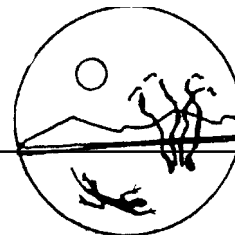


High on the Desert

Cochise County Master Gardener

Newsletter



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

Shades of Blues & Purple Plants for the Garden

This month we wrap up the color-wheel series "Plants for the Garden" with the mellow blues and purples. These are the cool colors of the color-wheel spectrum which blend and fade into the garden. If you want a restful garden, plant with whites, greens, greys, blues, and purples. Luckily purple is one of my favorite colors—here's a list of plants that do well in my garden. Happy fall gardening!

Wildflowers & Perennial Flowers

Evolvulus arizonicus - Arizona
Blue Eyes
Lavandula species - Lavender
Mirabilis multiflora - Desert Four
O'Clock
Penstemon amphorellae
Sphaeralcea species - Globemallow
Trichostema arizonicum - Arizona
Blue Curls
Verbena goodingii - Gooding's
Verbena

The Delightful Daleas

Dalea bicolor var. *bicolor*
Dalea bicolor var. *orcuttiana* -
Baja Dalea
Dalea bicolor var. *bicolor*
'Monterrey Blue'
Dalea frutescens 'Sierra Nigra' -
Black Dalea
Dalea greggii - Trailing Indigo
Bush
Dalea pulchra - Bush Dalea
Dalea versicolor var. *sessilis*
'Mountain Delight' - Weeping
Dalea

The Texas Rangers

Leucophyllum candidum - 'Silver
Cloud'
Leucophyllum candidum - 'Thunder
Cloud'
Leucophyllum frutescens - Texas
Ranger
Leucophyllum frutescens - 'Green
Cloud'
Leucophyllum frutescens -
'Compacta'
Leucophyllum frutescens - 'Rain
Cloud'
Leucophyllum frutescens -
'Mountain Cloud'
Leucophyllum frutescens -
'Heavenly Cloud'

L. frutescens x laevigatum - Big
Green Hybrid Ranger 'Verde
Grande'
Leucophyllum laevigatum -
Chihuahuan Sage
Leucophyllum langmaniae - 'Rio
Bravo'
Leucophyllum pruinosum - 'Sierra
Bouquet'
Leucophyllum revolutum - 'Sierra
Magic Mix'
Leucophyllum zygophyllum - Blue
Sage
Leucophyllum zygophyllum -
'Cimmaron'

The Spectacular Salvias

Salvia chamaedryoides - Blue Sage
Salvia clevelandii - Chaparral Sage
Salvia dorrii var. *dorrii* - Desert
Sage
Salvia farinacea - Native Mealy
Cup Sage
Salvia greggii - Autumn Sage
Salvia leucantha - Mexican Bush
Sage
Salvia parryi

Trees

Chilopsis linearis - Desert Willow
Ungnadia speciosa - Mexican
Buckeye

Cheri Melton
Master Gardener

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

“It’s not nice to fool Mother Nature” or Understanding Microclimates

Growing plants successfully in the high desert is not always an easy process. It requires careful planning and forethought. If your idea of gardening is just to grab the first pretty little flower that strikes your fancy, slap it in the ground, walk away and let nature take its course—well, I have got news for you; you can’t! That is unless you want to invest in plastic or silk flowers. And not to burst your bubble, but even they have to be dusted and you must be sure they are UV resistant.

I personally believe that you can grow practically anything here in the high desert; the key is to work with the desert environment. If you fight with Mother Nature, you will lose! Key to success in planting/growing anything here is to match the appropriate plant to the appropriate microclimate. Unless you just arrived on the “Good Ship Lollipop” you should be keenly aware that there are distinct temperature and sunlight exposure differences throughout your yard. It is these differences that we call microclimates. Plant a tender gardenia near a west facing wall and you will be given a sample of how microclimates can affect planting success as Mother Nature in her wrath at your folly will turn your “foo-foo” gardenia to toast and an addition to your compost pile!

If you are new to the area, it might be wise to call on the services of someone who has been in the area for some time to help you identify the various microclimates and suggest plants that will compliment them well. Keep an open mind! You simply will not be able to make your piece of turf look like Duluth or Nashville, or Kansas City *etc., etc.* But then who would want to; we live in the Southwest and should celebrate our unique environment. This advice could come from a reputable landscaper (preferably one who has been in Arizona more than a few weeks and do more than just spell the word—ask for references!!!) or you can avail yourself of a free service to city and county residents by calling the Cooperative Extension and ask for a WaterWise audit. WaterWises’ Cado Daily will arrange to come to your home and walk through your landscape with you and identify the various microclimates, provide plant lists of recommended plants, and make suggestions to help you design a water wise landscape that will not suck the aquifer and your pocketbook dry. The Cooperative Extension also has extensive brochures that can provide invaluable information to assure gardening success.

To begin identifying microclimates, you must know where your home is located and its orientation. Is your home on the side of a mountain, in a natural

depression, on an exposed plain, *etc., etc.*? How is your home oriented? That is to say where is south, north, west, east in relationship to your landscape? Simplistically, folks, from Sierra Vista, Mexico is south, Bisbee is east, I-10 is north, and the fort is west. If you still don’t have a clue, ask someone; hopefully one of your new neighbors will know. (If all else fails, buy a compass.) This is critical as many plants are quite particular as to where they are sited in the landscape. Don’t be fooled; even the tough as nails



cactus will fail if not properly sited.

Next, determine the air flow pattern in your yard. Some plants simply will not tolerate being subjected to hot dry winds that can suck the moisture right out of their tender foliage. A good example is the Tanyosho Pine. Another thing to consider is breakage. Some trees/ shrubs are more susceptible to breakage than others. Windmill Palm fronds will look tattered and ugly after a particularly nasty spring wind storm if they are sited in savage wind prone areas. Magnolia branches will snap or the entire plant break apart if exposed to prevailing harsh winds (speaking from experience here). Also, be aware that wind flow across your landscape can affect temperatures. Cold air tends to pool in recessed

Robert E. Call

Robert E. Call
Extension Agent, Horticulture

Carolyn Gruenhagen
Editor

areas or where air flow is blocked. This is why one USED to see
(continued on next page)
 orange groves in Southern California on the hillsides and never in the valleys (now all you see is asphalt and condos).

Sun exposure is the next variable to consider. Watch how the sun moves across the landscape. Some plants will tolerate a few hours of our harsh summer sun but will fry if exposed to unrelenting blasts all day long. Take into consideration reflected heat! Many plants will take continual exposure to direct sun but cannot handle the double whammy of full sun and reflected heat off a wall or house. Roses love the sun but the delicate buds will fry with reflected heat off a west or south wall. Watch for shade patterns in your landscape. How much shade will be provided by the house, other structures, or nearby plants and shrubs will often dictate what can be safely planted there. Many plants appreciate a little shade in the harsh summer months. Others want full sun and some need continual shade. Ask anyone who has planted sun-loving Bermuda grass under the dense foliage of a fruitless mulberry and you will become keenly aware of how expensive and frustrating this lapse in judgement/knowledge can be.

This has been a very very simplistic overview of micro-climates. The library will be a good source for further research. Hope this information helps your gardening success.

*John Phillips
 Master Gardener*



Cuttings 'N' Clippings

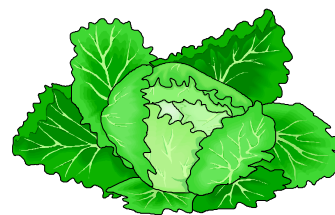
- ▶ Cochise County Master Gardeners Association will meet October 4 at 4:45 pm at Ramsey Canyon Preserve.
- ▶ A big “thank you” to all of the vendors, volunteers, and the public for making the High Desert Garden Fair successful! Hats off to Jan Groth, De Lewis, and Gwin Garcia for all their hard work!
- ▶ Also, a “thank you” to the homeowners who opened their gardens to the public for the Fall Xeriscape Garden Tour!
- ▶ Check this out! John Begeman, Pima County Extension Agent has a new television show *Desert Gardening* which airs on Channel 9, KGUN Tucson Sunday afternoons at 4:30 pm.

House Plant Symptoms

- ? **Spindly “leggy” plants** (plants may be leaning toward a window or light source):
Cause: insufficient light
Remedy: provide better light or select low-light tolerant plants
- ? **New foliage is yellow:**
Cause: alkaline soil
 inadequate light
 poor root activity
Remedy: apply chelated iron
 move plant to brighter light location
 repot plant into larger container

OCTOBER REMINDERS

- ▶ Be ready for the first frost
- ▶ Thin the seedlings
- ▶ Overseed lawns
- ▶ Plant spring bulbs
- ▶ Divide perennials
- ▶ Don't let weeds go to seed



Cool Season Crops

Many of the cool-season crops, those that can withstand freezing, do very well in Cochise County during the fall. In fact, the fall in Cochise County is better generally than the spring to raise cool-season crops. These vegetables include the cabbage family, *i.e.* broccoli, cauliflower, kale, and cabbage among others. Also, spinach, small beets, peas-both snap and edible pod, turnips, radishes, lettuce, mustard greens, and other greens. The onion family does best when planted in the fall and then overwintered and harvested in early summer. Members include garlic, onions, and chives.

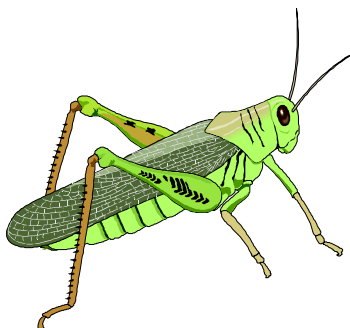
*Robert E. Call
 Extension Agent, Horticulture*

Call's Classic Comments

We have several species of grasshoppers in Cochise County. Some are very colorful and grow quite large. Grasshoppers emerge in the spring from eggs laid last year. Grasshoppers hatch as miniature adults and molt 5 or 6 times during a period of 40 to 60 days. The young feed in the immediate vicinity and then move on to "greener pastures" as food sources become depleted. Adults begin laying eggs shortly after they mature. Eggs are laid in the ground in pods that contain 15 to 75 eggs. A female can lay a total of 200 to 400 eggs during several weeks. Hatching rate depends on soil temperature and moisture and may continue for three months. Some species have more than one generation per year. Grasshoppers feed on grasses and other plants. When populations increase they will feed on nearly any kind of vegetation including bark and leaves of deciduous trees. Adults continue to feed until cold weather kills them. Natural weather cycles cause fluctuations in populations. Mild winters and warm, dry springs increase hopper populations. Cold, wet weather cause slow development and favor grasshopper diseases. Cool summers and early falls delay maturity and decrease the egg laying period.

Control: If desert surrounds your property it can become very difficult to control grasshoppers because of large populations that can become migratory. Disturbing egg pods in the soil by tilling or plowing will expose egg pods,

decreasing their viability. Young small hoppers are easier to control than adults. "Picking and squashing" is a time consuming but effective control measure. Several



chemical insecticides will control grasshoppers as well as the abrasive nature of diatomaceous earth. *Nosema locustae* is a naturally occurring disease organism of grasshoppers. Bran and sweeteners are added to *Nosema* to attract the hoppers. Grasshoppers are cannibalistic and infection spreads as healthy hoppers eat sick ones. Also, the females pass this disease on to generations through laid eggs. *Nosema* will take longer to destroy grasshopper populations than conventional pesticides. This is a living organism and must be stored in the refrigerator and has a limited shelf life. Contact your local nursery or garden catalog for current recommendations. **Always read the label of pesticides and use them accordingly.**

Source: *Insect Pests of Farm, Garden, and Orchard*. 1979. R.H. Davidson and W.F. Lyon. pp. 117-119

Robert E. Call
Agriculture Agent, Horticulture
(October 1993 Cochise County Master Gardener Newsletter)

Plant Now to Be Water Wise and Energy Smart

Did you know that autumn is an ideal time to plant here in the high desert? Most folks get the planting or gardening "bug" in the spring and put in all their shrubs, trees, and flowering plants right before the weather here gets extremely hot and dry. Spring is actually the worst time of year to establish plants in Arizona! They will require a lot of water and spend all their energy trying to survive the heat and dryness instead of putting energy into expanding their root system. Try planting now, when the weather is cooler. This will allow your plants the time and energy they need to establish good roots before next spring and summer. A good root system will help them get through the hot, dry months of May and June, and during monsoon season you will see them really take off!

Another reason to plant in the fall, for deciduous trees especially, is that many plants go dormant in the fall and remain that way throughout the winter. While in a dormant state, they are not expending energy to try and put on leaves or flowers. Planting a plant that is trying to put on leaves or flowers can "stress it out."

Planting at this time of year can help save water because the evapo-transpiration rates are not as high as they are during the spring and summer. **HOWEVER, PLANTS**

(continued on next page)

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WILL STILL REQUIRE SOME WATER TO HELP THEM ESTABLISH ROOTS. Use a soil probe, which can be purchased at the Cochise County Cooperative Extension Office, to help you fine tune your watering schedule.

Remember!!! We will experience freezing and below freezing temperatures here during the winter. Do your research and make sure that the wonderful drought tolerant plants you choose are also frost tolerant.

*Ginger Maxey
Master Gardener/Ft. Huachuca Water
Conservation Educator*

The Virtual Gardener— AZ Native Plant Laws (Cont'd)

Last month we discussed the various categories of plants protected by law in Arizona (A.R.S. Title 3.) As you recall, there were five different groups of plants, each having its own specific restrictions. This month I want to continue the discussion of native plant laws by discussing how you can legally harvest and transport some native plants for non-commercial purposes in Arizona. There are only three basic rules to remember.

- First, the plant must not be on the highly safeguarded list. Unless you are involved in specially approved scientific research, you cannot even take fruits, seeds, or cuttings of these plants. See last month's article for a list of highly safeguarded plants.
- Second, you must have the written permission of the land

owner if the plants are growing on privately owned land. In the case of federal land, you need to check with the agency that administers it.

- Third, you need to have a valid permit and tags and seals issued by the Arizona Department of Agriculture for each plant. Permits, tags, and seals may be issued for approved plant salvage operations or upon joint application by a collector and a private land owner.

Note that some municipalities may have supplemented Arizona statutes with their own ordinances. Sierra Vista is such a community. Before destroying or transporting any protected plants within a municipality, check with the local city government to determine if additional rules apply. In Sierra Vista, check with the Plant Sciences Center at 1140 N. Colombo or call 458-8278.

By law, both private land owners and state agencies are required to notify the Arizona Department of Agriculture if they intend to clear land that contains protected species of plants. Land owners, public or private, may or may not decide to allow the public salvage from the land to be cleared. Contact an office of the Arizona Department of Agriculture to determine if there are any public plant salvages scheduled for your area (see address below.)

Land owners may also sell or give away protected native plants from their property. In this case the person seeking the permit to remove and transport the plants must apply jointly with the land owner to the Arizona Department

of Agriculture to obtain permission to remove the plants and then purchase a transportation permit, and seals and tags for each plant to be moved. Transportation permits cost \$5.00 each, seals are \$0.08 each and tags range from \$0.50 to \$6.00 each, depending on the plant to be moved. Each protected plant being moved requires a seal and tag while in transport, but you may remove the tag and seal once the plant has arrived on your property.

In Cochise county, permits, seals, and tags can be obtained from the district office of the Arizona Department of Agriculture, 241 S. Haskell, Willcox, AZ 85644. Tel (520) 384-2665.

As you can see, it is extremely difficult to legally collect living specimens of protected native plants in Arizona. If you would like to grow protected species of native plants in your yard, your best bet is to buy them from a licensed dealer. If you have the patience, an alternative is to collect the seeds of

these plants in the wild and attempt to grow them out at home. Just remember that you cannot even legally collect the seeds of highly protected (Group 1) natives.



The definitive source for information about Arizona native plant laws can be found at: <http://agriculture.az.us/PSD/nativeplants.htm>

Until next time, happy surfing.

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

ARIZONA COOPERATIVE EXTENSION
U.S. DEPARTMENT OF AGRICULTURE
Cochise County
450 S. Haskell Avenue
Willcox, AZ 85643-2790
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

PRSR STD
POSTAGE & FEES PAID
USDA
PERMIT NO. G268

Address Correction Requested

Fall Plant Sales

Desert Survivors

1020 W. Starr Pass, Tucson
(520) 884-8806
September 29 – October 1
8:00 am – 5:00 pm

Tohono Chul Park

7366 N. Paseo del Norte, Tucson
(520) 742-6455
October 7, 9:00 am to 5:00 pm
October 8, 10:00 am to 4:00 pm

Tucson Botanical Gardens

2150 N. Alvernon, Tucson
(520) 326-9686
October 7 – 8
9:00 am – 4:00 pm

Diamond JK Nursery

S. Hwy 83, Sonoita
(next to Eagle Milling Feed Store)
Tel: (520) 455-9262
October 10 – 21
10% off 1st week
20% off 2nd week

Boyce Thompson Arboretum

37615 U.S. 60, Superior
(520) 689-2723
October 13 – 29

Desert Botanical Gardens

1201 N. Galvin Parkway, Phoenix
(480) 941-1225
October 21 – 22