



High on the Desert Cochise County Master Gardener Newsletter

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

Book Review...

Of Corn, Cats, and Crabapples

Shrinking the CAT (Genetic Engineering Before We Knew About Genes) by Sue Hubble is a “Wow! I didn’t know that” book to smile your way through. Mystery readers will find this as fascinating as a well plotted puzzle. It is written for the understanding of those without a scientific education. The examples and parables which carry you from point to point so you arrive with an understanding the principles and a few of the technical terms which define them. The history of the domestication and breeding of corn, silkworms (and mulberry trees), cats, and apples is presented with anecdotes, humor and enough story line to be fun and informative. Her tales are of these species we have manipulated so in their present day form, they suit us but are far different from their original natural forms.

Sue Hubble asserts that humans ought to be defined as Homo mutans (mutant)

rather than Homo sapiens (intelligent). We could more appropriately be known by our talent for changing our environment and those plants and animals in it to suit ourselves, than simply for our awareness or intelligence. She points out that some of our intelligent decisions haven’t been that bright—like propagation of the gypsy moth as a substitute for the silkworm moth because they fed on a wider variety of leaves.

If you want a well written, entertaining little book which is thought provoking and provides trivia in history and horticulture, check this out, read, and smile. The Sierra Vista library has a copy in the 574.6 area in new acquisitions so don’t look for it in the horticulture sections.

The cover touts a comment by Bernd Heinrich. “This is a great antidote to the ‘genetic engineering’ paranoia, and a great read, too.” Enough said—read and enjoy.

Joyce M. Gay, Associate Master Gardener

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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

Turf Grass Management

You can successfully grow turf grass in Southeast Arizona and deplete either the local aquifer or your pocketbook. The key to success is to: plant only the amount of turf necessary for your needs, plant only drought tolerant turf grasses, and maintain the turf properly. It is the height of folly and environmentally insensitive to plant a sea of grass that serves no purpose in the landscape other than to act as rabbit food and land your yard's picture on the cover of Turf Grass Monthly.

Before you decide to plant turf grass, evaluate your needs. What purpose will the grass serve? Is it a child's play area or just a sitting area? The amount of traffic the yard will sustain should impact your turf grass selection. If your desires are purely aesthetic—seriously consider—DO YOU REALLY need turfgrass at all? You can have a lush

vibrant landscape without turfgrass. (Call the *Water Wise* representative Cado Daily at 458-8278 ext. 2139 for alternative suggestions). No matter what type of grass you select, your water bill will go up and maintenance will impact your limited leisure time. So if you initially thought of putting in an acre of grass perhaps you should scale back your designs.

Next comes the decision of what type of turfgrass you will plant. You have quite a few choices but be forewarned—just because you had a particular type of grass back east does not mean it will do well here. You must select turf varieties that will thrive in intense sunlight/low humidity conditions with minimal water usage. Planting a sea of Kentucky Bluegrass is not only environmentally irresponsible but will cause you nothing but grief. Always remember—there is a reason the native landscape here does not look like the Tennessee Valley—you live in the Southwest. ADAPT! You can have year-round green turf but really do you need green grass in the middle of winter? It gets cold here and with the cold wind blowing and snow flying are you really going to park yourself out in the back “forty” with your feet buried in green grass or do you relish the idea of pushing a mower in January?

Drought resistant varieties of fescue are probably your best bet for year-round turf. I personally like “Bonsai.” It is a softer, shorter, more drought resistant variety. It is more expensive but you get what you pay for in this case. Some varieties of fescue look nice at a distance but have a straw-like consistency which is not nice to bare feet. Remember, you MUST water fescue even in the winter. If it dies back, no amount of watering will revive it. Better suited to our climate are the seasonal turf grasses such as Bermuda and buffalo grass. I sort of consider common Bermuda as the grass from hell. It is extremely aggressive and once it gets into your

Cuttings 'N' Clippings

* Cochise County Master Gardeners Association (CCMGA) next meeting will be September 4 at 5:00 at the Sierra Vista library.

* The *Water Wise* lecture series continues on September 7. The presentation will be **Planting Techniques** by DeForest Lewis, Certified Arborist and Cochise County Master Gardener. The free lecture takes place at the University of Arizona South, 1140 N. Colombo, Sierra Vista at 9:00 a.m.

* The **Fall Xeriscape Tour** is scheduled for Saturday, Sept. 7 from 9 a.m. to 1 p.m. in the Sierra Vista area. This is not a garden tour but a low water use landscape tour. Maps of the gardens on display will be available from the Cooperative Extension, Sierra Vista near the end of August. Please call Joyce at the office.

August Reminders

Keep pulling the weeds

Fertilize

Prolong Annuals

Plan your spring wildflower garden

Watch for nutrient deficiencies, sunburn, saltburn, over-watering & insects

Start shopping for bulbs (Bulbs for Southern Arizona bulletin is available from the Cooperative Extension offices)



Robert E. Call
Extension Agent, Horticulture

Carolyn Gruenhagen
Editor

flower beds it is extremely difficult to eradicate. However, this very tenacity makes it a great high desert survivor. The previous owner of my property put in common Bermuda and rather than turn my hacienda into a chemical waste dump to get rid of it, I have learned to cope with and even appreciate it. During times of extreme drought, I have let it go completely dormant to the point of almost bare earth. But, lo and behold, with a little rain it comes up lush and beautiful again. It can stay green with only two deep waterings a week during the hottest part of the summer. A perhaps better choice for lawns are the hybrid Bermudas such as EZ Turf (Midiron), Tiffway and “BOB” just to name a few. These are non-allergenic, not aggressive spreaders, and drought resilient. And, if you must have a year round lawn, can be easily overseeded in October with annual rye. These are available as stolens or sod—not seed since they are sterile varieties.

(Continued on back page)

Gardening—by John Begeman

Start new plants from cuttings taken during monsoon onset...

Summer is a great time to start new plants by taking cuttings from shrubs and rooting them. Many varieties of shrubs respond well to cuttings taken in the summer. Some root best on softwood cuttings while others form roots best on semi-hardwood.

Softwood cuttings are taken during a period when plants are putting on a flush of new growth. This growth flush often occurs in July with the onset of our monsoon rains. Softwood cuttings are taken before the stem stiffens and becomes woody. Shrubs that root well from softwood cuttings include Texas ranger, butterfly bush, pyracantha, photinia, jasmine, eleanus (silver thorn) and euonymus.

Semi-hardwood cuttings are also taken from the current year's growth, but after the stem has matured and stiffened. Stems of semi-hardwood cuttings will usually "snap like green beans" when broken. Shrubs that root well from semi-hardwood cuttings include cassia, Texas mountain laurel, bougainvillea, oleander, hibiscus, pittosporum (mock orange), cape honeysuckle, and ligustrum (privet).

For best results, cuttings should be taken in early morning when the plant's moisture content is highest. Cuttings should be made with a sharp knife, safety-razor blade, or sharp hand pruners. Prior to cutting, sterilize the cutting blade with rubbing alcohol or a mixture of one part bleach to nine parts water to prevent contaminating the cutting with disease organisms.

Cuttings should be 4 to 6 inches long, taken from the outermost growth. Select stems that are free of flowers. If that isn't possible, then remove flowers and flower buds from the cuttings. Flowers take energy away from root and shoot formation. Immediately

place the cuttings in a bucket of cool water to keep them moist. Prior to sticking the cuttings in the rooting media, remove the leaves from the lower half of the stem. If the cuttings are from large-leafed shrubs, cut the remaining leaves in half to reduce moisture loss.

Some species of plants are more difficult to root than others. For this reason, it's advisable to apply a root promoting hormone to the cuttings, preferably one containing a fungicide. The two most common root hormones available at local nurseries and garden centers are Rootone and Hormonex.

Do not stick the cuttings directly into the bottle of rooting hormone. This will contaminate the supply for later use. Just place a small amount of hormone powder in a paper cup. Any powder that remains after treatment should be discarded and not returned to the original container.

Stick the cuttings in the hormone powder, covering the stem all the way up to the remaining leaves. Be sure to tap the cuttings to remove excess hormone before sticking them in the rooting media.

The bare end of the cutting should be stuck into the rooting media. At least one leaf node, and preferably more, should be in the media. A leaf node is the point at which a leaf was attached and where roots are most likely to emerge. Moisten the media prior to sticking the cuttings and keep it moist.

An excellent rooting medium can be made by mixing equal parts of peat and perlite. Both of these ingredients can be purchased in small bags at local garden supply stores. Coarse sand may also be used, but it must be sterile. You can sterilize the sand by moistening it, placing it in a pan, and heating it in a 220° oven for one hour.

A greenhouse is not necessary for successful propagation of stem cuttings; however, maintaining high humidity around the cuttings is critical. If you are rooting only a few cuttings, you can use a flower pot. Maintain high humidity by covering the pot with a bottomless milk jug or by placing the pot into a clear plastic bag. Cuttings can also be placed in plastic trays covered with clear plastic stretched over a wire frame. Pots and trays must have holes in the bottom for drainage. The plastic will help keep the humidity high and reduce water loss while the cuttings are forming roots.

Put cuttings in a location that has bright light but no direct sunlight. Excessive heating will kill the cuttings before they root. Do not let the cuttings dry out. In three or four weeks, check them to see if they are rooted by giving them a gentle tug. Rooting may take up to eight weeks.

Newly rooted cuttings should be gently pried out of the media with a knife blade and transplanted to a separate container. Keep the young plant well watered and out of direct sunlight. In mid-October, place the plant in a location where it receives morning sun. After a few weeks, it's ready to be planted in its permanent location in the landscape.

John P. Begeman is the urban horticulture agent for the Pima County Cooperative Extension.



Creating a Wildlife Habitat Garden—Basic #2— Food Part 2

BIRDS

Plants are a fun way to provide seeds, berries, fruits, and nectar for wildlife and unlike supplemental feeding is much safer and easier and enhances the landscape. Try selecting a variety of plants that will provide food throughout the year.

HUMMINGBIRDS

A misconception is hummingbirds live on sugar water and nectar alone. Small insects such as gnats, aphids, and fruit flies are a vital part of their diet.

BUTTERFLIES

Caterpillar food plants (also known as larval or host food plants). The best way to attract butterflies is to *GROW BUTTERFLIES* by planting caterpillar food plants. Plants may be located away from the main garden as caterpillars will chew up the leaves/flowers leaving them unsightly. Or be daring and make these plants the feature of your garden!

Nectar Flowers for Adults—Groups of plants will be more enticing than one plant here and there in the garden. Diversify the palette so there is always something in bloom from spring to late fall. Many butterfly species nectar on small, inconspicuous plants that most gardeners would consider “weeds.” If possible allow an area of the yard to become “scruffy”—you’ll be amazed at the insects these areas will attract—thus bringing birds, lizards, toads, and others to the garden!

When selecting plants try to choose native plants. Besides their beauty they will require less care, fuss, and water. And our local

fauna easily recognizes these food sources.

Reasons to landscape with regional native plants:

- Work in harmony with the natural landscape and Mother Nature
- Provides shelter, nectar, pollen, and seed/fruit sources for native insects, animals & birds
- Conservation and diversity of native flora
- Long term cost savings and increased enjoyment due to less intensive management:
 - Self-sowing—helps keeps costs low by increasing plants through volunteers
 - Water—little or none required after establishment (place high water natives near gutters or make swales to catch seasonal rainfall)
 - Fertilizers & Pesticides—none required (use a natural mulch so plants can fertilize themselves with fallen leaves and dead plant debris)
 - Mowing—not needed except for wildflower and grass meadows

Here are some basic “starter” plants for the habitat garden:

Acacia smallii—Sweet Acacia
Agastache species—Texas Hummingbird Mint
Anisacanthus species—Desert Honeysuckle
Arctostaphylos pungens—Manzanita
Asclepias species—Milkweed
Bouteloua gracilis—Blue Grama
Celtis reticulata—Netleaf Hackberry
Chilopsis linearis—Desert Willow
Cosmos sulphureus—Cosmos
Helianthus species—Sunflowers
Dalea species
Juniperus monosperma—One-seed

Juniper

Lycium pallidum—Wolfberry

Muhlenbergia species—Deer Grass

Parthenocissus inserta—Woodbine

Penstemon species

Prosopis velutina—Velvet Mesquite

Prunus besseyi—Western Sand Cherry

Rhus microphylla—Little Leaf Sumac

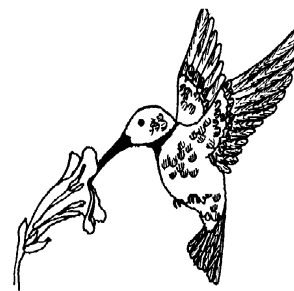
Salvia species

Senna leptocarpa, *Senna wislizeni*—Senna

Tagetes lemmonii—Mt. Lemmon Marigold

Tithonia rotundifolia—Torch Flame

Cheri Melton, Master Gardener



Cheri's “What To-Do” List

August in the High Desert can still be cool and wet!

- I love planting in August. It's a good time to plant cold hardy trees, shrubs, and flowers.
- Take advantage of the saturated soils to create berms and swales to collect rainwater runoff.
- Some of the native plants will slow down flowering at the end of the month to set seed for fall.
- Watch for baby birds, bunnies, and butterfly caterpillars!

The Agent's Observations

Q I'm seeing quite a few "June bugs" each morning below my outdoor night light. What are they and where do they come from? Do they do any damage to plants?

A The insects you are referring to are actually beetles. Adults emerge from the soil in May and June flying around looking to mate. They can be seen flying around lights at night.

The female lays her eggs into the soil and they hatch three to four weeks later. One of the preferred egg laying areas is in turf. Small grubs feed on plant roots during the first summer. As cooler temperatures arrive in the fall the now larger grubs move down the soil profile to warmer soil. Grubs return to the upper rooting zone in the spring to pupae and emerge as adults. June beetle grubs or larvae require one to two years to complete their life cycle. In the case of the two year cycle grubs will not pupate until the following year but will continue feeding close to the soil surface and then move lower in the soil when cold weather returns. Emerging adults range in color from tan to brown and some are almost black. The cycle for the next generation begins anew.



The first evidence of turfgrass injury is in localized patches of pale, discolored, and dying grass showing symptoms of moisture stress. Turf in these areas can be easily lifted from the soil surface or rolled like a carpet, revealing the "C" shaped white grubs underneath. Damage is most apparent in mid-August through early September when feeding activity is the greatest.

Several animals, especially skunks are highly attracted to turf insect infestation

and signs of their foraging in an area are strong indications of white grub activity. Flocks of birds, particularly starlings, feeding in the turf area provide additional evidence of a possible infestation. Examine the affected turf area by cutting a 12 inch square section of turf on three sides. Peel the sod back and examine the upper two inches of the root zone for the presence of white grubs. If three to five grubs are found per square foot then treatment is called for.

Control: Treatment with an approved insecticide should occur about three weeks after the heavy beetle flight or in mid-July through August. This is the optimum time. During this time frame most of the beetle eggs should have hatched and the small grubs will be feeding near the soil surface where control is much easier. Effective chemical control of white grubs depends on moving the insecticide down to the root zone where the grubs are feeding. This is best done by applying ½ to ¾ inches of water immediately after application of the insecticide. However, you should always follow the label directions. Some products will suggest repeat irrigations every 4 or 5 days to continue moving the insecticide into the soil. If it has been very hot and dry the grubs are probably deeper in the soil. A pre-treatment irrigation of ½ inch of water applied 48 hours before the insecticide application should encourage the grubs to move closer to the soil surface and enhance the level of control.

Q Since the rains have started I have seen some interesting insects. One is a bright red velvet looking insect. There are hundreds on the ground.

What is it and how should I control them?

A These critters are velvet mites. They are not insects but are in the spider group and are large mites approaching ½ inch in length. They have a head, abdomen, eight legs, and can be bright orange to red in color. White or cream spots can appear on the backs of larger specimens. Their appearance coincides with the great flights of winged ants and termites that become abundant during the rainy season. These mites are predators and easily find prey during the rains. Not a great deal is known about their life cycle. Immatures have been found in the egg pods of grasshoppers so they may be general predators. They can be very abundant. An entomologist arriving by air to visit Tucson noticed that the desert near Picacho Peak was tinged pink in color. Once on the ground he visited the area to investigate and found velvet mites! There is no reason to control them. They are good guys! If found in unwelcome areas just move them to a different location.

Sources: *Master Gardener Newsletter—July 2002*. Ann Fair. p. 11. Doña Ana County, New Mexico Cooperative Extension

Insects of the Southwest, 1994. Floyd Werner and Carl Olson. Fisher Books, Tucson, AZ. pp. 72-73, 128.

Robert E Call
Extension Agent, Horticulture

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(Continued from page 2)

The absolute best turf for low water use is Buffalo Grass - adapted from native grasses of the prairie. This grass can be kept green with only a couple of waterings a month during the summer. It must be mowed higher (4 inches or more) or can be left alone to give your lawn a natural prairie look.

Install a good watering system before you put in your turf. Make sure that you are waterwise and only watering your turf not the sidewalks. If you don't want to have it professionally done—consult the internet—Rainbird and Toro are two good sites for information on how to do it right the first time. Work the soil to a depth of 6-8 inches. Lay about ¼ to ½ inches of well composted manure or compost on top and work it in again. If you have poor drainage, the addition of gypsum at a rate of 80 lbs

per 800 sq ft is beneficial. Rake it smooth and you are ready to install turf. Sod should be laid out in a “brick” pattern and “rolled” to make sure it has good contact with the soil. Seed must be dispensed with a mechanical spreader and covered with a ¼ inch layer of soil or compost (otherwise you have put out bird feed). Set your water timer to have the sprinklers come on about 4-5 times a day for very short periods for the first couple weeks. Back off on watering once the sod has rooted (you can tell by trying to pull up on it) or after you have mowed your seeded lawn the second time. Your goal is to reach a point where you are only watering every second or third day in the hottest part of the year. It is always better to water less frequently but deeper. A water probe should sink down to 6-8 inches 30 minutes after the sprinklers have shut off. You may have to have them come on several times for

short periods to avoid run off on clayish soils. Fungi problems are common in fescue when over-watered.

Fertilizers should be applied sparingly. The more you use the more water will be required by the lawn. Follow package directions as you can easily turn your yard to toast with too much. I use organic only on my lawn (personal choice—I am a water miser). Mow often at the proper height with a sharp blade on the mower. Fescue should be mowed at 3-4 inches; Bermudas at 1½ to 2 inches. Never cut back your lawn more than 1/3 its height to avoid stress.

John Phillips, Master Gardener

