

## Events & Activities

MG Association Meeting, Cottonwood,  
Wednesday, January 19, 6:30pm.

Yavapai Rose Society - , 7:00 PM For more  
information call Bob or Nancy at 771-9300,

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

Pond Club -this is an informal group that  
meets every couple of months, usually the 3rd  
week. Email [aquaticgardens@esedona.net](mailto:aquaticgardens@esedona.net)  
for more information.

The Organic Gardening Club meets on the  
3rd Saturday of the month, 2215 E. Aspen St,  
3pm. For directions call 928-649-3451.

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

## Table of Content

Thank You . . . .	pg 1
Highlands Garden Conf, . .	pg 2
Alkali Sacaton . . .	pg 3
Bouteloua gracilis . . .	pg 4
Salvia dorrii mearnsii . . .	pg 5
Purshia subintegra . . .	pg 5
Fall Leaves . . .	pg 6
MG Association News . . .	pg 7

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University of Arizona Yavapai County Cooperative Extension

# *Yavapai Gardens*

Master Gardener Newsletter

December 2004

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## Thank you!

I would like to personally thank the Master Gardeners that organized and delivered the Fifth Annual Arizona Highlands Garden Conference in Camp Verde October 18 and 19. This year's conference featured several nationally recognized speakers, many excellent vendors and exhibitors, and ran very smoothly because of an outstanding planning committee. Jane Davie chaired the conference committee, solicited many sponsors, conducted the planning meetings, and served in many other valuable ways. Rosh Preuss co-chaired the conference (not officially, but in reality) and acquired many key sponsorships, worked behind the scenes on budget, book sales, speakers, the garden tour, and many other capacities. In addition to writing this wonderful newsletter every month, Nora Graf chaired the speaker committee, organized the gourd decoration (which raised funds for the conference), was the local drop-off point for door prizes, and helped in many other ways. Jeannette Teets organized and hosted the speaker's barbecue and helped with several loose ends that were critical to the conference. Deb Bodnar wrote press releases and managed conference publicity, Joan Tyler was the conference photographer, and Susan Moody helped with organization during the planning process. There were many other Yavapai County Master Gardeners that assisted on the days leading up to the conference with notebook assembly, door prizes, room monitoring, and all the other details it takes to put on a conference. These folks were the core of the planning committee.

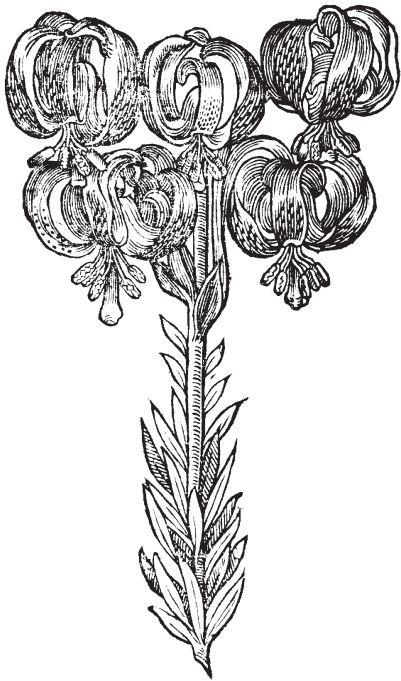
We also had assistance from beyond the Yavapai County Line. Hattie Braun, Coconino County Master Gardener Coordinator, served on the speaker committee, wrote thank you letters, and volunteered many hours beyond her paid position. Gila County Master Gardeners Jane Bowman, Carol Clapp, Courtney Rogers, and Diana Stevens coordinated the speaker's barbecue and helped in many other ways. Two Navajo County Master Gardeners, Jan Mathis and Judy Kuncel, also served on the planning committee.

I would also like to specially thank my Administrative Assistant, Karen Pizzuto, for helping the committee with the financial management, ordering supplies, printing, document formatting, attending meetings in my absence, and other various details. Chris Jones (Gila County ANR Agent) and I thank all of you, named and unnamed, for your service and dedication. This year's conference was outstanding and it would not have happened without all the people that helped.

Regards,

Jeff Schalaus

# Highlands Garden Conference



gardens that were whimsical, musical, lush and spare, but all inviting.

On Tuesday, John Greenlee gave a truly passionate cry to do away with our lawns, something I have advocated for years. John Greenlee humorously railed against the lawnmower, the fertilizers and pesticides that define the modern lawn. He did not speak about giving up grass but of embracing grass for what it truly is—lush and lovely and independent—not manicured to an inch of its life. Passionate for grass—hard to imagine but—John Greenlee surely is.

But the passion didn't stop there, Wilella Stimmell drew us into the dangerous world of orchids, where one is never enough. Once you start, it is easy to get sucked in and next thing you know you are building a greenhouse. Peggy Hughes invited us to explore roses while Terry Mikel tried to keep us from embarrassing our trees by inappropriate planting and pruning. Dennis Swartzell from Mountain States Nursery sent us away with a deep desire for at least one of the new varieties that he showed us. So this conference was all about passion and, after a tough year for me, it rekindled my spirit. Already started planning my spring garden and maybe I won't give up on trying to grow orchids. I also bought some grasses from John Greenlee and there are those seed catalogs starting to show up in my mailbox. Passion!!

I think the word that describes the conference this year is “passion.” In program after program we heard from people who have a passion for plants and gardening. On Monday morning we started with Scott and Lauren Springer Ogden, both nationally known and respected landscapers. They have a real passion for creating gardens suited for the environment. They took us on a wonderful tour of gar-

## Comments & Complaints

First, I want to thank everyone that turned in the conference evaluation forms. We really do look at them. (We hold a meeting after the conference to review what worked and what didn't, so, hopefully, we don't repeat our mistakes.) I also want to address some of the complaints we had.

The first one is the food. We had a number of complaints about breaks, especially, but a few generally about the facility. The food and the cost of the facility are the main drivers of the price we charge for you to attend. The Cliff Castle Lodge was the most expensive venue we have used so far and we made every effort to keep costs down. Every additional item we ask for has cost, which is reflected in the price we charge for the conference. For example, cookies/muffins cost \$1.25 apiece. For the number of people we fed, that comes to approximately \$218 for each break (one cookie each) or \$875 dollars for four breaks over two days. The Conference Planning Committee decided that we would do without the morning snack break. We were hoping everyone would come fortified with a good breakfast and were coming because of the speakers, not for the food. I have attended many conferences over



the years and food is getting so expensive that many are cutting out snacks at breaks and providing only coffee and water. While the conference committee was able to raise a considerable amount of money (thanks especially to Rosh Preuss and

Jane Davie for that) it was for paying for speakers and other incidentals.

One of the other issues that came up was about room monitors closing doors for the sessions and trying to reduce in and out traffic. I'm sorry that the door latches were so noisy but it is common courtesy to reduce distractions for the speaker and the people who came to listen. No one likes to have a door repeatedly opened <sup>2</sup>

and closed, nor do they want to have to talk over people having conversations in the audience. We had breaks where people could converse and time to use the restroom. The simple courtesy of arriving on time makes it a better experience for everyone.

The conference notebook is always a problematic thing. We did try to have something from every speaker, but it is up to the speaker to provide us with the material. I really bugged all the speakers about handouts but several of them just didn't have them. I'm sorry, but sometimes that's just the way it is.

On the plus side here are a few of the positive comments.

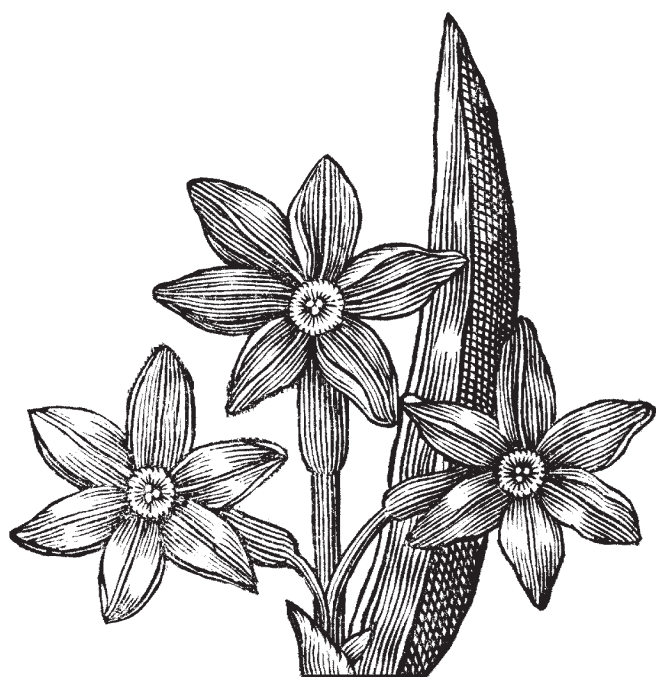
“Wonderful conference. The facility was PERFECT! Loved the large conference rooms! The steering committee should be proud.”

“Great overall. Well worth the price.” “Very good variety and caliber of speakers. Almost all speakers were passionate about their topics.”

Beautifully done—every detail was thought of! Kudos to all the committee.”

We read your other comments about including the cities of the attendees on the name tags, so that will probably be done next year. We've looked at your suggestion for speakers and those will be considered.

The good news is that this was probably the best conference ever which makes us proud of all the hard work that was put into it. We are glad that you enjoyed it also!



# Alkali Sacaton

*Sporobolus airoides*

by Nora Graf



In honor of John Greenlee's passion for grasses, I'm going to feature an interesting Arizona grass. Did you notice it also has a great latin name? Love the way it sounds. Anyway Alkali Sacaton, is found throughout the West ,although never in such large numbers that it became an important forage grass.

This is a tough native warm-season perennial grass. It grows one to three feet tall. The plant forms large dense clumps. Leaves are pale green to grayish-green. Flowers are held on panicles that are loose and open, forming an airy effect.

Alkali Sacaton prefers a moister environment and prefers sandy to clay soils.

In nature, it grows in areas that flood periodically. It is found in elevations from 1500 to 7500 feet, so you might guess it is very cold tolerant (to -20°F.) Like its name it survives quite well in alkaline conditions but also in conditions where it floods and in drought conditions and can take moderate grazing and mining disturbances. It even stabilizes eroding soils and tolerates some shade. Cattle, sheep and wildlife will graze it while green but it doesn't make good forage once dry. Any grazing is best done in spring and summer.

For home landscapes, it makes an attractive ground cover in saline soils. It also makes an interesting hummock surface. Use it as a foreground planting with fourwing saltbush. If you are out of the city, this will attract quail and possibly turkeys, depending on where you live. It should be mowed or burned in late winter to reduce thatch and stimulate re-growth.

Alkali Sacaton can be grown from seed—one pound per 4000 square feet. The seeds germinate quickly if kept moist and the soil temperature is at least 80°F. Seed needs to be buried shallowly—no more than 1/4 inch.

There has been some commercial selection of varieties. “Salado” is the most common, but you may also find “Wilcox” and “Saltalk” There is also a Giant Sacaton that is similar but larger. Seeds are available.

# Bouteloua gracilis

## Blue Grama

by Nora Graf



Another great name, especially the Bouteloua part, (Boo ta lou a.) Here is another warm-season grass that will form sod in cool, moist conditions and a bunch grass when it is in hotter and dryer conditions. It was an important grass in the American short grass prairies. This is a smaller growing plant although it can grow up anyplace from 6 to 24 inches. Clumps spread from 12 to 24 inches. The leaves are pale green and go blond in the winter.

One more fun feature, besides the name, is the seedheads that form mid to late summer. They form little purplish flags. I'm sure you've seen them someplace. A fun looking grass.

Blue grama is tolerant of many different conditions. It does like having between 12 to 20 inches of water in elevations less than 8000 feet. That means in dryer areas you might have to water it a few times during the summer. Loves the heat, tolerates cold to -25°F, so it should grow anyplace in Yavapai County. It isn't even fussy about the soil, but prefers soils that drain well.

You can use blue grama alone or mixed with other grasses. It goes well with buffalo grass for low maintenance lawns. It can be mowed (heaven forbid you'll cut off all the neat seedheads) to anyplace from 1 1/2 inches to four inches between May and September. Fertilize once with nitrogen in late spring. Don't over do the mowing, watering or the fertilizer or else the plant turns yellow.

### Sources of seeds & plants

Blue grama is often available in local nurseries, if not request the nursery to order plants or seeds for you. Alkali sacaton is less common but may be available locally if you request it. You may also do a search on the internet to find sources.

Plants of the Southwest  
Route 6 Box 11-A  
Santa Fe, New Mexico 87501

Greenlee Nursery  
301 E. Franklin Ave  
Pomona, CA 91766

Redwood City Seed Co.  
PO Box 361  
Redwood City, CA 94064

### Did you Know?

The 2003 wholesale value of floriculture (flowering plants) crops produced in Arizona was up 9 percent from 2002. This in spite of fewer growers and less open ground used. Sales are estimated at \$35.6 million, generated from 40 growers in the state. The amount of space needed for all those flowers was 3.58 million square feet, most of it in greenhouses.



# Salvia dorrii mearnsii

## Verde Valley Sage

by Nora Graf

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I've talked about some invasive plants in the newsletter but maybe it's about time to talk about some rare and endangered plants that are trying to survive in Yavapai county. One of them is the Verde Valley Sage. First, an interesting side story concerning the subspecies name—*mearnsii*. Dr. Edgar Mearns was an interesting man. He was an army doctor that served at Fort Verde

between 1880 and 1885. Mearns was one of many men that joined the army because it gave them an opportunity to explore the West. During his travels he collected hundreds of specimens of animals and plants to send back to museums in the East. The type specimen for this plant is probably at the Museum of Natural History in New York. Most likely Dr. Mearns found this plant during his stay in the Verde Valley. Mearns's wife was a botanist. Lillian Mearns used to transcribe her husband's field notes. He occasionally left love letters for her to find while she was transcribing.

Back to the plant. The plant was originally given the name *Audibertia mearnsii* but was later changed to *Salvia dorrii*, because it is now considered a subspecies of a plant that occurs throughout the West. *Salvia dorrii mearnsii* is distinct to Central Arizona, the Verde Valley, Upper Verde River and near Sedona. It is a low much-branched woody perennial shrub up to 20 inches tall, the branches being somewhat spiny. Leaves are narrow to rounded slightly, 1/2 to 1 1/2 inches long and less than a half inch wide. They are covered with silvery hairs on the petioles. Leaves exude the usual sagey scent when crushed. The flowers are clustered and spaced along the upper stems and have large hairy, greenish purple bracts.

The flowers are bright blue with a maroon calyx. The plant is actually pretty. Blooming mainly occurs in April and May but blooms may occur throughout the summer, if conditions are right.

Verde Valley Sage has specific conditions it needs, readily found in the Verde Valley. It is found in creosote-shrub communities on gypseous limestone, occasionally found in Tertiary lakebed deposits in the Sonoran desert and Supai/Hermit formations in Pinyon-Juniper woodlands (for those that know their geology.) It prefers eastern exposures between 3100 feet 5120 feet.

Not much is known about the plant; it has a limited habitat. The sage is threatened mostly by habitat loss. It does not grow back if an area is disturbed and grazing seems to decrease its ability to set seed. Gypsum mining is a threat and also the unlimited growth of houses and roads, along with the use of off-road vehicles.

# Purshia subintegra

## Arizona Cliffrose

by Nora Graf

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Another rare plant in Arizona that is a little better known than the sage. It has figured in a few road projects and has hit the news on occasion, as it is listed as an endangered species. Like the sage, this is a plant that likes limestone, something we have in

abundance in the Verde Valley. It occurs only through Central Arizona on limestone lakebed deposits that are high in lithium, nitrates and magnesium, between 2500 and 4000 feet elevations.

Cliffrose is a evergreen shrub that grows from 3 to 8 feet tall and 12 feet across. The leaves are linear and small. Young twigs are glandular and sticky. Bark is pale gray and shredded looking. It flowers from April to May. The flowers are white or yellow.

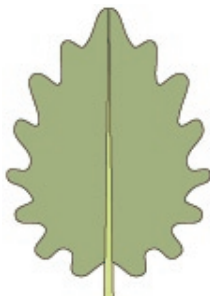
Like most endangered species, this plant is threatened by habitat loss but it may also be hybridizing with other species of *Purshia*.



# Fall Leaves

By Jeff Schalau,  
County Director, Agent,  
Agriculture & Natural Resources

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Chlorophyll, the green pigment in plant leaves, captures light energy then transfers and stores it as chemical energy in sugars and starches: the process of photosynthesis. Although chlorophyll is the best known of the plant pigments, several other pigments are present in plants. Carotenoid pigments are present in most plant leaves throughout the growing season and appear orange and yellow. Like the name, carotenoids are the orange pigment in carrots and other yellow/orange vegetables. Anthocyanins are purple and red plant pigments and found in red cabbage, chard, and turnips. What about the colors in fall leaves?

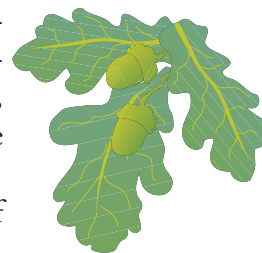
As fall approaches, we observe leaves changing color from green to yellow, orange, red, and even purples. Fall leaf colors are produced when weather interacts with physiological plant processes to cause color changes. Initially, chlorophyll production begins to slow. A decrease in green pigment allows the yellow pigments to become more visible. Both chlorophylls and carotenoids are held within membrane-bound structures called plastids.

Anthocyanins are produced by different processes and are found in the cell sap (cytoplasm). During summer, phosphate reaches high levels in leaves. Phosphate is an important compound used to add energy during the intermediate steps of photosynthesis. In deciduous trees, cool weather and shorter daylight hours signal leaves to decrease sugar production and prepare for winter. At this stage, phosphate is transported out of the leaves and into the stems. When this occurs, sugar breakdown processes change chemically which leads to the production of anthocyanins creating red to purplish fall colors.

Different plant species have varying ratios of chlorophyll to other pigments. They also have widely varied physiological processes and leaf chemistry. This is the reason for the wide variation in fall color between deciduous tree species and even individuals within the same species. Aspens have



little or no anthocyanins while Rocky Mountain maples have enough to make them pink to red. Purple leaf plum trees have abundant anthocyanins throughout the growing season. Landscape trees that provide good fall color are Liquidambar (many named varieties provide yellows, oranges, reds, and purples) and Chinese pistache (red).



The University of Arizona, College of Agriculture, U.S. Department of Agriculture and Arizona Counties Cooperating



What happens to the deciduous leaves after the fall color show? Again, complex biochemistry is taking place within the plant. The technical term for leaf drop is abscission. In deciduous trees, the attachment of the leaf to the stem is designed to fail at the proper time. This abscission zone is characterized by two or more layers of cells: some with poorly developed cells walls to make it purposely weak and others that form a protective layer that can be walled off and “waterproofed” after the leaf drops.

A leaf is an expensive investment for any plant and to just drop it of without any consideration for the materials contained therein would be a great waste. Consequently, many complex molecules, are broken down into smaller units and transported from leaves into stems, down the trunk, and into the roots. This allows deciduous forest trees to survive in nutrient poor environments by salvaging nutrients before leaves are dropped.

After the salvage job is complete, other processes take over. Auxin (growth hormone) levels decrease in the leaf, ethylene production increases, and enzymes are secreted that weaken the abscission zone to the point of separation. The leaf drops to the ground and the remaining nutrients are stored on-site for use the following year when soil microbes release them again.

# MG Association News

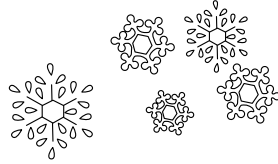
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## End of Year Reporting

The 2004 volunteer hours #s will be submitted to the U of A in early January. Please turn in all your remaining 2004 hours by January 2, 2005.

## Volunteer Opportunities

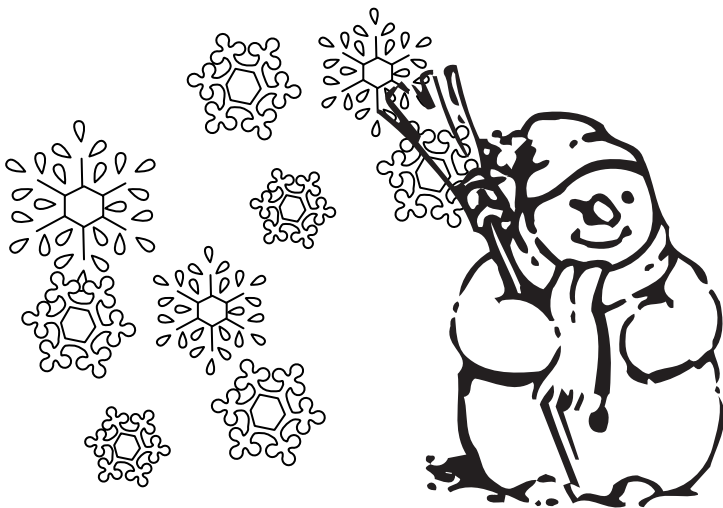
We still need volunteers for the following:



\* Need a chair for the MG table at the Garlic and Gourd Festival (Camp Verde) on June 11th & 12th. Planning meetings have already started, so we need to fill this position ASAP. Contact Mary Barnes, 583-0889, [mcbarn1@cableone.net](mailto:mcbarn1@cableone.net)

\* For the Pecan & Wine Festival in Camp Verde, Feb 11th - 13th, we need 6 MGs to assist with judging & we need MGs to staff the MG table. Contact Jane Davie, 928-634-7077, [jcdavie18@aol.com](mailto:jcdavie18@aol.com)

\* Much time has been invested in working with the Verde Valley Medical Center (Sedona & Cottonwood) to determine how Master Gardeners can help them upgrade their landscaping, which will be a big morale boost for their patients. The first phase of the project is in Sedona. This is an excellent opportunity for MGs to be creative and to do some hands-on work. Contact Jeannette Teets, 928-567-6891 [jdteets@commspeed.net](mailto:jdteets@commspeed.net),



**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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[mesquite2@hotmail.com](mailto:mesquite2@hotmail.com)  
(928) 567-6703



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840 Rodeo Dr.  
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FAX: (928) 445-6593

**Cottonwood**  
2657 Village Dr.  
Cottonwood, AZ 86326  
(928) 646-9113

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Prescott, AZ 86305

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