Events & Activities

MG Association Meeting, Wednesday, May 20, 6:30pm, Prescott, Meet the new Master Gardener Social

Alta Vista Gardening Club, Prescott, fourth Tuesday of the month, 12:30pm. Call 928-443-0464 for location and information.

Prescott Area Gourd Society, third Tuesday of the month, 6:30 pm, at the Smoki Museum.

Prescott Orchid Society, meets 3rd Sunday of the month, 2pm at the Prescott Library, call Cynthia for information. (928) 717-0623

Prescott Area Iris Society call 928-445-8132 for date and place information.

Verde Valley Iris Society call Linda Smith at 928-567-7470

Table of Contents

Hot, Hotter, Hottest ..(chiles). . . 1
Scoville Rating . . . 2
Chile Sauce Recipe . . . 3
Gayfeather/Liatris . . . 4
MG Garden Tour . . . 5
Mrs. Hedges’ Garden (poem) . 6
MG Notes, Calendar . . . 6-7

From the green chile found in grocery stores to the absolutely blazing, hurt yourself, Naga Jolokia, there is a chile for everyone. Today chiles are grown worldwide but they originated in South America. Native Indians as early as 7000BC were eating wild chiltepins or pequin chiles. They were first cultivated around 2300BC by the Incas. The cultivation of chilies traveled north into Mexico and from there the plant was exported to other southwestern cultures. By 500BC bowls used for crushing chiles were being used and traded. At the height of Mayan culture, around 500AD, they were growing different varieties of chilies and they had become a culinary staple appearing in nearly every meal. On Columbus’s second voyage, physician Diego Alvarez Chanca brought chilies to Spain. He was the first to write of their medicinal uses in 1494. Spain was a powerful world force in the days of Columbus and controlled trade to Asia. Through the Spanish the chile spread to Asia, the Philippines, India, China, Korea and Japan where they were incorporated into local cuisines. India gave us Vindaloo. The Szechuan region of China developed a spicy cuisine now beloved by restaurant goers everywhere. Paprika from Hungary is mostly seen as a garnish on deviled eggs and potato salad but also forms the basis for some great dishes like chicken paprika and Hungarian goulash. From Turkey comes Harissa. Sambal from Indonesia, Malaysia and Sri Lanka. While Italy did not embrace the chile like they did the tomato, every pizza parlor seems to serve crushed red pepper flakes.

Chile or chili? And what about pepper? Either chile or chili, works although chile is coming to be the common usage today. Chili seems to be the preferred way to refer to a particular food dish like Chili Con Carne or, in the midwest US, a ground beef stew. The first chili I knew about was my mom’s concoction of ground beef, tomato sauce, macaroni, onions and sometimes chili beans. Still make it occasionally, one of those comfort foods I guess, although over the years more chili powder was added to spice it up.

Peppers and chiles are often thought of interchangeably...
and for common usage as long as you know what you are talking about, it’s ok. But pepper refer to the genus *Piper* from which the pepper of salt and pepper comes from. Different plants entirely. Confusion reigns—don’t worry about it. I don’t know who is going to be confused if you use either term if you are talking about your garden since not many of us grow any of the “*Piper*” type of pepper.

Chiles apparently evolved the “heat” to discourage being eaten by mammals. Birds, on the other hand, aren’t affected and readily eat the fruit of many native chilies, helping to disperse the seeds. I did find an interesting article that suggested the capsaicinoid chemicals inhibit the growth of fungus and the plant may have developed the chemicals to withstand various fungal infections.

The Scoville scale was designed to measure the spice of the chile. Wilbur Scoville developed the test in 1912. Scoville’s method was to dilute a solution of chile extract in sugar syrup until the heat was no longer detectable to tasters. This was translated into the “Scoville Scale”. The lowest, at zero, were the sweet peppers which contain no capsaicin, the ingredient responsible for the heat. The hottest peppers can rate at 200,000 or more. This is an imprecise test depending on individual testers so is open to interpretation. Today the heat is measured by high performance liquid chromatography which measures the actual heat-producing chemicals. A mathematical formula is used to weight their relative capacity to produce a sensation of heat. It is called the American Spice Trade Association pungency units. Approximately one part capsaicin per million equals 15 Scoville units.

The rating for a chile may vary. Cultural practices, soil, genetics and climate all play a role in the

### Scoville Rating

<table>
<thead>
<tr>
<th>Rating</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,600,000–9,100,000</td>
<td>Pure capsaicin</td>
</tr>
<tr>
<td>500,000–5,300,000</td>
<td>Various capsaicinoids (homocapsaicin, homodihydrocapsaicin, nordihydrocapsaicin)</td>
</tr>
<tr>
<td>855,000–1,050,000</td>
<td>Law Enforcement Grade pepper spray FN 303 irritant ammunition</td>
</tr>
<tr>
<td>350,000–580,000</td>
<td>Naga Jolokia or Bhut Jolokia (The Naga Jolokia comes from northeastern India. Chile breeder, Professor Paul Bosland, New Mexico State University, equated it with breathing fire.)</td>
</tr>
<tr>
<td>100,000–350,000</td>
<td>Red Savina Habanero</td>
</tr>
<tr>
<td>50,000–100,000</td>
<td>Habanero chili, Scotch Bonnet Pepper, Datil pepper, Rocoto, Jamaican Hot Pepper, African Birdseye, Madame Jeanette</td>
</tr>
<tr>
<td>30,000–50,000</td>
<td>Thai Pepper, Malagueta Pepper, Chiltepin Pepper, Pequin Pepper</td>
</tr>
<tr>
<td>10,000–23,000</td>
<td>Cayenne Pepper, Aji pepper, Tabasco pepper, some Chipotle peppers</td>
</tr>
<tr>
<td>2,500–8,000</td>
<td>Serrano Pepper, some Chipotle peppers</td>
</tr>
<tr>
<td>500–2,500</td>
<td>Jalapeño Pepper, Guajillo pepper, New Mexican varieties of Anaheim pepper, Paprika (hungarian wax pepper)</td>
</tr>
<tr>
<td>100–500</td>
<td>Anaheim pepper, Poblano Pepper, Rociotillo Pepper</td>
</tr>
<tr>
<td>0</td>
<td>No heat—Pimento, Pepperoncini, Bell pepper</td>
</tr>
</tbody>
</table>

Tabasco is rated at 2,140

Anything above 100,000 should probably be considered a food additive and not something you liberally pour over your food. Use at your own peril!!
hotness of a chile. Habaneros are especially influenced by outside factors. You can reduce the heat of a chile by removing the placenta (the mid rib on the inside of the chile; look for the slightly orange area). This is where the capsaicinoids are located. Removing it removes the heat.

Capsaicin reacts with the mucus membranes in the mouth, throat and skin. Don’t try to remove the burning sensations with water or beer—drink milk or any other dairy product. Casein, present in dairy products, disrupts the burning. For skin irritation use rubbing alcohol to reduce the sensation and if you get capsaicin in your eyes just rinse repeatedly with water.

Growing your own

Chiles grow well in our area and should be treated similarly to tomatoes although they take less cold than tomatoes. In warmer areas they are grown as perennials. If you are planting tomatoes you can be planting chiles (sweet peppers also) as well. They need full sun and like the weather hot. They also need moister conditions although keeping them too moist will reduce the heat factor. Mulching will keep the soil moist and the peppers happy. Stress them with a little less water and you may increase the heat factor.

Green chiles are picked when they are green. Red chiles are green chiles that have ripened on the plant until they are red. Green chilies are sold fresh and/or roasted. Red chiles are usually dried. Chipotle chilies are jalapenos that have been smoked.

If you don’t want to grow your own peppers, you can buy pure capsaicin on the internet; just be very careful, this stuff is deadly. For ratings on various hot sauces and sources go to http://www.chez-williams.com/Hot%20Sauce/hothome.htm

New Mexico State University runs the Chile Pepper Institute, if you are interested in learning more: http://www.chilepepperinstitute.org/index.html
They also sell seeds: call (505) 646-3028 or check out their website: http://www.chilepepperinstitute.org/chile-pepper-institute-c.html
Bhut Jolokia seeds are available only through the Chile Pepper Institute.

Arizona source of chile seeds and chile products
www.native seeds.org
www.santacruzchili.com

Chile Sauce for Enchiladas

don The Cuisines of Mexico by Diana Kennedy

from The Cuisines of Mexico by Diana Kennedy

2 chile anchos
2 chiles guajillos
2 cloves garlic, peeled, roughly chopped
1/4 medium onion, roughly chopped
1/4 t. salt
1 cup water
enough hot water to cover the chiles
Toast the chiles lightly on a griddle or comal, turning them constantly so they do not burn. Slit them open and remove the seeds and veins. Cover the chilies with hot water and let them soak for 20 minutes. Transfer to a blender. Add the rest of the ingredients and blend to a smooth sauce.
Butterflies visit the blooms, birds love the seeds and gardeners love the striking late summer displays of this prairie plant. For some, though, it might mean just feeding the gophers. Pocket gophers apparently love the roots and if you plant these you will be in a war that you probably will not win. For the gopher-free this could be a wonderful addition to a low water use garden.

There are approximately 32 species of Liatris and, depending on the species, you might have a corm, a rhizome or an elongated root crown. All have grass-like leaves. Liatris is a member of the Asteraceae family (related to sunflowers, asters). While liatris does not have ray flowers that are typical of that group, they do have fluffy disk flowers that supposedly resemble blazing stars. Guess it’s all in the eye of the beholder.

The plant’s original habitat is prairies and grasslands on rocky slopes at elevations ranging from 5000 to 8000 feet. Various species inhabit nearly every state east of the Rockies southern Canada and into northern Mexico. Three species are listed on the endangered species list. There are 13 species and several hybrids that are sold for home gardens. It doesn’t mind the cold, being hardy to -30°F and doesn’t mind hot weather. Perfect for us! It likes full sun and once established it can get by on monthly deep watering. It has a deep carrot-like taproot–so deep watering is essential. Too much water and the plant will be leggy and floppy.

Make sure you know where you want to put it because once the plant is in the ground and starts to grow it does not like being moved again. That long taproot, which makes it possible to survive with little water, makes it nearly impossible to change locations. It can grow quite large. In September the plant sends up striking spikes of purple flowers (depending on species) 1 to 5 feet tall. It does not require any pruning except to remove old flower stalks in the winter. It works well planted around boulders, use it with penstemons, butterfly weed, chocolate flowers, and prickly poppies for a nice desert display. It can also be used in drifts and ground cover. Plant 12 to 15 inches apart in full sun and good-draining soil. It tolerates poor soils and some species prefer them. The best time to plant is early spring but will do ok if planted in early fall. Water regularly during the first growing season to establish a good root system. Once it is growing well, the water can be tapered off to longer intervals. It does not like wet feet! Fertilize before new growth begins in the spring. For the most part Liatris are pest-free, but they susceptible to various diseases, including powdery mildew.

It can be grown easily from seed. Start indoors or sow directly. The seeds will take 25-45 days to germinate so have patience. Germination is improved with a 4-6 week cold moist stratification. Plants will generally bloom starting the second year. You can purchase plants or corms. This purple-flowered (there is a white variety) beauty really deserves a home in your garden. The butterflies and birds will love you.
The Verde Valley Master Gardener Tour will take place on May 9th. Registration is from 8AM to 10AM at Windmill Gardens Nursery in Cornville. Following registration, participants may begin the tour. Maps will be available, and all gardens will be keyed to the map. There is a cost recovery fee of $5.00 at registration.

Our 2009 Master Gardener Tour sites belong to owners who are heavily invested in time and interest in their gardens. Their enthusiasm for the ongoing projects in their gardens is contagious. It is also a reminder for all of the Master Gardeners that our work of love in the garden is never done!

Everywhere you look in Larry Anderson’s garden there is a multitude and variety of vegetation. Larry can name his plants with the common name and the Latin name. He has experimented and has found optimum locations for native plants as well as plants adapted to the Verde Valley. Larry’s fine-tuned imagination is evident in the yard art that he has created from material that others might have discarded.

With a backdrop of the Mingus Mountains, Cyndi Blackberg’s garden has much to offer. A majority of the plants are xeriscape. She has incorporated water catchment for her potted plants. Cyndi’s compost includes fertilizer from her ducks and chickens. From simple materials, she has constructed a cold frame for winter lettuce. To add to her outdoor enjoyment, Cyndi has garden art painted on the back wall of her house.

Merle and Michele Herrick’s garden is an outstanding example of organic composting and vermiculture. With their drip irrigation system, they have an oasis. They have taken what nature has given them to create a terraced garden where they grow a large variety of produce for themselves and for the local farmers market. Michele and Merle’s garden has mesquite trees which provide for shade-loving plants.

There is also abundant sunshine for sun-loving vegetables, perennials and annuals. At the end of the day, Michele and Merle find quiet relaxation overlooking their garden.

Janice Montgomery has taken her extensive knowledge from involvement in community gardens in Scottsdale and applied it to her back yard. It is inspiring to learn how she has turned her backyard into a bountiful vegetable garden. Beginning with poor, rocky soil you will have an opportunity to learn how Janice dug, sifted rocks and added amendments to the native soil to produce a bountiful harvest. She has created four rectangular garden beds which allow her to work her vegetable garden without compacting the soil. It is amazing to see how much harvest Janice produces from a small space. Janice has incorporated practical creativity in her gardening techniques.

Jennifer Young’s garden sits on property that cascades to a creek. She is in the process of developing a yard that has low water usage plants. Jennifer has utilized the slope of the creek access to plan and build a labyrinth. Other plans for the slope to the creek include utilizing native plants. Jennifer’s goal is to prevent erosion on the slope while maintaining the integrity of the nature of the surroundings. The natural environment is enhanced by the quiet sound of a gentle water feature which Jennifer has created.

Jennifer Young is the primary gardener in a service-oriented garden on a neighboring property. The non-profit Cornucopia Community Gardens provides produce for the hungry in the Verde Valley. The garden takes advantage of a slope to incorporate a terraced garden. The green house holds tomato seedlings that are resistant to the Curly Top Virus. Chickens supply additional food and compost opportunities. Three families are involved in this effort to assist the less fortunate.

The Garden Tour Committee hopes you will be able to join other Master Gardeners for an informative and educational tour!
**In Mrs. Hedges’ Garden**  
by Jacqueline Rizzo

The ring of chimes is  
Sweet and sublime.  
In Mrs. Hedges’ garden.

The little path all  
neatly laid,  
A quiet meander it has made.  
Through Ms. Hedges’ garden.

You, of course, will see,  
All care and treatments  
Are done naturally  
In Mrs. Hedges’ garden.

It definitely takes quite a  
knack,  
to grow all the plants by the almanac.  
In Mrs. Hedges’ garden.

All the herbs, with their  
special smells,  
Are used in recipes to keep you well.  
From Mrs. Hedges’ garden.

There is a darling sundial, to  
Count the hours you while,  
Away in Mrs. Hedges’ garden.

I so enjoy the practical sense  
In neighbor’s chats across  
The fence  
Of Mrs. Hedges’ garden.

There is a little place to sit,  
When your toils you have quit.  
In Mrs. Hedges’ garden.

By your feelings it will be known,  
You have enjoyed a world of its own  
In Mrs. Hedges’ garden.

**Congratulations!**

Five Master Gardeners have reached Emeritus status this year. They have given 10 years of continuous service to the Master Gardener Program.  
**Bill Cart**  
Beverly Emerson  
Marilyn Perkins  
Anna Wilson  
Phil Young

Donna O’Rourke has completed her 50 hours and is now an MG. Her mentor is Lesley Alward.

Bearded Iris  
“Parvins Pinot.” One of the favorites in my garden. Nora

The MG Cookbook Committee is soliciting recipes. Please forward to Cookbook Chairperson Robin Weesner (rgweesner@msn.com) or PO Box 508, Rimrock, Arizona 86335 or bring to MG meeting starting in June. If emailed, either type in email body or provide as email attachment in Word format. Recipe should feature at least one produce item that can be grown in Yavapai County.
**Master Gardener Programs, Workshops & Field Trips 2009**

May 20th — Prescott New class Social — no program

June 17th — Cottonwood “Gardens for Humanity” Diane Dearmore, Presenter. Refreshments made with Herbs by MG’ers

July — No Meeting

August 19th Prescott — “Gardening Journaling” Cynthia Cartier-Roberts and “The History & Mystery of Plant Names” Bob Burke

September 16th Cottonwood “Winter Vegetable Gardening with Extension into Spring Veggie Gardening”, Presenter Jay Fleishman

October 10th Master Gardener Picnic Goldwater Lake Prescott

November 18th Cottonwood — “Growing & Cooking with Herbs” Presenter Serve Snacks made with herbs as refreshments)

December — No Meeting

January 2010 — Cindy Scott from Underwood Garden Heirloom Seeds “Heirloom Seed, What Are They and How to Gather & Save Seeds”

**Workshops**

May 16th Saturday, 9 -12, Prescott Co-op Extension Office “Creating Decorative Flower Pots” with Marti Dodd. Class size limited to 15. Participants need to bring a small to medium clay pot and material to decorate it with. Materials may be old tile, plates, pebbles or glass pieces. Bring a hammer. Wear old clothes. Fee of $4.50 to cover the cost of the adhesive. Call or email Marti (928) 717-1810. mbodd@cableone.net or call or email Diane (928) 899-8363. our_bettyjane@yahoo.com.

Photoshop Workshop: October 3rd at the Prescott Co-op Extension Office from 9 until noon and October 24th at the Cottonwood Public Safety Building from 9 until 12 noon. “Overview of Adobe Photoshop Elements and Features Steve Moody Has Found Most Helpful” Class size limited to 20. Fee: $20 (Fund Raiser for Yavapai MG)

To reserve space please signup at a MG meeting or email Steve Moody at moodyste215@pipeline.com

FROM THE EDITOR: Please send or email articles and announcements to the address below. All articles must be in my hands by the 10th of the month. Short announcements (no more than 2 or 3 lines) will be accepted until the 25th.

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MG NEWSLETTER

MG Association Meeting
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New class Social, no program