Mike Hills, Master Gardener

Some fall and winter herbs are best planted from seed rather than from potted transplants.

Transplants are generally available, but these herb species usually bolt and blossom immediately if planted from transplants since they are winter annuals or biennials and relatively short-lived. Planting these herbs from seeds will provide a healthier plant for a longer season of harvest and use. Prior to planting, soak the seeds for several hours in warm tap water to increase the germination. Most of the seeds will germinate so check the package for proper spacing. On Cilantro (Coriander), it is recommended that the gardener plant 1/4 of the seeds the first day, wait several weeks and plant another 1/4 and so on throughout the fall and winter in order to prolong the harvest period.

Anise, Parsley, Caraway, Sweet Fennel, Cilantro or Coriander, Dill, Savory, Chervil, German Chamomile and Lemon Mint

Herbs best planted in spring.

Wait until warmer temperatures to plant these more tropical herbs in your garden. Occasionally a large robust plant of these species can be planted in October and become well enough established before frost hits, especially with some freeze protection on those cold nights. Generally these plants are very frost sensitive and smaller specimens will not survive their first winter, unless they have had several months of warm weather to become well established and develop woody stems. These are perennial plants, so once they become established when planted

properly next Spring or Summer they will usually survive an occasional freeze in the low desert garden.

Basil, Chiles/Peppers, Lemon Grass, Lemon Verbena, Palmarosa Grass, Pineapple Sage, Summer Savory, Mexican Tarragon or Mexican Mint Marigold (*Tagetes lucida*)

Herbs that require extra drainage to survive thrive and reach full size and production.

Most of these plants come from dry climates with well-drained soil – chiefly in the Mediterranean regions of Southern Europe and North Africa. They are prone to a number of fungal and bacterial diseases that rot away the root systems in poorly drained, or over watered gardens. Proper watering and improving the soil drainage by incorporating soil amendments, raising the gardening beds or growing in containers is the only way to enjoy success with these plants. Please keep in mind that these herbs are most often killed from overwatering – yellowing leaves are often a sign of too much water, rather than a sign that the plant needs additional water.

All Sages, Rosemary, all Thymes, French Tarragon, Marjorams, Lavenders, Oreganos.

Fall and Winter herbs that prefer shade.

Contrary to popular myth, most herbs DO NOT need a lot of shade. With most herb species, filtered shade in late afternoon is more than enough sun protection. Most actually perform and taste better when grown in full sun. However, some herb plants do need more protection from the sun and can provide the gardener

a wide choice of plant material for those problem shady areas.

Pineapple Mint, Grapefruit Mint, Apple Mint, Variegated and Fuzzy Leaved Scented Geraniums, Lemon Balm, Gotu Kola, Sweet Woodruff, Violets, Variegated Thyme, Angelica

Herb gardening resources – to learn more about herb gardening in the low desert, contact The Arizona Herb Association in Phoenix for their useful Tip Sheet or to attend a meeting as a guest. You can also check on available gardening classes at the Desert Botanical Garden and with the Master Gardeners through Maricopa County Extension.

Most herb gardening books are not written with our extreme climate in mind. Check out your local bookstore, nursery, garden center or botanical garden gift shop for these excellent books written specifically for low desert gardeners:

“Herbs Grow in the Desert Southwest” – by Charlie Humme, Arizona Herb Association

“The Low Desert Herb Gardening Handbook” – by Anne Fischer, Arizona Herb Association

“Desert Gardening For Beginners” – Cathy Cromell, Master Gardener Press



Herbs to Grow and Use in the Low Desert

By Mike Hills, Master Gardener

OREGANO HERBS

Cuban Oregano - *Plectranthus barbatus*
Mexican Bush Oregano - *Lippia graveolens*
Native American Oregano (Bee Balm - Oswego Tea) - *Monarda* spp.
Syrian Oregano (Bible Hyssop) - *Origanum syriacum*
Creeping or Dwarf Oregano - *Origanum vulgare* 'Compactum Nanum'
Woolly Oregano - *Origanum x hybridum*

LEMON HERBS

Lemon Basil - *Ocimum basilicum*
'Lemon' *Ocimum citriodorum*
Lemon Verbena - *Aloysia triphylla*
Lemon Balm - *Melissa officinalis*
Lemongrass - *Cymbopogon citratus*
Lemon Thyme - *Thymus x citriodorus* (Golden variety = 'Aureus')
Lemon Mint - *Monarda citriodora*
Lemon Catnip - *Nepeta cataria* 'Citriodora'
Lemon Rose Scented Geranium - *Pelargonium graveolens*

LAVENDER HERBS

Desert Lavender - *Hyptis emoryii*
Sweet Lavender - *Lavandula spica*
Spanish Lavender - *Lavandula stoechas*
French Lavender - *Lavandula dentata*
Fernleaf or Spike Lavender - *Lavandula multifida*
Goodwin Creek Lavender - *Lavandula heterophylla*

CILANTRO HERBS

Cilantro/Coriander (Chinese Parsley) - *Coriandrum sativum*
Vietnamese Cilantro (Ngo gai) - *Eryngium foetidum*
Bolivian Cilantro (Quillquina or Killi) - *Porophyllum ruderale*

ANISE HERBS

Bulb Fennel (Florence Fennel or Finocchio) - *Foeniculum vulgare* 'Dulce'
Sweet Fennel (Seed Fennel) - *Foeniculum vulgare*
French Tarragon - *Artemisia dracunculus*
Mexican Tarragon (Mexican Mint Marigold - Yerba Anis - Rootbeer plant Winter Tarragon - Poor Man's Tarragon) - *Tagetes lucida*
Sweet Green Basil - *Ocimum basilicum*
Purple Basil - *Ocimum basilicum* 'Purpurascens'
Thai Basil - *Ocimum basilicum*
'African Blue' Basil - *Ocimum basilicum* 'Kasar'

MINT HERBS

Rosemary Mint - *Poliomintha incana*
Catmint - *Nepeta faassenii*
Mint Rose Scented Geranium - *Pelargonium* spp.
Candy Mint - *Mentha* spp.
Spearmint - *Mentha spicata*
Orange Mint - *Mentha x piperita*
Chocolate Mint - *Mentha x piperita*
Grapefruit Mint - *Mentha suaveolens x Mentha piperita*

GARLIC HERBS

Garlic - *Allium sativum*
Elephant Garlic - *Allium ampeloprasum*
Walking Garlic (Serpent or Rocambole Garlic) - *A. sativum* 'ophioscorodon'
Garlic Chives (Chinese Chives) - *Allium tuberosum*
Society Garlic - *Tulbaghia violacea*

ROSEMARY HERBS

Prostrate - *Rosmarinus officinalis*
Upright - *Rosmarinus officinalis*

Recommended Herb Demonstration Gardens in Arizona

These gardens are an excellent source of information on proper planting and care of herb plants in Arizona's low desert climate.

Arizona Herb Association – Interpretive Trail Demonstration Garden
Maricopa County Extension
4341 East Broadway Road
Phoenix, AZ 85040
(602) 470-8086 ext. 830
www.azherb.org
No Entry Fee - Open Daily

Desert Botanical Garden – Herb & Vegetable Demonstration Garden
1201 N. Galvin Parkway –
Phoenix, AZ 85008-3431
Entry fee - Open Daily
(602) 941-1225
www.dbg.org

Boyce Thompson Southwestern Arboretum - Herb Demonstration Garden
37615 East Highway 60
Superior, AZ 85273
Entry fee - Open Daily
(520) 689-2811
ag.arizona.edu/bta

Tucson Botanical Garden - Herb Demonstration Patio and Garden
2150 North Alvernon Way
Tucson, AZ 85712
Entry fee - Open Daily
(520) 326-9255
www.tucsonbotanical.org

Tohono Chul Park
7366 N. Paseo del Norte -
Tucson, AZ 85704-4415
(520) 575-8468
Entry fee - Open Daily
tohonochulpark.org

Arboretum at Flagstaff - Herb Demonstration Garden and Patio
4001 S. Woody Mountain Road
Flagstaff, AZ
(520) 774-1442
Entry fee - Open Daily
www.flagstaffguide.com/arboretum/

WHAT YOU NEED TO KNOW

New to the Desert?

By Cathy Rymer, Master Gardener and Water Conservation Specialist, Town of Gilbert

We do things differently here in the Low Desert. In fact, just about everything is different. While most of the country prepares for the frigid temperatures of fall, we are readying our gardens for the most productive seasons of the year. You may want to forget much of what you know about gardening and landscaping 'back home' and start with a clean slate.

Here are a few suggestions that might help you succeed in our challenging climate and salty soils.

- Roses look their best in March and October.
- Tomato blossoms may fall off when temperatures reach 90 degrees.
- Gardenias, Hydrangeas and Azaleas usually fail in our alkaline soils.
- Spring bulbs such as Dutch Tulips and Hyacinths rarely get the chilling they need to bloom.

If this is your first year in the desert, you may be wondering what to expect in different months. For a listing of monthly gardening tips, see the searchable listing at <http://cals.arizona.edu/maricopa/garden/html/t-tips/t-tips.htm>

In the arid southwest the key differences relate to weather, water, soil and plant types.

Weather – In the low desert we have a nearly year-round growing season that averages 265 days without frost. Occasional freezing temperatures may require frost protection for tender plants. In summer our intense heat is hard on plants, so sun protection and additional irrigation may be required for some varieties. We typically have low relative humidity and large 24-hour temperature ranges (up to 35 degrees regardless of season), which eliminate many species that require a more constant temperature.

Water – Our rainfall is scarce and intermittent, making supplemental irrigation necessary to maintain many annual flowers, vegetables, and non-native shrubs and trees. The free booklet, *Landscape Watering by the Numbers* will explain drip irrigation and provide watering schedules for your trees, shrubs, groundcovers, cacti, annuals and turf areas. It is available from the Town of Gilbert Water Conservation office, 480-503-6098.

Soil – Soils are generally alkaline (salty) and low in organic matter. Plants that like acid soils should be grown in large containers and may benefit from soil sulfur applications. Native and desert-adapted plants can survive in native soils (and during transplanting do not need special treatment or soil amendments).

Vegetables and annual bedding plants require special planting bed preparation and benefit from additional organic matter (which needs to be repeated each year). See AZ1005 – Vegetable Planting Calendar - <http://cals.arizona.edu/pubs/garden/az1005.pdf> and AZ1100 -Flower Planting Guide - <http://cals.arizona.edu/pubs/garden/az1100.pdf>

Plant Types – Our desert environment alters the choice of plants. Most plants you grew "back home" just aren't happy here. However, there are literally hundreds of desert-adapted plants that thrive in our challenging climate and soils and will provide your landscape with color, fragrance, interesting textures, and can attract native wildlife like hummingbirds and butterflies. Look for the free booklet *Landscape Plants for the Arizona Desert* that features over 200 colorful, easy-to-grow desert-adapted plants. It is available from the Water Conservation office 480-503-6098.



Desert Penstemon - Penstemon parryi

They're Back: Those Wacky Winter Weeds

By Cathy Rymer, Master Gardener and Water Conservation Specialist, Town of Gilbert

Some folks call them weeds; to others they're just a plant growing where it's not wanted. They seem to sprout overnight and can outgrow the plants you pamper in a heartbeat. Recent rains have prompted vigorous growth. Left unchecked weeds can steal water and nutrients from neighboring plants. Where do they come from? How can they be controlled so they don't take over your yard? Read on for tips on controlling these pesky invaders.

Weed seeds arrive in your yard either by wind or carried in by birds. They could be brought in with yard equipment, grass seed, organic soil amendments or 'hitch' a ride on shoes, clothing or even on the fur of pets.

The two basic groups of weeds are *grasses* and *broadleaf* weeds. Some sprout from seeds and grow, flower, produce seed and die within one season. These are referred to as *Annual* weeds. *Perennial* weeds can live for several years. The control methods you choose will depend on what type of weed you are dealing with.

Control

If you only have a few weeds in a relatively small area, mechanical removal is often the most desirable method. This can be accomplished with sharp hoes, shovels, or hand pulling. C'mon, this is good exercise – therapeutic, even. If applications of herbicides are warranted, it is important to select one that will target the weed you are dealing with and not harm surrounding vegetation.



If you use grass killer on the crabgrass or nutsedge growing in your hybrid Bermuda lawn, it won't discriminate and will kill all grass it contacts. A broad-spectrum herbicide may kill anything green it touches.

In gravel areas both annual and perennial weeds can be controlled with the application of a **post-emergent** herbicide. Post-emergent meaning it controls weeds that have already sprouted and are growing. The most common products for this application contain Glyphosate or Glufosinate as active ingredients listed on the label. These herbicides work by translocating the product through the leaves to the roots where they interfere with the growth process. The best control is accomplished when applied to young plants. Both these products are non-selective, meaning they will kill any growing vegetation, both grass and broadleaf.

In lawn areas the best weed control is a healthy lawn. Turf will out-compete most weeds and regular mowing will remove the growing tips of the weeds. Any chemical weed control should be practiced only on well-established lawns as newly installed or seeded lawns are often injured by weed control agents. Spot treatment with Glyphosate is effective especially in dormant winter Bermuda lawns.

Pre-emergents work very well in preventing weed seeds from sprouting and work best in gravel areas. Do not use a pre-emergent if you plan to establish a Bermuda grass lawn by seeding. The same is true in the fall if you overseed your hybrid Bermuda or Bermuda grass lawn - it will prevent the winter rye grass seeds from sprouting! Many pre-emergents are available from your local nursery or home improvement store.

For example, a common pre-emergent herbicide has a chemical name of: 3, 5-dintro-N₄, N₄-dipropylsulfanilamide. The common name is oryzalin. Ask the sales staff for assistance if you are unsure which product is a pre-emergent. Apply twice a year in April for summer weeds and September for control of winter weeds.

Many homes in the Phoenix area are built on old irrigated agricultural fields where nut sedge is sometimes a problem. For control of nut sedge (nut grass) in lawns, several applications of the products that contain imazaquin (Image) or halosulfuon (Manage) in September will provide effective, control. Some follow-up may be necessary.

Caution: Some products are labeled *total or complete vegetation killers*. These products kill existing vegetation, but can persist in the soil for many years and leach into surrounding areas seriously affecting or killing plants there. If you have an area in your yard where nothing will grow, a total vegetation killer or soil sterilant may have been applied there in the past.

Be careful when using products that contain 2-4-D. They are designed to be applied when the temperatures are below 80 degrees or so. On warm days, this product volatilizes (turns to a gas) and can cause damage to surrounding vegetation as it drifts through the air.

Remember! Always follow label directions exactly! We sometimes think if a little is good, more is a whole lot better. The average homeowner applies **9 times** more chemicals to their property than a farmer does on the same size land. With herbicides and insecticides, this can be deadly - to plants, pets and humans. Wear protective clothing and avoid skin contact with the product.

Common broadleaf weeds:

Desert broom, purslane, goosefoot, pigweed, puncture vine, London rocket, bur clover, cheese weed, tumbleweed, silver nightshade, prostrate spurges.

Common grass type weeds:

crabgrass, Bermuda grass, nutgrass (not really a grass), brome grass, orchard grass, common foxtail.

For more information on weeds, use the on-line reference <http://ag.arizona.edu/urbanipm/weeds/weeds.html> and <http://ag.arizona.edu/urbanipm/weeds/weedcontrol.html>

Real Gardens for Real People Tour March 12, 2005 9:00 am - 4:00 pm

The Master Gardener "Real Gardens for Real People" 4th annual tour will be held in the Glendale/Peoria area this year.

See five exciting and interesting gardens, including a school desert habitat built with a Heritage Fund Grant, including a hummingbird and butterfly garden, an organic pond with two waterfalls, and a desert tortoise habitat.

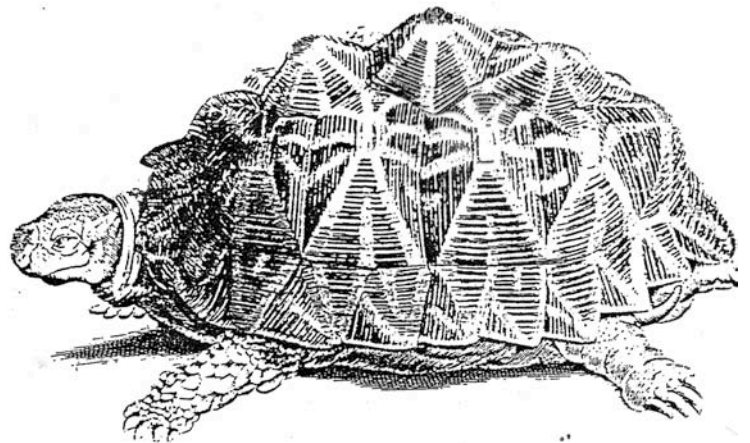
Price: \$15.00/person.

For more information:

Email: pratty@mindspring.com

Phone (602) 470-1556.

www.MasterGardenerEvents.com





Two Master Gardener Citrus Clinics!

East Valley
held at the
Greenfield Citrus Nursery
2558 E. Lehi Rd., Mesa

Saturday, January 22, 2005
8:30 a.m. - 12:00 p.m.

Northwest Valley
held at the
Citrus Agricultural Center
Waddell, Arizona

Saturday, January 29, 2005
8:30 a.m. - 12:00 p.m.