One of the unsung heroes of the summer garden is the zinnia. In a world dominated by masses of 6-packs of petunias, marigolds and salvias the zinnia is limited to a mere flat or two pushed into a back corner of the garden center. Why? Zinnias come in a wide range of colors, shapes and sizes, so it can’t be that. They bloom and grow in very hot weather, so that’s not the reason. The reason is they don’t tolerate modern commercial greenhouse conditions and growing techniques. Zinnias are not fond of getting their leaves wet and most commercial greenhouses use overhead sprinklers. Nor do they like their roots disturbed, so it’s tough to transplant them out of 6-packs. The good news is that you can toss out a few handfuls of seeds and have a great summer display.

Zinnias come in all styles: there are types that resemble spider dahlias, others that are small pom-poms and there are tall varieties and short ones for borders. All colors of the rainbow are represented, from whites, reds, yellows, purples, oranges and everything in between.

The flowers are native to southwestern US, Mexico and Central America. It was the Spanish who first sent them to Europe. These species were small and the Spanish considered them ugly; they even called them “mal de ojos,” loosely translated to “bad eye.” They were cultivated in Austria in 1613. It was a medical professional that gave the flower its name. Johann Gottfried Zinn was a professor at Gottingen University. He wrote a book on flora of the area and a book on the anatomy of the eye that was so accurate it is still valid today. Zinn died in 1759 but left behind the flower, zinnia, and a description of part of the eye called Zinn’s Zonule.

The Victorian age was a great time for assigning flowers meaning. Zinnias generally mean “thoughts of an absent friend.” It went even further in that different colors had different meanings. Magenta meant lasting affection, scarlet-constancy, white-goodness, yellow-daily remembrance.
Zinnias are members of the Asteraceae family (asters) that were found from Colorado to Guatemala. It is now the state flower of Indiana for some reason, who knew! Today they are frequently grown (or should be!) in home gardens. They are also grown as cut flowers for commercial sale. About 20 different species of zinnias are recognized. Three species are now grown commercially: *Zinnia elegans*, (the common zinnia,) *Z. haageana*, (Mexican zinnia) and *Z. augustifolia*.

*Zinnia elegans* is the most common one you will find. All those packets of seeds on racks are likely to be elegans. The species has been transformed into a showy variety of flower types, sizes and colors. They come in every color except blue—even some called “Candy Stripes”, which have stripes of colors on them. You will even find green zinnias. Two of the most popular shapes are the Cactus type and the Dahlia type introduced by W. Atlee Burpee in the 1920’s. Cactus-flowered varieties have twisted, tubular or quilled double flowers up to 6 inches across. Dahlia-flowered have broad, flat petals that are doubled up to 6 inches across. You will also find small pompom varieties that are great border plants that grow 12 -15 inches tall. Look for “Thumbelina”, “Lilliput”, “Peter Pan”, and the Lollipop series.

*Zinnia haageana*, the Mexican zinnia, is also labeled as “old Mexico” or “Persian Carpet.” Colors usually are red, yellow, orange and mahogany; sometimes different colors will appear in the same flower.

*Zinnia angustifolia* (or *Z. linearis*) is a compact type around 12 inches tall with one to two inch flowers, usually bright orange with a yellow midrib. This was a plant well known to the Aztecs. “Classic” and “Orange Star” are two varieties. These are closer to the original species with single, daisy-like flowers.

Another species you may come across are the Peruvian zinnias, *Z. peruviana*, which were a favorite of Thomas Jefferson. These have small 1-inch flowers that come in Red or Yellow. I’ve grown both of these plants and they are interesting but they can be a bit rangy and tall and reseed easily. The flowers fade to a paler color as they age and will dry on the stalk.

Two other species that are interesting are from the Southwest: the desert zinnia, (*Z. acerosa*) and plains zinnia, (*Z. grandiflora*.) The desert zinnia has white, single flowers and grows to about a foot tall. It blooms in the spring and summer and is now available commercially. I found it available at High Country Gardens but have also seen it in nurseries in Phoenix. It will grow in our area and is drought tolerant. The plains zinnia is similar, with yellow flowers, but it is difficult to establish.

Butterflies love zinnias and planting them in your garden will provide them with a feast. There are some species they prefer over others, though. The variety “Cut and Come Again” seems to be a favorite. “Blue Point Formula Mix” and “Royal Purple”, “Sunbow Mix”, *Z. angustifolia* “Crystal White” and “Star White’ seem to be favorites but you will have to experiment for what works best for your area.

Zinnias are simple to grow and they love our conditions—hot, dry summers and low water. They easily become chloratic at temperatures below 60°F. They prefer temperatures above 70°F. Plant seeds directly in the garden after danger of frost is over. They really look best if you plant masses of them, versus setting them in a row or individually. Thin seedlings to 6-18 inches apart, depending on the variety. You can start them inside in colder climates, but around here I wouldn’t bother since they really don’t like their roots disturbed. Once the seeds germinate and leaves have formed, give them a light application of fertilizer, but, if they are in a good soil to begin with, they may not need it. Vegetative growth happens when the days are long; flowers appear when the days start to shorten—under 14 hours. Powdery mildew can be a serious problem with zinnias and it can plague gardeners in the Midwest and South. While powdery mildew can be a problem in the monsoon season, I have yet to see it on the zinnias I have grown in Camp Verde. Keep their leaves dry—no overhead watering; they thrive on drip systems. If you have had a problem in the past there are some varieties which are resistant. Try “Blue Point”, “Oklahoma”, “Profusion” and the “Pinwheel” series.

Keep the blooms deadheaded to encourage a long summer bloom. They should bloom until the first cold weather knocks them out. They also make excellent cut flowers, so enjoy and bring some in the house.

Aside from powdery mildew, there are some diseases and pests zinnias may be afflicted with. Thrips,
caterpillars (remember caterpillars can be butterflies and moths in waiting) and stem miners can infest the plants, although I have had few problems with mine. Diseases other than powdery mildew aren’t usually a problem in our dry climate but can be infected via insects with viruses like Cucumber Mosaic Virus and Tomato Spotted Wilt virus. Some types of nematodes may also be a problem.

These are generally trouble-free, vibrant, exciting flowers to brighten up the summer garden. If you haven’t tried them for awhile, give them another shot and brighten your summer days.

Sources

Most garden centers and garden catalogs have seeds readily available. There was one website I found that had a lot of varieties:

www.redbudfarms.com

For Zinnia acerosa, the desert zinnia, try High Country Gardens or check with your local nursery; they may be able to order it as I think it is now grown commercially. Also, check out the various botanical garden sales in Arizona, as they sometimes have the plant for sale.

“Almost Free” Well Water Testing for Private Well Owners

The Yavapai County Master Watershed Stewards and the University of Arizona Cooperative Extension Office for Yavapai County is offering “Almost-Free” Well Water Testing for Private Well Owners. This 7th annual testing program will be offered during National Drinking Water Week, May 2 - May 8, 2005. The deadline for kit reservations is April 15.

The cost to reserve and receive a 5 parameter kit is $7.00. The “Basic” kit will test for Nitrates, Nitrites, Hardness, pH, and Alkalinity. This at-home, on-site, “shirt pocket” test kit is easy to use, reliable, accurate, and will provide you with immediate results (in your home...no lab trips) of your water quality.

The cost for the 5 parameter basic test kit PLUS Arsenic is $22.00. All kits will be mailed from our Prescott Office by USPS -1st Class Mail to all participants during National Drinking Water Week.

In addition, optional, bacterial testing discount coupons will be provided by Bradshaw Mountain Laboratory, a local certified laboratory partnering with the Cooperative Extension. Acustrip, Inc is providing the discounted, cost-recovery kit once again in support of this public service effort.

Participants choosing to share their results with the UA - Cooperative Extension Office will receive confidential comments and follow-up information regarding their water’s quality by Master Watershed Stewards and Cooperative Extension Staff.

If you are interested in participating, contact or visit your local Cooperative Extension Offices in Prescott or Cottonwood. Kits must be reserved by mailing a check with your current mailing address and a contact phone number. Checks must be made payable to the University of Arizona. The deadline to reserve a kit is April 15th.

Mail your kit reservation to:

UA-Cooperative Extension-Yavapai County
Attention: Well Water Testing
840 Rodeo Drive, Bldg C
Prescott, AZ  86305

Russ Radden
Program Coordinator, Natural Resources
Phone: 928-445-6590
rdradden@ag.arizona.edu

Editor apologies—This month I had an abundance of items to put in the newsletter and I underwent a major spring cleaning at home. These two are related in that some items, like pictures, disappeared in the cleaning and other items had to be left out. When I find the pictures I will include them and the articles will show up as space permits.
First Annual Prescott College Seed and Seedling Swap

Prescott College’s Wolfberry Farm and Crossroads Café will host the first annual Prescott College Seed and Seedling Swap on Sunday April 10th from 11 am to 2 pm in and around the new Crossroads Café. Seeds and seedlings of vegetables, flowers, and natives are equally welcome, however perennial natives dug from the wild are excluded from the swap as are commercially produced seeds and seedlings. If you do not have anything to swap, you are welcome to show up at noon and purchase any un-swapped seeds for $1/packet and $2 for six-pacs, four-pacs or large individual seedlings. To learn details on how the swap will be organized, please go to Prescott College’s web page (www.prescott.edu <http://www.prescott.edu>) and click on Seed and Seedling Swap under upcoming events.

How Will the Swap Work
Pre-Registration: Please call (928) 778-2090 ext. 2292 to inform swap organizers of your plan to participate. The voice-mail message will request specific information required to pre-register.

Registration and Set-up from 10-11am: On Sunday April 10 between 10-11am, people with seeds and/or seedlings to swap should show up at the Prescott College Crossroads Café to register, receive a table assignment, and spend a few minutes checking out what other growers have brought before the swapping begins.

Seed and Seedling Swap between participants from 11-12: Upon registering, all participants (regardless of how many seeds or seedlings they bring) will receive 10 green “Swappers” which are swapping certificates. When swapping begins at 11:00am, participants exchange 1 Swapper for any packet of seeds or 2 Swappers for seedlings (either a 6-pac, a 4-pac, or 2 large individually potted seedlings). As people exchange their seed packets or seedlings they accumulate more Swappers, which allows them to go acquire more seeds and seedlings for themselves. Ideally, two people will register together so one person can be handing out seeds or seedlings for Swappers, while the other person is off trading Swappers for seeds and seedlings. However, individuals can participate alone, they will simply have to divide their time between handing out and acquiring plant materials.

Public Shopping from noon-2pm: At noon, people who do not have seeds or seedlings to swap will be allowed to purchase remaining seeds for $1 per packet or $2 for seedlings ($2 will buy one of the following--a 6-pac of small seedlings, a 4-pac of medium seedlings, two individually potted large seedlings, or one very large seedling). Swapping of plant materials by registered participants using Swappers is still encouraged after noon-there will simply be more people present and some will be making purchases with dollars. Please Note: The intent of the Seed & Seedling Swap is to exchange regionally-adapted, open-pollinated plant materials for free. Participants should not come to this event with the goal of making substantial amounts of money. However, the sale of remaining items after noon will both serve to disperse regionally-adapted plant materials to the public at large as well provide some gas and lunch money to the registered participants. Seed and plant growers will be allowed to keep 100% of their sales.

What to Bring
Bring a minimum of 25 seed packets with a minimum of 25 seeds/packet, or 25 seedling units-in other words, 25 seedling 6-pacs, 25 seedling 4-pacs, 25 sets of 2 large seedlings, or 25 large seedlings. IT IS ESSENTIAL that you provide written descriptions for your seeds and seedlings including where the plant came from (e.g., great grandmother), its aesthetic, culinary and/or ecological characteristics (e.g., attracts pollinators), where the plant has been successfully grown in Arizona, and whether the seed or seedlings were grown organically - the descriptions can either be printed on the packets or on slips of paper to hand out with the packets or seedlings. Please do not bring purchased packets of seed or seedlings to swap.

Icing on the Cake
The Crossroads café will be open at 11:00 serving delicious soups and salads featuring the finest regionally-grown ingredients. In addition, Wolferry Farm and Prescott College Agroecology will be unveiling and demonstrating a new web site dedicated to seed swapping year round.
Master Gardener Request

Paul Schnur, Ralph Young and myself are planning to dig up and divide quite a few narcissus clumps in the rose garden at Sedona Heritage Museum. We will be bagging the excess for sale in the Museum gift shop. We are planning to do this on Saturday, April 23rd from about 10-12 AM. We could use a few more able bodied diggers, since I am still recovering from my knee replacement. Could you send out a message to other Master Gardeners in the Sedona/Verde Valley area and see if a few of them might be interested in helping? You could have them contact me at scheerer@sedona.net or call me at 928-282-4706 for details.

Meet a Master Gardener
by Pam Bowman & Janice Billiam

Since Yavapai County covers such a large territory and divides MG monthly meetings between Cottonwood and Prescott, few of us get the opportunity to get to know one another on a more personal level. Each of us has “a story” as to what has drawn us into gardening and what motivates us to volunteer. We are either native Arizonans or are transplants from other areas—we have many talents and can learn a lot from one another. Beginning with this newsletter, one of our Master Gardeners will be highlighted and will share his or her “story”. This month, the spotlight is on Jane Davie!

Jane has been an AZ Master Gardener for 4 years, but her interest in gardening began as a child, growing up in Lincoln, Nebraska. At 5 years old, her father enlisted her help in removing acorns from their yard before he would mow the lawn. According to Jane, this must have been the “green moment” in her life, when she decided gardening was her calling. She went on to receive a degree in Horticulture from the University of Nebraska and began her career there in the area of Corn Research.

Today, landscaping and grounds maintenance are Jane’s full-time occupation. Since moving to Arizona 21 years ago, Jane has been a groundskeeper at L’Auberge and Tlaquepaque and currently maintains the grounds at Sedona Springs, the Villas of Sedona and Villas of Poco. Jane “loves to go to work each day”, making landscapes look beautiful and sharing her knowledge with others. “People want to know how to do things correctly”, and Jane certainly has the skills and expertise to share with them—both professionally and as a Master Gardener.

Currently, Jane and her 16 year old daughter, Kelsey, live in Cottonwood. Outside interests for Jane include belonging to a women’s investment club, which she considers a great learning experience. A little known fact is that Jane is also a trained pyrotechnician! She and her boyfriend, Bob, are trained to provide fireworks displays at Cliff Castle Casino on New Years’ Eve and the Cottonwood Fairgrounds on 4th of July.

As a Yavapai County Master Gardener, Jane did an outstanding job of organizing last fall’s Highland Conference in Camp Verde. Staffing the MG booth for the recent Pecan and Wine festival was also Jane’s responsibility---we are truly fortunate to have her willingness to share her skills and talents with us! Thanks, Jane, for all you do!
Soil Lesson for 3rd Grade Students in Prescott Valley
By Pam Bowman

On February 7, Master Gardeners Lenora Warnock and Marti Dodd entered a 3rd grade classroom at Coyote Springs Elementary School to teach the students about soils. Lenora led the class while Marti and two students selected by the teacher assisted her. The 40-minute hands-on class was well-received by the students and the teacher provided constructive comments and positive feedback. This successful “trial run” was the result of a project developed by Master Gardeners several months ago.

Last year, Jessica Diehl, head of the Parent Teachers Association for Coyote Springs Elementary School approached County Agent Jeff Schalau with a proposal. She suggested that Master Gardeners would have the knowledge and ability to develop and implement science-based lesson plans that evolved from the science of gardening. These lessons would show how science is important in daily activities and could be presented to students in grades 3 through 5.

In early summer, 2004, Mary Barnes, Marti Dodd, Charlotte Ewalt, Nancy Millet, Jim Musgrove, Jeannette Teets and Lenora Warnock began work on the project. Under the leadership of Charlotte, they developed a list of potential topics: beneficial insects, biodegradable material cycle, composting, indigenous Arizona plants (local area,) local Arizona wildflowers, plant life cycle, plant structure, soils and wildlife habitat. The team then asked the teachers at Coyote Springs Elementary School to prioritize the topics. Topics identified as high priority by these teachers were: composting, indigenous Arizona plants (local area,) plant life cycle(what is necessary for growth,) and soil, (textures, erosion, components and pH.)

The team decided to develop a lesson plan about soil texture and structure. Although this first lesson plan would be written for 3rd grade students, the team felt it could be easily adapted to fulfill the needs of 4th and 5th grade students. The team also felt very comfortable with the topic because the information received in their training as Associate Master Gardeners had given them a solid foundation. The team developed a plan that would identify the physical properties of clay and sandy soils and discuss the implications for plant life. So, with the soils lesson plan in hand, Lenora and Marti felt confident as they entered the classroom.

Now the team hopes that interested Master Gardeners will volunteer to help with this project. If you would like to research, write, or implement lesson plans for the remaining topics or adapt the soils lesson plan for 4th and 5th grade students, please contact Charlotte Ewalt at 928-443-5313 or caewalt@cableone.net.

Verde Valley Medical Center Project

Master Gardeners hard at work, all photos by Joan E. Tyler

Mary Barnes
FROM THE EDITOR: Please send or email articles and announcements to the address below. Long articles will go in as soon as possible, announcements must be in by the 15th of the month to be included.
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Dr. Paul Schnur, Richard Wise, Marty Dodd, Mary Barnes,
Jonella Blake, Jeanette Teets
MG Association Meeting
April 20, 6:30pm, Prescott
Speaker: Betty Billingsly, Judging at the Fair.

May 18, Cottonwood: Bill Cook, Fruit Trees, thinning, grafting and pruning.

Yavapai Gardens Mailing
If you'd prefer to view this newsletter on-line (available on the U of A website the first Wednesday of each month), please e-mail Mary Barnes (mcbarn1@cableone.net) to be removed from U.S. Mail distribution.

6th Annual Iris Exhibit
The Prescott Area Iris Society invites you to enter your iris blooms in our 6th Annual Iris Exhibit. The exhibit will be held Saturday, May 14 at Mortimer Nursery in Prescott from 10 a.m. to 3 p.m. and is free and open to the public. Exhibition privileges are available to anyone who grows iris. Exhibitors may enter individual iris stalks and iris arrangements. Entries will be accepted from 8:30 a.m.—9:30 a.m.

Help us promote an awareness and appreciation of iris by entering several different iris. The public will vote for their favorite irises and the exhibitors of winning irises will be awarded prizes for Best Tall Bearded Iris, Best Other Iris, Best Artistic Design and President's Award. Prizes will only be awarded for named iris. Unnamed iris will be for display only. For exhibit rules or information: 776-7217 or jbook@cableone.net.

Mark your calendars now for our rhizome sale, Saturday, August 6, Sharlot Hall Museum.