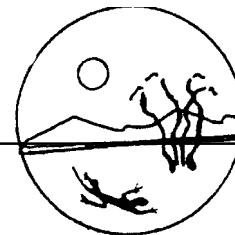


High on the Desert

Cochise County Master Gardener

Newsletter



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

Cheri's Plant of the Year

Each year one or two newly planted plants in my garden catch my eye and makes my heart smile. Recent winners have been Texas Rangers (*Leucophyllum species*), *Agaves*, *Dalea's*, Devils River (*Zexmenia hispida*), and of course the *Penstemon's* and *Salvia's*.

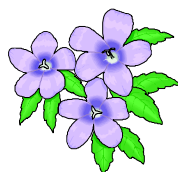
This year's winner is *Mirabilis multiflora*. It goes by the common names of Giant Four-O'Clock, Desert Four-O'Clock, Wild Four-O'Clock, Showy Four-O'Clock, Colorado Four-O'Clock, and Maravilla—whew! A good example of why it's always important to know Latin name of plants as it will only have one, opposed to common names, which can be numerous.

This Four-O'Clock is native to dry, sandy, rocky plains and grasslands from 2,500 to 7,500 feet and ranges from West Texas to Arizona, Colorado to Nevada and Mexico. It is cold hardy to -20F and very heat and drought tolerant once established. It can

be grown in full sun and under shade, making it a wonderful candidate for a ground cover under native trees and shrubs.

I planted it in May and it has flowered non-stop since June. The flowers are a gorgeous magenta in clusters of 3 to 6 bell-shaped, one-inch flowers with dark green oval to heart-shaped leaves. Its extensive tubular root system helps stabilize slopes and prevents erosion. A herbaceous perennial, it forms a nice rounded clump reaching two feet tall and anywhere from 4 to 8 feet wide, and the flowers open in late afternoon usually after—guess what time?—four o'clock and remain open though the night, withering the following morning. Hawkmoths adore this plant, especially at dusk when it releases a scented perfume. The larvae of the hawkmoths and hornworm caterpillars feed on the leaves making *Mirabilis multiflora* both a nectar and host plant for hawkmoths. Also, many insects and birds eat the seeds.

Cheri Melton,
Master Gardener



Cuttings 'N' Clippings

✓ Cochise County Master Gardeners Association meets 5:00 p.m. September 1 at the Sierra Vista Library. Final plans for the Garden Fair will be made.

✓ The Fall Xeriscape Garden Tour will be September 4 from 9:00 am - 1:00 pm. For details see Page 3 of this newsletter.

✓ The Garden Fair will be held September 11 from 10:00 am - 4:00 pm at the Sierra Vista Library. See back page for more details.

✓ The High Desert Gardening and Landscaping Conference is set for February 17 & 18, 2000. We are very excited about holding it at the Lakeside Activity Centre on Ft. Huachuca! Master Gardener volunteers are still needed. Please contact Carolyn through the Sierra Vista office.

Cochise County Cooperative Extension

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(520) 458-8278, Ext. 141

450 Haskell, Willcox, AZ 85643
(520) 384-3594

What to do . . . September

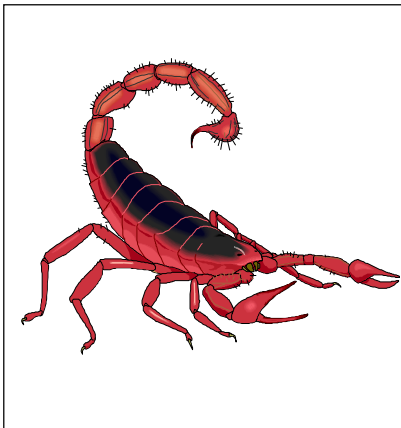
Don't stop now: There is a high mortality rate among spring-planted plants in September. It isn't that spring is a bad season in which to plant in the desert or that our fall weather is hard on plants. The problem actually relates to our wonderful rainy season. The rains of July and August meant we could relax our water vigilance a little. Now that the drier months of September and October are here and the desert is experiencing its final temperature surge before winter arrives, plants that have been in the ground less than a year are prone to drought stress. All plants, even desert or low-water use plants, need extra water during the first year. Not watching for drought stress during the first months of fall is a mistake that gardeners new to the desert often make, and the reason that spring plantings sometimes fail during these months—this includes trees and shrubs that are less than a year in the ground. By the end of their first year, most plants will have established healthy root systems and need a lot less water, especially if they are drought-tolerant varieties. Neglecting young plants during the early fall can result in the loss of the plants you so carefully protected through the hot summer.

You can always plant something: You can still plant lettuce, radishes, and spinach for harvesting before the first frost.

Start shopping for bulbs: Bulb planting will be at its peak in early October and you want to be ready. Order bulbs from catalogs and watch for their arrival in area

nurseries. If you are planting a bulb bed for the first time, turn over the soil, removing any rocks and breaking up all chunks, and check the soil drainage, adding sand or mulch as needed. Pull up any weeds that sprout in your new planting bed. Bulbs planted in fall will bloom early spring and include crocus, hyacinth, iris, and daffodil. By the way, gophers are reported to detest daffodil bulbs. Keep bulbs cool and dry until you are ready to plant. The bulletin *Bulbs For Southern Arizona* is available at the Cooperative Extension offices.

Jackie Dillon-Fast
former Cochise County Master Gardener
(Reprinted from the Cochise County
Master Gardener Newsletter, Sept. 1990)



Bark Scorpions

There are 36 species of scorpions in Arizona. All species can sting, causing some immediate pain, with little or no local swelling or redness. Normally, only one species of scorpion cause further medical problems. This is the bark scorpion. The scientific name of the bark scorpion is *Centruroides exilicaudal* (formerly *Centruroides sculpturatus*). The generic name *Centruroides* is from the Greek words *centr-*, meaning “pointed,” and *ur*, meaning “tail.” The specific name *exilicauda* is

from the Latin words meaning “slender” (*exili-*) and “tail” (*cauda*).

Centruroides exilicauda is found in southeastern California, Arizona, Nevada, southern Utah, and southwestern New Mexico in the United States as well as the Baja Peninsula and western Sonora. It is most commonly found under rocks, logs, the bark of trees, and other surfaces. Unfortunately bark scorpions are also one of the few varieties that commonly invade homes.

Scorpion stings, like bee stings, can induce an allergic reaction in some people. Dr. Scott A. Stockwell at the Walter Reed Biostatistics Unit in Washington, D.C. provides statistics from the Arizona Poison and Drug Information Center (APDIC) that show out of 438 reported stings by bark scorpions, none were fatal. APDIC recommends cleaning the site with soap and water, applying cool compresses, elevating the affected limb to approximately heart level, and taking an analgesic as needed for minor discomfort.

Dr. Stockwell recommends that the key to keeping scorpions out is sealing the house. You must also remove all debris (wood piles, rock piles, brick piles, etc.) from around the house. No baits have been developed, and parasites and predators of the scorpion are just as obnoxious as the scorpions themselves. There are no specific pesticides recommended for scorpions, but pesticides that kill cockroaches and other scorpion delicacies will help to control their numbers

Gary A. Gruenhagen, Master Gardener
(Reprinted from the Cochise County
Master Gardener Newsletter, Oct. 1996)

Fall Xeriscape Tour

Mark your calendars for Saturday, September 4 from 9:00 a.m. to 1:00 p.m.—it's the *WaterWise*/Cochise County Master Gardeners Fall Xeriscape Tour! And, it's FREE! Thank goodness for all this rain. Things are growing (maybe a little too much!) and we are on our way to a beautiful fall season. After an extremely dry spring, summer is making up for lost time. Berms have breached, gravel washed, and rain barrels have overflowed. Despite all the havoc the rain has caused, it has greened up all the landscapes around town, and we'd like to share a few with you.

There will be four landscapes on this self-guided tour, all in the Sierra Vista area. All of the sites have incorporated low water use techniques into their designs. Docents from the Master Gardener program and the homeowners will be available at the sites to answer questions. This is a great opportunity to get inspired for fall planting.

If you have to redirect water flows across your property, you will want to see how one home turned a "sow's ear into a silk purse." This homestead is located in a low area in a rural section of town. Water flowing from adjacent properties added to the existing volume of water this home had to deal with. Features include different types of soil berms that direct water away from the straw bale home and into natural planting areas. Last summer a volunteer watermelon grew in the water catching area of the berm without any irrigation! Sunken bed gardens and rain tanks add to the focus of this water harvesting design. If you

visit this "off the beaten path" site, give yourself plenty of time as there is a lot to learn. Closed shoes are suggested as the berms are located in the surrounding desert scrub.

Perhaps you are a seed scatterer. A second xeriscaped yard features wildflowers freely reseeded (and weeded!) by its keeper. Here you can learn how this homeowner created a wildflower extravaganza including zinnias, wild buckwheat, desert marigolds, Mexican hats, and Indian blanket flowers by relying only on Mother Nature. Using wildflowers not only adds color, but welcome ground cover in a xeric landscape. Succulents, cacti, small boulders, and acacia trees provide the backbone of the design. This delicate, gently contoured front entrance welcomes the visitor to a desert habitat rich in diversity.

A few seasons too many waiting for the Bermuda grass to turn green? Or perhaps you've had enough weekends of mowing, fertilizing, and weeding your lawn? See how this home belonging to a Master Gardener Associate tackled the conversion of a robust Bermuda lawn to a low maintenance flowering yard complete with flagstone steps and a shaded sitting area under a spreading mesquite tree. This is a landscape in progress. You will be able to see the before section of the landscape (part of it has been left as an appropriate sized turf area), a section in the process of conversion, and a beautiful finished product. Be prepared to do a little butterfly watching as this yard is popular with the pipevine swallowtail.



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No tour is complete without a repeat. This is the opportunity to see how a yard has matured over the seasons. Planted in early 1998, this Master Gardener's landscape has just taken off. Chock full of low water use plants, this xeriscaped yard burst with activity. Everything from herbs and vines providing larval food for butterflies, to volunteer plants providing delicate ground cover, a "no water" front area splashed with color and a small water feature add to the cacophony of senses here. Hard to believe this landscape uses a minimal amount of water!

For a map of the xeriscape tour homes, call the *WaterWise* Program at 458-8278, Ext. 141, or pick one up at the Cooperative Extension in Sierra Vista. On the morning of the tour you can pick one up at 4920 Corte Vista or 3340 Flat Rock Court. Please be considerate of the homeowners and visit the stops only during the tour hours.

Cado Daily
Master Gardener/WaterWise Program

The Agent's Observations

Q I have several cucumber, pumpkin, and squash plants that have discolored leaves and distorted leaves. I see no insect damage and have sprayed for powdery mildew. The plants have adequate nutrition and are watered regularly. What's wrong with my plants?

A Your cucurbits, (squash and melon family), have been infected with a virus. There are several different viruses that infect this family of plants. They include: cucumber mosaic virus (CVM), squash leaf curl virus (SLCV), squash mosaic virus (SQMV), watermelon mosaic virus (WMV) and zucchini yellow mosaic virus (ZYMV). Each of these pathogens usually have several strains. Sometimes an infected plant may have more than one virus causing the symptoms. Therefore, it makes an exact diagnosis difficult without laboratory work.

Plants may have mottled leaves, that is patches of green and yellow, often in varying hues mixed in the leaf color. Whole plants and leaves are usually smaller than normal. Many times they are deformed and fragmented. Plants may be stunted and have many growing points; the effect is called a "witches broom." Cucumber, melon and squash fruit are also small, stunted and colored unusually. The fruit at times will have warts and be bumpy. A sample that came into the office recently had greatly enlarged female reproductive tissue growing

through the side of a cracked squash, but produced no seeds.

Viruses can not survive outside of living organisms. They may be contained in the seed when planted, which occurs with SQMV. Insects serve as vectors (transmittance agents) for many viruses. Sucking insects like squash bugs, aphids, and white flies and chewing insects such as cucumber beetles and grasshoppers transmit virus particles from infected plants to healthy ones.

Control: Some virus resistant varieties are available and their use is advisable. Control of host plants like buffalo gourds and weeds that serve as reservoirs of viruses. Infected crop plants also harbor viruses which can be transmitted to healthy ones. Destroy infected plants as soon as symptoms appear whether wild or domestic. Control insects which transmit viruses from one plant to another. There are no known chemical or natural cures for viruses in plants yet. The infected plants many times will survive in a weakened state much like what happens when we get a viral flu or cold.

Q There are thousands, perhaps millions of caterpillars crawling around on our property! They are black, smooth caterpillars with green and/or reddish orange stripes down their backs. The tail-end has a horn on it. What are they and how can I get rid of them?

A The caterpillars you describe are the larvae of the white-lined sphinx moth (*Hyles lineata*). During years of good summer rains large numbers of hairless caterpillars

appear during late summer and fall in grasslands. These black larvae are three-inches long with a horn on their tail-end and variegated colors of green with some black dorsal spots or solid black stripes. When mature they wander looking for a suitable spots to dig into a couple of inches and make an earthen cell and pupate. Sometimes larvae numbers are so large that they will "grease" a roadway!

White-lines sphinx moth larvae prefer feeding on native relatives of four-o'clock flowers and ice plant. The survival rate of the larvae is low because of the few adults that are seen. Adults have been studied and shown to be an important pollinator of some night-blooming cactus species.



Control: If these caterpillars are eating some of your important plants a treatment of B. T. should control them. A note of interest. In the evening several years ago my eight-year-old daughter was very excited and yelled for me to come and see something. She pointed out a white-lined sphinx moth that while visiting a salvia plant, had been caught by a preying mantis. The moth was flapping its wings as the mantis feasted!

Reference: *Insects of the Southwest*. 1994. Floyd Werner and Carl Olson. Fisher Books, Tucson, AZ. Page 112.

Robert E. Call
Extension Agent, Horticulture

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Extension Agent, Horticulture

Carolyn Gruenhagen
Editor

THE VIRTUAL GARDENER=

Grim Reaper

At ease Weed Warriors! Even if you've followed all the tips presented over the last few months for combating our green enemies I'll bet you still have a few weeds around that need to be pulled. If this is the case don't despair, you can still snatch a little victory from the jaws of defeat.



I mentioned in passing a month ago that weeds make a great addition to your compost pile. This month I want to explore that idea in a little more detail. Successful composting requires you to combine a source of carbon ("brown stuff"), a source of nitrogen ("green stuff"), some air, and some water to obtain the brown gold gardeners call humus. The process happens naturally whether you do something or not, but you can hasten it along by combining things in the right proportions.

By "green stuff" I mean green plant materials, and by "brown stuff" I mean the same materials after they have dried out and turned brown. The green material fur-

nishes the nitrogen that provides the essential enzymes needed by the bacteria to digest the carbon in the brown materials into compost. Ideally, you should have up to four parts by weight of brown stuff to every one part of green stuff to provide the correct ratio of carbon to nitrogen to optimize the process.

Ordinarily, we in the High Desert have an abundance of brown materials and a dearth of green materials to add to our compost piles. We also normally have a shortage of water. At this time of year, however, we have both an abundant supply of green plant materials and water.

The best strategy is to let some of the weeds you pull dry out and turn brown before you add them to the compost pile. You can do this by spreading them out on the ground for a couple of days. Once you have some brown materials, interlayer them with some green materials. If a little soil remains attached to the roots of the weeds you have pulled, so much the better because the soil will contain some bacteria to get the decomposition process started. You can either contain the pile of composting materials in an open enclosure or just pile it up on the ground. In either case, you should keep it as moist as a damp sponge. Experts advise that 40-60 percent moisture content by weight is ideal. Any drier than this and the bacteria shut down and any wetter than this and the bacteria can't get enough oxygen and die. To prevent the

compost pile from becoming a stinky mess, it should be turned from time to time to aerate it. One way to tell when it is time to turn the pile is when the temperature drops.

As the bacteria in your compost pile digest the plant materials, they produce heat. Ideally the temperature in an efficiently composting pile will be between 90 and 140 degrees Fahrenheit. You can buy a special thermometer with a long probe to measure the temperature or you can push your hand into the pile and sense it directly. Temperature is important for a couple of reasons. First, correct temperatures keep the decomposition process going at an optimum rate, but second it also kills any seeds that were added to the pile with the weeds.

If you are interested in finding out more about composting, check out the following Web site:

<http://www.oldgrowth.org/compost/index.html>

Until next time, happy surfing.

Gary A. Gruenhagen, Master Gardener
gruenha@sinosa.com

"Adding compost to your landscape is like setting up a savings account in a bank. The interest you draw from your compost soil bank is healthier plants, reduced water and fertilizer bills, a reduction in pest problems and an inner satisfaction from thoughtful Earth stewardship."

- Backyard Composting

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