



High on the Desert Cochise County Master Gardener Newsletter

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

The Virtual Gardener—The Billion Tree Campaign

Your mission, should you choose to accept it, is to save planet Earth...well, at least *help* save it. The United Nations Environment Programme (UNEP) has launched a campaign to get one billion trees or more planted on the planet by the end of this year, and everyone—including you—is invited to participate. Just like the proverbial journey that starts with a single step, the billion tree campaign starts with the planting of a single tree. Plant yours now.

At the dawn of human history, trees covered nearly half the land area of our planet. Today trees cover about one-third of the land, and the forested area continues to shrink due to the conversion of forest land to agriculture and the cutting of trees for fuel and lumber. The continuing loss of this forest cover has potentially serious long-term consequences for us.

In addition to being things of great beauty, forests are an integral and important part of the Web of Life on earth. The highest levels of biodiversity

on the planet are found in old growth forests, providing us with a huge reservoir of genetic materials potentially to be used for human health and welfare. The roots and litter from forests stabilize soils and act as giant sponges to capture water and slowly release it into the soil. Water vapor transpired from forests moistens the atmosphere and promotes rainfall. Forests act as the lungs of the planet, generating oxygen and purifying the air we breathe. And forests are major allies in the war against global warming.

Trees, like other photosynthesizing plants, absorb the greenhouse gas, carbon dioxide, from the atmosphere and use the energy of sunlight to convert it into plant products. Some of the carbon dioxide is returned to the atmosphere when the trees respire, but much more remains locked up in the tissues of the plant. The net result is that trees remove more carbon dioxide from the atmosphere than they return.

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Cochise County Cooperative Extension

www.ag.arizona.edu/cochise/mg/

1140 N. Colombo, Sierra Vista, AZ 85635

(520) 458-8278, Ext. 2141

450 Haskell, Willcox, AZ 85643

(520) 384-3594



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And what is removed is locked up in the trees for a long period of time, only being released to the atmosphere when the tree is either burned or decays. Cutting down a tree and burning it for fuel thus has a doubly negative effect on levels of atmospheric carbon dioxide. First, when the tree is killed, it is no longer capable of removing carbon dioxide from the atmosphere and sequestering it, and second, when the tree is burned, the combustion process transforms tree tissues into carbon dioxide which is released back into the atmosphere.

According to the UNEP Web site, 1 hectare (roughly 2.5 acres) of trees absorbs about 6 metric tons of carbon dioxide from the atmosphere each year, but one long-haul airline flight returns about 3.75 metric tons of carbon dioxide to the atmosphere. And that's just one flight.

The Web site also tells us we would need to plant 14 billion trees (about two per man, woman, and child on the planet today) each year for the next 10 years just to make up for the loss of trees during the past decade. Let's get busy.

If you would like to sign up to participate in the Billion Tree campaign or just learn more fascinating facts about forests and trees check out the UNEP Web site at: www.unep.org/illiontreecampaign

Until next time...Happy Surfing.

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

Karesansui: No Water Required

Add interest to your yard without consuming additional water. Try creating a dry landscape or rock garden, also known as *karesansui*. Often associated with Zen Buddhism, *karesansui* or "Zen gardens" include main elements of rocks and sand arranged to represent mountains or islands situated amidst flowing rivers or ocean. The term "Zen garden" arose in the mid-twentieth century to describe an element of Japanese culture that is complex in meaning and origins. Today the expression can describe many types of gardens ranging from temple gardens or stone arrangements to any garden with a strong sense of spirituality.

Determining a site for your dry landscape garden is a matter of individual preference, depending on whether the design will be natural or abstract in appearance. For example, a garden planned to imitate a mountain canyon may be placed near a wall or on a slope to produce a cascading effect. A formal design dominated by straight lines may work best on level ground. Yard areas with

strong southern exposures that are blasted by heat are well-suited for waterless rock gardens, rather than vegetative landscaping. In fact, plants are often completely excluded from many *karesansui* gardens, so no green thumb is necessary.

Karesansui are often designed to be viewed from a specific, seated perspective, so consider allowing space for a bench when choosing your location. Determine the shape of your garden and remove two or three inches of soil before outlining the area with edging or some other border material. Line the area with permeable plastic or landscape fabric to prevent the soil below from mixing with sand or gravel placed on top, and allowing water penetration.

Take time to reconnoiter sources of rock in your area. Although many traditional dry landscape gardens use white sand or gravel to represent purity where sacred rituals were held, white sand is difficult to obtain in any large quantity. The large rocks in waterless stream gardens are often associated with and named after mountains. These special stones are placed in the garden based on a numerical series of odd numbers, while a river or the sea is symbolized by sand raked in patterns that suggest water currents. Of course, your *karesansui* can represent anything that you desire to enhance the sense of place in your yard and create your own waterless contemplation space. See photos on Page 3.

Diane Liggett,
Associate Master Gardener

Robert E. Call

Robert E. Call
Extension Agent, Horticulture

Carolyn Gruenhagen
Editor



1. Create outline of garden.



3. Line area with plastic (preferably porous) or landscape fabric.



5. Place large “island rocks” and fill area with sand.



2. Remove 2—3 inches of soil and install border material.



4. Place sand or gravel on top of plastic. Test for desired effect after raking.



6. Enjoy raking new designs often.



7. Finished and raked karesansui.

In a Desert Garden

Thymophyllia (Dyssodia)

I planned my garden so that it is not bare and gray in winter. At least I have color most winters. This winter is slightly different, being so much colder than last year, the plants that give me winter color are frost bitten. My Primrose Jasmine—*Jasmine mesnyi*—that usually is in bloom from late fall until late spring shows me its barren branches. The leaves have fallen off, but in some places there are still some flowers. The Coral Honeysuckle—*Lonicera xheckrottii*—that shows its beautiful coral trumpet flowers this time of year is almost without leaves. The only plant in my yard that hasn't noticed the freezing nights is the Carolina jessamine—*Gelsemium sempervirens*. It is in full bloom and has been since fall when the nights became cooler. The beautiful yellow trumpet-shaped flowers light up my small yard and thanks to my neighbor who graciously allows his vine to drape over the wall into my yard, there is plenty of it.

In spite of the cold nights and the frozen plants in my yard there is another plant that brings me sunshine. It is a small low-growing clump nestled in between the rocks and some pots with cacti and succulents. A plant I never

expected to be hardy enough to bloom under these conditions, but I must have found the right spot for it to exist. It is a variety of *Dyssodia-Thymophyllia*. I do not remember the species, but I know I got it several years ago from a vendor at the High on the Desert Conference. It is blooming forever, and I mean forever. I dug it in about three years ago and it hasn't stopped blooming since that time. Spring, summer, fall, and winter this little gem is blooming its little heart out. I have never fertilized it, it hardly ever gets watered, and it thrives on neglect. After doing some research, I came to the conclusion that my plant must be *Thymophylla acerosa* or Prickly-leaf Dogweed. This is a native to Nevada, Texas, and Mexico. The leaves are needle thin and bright green and the flowers are lovely yellow daisies. My clump is about six inches high and about a foot wide.

There are several varieties of *Dyssodia*. One of them I have come to love is *T. pentachaeta*—Golden *Dyssodia*, a short-lived perennial. Our local Garden Club had a project for a while, taking care of the Butterfly and Hummingbird Garden at Kartchner Caverns, and here I saw this little gem for the first time. The one at Kartchner Caverns is a much

smaller plant than the one in my yard. It only grows 4 to 6 inches tall and wide, but it self-seeds freely. You plant one and you have a lot—my kind of plant. Unfortunately I have never seen it in any of our nurseries. It is a native of California, Nevada, and Texas. It blooms heaviest in spring and from time to time the rest of the year. The plant you will find in the nurseries here is the Dahlberg Daisy—*T. tenuiloba*. This is a heat loving perennial that is also short-lived, native to Texas and all the way to Florida and Mexico. This plant forms a mound one foot high and wide. It is lovely in pots and rock gardens. Sometimes it is a little fussy because what we find here is grown in a greenhouse and pampered. All these varieties are small plants but big in appearance. Their color display make them lovely additions to any garden or planter. They are perfect in between cacti or succulents because their biggest enemy is water. They need good drainage and moderate watering once they are established.

Angel Rutherford, Master Gardener



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Landscape Living With Javelina

Javelinas are frequent visitors of homes and gardens in much of central and southern Arizona. Like any other animals they visit because of their search for food, water, and shelter. Usually, javelinas do not cause much damage; often surprising homeowners. However, they may root around and eat a few or many plants. Javelina can be quite destructive especially during a drought period when they are hungry. They should NEVER be fed because this will encourage them to become regular visitors. The only sure method to prevent plant injury is exclusion using a fence or another barrier. The favorite foods of the javelina are cacti, succulents, bulbs and tubers, and any plants that drop fruit or nuts. There are some plants, though, that are resistant to these omnivorous animals. In 1993, Cindy Ticer of the Arizona Game and Fish Department, conducted a survey of 300 homeowners and their experiences with plants resistant to the javelinas. Here is the result of that survey.

David Davis,
Associate Master Gardener



Common Name	Botanical Name
Allysum	<i>Allysum</i> spp.
Basil	<i>Ocimum</i> spp.
Butterfly Bush	<i>Buddleia</i> spp.
Carnations	<i>Dianthus</i> spp.
Chili Pepper	<i>Capsicum</i> spp.
Chrysanthemum	<i>Chrysanthemum</i> spp.
Cosmos	<i>Cosmos</i> spp.
Cottonwood	<i>Populus</i> spp.
Cucumbers	<i>Cucumis</i> spp.
Daffodils	<i>Narcissus</i> spp.
Dahlias	<i>Dahlias</i> spp.
Daylily	<i>Hermerocallis</i> spp.
Deerbrush	<i>Ceanothus</i> spp.
Easter Lily	<i>Lillium longiflorum</i>
Eggplant	<i>Solanum melogena</i>
Fir Trees	<i>Abies</i> spp.
Geraniums	<i>Geranium</i> spp.
Gladiola	<i>Gladiolus</i> spp.
Globe Amaranth	<i>Comphrena</i> spp.
Hens and Chicks	<i>Echeveria elegans</i>
Hibiscus	<i>Hibiscus</i> spp.
Ice Plant	<i>Mesembryanthemum</i> spp.
Iris	<i>Iris</i> spp.
Ivy	<i>Hedera</i> spp.
Juniper Shrubs	<i>Juniperus</i> spp.
Juniper Trees	<i>Juniperus</i> spp.
Larkspur	<i>Delphinium</i> spp.
Lilac	<i>Syringa</i> spp.
Manzanita	<i>Arctostaphylos</i> spp.
Maple Trees	<i>Acer</i> spp.
Marigolds	<i>Tagetes</i> spp.
Mountain Mahogany	<i>Cercocarpus</i> spp.
Oak Trees	<i>Quercus</i> spp.
Pampas Grass	<i>Cortaderia selloana</i>
Pansies	<i>Viola</i> spp.
Peonies	<i>Paeonia</i> spp.
Petunias	<i>Petunia hybrida</i>
Pine Trees	<i>Pinus</i> spp.
Portulaca	<i>Portulaca grandiflora</i>
Red Hot Poker	<i>Kniphofia uvaria</i>
Rose Bushes	<i>Rosa</i> spp.
Rosemary	<i>Rosemarinus officinalis</i>
Sage	<i>Salvia officinalis</i>
Santolina	<i>Santolina</i>
Shrub Live Oak	<i>Quercus turbinella</i>
Silktassel	<i>Garrya wrightii</i>
Skunkbush	<i>Rhus trilobata</i>
Snapdragons	<i>Antirrhinum majus</i>
Spruce Trees	<i>Picea</i> spp.
Sweet William	<i>Dianthus barbatus</i>
Vinca	<i>Vinca</i> spp.
Violas	<i>Viola</i> spp.
Zinnia	<i>Zinnia</i> spp.

The University of Arizona
Cooperative Extension
Cochise County
450 S. Haskell Avenue
Willcox, AZ 85643-2790

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Cuttings 'N' Clippings

* The next CCMGA meeting is 5:00 p.m. Thursday, February 1, 2007 at the University of Arizona South campus, Room 508.

* The vendors and exhibitors at the High Desert Gardening & Landscaping Conference will be open to the public at The Palms from 7:30 a.m. to 5:00 p.m. during the February 15 & 16 conference.

* The February Water Wise lecture will be held Saturday, February 3 from 9:00—11:00 a.m. at the University of Arizona South Campus. The speaker is Cado Daily, UA Extension Water Wise Educator on *Rain-Only Landscapes (with a little gray water thrown in)*. For information contact Cado Daily at 458-

8278, Ext. 2139 or check the web site: www.ag.arizona.edu/cochise/waterwise

* On February 17 from 9:00—11:30 a.m. Carmen Miller, UA Extension Water Wise and ISA Certified Arborist, will present *Tree Health Care and Pruning* at the Benson Cochise Community College located on Hwy 90. For information contact Cado Daily at 458-8278, Ext. 2139.

* Due to popular demand, the Sierra Vista Farmers Market will be open the first Thursday of each month this winter. The next market day is Thursday, February 1 from noon to 4:00 p.m. at the corner of Wilcox and Carmichael. Also in conjunction with the High Desert Gardening & Landscaping Conference a special Market Day will be held on February 15, same location and same time. For more information e-mail vallimac@cox.net or call 266-1976.

* The 2007 Master Gardener class begins March 14 and runs every Wednesday for 13 weeks from 10:00 a.m.—1:00 p.m. There is a fee for the class. For information contact Joyce at the Cooperative Extension office—458-8278, Ext. 2141.

February Reminders

- ◆ Winter pruning
- ◆ Prune roses
- ◆ Cold-moist stratify seeds
- ◆ Plant bare-root trees
- ◆ Prepare spring planting beds
- ◆ Clean and repair drip irrigation systems
- ◆ Finalize spring garden plans
- ◆ Keep watering