



Vol. 24, No. 6 June 2013

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

The Virtual Gardener—Summer Heat Dangers

Summer is here. Purists may argue it doesn't arrive until the summer solstice but we gardeners know better. We know it's here when temperatures flirt with triple digits and dew points struggle to climb out of single digits. It's here when our plants desiccate before our very eyes despite our best efforts to keep them hydrated. But it's not only plants that face mortal danger in the summer heat. We too are at risk, especially those of us who are a little older, have medical conditions, or take certain medications. Here are some of the dangers to watch for.

Exposure to excessive environmental heat can lead to a whole spectrum of human illnesses, ranging from minor discomfort to life threatening conditions. At the lower end of the spectrum **heat cramps** attack overworked muscles during or following heavy exercise in the heat. They may affect any muscle group but muscles of the abdomen, back, arms, and calves are most frequently the targets. Heat cramps should be regarded as a signal

from your body telling you to slow down, cool off, and rehydrate. Although they can be painful, heat cramps do not usually cause permanent damage.

So what do you do if you find yourself suffering from heat cramps? According the Mayo Clinic [website](#), you should stop exercising, cool off, drink plenty of non-alcoholic liquids (especially sports drinks with electrolytes), gently stretch and massage the cramped muscles, and wait for several hours after the cramps have gone away to resume strenuous exercising. You should consult a physician if the cramps don't go away within an hour or so.

Next up the scale of heat injuries is **heat syncope** (SEEN-kuh-pee) or fainting. A person suffering from this condition will suddenly pass out in the heat. Other symptoms such as dizziness, dry mouth, excessive thirst, excessive sweating, fatigue, headache, nausea, or vomiting may also be

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present. The condition occurs when the body attempts to cool itself by sending more blood flow to the skin, causing a sudden drop in blood pressure. In addition to the threat posed by the heat stress itself, a person fainting while working in the garden may suffer collateral injury if he or she is using power equipment at the time or working in an area where the fall itself could cause injury.

A person who has suffered heat syncope should be moved into a shaded or cool area and placed in a supine position with their legs elevated. Heavy or restrictive clothing should be loosened or removed and the skin sponged with cool water. As soon as the victim has returned to consciousness and is alert, he or she should be given non-alcoholic liquids/sports drinks to restore hydration and replenish electrolytes and be allowed to rest. Recovery should occur within 10-15 minutes. Because there is a great danger of mistaking a more serious condition for simple fainting and there are many potential [risk factors associated with heat syncope](#), the patient should see a physician for a more thorough examination.

Heat exhaustion is a continuation up the scale of heat-related illnesses. A person suffering from heat exhaustion may exhibit any of the symptoms previously described as well as nausea, vomiting, and seizure. If left untreated, heat exhaustion can progress to **heat stroke** when the internal body

Heat Index	Risk Level	Protective Measures
Less than 91°F	Lower (Caution)	Basic heat safety and planning
91°F to 103°F	Moderate	Implement precautions and heighten awareness
103°F to 115°F	High	Additional precautions to protect workers
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures

temperature exceeds [105.1°F](#), a condition that requires immediate professional medical attention and can lead to death. According to a [study](#) of 58 heat stroke victims admitted to Chicago area hospitals in 1995, 21 percent died in hospital, another 28 percent died within a year after release from hospital, and all survivors suffered permanent impairment or organ damage.

All of the symptoms described above for any heat stress illness may be present for people suffering from heat stroke. In addition, they may exhibit dry skin (no sweating), mental confusion, rapid heart rate, and impaired speech and motor functions. [First aid for heat exhaustion/heat stroke](#) is the same as for heat syncope. Get the victim out of the heat; cool the body in any way possible; rehydrate with non-alcoholic liquids; and elevate the legs above the heart. Call for emergency medical assistance.

Until next time, happy surfing!

Gary Gruenhagen, Master Gardener
virtualgardener@cox.net

Cuttings 'N' Clippings

* The June CCMGA meeting is the Annual Business Meeting and graduation of the 2013 Master Gardener Class. For information call (520) 458-8278, Ext 2141 or contact Joyce at:

[jwilliam@ag.arizona.edu/](mailto:jwilliam@ag.arizona.edu)

* There will not be a July CCMGA meeting due to the holiday.

* The Water Wise schedule for June includes an informational talk on **Saturday, June 1** by Greg Starr from Starr Nursery in Tucson. He will talk about *Amazing Agaves and Colorful Cacti*. The meeting location is the Public Meeting Room at UASV and the time is 8:30 to 10:30 a.m. Look for mini talks on Irrigation Systems and Rainwater Harvesting at Lowe's and Home Depot. For information call (520) 458-8278, Ext 2141, or contact Joyce at:

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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!

Grow Some Food!

A couple of weeks ago, while in town running some errands, I stopped at a restaurant to get a bite to eat. After being served, I realized that I hadn't received any honey for my biscuit, so I returned to the counter to get the honey, which was packaged in a little packet like those annoying individual servings of catsup (Don't you hate those things?). On the way back to my seat, I noticed the packet was labeled "honey sauce." What? Honey "sauce?" Flipping the packet over, I saw a list of ingredients. This "honey sauce" contained five, count 'em, five different forms of sweetener: high fructose corn syrup, corn syrup, sugar, honey, and fructose, not to mention a preservative and a coloring agent. Real honey was number four on the list. The "sauce" looked and flowed like honey and it tasted sweet. It was OK for the biscuit, but I was somewhat creeped out.

A quick reading of the ingredient list of many products in the grocery store or chain restaurant yields similar results. One finds unpronounceable ingredients, unfamiliar ingredients, ingredients never found in a real kitchen—home or professional—and, maybe most disturbingly, a very long list of these strange things. A famous fast food fried chicken nuggets recipe has over thirty ingredients! And no, the ingredients aren't chicken, flour, eggs, salt, pepper, water, and 25 different herbs and spices. As a matter of fact, just one ingredient is listed as "spices." A package of salad croutons in my pantry lists over thirty ingredients as well.

Every single ingredient in prepared food products has been

deemed safe for human consumption by one government agency or another, so I'm not trying to be a scare monger here. Nor am I suggesting that anything with a chemical name is bad. After all, every substance on earth is a "chemical." Water? It's dihydrogen monoxide. Salt? Sodium chloride. Black pepper? The list of chemical compounds in black pepper is very long and it contains probably not a single compound an average person would recognize. The point I am trying to make is that we have traveled a long way from what used to be considered food. Because we value things like speed of preparation and long shelf life, we have gotten away from consuming fresh foods. Nutritionists tell us to eat more fresh foods.



With the hectic lifestyles of many folks today, the solution to eating better and fresher seems complex and difficult. A good place to start; however, is with a home garden. We have at least four months of reliably warm weather ahead of us—probably closer to five months. Go ahead and plant tomatoes, peppers, beans, squash, okra, pumpkin, melons, sweet potatoes, corn, and eggplant, as well as a number of herbs, including basil, oregano, thyme, rosemary, mint, lavender, and mar-

joram. Living in the high desert southwest, we can grow something to eat pretty much all year long. Cooler weather crops include lettuces and greens, onions, garlic, carrots, beets, cabbage, cauliflower, potatoes, and turnips. This is all good, fresh food.

Our climate is also conducive to growing many perennial food crops. Think about planting some asparagus. You will not believe how good freshly picked asparagus is. How about a fruit or nut tree or two? Among the fruits that grow well here are apples, peaches, apricots, and pears. Appropriate nut varieties include pecans and pistachios. Among the smaller fruits that will grow well here are raspberries and blackberries. Yum!

Now, not everyone has the space to grow a big garden. Not everyone has the inclination to do so, either. But we can all at least grow a tomato or a pepper plant in a large pot on the porch. A pot is also a great place for an herb or two, or maybe a few lettuce plants. If you have a small yard put in a raised bed or two and see just how much you can grow. You'll be surprised at the output of a couple of four-foot by eight-foot raised beds. And, if you've got a fair amount of land, the sky is the limit and only your ambition is holding you back.

If you need information along the path to raising some of your own food, check out the Cochise County Master Gardeners' website at: <http://ag.arizona.edu/cochise/mg/> Click on the "Desert Gardening" tab and you'll find an enormous amount of gardening information there.

Try growing some of your own food. You'll be glad you did!

Bill Schulze, Master Gardener
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BOOK REVIEW: THE \$64 TOMATO: How One Man Nearly Lost His Sanity, Spent a Fortune, and Endured an Existential Crisis in the Quest for the Perfect Garden

By: William Alexander
Algonquin Books of Chapel Hill 2007

Just how much does it cost to grow your own heirloom Brandywine tomato? In this chronicle, William Alexander reveals his adventure and expenditures as a somewhat obsessed gentleman farmer, and the result is an often hilarious and somewhat sad treatise on home gardening.

Reminiscent of an Ibsen play, somewhere outside of Yonkers, Bill and his wife (the new town doctor) purchase “the big brown vacant house” that sits on a bluff above a “town time forgot.” They were prepared for an abandoned house, but not for a complete dump. Eventually an area is designated as a garden and the saga begins. The landscape designer and contractor become the first hurdle along with the inclement weather. Then come the weeds—a battle with purslane is made more frustrating when he finds that it is “the latest trendy salad ingredient in New York’s priciest restaurants.” The dream of a bountiful, organic garden is disturbed repeatedly by vermin, webworms, a groundhog he names “Superchuck,” deer, opossum, all reality checks of childhood memories about apples and reluctant family members.

Assuming that it is cheaper to grow your own food than to buy it, Bill does an accounting. Expenditures mount up as he concludes that the garden costs \$16,565 over 20 years plus related expenses of \$735 annually. Dividing by the yield of the pro-

duce, that tomato really did cost \$64.00. But then, he wasn’t a Master Gardener.



An easy read, available at the Sierra Vista Public Library, that will make you laugh and cringe –

sometimes simultaneously.

Jennifer “Ginger” Ryan, MBA/Ph.D.
Master Gardener Trainee

Ask a Master Gardener

Cochise County Master Gardeners are available to answer your gardening questions either by telephone call to the Cooperative Extension Office or on-line on our web site at:

www.ag.arizona.edu/cochise/mg/

Here are two of the recent inquiries and their answers:

Question: We have about 3 acres of tumbleweed—*Amaranthus graecizans*. I have read that Roundup® does not work that well and that it works better to physically remove them with shovel/hoe, but with that many acres it is just not practical. Do you know of anything that I can spray on them at this point in the season to stop them from re-seeding? Thank you very much!

Answer:

<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7486.html> is a web site that will tell you everything you ever wanted to know (and maybe more) about tumble weeds. For your situation, mowing when the plants are small and then treating with glyphosate such as Roundup® applications to small plants may work best.

Question: Several weeks ago I planted 2 scabiosa quarts in full bloom with lots of buds. They were a nice lavender when I planted them but now the blooms are nearly white. They are right beside one that survived from last year so share the same soil conditions. The plants do not appear stressed, wilted, etc. Since they are new I have given them a bit of supplemental water. Any ideas what is going on?

Answer: It’s possible that you have powdery mildew on the plants. Powdery mildew does form on plants this time of year. It will also be on the leaves, if that is your problem. You can wash the mildew off with water in a sprayer. Another possibility is that the blooms were affected by the late freeze that we had during the week of 20 April.



Master Gardener

Cochise County Master Gardener
 Newsletter Editor
 Carolyn Gruenhagen

At a Glance Box

It's a Bloomin' Cochise County Native Plant of the Month

This plant is so common that it could almost be considered native to Cochise County. The Yellow Bird of Paradise, *Erythrostemon gilliesii* is a woody shrub about five-feet high with bright yellow blooms and long red stamens protruding from the flower. When dry, the seedpods split and fling, easily germinating seeds. *E. gilliesii* is native to Argentina and Uruguay. The plant has naturalized in Arizona and many other southwestern states, Georgia, and Puerto Rico. It is not reported as invasive.

To learn more about Cochise County plants, visit the Cochise County Herbarium on the UA Sierra Vista Campus and the web site at: www.cochisecountyherbarium.org

For an in depth article on *E. gilliesii*, see article below.

Ms. Cado Daily, M.A.

Water Resources Coordinator, Water Wise Program

University of Arizona Cochise County Cooperative Extension

Pebbles or Plant?

I was beginning to get irritated. Someone kept throwing pebbles at my windows. Sometimes they missed and landed on the tin roof. Sure, we had just moved into the neighborhood as displaced easterners, but we weren't from California so we should have been given some slack. Where was that generous southwestern hospitality I had heard so much about?

They weren't large pebbles by the sound of it and not big enough to cause a crack in any fragile glass panes. It happened during the day, usually on warm summer afternoons, never in winter. I guessed the kids had some idle time on their hands when school was out. Why weren't they inside playing video games like what has become the norm for American kids?

The final straw came when a pebble hit me outside in the yard. I spun around determined to collar the culprit and sentence them to hours locked up in a dark room destined to play the same video game ad nauseam and never win. That would teach them. But there wasn't anyone there.

Click. There went another one whizzing by my head. Following its trajectory, I dug around in the duff and found it. It wasn't a pebble. I wasn't doing very well with my detective work so far. What I found was a beautiful, shiny, half-inch flattened chocolate brown seed.

Humm. Where the heck did it come from? Did the kid use a slingshot? Not too far away, a bright red and yellow flower on a five-foot tall shrub caught my eye. Walking over to it, I noticed some conspicuous seedpods. I also noticed that some of

the pods had dehisced. They had just split open and then spiraled tightly.

Mystery solved! I wasn't prey to the neighborhood kids. I was being bombarded by seeds from the Yellow Bird of Paradise, *Erythrostemon gilliesii* (formerly *Caesalpinia gilliesii*). What a fantastic, and as indicated by the numerous other *E. gilliesii* shrubs on the hillside, highly successful seed dispersal strategy.

Besides the Yellow Bird of Paradise (YBOP), other related plants include the frequently used landscape plants Red Bird of Paradise (*C. pulcherrima*) with red and orange blossoms and the Mexican Bird of Paradise (*Poincianella mexicana*—formerly *C. mexicana*) with all yellow blossoms.

Caesalpinaceae plants are mostly found in the tropics or subtropical latitudes. The YBOP is native to Argentina and Uruguay. It has naturalized in subtropical areas where air temperatures don't drop below 10°F, and summer temperatures are warm to hot. It is reported that the rootstock is hardy to -10°F. Water demands of the YBOP are low and the plant is considered very xeric.

The flower of the YBOP is reminiscent of the tropics—or of the Fourth of July. The broad yellow petals cup a firework-like explosion of bright red stamens that extend far beyond the corolla. A profusion of buds on the end of the woody branches bloom three or four at a time during the warmer months of the year.

After the bloom, numerous red-tinged fuzzy two to five-inch long

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Economic Development & Extension, College of Agriculture and Life Sciences, The University of Arizona. The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, or sexual orientation in its programs and activities. The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by Cooperative Extension is implied. Any products, services, or organizations that are mentioned, shown, or indirectly implied in this publication do not imply endorsement by the University of Arizona.

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seedpods wait on the plant in anticipation of dehiscing to fling numerous seeds with fury across the landscape. After the explosion, the spiraled seedpods persist on the plant. If the growing environment is favorable with well draining soils, full to reflected sun and enough water to start and sustain growth, the YBOP can gently populate an area. Seeds do not need to be scarified to grow, but will germinate faster with a little scratching.

In a xeric landscape, the *E. gilliesii* is a great plant to use. Unlike its showier, but frost tender relatives the Red and Mexican Bird of Paradises that die back to the roots in colder temperatures, *E. gilliesii* will drop its small bipinnate leaves but remain upright and woody. Birds will delight in sitting on the many small branches. To shape it, clip off the dead ends of the branches but do not shape it into a lollipop. The wood is weak (and if over watered will be very weak), and any excessive upper weight will snap off the one to two-inch diameter trunk. This is also a short-lived shrub.

Like many native or naturalized plants, the YBOP should be left alone to grow to the size and shape best suited to its environment. If used in a more controlled landscape, be judicious in enhancing its natural light form and intermittent flowering habit.

So next time you want to have a bit of seed-popping fun while adding pizzazz to a landscape, try the exotic Yellow Bird of Paradise.

Ms. Cado Daily, M.A.
Water Resources Coordinator



Erythrostemon gilliesii