



High on the Desert Cochise County Master Gardener Newsletter

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

Edible Desert Plants—Part II

As promised last month, here are some edible desert zone plants:

- Acacia (*Acacia farnesiana*)
- Agave (*Agave* species)
- Cactus (various species)
- Date palm (*Phoenix dactylifera*) (not found in Cochise County area)
- Desert amaranth (*Amaranthus palmeri*)

ACACIA (*Acacia farnesiana*)

Description: The acacia is a spreading, usually short tree with spines and alternate compound leaves. Its individual leaflets are small. Flowers are ball-shaped, bright yellow, and very fragrant. The bark is a whitish gray color, and its fruits are dark brown and pod-like.

Edible Parts: Its young leaves, flowers, and pods are edible raw or cooked.

AGAVE (*Agave* species)

Description: These plants have large clusters of thick, fleshy leaves borne close to the ground and surrounding a central stalk. These plants produce a massive flower stalk: however, they flower only once, then die.

Edible Parts: Its flowers and flower buds are edible. Boil them before eating.

CAUTION: The juice of some species causes dermatitis in some individuals.

AMARANTH (*Amaranthus* species)

Description: These plants, which grow 90 centimeters to 150 centimeters tall, are abundant weeds in many parts of the world. All amaranth have alternate simple leaves. They may have some red color present on the stems. They bear minute, greenish flowers in dense clusters at the top of the plants. Their seeds may be brown or black in weedy species and light colored in domestic species.

Edible Parts: All parts are edible, but some may have sharp spines that need to be removed before eating. The young plants or the growing tips of older plants are an excellent vegetable. Simply boil the young plants or eat them raw. Their seeds are very nutritious. Shake the tops of older plants to get the seeds. Eat the seeds raw, boiled, ground into flour, or popped like popcorn.

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CEREUS CACTUS (*Cereus species*)

Description: These cacti are tall and narrow with angled stems and numerous spines. They have great displays of night-blooming flowers.

Edible Parts: The fruits are edible, but some may have a laxative effect.

PRICKLY PEAR CACTUS (*Opuntia species*)

Description: This cactus has flat, pad-like stems that are green. Many round, furry dots that contain sharp-pointed hairs cover these stems.

Edible Parts: All parts of this plant are edible. Peel the fruits and eat them fresh or crush them to prepare a refreshing drink. Avoid the tiny pointed hairs. Roast the seeds and grind them into flour.

CAUTION: Avoid any prickly pear-like plant with milky sap.

BANANA YUCCA (*Yucca baccata*)

Description: This evergreen plant has coarse, light green foliage and grows to 4 feet tall. It has cream-colored flowers that are seen in the spring.

Edible Parts: The flowers.

SOAP TREE YUCCA (*Yucca elata*)

Description: This evergreen plant has coarse green foliage and grows to 10 feet tall. It has white flowers that bloom in the spring.

Edible Parts: The leaves are edible and can be incorporated into salads.

Miscellaneous Uses of These Plants:

- The yucca plant can be used to make cords. Use

the fibers from its stem.

- Some species of Agaves have very fibrous leaves. Pound the leaves and remove the fibers for weaving and making ropes. The species that have sharp needle tips can be used for sewing or making hooks. The sap of some species contains a chemical that makes a suitable soap.
- The pulp of the Cereus and Barrel cacti are a good source of water. Break open the stem and scoop out the pulp. Peel the prickly pear cactus before putting it in your mouth. The pulp of the prickly pear can also be used to promote healing (apply pulp directly to the wound).

*Julianna Stangland,
Master Gardener Associate*



Robert E. Call

Robert E. Call
Extension Agent, Horticulture

Carolyn Gruenhagen
Editor

Cuttings 'N' Clippings

* The next meeting of CCMGA is 5:00 p.m. September 2, 2004 at the University of Arizona South campus, Room 100 in the old building. Speaking on *Fire Ready! Tips for Protecting Your Home From Wildfire* is guest speaker Ellen Smith, USFS Ranger, Wildland-Urban Interface Specialist.

* Saturday, September 4 from 8:00.—9:30 a.m. a free *Water Wise* workshop will be held at UAS. Learn from DeForest Lewis, ISA Certified Arborist and Master Gardener, on *How Do I Plant?* De says, "A healthy plant is a plant planted well."

* The fall Xeriscape Garden Tour is also scheduled for Saturday, September 4 from 9:00 a.m. until 1:00 p.m. Maps are available from the Sierra Vista Cooperative Extension office and at the *Water Wise* workshop that morning..

September Reminders

- ◆ Keep on watering
- ◆ Plant cool-season flowers and veggies
- ◆ Start shopping for bulbs (*Bulbs for Southern Arizona* bulletin is available from the Cooperative Extension offices.)

The Virtual Gardener—Root Camp IV



Last month I described how to install your new plant recruit in its permanent home, however just because it's been posted to its permanent duty station doesn't mean that your training responsibilities are over. This month we will talk about getting your new plant happily established in its new home.

A new plant becomes *established* when a substantial number of roots have grown out of the original root ball and penetrated into the surrounding soil. The surrounding soil rather than the root ball thus becomes the principal source of water and nutrients for the plant. If roots never penetrate into the surrounding soil, the plant will fail to develop properly and may even die. The period of establishment varies with species but generally takes two or three years. Roots will penetrate out of the original root ball if the soil was loosened for three to five times the width of the root ball, the sides of the hole were roughened, and there is moisture in the surrounding soil.

Contrary to the beliefs of some people, roots do not *seek* water. That myth was probably started by someone whose sewer line was penetrated and destroyed by tree roots. There is no intelligence inside the plant directing the roots to explore the surrounding soil for water. Rather, roots *follow* water. If the soil is moist, the roots will grow into it. If it is dry, they will not. Knowing this allows us to develop a strategy to encourage

our plants to establish in the shortest possible time.

The trick is to apply water to the area around the outside of the root ball, this means at the drip line of the tree or bush and beyond. The drip line is the imaginary line on the ground beneath the tips of all the branches of the plant. Rainwater will wet the ground around the plant outside the drip line. The area inside the drip line will be dry (or at least drier) than the area outside.

There are at least three techniques for applying water to this area.

First, you can use a soaker hose to make a circle around the plant at the drip line and barely turn the water on for a long time until the water penetrates at least 2 or 3 feet into the soil. I find letting the hose ooze water overnight or all day will accomplish this.

Second, you can place drip emitters around the plant. Just remember that you will have to relocate the emitters farther out from the trunk each season as the plant grows or you will be watering the wrong place. Although the diameter of the wetted area around an emitter varies with the type of soil, a rule of thumb says that the effective diameter of the wetted area averages about 2 feet. That means that you have to place your emitters at intervals of 4 feet around the drip line of the plant in order to get continuous coverage. If the canopy of a tree has a diameter of 5 feet, you need 4 emitters. When the tree grows to have a diameter of 10 feet, you will need 8 emitters, and so on.

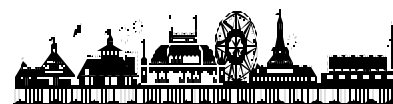
Third, you can dig a moat around the drip line of the tree or build a berm just outside the drip line and flood the moat or the area inside the berm. This is the technique I use and I have had excellent results with it. An additional advantage of the flood irrigation technique is that the moat or berms capture rainfall as well as artificial irrigation. Of course the flood basin must also be expanded as the tree grows larger.

Last but not least, use plenty of mulch over the area you irrigate to keep the water in the soil and not allow it to evaporate away.

To learn more about planting and irrigating trees, once again point your browser at <http://hort.ifas.ufl.edu/woody/planting>

Until next time. Happy surfing.

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**Cochise County
Fair
September 23—26
Douglas Fair
Grounds**

Fair books are available at Chamber of Commerce offices.

In a Desert Garden

Gaura lindheimeri Onagraceae



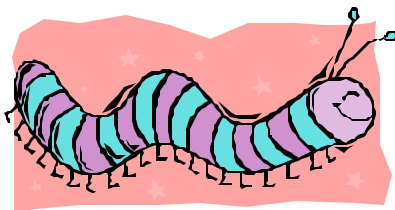
Another beautiful plant in my desert garden is *Gaura lindheimeri*. It is a very good performer and somewhat underused. This plant has an airy appearance with its veil of white flowers. It is native to Texas, Louisiana, and

Mexico but quite hardy in our region. Its long tap root makes it drought tolerant.

A long time favorite in English gardens, *Gaura* has been loved for its delicate flowers which bloom well above the foliage. This plant is now getting popular in our desert gardens. It was one of the first plants I put in six years ago in my front garden and it has performed very well ever since. I had two attacks on my *Gaura* and it came out of them stronger than ever. The first one was an accident my husband had. He lost his balance and ended up right in the middle of my *Gaura*, flattening it. Lucky that this plant had so much growth he didn't hurt himself, but I expected the worst for the poor plant. I thought it was history so I got out my pruners and cut off all the broken stems. In a month the plant came back stronger and wider than ever—it

is now doubled in size to 4 feet wide. The second attempt on its life was a lot more dramatic—an attack of flea beetles. They really did a job on it. As I refuse to use any poison and the repellent I purchased didn't help at all, I took drastic measures and cut the plant down to the ground. The beetles left as there was nothing more to eat. The plant recovered in a short time and looked as lovely as ever.

I grow a lot of plants that are food plants for butterfly and moth larvae. If you like the White-lined Sphinx Moth like I do, *Gaura* is for you. Next to *Calylophus* it is the favorite food plant for this moth's larvae. The damage they do is not great as they only eat the flowers which are produced in abundance. I sometimes have more than thirty caterpillars on it. The larvae are beautiful and colorful.



I do not grow my plants for the beauty of their appearance but mainly for the wildlife they bring in (except flea beetles—sorry!). Another good feature of *Gaura* is that it stays evergreen in our winters. The plant forms a nice round clump but it does need some room. The leaves resemble those of evening primrose. At one time it was considered to belong to the family of *Oenothera*. The Western species are still in that family. The flower stalk can grow to 5 ft. tall, but they are very airy. The flowers are 1 inch wide and have 4

petals, opening a few at the time from the bottom up. The flowers open white and fade to pink from spring to frost. The plants like full sun to part shade and the foliage may turn reddish in fall. They tolerate clay soil if it is well draining, so do not dig out all your rocks as they help with the drainage. The plant tolerates our summer heat and our winds. It can self-seed quite freely.

There also is a hybrid 'Whirling Butterflies' which is shorter and doesn't set seed. Another cultivar is 'Siskiyou Pink'. It has reddish leaves and rose pink flowers. The plants are smaller, 2 x 2 ft. and very lovely. I grow one in front of our house and one in a pot in the back yard. It seems to do just fine in the pot. Another cultivar, 'Corrie's Gold' is somewhat variegated with the foliage edged with gold. I tried it twice without much luck. The plants came from a mail order and were very small. A local nursery had one planted in their display garden. It might not be suited for our area and that's why they lost theirs too.

The Guide to Plants of Arizona lists 2 *Gauras* and you can find them growing wild when you hike the canyons. They are called *Gaura* but belong to the evening primrose family. There is the Scarlet *Gaura*—Scarlet Bee Blossom. It only grows to 20 inches. The flowers are reddish pink and it flowers from April to September. The other one is Lizard Tail or Tall *Gaura*—*Gaura parviflora* only remotely resembles our garden *Gaura*.

Angel Rutherford, Master Gardener

The Agent's Observations

Q I have several sycamore trees that have leaves that are drying up. Some of the leaves have fallen off and the bare branches are showing. What is the cause and is there a cure?

A A leaf sample was brought to the office. Upon examination sycamore anthracnose (*Gnomonia platani* or *Discula platani*) or leaf and twig blight was determined to be the cause. This most important sycamore leaf disease is caused by a fungus. Similar fungi cause anthracnose on ash, oak, elm, and hickory trees. The disease may appear as four distinct phases. **Twig Blight:** Occurs in the spring before leaf emergence, killing tips of small, 1-year-old twigs. **Bud Blight:** Occurs in April and May; the expanding buds die because of the girdling action of the canker on the branch. **Shoot Blight:** New shoots and immature leaves on infected branches suddenly die. **Leaf Blight:** The most characteristic symptom is a crinkling and browning of the leaves. Entire leaves may be killed and may fall. These symptoms are very similar to those caused by late spring frost injury. This disease is favored by cool, wet weather

(temperatures under 60° F during budbreak and the first few weeks of growth). These were the weather conditions in April of this year. The much needed rain can cause other effects! A severely infected tree may be defoliated several times in a single season. Small twigs and branches may be affected, and cankers may girdle and eventually kill the branch. This will result in the production of many small shoots from the area just below the girdled portion of the branch, giving that part of the tree a bushy appearance. Spores are spread by rain and wind to healthy leaves, buds and twigs. The fungus survives the winter on fallen leaves and twigs. **Prevention and Treatment:** Fallen leaves and twigs should be raked up and destroyed. Diseased branches should be pruned out and destroyed limiting the number of spores being produced by the fungus to start new infections. Care should be taken to sterilize pruning shears in rubbing alcohol, a 10% bleach solution, or other disinfectant after pruning each infected branch. Adequate fertilizer and water should be applied to maintain the vigor of the tree. The cultivars 'Bloodgood', 'Columbia', and 'Liberty' are moderately resistant to anthracnose. Early spring applications of bordeaux mixture, copper, chlorothalonil, or thiophanate-

methyl fungicides may control the disease. Read and follow all directions on the label.

Sources: *Plant Pathology 3rd Edition*. George N. Agrios. 1988. Academic Press, Inc. New York. page 386. Also: <http://hgic.clemson.edu/factsheets/Graphics/sycamore/anthrac.htm>

Robert E. Call
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Book Review

I particularly wanted to write about Thomas Leo Ogren's book because there is information about some of my favorite plants that get a bad rap. I grow and enjoy them in my garden—*Morus Alba*, White Mulberry female with fruit. Yes, that's what I said—Mulberry. You just have to know a little more about them before you judge them. Mr. Ogren's idea is to have: The female garden.

Allergy-Free Gardening: The Revolutionary Guide to Healthy Landscaping
by Thomas Leo Ogren

Mr. Ogren has done much research and you can't find a more informative book that helps you understand about allergy-free gardening. He says priority is given to two groups of plants. First, the plants that produce large, very showy, lightly scented flowers, in which the male flower

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parts are either few in number or deeply recessed within the blossom. They are almost certain to be perfectly pollinated by insects and rarely cause pollen problems.

The second type of plants that rate extremely well are those separate sexed species in which the female plants are known and commercially named, or those in which the females of the species are easy to identify by sight. In separate-sexed dioeciously plants, individual plants are either males or females. The males almost always are capable of causing problems, but the females have no pollen at all and usually make wonderful allergy-free landscape choices.

His book lists the good and bad plants. He mentions the

monoecious (a plant with male and female flowers) systems, like corn. The male flowers are at the top of the plant and the female flowers are below them. In this case, the pollen simply falls down by gravity to reach the female flowers. In many other monoecious flowering systems, however the male flowers are always found at the bottom of the plant and the females at the top. In this system, the pollen of the male flowers must float up to reach the female blooms. In this text, the extensive list of criteria used to rate each species and cultivar in monoecious systems, which feature the male flowers below the female, factor highly. These plants often have allergenic potential second only to certain male-only dioecious plants.

A few of his "Best" or allergy-free are rated 1—"Worst" is rated to 10.

Acacia, shrubs-8, trees-10
Abronia, sand verbena-1
Acer, ash-leafed Maple, Box Elder.
Males-10, females-1
Archillea, yarrow 7
Buddleia davidii, Butterfly bush-5
Callistemon, Bottlebrush-9
Chilopsis linearis, desert willow-5
Creustomeria japonica, Japanese cedar-10
Ligustrum lucidum, Glossy privet-8
Lobelia cardinalis, Perennial Red
Lobelia-1
***Morus alba*, Mulberry female with fruit-1**
Olea europaea, Olive tree-10
Penstemon heterophy, beard tongue-2
Vitex sp, chaste tree-4

This information and much more is in Mr. Ogren's book. I think it is a worthwhile addition to your library.

Emily Boyd, Master Gardener