



Communicator

University of Arizona

Cooperative Extension

September-October 1997

Things To Expect

GROWTH RECOVERY of summer weary plants can be expected with the cooling night-time temperatures.

PREMATURE LEAF DROP late in October could be a result of the stresses of the summer.

ORANGES AND TANGERINES WILL START SPLITTING during this season when they are enlarging in size. The damage from the sun on the rind makes the rind less supple and less resilient to stretching and growing, thus the cracking.

MESOPHYLL COLLAPSE is a sudden wilt or drop of citrus leaves provoked by abrupt weather changes. Twig die-back and gumming often occur with this condition.

AGAVES may collapse into a putrid, rotting mess during late summer as a result of internal infestations of agave weevil larvae. They also infest the bases of yucca stems, causing chlorotic decline and death of infested stalks. Controls should have been applied during May and June.



*Agave Weevil
adult*

Things To Do:

EARLY FALL ROSE BUSH CARE includes pruning out all dead canes and moderately pruning back weak top growth; fertilize and follow with a deep watering.

PLANT WINTER HARDY TREES, SHRUBS AND VINES. The frost sensitive ones (citrus, bougainvilleas, etc.) are a bit risky this time of year.

SOW WILDFLOWER SEED in October to have a spectacular show in late spring.

PLANT ANNUAL SPRING COLOR in mid-to late October. The nurseries will be packed

with glorious selections in every size, color and shape. Spend a lot of time preparing the soil for the explosive growth of these plants. Everything you do "up front" will be rewarded later. It's hard to overcome a poor start with flowers and vegetables.

CUT BACK WATERING FREQUENCIES to minimize anaerobic conditions in the soil. The cooling temperatures and slowing plant growth allow the soil to remain wetter longer.

OVERSEED ESTABLISHED BERMUDA GRASS LAWNS from mid-October through mid-November for green grass (and mowing practice!) all winter.

BERMUDA RESPONDS with a light fall application of potassium, no matter whether you overseed or not. We rarely recommend potassium for plants here, but potassium for Bermuda helps it 'rest' better and then come out of dormancy with greater vigor.

PLANT COOL SEASON VEGETABLES starting in October. The cool season vegetables are the versatile ones – you eat the roots, stems, leaves or immature flowers. If planting these cool season vegetables is done and the days are still warm, you will find that sprinkling the seed bed will cool the soil more. Many of these seeds need cool temperatures to sprout.

ONIONS PLANTED FOR BULBS should be sown in mid-October (Remember Grano 1015Y? The 1015 indicates the planting date). Seeds or seedlings work the best. If you want the best scallions, plant the onion sets. These grow quickly into thick, luscious green onions, but rarely perform as well as seeds or seedlings for the later bulbs.



*Terry H. Mikel
Extension Agent, Commercial Horticulture*

The Spirit of Desert Gardening

(Keynote Address, 1997 Southwestern Low Desert Gardening and Landscaping Conference. Presented by Kent C. Newland, City of Phoenix Water Conservation Office, August 8, 1997)

I will focus on three key thoughts: Spirit, Desert and Gardening.

Spirit is defined as a frame of mind. Savoring the first ripe tomato of the season. Being entranced by the fragrance and pristine beauty of *Trichocereus* flowers on a spring night. Tasting the fresh cut oregano from your garden in the spaghetti sauce. Watching a hummingbird dance among the penstemons on a bright spring day. Being dazzled by the floral display of Texas sage on a monsoon day. Sowing wildflower seeds in the fall for the hope and beauty of spring wildflowers. Watching your octopus agave finally flower, the one you grew and nurtured from a young bulbil. All memorable moments that enrich the life and spirit of a desert gardener. Desert gardening is a series of moments, sometimes with trouble and tribulation but with many intangible rewards for the spirit. "Sowing the seed, my hand is one with the earth. Wanting the seed to grow, my mind is one with the light. Hoeing the crop, my hands are one with the rain. Having cared for the plants, my mind is one with the air. Hungry and trusting, my mind is one with the earth. Eating the fruit, my body is one with the earth," so wrote Wendell Berry.

Gardening is much like life. From the Earth, we arise like a flower. We bask in the glory of life, indeed becoming an expression of the Earth and to the Earth we all return, a never-ending cycle. "Everybody needs beauty as well as bread, places to play in and pray in, where Nature may heal and cheer and give strength to body and soul alike," observed naturalist John Muir. Such places are desert gardens; to work and meditate in and harvest the intangible and priceless rewards of beauty, discovery, wonder and joy that enriches and renews your gardening spirit.

"Wild nature dwells in gardens just as she dwells in the tangled woods, in the depths of the sea, on the height of the mountains, and the wilder the garden, the more you will see of her there," remarked naturalist Herbert Sass. There is a wild spirit that dwells in desert gardens. You cultivate that spirit every time you plant those special seeds or plants in your desert garden with the inherent hope that they grow and prosper, and there is a flowering of your desert gardening spirit.

Deserts are arid, desolate, forbidding, barren lands to some. To others, diverse biotic communities with unique plants and animals worthy of investigation. Deserts may be at once stark and barren yet simultaneously beautiful, pristine, thought-provoking landscapes. "Aridity, more than anything else, gives the western land-scape its character, aridity that put brilliance in the light, aridity that exposes the pigmentation of the raw earth and limits and almost eliminates the color of chlorophyll," noted western author Wallace Stegner. Arid regions offer constant

challenge and innovation to desert dwellers. "If you don't know where you are, you don't know who you are," remarks Wendell
Continued on page 3

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Property Owners & Residents Association (PORA) Office, 13815 Camino del Sol Blvd., Sun City West, AZ 85375. Phone 602-546-1672. Hours: 9 a.m. - 1 p.m. Tue., Thu., and Fri.

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Spirit of Desert Gardening (*From page 2*)

Berry. The Sonoran Desert is our home. A vast mosaic of land, climate, plants and animals, making it one of the most diverse desert regions on the planet. The Sonoran Desert is land of Gila monsters, saguaros, boojum trees and javelina. The biodiversity of the Sonoran Desert is in no small measure due to the climatic extremes of heat and frost and drought and flood. "Nature knows how to produce the greatest efforts with the most limited means," a naturalist has written. The heart of the Sonoran Desert is the Central Desert region of Baja California. Naturalist Joseph Wood Krutch once recalled that on his tenth visit to Baja California he was in a "state of high elation" finding that "the scene was weird even to one by now accustomed to the usual desert weirdness."

The Central Desert is a strange mystical desert garden of unique boojum trees, massive cardón cacti and bizarre elephant trees. I urge you spend one day in the botanically rich deserts of Baja California and you will see deserts and desert plants in a new light. I have pondered how boojum trees in Baja California get to be 80 ft. tall on less than 6 inches of precipitation, making them the tallest trees of the Sonoran Desert. The Sonoran Desert – accept it as a desert gardener with its extremes of weather and get in touch with this desert land and know it many faces; a boojum forest at sunrise, a saguaro forest at sunset and let it enrich your life and spirit.

'Gardening' is defined as "to develop and work in a garden." Interestingly enough, 'garden' is derived from the old high German, *gart*, meaning enclosure, which also gave rise to the word 'yard.' Thus, 'yard' and 'garden' have a close derivation. Desert garden styles are changing. We are redefining our desert gardens in regard to their theme and function. Our desert gardens are extensions of our houses and lifestyles. We give our desert gardens a sense of place, taking our design cues from the surrounding desert lands and our desert climate. Gardening in the Sonoran Desert is a challenge and often an act of courage, but the rewards are greater for the efforts.

Desert gardening is working with the land. We have been desert gardening in this region for hundreds of years. I have visions of the Hohokam tending their canals and corn fields, the agrarian boom using the fertile lands of the Salt River Valley to produce citrus and field crops and finally citrus groves giving away to urban landscapes with new landscape challenges in water conservation and pest management and new opportunities in creating colorful xeriscape gardens and urban wildlife habitats. Desert gardeners reflect on the past, work on today and envision the future of desert gardening.

Desert gardening is gardening with the seasons. The desert garden seasons vary from the sky dramas of the monsoon and ripe Hopi watermelon to the snow on the saguaros and

frost in the winter vegetable garden. Desert gardeners blend with the seasons and celebrate living and gardening in the Sonoran Desert and its special seasons.

Desert gardening is experimental. Desert gardeners are always trying new plants and approaches that add to our database of desert gardening. I dare say, the future of desert gardening rests with each of you, in your desert garden laboratories, evaluating new plants and gardening techniques and freely sharing your knowledge for the common good of desert gardening.

Desert gardening is sowing the seeds of gardening knowledge. Through your ongoing involvement in the community, Master Gardeners continue to plant the seeds of gardening knowledge in this desert region. We will reap a bountiful and productive harvest of desert gardening knowledge for gardeners in the Sonoran Desert because of your efforts. Don't ever doubt your knowledge of desert gardening is appreciated by your neighbors and the community.

The Spirit of Desert Gardening is tempered and inspired by the land and seasons of the Sonoran Desert, mindful of our historic desert gardening legacy, meeting the challenges of urban desert horticulture but seeing new opportunities in these challenges, being experimental in our approaches to desert gardening, sowing the seeds of knowledge for desert gardeners of today and tomorrow but contemplative of the beauty, discovery, wonder and joy of our desert gardens that is the essence of the spirit of desert gardening. "The only limit to your garden is at the boundaries of your imagination," wrote Thomas Church, western landscape architect. So I urge you to be bold in your desert gardening imagination, to be limitless in your desert gardening ideas. To live out your desert gardening dreams and be enriched by the spirit of desert gardening.

Wildflower Gardening



Owl's Clover

Wildflowers are easy to grow because they are adapted to our alkaline soils, seasons, and weather. All they need is full sun, an occasional spring watering and weekly water in the summer. In the ground or in a pot, they are easy because they are native and sometimes

nature does it all by itself! I grew a yard full of wildflowers this year, and what I heard was that it gave the most pleasure to everybody who came by. If you have had failure in the past I recommend that you try them again this fall.

When to plant

Fall is the prime planting season. You can plant September through October. Plant as early as possible to take advantage of fall rain and warm soil temperatures (cool soil temperatures inhibit germination). Spring-blooming flowers planted in the fall will germinate and spend the winter developing a small plantlet and extensive root system. Some tender annuals and perennials should be planted in the spring, but most flowers can be planted in the fall. Plant everything at once: summer-blooming plants will germinate beneath spring annuals and will be ready to take over as the plants die out in the heat of late spring.

How to Plant

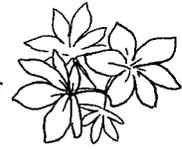
Wildflowers like good drainage. If you have a problem soil that is very compacted you may have to loosen or amend it. Tilling the soil will work up weed seeds – keep this in mind if you choose to rototill an area. If you are planting into decomposed granite (you will need to remove plastic underneath) or open desert that has adequate drainage you will only need to rake over the soil to loosen it. Rake in one direction, plant your seed and then rake back across it only once (too much raking back and forth can bunch up your seeds). Don't plant seeds any more than ¼- inch deep – some seeds need light to germinate, and planting too deeply can cause failure.

You can mix your seed and scatter it by hand or with a hand spreader. A spreader is useful for covering larger areas. Mix the seeds with four parts fine soil or sand when planting in a mix style. Planting each type individually in selected areas is one way to identify seedlings and the best way to design for size and color. When you plant by hand you can feel even the finest seed dropping from your fingers. Use caution when planting very fine seed – sow it as close to the ground as possible to avoid drift. Calm air will give you the most control. To ensure even coverage, divide your seed in half, spread the first half in a north-south direction then cross the first planting in an east-west direction. Over-planting will result in crowded, weaker growth that will need to be thinned. Use small scissors to thin – it is less disruptive.

Lack of moisture is the main reason for poor wildflower bloom in the desert. Scarification, cold stratification, and soaking seed can also help to break seed dormancy. Be patient if some of your flowers don't bloom the first year that you plant them – some seeds may take two seasons to finally germinate and others will not bloom the first season.

Water and Fertilizer

After your seed is in, gently water it daily until the seeds germinate. A myth about wildflowers is that they will grow on their own; they do, but it does not happen every year. For a healthy and beautiful show in the spring, water about once a week after they have sprouted, less often with regular rains or in cold weather. An occasional slow and deep watering through the spring and weekly all summer will keep flowers blooming strong. You can use fertilizer in dense plantings but it generally isn't necessary under normal planting situations (fertilizer will grow more foliage and fewer flowers). Water, soil type, and spacing will determine the size of a plant, with water being the most crucial deciding factor.



Arroyo Lupine

The cheapest form of irrigation is an overhead sprinkling system attached to a garden hose. An oscillating sprinkler works the best, because it does not puddle, and it can get over tall plants. Any system that you choose must have a clear open space to run properly. If you have a pop-up system, taller pop-ups may be required.

Some easy to grow wildflowers: Mexican gold poppies, California poppies, Desert bluebells, Desert marigold, Desert lupine, Arroyo lupine, Dyssodia, Firewheel, Red flax, Mexican hat, Spreading fleabane, Desert senna, Verbena, and Sunflowers.

Wildflower Gardening

Catalogs

Wild Seed, Inc., P.O. Box 27751, Tempe, AZ 85285. Phone 602-276-3536.

Wildseed Farms, 1101 Campo Rosa Rd., P.O. Box 308, Eagle Lake, TX 77434. Phone 900-848-0078.

Plants of the Southwest, Agua Fria, Rt. 6 Box 11A, Santa Fe, NM 87501. Phone 505-438-8888. Website: www.plantsofthesouthwest.com

High Country Gardens, 2902 Rufina St., Santa Fe, NM 87505-2929. Phone 800-925-9387.

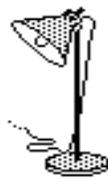
Other: Arizona Nursery Association. Call for a map of participating ANA Retail Nurseries, 602-966-1610.

*Lynne M. Senzek
Master Gardener*

Extension Spotlight

Carl Olson, The Bug Man

First in a series of articles highlighting the work of Extension Agents, State Specialists, and University of Arizona Faculty.



Carl Olson is the associate curator of the University of Arizona Department of Entomology. He is involved with anything and, it seems, everything that has to do with bugs. For instance, he was recently invited to do some consulting work with the city of Puerto Peñasco, Mexico (known to most Americans as Rocky Point). There have been enormous fly population outbreaks in the Las Conchas area (a strip of beach where lots of Americans have built homes).

He and a team made up of local people set out to find the food source that was attracting the flies. They literally combed the surrounding desert and sand dunes. What they found even astonished Carl: It was a three foot high wiggling mass of maggots! It seems that local fishermen were cleaning their catch, and dumping the entrails in the sand dunes instead of taking them to the dump. Once everyone had been educated as to the correct way to deal with the problem, and to be consistent in dealing with the problem, the flies gradually disappeared.

He received a degree in zoology from University of Miami, Ohio, and a masters degree in biology from Marshall University, West Virginia. Then Carl worked for a company in California who grew bugs by the millions. Carl unfortunately found the work repetitious and tedious as his job was to make the media that the bugs lived in, while keeping the culture free of contamination, and predator bugs out of the environment. He sought a more challenging position which led him to the University of Arizona, where he has been since 1975.

Carl, who is perhaps best known for co-authoring *Insects of the Southwest*, begins the book by saying, "Working with insects has been a love affair of mine as long as I can remember." *Insects of the Southwest* was begun by Carl's mentor and friend, Dr. Floyd Werner. Carl completed the book on his own when Floyd became fatally ill. The book was compiled to fill a need for the general public, as there was nothing previously written just on bugs of the Southwest. The book illustrates the most common bugs found around the home and yard, and explains how they benefit the ecosystem. "Not all

bugs are bad," Carl explained. "I try to teach people tolerance."

Carl goes about doing that in a lot of different ways. The University collection, of which he is curator, contains around three quarters of a million specimens. Thirteen thousand species are from Arizona, although Carl feels that represents only about one-third of what is here. Any one can come into the Forbes Building on campus and see the collection.

Carl is a lecturer at the University; he teaches a class on insects in society; a correspondence self-paced three-hour class on bugs (call 520-626-4222 for information); and answers between 2,000 - 2,500 questions from the public annually. He is also involved with forensic entomology researching how insects eat bodies as they decompose. This knowledge is then shared with law enforcement agencies aiding them in solving crimes.

Carl teaches an Elderhostel class through the YMCA. The class covers the different types of deserts, habitat, plant life, the arthropod world, the insect world in general, and how animals are effected by bugs. He also presents a four-day, one credit hour class in the Catalina Mountains through the Audubon Institute of Desert Ecology. People come from all over the country representing age groups 18 through 80 for the class. Everyone camps out in the state park in April for a real desert experience.

He is available to grade schools working with 4-8 graders. Museum groups invite him to teach them about how to handle insects in collections, and he presents at many conferences. You may have guessed by now that Carl likes meeting people, and talking and educating others about bugs.

He doesn't stop there though. Carl writes and publishes papers, processes and analyzes formal surveys, and, and, and... Well, I guess just about anything that has to do with bugs. You can reach him at his E-mail address at, what else but: Bugman@ag.arizona.edu.

*Sue Hakala,
Master Gardener*

FALL IN THE HERB GARDEN

It's time to start your fall herb gardening activities (the temperatures **will** be cooling...). First off, remember to renew the organic matter in your soil with at least a few inches of compost or mulch. If you top-mulched around your herbs for the summer, work that material into the soil, as well as some fresh compost (you **can't** overdo the organic matter!). This material enhances the drainage and overall structure of your soil, and for most herbs provides an adequate source of nutrients.

Fall is the perfect time for transplanting a wide variety of perennials into your garden or landscape. The soil is still warm, encouraging new root growth, while air temperatures are dropping, which is easier on the above-ground portion of the plants. Cooling soil temperatures are needed for seeding the cool-season annual herbs.

This seems to be the best time to plant lavender and sage plants. These Mediterranean herbs **must** have excellent drainage, as they fall victim to fungal rot all too easily. If your soil doesn't provide adequate drainage, it's worth digging 1½ - 2 feet deep, putting a 1 - 2" layer of gravel in the bottom of the hole, and amending the backfill with mulch and sand to enhance the drainage. Is digging too much work? Planting on a mound or in a raised bed with some well-draining soil mix will also do the trick! This is also a good time to put out French sorrel plants, as well as most other perennial herbs.

Fall is the season to go crazy with direct-seeded herbs. Most of the annuals that develop a taproot system produce more vigorous plants if they are direct seeded where they are to grow. This would include herbs of the family Apiaceae (carrot family), such as cilantro/coriander, parsley, dill, fennel, caraway and chervil. Also plant seed of borage, calendula, nasturtium and chamomile. In October, put out seed of arugula and desert chia, as well as cloves of garlic and shallots. Remember that garlic won't mature until May or June, so choose a location where it can be left undisturbed for that period. Try planting some cilantro seed every couple of weeks so that you'll have a continual harvest of this essential herb. It's especially important, while the temperatures are still fairly high, to keep the upper layer of soil moist for seed planting so that your developing seedlings won't dry out.

This is also a good time to divide clumps of your established lemongrass, garlic chives, society garlic, comfrey, costmary, mints, yarrow and tansy.

As the weather cools, remember to cut back on your watering frequency. Enjoy this perfect season for herb gardening!

Kirti Mathura

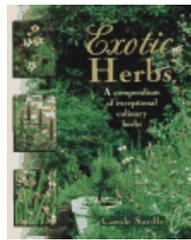
Master Gardener & President, Arizona Herb Assoc.



Book Review

Exotic Herbs by Carole Saville, 1997. Henry Holt & Co., New York. 308 pp. \$35.00

This lovely hardcover book treats many unusual herbs, including more recent ethnic herbs introduced from various cultures, such as cilantro, Cuban oregano, roselle, perilla, and Vietnamese coriander. A number of plants frequently used in Arizona gardens (and landscaping) are treated: Mexican tarragon, Cleveland blue sage, Mexican oregano, Mrs. Burn's lemon basil. Herbs are listed in family or



flavor groups; each one has an excellent color photo, with common and scientific name given, followed by discussions of the herb's origin, history and general habit; on how to grow and harvest them, and on culinary uses. An intriguing recipe is given for each species. Examples: cranberry vinegar with 'Golden Rain' rosemary; Asian pesto, Petits Pois with purslane and Egyptian onions, Pickled samphire, Rock Cornish Game Hens with Cleveland Sage. Ms. Saville's discussions are fascinating, complete, and contain much information of value to southwestern gardeners, since she gardens in Hollywood Hills, CA. Her suggestions of planting combinations are especially well-done. An introductory section gives general information on the history of herb gardening; on cultivation, propagation, germination; and on gathering, harvesting, storing and preserving herbs. The design and layout of the book gives visual and tactile pleasure in itself, but the real treasure is in the knowledge Ms. Saville presents.

Carol Crosswhite

Curator, Boyce Thompson Arboretum

Fall Vegetable Gardening

Now that an end to hot temperatures is in sight, many low desert gardeners begin to think of the cool fall days and bountiful vegetable harvests ahead.

Site selection and soil preparation is the first important step. Most vegetables need full sun, good drainage and fertile soil. Till the bed at least 1 ft. deep, and amend heavy clay soils with sand or perlite to improve drainage. Reduce the chances of disease by solarizing the soil for about 2 months before planting. Vegetables are intense users of nutrients, so amend the soil with slow-release fertilizers, manure, or compost. Irrigate the entire area so water penetrates at least 2-3 ft. deep to help settle the soil and leach salts away from the future root zone. Let the soil dry out for 1-2 weeks.

Selecting vegetable varieties is the next step. As a general guideline, it is best to select short season (quickly-maturing) varieties that are resistant to common pests, like *Verticillium* and *Fusarium* wilts, crown gall, nematodes, etc. The following vegetables are recommended for fall gardening **only**: broccoli, cauliflower, celery, endive, garlic, parsnips, and peas. Some vegetables can be grown in both fall and spring gardens: beets, cabbage, cucumbers, carrots, chard, lettuce, onions, radish, rutabega, spinach and turnips. Many of these varieties have a better quality or taste when maturing during cool temperatures. Also, keep in mind the difference between heirloom and hybrid varieties. If you are planning to save seed for next season, choose heirlooms or hybrids that are open- or self-pollinated.

When sowing vegetable seeds, keep soil constantly moist (but not wet) during germination. Soil temperatures of 70° to 75°F. are best for germination. Check the seed packet for proper planting depth. Cover seeds and gently tamp down soil with hands or the back of a hoe, and water gently. Cover seeds with floating row cover to protect from birds and insects. Do not fertilize until seedlings are well established and thinned. After seeds have sprouted, irrigate only frequently enough to keep the root zone moist (a general rule of thumb is to water

Garden Harvest Recipes



Toasted Pumpkin Seeds

Conventional: Wash and drain seeds. Spread in a single layer on a cookie sheet. Roast at 375°F for 20-30 minutes until dry. Increase heat to 400°F, dot seeds with margarine and brown for 5-10 minutes, stirring often. Sprinkle with salt. Cool in an airtight container.

Microwave: Wash seeds and remove any membrane, pat dry. Place 2 tablespoons of margarine in 12" x 8" glass dish and microwave on high for 1 minute until melted. Stir in 1 cup of seeds, coating evenly with butter, sprinkle lightly with salt if desired. Spread evenly in dish and microwave on high for 10-12 minutes until lightly toasted, stirring occasionally during last half of cooking time.

These and more pumpkin recipes are available on HE-141 "Pumpkins" from Home Economics Publications. Call 602/470-8086 Ext. 341 or write Home Economics, Maricopa County Cooperative Extension, 4341 E. Broadway Rd., Phoenix, AZ 85040-8807.

twice weekly while temperatures remain 100° F or above, and gradually reduce watering interval to 7-10 days when temperatures drop to below 100°F). After germination, thinning seedlings helps reduce competition and chances of disease.

Transplants are recommended for broccoli, cauliflower and cabbage. Choose a cloudy day to plant transplants (if possible). Disturb the roots as little as possible, and plant no deeper in the soil than it was in the container. Protect the transplants from heat, sun, or wind for a few days.

Mulching is an oft-neglected step in vegetable gardening. Spread straw, peat moss, sawdust, wood chips, etc. around the established vegetable plants. Mulches help control weeds, conserve moisture, regulate soil temperature and keep the vegetables cleaner.

Shanyn G. Hosier
Instructional Specialist

Fall Ornamentals for Color

I have not been part of a school year for many more years than I care to remember, but I still recall what September felt like then. The anticipation and un-certainty of a new school year; new dresses and shoes in dark plaids, deep greens, and rust – a tribute in colors that had no-thing to do with fall where I lived. I loved the smell and feel of those fabrics, but they were almost unbearable in central Texas where, like here, it is still hot in September.

I still think of September as a beginning month, something new is on the horizon, the signs of a new season are all around. Shorter days and drier mornings, asters gently replace the yellow of desert senna on the driveway, another burst of growth and bloom in salvias, justicias, and daleas; and the surest marker of the new season – the annual arrival and leave-taking of the Rufous hummingbird.

Gardens that made it through the summer well look fabulous this time of the year. It is like having spring all over again. No death and decay, no turning leaves, no nip in the air to mar the delight and joy of this beautiful month.

Lots of good desert ornamentals bloom again in the fall making it a great season of color. Autumn sage (*Salvia greggii*), California fuschia (*Zauschneria californica*), yellowbells (*Tecoma stans*), Texas rangers (*Leucophyllum* spp.), Sundrops (*Calylo-phus hartweggi*) mixed with the hibiscus, lantana, and Mexican oregano (*Poliomentha madrensin*) that never quit. Add to this the continued long term bloom of firebush (*Hamelia patens*) and jasmine to make fall one of the most colorful seasons in desert gardens.

But there is plenty of work to do, because this is the beginning of the long, fruitful planting season here in the desert.

Trees and woody shrubs, in particular, thrive in a fall planting. Mesquite, palo verde, ironwood, desert willow, lysiloma, kidneywood and Texas ebony use the long fall growing season and the mild desert winter to set and grow a fine network of roots. Those roots are what will enable the plants to endure the rigors of the following summer. The only shrubs which prefer spring planting over the fall are the ones which are frost tender: bougain-villea, yellowbells, firebush, lantana. Even these will do fine if given adequate protection should the weather get very cold in December or January.

Cactus and other succulents, particularly yucca and agave, likewise perform well with a fall planting. Unless the plant is particularly cold sensitive, like Organ pipe (*Stenocereus thurberi*), senita (*Lopho-cereus schottii*) or *Agave attenuata*, a fall planting will do wonders for a succulent plant's ability to establish and grow. In addition, there are a host of excellent winter growing succulents which are cool season growers and bloomers. These include aloes and the huge mesemb family – a group of low, ground hugging succulents in the genera *Ruschia*, *Drosanthemum*, *Lampranthus* and *Cephalophyllum* among others.

I personally cannot get most Mediterranean herbs to do well unless I plant them in the fall. Lavender, thymes, and rosemary respond so well to a fall planting, I can no longer bear to plant them any other time. These are the plants which are accustomed to the long, dry Mediterranean climate summer and so are just itching to get growing again in the shorter days and cooler nights of the fall.

The same phenomenon occurs in plants from western deserts of Arizona and the California chaparral, a region characterized by hot, dry summers and intermittent winter rain. Plants like *Salvia clevelandii*, wild buckwheat (*Erigonum fascicul-atum*), the shrubby smoketree (*Psorothamnus spin-osus*), and beavertail prickly pear (*Opuntia basil-aris*) all do their best beginning in September. This signals the beginning of their growing season and is a wonderful time to plant these very tough ornamentals.

So it's time to get busy, get planting, and enjoy the first month of the cooler portion of the long growing season which the low Sonoran desert provides.

Mary F. Irish
Desert Botanical Garden

BULBS FOR FALL PLANTING

If you have not discovered the joy of growing bulbs in your garden, now is the time to begin. With a few exceptions, most bulbous plants are planted in the fall of the year. Gardeners in the Sonoran Desert are blessed with a climate which make it possible to grow some of the more tender species which cannot tolerate cold winters. On the other hand, some spring-flowering bulbs require a cold treatment via the refrigerator to perform well.

The term "bulb" includes a variety of plants which are really not bulbs at all, but corms, rhizomes, tubers, and tuberous roots. A true bulb is a modified stem which contains leaves and flowers in embryonic form. Bulbous plants most familiar to gardeners are the big four spring-flowering ones - daffodils, tulips, crocus, and hyacinths. They usually show up in local nurseries in October, when they are traditionally planted in temperate climates.

There are literally hundreds of cultivars of daffodils. The catalog of the Daffodil Mart list 16 pages of these beauties. In general, daffodils can be planted as soon as purchased in the fall, but hardy varieties bloom better if pre-cooled for 8-10 weeks at 40 degrees Fahrenheit. Paper white daffodils need no cold treatment to flower. These delightful flowers are great in desert gardens where they will persist for years.

Crocus do not need refrigeration, nor do hyacinths. However, hyacinths lend themselves so readily to forcing, it is a pleasure to buy pre-treated bulbs to enjoy as houseplants. After bloom they should be set deeply in enriched, well-drained soil.

There are many species and varieties of crocus. The tiny little snow crocus appear in early spring in plain and striped colors. Later-blooming one have larger blossoms in subtle shades of silver grey, amethyst, deep violet, and reddish purple. They are garden gems. McClure and Zimmerman list over 30 species of spring-blooming crocus.

Freesias are very tender plants grown from corms. They are garden aristocrats, very fragrant and blooming over a period of time in the garden as individual flowers open along the flower stems. Place them in sheltered spots. Once established they will bloom year after year.

Amaryllis belladonna appear in August gardens as "magic lilies" or "naked ladies" on leafless stems. Their strap-like leaves grow in the spring and disappear. The bulb should be planted right after the blooming period. They may not bloom for several years if they are disturbed at the wrong time.

Orinithogalum has several forms suitable for desert gardening. *O. umbellatum*, dainty green and white Star of Bethlehem closes at night to protect its pollen, *O. dubium* may be yellow or orange with a black eye. *O. arabicum* is white, fragrant, and sports a prominent black ovary in the center of each flower. The Chinchinchee, *O. thyrsoides*, is a native of South Africa with white and yellow forms. It is a tender bulb which will bloom in water and lasts in flowers for many weeks. *O. caudatum*, Pregnant Onion, is grown for its foliage. It has leaves approximately 6' long and its flower stalk is 4' tall.

The catalog of McClure & Zimmerman, mentioned above, devotes 15 pages to miscellaneous and small bulbs from alliums to Zantedeschia. Two additional pages list fall-blooming bulbs, most of which are shipped for planting in early fall. The catalog is a splendid reference for information on culture and uses of the small bulbous treasures.

It pays to do some homework before investing in garden bulbs. Our own Cooperative Extension brochure, Q382, is useful for general information, descriptions of plants, and planting dates. The Brooklyn Botanic Garden (1000 Washington Ave, Brooklyn, NY 11225) published *The Gardener's World of Bulbs* in 1991. One chapter features tender bulbs for Southern gardens.

CATALOGS:

The Daffodil Mart, 7463 Heath Trail, Gloucester, VA 23061

McClure & Zimmerman, 108 W Winnebago, Friesland, WI 53935. Van Bourgondien Bros, 245 Route 109, Babylon, NY 11702.

Evelyn Helm
Master Gardener

New Heritage Rose Garden Association

Attention all rose lovers. The Valley of the Sun Heritage Rose Association is now being organized. The emphasis for the association will be on the study of old garden roses with hands-on experience for all. There will be many group activities planned with jobs tailored for all levels of physical activity. Come to the organizational meeting on Thursday, October 16th and be a founding member of the only Heritage Rose Garden Association in the Valley. Learn that the divi-ding line between old and mod-ern roses is 1867, the year the first hybrid tea "La France" was introduced. Discover some of the many myths of Old Roses and learn which roses can bloom year round in the Phoenix valley. Study rose history, learn about rose crafts and various old garden rose classes.

The first regular bi-monthly meeting will be Nov-ember 20th followed by the January 15, 1998 gathering. All meetings begin at 7:00 p.m. at the Maricopa County Cooperative Extension Office located at 4341 East Broadway Rd., Phoenix. Each meeting will highlight a different old rose topic. Actual garden work will be available for those interested on both weekday and weekends.

Call American Rose Society Consulting
Rosarian Floyd Evans at
944-2198 for more info.



Horticultural Jewels

These plants are suggestions of unusual, uncommon or rarely used varieties.



Erythrina flabelliformis (Coral Tree)

This tree has spectacular bright red tubular flowers before it leafs out. It grows 4 - 5 ft. high and looks like a stunted cottonwood. Its spring flowers attract hummingbirds.

Kent Newland, Native Plant Society

Gaura lindheimeri

When this plant is blooming, it looks like a flock of white butterflies has settled on the plant. It is very hardy, drought tolerant and likes full sun. It is very seldom out of bloom. It grows 18 inches to 2 feet tall and has a 3 foot wide spread. It is a perennial that is native to our Southwest.

Jim Baker, Baker's Nursery

Maytenus sp. phyllanthoides (mangle dulce)

This is a very slow-growing shrub that can be used as a screen. It is evergreen and has leaves that are shiny and a deep, glossy green (resembles a jojoba). This bush has inconspicuous blooms, is drought tolerant and can be planted in part shade to full sun.

Janet Rademacher, Mountain States Wholesale Nursery

Xeriscape: Nature's Choice in Landscaping

Kent Newland, Xeriscape Program Manager for City of Phoenix Water Conservation Office will be teaching these free classes. **ADVANCED RESERVATIONS ARE REQUIRED.** For more info call 256-3430. Each class meets 6:30-8:30 p.m.



10/7 - Los Olivas Senior Center, 2802 E. Devonshire, Phoenix,
10/14 - Cholla Library, 10050 Metro Pkwy. East, Phoenix,
10/21 - Yucca Library, 5648 N. 15th Ave., Phoenix,
10/23 - Paradise Valley Community Center, 17402 N. 40th St., Phoenix,
Oct 28 - Ironwood Library (Ahwatukee), 4333 E. Chandler Blvd., Phoenix.

CALENDAR OF EVENTS**SEPTEMBER**

Fall rose pruning demonstrations will be held on the following dates. Rosarians will be on hand to answer questions.

9/6 Glendale Rose Society. Dr. Fields rose garden at the SE corner of 45th Ave. and Northern Ave. 9 a.m. - 1 p.m. For info call Nancy 843-2522.

9/13 West Valley Rose Society. 8015 W. Northern Ave., Glendale, 8 a.m. - noon. Formal rose garden with gazebo and ponds, light refreshments. For info call Ken and Peggy Jones 931-5004.

9/16 Phoenix Rose Society. Valley Garden Center, 1809 N. 15th Ave., Phoenix, 6 p.m. - dark. For info call Paul Bushkin 937-5713.

9/20 Scottsdale Rose Society. Society's rose garden at Goldwater Blvd. and 5th Ave., Scottsdale, 10 a.m. - 1 p.m. For info call Julieanne 451-6291.

9/6 Iris Sale, Sun Country Iris Society. Tri-City Mall, Mesa and ChrisTown Mall, Phoenix, 9 a.m. - 2 p.m. (or until sold out). Old favorites, new introductions, all colors, starting at 50¢. For info call Marge 839-2625.

9/26 West Central District Meeting of Garden Clubs. Beefeaters Restaurant, 300 W. Camelback Rd., Phoenix, 9:30 A.M. - noon. **ADVANCED RESERVATIONS ARE REQUIRED AND MUST BE MADE BY 9/19.** Cost \$13.50, guests are welcome. Speaker: Rose Mofford "So I'm Retired - What Next?" For info call Lois 266-0142 or Dot 957-9095.

9/28 Central Arizona Cactus & Succulent Society. Webster Auditorium at Desert Botanical Garden, 1201 N. Galvin Pkwy., 2:00 p.m. Speaker: Woody Minnick from California – billed as one of the most experienced plant explorers of cactus in Mexico. For info call Gard at 996-9718.

OCTOBER

10/2 Orchid Society of Arizona. Valley Garden Center, 7:00 p.m. Speaker: Dr. John Atwood, Director, Orchid Identification Center at Selby Botanical Garden, Sarasota, FL. For info call Bernice at 730-1479.

10/17 - 11/2 Plant Sale at Boyce Thompson Arboretum, 37615 US Highway 60, Superior (45 minutes east of

Mesa), 8 a.m. - 5 p.m. daily. Admission \$5.00 for adults. Thousands of arid-land tolerant plants. Horticulturists will lead tours Sat. and Sun. at 10:30 a.m. and 1:30 p.m. For info call 520-689-2811.

10/18 Regional Meeting of Men's Garden Clubs. Red Mountain High School, 7301 E. Brown Rd., Mesa. Registration begins 8:30 a.m. Cost \$12 in advance, \$15 at door (includes lunch and snacks). Bring a plant to exchange. Speakers: Janet Radmacher "New Introductions," Allen Clark "Bees," Frank Martin "In a Land of Little Rain, Native Seed Gardens." For info call Sue 832-2159 or Bob 986-1563.

10/25 Central Arizona Cactus and Succulent Society Bus trip to Tucson, visit 4 nurseries selling cactus and succulents. For info call Gard 996-9718.

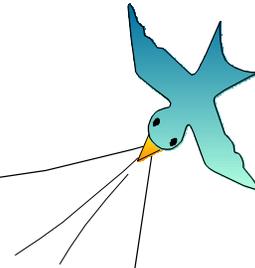
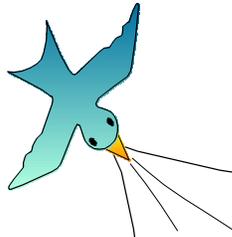
10/25 State meeting of Native Plant Society, Desert Botanical Garden, 1201 N. Galvin Pkwy. Registration 9 a.m., free garden admission if you pre-register. Cost \$25 for members, \$35 for non-members (club membership fee is \$15). **SPACE IS LIMITED – LATE REGISTRATION CHARGE AFTER 10/8.** Keynote Speak-er: "Why Landscape with Natives," plus Judy Milch "Landscaping with Natives," Dr. Lisa Harris "Trans-planting the Saguaro," Jane Evans "Landscape Brochures," Dan James "Techniques for Desert Restoration," Karen Novak "Linear Oasis – riparian habitat protection in subdivisions," Mary Irish "New Ornamentals for Desert Gardens," TA "How to Prune Native Trees," Terry Mikel "Native Plant Diseases." Call Pam (Tucson) for registration papers 520-749-2581.

10/25-10/26 Desert Botanical Garden Plant Sale. 1201 N. Galvin Pkwy., 9 a.m. - 5 p.m. both days. Free admission to plant sale area. Sale open to Members only on 10/24 from noon to 6 p.m. For info call Chuck Smith 941-1225.

10/16 - 11/7 Arizona State Fair

NOVEMBER

11/1 "Galaxy of Roses" Rose Show sponsored by West Valley Rose Society and Sun City Rose and Garden Club. Bell Recreation Center, 90th Ave. and Bell Rd., Sun City. Enter exhibits 6:30 a.m. - 10 a.m., view roses noon to 5 p.m. Call Ken and Peggy Jones prior to show for entry numbers, or for info 931-5004.



Visit the new Maricopa County Master Gardener website...
**“Environmentally Responsible Gardening and
Landscaping in the Low Desert”**

Just point your browser to
<http://ag.arizona.edu/maricopa/garden/>

Includes sections on timely tips, horticulture happenings, search engine, hot off the press, and you can even send your gardening questions to a Master Gardener listserv!

