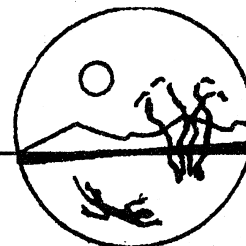


# High on the Desert

Cochise County Master Gardener

## Newsletter



The University of Arizona and U.S. Department of Agriculture cooperating.

### Garden Basics: Gardening for the Butterflies

A successful butterfly garden consists of four items: sunshine, windbreaks/shelter, nectar/water, and larval food plants.

Butterflies prefer warm, sunny spots in the garden. They fly best when their body temperature is about 85-100°—which is why they are usually seen during the hottest time of the day. Provide rocks in the garden which butterflies can perch upon to warm themselves.

Sheltering the butterfly garden from winds helps butterflies so they are not cooled by winds and will not have to extend extra energy searching for food, mates, and laying eggs. *Vitex agnus-castus* and *Buddleia's* not only provide shelter



but nectar as well. From a butterfly's point of view you can't have too many nectar sources! Large groups of plants will be more enticing to butterflies and diversify the palette so there is always something in bloom.

According to *Desert Butterfly Gardening*, published by the Arizona Native Plant Society and Sonoran Arthropod Studies Institute, the following are just a few of the many plants that butterflies love to visit. Bee Bush (*Aloysia gratissima*), butterflies love the nectar and the birds eat the small seeds, Pine-leaf Milkweed (*Asclepias linaria*), this plant is the major food source for the Queen and Monarch caterpillars, Side-oats Gramma (*Bouteloua curtipendula*) and other native grasses are great larval food plants, Desert Hackberry (*Celtis pallida*) is a native larval food plant and a good all around wildlife plant. The *Dalea* species is another great larval food plant and will not only bloom in spring but many also bloom again in fall. *Lantana* is known worldwide as a great nectar producing plant—the yellow and pink varieties seem to attract butterflies the most.

For water, provide an area where a small dish can be filled with sand/soil, manure, and water until damp. Males will visit the site—a behavior called “puddling.” They will extract sodium and other nutrients needed for mating. To keep females from just passing through (and the males, too) be sure to include larval food plants, which are what they are searching for so they can mate and lay eggs. These can be planted in an informal place away from the main garden as the caterpillars will chew up the leaves and flowers leaving plants unsightly. And, remember that butterflies are insects and pesticides (including BT, *Bacillus thuringiensis*) kill not only the bad guys but butterflies and their larvae as well.

Happy gardening!

**Sources:** *Desert Butterfly Gardening*, Arizona Native Plant Society and Sonoran Arthropod Studies Institute; *The Butterfly Book*, Donald and Lillian Stokes/Ernest Williams; SABO of Bisbee, (520) 432-1388, e-mail: [sabo@SABO.org](mailto:sabo@SABO.org), Website: [www.sabo.org](http://www.sabo.org)

Cheri Melton  
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## Cuttings 'N' Clippings

► Cochise County Master Gardeners Association will not be holding regular meetings during June, July, and August. They will resume on September 2, 5:00 pm at the Mona Bishop Room of the Sierra Vista Library. They will be holding their annual potluck picnic in honor of the graduation of the 1998 Master Gardener Class and their Annual Business Meeting on June 16 at Ramada #1 in Sierra Vista's Veterans Memorial Park. All Master Gardeners and Trainees are invited to attend. Please call Joyce at the Sierra Vista Cooperative Extension if you plan to attend.

► The Sierra Vista Area Gardener's Club meets the third Thursday of each month at 2:00 pm at the Mona Bishop Room of the Sierra Vista Library. On June 18 Jena Barnett will speak on *How to Water*.

► Arizona Game and Fish Department's Russ Haughey is looking for volunteers to help plant seeds of mesquite, hackberry, and walnut trees on June 17/18 in a greenhouse in Mesa. Interested? Give him a call at 602-981-9400, Ext. 222.

### Newsletter Staff:

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*Robert E. Call*

Robert E. Call,  
Extension Agent, Horticulture

## Readin' Time

It's that time again to get out of the heat (and wind!) and curl up next to the swamp cooler and read a book or two! Eric A. Johnson, co-author with Scott Millard on two of my favorite books, *How to Grow the Wildflowers* and *The Low-Water Flower Gardener*, has come out with another excellent addition to the Plants for the Arid West series with *Pruning, Planting & Care, How to Grow More Than 300 Native and Adapted Trees, Shrubs, Ground Covers, Vines and Flowers*. This guide thoroughly covers everything you want to know about gardening for the Southwest region. This book is destined to become a dog-eared favorite in my library and I highly recommend it for everyone. If some of the photos look familiar that's because many shots are from Tohono Chul Park in Tucson.

Lavender lovers—there's finally a book dedicated to lavenders. *The Lavender Garden*, by Robert Kourik, is a sweet little book profiling sixteen of his favorite lavenders including lavender botany, planting and care, and lavender in fragrances, crafts, and cuisine. If you're thinking of installing a drip system, check out one of the author's other books, *Drip Irrigation for Every Landscape and All Climates*.

Sunflowers have been gaining popularity in the past few years and two books are out celebrating the happiest flower in the garden. Lucy Peel's *The Ultimate Sunflower Book* has beautiful pictures of the many varieties available and many craft and cooking ideas. *The Great Sunflower Book* by Barbara Flores is a wonderful little book brought to bloom from the horticulturists from Seeds of Change, an organic seed company in Santa Fe, New Mexico.

Cheri Melton  
Master Gardener/Staff Writer



## Dollars and Sense

Do Master Gardener programs pay off? Yes! according to a recent study by University of Minnesota horticulturists. The researchers conducted an economic analysis of the Minnesota Extension Service Master Gardener program (similar to other programs across the country in which individuals are provided horticultural training at low cost in exchange for a time pledge to extension projects)

Findings of the analysis: The Minnesota Master Gardeners contributed time valued at \$924,000 to the Extension Service, providing over \$15 worth of work for every dollar dedicated to training—an investment return that most Wall Street players only dream about.

Source: M.H. Meyer and A. Hanchek, *Master Gardener Training Costs and Payback in Volunteer Hours*, HortTechnology 7, October-December 1997, pp 368-370.

# THE VIRTUAL GARDENER-

## Landscaping for Wildlife

One of several reasons I mentioned last month for choosing to landscape with native plants is to attract wildlife to your garden. If you are like me, watching animals and birds in your garden is a constant source of pleasure. Particularly at this time of year when we spend many mornings and evenings on the patio, we enjoy watching the small dramas played out before our eyes by the many creatures that live in the garden or stop by for visits. We have Desert Cottontails (*Silvilagus audubonii*), Rock Squirrels (*Spermophilus variegatus*), lizards of several different varieties, and of course lots and lots of birds. They court and play, squabble over food and water, and introduce us to their babies.

There are many resources on the World Wide Web that provide guidelines for creating landscapes that attract wildlife. A search for "landscaping for wildlife" on [www.dogpile.com](http://www.dogpile.com), one of my favorite metasearch engines despite its scatological name, and SavvySearch ([www.cs.colostate.edu/~dreiling/smartform.html](http://www.cs.colostate.edu/~dreiling/smartform.html)) another favorite metasearch engine, yielded hundreds of documents containing that phrase. One of the most useful of these was a page of links to 75 sites discussing all aspects of landscaping for wildlife. The URL for that page is [www.tiac.net/users/sgprice/backyard/wildlife.htm](http://www.tiac.net/users/sgprice/backyard/wildlife.htm).

Although the details about specific plants and animals vary from region to region, the principles of landscaping to attract wildlife are the same everywhere. All wild animals and birds have the

same basic requirements. They require water, food, and cover.

Water is particularly important in this arid region. Wherever water is available, there you will find insects, birds, reptiles, and other animals. Since not too many of us are fortunate enough to have a spring or other natural water feature on our property, we will have to make one if we want one. The water feature can be as simple as an inverted garbage can lid or as elaborate as a fancy mission fountain. When creating a watering hole, keep in mind that most animals consider themselves very vulnerable to predators when they are drinking. For this reason it is a good idea to place your water source in an open area that is shaded but some distance from vegetation that could conceal an enemy. This will have the added benefit of allowing you to observe animals drinking. Be very careful not to create a trap that can drown your visitors. The water should be no more than two or three inches deep and the edges of the container should be gently sloped and have a rough enough surface that the animals can easily climb out. A couple of flat rocks to provide platforms in the water for animals and birds to stand on are also a good idea. If you can create a feature that has running or dripping water it will be even more effective in attracting visitors.

There are also some things to avoid. Don't forget to keep the water feature filled. Thirsty creatures looking for a cooling drink are as disappointed to find an empty watering hole as you would be. If the source of water is not

dependable, they will be less likely to come back. Don't let the water become fetid and nasty. Not only can contaminated water harbor disease organisms that can make the animals sick, but they can also become breeding grounds for mosquitoes that can make your life miserable or even give you dengue fever.

Food is supplied by both plants and other animals. Plant eating animals consume nectar, fruit, greens, seeds, and nuts. Pick plants for your wildlife garden that supply all of these products. Try for a large variety of plants and pick a mix that keeps something in bloom throughout the season. If you have plants you don't want your wild friends to eat, you will have to protect them with barriers. We protect small plants from birds and bunnies with chicken wire cylinders. The squirrels are usually clever enough to get what they want despite our efforts so we just accept the losses. We are fortunate not to have to worry about deer, coatis, and javelina at our place but have had enough exposure to the problems they have created for others to appreciate the challenges they can present.

It is interesting that most of the documents on the Web that discuss gardening for wildlife ignore carnivores. Almost all the discussions of food for animals, especially birds, speak only of plants foods. Of course we all realize that the world is inhabited by meat eaters as well as plant eaters. In fact, we are thankful for the large quantities of insects consumed by birds and small reptiles. But we don't like to think about animals that eat other (noninsect) animals. Because plant eating animals are going to be concentrated in the food paradise we have created for them, the meat

(Continued on next page)

eaters are also going to be attracted there. Carnivores also have to make a living and have families to feed, so some of our plant eating friends are going to become meals. Sometimes the results are tragic. On one occasion last year, my wife and a mother quail unsuccessfully tried to stop a roadrunner from devouring a covey of tiny quail chicks.

One tragedy that can be avoided, however, is allowing our pets to terrorize our wild friends. We should not create a hunting ground for our pets. Cats are particularly hard on birds and small mammals if left to hunt freely in the garden. Our two dogs are potential threats to rabbits and squirrels except that the wild creatures are professional survivors and our dogs are strictly amateur hunters who are quickly outwitted. Even so, we take care to shoo away the bunnies in the back yard before turning out the dogs.

Cover provides protection from the elements and from predators, and you should take pains to provide hiding places and shelter for your wild friends. Ground nesting birds like tall grasses and low growing bushes to shelter in and nest under. Other birds like to roost and build nests in trees and cactus. One of the high points of our spring this year was watching a Curved-bill Thrasher (*Toxostoma curvirostre*) family build a nest in one of our chollas and produce a family of three chicks. The chicks have now all grown up and departed looking for employment and mates elsewhere, but they were great fun to watch while they were here.

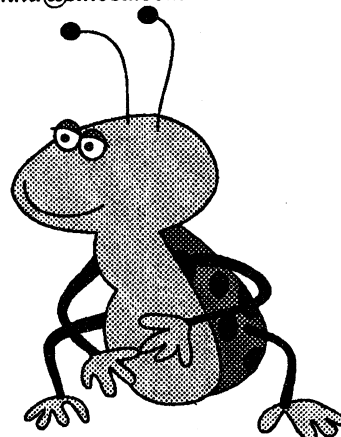
Many small animals like to make their homes in man-made structures. Our pile of fireplace logs has been home to several generations of squirrels over the last fourteen years, and both the

bunnies and the squirrels like to nest under the floor of my garden shed. One of the documents on the Web suggested that no wildlife garden was complete without a stone wall to provide hiding places for small mammals and reptiles. Another suggested broken clay flower pots could be partially buried so as to become tiny caves to provide homes for lizards, frogs, toads, and tortoises. We often have Horned Lizards ("horny toads") —*Phrynosoma platyrhinos*—who burrow into slopes in the yard, and I'm curious if they would like a flower pot home.

While I'm on the subject of horned lizards, I would like to put in a plea for you to avoid using poisons to kill ants. These lizards live on a diet of ants and will die when they ingest the poisoned ants. Old timers will tell you that "horny toads" used to be very common and now have become very rare. One of the reasons for their disappearance is the widespread use of pesticides to kill their favorite food. Please don't use pesticides to kill ants.

I hope I have given you some ideas for creating a miniature wildlife preserve right in your own back yard. If you have access to the Web, look up some of the URLs I have given you and you will find many more ideas. Until next time—happy surfing.

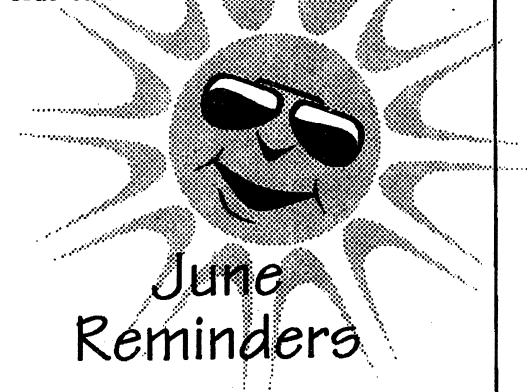
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## MORE VIRTUAL GARDENING!!!

### Gardening for Pollinators

The Arizona-Sonora Desert Museum, in cooperation with the Arizona Native Plant Society, has just published a new brochure entitled *Gardening for Pollinators in the Desert Southwest*. It describes and illustrates a variety of native desert plants that can be used as food sources for pollinators (hummingbirds, bats, native bees, butterflies, and hawk moths), and includes descriptions of feeding, nesting, and territorial habits of the animals. You can find a description of the brochure at <http://www.azstarnet.com/~anps/pubs/pollinators.html> which has a link to the Desert Museum's publications page where it can be ordered online.



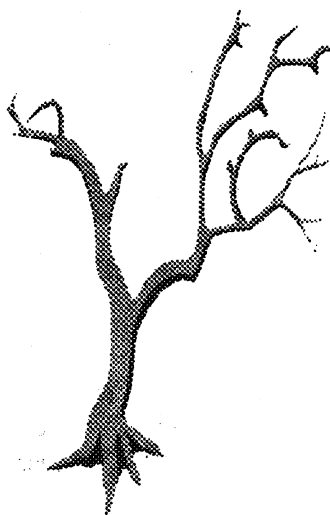
- Check tree ties
- Remove stakes if tree can stand alone
- Mulch trees & shrubs
- Remove faded flowers and fertilize roses
- Stake tomato plants & watch for curly top - remove
- Prevent blossom end rot by even watering
- Water! Water! Water!

## The Agent's Observations

**Q** I have several twelve-year-old cherry and peach trees that have holes in the leaves. Also some of the cherries have a grayish spot forming on the fruit. I do not see any insects. What is causing the holes and what can I do about them?

**A** It sounds as though your trees are affected by bacterial canker of stone fruit or *Pseudomonas syringae*. Other common names include gummosis, blossom blast, die back, spur blight, and twig blight. There are several different races of this bacteria. Symptoms may appear on some trees and not on others. These include canker development on twigs at the base of flower and leaf buds, and the base of spurs. Cankers normally spread upward, and the infected sunken areas are usually formed in late winter or early spring. Gum often exudes from the canker during the early part of the growing season. If the canker girdles a limb it will die in short order. However, the root system stays healthy and may even produce sucker growth. Dormant leaf and flower buds may be infected and are often killed, but some invaded buds develop normally but will collapse in early summer. Leaves and fruit produced by these buds wilt and dry out. In contrast, leaves and flowers of other infected buds will remain symptomless. Leaf infections, especially on cherries, appear as

water-soaked spots that later become brown and dry. At a later stage shot holes may be seen on leaves sporadically and not always symptomatic of the disease. **Control:** Make sure that the trees are pruned, watered and fertilized properly. There is some indication that during mild, wet winters bacteria populations can increase. Trees are particularly susceptible in sandy soils, water logged soils that drain poorly, and during prolonged drought periods. Careful watering is a must. Precautions should be taken while pruning not to spread the disease. Dipping pruners in 20% bleach solution after each pruning cut should help. Chemical control of bacterial canker is based on protective copper containing sprays applied in autumn and spring before flowering. In cherry and peach growing areas there are strains of bacterial canker that are resistant to copper sprays.



**Source:** *Compendium of Stone Fruit Diseases*. 1995. Edited by Joseph M. Ogawa, *et al.* The American Phytopathological Society, St. Paul, MN. Pages 48-50.

**Q** My mesquite trees have brown round bumps on many of the limbs. In fact some of the branches have ooze dripping from them. Is this scale?

**A** Yes, the problem is scale, soft brown scale in fact. Scale are a "super family" of over 200 insects that feed on plant sap while females protect themselves with a soft or hard "shell" body covering. Males can be winged. Scale produce young by eggs or by bearing live young. The young, called crawlers, may crawl out from under mother's covering and move to another location, usually close by, and then set up "housekeeping." One to five generations will be produced each year depending on the species and environmental conditions. Scale are protected by the covering they make for themselves, and it is very hard to penetrate with pesticides. They may cause the tree to suffer some but do not kill healthy trees. I do not recommend controlling them. However, for those who want to give it a try here are a few suggestions.

**Control:** Physical removal by spraying a hard stream of water may work, however many times they are stuck on the plant very tightly. Rubbing off the scale with a stiff wire brush can be effective, but the neighbors may think you are nuts! Using systemic insecticides can help control scaled but many times does not work very well. Suffocating or penetrating their "shell" are methods also used to kill this pest. Dormant oil sprays

*(Continued on back page)*

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are used when plant leaves are no longer than a half inch in early spring. If used later leaf damage may occur. Rubbing alcohol applied to scale will penetrate their waxy shell covering and kill them. Use 70% isopropyl (rubbing) alcohol, mixing 1 to 2 cups of alcohol per quart of water. Since alcohol can damage some plants first test by spraying on a small area. Wait for a day or two to see if damage occurred. You can mix insecticidal soap up according to the label directions but substitute rubbing alcohol for half of the water. A recipe that has proven effective in the past for scale control and other insects is made by mixing one cup cooking oil plus 1 Tablespoon of dish detergent (non-citrus). Mix one to two teaspoons of this solution with one cup

of water. Spray mixture on the infected plant until it drips off. It is best to spray a few leaves and then check for leaf burn the next day before spraying the entire plant. With many of these treatments the scale will not drop off of the plant but will remain attached even though they are dead. Pry some off several days after treatment to determine if the scale are dead. If not treat again.

*Robert E. Call*  
*Extension Agent, Horticulture*

***Backyard Wildlife Habitat***  
is available from the Cooperative Extension's *WaterWise* program at The University of Arizona Sierra Vista Campus. Call 458-8278, Ext. 141 for a free copy.

## Thanks!

To all those who helped with the Xeriscapte Tour on May 2—thanks! Without your participation, the tour couldn't have happened. Many folks learned about xeriscape and appropriate plants for our high desert and even took some home from the plant sale. We plan to do this every year (even perhaps a fall tour?) so please keep your eyes out for possible yards to be highlighted. One of those yards could possibly be yours! If you want to create a more xeric landscape, or see how yours "rates," contact the *WaterWise* program. Again, thank you!

*Cado Daily*  
*Master Gardener/WaterWise*