

# COOPERATIVE EXTENSION

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

the Cochise County Master Gardener

## NEWSLETTER

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SEPTEMBER 1994

### CRAPE MYRTLE (*Lagerstroemia indica*)

Barbara Kishbaugh  
Staff Writer

Crape myrtle is an ideal landscape shrub or tree for the high desert. It is used extensively in Sierra Vista as a street-side tree, in commercial landscape applications, and private residences as well. Fine examples of crape myrtle have been placed between buildings at the Cochise College campus in Sierra Vista. The trees have grown and flourished in tree wells which are surrounded by concrete paths, withstanding winds and the passerby handling their limbs as they grew. It has become a local favorite for its long-lasting blossom period and for its quick adaptability to new environments.

Varieties can be purchased for shrub or hedge development, and the plants can be trained with a single stem forming a charming tree. The bark is mottled, smooth-looking with varying shades of brown. The trees have clusters of white, pink, or lavender blossoms that bloom through summer and into the fall. The tree or shrub will be covered with color.

The recommended procedure for transplanting crape myrtle is to place the plant in a prepared hole which is deep enough to accommodate the roots and wide enough—plenty wide—to allow for lateral growth. Crape myrtle can take full sun but will also grow successfully in shady areas. It blossoms during the hottest time of the year, so give it regular moisture, preferably by means of a drip system for metered, even water flow. It is subject to mildew, but this is seldom a problem in our dry climate.

Crape myrtle is chosen by the gardener for the lack of maintenance it requires. It is deciduous and will grow at a fairly good rate. A pruning and shaping of the plant when it is dormant may be necessary to increase blossoms for next year. This plant will not stress out during hot spells

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Robert E. Call

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or in high winds. It can be used in formal landscapes or casual settings, depending on placement in the landscape scheme, plant shape desired, and the variety chosen.



Lagerstroemia indica

## COCHISE COUNTY FAIR

Douglas fairgrounds  
September 22-25  
Gates open 10:00 am  
Thursday - Sunday  
Close at midnight

### September Reminders

- Keep watering!
- You can always plant something (try cool season veggies—see September 1993 newsletter)
- Start shopping for bulbs (*Bulbs For Southern Arizona* bulletin is available in the Cooperative Extension Offices)

Staff: Carolyn Gruenhagen  
Barbara Kishbaugh  
Virginia Westphal

### Other bush/tree flowering deciduous plants which grow well in the high desert are:

- Pomegranate (*Punica granatum*) Brilliant red flowers become juicy fruit which can be dried to a reddish purple, leaves small, waxy green, forming dense cover for wildlife.
- Mock orange (*Pittosporum*) Beautifully fragrant white blossoms on a very bushy plant.
- Texas ranger (*Leucophyllum frutescens*) Gray foliage with small pink-purple blossoms. Bushy appearance can be pruned for a more sculptured appearance. Adapts well.
- Blue plumbago (*Plumbago auriculata*) Full bushy plant which has blue flowers. Is not frost tolerant.
- Coralbean (*Erythrina flabelliformi*) More of a specimen plant with red blossoms and large leaves which drop, exposing a white limbed skeleton. Bright red large seeds in long, dangling pods. Poisonous.
- Creosote bush (*Larrea tridentata*) Small dark green waxey leaves with bright yellow blossoms on multiple spindly stems. Strong odor after a rain.
- Manzanita (*Arctostaphylos*) Beautiful red barked limbs with bushy green foliage and tiny white to pink blossoms. Does not transplant easily and requires an acid soil. Evergreen.

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## ARIZONA CERTIFIED NURSERY PROFESSIONAL TRAINING CLASS OFFERED

A four week course will be offered meeting each Wednesday, beginning October 12 at the U of A Campus in Sierra Vista, to prepare participants to take the Arizona Certified Nursery Professional (ACNP) test. Terry Mikel, Commercial Horticulture Agent in Maricopa County, is certified and will do the training. The free class will begin at 6:30 pm and run to 10:00 pm. Topics covered will include plant materials, uses and identification, problem diagnosis, fruit, vegetable and nuts culture. The cost of the training book is \$35.00. A \$35.00 charge is assessed to take the examination if the participant is affiliated with an Arizona Nursery Association member nursery, and \$150.00 if you are not an ANA member. Individual ANA membership cost \$50.00.



### MULCHES

Barry Bishop

You've got to be kidding! You mean I can have a vegetable or flower garden without the usual work that goes along with it? Come on, get serious. It's true according to Ruth Stout, sister of Rex Stout, the famous detective writer. Her passion was gardening and she wrote several books, all of which say we can have our garden without having to do the backbreaking work of plowing, spading, sowing cover crops, harrowing, hoeing, cultivating, or pulling weeds with its accompanying problems.

We are asked to put eight inches of mulch on the area we wish to garden. Then push back the mulch on both sides of the row we intend to plant. We are asked to sow the seeds in a small ditch we have made along the row that is uncov-

ered. The level of the ditch is determined by the size of the seeds of the plants that we wish to grow. When the plants start peeking their heads up through the soil, we move the mulch around each one so that the mulch will smother out the weed seeds. Now the plants that you want to grow are not covered by the mulch and they are allowed to see the sun and breathe the air.

The previous eight inches of mulch you laid will experience compaction and be reduced in size to much less. Because of this, weeds may poke their heads through the mulch. No big thing—just add more mulch and the weeds will disappear.

When you live in the desert country of Arizona, you give your plants water. The mulch helps to hold it and gives it to the plant and its soil over a longer period of time.

Mulch is any vegetable matter that rots—including hay, straw, leaves, pine needles, sawdust, and weeds. You must be careful as certain weeds that are not dead and certain branches from the chipper will cause you problems that can only make your life more difficult.

Where do we get the mulch? Anywhere you can. You can get hay from a hay dealer and you don't have to buy the best hay he has, since you are not going to feed it to thoroughbreds. Buy rotten hay or soiled straw. Go to a cotton gin and get their cotton seed hulls or trash. If you have a large lawn and loads of grass clippings, you can use that for mulch. You can use shredded newspaper or cut up cardboard, old (or new!) carpet, or your own homemade compost.

The best time to mulch is now. No, you don't have to wait for falling leaves, or fall. Do it now. To put eight inches of mulch on a 50' x 50' garden, I recommend 25 fifty pound bales of hay. All will probably not be needed, so what is left can be added later when the mulch you put down is compacted. I would recommend always having some around to use.

See, the excuses we used to deter us from growing a garden before are no longer valid. With mulch, a bad back does not enter in or stop us.

## THE AGENT'S OBSERVATIONS

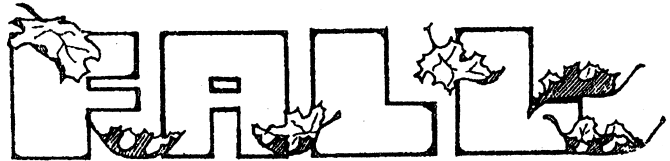
Robert E. Call  
Horticulture Agent

**QUESTION:** I have several Arizona cypress trees which are dying. There are holes in the trunks and the tips are breaking off. Are these two problems related? I guess that a boring insect is the cause. How can I rid my trees of these problems?

**ANSWER:** The problems you have observed on your Arizona cypress trees are two different insects. Both are aggressive pests of cypress and junipers in Arizona. The first is the western cedar borer (*Trachykele blondeli* Marseul). It belongs to the buprestid beetle group also known as metallic or flatheaded wood borers. Unlike most other buprestids, this borer will attack and seriously injure or kill seemingly healthy trees. Considerable damage is found in some juniper stands; older, larger trees seem to be favored by the beetles. Adults range from 1/4 to 1/2 inch long and are bright emerald with several dark areas on the wing covers. Females lay eggs under bark scales on branches of living trees. Flatheaded larvae bore from branches in to the main trunk where they feed on the heartwood for several years. Mature larvae move near the surface and pupate. Adults emerge in the spring leaving oval or rectangular exit holes. The second insect is the juniper twig pruner (*Styloxus bicolor* (Chamblain and Knull)). Juniper twig pruner causes twig dieback on the tips of tree branches. The insect is a small cerambycid or long-nosed beetle. The juniper twig pruner adult is 1/4 to 1/2 inch long and has a reddish-orange head and brownish to black body. Eggs are laid on branches, often near an intersection of twigs, one to two feet from the branch tip. Larvae are small, white, cylindrical, legless grubs that kill twigs by boring through the centers. The life cycle may take as long as two years to complete. **Control:** No practical controls or preventive measures have been developed for western cedar borer. Control of juniper twig pruner is unavailable also. Chemicals are not registered for this pest. Damage can be unsightly when populations are high but

trees are rarely seriously injured by the juniper twig pruner. However, the western cedar borer will kill your trees.

Source: *Conifer Pests in New Mexico*, Robert Cain, Jesus Cota\* and Charles Ward. 1990. New Mexico State University - Cooperative Extension Service and \*USDA Forest Service. pp. 32-33.



**HERE COMES THE BVC!**

On September 23rd the University of Arizona Cooperative Extension will begin training six Border Volunteer Corp (BVC) members who will begin their year long service in the Sierra Vista area. The project that Cooperative Extension and BVC will be implementing concerns renewable and natural resource conservation. A six week training course will be given which will include topics on water conservation, hydrology and water shed management, xeriscaping with native high desert plants, range land vegetation management, soil types and characteristics, alternatives to environmentally sensitive residential development, local options to solid waste management among other topics. Local field trips and a trip to Tucson to visit the Soil Conservation Service Plant Materials Center, Desert Legume Project, and other sites is planned.

During this training BVC members will be working on outdoor classroom projects at Apache Middle School and Buena High School putting to use the classroom learning they have done. After the training the BVC will work with interested land owners doing a resource conservation audit, developing environmental projects with school age children and assisting the City of Sierra Vista to implementing water and energy conservation programs. Anyone interested in helping with these projects can contact the Cooperative Extension Office in Sierra Vista at 458-1104 Ext. 141, or in Willcox at 384-3594.

# The Land Grant System



by Dr. Jimmy L. Tipton  
*Arid Ornamental Specialist*  
*University of Arizona Cooperative Extension*

Sometimes you become so familiar with a subject, so totally immersed, that you assume everyone knows as much as you do, that your knowledge is common knowledge. Then something happens to expose the fallacy of this assumption and you realize how misconceptions and misinformation could be influencing other people's perceptions. So it is with the land grant system.

I have had several conversations recently that revealed to me the need for more information on the land grant system and how it works. I am going to emphasize agricultural production in this article, but you should be aware that home economics (family and consumer resources), 4H, and community resource development are all parts of the land grant system.

Before 1862 higher education in the United States was elitist, only the sons of wealthy families were sent to college. Congressman Justin Smith Morrill of Vermont wanted to create an educational system that was more proletarian, that would in particular address agricultural and emerging industrial needs. Despite some ridicule and setbacks, the Justin Morrill Land-Grant Act of 1862 was enacted and signed by President Lincoln. This legislation would develop at least one college in each state that would "teach such branches of learning as and related to agriculture and the mechanical arts in such manner as the legislature of the states may respectively prescribe in order to promote the liberal and practical education of the industrial classes in several pursuits and professions of life."

The act granted land to each state. The federal land was sold, the money invested, and the states paid each year from the income. This income endowed and supported the land grant colleges, bringing higher education within the reach of all who qualified, regardless of wealth. This was the first commitment by our nation to providing higher education to the public.

Agricultural instructors at the land grant schools quickly discovered that they did not have data to support their classroom instruction. Agricultural research was needed to provide this data, so the Hatch Act of 1887 authorized federal support to establish and maintain an agricultural experiment station at every land grant college. Most agricultural instructors had a joint appointment: classroom teaching through the college and research through the experiment station.

The original concept was that these instructors would conduct research on local, practical problems associated with agricultural production. Of course this concept has

changed over time. In Texas we used to say that we were supposed to do basic research on local, applied problems with international significance.

The land grant college/agricultural experiment station idea worked well. New knowledge was being discovered through research and imparted to a new generation through the classroom. However, there was not a mechanism to distribute this new knowledge to existing agricultural operations.

The Smith-Lever Act of 1914 solved the problem. This act created the Cooperative Extension Service associated with each land grant college. Cooperative Extension was created "in order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics and to encourage the application of the same. . . Cooperative agricultural extension work shall consist of the giving of instruction and practical demonstration in agriculture and home economics and subjects relating thereto to persons not attending or resident in said colleges. . ." So Cooperative Extension was designed for non-classroom teaching. Split appointments between extension and research are fairly common. I am split 75% extension and 25% research through the experiment station, for example. Split appointments between extension and teaching are uncommon. In other states some people have a three-way appointment: teaching, research and extension.

The cooperative in Cooperative Extension refers to the organizational structure. The federal government is a partner through the Extension System of the U.S.D.A. State governments are partners through their support for the land grant colleges and state wide Cooperative Extension. Finally, County governments provide rent-free space and usually utilities for the local county agent offices.

So there you have the land grant system: research to develop new knowledge, cooperative extension to impart this knowledge to the current generation, and classroom teaching to impart this knowledge to the next generation. This system has been a model for the rest of the world (we are currently consulting with Russia in developing a similar system) and is, in my opinion, largely responsible for the level of production in U.S. agriculture.

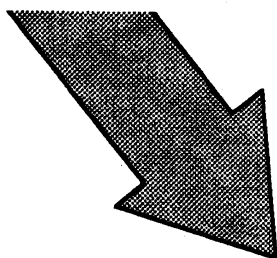
Remember that through much of the 1970s and 1980s agriculture was the only sector of our economy that had a positive trade balance with the rest of the world. I wonder where we would be if we had a program of cooperative effort involving government, universities and industry.

COOPERATIVE EXTENSION  
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## C'mon along . . . on our field trip to Elfrida!!!

The Cochise Master Gardeners are planning a trip to the Elfrida area on Saturday, September 24, and you are invited! We will be visiting the large and beautiful garden of Mrs. Poe and touring Fiesta Canning Company, the second largest chili and salsa canning company in the country. They process 4,000 acres of chili per year. You will be able to see the canning process and purchase case lot quantities of their products at factory prices. (For sanitary purposes Fiesta Canning requests that no shorts, sandals, or dresses be worn in the facility and because the floors are wet, wear shoes with non-slip soles.) You will then have the option of going to U-pick farms or on to the Cochise County Fair near Douglas. This field trip promises to be fun and informative.

We will meet at the Elfrida Fire Station located where Frontier Road and State Route 191 meets in Elfrida at 9:00 am. From Sierra Vista you can take Charleston Road to Tombstone, South to Davis Road, left to Frontier Road, and then North to Elfrida, or you can take Gleason Road from Tombstone to Highway 191, then South to the fire station. We should be finished with our visits by noon. Call Joyce at the Cooperative Extension Office (458-1104, Ext 141,) and leave your name and number of people who will be coming.