



# High on the Desert Cochise County Master Gardener Newsletter

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

## Call's Comments...

My discussion this month focuses on the clouds that produce precipitation during our monsoon or rainy season. I am not a meteorologist or climatologist, and I do not play one on the evening newscast either, however I am told that most of our summer rains come from Stratocumulus and Nimbostratus clouds. I know clouds are made of tiny ice crystals or water droplets that have evaporated into the air and condensed as they cooled. Clouds change shapes and move as wind pushes them or when they touch warmer air and start to evaporate. Weather is determined by clouds. Sunny days occur when clouds are absent or thin; days are dark when they are thick. Clouds act as insulation and provide shade causing temperatures to rise more slowly during the day and cool more slowly during the night.

Low clouds have a base of less than 6,000 feet above sea level. Stratus clouds, meaning "layer-like," look like a smooth even sheet. Stratocumulus clouds are not as even and show light

and dark areas on the bottom because they are piled up. Many times drizzle falls from these clouds.

Middle clouds usually lie 6,000 to 20,000 feet above sea level. They include Altostratus clouds that form a smooth white or gray sheet across the sky, sometimes thin enough for the sun to shine through. Altocumulus clouds look like unconnected piles or a layer of clouds piled together. Nimbostratus clouds are a smooth layer of gray that may be closer to the ground but often you can't tell because it is raining or snow is falling from them!

High clouds are formed of ice crystals above 20,000 feet above sea level. They often look like wisps of hair (Cirrus means "curl"). Cirrus clouds are delicate and fine and may go even higher than 35,000 feet. Cirrostratus clouds combine thin sheets of clouds with wispy curls. This is the kind that makes a "halo" around the moon at night. Cirrocumulus

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clouds look like little pieces of cotton high up in the sky, but they rarely form.

Clouds can tell us wind direction and what type of weather will be forthcoming. They entertain us with their beautiful shapes and make Arizona sunrises and sunsets some of the best in the world! You can learn a lot from the clouds.

Robert E. Call  
Extension Agent, Horticulture

## July Reminders

**Keep the pests under control**

**You can still plant something**

**Keep on watering!**

Robert E. Call  
Extension Agent, Horticulture

Carolyn Gruenhagen  
Editor

## Firescape

Reduce the threat of wildland fires—take time to protect your home!

1. Stack firewood away from the house.
2. Thin and prune trees and shrubs.
3. Maintain a circle of safety—at least 30 feet or greater on slopes.
4. Keep grass and weeds mowed.
5. Keep the immediate area clear of debris.
6. Enclose openings such as porches and foundations.
7. Remove tree limbs that hang over structures.
8. Replace or treat wood shake roofs with fire retardant materials.
9. Keep roofs and gutters clear of debris.
10. Keep your fire extinguisher charged and available and a hose near outdoor faucets.
11. Dispose of ashes properly.
12. Provide adequate access for emergency vehicles.
13. Install spark arrestors on chimneys.
14. Provide an adequate outdoor water supply.
15. Dispose of trash legally—do not burn it.

**Source:** The Southwest Fire Management Board

## Cuttings 'N' Clippings

\* Cochise County Master Gardeners met on June 12 and elected officers for the new year. They are:

President: De Lewis  
V. Pres: Gary Gruenhagen  
Treasurer: Helen Sisney

Thank you to the outgoing officers for another successful year. The next CCMGA meeting will be September 4.

\* The August 3 free *Water Wise Workshop* will be **Low Water Use Plants**. The workshop will be presented by Peter (Petey Mesquitey) Gierlach, Spadefoot Nursery, and takes place at the University of Arizona South, 1140 N. Colombo, Sierra Vista at 9:00 a.m.



\* Bisbee's Farmers' Market, an "old-fashioned" farmers' market, is held in the Warren District's Vista Park, Bisbee, on Saturday mornings from 7:30—11:30 a.m. On July 6 a seed and plant exchange will be held. Bring extras to exchange with others. For information call (520) 432-7066.

\* The Master Gardeners International Conference will be held in Greater Cincinnati and Northern Kentucky, June 18-22, 2003. The web site is up and running, and you are encouraged to bookmark it and visit it often as it is evolving with more information regularly. The address is: <http://mastergardener.osu.edu/imgc2003>. There have been reports of difficulty in getting to it probably since it is NOT a www address. If necessary you can type in [mastergardener.osu.edu/imgc2003](http://mastergardener.osu.edu/imgc2003) and your browser will take you there.

## The Virtual Gardener—The Mexican Monsoon

Thunderheads building in the southeastern sky herald the beginning of the most exciting weather season in Southeastern Arizona—the summer monsoon. Hopefully the moisture will be abundant and give us a little respite from the busy job of keeping enough water on our plants to keep them alive.

If you've ever wondered about the summer rains—where the moisture comes from, why the rains regularly arrive in the first week or so of July, and why they are called monsoons—you need only point your browser at the Tucson Office of the National Weather Service Web site (<http://www.wrh.noaa.gov/tucson/>) to find the answers. This Web site has been recently remodeled and now presents a wealth of local weather information and provides many links to even more weather and climate information.

The Mexican Monsoon, as one article on the Web site refers to it, is similar in origin to the more famous monsoons of Southwest and Southeast Asia. Both originate from a seasonal shift in winds which blow marine moisture over a hot, dry landmass. Those of us who have had the pleasure of experiencing monsoon rains up close and personal in Southeast Asia realize, of course, that the Mexican Monsoon is but a pale imitation of the real thing. Never-the-less, it's what we have to work with here and we love every drop of water that falls.

During May and June, a ridge of high pressure sets up to the south of us over northwestern Mexico. The clockwise circulation of air around the high brings us a supply of hot air from the west that has been

stripped of any moisture by its long passage over the mountains and deserts between us and the sea. The air over Southeastern Arizona becomes bone dry and because the dry air is unable to hold much heat at night, temperature swings are extreme from the baking heat of the afternoon to the refreshing coolness of the pre-dawn.

As the season progresses, global changes move the high pressure ridge to the north and east until it is centered over Texas. This puts us on the back side of the high and the airflow is from the south. This picks up moisture from the Gulf of California. The earliest moisture to arrive is at the mid-levels of the atmosphere from 10,000 to 30,000 feet. Thunderstorm and rainfall activity during this period is confined to the highest elevations. Later the area of high pressure sets up over the Four Corners area.

Low-level moisture is the fuel necessary to get strong thunderstorm activity on the desert floors as convection carries the hot moist air from the surface to higher levels where it cools and condenses. As more and more moisture is brought into Arizona from this southern flow, the lowest levels of the atmosphere begin to moisten up. The dry air absorbs moisture like a sponge until the moisture levels reach critical levels.

Meteorologists of the National Weather Service have decided that the critical level of moisture is reached when mean surface dew points reach 55°F for three consecutive days in Phoenix. This means that there is enough water vapor absorbed in the atmosphere

that liquid water will begin to form when the temperature reaches 55°F (for example moisture will form on a glass holding a drink that has been cooled to 55°F).

Most of the low-level moisture that enters Southeastern Arizona during the height of the monsoon is brought by "Gulf of California moisture surges." These are pushes of cool, moist low-level air that moves northward over the Gulf of California into Arizona.

Whatever its causes, the Mexican Monsoon is a life-saver for Southeastern Arizona. It not only brings us the moisture our plants need to survive, but the associated cloud cover and cool outflows of rain and air from thunderstorms bring a welcome respite from the summer sun.

Until next time, happy surfing!

Gary A. Gruenhagen, Master Gardener  
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**Call Before You Dig!!!**



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## Creating a Wildlife Habitat Garden—Basic #2— Food Part 1

This month we will concentrate on supplemental feeding; that is the food that we put out for wildlife.

### BIRDS

Bird feeders are an easy and effective way to feed birds. Feeders should be cleaned thoroughly once a week to prevent disease transmission.

The gardener will find many types of bird foods on the market to include suet, nectar solutions, feed blocks, and various assortments of seed. Purchase the highest quality of product that you can afford. Many products contain fillers and the birds won't eat these fillers not to mention it being a waste of money.

If you purchase seed mixes that contain sunflower seeds in their shell you will need to rake up the feeding area regularly and dispose of the seed hulls. They can accumulate over time and spread diseases as well as become a unsightly mess in the garden. Because seed is usually sold by the pound I like to purchase no-mess blends—the hulls have been removed from the seeds and the result is pure food without the mess which means more seed for the money. The no-mess blends also attract the largest variety of birds to my garden. Since I switched, the bird populations that can not crack seeds very well like woodpeckers, Curved Bill Thrashers, Cactus Wrens, and Pyrrhuloxia, have increased greatly.

Suet is fun and attracts many birds. In the heat some suets can melt. Purchase a suet dough which can withstand high temperatures.

The favorites at our house are Fruit Cake and Calcium Care.

Many birds love fruit. I have five fruit feeders in the yard and I spike them with halved apples and oranges sections. You can make your own fruit feeder with a eight to ten inch piece of 2x4 wood with a couple of nails pounded in the sides (I grind off the nail head to make a sharp point so it is easier to put the fruit on it.) Drill a hole on the top and screw in a closed eye bolt and hang this on a hanger from a tree or garden structure object. I have fruit feeders that hang vertical and horizontal.



### HUMMINGBIRDS

Hummingbird feeders usually have red parts on them to attract hummers—there is no need to color the sugar solution. Clean feeders every 2-3 days with hot water. For stubborn mold try using a little white vinegar. Sugar solution for feeders is four parts water to one part white table sugar (do NOT use honey or red food coloring) and boil on stove for 2 minutes. Cool before filling feeders. Extra solution can be stored in the refrigerator. If solution “gums” up in feeders during hot weather try increasing the ratio to five parts water to one part sugar.

Next month we will continue the food basic series and talk about plants.

*Cheri Melton, Master Gardener*

### Cheri's “What To-Do” List July in the High Desert is finally WET!

- I start planting the plants from the Spring plant sales.
- Watch the land and indicate on your map where water pools, puddles, and runs off the property.
- I find it is a great time to transplant plants.
- Insects are still abundant this month.
- Discontinue using platform seed feeders as they become birdbaths for the few weeks during our rainy season.

### Do you know the 7 Xeriscape Principles?

1. Good landscape planning and design.
2. Low water use plants.
3. Appropriate turf areas.
4. Efficient irrigation.
5. Soil improvements
6. Use of mulches
7. Appropriate maintenance.

For more information and a free water audit contact Cado Daily, *Water Wise* educator, at the University of Arizona Cooperative Extension. The telephone number is 458-8278, Ext. 2139.

## The Agent's Observations

**Q** I have heard that an insect called a "sharpshooter" can cause disease in several ornamental plants. Also, I understand that the vineyards in Santa Cruz County have a problem with this insect. What do I need to watch for and what diseases can this insect cause.

**A** Sharpshooters are in the same insect family as leafhoppers (Cicadellidae). The blue-green sharpshooter feeds, reproduces, and is often abundant on cultivated grapes and other woody or perennial plants such as wild grape, blackberry, elderberry, apple, cherry, apricot and stinging nettle. The blue-green sharpshooter (*Graphocephala atropunctata*) is most common along stream banks or in ravines or canyons that have dense growth of trees, vines, and shrubs. It can also be abundant in ornamental landscaping around homes. Because it feeds on succulent new growth in areas of abundant soil moisture and shade, sharpshooters are seldom found in unshaded, dry locations but also finds plants in constant deep shade unattractive.

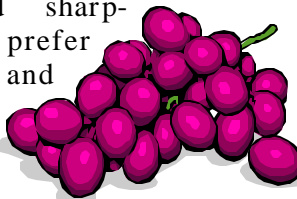
The blue-green sharpshooter has one generation a year in most of Arizona and a second generation in some parts of the state. In late winter and early spring, adults become active, and a percentage begin moving into nearby vineyards. Feeding and egg laying starting just after bud break continuing until grape shoots are several inches long. Their dispersal into vineyards increases as natural vegetation dries up. Eggs hatch from May through July.

Some of the nymphs become adults by mid-June, and the number of young adults continues to increase through July and August. In August when grape foliage is less succulent, blue-green sharpshooters begin to move back to nearby natural habitats. Populations of blue-green sharpshooter are always larger in natural vegetation than in vineyards or cultivated plantings.

The green sharpshooter and the red-headed sharpshooter prefer grasses and certain annual weeds for breeding and feeding.

Grapes are only accidental hosts of these grass-feeding sharpshooters. Pastures, weedy hay fields, bermudagrass, perennial rye, fescue or other grassy areas are favored foods of the green sharpshooter. Red-headed sharpshooters feed and breed primarily on bermudagrass. The presence of neighboring hay fields or permanent pastures should be considered when planting a vineyard or orchard.

The green sharpshooters (*Draeculacephala minerva*) and red-headed sharpshooters (*Carneocephala fulgida*) sharpshooters have three generations per year. They overwinter as adults and lay eggs from late February to early March. The overwintering adults do not live long, thus it is probably the second generation



that causes damage to plants. Sharpshooters are the most important vector (spreader) of Pierce's disease in grape-growing areas. The bacterium *Xylella fastidiosa* causes Pierce's disease in grapes. After infection the bacterium multiplies in the plant's water-conducting system (xylem) and eventually blocks it, causing water stress of the plant. Symptoms appear in midsummer and increase through fall. Grape varieties that are somewhat tolerant to Pierce's disease may recover more frequently than more susceptible varieties. Early season infections are more likely to survive through the next winter. Pierce's disease can kill grape vines 2 to 3 years after infection.

Another Pierce's disease vector is the glassy-winged sharpshooter (*Homalodisca coagulata*). It has recently been found in a Phoenix retail nursery. This vector is a serious threat to vineyards and ornamentals because it moves faster and greater distances than the other species of sharpshooters. The glassy-winged sharpshooter occurs in unusually high numbers on woody ornamentals such as oleanders. Until recently these plants have not been sources of Pierce's disease vectors.

**Control:** In early March begin monitoring for sharpshooters by hanging yellow sticky traps that are at least 4 by 7 inches. Place traps in areas adjacent to vineyards that serve as habitat for this insect (riparian habitat, pastures, grassy

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areas or ornamental landscapes, etc.) as well as 50 feet into the vineyard. Pierce's disease control is based entirely on preventing infection. Do not allow vectors to enter vineyards from areas adjacent to vineyards, especially from March to May. In alfalfa fields, orchards, or field-crop areas the grass weeds growing in or at the margins of the crop support sharpshooter populations. Eliminate weedy grasses whenever possible.

Insecticide treatments aimed at controlling the vector in areas adjacent to the vineyard have reduced the incidence of Pierce's disease by reducing the numbers of sharpshooters immigrating into the vineyards in early spring. The goal is to eliminate more than 95% of the vector population. This degree of control, however, is not effec-

tive for very susceptible varieties such as Chardonnay and Pinot Noir or for vines less than 3 years old. If a vineyard is near an area with a history of Pierce's disease, plant varieties that are less susceptible to this disease.

**Source:** *UC Pest Management Guidelines*. See: [www.ipm.ucdavis.edu/PMG/r302301711.html](http://www.ipm.ucdavis.edu/PMG/r302301711.html)

*Robert E Call*  
*Extension Agent, Horticulture*

### Gardening Tip #6732

How many times have you found yourself having to water a plant that is not on your current drip system but still needs a little supplementary water? Have I got a tip for you! You can make a portable drip system that can easily be transported to any



location in your yard using a one gallon plastic milk jug, a drip emitter, and a piece of spaghetti tubing. Poke the emitter into the bottom of the jug (I use a 2 gph emitter and pre-puncture the jug to make the emitter go in easier), add a short piece of spaghetti tubing (24 inches should do the trick) to the emitter, and you're done. To water a plant, elevate the jug on something (I find a 5 gal. nursery pot turned upside down works great), place the end of the spaghetti tubing next to the plant, and fill the jug with water.