



VOLUME 28 , ISSUE 1

January/February 2005

The Defeat of Initiative 1

By Bill Gray

The Down Side That was a real roller-coaster! After early polling showed a very positive outlook, anti-initiative ads in the late stages took their toll, building on concerns about higher taxes, shutting up land, etc. Significant negative impact came from opposition by Governor Walker, Deseret News, the Farm Bureau, Jim Hansen, and the Taxpayer's Association.

The Positive Side Despite the defeat, it is good to look at the tremendous effort that went in, and what was achieved:

Getting the measure on the ballot was a triumph in itself, because of the need for real support in every county. Prior to this, only 17 other initiatives had made it to the ballot in the whole history of Utah politics, and only 4 of them passed.

Thousands of volunteers worked at educating the public about the issues, delivered campaign literature, made phone calls, put up signs.

Thousands of people contributed a total of more than a million dollars to fund the literature and radio and TV ads. We don't know how much was spent by the opposition.

Best of all, 370,000 voters said that the issue of quality environment was so important to them that they wanted their taxes raised a little to improve it. No Ifs or Buts, it would have cost them money, and they were willing to pay.

What Next? The whole experience was unprecedented in the history of Utah's environmental movement, particularly the breadth of participation. The organizers see it as a beginning of something that can grow into an effective long-term advocacy for issues concerning quality management and development of our resources. They have created an ongoing "Conservation Action Team" which can use people in many different capacities. If you would like to learn more about this, please contact kferguson@utahlands2004.org.

A fuller discussion of the issues raised here can be found in an article sent to all the volunteers who worked for the campaign, a copy of which is on the UNPS website (www.unps.org).

JVWCD's Demo Gardens :A Place To Cultivate Your Imagination

Words and Photos By Kelly McNulty

Sometimes, you have to see it before you can, well, see it. And for native plant enthusiasts with green thumbs, but maybe not so green imaginations, The Jordan Valley Water Conservancy District (JVWCD) Demonstration Garden offers a real-world look at incorporating native Utah plants into the landscape. Which is why, to help raise awareness of UNPS, the Society chose to host a booth at two of the JVWCD's Garden Fairs this past summer.

"Planting" a booth dedicated to native plants in the middle of a native plant landscape where people have come to learn about adding natives to their own landscapes was a great way to teach attendees not only about the society, but about native plants as well. What's more, attendees could see a plant, learn about it and go buy it from one of the nurseries also at the events.

Many people stopping by the Society's booth, located in the garden's High Desert Mountain landscape were eager to learn about gardening with natives. The High Desert Mountain landscape is one of the six that make up the Demonstration Garden's Neighborhood Garden area. And all six landscapes—Traditional, Perennial, Modified, Woodland, Harvest and High Desert Mountain—include Utah native plants with the most natives in the High Desert Mountain and Woodland landscapes.



Below, Utah Valley President, Celeste Kennard with Joy Bossi



Above and center, views of JVWCD Demo Gardens

Set against a beautiful backdrop of tan and rose gravel next to an authentic-looking dry river bed made up of huge rounded stones, the High Desert Mountain landscape is based on a desert theme and incorporates many plants indigenous to Utah. Many are from southern Utah, but easily adapt to more northerly Utah areas. Among the numerous native trees, shrubs, grasses and perennials found in the landscape are Utah Pussy-toes (*Antennaria parviflora*), Fringed Sage (*Artemisia frigida*), Big Sagebrush (*Artemisia tridentata*), Utah Ladyfinger (*Astragalus utahensis*), Four-Wing Saltbrush (*Atriplex canescens*), Desert Marigold (*Baileya multiradiata*), Blue Grama Grass (*Bouteloua gracilis*), Indian Paintbrush (*Castilleja chromosa*) and Pinyon Pine (*Pinus edulis*). Also showcased are a few specimens of Desert Four O'Clock (*Mirabilis multiflora*), well on their way to reaching this plant's possible eight-foot diameter.

Established plants in this landscape are thriving with no irrigation and new plants receive only occasional hand watering for the one to two years required for establishment. Says JVWCD's Paula Mohadjer, "This garden hasn't been watered, at all, for two years."

People stopping by the Society's booth were often shocked to learn not only of the lack of water required by natives - once established, but also that many of the beautiful and colorful plants growing in this area are native to their very own state!

The Woodland landscape incorporates natives in an informal **terrain** that will eventually grow into a dry shade garden. This landscape requires water only once a month. Featured plants include Rocky Mountain Maple (*Acer glabrum*), Curleaf Mahogany (*Cercocarpus ledifolius*), Squawbush (*Rhus trilobata*) and numerous native perennials.

To cull ideas for their own gardens or just to enjoy the grounds, native plant and gardening enthusiasts can visit the Demonstration Gardens year-round at 8215 South 1300 West in West Jordan.

Summer hours are 8 a.m. to 8 p.m. daily from May 1 to September 30. Winter hours are 8 a.m. to 5 p.m. Monday through Friday from October 1 to April 30.

To see more photos and for more information on the gardens, Garden Fairs, classes and other programs, visit the JVVCD's website at www.slowtheflow.org.



Learning more about Natives at JVVCD

Announcements

UNPS LIFETIME MEMBER UPDATE

Larry and Therese Meyer have become, EACH, the latest Utah Native Plant Society lifetime members. UNPS now has 18 lifetime memberships. Larry and Therese have also worked tirelessly to support UNPS including a very, very long stint as newsletter editor, as chairs or co-chairs of committees and serving on our board (and are currently board members) and in many other capacities. Thanks Therese! Thanks Larry!

Ben Franklin

President of UNPS, Susan Garvin and the board of directors would like to give their heartfelt thanks to Ben Franklin for his many years of service as UNPS treasurer and look forward to his serving as an honorary board member in 2005.



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UNPS Responds to Proposed Castle Peak and Eightmile Flat Oil and Gas Expansion Project

by Tony Frates

In late November of 2004, UNPS submitted comments in response to a draft environmental impact statement (DEIS) in connection with proposed oil and gas expansion which would involve a disturbance to over 3500 acres of native shrublands. Over a 12-year period over 900 additional wells are proposed to be drilled on 40-acre spacing patterns to pump oil and gas from the Green River Formation.

The disturbance impact includes some 80 miles of new and upgraded roads; considerable water resources will be consumed.

We believe that the DEIS improperly evaluates the impact to the federally listed *Sclerocactus brevispinus* and in general *S. brevispinus* habitat is not being properly managed. Much of the total habitat for this species is in the project area with some 680 acres of known habitat under the BLM recommended alternative proposed to be disturbed. Some 3,000 acres of potential habitat for this species could be disturbed. *S. brevispinus* plants would be removed. Since 1995 as many as 100 endangered *Sclerocacti* have already been removed. With reference to *S. brevispinus* the DEIS states: **The project area includes over 50 percent of this species' known population** (Draft Environmental Impact Statement Castle Peak and Eightmile Flat Oil and Gas Expansion Project Inland Resources Inc., September 2004, table 3.7-1, page 3.7-2, on page 150 of the 359 page PDF document).



Sclerocactus brevispinus
photo courtesy of Ben Franklin

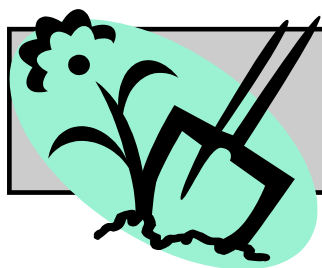
Yet it then proceeds to conclude that the overall impact will be acceptable because it lumps *S. brevispinus* under the listed *Sclerocactus glaucus* (which has a broader albeit very limited distribution) for purposes of impact analysis.

It will take some 50 years for vegetation to recover; 250 years for cryptobiotic crusts to recover as acknowledged in the DEIS. The applicant is Inland Resources, Inc. of Denver, Colorado. The entire project area will literally be dotted with oil wells.

There is no excuse for the taking of any endangered cacti in connection with this project.. All habitat for *Sclerocactus brevispinus* should be protected. Multiple use values have not been properly considered.

Other groups that responded to the DEIS included the Center for Native Ecosystems, The Nature Conservancy and Western Resource Advocates.

The UNPS response letter can be viewed at <http://www.unps.org/miscpdf/UNPSCPDEISResponse.pdf> (or go to our News page at www.unps.org and click on the link provided there). The Vernal BLM NEPA web site is at <http://www.blm.gov/utah/vernal/nepa.html>.



Events and Chapter News

NEW CHAPTER!

Welcome Kane Chapter!

As we reported in the last Sego Lily (Nov/Dec 04) Walt Fertig and company have been trying to set up a new chapter in Kane County. Those efforts have paid off and we would like to offer a warm welcome to our newest chapter which currently has 20 members and is still growing.

For more information on Kane chapter and upcoming events contact Walt on 435-644-8129 or walt@xpressweb.com.

Cache Chapter

Announcing the Annual UNPS-Cache Chapter Meeting, Dinner and Social

When: January 13, 2005, **At** 6 PM if eating there, 7 PM if not.

Where: El Toro Viejo

1079 North Main

LOGAN, UT 84341-2215

(435) 753-4084

<http://mapsonus.switchboard.com/bin/maps-maonly/usr=~41b8bd1e.408cd.abc.8/c=1/refsrc=SB.home/isredir=1/>

Ask for UNPS or Steve Ripple - we will be in the back, but may eat first in the regular restaurant.

Speakers: Lee Bjerregaard and Mark Ellis, will speak on the genetics of populations of Maguire Primrose in Logan Canyon

We will also discuss future events and activities for the year, our goals as a UNPS Chapter and for the State UNPS, and talk about the potential of new officer positions for our chapter.

Contact Steve Ripple 435.752.2732 limax-maxumus@comcast.net

Utah Valley Chapter News

For 2005, the Utah Valley Chapter plans to meet on the following Friday evenings February 18, May 20, August 19 and November 18. These chapter meetings are held at the Provo Federal Building, 100 North and 100 West in Provo. Meetings start at 7 p.m. preceded by a potluck dinner at 6.

The speaker at the February meeting will be landscape designer and chapter member Terri Williams, whose topic will be "landscaping solutions with native plants".

Our last meeting in November 2004 featured Dr. Phil Allen, who gave a powerpoint presentation updating us on the ecosystem restoration efforts at Provo's Rock Canyon, and also brought huge posters presenting other research and restoration projects he and his BYU students have been working on. The next day chapter members went out to Rock Canyon to do supplemental plantings of native grasses and wildflowers throughout the restoration area.

Chapter officers going into 2005 are Celeste Kennard as President, Randall Nish as Treasurer, and Denise Van Keuren as Secretary.

Congratulations to these chapter members joining the State Board - Terri Williams as State-level Secretary and Celeste Kennard as State-level Treasurer (in addition to being the chapter representative to the Board). They join Susan Garvin, Phil Allen and Susan Meyer in serving the whole UNPS on committees or the Board from Utah Valley!

Lecture at Red Butte Gardens

When? Thursday January 20

Where? The Orangerie, at Red Butte Gardens

Time? 7pm

Guest Lecturer Kathleen Dean Moore, Professor of Philosophy at Oregon State University

“TOWARD AN ECOLOGICAL ETHIC OF CARE”

For more information go to Red Butte's website www.redbuttegarden.org/

This lecture is cosponsored with the U's new environmental humanities program, the Stegner center and the Utah Arts Council

Now Available

TECHNICAL PUBLICATIONS OF NOTE

Dynamics of a Dwarf Bear-Poppy (*Arctomecon humilis*) Population Over a Sixteen-Year Period. K.T. Harper and Renee Van Buren in Western North American Naturalist, Volume 64, No. 4, October 2004, pages 482-491.

Do Alien Plants Reduce Insect Biomass? Douglas W. Tallamy in Conservation Biology, Volume 18, No. 6, December 2004, pages 1689-1692.

Restoring Western Ranges and Wildlands

This book, edited and largely authored by Steve Monsen from the Shrub Sciences Lab in Provo, is available online in .pdf format at the following link, with instructions on downloading or ordering a printed copy.

http://www.fs.fed.us/rm/pubs/rmrs_gtr136.html.

This work, in three volumes, provides background on philosophy, processes, plant materials selection, site preparation, and seed and seeding equipment for re-vegetating disturbed rangelands, emphasizing use of native species. The 29 chapters include guidelines for planning, conducting, and managing, and contain a compilation of rangeland re-vegetation research conducted over the last several decades to aid practitioners in reestablishing healthy communities and curbing the spread of invasive species.

Volume 1 contains the first 17 chapters plus the index. Volume 2 contains chapters 18-23 plus the index. Volume 3 contains chapters 24-29 plus appendices and index.

Utah at Home: Landscaping with Native Plants booklet available

We are pleased to be able to offer this 20-page, full-color, how-to booklet published by the Intermountain Native Plant Grower Association. It was created to give gardeners easy-to-follow guidelines for using native plants in home landscapes and is highly recommended. The booklet can be purchased via our Store page at www.unps.org. Cost of the booklet is \$1.50 for members (plus 75 cents postage) and \$2.00 for non-members (plus postage).

How to Help Us Make a Difference in 2005

Make a donation! Donations can be made painlessly via our Store page (www.unps.org and then click on Store) or you can simply mail us a check. Donations in any amount are greatly appreciated and 100% are applied to mission critical projects.

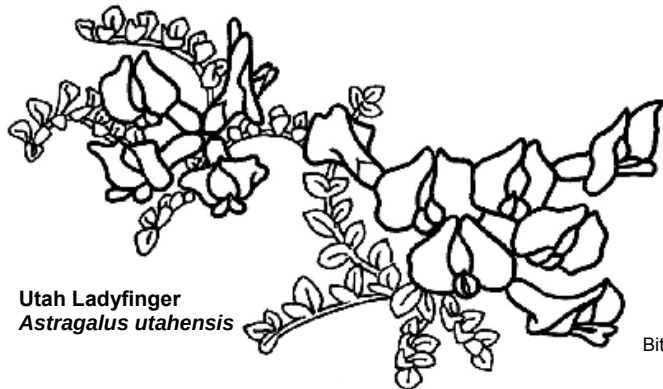
Go native! By planting Utah natives in your Utah landscape, you are helping to stem the tide of the alien invasion as well as raise awareness of the vital need to use those plants best suited for our environment. For more information about planting Utah natives and where they can be obtained, see our Plant sources page at www.unps.org/PAGES/cohortlist.html or go to www.unps.org and click on Plant sources.

Volunteer! Help is always needed in every aspect of the organization including administration/ membership, newsletter, horticulture, field trips, invasive species, web site, conservation and many more. Tell us what you are interested in doing by sending an e-mail to unps@unps.org. We need help from every corner of the state.

UNPS
Utah Native Plant Society
P.O. Box 520041
Salt Lake City, UT 84152-0041

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Bitsy Schultz

For latest UNPS and
Utah native plant
news go to:

www.unps.org
and click on News

Utah Native Plant Society Membership and Information

☐ New Member ☐ Renewal ☐ Gift

Name: _____
Street: _____
City/State: _____
Zip: _____ Phone: _____
Email: _____
Chapter: _____

Check membership category desired:

- | | |
|--|----------|
| ☐ Student | \$9.00 |
| ☐ Senior | \$12.00 |
| ☐ Individual | \$15.00 |
| ☐ Household | \$25.00 |
| ☐ Sustaining | \$40.00 |
| ☐ Supporting Org. | \$55.00 |
| ☐ Corporate | \$500.00 |
| ☐ Lifetime | \$250.00 |
- ☐ Please send a complimentary copy of the Sego Lily to the above individual.

Please enclose a check, payable to Utah Native Plant Society and send it to:

Membership ,
Utah Native Plant Society
P.O.Box 520041,
Salt Lake City,
Utah 84152-0041

For more information about the
Utah Native Plant Society call:

Bill King: 582-0432
Susan Garvin: 356-5108
Or write to: unps@unps.org

Many thanks to Xmission for
sponsoring the Utah Native
Plant Society website.

Please direct all suggestions,
articles and events for the
newsletter to Paula Longhurst
at
plonghur@xmission.com.
**The deadline for next issue
is 8th February**

UTAH NATIVE PLANT SOCIETY

President: Susan Garvin
President Elect: Mindy Wheeler
Chairmen: Larry Meyer/Dave Wallace
Treasurer: Celeste Kennard
Secretary: Terri Williams
Newsletter Editor: Paula Longhurst

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Canyonlands: Steve Budelier
Mountain: Mindy Wheeler
Price: Mike Hubbard
Salt Lake: Bill Gray
Southern Utah: Margaret Malm
Utah Valley: Celeste Kennard
Escalante: Winnie Washburn
Kane: Walt Fertig

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Conservation: Bill King/ Tony Frates
Education:
Invasive Species: Phil Allen/
Susan Garvin
Communications:



VOLUME 28 , ISSUE 2

March/April 2005

Native Plant Propagation Workshops 2005

UNPS has partnered with USU extension once again to bring you these native plant propagation workshops which are taking place throughout Utah during March and April. Learn to plant and grow Utah native plants. Participants will plant a selection of Utah native seeds to take home. Space is limited so register now!

Box Elder County

April 16th, 10 am to 1 pm and Tour on May 28th, 9 am to 2 pm

Cost \$25. Pre-register at USU Extension, 195 W 1100 S, Brigham City, UT (435) 734-9945 or 1-800-738-0210

Cache County

Mar 3rd, 6 to 8 pm or Mar. 5th, 9 to 11 am or 1 to 3 pm

Cost \$20. Pre-register by calling (435) 752-6263 USU Teaching Greenhouse, 1389 North 800 East, Logan, UT

Davis County

Mar 12th, 9 am to 12 pm, 1pm to 4 pm

Cost \$20. Pre-register by calling (801) 451-3403 Utah Botanical Center Greenhouse, 750 South 50 West, Kaysville, UT

Salt Lake County

March 12th, 19th and 26th. 9 am to 12 pm

March 16th, 23rd, 30th 6pm to 9 pm

Cost \$20. Pre-register by calling (801) 468-3171. Salt Lake County Government Building, 2100 S State St, Room S-1007/8 Salt Lake City.

Utah County

March 30th beginning at 10am

Cost \$20 for non-members \$15 for UNPS members and Master Gardeners

Pre-register by calling 851-8460. County Building, 51 S. University Avenue, Provo, Room L600

Please note that Southern Utah have already completed their Propagation Workshops by the time of going to print.



March / April 2005

Propagation Workshops 2005 : P1	Calendar of Events : P2
Chapter News : Save the Flow : P4	What's in a Name? : P5
The Phragmitization of the Great Salt Lake : P6	Creeping Oregon Grape : P7

Calendar of Events

Please note that some of the February events listed *may have already taken place*. For the most up-to-date events lists go to our website www.unps.org and click on the "calendar" link.

February

- Feb 17th : UNPS board meeting, open to all members please e-mail us for the location unps@unps.org. The meeting will be held from 6pm to 8pm.
- Feb 18th : Utah Valley Chapter Meeting to be held at Federal Building, 100 N 100 W in Provo. The speaker will be Terri Williams, landscape designer and chapter member, her topic will be "landscaping solutions with native plants" Potluck dinner at 6pm meeting starts at 7pm.
- Feb 26th : Cache Chapter Winter Botany Field trip in Logan Canyon, starts at 10am Cost \$20 non-members, \$15 for members (for van rental and lunch) Must sign up by Feb 22, contact Steve Ripple at 435-752-2732 or limax-maxumus@comcast.net or call the Herbarium on 435 797 0061.
- Also Feb 26th : "Waterwise Gardening, Landscaping with Natives. This talk will be held at Orem Library (58 N State). at 10am. The speaker, Celeste Kennard, President of Utah Valley Chapter will be giving a powerpoint presentation geared towards beginners, but all are welcome. Orem library will also be displaying their collection of gardening books.

March

- Mar 2nd : 4th Annual Red-Butte, UNPS sponsored Utah Rare Plant Conference. For more information and to sign up, contact Jennifer Lewinsohn of Red Butte Gardens **as soon as possible** Jennifer.Lewinsohn@redbutte.utah.edu. Please note that the meeting is *not* being held at RBG this year.
- Mar 3rd : W Richard Hildreth, co-founder of UNPS and founding director of Red Butte Garden will lecture on some of the nuances of gardening in the west. Non-members \$7, members \$5. 7pm to 9pm at Red Butte Gardens.
- Mar 24th : UNPS board meeting, open to all members please e-mail us for the location unps@unps.org. The meeting will be held from 6pm to 8pm

April / May

- April 2nd. 2 PM. Tour of Water Wise Gardens, a native plant nursery, and hear a presentation on native bulbs. Location: 45 North Main Street, Lewiston, Utah 84320. We may also inspect a nearby infestation of Saltcedar/Tamarisk. For more info and car-pooling options contact Steve Ripple at 435-752-2732 limax-maxumus@comcast.net or join the email list at <http://lists.usu.edu/mailman/listinfo/cacheunps> and post a question
- Also April 2nd. 9 AM, Join members of the Utah Valley Chapter on a field trip to look at *Viola beckwithii*. Meet at the parking area across from the gravel pit at Moark Junction. All are welcome. It is an easy hike across the old gravel pit to see *Viola*. Those wishing to stay and look for more *Viola* plants on State Land should bring your outdoor gear, cameras, a packed lunch and water. Moark Junction is the intersection of Hwy 89 (The main road south through Springville), and Hwy 6 (the road through Spanish Fork Canyon to Price). Landmarks are the red buildings of the explosives plant east of the junction, and the power substation in the old gravel pits just to the north of the junction. Those coming from the north can take the I-15 Price exit go east through Spanish Fork, and turn left toward Mapleton and Springville. Contact Robert Fitts on 796-8631
- April 7th Biological Soil Crust Ecology and Management will be taught in Moab UT. For more details go to <http://oslearn.ntc.blm.gov/itdc.nsf/>
- To be announced: Visit to the Logan Canyon *Primula Maguirei* populations - April or May (depending on phenology). contact Steve Ripple at 435-752-2732 limax-maxumus@comcast.net, or the Herbarium at (435)797-0061 funqi@biology.usu.edu for updates or post to email list.

June

- June 16-22. A "Measuring and Monitoring of Plant Populations" BLM training center course to be taught in Lander WY. For more details go to <http://oslearn.ntc.blm.gov/itdc.nsf/>

We are looking at the idea of an electronic events notification system for UNPS members. If you would like up-to-the-minute information on new events delivered straight to your desktop please send an e-mail to plonghur@xmission.com stating that you want to be notified electronically and giving the e-mail address you want us to use.

If enough people are interested we will set the system up. There will be a notice in the next Sego Lily to let members know if this is going ahead

TECHNICAL PUBLICATIONS OF NOTE MAR/APRIL 2005

Reproduction and Demography of *Townsendia aprica* (Asteraceae), a Rare Endemic of the Southern Utah Plateau. Vincent J. Tepedino, Sedonia D. Sipes, and Terry L. Griswold in Western North American Naturalist, Volume 64, no. 4, October 2004, pages 465-470.

Excerpts from the concluding portion of the technical abstract:

Outcrossing is the primary means of reproduction and native solitary bees are most important pollinators. Paramount are several species in the genus *Osmia*, and the ground-nesting species *Synhalonia fulvitaris*, which nests among the *T. aprica* plants. *S. fulvitaris* also visits a contemporaneous blooming phlox (*P. austromontana*), which may facilitate pollination of the rare townsendia. The *Townsendia*-*Phlox*-*Synhalonia* interaction may represent another example of why we must consider communities rather than individual species in our conservation efforts.

Editor's note: Last Chance *Townsendia* (*Townsendia aprica*) was federally listed as threatened in August of 1985. For a technical description and pictures, see the Utah Rare Plants Guide site sponsored by the Utah Native Plant Society at www.utahrareplants.org.



Chapter News

Results of the “Name the Chapter” Contest

At our January meeting, the assembled crowd voted to select the name and mascot for the Kane County Chapter. Among a pool of 16 entries, the choice was narrowed down to *Artemisia* and Manzanita. After a tense round of balloting (including one confused vote for Pat Buchanon), Manzanita was selected.

Due to a desire to keep some mention of Kane County in the name, the group settled on “Manzanita Native Plant Society of Kane County” for our title. Those wishing for an acronym may use “MANAPSOKACO”, which loosely translates from the Latin as “Manzanita Native Plant Society of Kane County”.

Anne Mejia submitted the winning name and thus won the door prize, a copy of *Plants of the Rocky Mountains* by Kershaw, MacKinnon, and Pojar. - *Excerpt reproduced from the Manzanita Chapter Newsletter Feb 05*

Save the Flow - Conserving Rain Water in Utah

Words and Photos by Paula Longhurst

It's official – the State of Utah has just entered the sixth straight year of drought. We are all being urged to use as little water as possible. Yes, yes I know that Southern Utah just had the worst flood in living memory and the Northern ranges are currently being loaded up with fresh powder. The problem is that if the weather turns too hot too quickly – as happened in March 2004 - the snow will simply evaporate off and the Southern flood waters ended up in Lake Powell!

Xeriscaping the yard and therefore getting rid of those water guzzling sprinkler systems is a good place to start but what about utilizing rain water? According to the NOAA website the average rainfall in this state per year is 16.5”. So where does that go? While a mere fraction of it soaks into the ground the majority goes right down the drain. Gallons of water just going to waste.

Unless you have a rain barrel that is, then the rainwater gets funneled down the guttering and straight into your water collection system. A prolonged downpour such as ones we had in Northern Utah in 2004 can fill a fifty gallon barrel overnight. When the barrel is full simply divert the water out onto the grass.

There are now kits available on the internet, or you can order the parts separately. The barrel will probably be a reconditioned food barrel with a tap, a plastic overflow pipe and then you need a downspout kit for the gutter which is easy to install.

A couple of words of caution – *make sure* the opening has a piece of mesh or netting tightly secured over the top to keep out leaves, dirt and most importantly mosquitoes. Also raise the barrel up to at least 3 bricks high so that you can get your watering can underneath the tap.

Anyone interested in a fact sheet detailing how to buy and install a rain barrel e-mail me at plonghur@xmission.com

Right - Rainbarrel and downspout kit - note the large tap you can see is actually the overflow tap - the main tap is right at the bottom of the barrel



What's in a Name - *Besseya*

By Walter Fertig

The genus *Besseya* in the Scrophulariaceae (figwort family) contains 7-9 species restricted to North America. Commonly called kittentails, members of this genus are recognized by their heart-shaped basal leaves and dense spike-like inflorescences of white, pinkish, or purple flowers with 2-4 calyx lobes and two exerted stamens.

Two species of *Besseya* occur in Utah, both of which are only infrequently observed. Wyoming kittentails (*B. wyomingensis*) is the more widespread species, occurring along the Rocky Mountain cordillera from southern British Columbia and Alberta to northern Colorado, the South Dakota Black Hills, and northern Utah in the Raft River and Uinta mountains. This species produced showy pinkish-purple inflorescences without the benefit of petals (the flower color comes from the slender filaments of the stamens). But once the stamens wilt Wyoming kittentails assumes a drab grayish-green color and can be difficult to locate.

Alpine kittentails (*B. alpina*) differs in having purple petals and inconspicuously colored filaments. In Utah, Alpine kittentails is known only from high montane meadows in the La Sal Mountains and in San Juan County. Otherwise, it ranges in the southern Rocky Mountains from southeast Wyoming to northern New Mexico.

Per Axel Rydberg named the genus *Besseya* in honor of his colleague, Charles E. Bessey (1845-1915) of the University of Nebraska. Professor Bessey was an outstanding teacher and influenced a generation of talented students, including Frederick Clements, one of the most influential (or notorious, depending on one's point of view) plant ecologists of the early 20th Century. Bessey, however, may be best remembered for his contributions to the development of a phylogenetic system of plant classification.



Above: Alpine kittentails by W. Fertig

Bessey contended that the order Ranales (including the Ranunculaceae, Paeoniaceae, Magnoliaceae, and other similar families) was the most primitive of the flowering plants due to its possession of a number of morphological features considered close to gymnosperms. Orders that differed from this basal group in one or more features were considered more advanced and thus more recently derived.

Bessey illustrated his concept of angiosperm relationships in a famous chart that became known as "Bessey's cactus" (or *Opuntia besseyi*?) due to its loose resemblance to a beavertail cactus. Although many of Bessey's conclusions are no longer accepted, his basic concepts have become a cornerstone of systematic methodology and his cactus-like charts live on in the works of many contemporary taxonomists.

The Phragmitization of the Great Salt Lake

By Brian Nicholson - reproduced courtesy of Friends of Great Salt Lake

Just as animal species profit from our presence on the landscape many plants aggressively spread after deliberate or inadvertent introduction. The potential for cattails (*Typha spp.*), reed canary grass (*Phalaris arundinacea*) and common reed (*Phragmites australis*), among others, to alter biotic community structure, reduce wetland function, and impede restoration is significant in the Great Salt Lake ecosystem. What makes these plants especially invasive is their tendency to be more vigorous and productive than in their native distribution.

Hypotheses that explain increased competitiveness include: 1) chemical or physical conditions at the new site that facilitate growth, 2) an absence of herbivores allowing allocation of resources away from defense to reproduction, and 3) hybridization. In the case of *Typha spp.*, *Phalaris arundinacea*, and *Phragmites australis* hybridization is a likely explanation as all are historically found in the Great Salt Lake Basin but did not dominate plant communities until more recently.



It is suggested that *Typha latifolia*, a freshwater cattail species, has crossed with *T. angustifolia*, a more salt tolerant species first recorded in Utah in the 1920's. *Phalaris arundinacea* has been an important cultivated forage grass in temperate areas for over two hundred years. Most likely, varieties bred for different soil conditions and increased yield have propagated with wild strains.

Phragmites australis possesses many characteristic traits of hybridized plants that include perennality, asexual reproduction and rapid colonization of disturbed habitats. Propagules are found in ballast water from the Old World and it is possible that these plants contributed new genetic material to indigenous populations. However, additional research is needed to determine if the more invasive genotype we see in Utah developed after colonization or prior to introduction.

Limiting the expansion of invasives to new sites is paramount if we hope to keep healthy and diverse wetland plant communities. Management strategies such as fire, flooding, and drawdowns are unlikely to control them as all rapidly colonize wetlands subject to human or natural disturbance. As stewards, any observations we can contribute regarding the spread and distribution of these three species may provide useful information for managing and protecting

The following is an excerpt from an article in W Richard Hildreth's "Naturally Native" series which were published in the Sego Lily in the early 80's. Dick was a co-founder of UNPS, the first director of Red Butte Garden and the driving force behind UNPS for two decades As Dick is giving a lecture at Red Butte in March we thought we'd give you a taste of what you can expect.

Naturally Native – Creeping Oregon Grape Mahonia repens by W Richard Hildreth
 First published January 1982

Versatility. This may be the best term to describe the landscape uses of the Creeping Oregon Grape. Over the wide range of its natural distribution from British Columbia, south to California and east to Colorado and New Mexico, individual clumps or broad expanses of this rhizomatous suckering low shrub will be encountered from foothill areas to higher elevation exposed ridges.

In Utah, Creeping Oregon Grape may often be seen growing beneath Gambel Oak (Quercus gambelii) and Bigtooth Maple (Acer grandidentatum) along the Wasatch Front. Homes developed in this area may have natural stands of all three plants, unless they were bulldozed away in the construction phase. Hikers become familiar with Creeping Oregon Grape at the mountain tops with Douglas Fir (Pseudotsuga menziesii), White Fir (Abies concolor), Lodgepole Pine (Pinus contorta v latifolia), Engel-man Spruce (Picea engelmanni)

Creeping Oregon Grape is characterized by its dull pinnately compound leaves, reminiscent of Holly. The leaves have 2-3 pairs of ovate leaflets which are typically rounded at the apex, wavy margined with 5-9 spiny teeth. Some forms are not undulate and scarcely toothed. The underside of the leaf is a paler green and densely papillose. Grape-like clusters of rounded black fruit (6-7mm) covered by a waxy blue bloom juicily ripen in mid to late summer. The fruit is edible out of hand, but rather tart. It makes a fine jelly or dries as raisins.

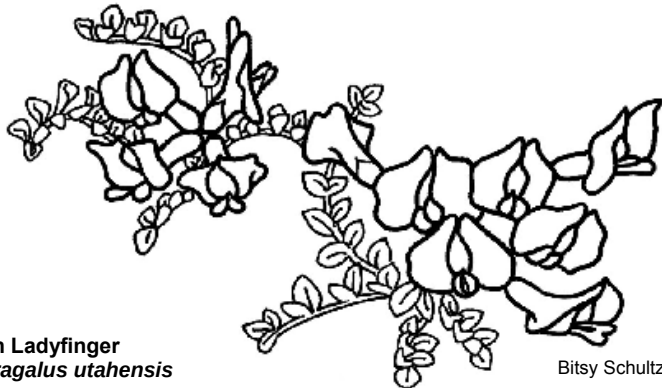
Desirable landscape features include it's tolerance to dense shade, where it grows to three feet tall with a loose open habit

It does equally well in full sun where its habit is more compact and dense. The handsome purplish-red fall color develops better in sunnier than shaded sites. Bright yellow upright clusters of many small flowers contrast nicely with the dark green foliage in spring. I have seen clumps of large yellow trumpet daffodils effectively interspersed in a ground covering bed of Creeping Oregon Grape.

Tolerant not only of sun or shade, Mahonia repens seems to adapt to a variety of soil conditions, although good drainage may be most important. Plants are readily available from local nurseries in tubes or gallon sizes. Smaller plants tend to spend the first year producing a root system, followed by vigorous top growth in subsequent years. Planting at 18" on center will ensure filling in of the ground cover in three years. After establishment little or no summer irrigation is required. Over-vigorous plants may have to be pinched back occasionally. All in all a tough, versatile, handsome plant deserving greater landscape use. Ideal as a groundcover in sun or shade, in large planter boxes, rock gardens, or on steep banks or erosion control

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Utah Ladyfinger
Astragalus utahensis

Bitsy Schultz

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Many thanks to Xmission for
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Please direct all suggestions,
articles and events for the
newsletter to Paula Longhurst
at plonghur@xmission.com.
**The deadline for next issue
is 8th April, 2005**

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Newsletter of the Utah Native Plant Society

VOLUME 28 , ISSUE 3

May / June 2005

UNPS Honors Dick Hildreth

Words and Photo Tony Frates



UNPS'S Bill King presents Dick with his lifetime achievement award

At the conclusion of a lecture co-sponsored by UNPS on March 3, 2005 at Red Butte Garden at which he was the featured speaker, UNPS awarded Dick Hildreth with a lifetime service and achievement award.

Dick was the co-founder of UNPS and tirelessly supported and helped to lead us for over two decades.

Dick came to Utah in 1977 and became the director for the State Arboretum of Utah after studying horticulture at Ohio State; by the following year UNPS was born. He was the founding director of Red Butte Garden and remained with the garden until he retired in 1999.

We wish him well as he continues his retirement gardening and hiking in the Sonoran desert.



May / June 2005

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Lifetime Member Update / Announcements via e-mail : P3	Natives in the News : P4
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Habitat for critically endangered plants in southern Utah

Words and photo by Bill Gray

Close to St. George is an area that has long been of urgent concern to UNPS and others fighting to preserve some of our rarest plants. The most glamorous of those is probably the Dwarf Bearclaw Poppy (*Arctomecon humilis*) which inhabits an area that is being heavily impacted by ORVs. A broad-based effort by The Nature Conservancy, UNPS and other groups is trying to get better protection for the plant and its unusual habitat. This effort was initiated about 20 years ago when the fledgling UNPS awarded a research grant of \$4000 for study of this threatened system. We think this has been money well spent. The effort hasn't achieved all we would like, but it has enormously raised the level of awareness.

While visiting the area last year, several members of the UNPS Board of Directors were taken to see a few plants of the extremely rare Paradox or Holmgren Milkvetch (*Astragalus holmgreniorum*). This lives just across the street from the Dwarf Bearclaw Poppy, less than a mile away, though the habitat is quite different — gravely washes rather than gypsum soils. It appears to be in much greater peril of extinction than the poppy, because the land is slated for development and/or highway construction. Later in the year we took a highly unusual step for us, and joined in a lawsuit to force the Fish and Wildlife Service (FWS) to create a recovery plan for the species and set aside critical habitat.

In the last few days of March the FWS announced that they were applying for funds to purchase some of that land, and invited UNPS and The Nature Conservancy to join them in their efforts. Those UNPS board members who were able to respond on very short notice agreed that UNPS would commit \$4000 to this project. If FWS is successful in obtaining a Federal grant for their portion, we would have a year to come up with our share. To this end we shall be setting up a special fund to receive donations, and will be contacting many of you individually. We hope this new venture will broaden the impact that small groups can have in prodding the vast bureaucracy that is the culprit in many life-or-death situations for wildlife.

About *Astragalus holmgreniorum*

(based on information in "A Utah Flora", Welsh et al. 2003; and "Intermountain Flora" Vol 3B, R. Barneby, 1989).

This small plant is one of an enormous array (more than 3000 species) of Milkvetch (*Astragalus*) species, of which well over a hundred are found in Utah. This one occurs only in a small area near St. George, and just over the border in Arizona. Probably it was first collected by Marcus Jones, but not treated by him as a new species. In 1941 it was collected again by Marvin Ogden; in 1961 his specimen was sent to Rupert Barneby, generally regarded as the foremost expert on the genus, for identification. Barneby decided it should be investigated further, and in 1979 he went back to St. George with Drs Noel and Patricia Holmgren of the New York Botanical Garden, editors of the "Intermountain Flora". They found the plant, and agreed it was different from any other known species.

Barneby published their findings the following year, naming it after the Holmgrens. Where did the vernacular name "Paradox Milkvetch" come from? Barneby based it on a pun about the "Pair o' Docs". The species has been on the Federally Endangered list since 1997.

The original plants collected in 1979 are in the herbarium at the New York Botanical Garden, and photographs of some of them can be seen at their web site: <http://207.156.243.8/emu/vh/specimen.php?irn=418138>. Click on the small image near bottom left to see the full sized picture.

Photographs of living plants found on our trip to the area last year are shown below. This trip was led by Dr Renee van Buren of the FWS, whose ongoing work with the species has been responsible for much of our knowledge about its population and prospects. It is through her efforts that the proposal to obtain critical habitat was initiated.



UNPS LIFETIME MEMBER UPDATE

By Tony Frates

Earlier this year, W. Richard ("Dick") Hildreth became the 19th lifetime member. As a co-founder of the society and the primary force behind UNPS for almost two decades, Dick already was an honorary member and if we had a hall of fame, he would be the first inductee. (see lead article on P1 Ed.) Dick included this note :

"I'm so pleased and proud of the growth of UNPS from a dream in 1977. Thanks to all [for] your dedicated work."

A long time member who requested to remain anonymous because our 20th lifetime member in March of 2005 (you know who you are - thank you!) and in early April, Jeffrey Mitchell of Orem, Utah became our 21st lifetime member. Thanks for your support!

UNPS Announcements by E-mail

You are invited to join the new UNPS e-mail list!

List subscribers get e-mail reminders of upcoming events, notices of changes or cancellations, and other important UNPS news. To join, go to <http://lists.usu.edu/mailman/listinfo/unps>. Then follow the simple instructions, click "subscribe" and you're ready to go. This is an "announce only" list, so expect only a few messages each week. The subscriber list is private. Any postings to the site will be sent to our moderators to keep it a spam-free zone.

Longtime members may recall "blue cards" announcing UNPS events, like this example from 1986 (see right). It was always good to see the cards arrive in the mail! "Blue card parties" were fun, too, as we met at someone's house to cut up card-stock and stick on address labels and stamps.

The Utah Native Plant Society has long outgrown the "blue card" era, but we still need to keep members informed. We hope this email list fills the need!

UTAH NATIVE PLANT SOCIETY
salt lake chapter meeting

THURSDAY, MAY 22, 7:30 PM - A DOUBLE HEADER !!!!
Keith Wallentine will talk about Orchids of Utah PLUS "Show and Tell" - bring a slide of your favorite flower/plant and info on its location.
ROOM 323, Olpin Student Union Bldg, U of Utah

SATURDAY, MAY 31 - Wasatch Foothills FIELD TRIP
with Ty Harrison. Meet 1:00 in front of the ski info sign in Little Cottonwood Canyon.

URGENT!!!! URGENT!!!! Volunteers needed to investigate the terrain of the *Primula Maguieri* in Logan Canyon ASAP. Help with a discovery! For information call Dave Wallace 466-2719 or Wayne Padgett (Logan) 753-3854 or 752-1311 (days).

Natives in the News

These articles are re-produced with permission from the authors, thank you to SLC tribune columnist and UNPS Member Maggie Wolf, Murray Journal's editor, Sallie Young and Deseret News columnist Rodger Hardy

Fernbush: a native shrub for Utah landscapes

By Maggie Wolf

Fernbush, *Chamaebatiaria millefolium*, is a member of the rose family, and native to Utah. This attractive, fine-textured plant can grow four feet tall, but may also be pruned annually to keep a smaller habit. White flowers (see right) cluster at erect branch tips, lasting several weeks in midsummer. As one of Utah's Choice shrub selections, Fernbush is destined to become a more popular landscape favorite in future years.



Dick Hildreth, past Director of Red Butte Gardens and recent recipient of the Utah Native Plant Society's (UNPS) Lifetime Service and Achievement Award, calls Fernbush one of his favorites. While living in Sandy, Utah, Dick grew Fernbush in his landscape. "It blew me away how fast it grew!" He also noted that Fernbush responds well to pruning, so it can be kept sturdy and small enough for an urban landscape. "And I really love the fragrance", he noted.



I grew a Fernbush from seed at the 2001 Utah Native Plant Society's Plant Propagation annual workshop. At that workshop, I planted several Fernbush seed along with several other native Utah plants. Today, my one surviving Fernbush (left) is about 3 feet tall, beautifully branched and healthy. According to Dick Hildreth, my plant will really "take off" this season, growing much faster during its third year.

Fernbush flowers at the terminal tips of branches. Spires of creamy white, three-quarter inch diameter flowers last many weeks. After deadheading the flower spikes last summer, my Fernbush flowered a second time before frost. The rose-like flowers attract many insects, and although I'm not an entomologist, I suppose Fernbush provides a food source for native Utah insects. Promoting native insects is a good way to practice Integrated Pest Management, encouraging beneficial insects to control garden pests.

Described as a "semi-evergreen", Fernbush retains its ferny green leaves far into early winter. After several hard freezes, the leaves fall off. But in early spring, (see right) they bud out again. To catch the plant while it's dormant, prune in mid to late winter, before any new growth starts to emerge. Pruning helps keep Fernbush sturdy and relatively small, with many branches to bear flower spikes.



An extremely drought-tolerant plant, Fernbush is happy with no irrigation. However, some water must be provided until the root systems are well established; this will take at least one year. Fernbush cannot tolerate poorly drained soils. In areas with high clay content, amend the soil

Fernbush cont

with composted organic material and elevate the entire bed to assure drainage away from the roots. Coarse mulch applied around the plant will maintain a good soil-to-atmosphere interface.

Still uncommon to landscapes, Fernbush is available from many garden centers participating in the Utah's Choice native plant program. You can find a list of participating nurseries at www.utahschoice.org. Or, participate in one of the upcoming Utah Native Plant Propagation Workshops in Salt Lake, Davis, or Utah counties. UNPS and Utah State University Extension Master Gardeners cooperate to bring these workshops to the public. This year, seed for many species are offered at the workshops, including Fernbush, Palmer Penstemon, Great Basin Wildrye, Littleleaf Mountain Mahogany, Firechalice, and more. Call your USU Extension office for more information.

Utah declares war on Tamarisk!

Thirsty trees get heave-ho

If left unchecked, prolific tamarisk could squeeze out native vegetation

By Rodger L. Hardy, photo courtesy of Keith Johnson
Deseret Morning News

LAKE SHORE — There was some serious weed-whacking going on Saturday near the shore of Utah Lake.

Some 50 people hacked away at bunches of non-native plants that consume so much water that, if left unchecked, could suck dry an aquifer and effectively eliminate native cottonwood and willow trees.

The tamarisk plants are now an inch in diameter but would grow into massive plants several feet thick if allowed to mature, according to state wildlife officials.

Tamarisk, a plant native to Asia, makes poor habitat for wildlife, said David Lee of the state Division of Wildlife.

Tamarisk plants were brought to the western United States to control erosion and serve as windbreaks, but they spread rapidly and populate more than 1 million acres, Lee said.

Poisoning the stumps of young trees was the first project of the season for Lee, who conducts several weed control projects a month during the spring, summer and fall.

"The roots go 100 feet down," he said of the sturdy tree. "If you pluck them they look like a carrot."

While native plants will use 100 gallons of water a day, the tamarisk sucks up twice as much and absorbs the salts and other minerals from the water into its leaves. The leaves fall off in winter and the salts are excreted into the soil. As a result, nothing will grow under the trees.

The U.S. Department of Agriculture estimates that 2 million to 4.5 million acre feet of water are consumed each year on the 1 million acres in the western United States infested with tamarisk. That's enough water for 20 million people or to irrigate 1 million acres of cropland, Lee said.

While native cottonwoods and willows do well with water having a salt content of 1,500 parts



Scott Root of the Division of Wildlife Resources cuts down a thicket of tamarisk near Utah Lake.

per million, tamarisk trees thrive on a salt content of 41,000 parts per million, or 31 times the tolerance of native plants, Lee said.

Many of the trees eliminated Saturday and placed into large piles, however, were entwined in greasewood bushes, which the hackers and cutters spared.

The trees spread their seeds from their first year of life, and by the time they reach full growth they can cast off some 500,000 seeds a year. The young trees that met their fate Saturday came from tamarisk trees a former landowner planted along a dike. Wind and water spread their seeds to the field.

"It's pretty important to spend the energy and money to get rid of (the tamarisk tree)," said American Fork's Susan Garvin, a Forest Service employee.

Tree work along Jordan River Trail stumps visitors

By Sallie Young



Murray City workers removed many Russian olive and tamarisk trees along the Jordan River Parkway this year

Not all trees are welcome in Murray.

"Russian olive trees are very invasive, and if left alone they will take over an area quickly," said Kim Sorensen, Murray Parks and Rec superintendent. "Birds don't even nest in them,"

Because these and other noxious trees can starve other plant life and suck up moisture from the ground during dry months, city workers have been removing them from along the Jordan River Trail.

"We've been removing Russian olive trees a few weeks each winter for the last three years," Sorensen reports, "We've also been removing tamarisk trees every fall for the last seven years. The tamarisks are 99 percent removed.

But the Murray City Forestry and Parks division are giving back where they take away, "We've been planting native trees along the trail for the past five years in preparation for removing the non-native trash trees," Sorensen told us.

City workers have been planting cottonwoods, willows and native shrubs, "In the spring and fall, we'll plant more," he said.

More than 300 trees were cut down over a two-week period this winter on the Murray Jordan River Parkway between 6400 South and the I-215 undercrossing, leaving a lot of stumps.

"We'll come back and remove those stumps," Sorensen assured us. This year's removal created a lot of questions because of the amount of removal, according to Sorensen. "Murray has been the leader in development along the Jordan River corridor," he said. "Hopefully, other cities will also implement tree removal efforts," he added.

"The Provo Jordan River Parkway Foundation and Jordan River Natural Areas Forum support our efforts and encourage all Jordan River property owners to remove non-native trash trees," Sorensen said



Parks and Rec workers planted trees and plants along the Jordan River trail to replace invasive growth that had been cut away

Calendar of Events

Please note that some of the April events listed *may have already taken place*. For the most up-to-date events lists go to our website www.unps.org and click on the "calendar" link.

April

April 14 : Escalante Chapter meeting at 7 PM, contact Kathy Munthe (jandkcool@yahoo.com) for location details. The speaker will be Dr. Susan Meyer. The title of her talk is "Native Plant Treasures of the Escalante Region - How to Grow Them from Seed and Keep Them Happy in Your Garden". Potluck supper at 6 pm, the talk starts at 7 pm.

April 23 : Earth Day activities at Zion Canyon Visitor Center in Zion National Park. Our Southern Utah Chapter will have a table at the Earth Day celebration in Zion and some of the chapter's members are involved with walks and talks . Schedules will be posted at the visitor center. 11am to 4pm (interpretive walks begin at 8am). Contact <http://www.zionpark.org/>

April 30 : UNPS board meeting, open to members and other interested parties, e-mail us for location details (will be in St. George area). unps@unps.org This board meeting will emphasize Southern Utah issues. There will also be an optional Endangered Plant fieldtrip before the meeting, beginning at 8.45. If you would like to attend e-mail us for the location and then bring yourself, plenty of water and a picnic lunch.

May

May 2 : Manzanita chapter monthly meeting. Denise Louie, botanist/ecologist for Zion National Park will describe plant revegetation efforts in the park. Meeting starts at 7pm.

May 14 : Manzanita chapter field trip. John Spence, ecologist for Glen Canyon National Recreation Area will lead a field trip for early spring wildflowers in the Glen Canyon Area. Start time is still to be determined (contact walt@xpressweb.com if you are interested in attending) but they will meet at the Glen Canyon NRA headquarters in Page, AZ

Also May 14 : Juncus workshop. Geology Rm. 301, USU, 10am. Join Dr Sherel Goodrich and learn how to recognize and identify these grass-like plants. Cost is \$20 (\$15 for UNPS members and includes lunch. To register (registration must be completed by May 9) e-mail Michael Piep funqi@biology.usu.edu. A limited number of copies of the "The Field Guide to Intermountain Rushes" will be available for those attending the workshop.

May 19 : UNPS board meeting, open to members, e-mail us for location details unps@unps.org (will be in Provo area). 6pm-8pm

Note: there will be no board meeting in either June nor July.

May 20 & 21 : Spring Mushroom identification. Learn the rudiments of mushroom identification, starting in the laboratory and then taking to the field to view spring fungi with Michael Piep. When: Friday May 20 (6:30 p.m.) and Saturday May 21 (9:00 a.m.) Where: Intermountain Herbarium. Cost: \$30 (\$25 for BMS, MSU, or UNPS members) - includes local identification keys, and fieldtrip transportation and lunch on Saturday. Registration must be completed by Friday May 13.

Round-up of Recent Events

Feb 26th : “Waterwise Gardening, Landscaping with Natives.

Orem Library

Speaker, Celeste Kennard

Gardening with Natives has apparently caught on in Utah County. There were 37 people in attendance at this presentation and they were hungry for information. Valerie Clark at the Orem Library has done an excellent job adding to the library's collection of books on western gardens, waterwise gardening and native plant keys. Celeste came with the Power Point Presentation artwork of Lyle Jenkins and all kinds of goodies and tidbits of wisdom from Susan Meyer to share with the group.

March 30th : USU Extension Plant Propagation Workshop in Provo

There were about 8 in attendance and we had a great time with Julia Tuck as an instructor and Celeste Kennard Jennie Lin Strong helping out. Paul Ames (Ames Utah Native Seed) was also in attendance and shared all sorts of hints for growing plants and told us about great places to see some of the plants in their natural habitats.

The Utah Valley Chapter recently hosted Terri Williams, local landscape designer, for a lecture and discussion on “Native Plant Landscaping”. Terri started designing landscapes over ten years ago, and worked for a landscape installation and maintenance company last year. Terri presented her evolving “Rules of Landscape Design”:

Rules are made to be broken - but learn the rules first.

Like painting or other artistic work, the rules train the hand and mind to respond on command – then the mind is free to create

Anything is better than nothing!

Don't be afraid to do, for fear you don't know enough or something won't turn out “right”. Any landscape improvement is better than an empty blank space. And you'll learn from trying.

Curves more interesting and natural-looking than straight lines

And make the curves bold and brave – nothing is wimpier than a weak wiggly line!

Rule of threes: Odd numbers

Use plants in groupings, usually in groups of odd number – three, five, seven or a bunch. Never place the plants perfectly equidistant from each other – it looks contrived. (Only break the “Rule of Threes” when you place a plant with very distinctive and unique characteristics – a “focal point” plant. Then lead the eye to that plant with the other elements of the landscape.)

Arranging knickknacks on a shelf

You can think of placing plants in the landscape like arranging knickknacks on a shelf – taller ones to the back, offset the objects to make more interesting arrangements, leave empty spaces to avoid a “cluttered” look, etc.



Weed Warrior Volunteers Needed!

To identify and remove invasive weed populations in the Cottonwood Canyons

- Where:** Big and Little Cottonwood Canyons
- When:** May 2005- August 2005
- Who:** You! Training is provided
- How:** Hike, identify and map invasive weed populations!

Description:

Dedicated volunteers are needed to get out and hike the Cottonwood Canyons, identify noxious/invasive weed populations, map and pull them where applicable.

Training is May 14th; 10AM – 3PM, program starts thereafter. We need volunteers to hike to target areas through mid-August. Volunteers are needed to hike at least 4 areas per month.

Ideal Candidates:

YOU are an ideal candidate if you like to hike and care about the health of Big and Little Cottonwood Canyons. Experienced and beginner hikers alike are welcome. Please remember that summer weather in the Cottonwoods can be quite variable, so please be prepared to work outside under adverse conditions! Training is provided in plant identification, GPS work and data collection.

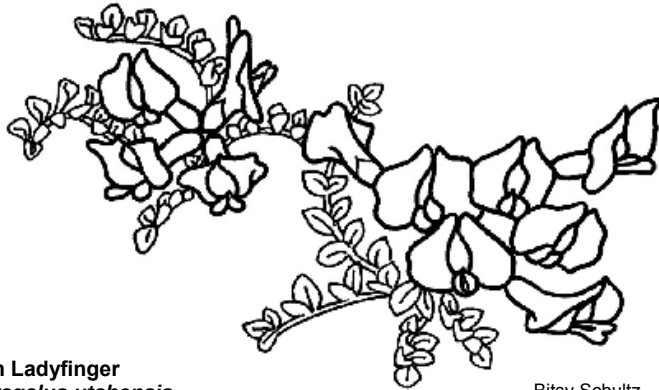
Benefits:

- Training in Weed identification, mapping techniques
- Learn how to use a GPS unit
- What better reason than to have an excuse to get outdoors?
- Meet great people!

Phone: (801) 947-8263 | **Online:** www.cottonwoodcanyons.org

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Utah Ladyfinger
Astragalus utahensis

Bitsy Schultz

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news go to:
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and click on News

Utah Native Plant Society Membership and Information

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For more information about the
Utah Native Plant Society call:

Bill King: 582-0432
Susan Garvin: 356-5108
Or write to: unps@unps.org

Many thanks to Xmission for
sponsoring the Utah Native
Plant Society website.

Please direct all suggestions,
articles and events for the
newsletter to Paula Longhurst
at plonghur@xmission.com.
**The deadline for next
issue is 8th June**

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Canyonlands (Grand) : Steve Budelier
Mountain (Summit) : Mindy Wheeler
Price (Carbon) : Mike Hubbard
Salt Lake: Bill Gray
Southern (Washington): Margaret Malm
Utah Valley (Utah): Celeste Kennard
Escalante (Garfield): Winnie Washburn
Manzanita (Kane): Walt Fertig

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Newsletter of the Utah Native Plant Society

VOLUME 28 , ISSUE 4

July / August 2005

Board Members Slay Dragons in St. George

Words and Pictures by Terri Williams



The elusive and beautiful Dwarf Bearclaw Poppy



Chairman Dave Wallace gathers the group

The UNPS Board of Directors hiked, drove, and examined much of the landscape around St. George at the April Board Meeting and associated tours and activities. The day began with breakfast at the Bear Paw Cafe, and soon the intrepid Board, local Chapter members and officers, and other interested folks were off to find the elusive Dwarf Bearclaw Poppy (*Arctomecon humilis*), an endangered plant found only within a few miles of St. George. UNPS members and several government agencies have been keeping an eye on the poppy for years, but development, OHV traffic and other factors have reduced the local populations dramatically.

At lunchtime, several Board members and guests visited a nearby petroglyph site. After all the excitement of the morning tour, the Board meeting served as a pleasant and entertaining rest break. Local chapter business and issues took center stage in the discussions. Our UNPS members and officers of local chapters make our organization happen!



July August 2005

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Seeds of Growth : P3	Natives in the News : P4
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Endangered Species Act Reconsidered

Excerpted from *Discover Magazine*, January 2005

In its 30 years, the Endangered Species Act has prevented the extinction of many endangered plant and animal species. But a report by the Tuscon based Center for Biological Diversity (CBD) last May stirred a debate among biologists, environmentalists and policymakers about whether the act is due for an overhaul.

"If extinction is the ultimate criterion by which to judge agency implementation of the Endangered Species Act, the failure has been spectacular," the report says.

Echoing other environmental studies, the Center concluded that low funding, political interests, and mismanagement at the Department of the Interior led to the disappearance of more than 80 under-protected U.S. species that never made it onto the endangered list.

Among other things, says the CBD report, environmental litigation severely hampers efforts to list more species by siphoning off money for legal costs.

"What you have is the Endangered Species Act being run by lawyers and judges rather than professional biologists," says Hugh Vickery, an Interior Department spokesman, "I don't think this is very effective,"

Kieran Suckling, a coauthor of the CBD report, contended that the number of protected species should be increased from 1,270 to

School Gardens

Re-produced with permission of NMPS

How out of touch with nature are today's youngsters? A few years ago a fourth grade class in Dallas visited a demonstration vegetable garden. Half of these kids were amazed to see that *carrots actually grew in the ground*.

Most youngsters view a garden or a meadow as an alien place. Nature is something they experience vicariously, if at all. And that's scary, because these kids are the ones who will have to solve all the environmental problems our generation is handing them.

Katy Moss Warner, the Horticulture Manager at Walt Disney World, put it this way, "The future of the environment depends on involving children as early as possible in growing and appreciating plants, *yet the worst landscaped institutions in this country are the public schools,*"

But there *is* hope. Around the country, some schools are installing gardens where kids can see nature up-close. They get to observe firsthand how plants and wildlife interact harmoniously. And they learn that pollination is not just an abstract concept in a textbook, but a living process vital to all of us.

In Encinitas, California, science teacher Jerry Trust involved his high school students in the design, installation and maintenance of a landscape full of plants indigenous to the region, and incorporated all this into the curriculum. And in Odessa, Texas, biology teachers Glenda McDowell and Barbara Starnes and their students turned the courtyard of Permian High into a regular desert garden.

But, it's not just teachers who are involved in these gardens. In many cases, it's parents and even concerned neighbors. And organizations such as the Audubon Society and the National Wildlife Federation have instituted school gardening programs to lend a hand, with the whole community getting involved.

In Elmhurst, Illinois, ecologist Patricia Armstrong and a crew of students installed a prairie garden at the Lincoln Elementary School. And in Milwaukee, Lorrie Otto installed a splendid prairie and woodland garden at the Bayside School – at her own expense!

By the way...how do the schools in your community measure up? Is this a worthwhile project for your chapter?

Although not mentioned in this article Utah has a large number of heritage gardens dotted throughout the state, many in schools such as Wasatch Elementary School, Provo & Ensign Elementary School, Salt Lake City. For more information on Utah's Heritage Garden Programs go to www.unps.org and click on the programs link.

Seeds of Growth

Reproduced from "The Trooper" Winter 2005 Edition

OUTREACH GIRLS PLANT COMMUNITY GARDEN



Green space along the Jordan River received a new look this fall. Local outreach girls had the opportunity to become Girl Scouts while learning more about Utah's environment through an environment program made possible through an EarthPACT grant, which Girl Scouts of Utah received earlier in the year.

From April-October more than 100 girls from under represented population areas and economically disadvantaged neighborhoods in the Greater Salt Lake Area were brought together to learn about the environment and nature in fun and interactive ways. "It is critical that our youth learn about the myriad connections between their lives and the planet we all share," says Elaine M. Gause, Chief Executive Officer for Girl Scouts of Utah. The grant along with the generous support from the University of Utah Bennion Center, Wild Bird Center, Utah Native Plant Society and Tree Utah allowed these girls to have hands-on training while experiencing the fun of Girl Scouting. The girls learned about watersheds and water conservation, reduction of pesticide use, landscaping, local native plants, wildlife and birds by attending program sessions at Girl Scouts of Utah camps in the scenic Wasatch Mountains.

On October 9, the program concluded with the girls planting a native, drought-tolerant garden in their own community along the Jordan River. By applying the knowledge and skills they acquired, the girls planted 500 flowers that they started from seed earlier in the year, put up three nesting boxes to attract native birds, and planted a tree donated by Tree Utah.



Putting their knowledge into practice - 2 local outreach girls planting drought tolerant plants along the Jordan River

As the girls play and live in their community, they will witness the garden grow and thrive, as well as observe the birds that inhabit the area.

And as new Girl Scouts, these girls will find fun and adventure, opportunities for growth and something for themselves in a safe and accepting environment

Natives in the News

These articles are re-produced with permission from the authors, thank you to Deseret Morning News columnist Larry Sagers and Agricultural Research Magazine. Thanks also to Kelly McNulty for her research

Beneficial Beetles Take a Bite Out of Saltcedar

Excerpted from April 2005 Agricultural Research Magazine

Can a tiny beetle spell doom for a rugged, aggressive weed that's already invaded streambanks and river channels throughout the American West?

Yes!

That's what [ARS](#) scientists and their colleagues have found in their investigations of a leafbeetle, *Diorhabda elongata*, that they've brought to sites infested with saltcedar, also known as tamarisk.

This salt-tolerant, fire-resistant, drought-hardy water guzzler was imported in the 1800s to help hold stream and river banks in place. Today, saltcedar's range extends from the Great Plains to the Pacific and from Canada to northern Mexico. It has crowded out native plants such as cottonwoods and willows, disrupting the natural surroundings needed by these plants as well as by birds, fish, and other forms of life.

Saltcedar resprouts vigorously even after the hottest blazes. It blocks river and stream access—by river rafters or thirsty wildlife and livestock—by forming dense, often impenetrable thickets, first as bushy shrubs and, later, as pink-blossomed trees that grow to 30 feet.

But the jaunty beetle, imported from China, Kazakhstan, other parts of Asia, and the Mediterranean region—all lands where the troublesome tree is native—has taken an impressive bite out of saltcedar in several study sites in the West. To this insect, America's vast stands of saltcedar are just one enormous, seemingly endless banquet. The plant's scale-like leaves offer a nutritious treat for the insects, whether they're in their caterpillar-like larval stage or have matured into quarter-inch-long adult beetles.

Besides thriving on emerging leaves and shoots, the beetles also nibble on the bark of small twigs, all the while posing no hazard to people, pets, or crops. That's according to ARS entomologists C. Jack DeLoach (Grassland Protection Research Unit in Temple, Texas) and ARS ecologist Raymond I. Carruthers. (San Francisco Bay area at the ARS Exotic and Invasive Weeds Research Unit.)

Scoring Big in Lovelock, Nevada

The beetles' greatest success since first being turned loose in saltcedar stands in 2001 has been along the Humboldt River in Lovelock, Nevada, about 80 miles northeast of Reno. Here, an original colony of some 1,400 laboratory-reared beetles has "expanded exponentially and has



Adult *Diorhabda elongata* leafbeetle on Saltcedar flower buds

now defoliated about 5,000 acres of saltcedar," says Carruthers.

Today, the helpful insects number in the millions. What's more, they've extended their range, spreading at least 100 miles along the Humboldt River—defoliating and stunting saltcedar. Some of those trees are beginning to die.

"We've seen a similar impact in some other study sites in Colorado, Nevada, Utah, and Wyoming, with hundreds of acres of trees hit hard by the beetles," notes Carruthers. He and DeLoach expect that figure to climb to thousands of acres by summer's end. Experts like Carruthers and DeLoach view biological control agents such as the *D. elongata* leafbeetle as perhaps the best long-term solution to getting tough with tamarisk.

Of course, the insects represent a considerable investment. Initially, they have to be collected abroad. Then they have to be extensively studied to make sure they don't inadvertently damage other plants. Finally, they have to be put to work outdoors and carefully monitored. Ideally, the beetles will provide an impressive return on these investments.

These studies represent the first time—in the more than 170 years during which tamarisk has run rampant in the United States—that any natural organism had been lined up to challenge this pest. But much more remains to be done. Though the beetles have established many flourishing colonies, they originally failed to reproduce at southerly test sites, such as those in Texas.

Mistaking the region's shorter days as a signal of winter's approach, the beetles went into hibernation, called diapause, in July—2 months too early. The mistake was fatal. The following year, they never woke up to complete their life cycle. Without enough fat reserves in their bodies to tide them over until saltcedar leafed out in spring, they starved to death.

To help solve this problem, ARS scientists and collaborators collected *D. elongata* from Uzbekistan through Greece to Tunisia, where daylengths better align with those of the American Southwest.

"These southern-adapted beetles," says DeLoach, "are now defoliating saltcedars in California, Texas, and New Mexico," where ARS and university scientists are monitoring their progress.

Native plants flourish — beautifully

By Larry A. Sagers
Deseret Morning News

When we consider the thousands of plants that will grow in our landscapes, we sometimes overlook native plants that thrive on their own. They have survived many millennia and are adapted to our soils, our rainfall, our climate and even our pests.

I recently spent a day with one of Utah's top experts on native plants. For the past 40 years, Dr. Jim Bowns has been teaching about Utah plants and their ecology. The state's deserts and mountains are literally his teaching laboratory.

Over the course of his career, thousands of students, ranchers, professors and other interested individuals have tramped his outdoor laboratories to learn about the plants that he has spent his life studying.

I visited with him to learn more about native plants that can be used in home landscapes. Bowns grew up in the small, eastern Utah town of Castle Gate. He

received a bachelor of science degree in forest range management and a Ph.D. in range ecology at Utah State

University. He holds a joint appointment with USU and Southern Utah University in Cedar City in a historic collaboration. "I came to SUU back when it was part of Utah State Agricultural College. I thought I would come down here and work two or three years at the branch campus and then move back to Logan." He fell in love with the area and the move back never happened. He is now practically a legend among educators, government officials, students and ranchers in southern Utah.

Bowns loves the area's ecological diversity. The Mojave Desert in the Beaver Dam area southwest of St. George is just over 2,000 feet in elevation. Peaks above Brian Head are near 12,000 feet.

"To understand native plants and where they grow, you have to understand their needs," he said. "I like to point out to people about the geology, the climate and the plants, because they are all interrelated. Looking at these, you can tell where a plant is going to succeed."

All plants are native, but the ecology means you need to ask, "Native to what?" he said. Look at where they thrive naturally and then see how they adapt. Bowns said you need to "understand what the plant means." When you try to grow a plant in your yard, you need to provide conditions similar to native conditions. Natives never thrive in landscapes if you don't understand what the plant means, he said.

To this end, Bowns shares some favorite natives that will thrive in northern Utah landscapes. "Cliff rose (see below) is an excellent shrub. It requires no (extra) water after it is established and is a real show stopper when it is in bloom. It is covered with yellow and white blossoms that resemble small roses. It gets 3-10 feet tall depending on moisture and other conditions," he said.



Mountain mahogany is another favorite. "There are three different types of mountain mahogany. Curly leaf is the parent plant that grows in high mountains. "The alder leaf mountain mahogany also grows at high elevations and is deciduous. The little leaf mountain mahogany grows at low elevations and is evergreen and provides good browse for elk and deer, so it is a good plant for areas where these animals graze."

Serviceberry is another plant Bowns recommends.



Dr Jim Bowns shows a mountain mahogany, which has three varieties

Larry Sagers

"In southern Utah, *Amelanchier utahensis* is our most common plant and it grows on dry hillsides.

The fruit is somewhat dry and pulpy. "In northern Utah, *Amelanchier alnifolia* is common in the canyons and grows as a small tree that gets about 20 feet tall. Their fruit is dark purple when ripe and is seedy and bland but edible. Native Americans made bows out of serviceberry.



"Oakleaf sumac is another excellent native. Native Americans used the berries for food, and they used the flexible straight branches for weaving baskets. Pioneers used seeds like popcorn. Throw a bunch in the pan and heat them to pop them," he explains. Among other shrubs Bowns likes are fern bush and blue elderberry (right). Both are drought tolerant.

False indigo has a long taproot and loves dry soil. Manzanita is another native plant that is on his list as a good landscape possibility.

Buffalo berry also works well in landscapes. There are two species. Silver buffalo berry is a larger plant that has gray textured leaves and edible berries. The round-leaf buffalo berry is a smaller compact evergreen shrub that is an excellent choice for landscaping. Neither of these tolerates excess water, so place them carefully in the landscape.

Bowns grows many native plants in his own yard. "One of my favorites is the pinyon pine *Pinus edulis* that flourishes on the Colorado plateau. It is not great for nuts — they are very small. The single-leaf pinyon has very nice pine nuts, and I have one of those in my landscape.

"I also grow rabbit brush and sagebrush. I have several cactus including a cholla cactus and pretty good-sized barrel cactus," he said.

Indian rice grass *Oryzopsis hymenoides* is a native grass that has good landscape potential. Bowns adds that although most people don't realize it, this is the official state grass as designated by the state Legislature. It grows well without water and has an attractive seed head so it makes a nice ornamental.

Jim Bowns is a man who truly wants to know what plants mean. He lets the plants tell their story and then he knows where they will grow. He wants plants that flourish and survive without constant watering, pest controls and other inputs. The right native plants can do all of this and be beautiful and functional, as well.

Events for July & August

Summer Field Trips - Tatow Knob, House Range and Bald Mountain Trailhead, Uinta Mountains

Robert Fitts of the Utah Valley Chapter will lead two field trips in July and August. All UNPS members, family and friends are invited. We are also inviting the Wasatch Rock Garden Club. Please call Robert at **801-796-8631** to be included on the contact list for additional details.

The first trip will be the weekend of July 8th and 9th. We will camp overnight near Tatow Knob in the House Range of Western Utah, near Robber's Roost. We will climb Tatow's knob the next day. The camping will be primitive and the hike will be difficult, only for those in good physical condition with adequate boots, there are no established trails. Robert will provide a map to those who contact him.

The other trip will be a hike in the Uintas on the weekend of August 5th and 6th. We will camp Friday night (call for details) and begin the hike at 9.30am Saturday at the Bald Mountain Trail parking lot at the top of the Mirror Lake Highway. Robert will take us behind Bald Mountain and visit some bogs. Both trips promise an interesting array of plants. More details will be available later to those who indicate an interest

Notice of UNPS Board of Directors meeting

There will be a UNPS Board of Directors meeting and wildflower walk in the mountains near Logan, August 6, 2005. Meet 10:00 at the Tony Grove parking lot for a wildflower walk around the lake, and bring your lunch so we can enjoy a picnic afterward. The Board of Directors meeting will start 2:00 at Tony Grove Campground, campsite 19.

UNPS members and other interested persons are invited. Expect a \$3 parking fee at Tony Grove, so carpool if you can. Tony Grove Lake has been partially drained for maintenance on the dam, but the wildflowers should be great!

UNPS LIFETIME MEMBER UPDATE

By Tony Frates

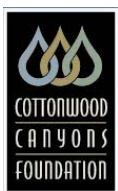
UNPS would like to thank Tami Coleman of Richmond, Utah for becoming our 23rd lifetime member! Tami is a driving force for native plants in Northern Utah. She is such an advocate and so knowledgeable about Utah native plants. Plus she is also working on her MS at USU which is no small task!

We need you!

Teacher Packet Project Needs Your Help!

Anyone interested in helping to develop a teacher curriculum packet about Utah's native plants, please contact Terri Williams at: artemis12@msn.com or (801) 794-0316

We need folks who teach, who work with computers, or just love natives and kids! If you know of other teaching resources available, that would be very helpful, too.



Volunteers Needed!

To lead Wildflower Walks during the Wasatch Wildflower Festival



- What:** Wasatch Wildflower Festival
Where: Alta, Snowbird and Solitude
When: July 29 -31st
Who: You! 20 volunteer guides are needed, training is provided
How: Lead tours in Wildflower Festival

Description:

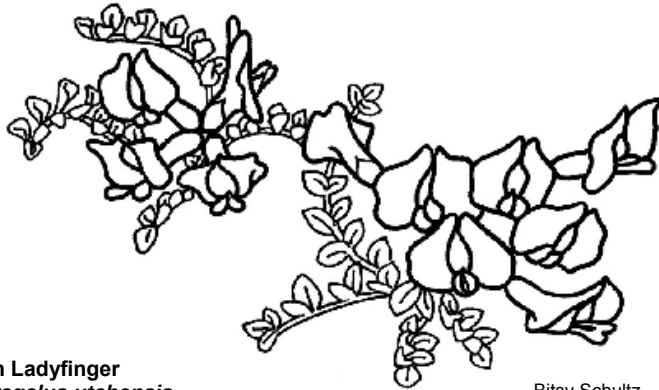
Enthusiastic, people friendly volunteers are needed to lead wildflower walks during the Wasatch Wildflower Festival. Volunteers will lead easy to moderate walks with up to 12 participants at various locations during the festival. **Basic training is provided; training July 16th at Alta.**

For MORE INFORMATION OR TO RSVP call (801) 947-8263

www.wasatchwildflowerfestival.org

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For more information about
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call:

Bill King: 582-0432
Susan Garvin: 356-5108
Or write to: unps@unps.org

Many thanks to Xmission for
sponsoring the Utah Native
Plant Society website.

Please direct all suggestions,
articles and events for the
newsletter to Paula Longhurst
at plonghur@xmission.com.
**The deadline for next issue
is 8th August**

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Newsletter of the Utah Native Plant Society

VOLUME 28 , ISSUE 5

September / October 2005

Wasatch Flower Festival 2005

Words and Photos by Patrick Nelson

For the third year running, the nonprofit Cottonwood Canyons Foundation has partnered with Alta Community Enrichment, Alta, Snowbird, Solitude and the Wasatch-Cache National Forest to highlight the biodiversity of Big and Little Cottonwood Canyons through the 2005 Wasatch Wildflower Festival.

While you can not TiVo or control a wildflower bloom with a remote control, we were able to pick the date with success this year- the bloom was great! The festival takes place each year the last weekend in July and has three different locations so as to maximize the number of wildflowers participants see. This year, the festival (July 29th – July 31st) took place at Solitude on Friday, Alta on Saturday and Snowbird on Sunday.

In 2004, over 323 festival goers learned about the wildflowers while this year (2005) we had over 538 participants! To achieve success, we rely heavily upon enthusiastic volunteers who lead tours. As the festival attendance keeps growing, more volunteers will be needed! I bet readers of a certain newsletter would be GREAT volunteers...

Volunteer training took place earlier in the month at Silver Lake with Wayne Padgett, the ecologist for the Wasatch-Cache National Forest and in Albion Basin with resident expert Annie Crawley. With volunteers ranging from beginner to expert, these turned into roving parties while people discussed the finer points anything from pollinator flower selection to why the Jacobs Ladder smells different than the Western Wallflower. Everyone learned quite a bit and we more than had a lot of fun this year, including moose watching during both trainings!



A group of festival goers enjoying the wildflowers

During the hikes at the festival, common names of the plants and their ecological relationships were emphasized to introduce beginners to the ecology and watersheds of the Wasatch Mountains. While the flowers'

scientific names are by far the most practical once you get into it, speaking a defunct foreign language in front of wildflower beginners just does not work! Shuttles, trams and ski lifts were used to get participants up into the flowers followed by a walk down. Other festival events included photography workshops, live music, a geology hike and children's activities.

Media coverage of the event was great this year as well, with mentions and articles in the Salt Lake Tribune, the Deseret News, Sky West Magazine, Sunset Magazine, Newsweek, Budget Traveler, the Park Record, etc. and TV coverage by Park City TV and Fox 13.

All in all, the point of the festival is not to promote recreation in the mountains, but to educate those already inclined to head up about the existing biodiversity and how to take care of it. What better way than to talk about the flowers? More information about the festival can be found online at www.wasatchwildflowerfestival.org. See you next year!



Richard Middleton and cub scouts

The Cottonwood Canyons Foundation is a nonprofit organization with mission of "Working to maintain and improve the environmental health of Big and Little Cottonwood Canyons through public education and stewardship." Working with the US Forest Service, Salt Lake City Department of Public Utilities, Alta, Brighton, Snowbird, Solitude etc, the nonprofit has many different projects. Aside from the Wasatch Wildflower Festival, it also maps noxious weeds and does other educational efforts such as winter snowshoe fieldtrips. Donations are welcome! Online at www.cottonwoodcanyons.org

WRIGHT FISHHOOK CACTUS IN WESTERN UTAH TO REMAIN AS AN ENDANGERED SPECIES

The U.S. Fish and Wildlife Service announced on August 3, 2005 that the Wright fishhook cactus remains listed as endangered under the Endangered Species Act.

When first listed in 1979, five scattered cactus populations were known. Since then, large scale surveys have shown increased range and distribution of the species. However, overall the species is experiencing a population decline with fewer offspring surviving until they reach full maturity and reproductive age. Such factors as cactus borer beetle predation, cattle trampling and crushing by off-road vehicles contribute to the loss of the plant.

The Service was petitioned by the National Wilderness Institute in 1997 to de-list the Wright cactus due to "original data error." However, no data or new information was provided with this petition, as required, as rationale for a request to remove a species from the ESA list. Present data available to the Service at this time indicates further decline of the Wright fishhook cactus.

A 60-day comment period, which closes October 3, 2005 is open for the public to provide any information they may have on the cactus. Data, information, written comments and materials, or questions concerning this petition and finding should be submitted to the Field Supervisor, Utah Ecological Services Office, U.S. Fish and Wildlife Service, 2369 West Orton Circle, Suite 50, West Valley City, UT 84119, Attention: Wright's Fishhook Cactus.

To read the full release go to <http://www.unps.org> click on the news link and then click more information

For more information about the U.S. Fish and Wildlife Service, visit their home page at <http://www.fws.gov>



September/October 2005

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Natives in the News

These articles are re-produced with permission from the authors, thank you to Geoffrey Fattah, and Jeremy Twitchell of the Deseret News and Brett Prettyman of the Salt Lake Tribune. Research by Kelly McNulty

Bees under seige: Mites munch on Utah insects

By [Geoffrey Fattah](#)
Deseret Morning News

LOGAN — The honeybee is not only Utah's official insect, admired for its inspiring knack for hard work, but its home, the hive, is emblazoned as the state's symbol.

But now, Utah's beloved honeybee is under siege by an enemy that is threatening to wipe out beehives from not only Utah but from across the country.

The critter in question is officially known as *Varroa jacobsoni* Oudemans, or commonly known as the Varroa mite.

The tiny bloodsucking insect was first discovered in Java, an island in the Indian Ocean, more than 100 years ago. Since that time, it has infected beehives throughout Asia and hit the United States in the '80s via import of honeybee queens.

For years, beekeepers have controlled Varroa infestations using certain pesticides that do not harm bees. But scientists say new strains of mites, resistant to pesticides, have spread since winter — and with disastrous results. Reports by entomologists nationwide show that over the past six months an estimated 50 percent of beehives in the United States were wiped out, spelling potential disaster for fruit and nut growers. In California, which is responsible for more than 80 percent of almond production worldwide, they are predicting a global almond shortage due to the bee loss.

"The bee industry is estimating as many as 50 percent of the hives were lost," of the some 2.6 million hives in the United States, said lead USDA bee entomologist Rosalind James at Utah State University. "Local beekeepers have reported between 35 percent to 70 percent hive loss" over the winter. James and those involved in Utah's honey and fruit industries say the impact won't be felt until next spring, but they predict it could have a serious impact on Utah's agriculture, especially those farmers who depend on honeybees to pollinate crops. Because without pollination, fruits, melons and other crops simply don't grow.

The mite, a small cousin to the tick, is about the size of a pinhead. But for a bee, it's a huge parasite.

"It's like having a tick the size of a squirrel on you," James said. The mite lays its eggs in the hive chamber where the honeybee larva is and feeds off the young bee until it hatches. The adult mite then attaches itself to the already weakened bee. James said the mite can spread to many other hives within a season via male drones, who lack the hive loyalty of their sisters and will wander between different hives.

Darren Cox's family has tended bees and harvested honey for four generations. To put the last winter into perspective, Cox said he has lost about 50 percent of his bees to the Varroa mite over the past 10 years. "Last winter, we've lost another 50 percent," Cox said. He knows of another out-

of-state beekeeper who used to tend more than 6,000 hives. "They ended up with only 250 hives," he said. Cox said beekeepers have tried to rebuild their hives by splitting existing hives to start new ones. However, this leaves hives that produce less honey. Cox said his company, Cox Honey, faces a financial strain. "I'm planning on a 30 percent loss between now and January," he said. "I'm not going to be able to break even with the price of fuel this year." Cox said state agriculture officials have helped by their willingness to approve any new treatments for Varroa mite, but he has seen no emergency assistance for beekeepers.

More and more, Cox said, beekeepers find the pollination business more lucrative than farming honey, renting out their hives to fruit and nut farmers. With the growing shortage of hives, Cox said hives that used to lease for \$50 to \$60 per season, per hive, went for \$125 to \$150 per hive last year. With the 50 percent loss, Cox said beekeepers estimate that the price will break \$200 per hive next year. It's a trend that could prove devastating to Utah fruit growers as farmers in California and other states vie to have Utah hives transported to their orchards, leaving Utah farmers in the lurch. "I've had calls from Arizona, Washington and even Wisconsin, from farmers looking for hives," Cox said.

This worries farmers like sweet-cherry grower Sheldon Ercanbrack of Orem. Like almonds, cherries pollinate best with honeybees. "Honeybees are very crucial for cherries," said Ercanbrack, also a board member of the Utah Horticulture Society. He has noticed honeybees seem weaker as of late. "It's almost as if they're burned out. Over the years, the bees don't seem to work as hard," he said. Ercanbrack said his orchard relies on having about 30 hives for pollination. News of the winter fatalities worries him as a farmer and as a Utahn.

"I guess we could say that it is a concern for us all. It's kind of like if we lost the seagull, our state bird. We all kind of take the bees for granted, that they'll be around. I don't think a lot of people understand that bees are an important factor in growing fruit, and if we didn't have them, that would be quite damaging," Ercanbrack said.

James said she knows the mite won't go down without a fight. Her team of entomologists at the USU Bee Lab have been finding alternatives to honeybees as pollinators, while at the same time, finding new ways to kill the Varroa mite.

Other bee species, such as the Alfalfa Leaf-cutting Bee and the Blue Orchard Bee, have shown some promise as effective pollinators. However, both species are social, yet solitary, insects who don't live together in hives but rather tubes — and they don't produce honey. USU researches have also found that a type of green fungus has proven fatal to Varroa mite, but it has no adverse effect on bees. James said they are currently doing biogenetic tests to find a strain of green fungus that can be marketed as a treatment for mite infestation.

Cox said he is working with USU on several test hives and the results look promising. He doubts, however, that any product using the fungus will be on the market before next fall. James said untreated hives have a 75 percent to 100 percent fatality rate but only one out of six hives treated with the fungus has died. Because a pathogen instead of a pesticide is being used, the bees are less likely to develop a resistance to the treatment, he added. "I think beekeepers are proud to have the symbol of the beehive on the state flag," Cox said, but he added beekeepers will need help to keep the honeybee buzzing in Utah.

Endangered Utah flower gets its very own lawsuit

By Jeremy Twitchell
Deseret Morning News

BIRDSEYE, Utah County — A resident of this small town recently became the subject of a national lawsuit.

The target is not a militiaman or a polygamist, or any of the other usual controversial figures that frequent rural Utah. It's a shrubby, endangered flower with a strange name, the Deseret milk-vetch. The lawsuit was filed in U.S. District Court in Washington, D.C. by the Utah Native Plant Society, the Center for Native Ecosystems and Forest Guardians. The suit requests that the Department of the Interior make the Utah Fish and Wildlife Service designate a critical habitat to protect the flower and develop a recovery plan to help it proliferate.



The Deseret milk-vetch, or *Astragalus desereticus*, grows only in an area near Birdseye, Utah County.
Tony Frates, UNPS

"What's basically prompting this lawsuit is that no recovery plan has been adopted and we're basically running out of time," said Tony Frates, of the Utah Native Plant Society. The Deseret milk-vetch, or *Astragalus desereticus*, is known to grow in only one place in the world, an area of slightly less than 300 acres near U.S. 89 between Birdseye and Thistle. The groups who filed the lawsuit say urban sprawl in the area and the possible expansion of the highway pose a critical threat to the survival of the species and action must be taken.

And while officials from wildlife services agree that the flower needs to be protected, they say the situation is not as urgent as the lawsuit indicates. "It's all just potential," said Larry England, a botanist for the agency. "Our concern for this species has been superseded by concerns for other species that are in greater danger. We do not see a great urgency (in this case)."

When the Deseret milk-vetch was placed on the endangered list in 1999, England said wildlife services decided not to designate the area as a critical habitat for the flower (as the lawsuit requests) because doing so would offer no real additional protection. "When the flower was listed, we considered a critical habitat was not necessary for the conservation of the species," he said. "We're working on a recovery plan for the flower, and we'd like to have it done sooner than later."

Frates said he doesn't believe the agency has been criminally negligent in its treatment of the flower, but it should have done a better job by establishing a critical habitat. "(The Deseret milk-vetch) has definitely suffered some neglect, but it's not willful or wanton neglect," he said. Frates said the problem is that state agencies receive very little funding to protect endangered species, and some species slip through the cracks as priorities are made. However, he said Congress has an additional fund set aside for instances where a court forces state agencies to protect additional species. "The sad thing is that these lawsuits are almost like grant applications," Frates said. "But over the long run, the actions we take now will save taxpayers money."

Erin Robertson is a staff biologist for the Center for Native Ecosystems, a Denver-based conservation group. She said one of the additional purposes of the lawsuit is to raise awareness concerning the Deseret milk-vetch. "Just getting people to sit down and think about how to save this flower would be helpful," she said.

The Deseret milk-vetch was first collected and identified in 1893, then again in 1981. According to the Utah Department of Wildlife Resources, the flower grows on sandy-gravelly terrains, usually on west- or south-facing mountain slopes. Robertson said not much else is known about the flower, including why it thrives in that limited area or if it could be transplanted to another habitat. She said if the lawsuit is successful, the recovery plan would provide more information about the flower and how to save it.

When the Endangered Species Act was passed in 1975, the Smithsonian Institution included the Deseret milk-vetch on its list of plants that should be protected, but it was left off the official list because it was believed to be extinct. Botanists rediscovered the flower in 1981, and in 1999 it was added to the endangered list.

"We've almost lost it once before, and now that we have a good fight with public land involved, we need to do all we can to save it," Robertson said.

This next event has already taken place but it's not too late to get up into the mountains and see the spectacular wildflower display. Brett also gives you some good locations to go to. See Patrick Nelson's review of the festival on the front page.

Call of the wildflower Enjoy the high-country blooms alone or hike with others at the festival

By Brett Prettyman
The Salt Lake Tribune

Utah's high-elevation wildflower explosion is on schedule for the first week of August. Some folks expect this to be the best wildflower season in years due to excellent snowpack over the winter. Wayne Padgett, forest ecologist for the U.S. Forest Service's Wasatch-Cache National Forest, says there is no doubt the extra water is helping, but he thinks the drought also may have played a role.

"It will be an incredible year and moisture is what did it, but I believe the drought may have had

something to do with it as well," he said. "We had six years of drought and plants under stress do everything they can to survive and place more energy into reproducing. This is speculation on my part, but I think it helps create a better bloom than if we had several years of good moisture."

Wildflower conservation and etiquette

Like all natural treasures on public lands, wildflowers should be protected for all to enjoy. The Forest Service offers these tips when visiting its lands or land managed by its sister agencies, the Bureau of Land Management, Fish and Wildlife Service and the National Park Service.

Take only photographs and memories when you leave.

Please, don't pick the flowers.

Tread lightly and stay on the trail.

Don't be afraid to ask for information on wildflowers.

Get Involved by exploring volunteer opportunities on public lands.

Where to see high country wildflowers

- Alta's Albion Basin in Little Cottonwood Canyon
- Silver Lake boardwalk near Brighton in Big Cottonwood Canyon
- Meadows at the top of Farmington Canyon
- Tony Grove Reservoir in Logan Canyon
- Mount Timpanogos
- Bald Mountain in the Uinta Mountains
- Nebo Loop
- Ski resorts across the state (many offer summer lift service)
- Mineral Basin area of American Fork Canyon



Fireweed and Aspen in Mineral Fork Canyon. (Al Hartmann/The Salt Lake Tribune)



Blue Columbine in blossom in Albion Basin. (Al Hartmann/The Salt Lake Tribune)

Last Board Meeting for Terri Williams



The board are very sorry to lose Terri Williams, who has been the Secretary for UNPS and makes taking the minutes look easy! Terri is moving out of State for personal reasons and we all wish her well. She will be missed!

This photo was taken in Logan Canyon at our most recent board meeting. From L-R Celeste Kennard, Gene Schupp, Terri Williams, Mary Barkworth, Bill Gray and Dave Wallace.

Photo courtesy of Jackie Freshwater.

Calendar of Events

Please note that some of the August events listed *may have already taken place*. For the most up-to-date events lists go to our website www.unps.org and click on the "calendar" link.

August

- August 26th : Mushroom Society of Utah Annual Fall foray.
The Foray runs from Friday August 26th to Sunday August 29th and will include a presentation by Dr. Orson K Miller Followed by field trips with Dr. Miller along the Mirror Lake Highway.

Camping at Pine Valley A Group campsite has been reserved in the Pine Valley Campground, this year it's Group Site B. Pine Valley is at mile marker 10 on highway 150.

Kids Contest : Prizes for the smallest, most colorful and most unique. Awards to be made after dinner Saturday evening which will be followed by a slide show

Informal review and discussion on Sunday

For the full Foray Schedule e-mail me at plonghur@xmission.com or contact

Ardean Watts at 801-581-1931 or Don Johnston at 801-942-0637

September

- September 10th : Jordan Valley Water Conservation District Garden Fair, 8am - 2pm at the Demonstration Gardens (in the car park at the front of the building). Lots of displays and experts will be on hand for those of you wishing to "slow the flow", learn more about irrigation methods or visit the UNPS booth to learn more about the native plants of Utah.
- September 17 : Utah Valley will be holding their fall plant sale from 9am to noon. The sale locations will be 1194 Grand Avenue in Provo. Plants and seeds will be available for a wide range of native Utah species, provided by chapter members and co-operating native plant growers. Fall is a great time to establish potted plants and sow native seeds.
- September 27th : All UNPS members are invited to a lecture on global warming entitled **"Alpine Vegetation in a Changing World: Looking Down from Alaska"**
The lecture will take place at Red Butte Gardens at 7.30pm and is free to all UNPS members. The speaker will be Steven MacLean Ph.D., emeritus professor of Biology and Ecology at the Institute of Arctic Biology, University of Alaska. Fairbanks. Dr MacLean will focus on the effects of global warming as are now occurring in Alaska and the Arctic and question what can be expected to occur in the future in Utah's Alpine/Sub-alpine mountain areas. This event is co-sponsored by Marie Griffiths and the Salt Lake Chapter of UNPS

FYI

Native Plants on TV

Tune in! The National Wildlife Federation has teamed up with Animal Planet to create BACKYARD HABITAT, a new television series that makes the planet a better place for animals, one backyard at a time. Hosted by David Mizejewski of the National Wildlife Federation and TV personality Molly Pesce, each episode presents fun and simple ways to attract wildlife to your property, whether it's a balcony in the city or a large backyard. From butterfly gardens to turtle ponds to bird feeders, learn how to build, landscape and create a certified habitat at home where you can enjoy the simple pleasures nature has to offer every day. Premieres August 15 and airs weekdays at 11:00 AM E/P (that's 9.00 AM AM Utah time) through September.

Salt Lake Chapter Wildflower Walks with Bill Gray

We have had a number of informal wildflower walks, and plan to continue them about once a week into the Fall. The aim is just to get out there, enjoy this spectacular year, and learn more about the natives. Venues have included the various foothills, Mill Creek Canyon, Big Cottonwood (Mill D) and Killyon's Canyon off of Emigration.

Most recently 10 of us rode the Snowbird tram and hiked across to the summit of Mt. Baldy at 11,000 ft to see some of the alpine plants. Although it looks so bare at first, little gems keep showing up among the rocks - Mountain Death Camas (*Zigadenus elegans*), Moss Campion (*Silene acaulis*), Cushion Phlox (*Phlox pulvinata*), Red Sandwort (*Arenaria rubella*) and many others. We looked for, but couldn't locate the endemic *Ivesia gordonii*. Stealing the show, and not at all shy, were the Old Man of the Mountains (*Hymenoxys grandiflora*) and Silvery Lupine (*Lupinus argenteus*). They seemed to like each other's company. If you would like to be included, please contact Bill at cyberflora@xmission.com. e-mail is essential, as that is the only way I can contact a lot of people on short notice.

Autumn Buttercup Reintroduction Project

On August 11, the Department of the Interior announced various cost share grants awarded by the US Fish & Wildlife Service under four grant programs.

In Utah, under the Private Stewardship Grants Program, a project was approved for Autumn Buttercup Reintroduction in Sevier River Valley (Garfield County) by The Nature Conservancy.

The Nature Conservancy, working with the Cincinnati Zoo and Botanical Garden, The Arboretum at Flagstaff, and Utah Valley State College, will help to prevent extinction of the endangered autumn buttercup by re-introducing plants grown in captivity through a public-private partnership.

Our congratulations go to Elaine York of The Nature Conservancy and Dr. Renee Van Buren at UVSC for making this happen!

For more information about the grants, see <http://www.fws.gov/>.

For more information about the autumn buttercup, go to

http://www.utahrareplants.org/rpg_species.html and click on the link for *Ranunculus aestivalis*.

Wipe Your Feet!

Excerpted from article by Ellen Jacquart, TNC Indiana Chapter, inpaws journal Summer '05

Most of you are aware of what invasive species are doing to natural areas around Utah. Many of you are actively fighting back in various ways from pulling noxious weeds to planting only non-invasive plants in your garden.

Want to know one more very simple thing you can do to help? *Wipe your feet!*

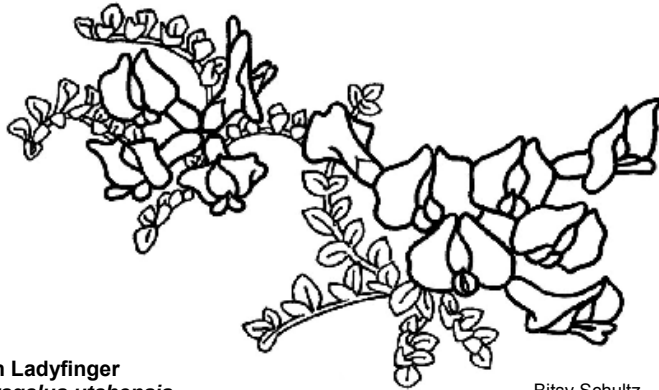
Invasive plants move around in many ways – fruits that are carried away by birds, seeds that catch on animals' fur, seeds designed to be spread by wind or water. Some of our invasive plants, though, are moved primarily by - you.

Invasive plants that have small seeds can be picked up and carried in boot treads, bike or car tires, and horses hooves. It is no secret that the first places we find invasives are by parking lots and trail heads. From there, the invasives use unwitting visitors to move their progeny further and further into the area.

To make sure you are not spreading these species, use a stiff brush to get the dirt off your boots before and after hiking in a natural area. Preferably, do this brushing in an area nowhere near the natural area, but if you're going to brush your boots at the site, try to do it over a parking lot where plants have less chance of establishing. Anything that sprouts around the parking lot will be seen and removed by the natural area manager before it can spread.

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For latest UNPS and
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news go to:
www.unps.org
and click on News

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For more information about
the Utah Native Plant Society
call:

Bill King: 582-0432
Susan Garvin: 356-5108
Or write to: unps@unps.org

Many thanks to Xmission for
sponsoring the Utah Native
Plant Society website.

Please direct all suggestions,
articles and events for the
newsletter to Paula Longhurst
at plonghur@xmission.com.
**The deadline for next issue
is 8th October**

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VOLUME 28 , ISSUE 6

November/ December 2005

Proposed Utah Museum of Natural History site – who benefits?

The new museum and parking lot will be built on 17 acres of the undeveloped foothills right next to Red Butte Canyon.

According to the downloadable brochure <http://www.umnh.utah.edu/museum/AboutUMNH/downloads/EISScopingBrochure.pdf> this process began in 1994 and the land - owned by University of Utah has been earmarked for the museum development since 1997. According to the website and local press reports *we will all benefit*.

Walkers, Hikers, Bicyclists, Dog Walkers etc.

The site *appears* to sit on top of the existing trail and block access to the popular “living room” trail. Although the website insists that the trail will be preserved during and after building it also states that the EIS alternatives may consider “minor permanent trail realignments”.

In 1999 \$1.5 million was spent to connect the trail across Parleys Canyon, and currently plans are in the works to connect the Bonneville Shoreline Trail with the Jordan River Trail, but the museum is about to build a complex that will sever a key part of the trail system.

Traffic

The new site will bring even more traffic onto the research park which, at peak times can hardly handle the current volume. Parking is at a premium at that end of the research park with most of the parking (except Red Butte Gardens) being for University use, meaning you have to have a permit to park there. TRAX stops at the U, and although there are surely plans in the works to extend it out to the research park it's currently a long walk for any student who wants to visit the new complex.

Socio Economic

Concerns were raised by the public that the museum's new location - on the East bench would make it less accessible to lower income members of the community.

Also listed among public concerns were open space and aesthetics along with impacts on wildlife and vegetation.

According to the UMNH website <http://www.umnh.utah.edu/museum/AboutUMNH/newBuildingEIS.html>

Public scoping was conducted in early 2005 and an Environmental Impact Study is being prepared and UNPS has expressed an interest in seeing it's results.

However because a “well-attended” public meeting was conducted during scoping for the Environmental Assessment, another public meeting *will not be held for scoping the EIS*.

UNPS and particularly the Salt Lake Chapter will be keeping a close eye on this project and we could use your help. The Draft EIS will apparently be available for public review *and comment* early in 2006. There will be a 60 day comment period and a public meeting. Comments on the DEIS will be used in preparing the final EIS. So go to the website <http://www.umnh.utah.edu/> and monitor the announcements, submit comments, attend the meeting and make your views known. Utah may need an updated Natural History museum but not at the expense of a key piece of the Bonneville Shoreline Trail and the foothills surrounding it.

Minutes of UNPS Annual Meeting - Held September 30th 2005

Dave Wallace opened the meeting at approximately 6:30pm.

Approximately 44 people present, 22 of which are UNPS members

Active board members present: Larry and Therese Meyer, Susan Garvin, Bill King, Tony Frates, Celeste Kennard, Dave Wallace, Bill Gray, Mindy Wheeler.

UNPS members voted on the board nomination list to elect the following people to the board for the upcoming year:

Walter Fertig	Robert Fitts	Jackie Freshwater
Tony Frates	Susan Garvin	Bill Gray
Marie Griffiths	Celeste Kennard	Bill King
Kipp Lee	Margaret Malm	Larry Meyer
Therese Meyer	Jeff Mitchell	Eugene Schupp
Dave Wallace	Winnie Washburn	Mindy Wheeler

The 5 new members nominated to the board are: Walter Fertig, Robert Fitts, Marie Griffiths, Kipp Lee and Jeff Mitchell.

Susan Garvin expressed a wish and hope for UNPS to grow in membership for more visibility and clout. Board members agreed that the key to growth is more chapter activities and the best way to achieve that is more active members.

Dave Wallace asked for a short report on the different committees within the UNPS.

Conservation: Tony Frates told members the best way to get an idea of what is going on for conservation is to visit the UNPS website. Elaine York from TNC briefly explained the recent purchase of the White Dome Preserve for the

Bear Claw poppy and told members they can contribute specifically for the purchase of this piece of property by writing White Dome Poppy Preserve on their checks. Tony also mentioned that UNPS has joined in several lawsuits to protect some species and their habitats, but no UNPS money has been contributed to these suits.

Susan Garvin called for more participation on the invasive species committee. It was pointed out that Susan has done an incredible job at raising awareness and keeping yellow starthistle at bay in Utah County.

Bill Gray then did a great presentation on 'Flower and Bird Watching in Utah' and walked the audience through his new cyberflora undertakings. WOW!

2006 High Altitude Revegetation Workshop March 7-9,

You are cordially invited to attend the seventeenth High Altitude Revegetation Workshop March 7-9, 2006. The workshop will be held at the Hilton Hotel in Fort Collins, Colorado. The High Altitude Revegetation Committee, through its biennial workshops and field tours, strives to promote understanding and education of reclamation techniques for fragile high-elevation ecosystems. Much of the information is also applicable to lower elevation situations.

Workshop participants will receive the published proceedings. An exhibitors area will feature displays of new techniques, plant material, equipment and services. The Poster exhibits will convey additional revegetation and research information. It is an excellent time to socialize with others working with the many aspects of high Altitude revegetation.

In addition to the conference workshop on March 8 and 9th, there will be a ½ day Technical Workshop March 7 on basic aspects of revegetation. Visit the HAR website highaltitudereveg.com for additional information about all of the events. If you have any unanswered questions, call Gary Thor (970-484-4999) or Wendell Hassell (303-431-6405).

We hope to see you there.

Correction In the September/October Issue, we mistakenly attributed the autumn buttercup reintroduction proposal to Elaine York it was *actually* submitted by Linda Whitham of The Nature Conservancy's Moab office. Thanks to Elaine for pointing that out!



Nov/Dec 2005

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2006 High Altitude Revegetation Workshop : P3	Natives in the News : P4
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Natives in the News

These articles are re-produced with permission from the authors, thank you to Larry A. Sagers of the Deseret Morning News . Research by Kelly McNulty

Experiment and have fun, horticulturist says

By Larry A. Sagers
Deseret Morning News

Dick Hildreth, the founding director of Red Butte Garden, is one of the best friends Utah gardeners have ever had.

He has spent his life researching, teaching and sharing his vast horticultural knowledge with gardeners in Utah and surrounding states, and there are few people who are as well qualified to teach about the plants that flourish here.

On Thursday March 3rd, 2005, Hildreth, who retired to Arizona in 1999, returned to Utah to talk about gardening in the West. He also compared gardening in the Mojave, Sonoran, Chihuahuan and Great Basin deserts. The event was co-sponsored by the Wasatch Rock Garden Society, the Utah Native Plant Society, the Utah Nursery and Landscape Association and Utah State University Salt Lake County master gardeners.

Hildreth's love of plants started early in his life. His father, respected horticulturist Aubrey Clare Hildreth, was the director of the Cheyenne Field Station for the U.S. Department of Agriculture.

"His job was to discover and introduce new woody plants that had commercial and ornamental value and were tolerant of the harsh Wyoming conditions," Hildreth said in a phone interview from his home in Tucson.

Those experiences helped Hildreth learn about the many varieties that could thrive in Utah's cold winter climates. And although Cheyenne Field Station has been closed for many years, "my dad's work lives on because he instilled in me a love of finding new plants and getting others to try them," he said.

Hildreth's education in Wyoming was followed by other studies at Ohio State and the University of California-Davis. He left his position as director of the Saratoga Horticultural Foundation and moved to Utah in 1977 to direct the state arboretum on the University of Utah campus.

While in this position, he envisioned a unique Intermountain botanical garden that would not only be a showplace but an outdoor laboratory for new plants. The result was Red Butte Gardens.



Penstemon thrives in the Tucson heat. Native plants are valuable because they are already adapted to the area.

Larry A. Sagers

While much of his career has been devoted to trees, Hildreth is passionate about other plants. He helped found the Utah Native Plant Society and helped other organizations promote plant discovery, preservation and use.



A vivid pink bloom atop a bed of cacti shows the beauty of native plants.

Larry A. Sagers

"I have a fondness for native plants because most are already highly adapted to our area," he said.

When he moved to Tucson, Hildreth looked for an area where he could carry on his work as a researcher and educator. His home, which sits on a little more than an acre, still has much of the original vegetation surrounding it. The plants include mature cacti and succulents, including about two dozen saguaro cacti.

"I selected the site because it still had the native vegetation but it included many other well-selected, and well-cared-for, introduced plants, including four or five Aleppo pines," he said.

"I had to do some renovation when I first got here. I started by taking out all the large, overgrown

pyracantha shrubs that had been pruned to look like clouds," he said. He's also adding to the existing plants and is currently trying several species of penstemons, salvias and lavenders.

"I also am trying many different aloes, agaves and yuccas," Hildreth said. "There are many of these plants that have not been adequately tested in colder climates. The little-known *Agave utahensis* should survive in the right spot."

Although conditions in Tucson are not the same as in Salt Lake City, there are some similarities, he said. "My home sits above the city a few hundred feet, so the air is a little cleaner. It is a little like living on the east bench, only the elevation is about 2,000 feet lower.

"Gardening here is in many ways very similar, but the plants grow differently. For example, my red chili peppers are now 3 years old and still growing. Many plants I grew in Salt Lake as annuals are excellent perennials here.

"Annuals are fun here, but they usually turn out to be perennials under our conditions. They grow well in the winter, and then when the intense heat comes in May, they fade out but come back in the fall.

"One plant I am trying is the native perennial marigold, *Tagetes lemmonii*. It comes from an elevation of near 9,000 feet, so I think that one has some possibilities in Salt Lake. It is a small, shrubby perennial with golden orange flowers.

"My bottom-line advice to gardeners is to have fun, experiment and don't be afraid to push the envelope. Be willing to try something new. If it does not work out this year, perhaps it will thrive next year.

"Even if it does not grow, you will have learned something."

Larry Sagers is the regional horticulturist at Utah State University Extension Service at Thanksgiving Point.

Experiences with the San Rafael Cactus: *Pediocactus despainii*

Words and Picture by Jeff Mitchell

It is now seven or eight years since I rediscovered my interest in cacti. I had found a cluster of the common pincushion plant *Escobaria (Coryphantha) vivipara* on a wash bank in the House Range west of Delta, Utah. The section of bank was collapsing as evidenced by a crack between the cactus and the rest of the bank. Given that it was going to be washed away, I preemptively dug it up. When I got it home, I discovered two seed pods on it and immediately wanted to know how to grow them. I got on an internet list called cacti_etc and started asking lots of questions on how to grow cactus seeds. I then planted them and lo and behold, they sprouted! Encouraged, I started discovering other Utah native cacti like the ubiquitous *Opuntia polycantha* or plains prickly pear, and the claret cup, *Echinocereus triglochidiatus*. I knew these by sight because they were all over my favorite lizard hunting area west of Elberta, Utah, but I had never put a common or scientific name to them. I followed the pattern of a number of list members and related experiences of trips taken for the benefit of those people all over the world that can't come to where cacti are common. When I posted one of these travelogues mentioning the claret cup cactus being in Utah County, Kim Despain contacted me by email and we got together and visited the site together. We've had a lot of good times since.

I showed him my little batch of pincushion seedlings and he suggested I try some of his seeds. I panicked. *Pediocactus despainii* was listed as endangered and I wasn't particularly experienced at this point. Sprouting a common cactus is one thing, but an endangered one made me worry that I'd blow it. He reassured me by noting that he wasn't giving me all his seeds, and that since he hadn't been successful, there was a likelihood that I might be and that I should at least give it a try. After all, his plants produced seeds every year and whatever I wasted would be replaced shortly anyway.

The cacti_etc list told me that I should start with a common cactus like *Pediocactus simpsonii* to get some experience before trying the more exotic species. The only problem was I had *Pediocactus despainii* seeds and no *simpsonii* seeds. I was starting out with the allegedly most difficult species.



Pediocactus despainii in flower

So I took the plunge and planted them. I had checked with the cacti_etc list for hints, and the biggest and best hint I got was to remember to not use any potting soil, peat moss or any other organic amendments. Organic amendments all hold too much water and deprive the roots of oxygen long enough for nasty fungi to attack the plant. I followed their advice and three or four days later they sprouted. I had used the little plastic six-packs and they dried out rather quickly. I lost a little over half of the seedlings by going a little late on the watering.

The following year, Kim gave me the remaining seeds and my growing project was on its way. Since then, I've moved to using four inch pots which hold water longer and the seedlings are much closer to

the fluorescent lights I use to grow seedlings during the winter.

Cacti grow slowly. They grow even slower in small pots, so when I took them outside I planted them one to each one gallon pot so they would grow faster. This used up a lot of real estate in my back yard, but I didn't have a lot of cacti then either.

Now that I'm running out of room, I put seven seedlings per gallon pot and I have a lot less work to maintain plants that way and the depth of the pot seems to be what lets them grow fast.

The original seeds were planted on November 23rd, 2000 and in the spring of 2003 two of the plants bloomed. I was so excited. Unfortunately, they didn't bloom at the same time so they didn't get pollinated. I hadn't yet thought of the idea to gather pollen from the first one, keep it in a dry place for a couple days and then try to pollinate the second.

In 2004, 30 of them bloomed, and I collected around 300 seeds. In 2005, around 200 bloomed and I collected a little over 3000 seeds. In 2003, I also bought some San Rafael Cactus seeds from Mesa Garden, an outfit that has seeds for just about every cactus native to just about anywhere. This group may start blooming in 2006. In the end, my nervousness about growing these plants was unwarranted as they are very easy to grow.

Each year, I make sure I have a handy supply of cotton swabs for pollination and go out every day to pollinate all the open flowers. This gets a bit tedious, but collecting all the seeds makes it worth it. When pollinating, the stamens holding the pollen react (thigmotropic) to the touch and bend inward toward the stigma. I can tell which flowers have already been pollinated because all the stamens are tightly clustered around the stigma.

When collecting the seeds, I notice that they are jet black when first released from the pod, then turn brown after drying or being in the sunlight. By the time the seeds are ready for collecting, the pods are about a half inch from the growing point and picking them causes no problem to the plant based on a sample size of 350 pods.

Dealing with each plant individually allows me to inspect each one to see what is happening with it. A number of the plants had holes in their sides, and it appears that slugs like San Rafael cacti. This year, as the weather cools down, I plan on putting out a lot of slug bait this time around. I'm not sure what the deal is, but I only see damage to the San Rafael cactus. None of the other *Pediocacti* (*sileri*, *knowltonii*, *winkleri*, *simpsonii* (I have some now), *peeblesianus*, *paradinei*) or other cacti seem to attract them. The *Opuntia pulchella* (Sand Cholla) shows some damage, but I haven't been able to tie that to slugs yet. I haven't yet lost any plants to the slugs, but the holes are unsightly.

In 2001, my wife and I went to the north end of the San Rafael Swell to look for the plants in the wild. Kim had given me pointers on where to look and specific locations he had found them in the past. I had gone the previous month to look for them with my dad and my daughter, but had not found any. There were snowdrifts still in evidence and it was pretty clear I really didn't know what I was looking for. In late April we went and this time they were in flower and very easy to spot. We covered four locations each about 100 yards in diameter and counted 369 plants. Around five to ten percent did not have flowers. The largest were not more than the width of an old silver dollar, most being in the

quarter to half dollar size range. A few had multiple heads, all of which appeared to be the result of damage to the original stem. I've only seen one cluster that had more than one stem and which was not the result of damage, and that one is in cultivation. That cluster is almost seven inches across with nineteen stems. Some of the plants were situated in the middle of ORV tracks. And when we packed up our camp, we discovered a large one right next to our tarp.

I thought I detected five shades of color in the flowers from cream, cream yellow, yellow, yellow pink and pink in the wild plants. After seeing a lot of flowers on my plants this year, I'm wondering if some of the different shading is due to the age of each flower. There is a distinct difference between the yellow and pink ones though, and I pollinated the pink ones--all two of them--to see if I can get a higher percentage of pink flowers. We'll see if the other shades are really distinct.

This year, 2005, is the first year I've been able to offer them for sale at the Salt Lake Farmer's Market, and most people who buy them do so for the novelty value of having a plant that is listed as Endangered under the ESA that is also legal to possess. When I first planted the San Rafael Cactus seeds I asked around for whether or not I would need a permit. Each person would tell me yes, it is endangered, and you have to have permits for possession of endangered species. I would then ask if they could point me to the regulations, but none of these people knew where to find them. Finally--it takes me a long time to get smart--I called the Fish and Wildlife Service law enforcement office in Ogden and the senior officer there gave me both where the ESA was and where the regulations were. The short story is that if you have the plants from a legal source, you need no permit to possess an endangered plant. If you want to sell them, you don't need a permit if you sell within your own state, but need a permit for interstate sales of endangered plants and seeds and threatened plants. For those of you with interest, the regulations are found at 50 CFR parts 17.62 and 17.61.

The future promises to be fun now that I have lots of seeds and I can now start experimenting with ways to increase germination rates. I noticed that I got around twenty percent germination on fresh seed, but got close to fifty percent on seeds that were four or five years old. This makes sense since plants in hard deserts tend to have seeds that delay sprouting for several years to ensure that at least some of them sprout in a good year that allows them to get established. But I am impatient and want to speed things up, so I'll be trying things like washing the seeds to get rid of any natural chemicals that temporarily prevent germination, or scuffing the seed coats with sand paper, freeze thaw cycles, and of course letting them age to see if that really accounts for a high germination rate. It helps to have enough seeds to have a control group and try a number of experiments to compare with that control group.

At least we now know how to grow them easily, and if we had genetically representative populations, we could now produce seed for rehabilitating areas disturbed by off road vehicles. At least one spot I originally surveyed in 2001 has had around 40 to 50 plants destroyed by people using areas adjacent to the road to use as a staging area for their recreational vehicle use. So there is still a lot of work to do.

Jeff Mitchell is partner in a legal services firm specializing in telemarketing law and is propagating almost all species of native cacti north of Cedar City. His back yard has around 4000-5000 native cacti in various stages of their life cycle!

Chapter News and Events

Salt Lake Chapter

- **Chapter Meeting**

7:00 pm, Tuesday November 1, 2005

Jack and Corinne Sweet Library, 9th Ave and 'F' St.

7:00 pm Brief meeting to meet people and elect a president for the chapter. UNPS board of directors has nominated **Kipp Lee** for the coming year.

As soon as that is complete we'll enjoy a **UFO** session. Bring your **Unidentified Flowering Objects** or, at this time of year **Unidentified Fruiting Objects**, and see how well the experts do at identifying them. **Digital photos** will also be fine, as long as we can load them on a computer and project them for all to see.

Sandra Bray has made a web site which can display photos ahead of time: <http://www.rootcellar.us/unps> — check it out now. If you have clear digital photos that you would like to share, send them to glbray@comcast.net with your name and a brief description of when and where it was taken, They'll be posted on the web site for others to have fun checking out, and a selection of them will be used at the meeting. For this first experiment send full-sized images and we'll trim them to size. Any questions, e-mail Sandra, or **Bill Gray** cyberflora@xmission.com (please don't send photos here).

Utah Valley Chapter

Our chapter sponsored a plant sale in September in conjunction with native plant grower Darrin Johnson. Among other customers was Vice-principal Stacy Briggs from Provo High School; she purchased a cartful of plants for a native plant garden planted by students at the north end of the High School.

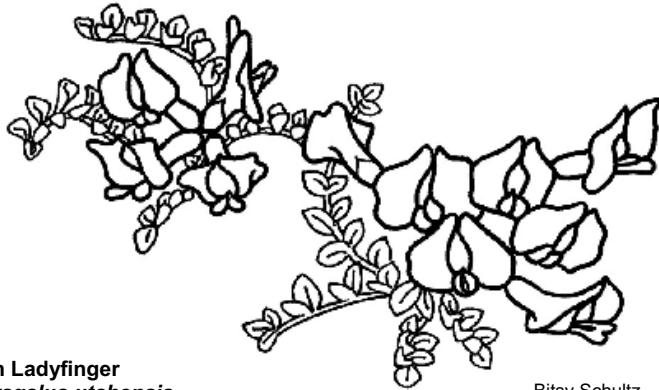
We also took field trips to Tatow Knob in western Utah in July and to Bald Mountain and surrounding boggy areas in the Uintahs in August. If anyone has suggestions for winter trips in January or February, please contact Robert Fitts at 801-796-8631.

We have a chapter meeting scheduled for **November 18th** at the Forest Service Building in Provo, 100 N and 100 West. We will begin with a pot luck supper at 6 pm and proceed to a short business meeting and program at 7 pm. Robert Fitts from the Utah Heritage Program will speak on "Mapping the Rare Plants of Utah" .

If any Utah Valley chapter members know of some available greenhouse space, for instance at a high school, please call Susan Garvin, 801-356-5108. We would like to grow some plants to sell next May, so let us know if you are interested in a planting meeting in February.

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call:

Bill King: 582-0432
Susan Garvin: 356-5108
Or write to: unps@unps.org

Many thanks to Xmission for
sponsoring the Utah Native
Plant Society website.

Please direct all suggestions,
articles and events for the
newsletter to Paula Longhurst
at plonghur@xmission.com.
**The deadline for next issue
is 10th December**

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