

Plant Science Says



*Happy
Valentine's
Day!*

February, 2004

2004 MNLA Convention in Missoula

by Yousef Zadegan

Yousef Zadegan, David Baumbauer, Cheryl Moore, Toby Day, and Jon Cox attended the Montana Nursery and Landscape Association Annual Meeting held in Missoula from Jan. 7 to 9.

Celebrating their 50th anniversary, MNLA organizers had put together an excellent program, which included industry trade shows with over 70 exhibits, numerous seminars, and discussion groups. This year, the main focus of the seminars revolved around the issues and opportunities regarding the use of Montana native plants in built landscapes.



Cheryl Moore, David Baumbauer, Yousef Zadegan and Toby Day

The Wednesday seminars started with an "Identification Clinic" during which the participants were given a refresher course on Montana insects and plant diseases. The next session was lead by Panayoti Kelaidis, a nationally renowned horticulturist from the Denver Botanical Gardens. Panayoti addressed the water shortage issue in the west in recent years and the need for alternative landscaping strategies for the purpose of creating sustainable landscapes. He provided numerous examples of beautiful garden designs in Colorado influenced by water shortage.

Thursday presentations included "Least Toxic and Organic Plant Treatment Options-Biofungicides", "Native plants: Salvation or Fad?" and "Emerging plant pests".

Thursday sessions were concluded with a banquet, scholarship fundraising, and a performance by "In Cahoots with Mob Rules". Not to mention that as a lucky participant, I won a hand-powered blender, a perfect companion on a hot summer day when your heart desires a glass of Mountain Madness Margarita or Java Shake.

The meeting provided an excellent networking opportunity for us to meet and to interact with landscape professionals, exchange information, and hear their concerns for producing, promoting, and using native plants in the landscape, a current trend nation-wide. Not to mention, our current research program here at MSU directly aims at resolving issues emphasized during this convention. In this regard, I think we have a great responsibility to get more involved in conducting research projects on various aspects of native plants. One major issue raised during the discussions was the lack of knowledge and direction in proper and effective use of native plants in the landscape. I think we should address this issue in our landscape/horticulture classes and also actively participate in MNLA Educational Programs providing workshops and seminars on planning and use of native plants in the landscape.

In meeting with company representatives, several nurseries and producers, such as Monrovia and Carlton Plants, indicated that they were willing to provide internships and employment opportunities for our graduating students.

Friday morning, MNLA members held an administrative meeting and discussed different issues including a better location with ample space and hotel accommodations for holding the annual meeting where they can admit a large number of exhibitors. Bozeman was considered as an alternative to Billings and Missoula due to its strategic location and the scope of the landscape industry in the Gallatin Valley.

Dougher receives Award

Tracy Dougher

received an "Award for Excellence" from the MSU Alumni Association and the Bozeman Chamber of Commerce. She had nominated Rebecca Kincaid for the student award and Rebecca was chosen. Rebecca then nominated someone who inspired her and it was Tracy. Congratulations Tracy!



Mathre Arbor Completed

With the addition of the arbor, the Mathre Courtyard is now close to completion. Dick Pohl will again be heading up the effort this spring to plant flowers in the courtyard. The type of vines that will be planted by the arbor will be decided by a contest. You will have the chance to vote for your favorite vines and the ones with the most votes will be planted. Eventually, the arbor will be covered with vines. There will also be two plaques hung – one in honor of Dr. Mathre and one in appreciation for the donation the Montana Wheat and Barley Committee and friends of Dr. Mathre made to complete the arbor.

As soon as the weather warms up, watch for an email announcing a barbecue in the Mathre Courtyard!

Grants

Luther Talbert, Jamie Sherman, & Phil Bruckner; Research and Commercialization Board, "Accelerated development of solid-stemmed wheat varieties"

Andreas Fischer, Research and Commercialization Board, "Functional Analysis of Genes Controlling Malting Barley Grain Protein Concentration"

Gary Strobel, Research and Commercialization Board, "Biological Treatment of Animal Wastes by Endophytic Fungi and 'Mycofumigation'"

Mark Young, TBI, "Characterization of Novel Viruses from High Temp Acidic Environments"



New Graduate Student

Humphrey Wanjugi – 124 ABS

I am Humphrey Wanjugi, a Ph.D. student in plant genetics with Dr. Jack Martin and Dr. Mike

Giroux. I am from Kenya. Kenya is known for its vast wildlife, game parks and long distance runners. I did my B.S at Egerton University, Kenya, M.S in plant genetics at the University of Idaho and then fell in love with the big sky-Montana. I am looking forward to making great friends and a successful stay at MSU.

Bob's Byte

Digital Images – Will your grandkids know what you looked like in 2004?



You just received a brand new digital camera for Xmas – How do you plan on saving all those memories you capture in a format that uses 0 & 1's? Unlike a print, you certainly can not tell how the image appears without a compatible program to view each file. For long term storage and archiving, printing is a good way to keep a tangible record of your precious files, and we'll discuss it in more detail later. For digital files, there are many file formats in use and no assurances that any will survive for 30 years. But most digital photographs today are stored in JPEG format, the compression standard used by most consumer digital cameras and supported by just about all the current imaging hardware and software. There are countless JPEG files in use today. The digital-imaging industry is very unlikely to drop support for it for a long time, even after better things come along. Store at least one copy of all your photos as a JPEG. Be sure to rename those files from the nondescript name assigned by your camera to something that easily identifies the contents of the file (current versions of Windows allow 255 characters in the file name)

JPEG uses lossy compression, which means that a decompressed image is not exactly the image you started with. Shoot and store your photos at the highest quality and resolution your camera allows. If you plan to manipulate your images, convert them to a lossless format—such as TIFF—while you edit, then save them back to JPEG when you are finished. TIFF files are typically huge, however, so use this format sparingly. Store your JPEGs and TIFFs on your hard drive in read-only format, so you don't unintentionally overwrite them. Set files to Read only by right-clicking on them in Windows Explorer, selecting Properties, and checking the labeled box.

Once you have all your digital files, how do you organize them so you can find them later? Different applications organize content in different ways, and there's no way to ensure that the product you use years from now will be able to read the organization information—metadata—used by your current software. For now, the best way may be to type up a list of photo captions and any other information you want and store that file on your CD in plain text format. You can also

print a list of the files or a thumbnail sheet to put in the CD's case.

It's the best way to archive your files? A look at today's technology shows that CD-R is the way to go. CD-ROM has been the medium of choice for storing, distributing, and exchanging music and photo collections for years, and you can be reasonably assured that there will be devices to read CDs for many years to come. What about DVD? Not yet. The standards war between the DVD+R/RW and DVD-R/RW camps has yet to be fully resolved.

CD-R media last significantly longer than rewritable CDs (CD-RW). CD-Rs have been widely tested and with the right care are projected to last anywhere from 50 to 100 years—even longer than CD-ROMs. But there are differences among CD-R products. Some say gold disc dyes provide more longevity, but there's no hard data to substantiate that claim. The best protection is to use discs from major brands—such as Fuji, Kodak, Mitsui, or TDK—which use protective coatings, instead of local retailer brands. And store them in hard plastic cases, too. Be aware, also, that the shelf life of a blank CD-R is only five years, so use your discs ASAP. Use a felt-tip pen to label your discs and avoid adhesive labels, which may cause your discs to wobble and make them unreadable.

Here are some other tips for CD storage:

- Use software such as Roxio's Easy CD & DVD Creator, which offers bit-by-bit verification of the copied files.
- Make two CDs of each batch of photos or music and store one set in a separate location. You may want to have each copy on a different brand of CD, in case one of them deteriorates faster than expected.
- Periodically make a "best of" photo CD, so you don't have to search through dozens or hundreds of discs to find the photos you really want.
- Keep CDs in a cool, dry place, away from sunlight and humidity.

Storing prints of your beloved photos is a great way to insure against digital-storage problems later on. Based on accelerated testing in several laboratories, ink jet prints using certain combinations of inks and paper may last as long as 75 to 80 years without fading. Accelerated testing subjects prints to heat, ultraviolet light, and humidity (the tests assume that they're framed under glass and exposed to light for around 12 hours a day), then projects their life based on their response. It's imperfect, as there's no way to tell how the acceleration affect results and there's no equivalent test for photos that will be stored in albums or shoeboxes, but it's the best predictive method available today. You can safely assume, however, that photos exposed to less light will last longer than the rated number of years.

Based on test results and vendor suggestions, the key is to use combinations of the printer manufacturer's inks and paper. For example, prints using Epson DuraBrite inks and Epson Matte Paper HeavyWeight, DuraBrite Ink Glossy Photo Paper, and Epson Photo Quality Ink Jet Paper may last up to 80 years. You can use any HP 57 or HP 58 color cartridges and HP Premium Plus Photo Paper for photos with a maximum rated life of 73 years. Prints made with third-party inks show dramatically reduced longevity; many are rated at only three to five years! HP's printers also come with Memories Disc Creator, a useful utility for archiving photos to CD.

Today's ink jet prints actually have longer rated lives than traditional silver halide prints, but if you prefer the older approach, find a service that will produce regular prints from your digital photos. Shutterfly uses Fuji printers and Fujicolor Crystal Archive paper, which has a rated life of 60 years. Here are some other photo storage tips to keep in mind:

- If you're displaying photos, frame them under anti-UV glass, away from sunlight.
 - Store your photos in an album, preferably a three-ring binder, as strapped books can put pressure on the photos, causing them to stick together.
 - Keep photos in a cool, dry, dark, well-ventilated place that's safe from pets and flooding—not the basement or the attic.
 - Visit www.pcmag.com for more archiving tips.
- You can preserve your precious digital files for years to come, but not without taking the right measures today. **The majority of the content of the article was published in PC Magazine, January 2004.**

Good Flower Choices by Bob Gough

Those new seed catalogs will be arriving in the mail soon and with their hundreds of cultivars it's sometimes a daunting task to sort out which ones are the best. Fortunately, for years now we have had that information available in the form of All America Selections. These are the results of testing many cultivars over many locations and coming up with the best few each year to be named All America Selection winners.

Dianthus is one of my favorite flowers and there's a great one out. "Melody Pink" *hybrid dianthus* produces sprays of single pink blooms and was bred specifically for the cut flower trade. The flowers are an inch in diameter and borne atop



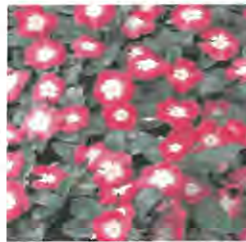
long stems. The plants, which may reach a height of two feet, are heat and cold tolerant, making them perhaps especially useful in our region.

'Cosmic Orange' cosmos is an improved, highly pest resistant *Cosmos sulphureus* that grows about a foot tall. The plants are vigorous and produce an abundance of two inch bright orange blooms all summer long.



The first sunflower to earn an AAS award, 'Soraya', has distinctly orange petals, as opposed to the normal golden petals. These contrast sharply with the chocolate brown flower center to make the flowers very appealing. The five to six foot tall plants produce 5 inch blooms about 90 days from seeding.

If you like vinca, try 'Stardust Orchid'. This is the first *Catharanthus roseus* with pastel orchid and white blooms about an inch and a half in diameter. The foliage is glossy and dark and relatively tolerant of pests, heat and drought. The plants reach about 15 inches in height when grown in full sun.



How about a dwarf 'Mexican sunflower'? 'Fiesta Del Sol' thrives in summer heat, growing about two feet tall. The single orange, two to three inch diameter flowers look like daisies and are great for cut flowers or for attracting butterflies. The plant is pest free. Not even deer will eat it. Plant this dwarf *Tithonia rotundifolia* in full sun and enjoy.



Birthdays

Mike Sun	2
Elaine Matlow	9
Norm Weeden	12
Phil Bruckner	17
Pam Border	23
Shirley Gerhardt	26



Recipe of the Month

Richard's Goose Drowned in Port Wine

In oven:

Take a 9 pound goose without feathers and rub it with 1/2 teaspoon of salt. Pre-heat oven to 450 degrees and

brown goose for 20-25 min in a brazier in oven with breast side up, turn once.

In separate pan, add 4 tablespoons of goose fat, margarine or oil. Brown any extra goose bits leftover and then add 1 1/2 cups of sliced onions and 1/2 cup of carrots. Sauté lightly. Add 6 tablespoons of flour and sauté further until light brown. Remove from heat, blend in 4 cups of beef or chicken stock and 3 cups of dry white wine (take a liter and drink one yourself).

Then bring to boil and simmer for 5 min. Add this stock to brazier, add goose, it should be drowning – 1/3 of bird head down, is submerged in stock. Bring to boil on top of stove. Cover brazier and place in oven at 225F in the middle of oven. Cook for 2 hr or jab it in the breast. Meat is done when fluid runs yellow or use a meat thermometer. Place drowned goose on platter and keep warm.

Sauce

Separate out fat from stock. Add 1/3 - 1/2 cup of Port wine. Boil down till it just coats a spoon or boil down slightly and add a sauce thickener. Correct seasoning, extra Port can also be added to sauce or to the cook at this time. Strain sauce, should have 5-6 cups of excellent gravy. Serve with boiled red potatoes or dumplings and red cabbage of course and don't forget a good bottle of red wine

Enjoy!

Richard & Ingrid Sikora
Bonn, Germany