



High on the Desert Cochise County Master Gardener Newsletter

Vol. 29, No. 6 June 2018

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

The Virtual Gardener—It's a Dry Heat . . .

"It's a dry heat," long-time Arizonans are fond of telling newcomers. "You'll hardly notice those hundred plus degree temperatures."

Those are true statements, as those of us who have experienced hot, humid summers elsewhere can attest. But the very fact that you don't feel the heat so much and your body is not soaked in sweat makes those hot, dry temperatures very dangerous, especially for hard-working gardeners.

Here's why.

Sweating is the body's first line of defense against overheating on hot days. When the air temperature is cooler than our body temperature, we stay cool by radiating body heat directly to the air, but when air temperatures reach above about 95°F cooling by radiation is not enough. At these times we begin to sweat through the roughly 2.6 million sweat glands (technically called eccrine glands) that cover our bodies¹. The sweat—perspiration—which is mostly water, evaporates, absorbing heat in the process.

Many factors determine how much we sweat—air temperature, physical activity, age, weight, and fitness among many others. When engaged in moderately heavy activity such as shoveling, raking, or carrying heavy loads, we can lose as

much as a pint to a quart of water per hour through perspiration. Under very humid conditions we are aware of how much we sweat because our skin is dripping and our clothes are saturated with moisture. But under hot, dry conditions, the sweat evaporates immediately and we are unaware of how much water we are losing.

Why is this important?

Like the plants we gardeners grow, our bodies are mostly water (60-70%) and this water is absolutely necessary to sustain life. The chemical processes that keep us alive—digestion, respiration, and all others—take place in aqueous solutions. Watery solutions carry nutrients to our cells and toxins away for disposal. Water lubricates our joints, eyes, and internal organs. Losing as little as 5% of our body weight due to water loss is serious and losing 10% creates a life-threatening situation requiring immediate medical treatment.

How can we tell if we are dehydrated?

Being thirsty is probably the most obvious sign of moderate dehydration, but thirst is not a reliable indicator. We can be pretty confident that we are dehydrated if we are thirsty, but lack of thirstiness does not mean that we are not dehydrated. Dry

(Continued on page 2)

Inside this issue:

Cuttings 'N' Clippings	2
June Reminders	2
Mites & Thrips—Oh My!	3
Return of Turkey Vultures #3	3
Keeping Up With the MGs	4
2018 MG Class Graduation	6



COLLEGE OF AGRICULTURE
AND LIFE SCIENCES
COOPERATIVE EXTENSION
Cochise County

Cochise County Cooperative Extension

www.cals.arizona.edu/cochise/mg/

1140 N. Colombo, Sierra Vista, AZ 85635
(520) 458-8278, Ext. 2141

450 S. Haskell, Willcox, AZ 85643
(520) 384-3594

(Continued from page 1)

mouth, lack of urination, dark-colored urine, dry-cool skin, headache, and muscle cramps are all indicators that you need to hydrate. Check out this [article](#) for a more complete list of dehydration symptoms.

What should you drink and how much?

The obvious way to avoid dehydration is to drink liquids. Eighty percent of the water we take in comes from the liquids we drink. The so-called “sports drinks” are heavily advertised as a cure-all for dehydration because they contain the electrolytes sodium and potassium. Most physicians recommend against them because of their high sodium and sugar content. Although you lose sodium, potassium, and other electrolytes when you perspire, the best way to replace them is naturally through your diet unless a physician recommends otherwise. You should also avoid other sweetened or alcoholic beverages, as they can cause even more dehydration. Cool, but not icy, water is the best beverage to drink. It not only hydrates but also cools your body.

The amount of water you need to drink is the amount needed to replace the amount you lost, keeping in mind that you lose water through urination (about 3+ pints/day) and breathing (about ¾ pint/day) as well as through perspiration. Doing heavy work in hot weather can cause you to lose as much as a pint to a quart of water each hour through perspiration. Experts recommend drinking about a cup (8 ounces) of water every 15 minutes when doing heavy work in the heat or about 16 ounces every hour when just resting.

There is a dangerous condition called water intoxication (hyponatremia) that can occur if you drink too much water in too short a period causing the concentration

of sodium in your blood to drop to critically low levels. Drinking more than a quart of water an hour should be avoided to preclude this condition.

Where can you find more information?

Doing a web search for “dehydration” will return links to hundreds of articles on the subject. Many are directed toward athletes and many promote sports drinks. For a comprehensive general discussion of dehydration, check out [Dehydration Causes, Symptoms and Tips to Stay Hydrated](#) from *OnHealth*.

A reminder . . .

Dehydration is not the only danger faced by gardeners in the summertime. See my Virtual Gardener articles on [heat exhaustion](#) and [skin cancer](#) in previous editions of this newsletter for discussions of other dangers.

Until next time, happy surfing!

¹Another type of sweat gland is the apocrine gland. These occur in our arm pit and groin areas and produce perspiration in response to stress. They have nothing to do with cooling our bodies.

Gary Gruenhagen, Master Gardener
virtualgardener@cox.net



Cuttings 'N' Clippings

✿ The next Cochise County Master Gardener Association meeting will be an Aquaponics Field Trip from 10:00 AM to Noon on **Thursday, June 14**. For more information contact Valerie at: valeriedavidson@email.arizona.edu or the Cochise County Master Gardeners web site at: <http://cals.arizona.edu/cochise/mg/>

✿ Water Wise will be holding a Rain Harvesting Workshop on **Saturday, June 16**, 10:00 AM—Noon at UA Sierra Vista. Discover the A to Z of rain harvesting. Remember plants love to drink rain! For information contact Valerie at: valeriedavidson@email.arizona.edu or 520-8278, Ext 2141.

Check out the Water Wise web site for their 2018 schedule at: <http://waterwise.arizona.edu/>

✿ AZ Native Plant Society will not meet again until September 2018. For more information, follow AZ Native Plant Society on their web site: <http://www.aznps.com/chapters/>

June Reminders

- ◆ Check tree ties
- ◆ Remove stakes if tree can stand alone
- ◆ Mulch trees and shrubs
- ◆ Remove faded flowers & fertilize roses
- ◆ Stake tomato plants and watch for curly top—remove
- ◆ Prevent blossom end rot by even watering
- ◆ Water! Water! Water!

Mites and Thrips—Oh My!!!

Now that our plants and roses are growing and blooming, it makes good sense to be on the lookout for mite and thrips damage before things get out of hand. Both pests are normally present in our gardens but are kept at low levels by predators and good gardening practices.

Thrips damage is most profound in our roses, where we see distorted and discolored blooms. They turn all of our efforts to grow beautiful blooms into frustration. If you are curious, grab both sides of a distorted bloom and pull it open to expose the base of the petals. You may very well see tiny cigar-shaped bugs scurrying about. They are rose thrips

To control them, the first thing you should do is groom the dis-

torted blooms and buds and place them in a sealed bag and place it in the trash. Spraying afterwards with soapy water will control those that shook loose as you groomed. Another valid approach is to use a fertilizer with a systemic insecticide, which should control them for several weeks.

Mite damage is not normally so easy to spot, since most of their damage is to the underside of most leaves. What you may notice is color leaving the leaves as if there is a fine dusting. In more serious infestations, you may see very fine webbing where leaves meet the stem. Mites are very small and difficult to see as individuals without a hand lens. So, if you suspect that they are present, shake the stem over a white piece of paper and look at the result.

With red spider mites you may see tiny red dots moving slowly about.



Control of mites is rather easy. First, wash the plant off with water (strong force). Then spray the plant thoroughly with a soap and water mix. In ten days spray again, or use the systemic approach. The best defense against mites is washing your plants off weekly. Mites love dust!!!

Jerry Ambrose, Master Gardener Class 1994

Editor's Note: We welcome Jerry back to the area after 20 years away! You'll find him and his expert plant advice at Sierra Vista's ACE Garden Place!

Return of the Turkey Vultures: Part 3

The previous two articles talked about Turkey Vultures and some of their characteristics. This article will talk about nesting, family life, and behavior.

Once mated for life, Turkey Vulture parents remain as a family group into the fall to raise their young. Turkey Vultures do not make nests but will clear an area to lay one to three eggs. The area can be an unprotected surface such as a cliff, trash heap, cave (only entering during breeding season), hollow tree, roads, or rock crevice. These nesting sites are typically much cooler than the surrounding environment. The same nest sites can be used for ten or more years.

The eggs are the size of a goose egg, and light cream in color with many dark brown or lavender spots around the larger end. Parents take turns incubat-



ing the nest for four to six weeks, then care for the chicks for another nine to twelve weeks until the chicks fledged.

To protect the nest, parents may flee or regurgitate on the intruder or feign death. Chicks defend by hissing or regurgitating.

The oldest known wild Turkey Vulture is 16 years, 10 months. Average age is probably ten years.

Although TV's (as Turkey Vultures are sometimes affectionately referred) forage independently and "queue-up" taking turns eating at a "wake," they are gregarious birds. When roosting for the night, the "committee" can consist of hundreds of birds and may include Black Vultures. The same roosting areas can be revisited for many years. A West Virginia researcher noted that Turkey Vultures roosted in the same site for over 45 years.

In Bisbee, cottonwoods are their favorite roosting trees where the leaves provide shelter during the night and the tall trunks reach up to the warm morning wind rising up the canyon.

At night, Turkey Vultures lower their body temperature by 11-34° F, becoming slightly hypothermic. TV's urinate on their unfeathered legs and feet using

(Continued on page 6)

Keeping Up With the Master Gardeners

Discovery Gardens Update



The Discovery Gardens have been bustling with activity this past month. The first in a series of **MG Workshops** (Master Gardener Workshops) was held in the Discovery Pavilion May 9 along with our monthly Master Gardener meeting. MG President, Cal Kelley, led a workshop on the drying, pressing, and processing of flowers which can be used for various artwork. Cal used an on-site microwave oven to teach attendees the fastest method of flower drying using flowers from around the Discovery Gardens. Everyone went home with a matted piece of art or a hand-made greeting card made in the workshop.

The liveliest and most frequent activity last month came from the numerous schools that visited the Discovery Gardens for field trips. The Master Gardeners along with the UA South Foundation extended an invitation to schools throughout Cochise County for students to visit the UA Sierra Vista campus. In April and May, the Discovery Gardens hosted more than 275 students from Buena High School, Peptech

High School, St. David, Bowie, Douglas, Bisbee Greenway, Coronado School, and Benson.

The UA South Foundation provided funds for bus fuel, bus driver, and a pizza party lunch for all the students, teachers, and parents who attended. The Foundation also gave tours and provided activity in the Patterson Observatory.

The Master Gardeners then gave the students a short tour through the Gardens, having them taste vegetables and herbs growing along the way. We then conducted a 90-minute class on flowers, pollinators, soil, seeds, and “good bugs/bad bugs.” The students all planted seeds in a container to take home and observe, and we ended our class in the Pavilion with a fun rock-painting session which put a smile on all the faces. We hope that all the students, ranging in age from 1st through 12th grades, are reminded of the University of Arizona and their lessons in the Gardens when they look at their colorfully painted rocks!

We even taught two evening sessions in the Gardens for two Cochise College science classes!

Another touch that brings a smile ... if you look around the Gardens on an occasional Wednesday morning, you’ll find several members of the Huachuca Art Association scattered throughout the Gardens in various shady spots, seated at a bistro table or on a garden bench, easel up, canvas standing, a paint-loaded pallet in one hand, and brush in the other, busily but peacefully painting various colorful scenes of serenity they are capturing around the Gardens.

These are but a few of the many things going on in the Gardens!

June Events

Saturday, **June 2, 10:00 AM**, features a workshop presented by

Master Gardeners, Mary Jackson and BJ Searcy, on ***Pollinators, Propagation, & Companion Planting***. Their workshop will be held at the **Sierra Vista Food Co-op** which is located at Bartow & Carmichael.

Saturday, **June 9, 9:00 AM**, features a ***Desert Plant Workshop*** presented by Master Gardeners, Jody Sharp-Webb and Jan Groth, to be held in **Goar Park** in Bisbee, right next to the Bisbee Museum. This is part of a 2-week traveling display project known as Water Ways, provided by the Smithsonian Institute. Plants and irrigation will be discussed, and then plants will be installed as part of a beautification/demonstration project in the planters of the small Goar Park. Attendees are welcome to install a plant or two to be part of the project.

On a date in June to be determined, Master Gardeners, Jody Sharp-Webb and Jan Groth, will be featuring an ***Irrigation Workshop*** in the raised bed gardens of **Brews Brothers Coffee House**. The date and time will be posted on Facebook, the Master Gardener website, and via email.

On Wednesday, **June 27**, Master Gardener, Elizabeth Riordon, will be presenting an art class, ***Discovering Colored Pencil*** drawing from life in the Discovery Gardens. The class will be set up in the **Discovery Pavilion** initially, and then attendees will be free to move around the Gardens to locations of their choice to draw and create!

Donations to the Discovery Gardens Genuinely Appreciated

The Discovery Gardens are always incredibly grateful for any donations made to help with the ongoing development and maintenance of the Gardens. Some ideas might be ... benches, bistro sets,

(Continued on page 5)

Keeping Up Continued

small metal side tables, clay and ceramic pots, garden art, metal trellises, *etc.* Any amount of cash is always appreciated as well, as it is used for purchasing plants, flowers, planting products, organic fertilizers, irrigation supplies, and student field trip supplies.

The Cochise County Master Gardeners Association is a non-profit, 501(c)(3) organization and will be glad to offer receipts for donations for donors' tax records. For further information on donating to the Discovery Gardens, please call Valerie at the Cooperative Extension, UA Sierra Vista campus, 520-458-8278, ext. 2141. Thank you!

Be Part of a Theme Team

The Discovery Gardens are designed in multiple small theme gardens. We would like to develop "Theme Teams" where two, three, or more folks form a team to adopt one of the theme gardens. The Team can come to the Discovery Gardens and take care of their theme garden on any day, at any time, that would be convenient for their schedules. The Team could trim, deadhead, weed, install new plantings, decorate, *etc.*, and be proud of the beauty they have created in their adopted garden on their own time schedule.

The Theme Gardens consist of: Shade Garden, Cactus/Succulent Garden, Native Shrub Garden, Moonlight Garden, The Pink Garden, Hot Color Garden, The Palo Verde Garden, Evergreen Garden, Hum-

mingbird-Butterfly Garden, The Backyard Display Garden, Mediterranean Garden, and several Herb & Vegetable Gardens.

If you would like to consider putting together or being a part of a Discovery Gardens Theme Team, please call Jan at 520-559-7078, or email:

jangroth@email.arizona.edu or stop by the Discovery Gardens Tuesday, Wednesday, or Thursday mornings after 10:00 AM. With a small amount of effort and fun, you can make a difference!

Little Free Library Installed by Sierra Vista Rotary



On Saturday, April 28, 2018, the Sierra Vista Rotary Club installed a "Little Free Library" in the Discovery Gardens at UA Sierra Vista. This is one of SV Rotary's newest projects where they hand-build the Little Free Library House, fill it with books, and install them around our community. The Discovery Gardens is one of 12 locations (as of April) which has received a library from the Rotarians.

The Little Free Library is a national 501(c)(3) organization which was founded in 2009 by Todd Bol in Hudson, Wisconsin. He built his first library for a

"take a book, return a book" concept by building a wooden container designed to look like a one-room schoolhouse on a post, and dedicated it to his mother who was a school teacher. His idea was to inspire a love of reading and promote literacy.

His idea spread rapidly throughout the country. The IRS recognized Little Free Library, which then incorporated in 2012. The original goal was to create 2,150 Little Libraries which would surpass the number of libraries founded by Andrew Carnegie. As of November 2016, there were more than 50,000 registered Little Free Libraries in all 50 states and worldwide.

The book exchange boxes are registered for legal use with the Little Free Library brand name and are maintained by stewards who must purchase a Library box kit or a charter sign. The Libraries are then eligible to be featured on the Little Free Library World Map which lists all locations with GPS coordinates and other information.

Our Little Free Library is maintained by Joanna Pohly, SV Rotary President, Jan Groth of the Master Gardeners, and partially supported with books by the Friends of the SV Library. The Little Free Library is located under the shade of a beautiful Mesquite tree in the Discovery Gardens next to the Pavilion and is open for the public to enjoy.

Bring your coffee, come grab a book, find a shady spot in the Discovery Gardens, and read awhile!

(Continued on page 6)

(Turkey Vultures continued from page 3)



evaporation to cool themselves (imagine, or—er, maybe don't—just how hot asphalt can be). The white uric acid remains on the legs. Storks also use “urohydrolysis” for cooling.

In the next MG newsletter issue we will conclude this series. If you would like more in-depth information about Turkey Vultures, there is a wonderful book recently published by Katie Fallon, *Vulture, the unloved bird*, available at Bisbee's Copper Queen Library and local bookstores. Article references are found in the previously mentioned booklet.

Cado Daily, Guest Author, Water Resources Coordinator, Water Wise Program – Retired! University of Arizona Cochise County Cooperative Extension

(Keeping Up continued from page 5)

Save the Dates!

Mark your calendars now for two upcoming events in the fall. One is familiar, and the other is brand new!

The Master Gardener Fall Plant Sale and Plant Talk are tentatively set for Saturday, September 22, with all proceeds going to the ongoing development and maintenance of the Discovery Gardens at UA Sierra Vista.

Then on Saturday evening, October 20, the Cochise County Master Gardeners, in conjunction with the Sierra Vista Community Gardens, Sierra Vista Area Gardeners Club, and Cochise County Water Wise, are presenting the first “Dining on the Desert.” It will be a ticketed event held in the Discovery Gardens Pavilion where food, drink, wine, and other products made from edible high desert plants will be on display. Cooking demonstrations and food & wine tastings will be offered. Come enjoy an evening garden party with live background music, all the garden lights, and some fascinating foods!

*Jan Groth, Master Gardener
Program Coordinator*



Master Gardener Class of 2018 Graduation May 23

We've been so lucky to have some fabulous Master Gardener classes in the last few years. This class has been exceptional as well. They've been engaged and enthusiastic. It's been a wonderful group, full of personality and diversity ... diversity in age, interests, and backgrounds. I will tremendously miss meeting with them every Wednesday morning for class! Thank you, MG Class of 2018, for being so terrific!!

*Jan Groth, Master Gardener
Program Coordinator*



Rear—L to R: Ruth Saffry, Carole Brown, Michael Palombo, Larry Whitmer, Norm Bessette, Christine Carriero, Al Jason, Bill Citera, & Fred Chappell.

Center: Meme Jason, Marlene Townsend, Alexandra Smith, Parla Manning, Mark Butterfield, Teresa Butterfield, Lilla DeLuca-Barret, Jodi Gaston, Tina Kristof, Bonny Miller, & Robin Henderson.

Front: Jan Groth, Program Coordinator, Rena Cook, Ana Martinez, Susan Albright, Nirvana Eveningred, & Samantha Goerlich.

Cochise County Master
Gardener Newsletter Editor
Carolyn Gruenhagen