



VOLUME 27, ISSUE 1

JAN/FEB 2004

Drought Tolerant Grasses

Contributions from Paula Mohadjer, Therese Meyer and Margaret Malm

January is a funny time to be talking about grass, especially with so much snow blanketing the ground! UNPS has been receiving enquiries about drought tolerant grasses from all over the state for the past few months so this information could help you to get a jump on spring planting.

There are a few nice turfgrasses that can be used in the Salt Lake Valley instead of the traditional Kentucky bluegrass lawn. Kentucky bluegrass is a cool season grass that requires 25-35" of water annually, while the Salt Lake Valley receives an average of only 15" annually, most of which comes in the winter months. Alternative turf grasses offer a range of color and texture and provide considerable water savings, giving you the opportunity to choose according to your preferences and site requirements.

Buffalograss (*Buchloe dactyloides*) is a warm season grass that is blue green and very soft while actively growing (late May through early October). Buffalograss goes dormant (brown) when temperatures drop (late October to early May). It tolerates considerable traffic when green, less when dormant. It requires no additional irrigation, although supplemental irrigation, once every 12-14 days, will keep it greener in the summer months. This grass tolerates compacted soils and prefers clay soils. Buffalograss can be mowed at 2-4" or left to its natural height of 4-6".

Buffalograss



This grass spreads by runners (which could cause minor problems during raking or sports) and can be grown from seed, sod or plugs. Commercially available plugs generally consist of a selection of female plants, as these have very short flowering spikes that are below the level of the blades and thus do not show.



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Utah's Choice - Dreams Do Become Reality

Events and Chapter News

When starting from seed, wait until end of May or when temperatures reach 75 degrees or above. Seed planting will have both male and female plants, and the male spikes are taller and some consider them unsightly. No mowing is required unless more water is applied so that the blades grow long, or to remove male seed heads.

Seed or plugs are available from

Biograss Sod Farms in Sandy (801) 562-9090,
Or High Country Gardens in New Mexico (800) 925-9387
or website highcountrygardens.com

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Blue grama (*Bouteloua gracilis*) is a warm season Utah native grass that is blue green and soft-textured while actively growing. It is similar to Buffalograss in that it goes dormant (brown) during the cool parts of the year (Oct to May), so the primary complaint is the late greening-up.



Turf Plots K Blue, Blue Grama, Buffalo

It tolerates considerable traffic while actively growing, less while dormant. Blue grama survives on 10" annual precipitation and requires no additional irrigation, although supplemental irrigation, once every 12-14 days, will keep it greener in the summer months. It can be mowed or left un-mowed for a natural prairie look about 18" tall. Blue grama is a bunch grass and is easiest to start from seed once temperatures are above 85°. Seed is available from High Country Gardens, and possible local Utah sources.

Crested Wheatgrass is a drought tolerant, cool season bunchgrass that prefers going dormant during hot, dry periods. Crested Wheat grass survives very well on 12-16" of annual precipitation and actually competes poorly with other plants on moist sites. It forms a thick, dense sod once established, that does well without irrigation.

Keeping this grass mowed to a height of 3" or above will produce a nice green sod during its growing season (fall and spring). Seeds are started very easily at a wide range of temperatures and quickly form fibrous roots which can penetrate the soil to depths of 3 to 8 feet deep at maturity.

Fescue. Many types of fescues are used in conjunction with or as a substitute look-alikes for Kentucky bluegrass, such as turf-type tall fescue (**Farundinacea**; some examples varieties are '**Bonsai**' and '**Lion**'). Tall fescue is one of the grasses recommended for the area down around St George, builders are now being urged to use fescue when they put in lawns.

Fescues tolerate shade and recover well after drought. They are cold-hardy and retain most of their green color through winter. If mowed, cut no shorter than 3" to ensure high disease resistance and weed control; cutting lower causes stress and increased disease and weed infiltration. Fescue varieties grow slowly in moderately heavy clay soils and only require between 8-14" of precipitation annually depending on variety.



Tall Fescue

Turtleturf® is a cool season, shade tolerant, bunch grass that is slower growing than Kentucky bluegrass, requiring less maintenance and less fertilizer. Turtleturf® is a relatively new grass and water needs for growing it in the Salt Lake area are under evaluation; a preliminary estimate puts its water needs relatively close to the Fescues. This grass isn't recommended for high traffic areas due to its very slow growth.

Sideoats grama is a warm season Utah native grass that is gray-green in . It can survive with as little as 8" of rainfall a year, however, supplemental watering once a month during hot summers will keep the grass more attractive. Un-mowed, it will grow to 24", for a natural prairie look.

Mowed at 3" or above, it forms a bunchgrass sod, spreading by tiller rhizomes. Sideoats grama tolerates dry, drought conditions and grows in any soil type. Sideoats grama is a long-lived, fine textured perennial adapted to rocky slopes, dry areas, and alkaline conditions. Seeding once the soil has warmed up produces an excellent stand. This warm season grass remains green in a similar time period to Blue grama and doesn't tolerate high traffic while dormant.

All the grasses discussed above with the exception of Sideoats grama are displayed with metered irrigation at the JWWCD Demonstration Gardens.

Not Recommended

Bermuda grass. Although it is drought tolerant. It is also reported to be too invasive (it crowds out native grasses), is very hard to keep control of and even harder to eradicate. The texture is also quite wiry.

Utah's Choice - Dreams Do Become Reality

Susan Meyer, UNPS Horticulture Chair

The Intermountain Native Plant Growers Association (INPGA) was founded less than a year ago by former UNPS board member and Wildland Nursery owner Janett Warner, along with friends both inside the Utah nursery industry and in the public sector. Since that time, the organization has gone into high gear to promote its chief agenda item, the Utah's Choice plant tagging and consumer education program. The membership has grown from just a handful of founding members to include individuals representing at least thirty different nursery and landscaping businesses in three states. The first all-membership meeting was held in September 2003 at the Utah Botanical Center in Kaysville, and was attended by nearly fifty people, almost all nursery professionals.



INPGA members relax and network during a break at the first annual all-membership meeting.

Plans were made at the Kaysville meeting for a variety of activities designed to increase the availability of native plants in the retail nursery trade and to encourage their use in landscaping. These included establishment of a Seed Bank to increase the availability of seeds of native plants to INPGA member growers, as well as developing ideas for stock block plantings maintained by member-growers to ensure continuing availability of hard-to-obtain seeds over the long term. The Seed Bank project for 2003 made seeds of 24 Utah's Choice species available to members, with total sales of over 300,000 seeds. INPGA member Lone Peak State Conservation Nursery agreed to store the seed inventory and handle the orders. The tagging program has also taken off, with over 25,000 plant tags sold to wholesale growers. We can expect to see substantial numbers of Utah's Choice tagged plants in retail nurseries this coming season.

For the initial promotional effort, thousands of full color Utah's Choice information brochures were distributed free

of charge to Water Conservancy Districts, USU Extension Offices, the Utah Division of Water Resources, Red Butte Garden, and other key players. To follow up on this good start, we are targeting the Utah Green Conference, the annual meeting of the Utah Nursery and Landscaping Association to be held this January in St. George.

In addition to the INPGA booth, which will feature our new retail marketing package, we will be participating in a half-day symposium on native plants in the Utah Green Industry.

Activities on the part of two of our partner organizations have helped us considerably in our efforts to raise visibility for native plant landscaping. The first was the publication of the book 'Water Wise: Native Plants for Intermountain Landscapes' by Utah State University Press in June 2003.

This beautiful book, written by faculty and MLA students at USU under the umbrella of the Center for Water Efficient Landscaping, goes a long way toward filling the knowledge gap for people interested in these plants and their uses in the landscape. It includes color photos and fact sheets for over 200 Intermountain native plants. The second important development was the launching of the Virtual Garden native and waterwise plant online database by the Central Utah Water Conservancy District <http://pc100.cuwcd.com/gardendemo/>

Though still incomplete, this website promises to be the most-used resource for people looking for information on landscaping with native plants, including names of nurseries where each species can be purchased locally.

INPGA has benefited from cash and in kind contributions from a number of organizations, including the USU Utah Botanical Center and Center for Water-Efficient Landscaping, the Central Utah Water Conservancy District, the Jordan Valley Water Conservancy District, the Utah Division of Water Resources, and the Utah Native Plant Society. But most of the work of the organization is carried out by dedicated volunteers, including our elected officers:

Amy Howa Croft, President, Michelle Cook, Secretary, and especially Linda Oswald, Treasurer. Janett Warner and myself act as Executive Directors of the Utah's Choice Program, with advice from an Executive Committee that includes the above officers along with Roger Kjelgren of USU, Robert Johnson of Great Basin Natives, and Edie Trimmer of the Lone Peak State Conservation Nursery. A long awaited event took place in mid-December 2003--the launching of our dedicated

website at www.utahschoice.org. Check it out for pictures of the Utah's Choice plant lineup, information about INPGA, instructions on how to obtain promotional materials, and links to partner websites and other resources. Our site too is still in its infancy, but we hope to build it into another useful web resource over the coming months.

The most important thing you all can do right now to help get more respect for Utah native plants is to go to your favorite retail nursery and ask for Utah's Choice. It would also be great if you could call in to the KSL Garden Show and ask pointed questions about our program!



Events and Chapter News

Utah Native Plant Propagation Workshops

(NOTE: at press time we were attempting to achieve a discount for attendance by UNPS members since the workshops outlined below are co-sponsored by UNPS and were developed by UNPS and spearheaded by our horticultural chair and past chairperson, Dr. Susan Meyer. We suggest that when registering, indicate that you are a UNPS member and request a \$5 discount.)

\$20, general public. \$15, Utah Master Gardeners (active members only).

Utah Native Plant Society and Utah State University Extension Master Gardeners are cooperating to present Utah native plant propagation workshops in 2004.

Plant seeds of Utah native plants chosen to perform well in your landscape. Seedlings will grow into a beautiful, water-conserving assortment of plants. Every participant will plant 72 cells in a special book-trainer tray, and take it home with instructions on how to grow and transplant the plants successfully. Available seeds will include: Cliffrose, Bitterbrush, Alkali Sacaton, Utah Yucca, Shining Muttongrass, James Buckwheat, Gooseberryleaf Globemallow, Utah Sweetvetch, Prince's Plume, and Mountain Big Sagebrush.

Register for classes by calling the USU Extension in the county holding the class.

Salt Lake: 801-468-3179;

Davis: 801-451-3204;

Thanksgiving Point: 801-768-7443;

Cache Co.: 435-752-6263.

Class dates and locations:

Salt Lake County:

February 17, Tuesday. 6:30 PM - 8:30 PM. Mt. Jordan Middle School, 9360S 300 E, Sandy.

February 21, Saturday, 9AM - 11AM, Cactus and Tropicals, 2735 S 2000 E, SLC.

February 24, Tuesday. 5:30 - 7:30PM. Salt Lake County Govt Bldg, 2001 S State St., SLC. Room S-1007-8.

February 28, Saturday. 9AM - 11AM. Murray City Park, 53rd S and State St, Murray.

March 6, Saturday. 1PM - 4PM. 3540 S Market St (2820 W), West Valley City.

March 10, Wednesday. 6PM - 9PM. Sandy City's Lone Peak Pavilion, 700 E 10140 S, Sandy.

Cache County:

March 6, Saturday. 9AM - 11AM. USU Teaching Greenhouse, Logan.

March 10, Wednesday. 6PM - 8PM. USU Teaching Greenhouse, Logan.

Thanksgiving Garden Visitor Center:

March 13, Saturday. 9AM - 11AM. Garden Center classroom.

Davis County:

March 13, Saturday. 9AM - 11AM. Utah Botanical Center.

General contact re: the above

Maggie Wolf 801-468-3171

maggiew@ext.usu.edu

www.usuextension.slco.org

Chapter News

The **Utah Valley** Chapter last met November 21, 2003.

As the program, we invited members to share their photos and slides with the group, and to donate some for the chapter's use. Lyle Jensen, Kim Despain and Denise Van Keuren showed many great images of Utah flowers and landscapes in a variety of formats. Lyle donated use of a CD of some of his wonderful jpeg images, that will be used for UNPS publications and presentations.

The chapter's planned dates for 2004 meetings are: February 20, May 21, August 20 and November 19, 2004, all Friday evenings.

Pot luck dinners will start at 6 p.m., and the meeting starts at 7 p.m. The meeting place is the Federal Building, corner of 100 West and 100 North in Provo.

Speakers haven't been decided upon yet.

Also on the planning board for 2004 are several field trips, a garden tour, a propagation workshop and continuing work with partners to promote heritage gardens, vegetative restoration, fighting weed invasions and public education.

Check your records, and if your membership has expired (many have!) please rejoin now!"

Position in Boise with BLM Fire Science

Vacancy Announcement Number: BLM/FA-04-10-DE

Opening Date: Wednesday, November 26, 2003

Closing Date: Thursday, January 15, 2004

Position: **Joint Fire Science Program Manager**

Series & Grade: GS-0401-14/15

Promotion Potential: 15

Salary: 79,344.00 USD Annually

Duty Locations: 1 vacancy - Boise, ID

Remarks: One permanent full-time position - Open to all qualified U.S. citizens. - Applications submitted by mail or hand delivered must be received in our office by close of business (4:30 pm Mountain Standard Time) on the closing date of the announcement.

Get the full details at

<http://jobsearch.usajobs.opm.gov/getjob.asp?JobID=20016939>

Report on Annual Members Meeting

Our annual meeting in Logan went very well. The new world food and decor were wonderful and Dr. Shaw's talk on pollination was very interesting.

Many thanks to Steve, Tami, Dave, Geno, Jackie and the rest of the Logan Chapter for putting on the best meeting in years. We also toured the Intermountain Herbarium, thanks to Michael for opening up on Saturday and giving us the grand tour.

And yes all of the old board members (who wanted to be) and chapter presidents were reelected along with a few new volunteers.

Expert to teach Grass Workshop

Dr. Mary Barkworth, world expert in the Grass Taxonomy, is leading a Grass Workshop for UNPS.

When: 9 a.m - 4 p.m., Saturday, January 31, 2004
(note: this is a re-scheduled date)

Where: Intermountain Herbarium (below Junction Cafeteria, USU Campus, Logan Utah)

Cost: \$10 (UNPS members), \$15 (non-members) payable to the Intermountain Herbarium

Outline: Grasses, grass structures, common genera, some keying, including use of an interactive key

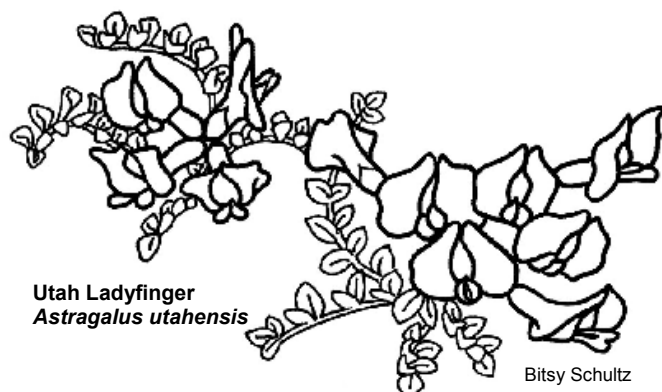
Sign up? mary@biology.usu.edu or call 435-797-0061 or check out the UNPS Website at

<http://www.unps.org/miscpdf/grassworkshop.pdf>

UNPS
Utah Native Plant Society
P.O. Box 520041
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Bitsy Schultz

Utah Native Plant Society Membership and Information

☐ New Member ☐ Renewal ☐ Gift

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

Check membership category desired:

- ☐ Student \$9.00
- ☐ Senior \$12.00
- ☐ Individual \$15.00
- ☐ Household \$25.00
- ☐ Sustaining \$40.00
- ☐ Supporting Org. \$55.00
- ☐ Corporate \$250.00 and up
- ☐ 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
Larry Meyer: 272-3275
Or write to: unps@unps.org

**Check out our
website!**

www.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 scoobydo@xmission.com
**The deadline for next issue
is Feb 16th 2004**

UTAH NATIVE PLANT SOCIETY

President: Susan Garvin
President Elect: Larry Meyer
Treasurer: Ben Franklin
Secretary: Therese Meyer
Newsletter Editor: Paula Longhurst

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Utah Valley: Phil Allen

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Conservation: Bill King
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Communications: Paula Mohadjer



VOLUME 27 , ISSUE 2

MAR/APR 2004

UNPS LIFETIME MEMBER UPDATE

By Tony Frates

Dave Wallace, Susan Meyer/Bitsy Schultz, Winnie Washburn and Ann O'Connell joined the ranks of UNPS lifetime members and became our 12th thru 15th UNPS lifetime members and as UNPS concluded celebrating our 25th year as advocates for Utah native plants. Thank you Dave, Susan and Bitsy, Winnie and Ann! In all we had nine new lifetime members in 2003. Thanks again to everyone who joined as lifetime members (and the many of you who renewed or became new members in 2003).

Our real work is now just beginning as we start the next 25 years.

Consider joining the growing ranks of lifetime Utah native plant advocates (see the January/February 2003 newsletter for all of the reasons why).

To become a lifetime member, you can send a check for \$250 to: Utah Native Plant Society, P.O. Box 520041, Salt Lake City UT 84152-0041 or go to our web site at www.unps.org and click on Store and then Membership (Renewal or New) Application and scroll down to "Lifetime" and click on the Add to Cart button.



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Report to the Members of Utah Native Plant Society

By Susan Garvin, President

The Board of Directors of UNPS met on February 7 to organize for this year. We meet approximately 6 times a year to conduct the business of the organization. New officers were elected; the results can be viewed on the last page of the Sego Lily.

UNPS was formed 25 years ago. Details of our organization can be seen on our website <http://www.unps.org/> on the Home page and the About page. In the early days the Society was strongly conservation-oriented, and that is still the case today. The organization used to be based closely around Salt Lake City, and that has changed in recent years.

In the last few years UNPS has added 7 new chapters around the state, with the newest chapter just organized by Winnie Washburn in Escalante with 32 members. The other new chapters are based in Utah Valley, Cache County, Price, Moab, Vernal, and Washington County. The energy for development of these new chapters came largely from the growing appreciation and need for native plant horticulture. We have sponsored Heritage Gardens (see Programs page on the website) and introduced propagation workshops statewide under the leadership of Susan Meyer, our horticulture chair.

We have continued our strong conservation heritage by publishing the web version of the Utah Rare Plant Guide (see <http://www.utahrareplants.org/rpg.html>) organized and overseen by our extraordinary webmaster Tony Frates. We have reinitiated and sponsored Utah Rare Plant Meetings jointly with Red Butte Gardens for several years. And we have continued to join with other conservation organizations to protect endangered plant species around the state, with particular emphasis on the impacts of the proposed highway from Hurricane to south of St. George on several sensitive plant species (see details on our Committees page, under Conservation, News).

We have an active Education committee (but need a new chairperson), working on collecting materials suitable for teachers and other educators to use. We have an active Invasive Species committee, engaged in weed warrior activities and formation of Cooperative Weed Management Areas to join in the battle against alien weed species, which are a major threat to many, if not all, of our native plant committees. And we continue to publish the Sego Lily, edited by our new volunteer coordinator Paula Longhurst, every two months to try to keep you in the loop on our activities.

These activities are overseen at the state level of UNPS. In addition many of our chapters are actively pursuing some of the same goals at the local level.

It's clear we are a dynamic and growing organization. But we are definitely having growing pains! The formation of far-flung chapters has changed the organization in a very healthy way, and we are trying to change our management of it to foster this new growth. We welcome your input and most of all your participation in UNPS. All chapter presidents have a vote on the Board of Directors. We recognize that distance complicates the transaction of business and are busily trying to adapt our policies to the age of technology, so input from outlying chapters can be effectively considered in the actions of the Board.

And we find that we need your help in this effort. At present we need a **secretary** to effectively conduct business. Our **treasurer** Ben Franklin has faithfully served in this office for many years and deserves to pass this duty on to someone new.

Our **membership chair** for the last several years, Abby Moore, will be moving this summer and we need someone willing to take over her job. We need an **education chairperson** to coordinate the collection and distribution of materials as we design or adapt educational resources related to our mission. We need a **communications chairperson(s)** to coordinate publicity of Society-sponsored events, increase the visibility of native plant issues, and oversee the publication of the Sego Lily. We need **Guardian Angels** for many of our Heritage Gardens, to oversee the maintenance of each garden. And we need help with **fund raising** to promote our goals. We would like to hold a State Field Trip in the vicinity of one of our outlying chapters if we could find someone to organize that activity. There are occasional times when we would welcome the donation of advice from a lawyer amongst our members. And articles pertinent to our goals for publication in the Sego Lily are always welcome from members.

There are many other projects we could and would undertake if some of our members would like to spearhead them.

If you would like to become more actively involved in UNPS, either at the chapter or local level, with any of the needs I have discussed, or others I haven't thought of, please contact us at unps@unps.org or Utah Native Plant Society, P. O. Box 520041, Salt Lake City, UT 84152-0041; we will put you in touch with the correct contact person. I am the president of the Society for this year, entrusted with carrying out operations between board meetings, with a lot of help from fellow board members; please feel free to contact me at utahweedwarrior@hotmail.com or at my work phone 801-356-5108.

Alert! Rock Canyon in Danger (January 2004)

By Susan Garvin, Utah Valley Chapter

Rock Canyon, home of Rock Canyon Trailhead Park and one of our UNPS Heritage Gardens, as well as the UNPS-sponsored Rock Canyon Restoration, is being threatened by a quarry for landscaping rock on private land near the canyon mouth. Quarrying activity has already begun, with dumptrucks and heavy machinery backing to within two feet of hikers on the canyon trail.

UNPS volunteers, along with cooperators from BYU, Provo City, and the U.S. Forest Service, have spent thousands of hours and dollars helping to restore Rock Canyon, a unique and cherished scenic and recreation area located on the east side of Provo near the Provo Temple. The Utah Valley Chapter of UNPS has agreed to assist in the effort to block the quarry. For information about UNPS activities in Rock Canyon see <http://www.unps.org/PAGES/Rock%20Canyon%20HG.html>

Rock quarrying activities will cross Forest Service and Provo City Parks land. By law the Forest Service cannot deny access to private land but can set reasonable conditions for access if National Forest System Land is impacted. Several sensitive species are known to occur within Rock Canyon and may be impacted by the proposed mining activity including a small shrub called Wasatch Jamesia (*Jamesia americana* var *macrocalyx*), and two listed bat species (Townsend's big-eared bat, *Plecotus townsendii* and Spotted bat, *Euderma maculatum*). See more information about these bats at this very nice website, <http://www.batcon.org/discover/species/usspecies.html> Peregrine falcons have also been reported in Rock Canyon but may have been driven off by eagles in recent years.

The owner must obtain mining permits from several jurisdictions, including the State of Utah, to proceed with mining activity. The City of Provo and Utah County have no mining laws in effect and may not simply stop excavation but may impose zoning restrictions on the

quarry operations. Uinta National Forest land surrounds the quarry site, and much of it lies within the city limits of Provo. The only access road is an asphalt roadway leading down the canyon right through the Trailhead Park, and part of the heavily used trail. The Bonneville Shoreline Trail also crosses Rock Canyon a short distance below the proposed quarry.

The Rock Canyon Alliance, which organized to protect Rock Canyon about 15 years ago from other development threats and spearheaded the formation of the Trailhead Park, have been reorganized under the leadership of several Provo residents to help find a solution. Informational flyers are circulating around Provo, and the Alliance is organizing neighborhood meetings to inform residents and raise money. Their efforts are aimed at ensuring regulatory compliance by the excavators and working with government agencies to encourage treatment of Rock Canyon consistent with similar lands in other parts of the country. Their ultimate goal is to turn the private property to public ownership for the preservation of native species, aesthetic values, and recreational use. Negotiations by the City of Provo and the U.S. Forest Service to purchase the piece of private land, owned by Richard Gray, broke down a few years ago. By law the Forest Service cannot buy or trade a piece of land for more than its assessed value.

The Alliance needs to raise about \$15,000 to cover the expenses of this effort. For more details, instructions on tax-deductible donations for this cause, and press coverage of the effort to save Rock Canyon from destruction see their webpage at <http://rockcanyonalliance.org/>

The Alliance also needs volunteer help circulating information, organizing meetings, and publicizing their efforts. Please contact DeAnn Wright at [<rockcanyonalliance@hotmail.com>](mailto:rockcanyonalliance@hotmail.com) or 801-373-2244 if you can help.

Utah Native Plant Society Board Meeting
Saturday March, 20, 2004 Starting at 11.00am
Location: 2931 Tolcate Lane, Holladay, UT, 84121



Chapter News and Events

Utah Valley Chapter Invites You On a Train Ride!

The Utah Valley chapter is sponsoring a custom ride on the Heber Creeper. Any UNPS member and family or friends is invited to participate. The train travels from Vivian Park in Provo Canyon to Heber City and back again. We have made arrangements for the train to let us off for a botany side trip in a pre-selected site on the route. Then the train will pick us up on a return trip. See the railroad internet site at <http://www.hebervalleyrr.org/> for more details.

The trip will be held on a Saturday in early to mid June, hopefully at the peak of wildflower bloom for that elevation. Our chapter has agreed to help the Heber Valley Railroad develop a plant list for the route; our group will receive a discount from advertised prices based on the size of the group we bring.

If you are interested in joining us, please contact Celeste Kennard in Provo at 801-377-5918 or celeste@byu.edu by **March 22** so we can finalize the arrangements. Please let her know approximate number of interested parties in your group and give her contact information. Details of date, price and schedule will be posted by the end of March on our website, <http://www.unps.org> under Chapters, Utah Valley.

New Propagation Workshop Added.

Weds. March 24, 2-4 pm, Suite 211 Historic Courthouse, 51 S. University Ave.

Provo

Contact Julia Tuck, 377-8084 to register.

Below is a list of the other propagation workshops available, remember to mention you are a UNPS member and ask for the \$5.00 discount.

Salt Lake County

March 6, Saturday. 1PM - 4PM. 3540 S Market St (2820 W), West Valley City.

March 10, Wednesday. 6PM - 9PM. Sandy City's Lone Peak Pavilion, 700 E 10140 S, Sandy.

Cache County:

March 6, Saturday. 9AM - 11AM. USU Teaching Greenhouse, Logan.

March 10, Wednesday. 6PM - 8PM. USU Teaching Greenhouse, Logan.

Thanksgiving Garden Visitor Center:

March 13, Saturday. 9AM - 11AM. Garden Center classroom.

Davis County:

March 13, Saturday. 9AM - 11AM. Utah Botanical Center.

To Register

Salt Lake: 801-468-3179;
Davis: 801-451-3204;
Thanksgiving Point: 801-768-7443;
Cache Co.: 435-752-6263.

Congratulations to Long Time UNPS Member Abby Moore!

By Susan Meyer

Congratulations to Abby Moore on the publication of her undergraduate research work with Lynn Bohs at the University of Utah as a peer-reviewed journal article in the November 2003 issue of the American Journal of Botany. Abby's paper, entitled 'An ITS Phylogeny of *Balsamorhiza* and *Wyethia* (Asteraceae: Heliantheae)', represents the culmination of many years of interest in this fascinating group of native plants. We knew she was committed to this cause even when she was in high school—her handle at hotmail.com for years was---Balsamorhiza. And, as frosting on the cake, the cover of the American Journal of Botany November 2003 issue was graced by a full-page color photo of a hillside up Red Butte Canyon featuring her favorite plants in full bloom. Hey, we always knew this kid was going to amount to something in the Botany World! Way to go, Abby! I understand that Abby is going to give us a full report of this work in an upcoming issue of the Sego Lily.

Southern Utah Chapter Stalwart Rebecca Fawson Receives USEE Award

By Susan Meyer

Third grade teacher Rebecca Fawson was recently honored by USEE (Utah Society for Environmental Education) with their Volunteer of the Year award for her work on the Dixie National Forest. In addition to supervising innumerable Eagle Scout trail-building activities over the years, Rebecca is primarily responsible for the development of two very special projects on the forest. The first project is the Equestrian Interpretive Trail near the town of Pine Valley, installed a couple of years ago and reported on earlier by Rebecca in a Sego Lily article.

The second project is the Children's Forest at the historic charcoal kiln on the Oak Grove Road above Leeds. Rebecca has jogged or walked the Oak Grove Road just about every morning of her adult life, and knows the area intimately. The Children's Forest at the Kiln is part of a Forest Service-wide system of Children's Forests, and is also designated as a Utah Heritage Garden in the UNPS demonstration garden program. It integrates charming signage produced by Rebecca's third grade students at Three Falls Elementary in nearby Hurricane with a short loop trail and a longer trail to the historic kiln. Rebecca has augmented the plants that grow along the kiln trail with container produced plants grown from locally collected seeds, and has lovingly hand-watered them through the drought. The Forest Service is so impressed with this project that they plan to have their national environmental education meeting in St. George this spring, so that they can feature a visit to the Children's Forest at the Kiln.



Signage for both projects was designed by Utah Valley Chapter member Bitsy Schultz and printed on the outdoor-durable vinyl sign maker that the chapter purchased a few years ago. We plan to post electronic versions of the signage for both these projects to the UNPS website soon, so that more people can enjoy them and find inspiration for their own educational signage projects.

Rebecca is also the primary motive force behind a very fine Utah Heritage Garden at her school. She is a true Utah native plant aficionado and has single-handedly done a great deal to raise local consciousness on native plant issues. She deserves our heartfelt thanks for her continuing efforts. Congratulations, Rebecca!

UNPS co-sponsors March 4th waterwise lecture

UNPS is a co-sponsor of a March 4 lecture entitled "Lots of Color with Less Water, Gardening with Waterwise Perennials. The speaker will be David Salman owner of High Country Gardens. The lecture will take place from 7-9 pm at Red Butte Gardens and the cost for UNPS members is \$5- paid at the door.

For more information go to:

http://www.redbuttegarden.org/Calendar/?c=Special_Lectures#colorlesswater

Announcing the
Fourth
Southwestern Rare and Endangered
Plant Conference
March 22-25, 2004

*Corbett Center, New Mexico State University
Las Cruces, New Mexico*

For more information or to register go to

<http://nmrareplants.unm.edu/conference/announce.htm>

or

<http://nmrareplants.unm.edu/conference/registration.htm>

New Utah Rare Plant Guide URL:

The rare plant guide has a new web address, www.utahrareplants.org.

This is simply a sister UNPS web site. We ran out of space at our main site that is donated to us by Xmission and in order to handle the space for all of the images, it seemed best to provide it with a separate home. UNPS however continues to be the host for the guide. Work in fact related to 2003 grants is being wrapped up and the guide has been frequently updated in early 2004.

UNPS offers Flora ID expert identification CD's

UNPS is pleased to offer to offer two CD's produced by Flora ID Northwest, LLC Interactive Plant Keys and Color Photos for Utah and Interactive Plant Keys and Color Photos for the Pacific Northwest (which includes Utah).

These CD's undertake the ambitious task of allowing for identification of all native and naturalized species in various states (over 3000 in Utah alone) through a series of user-specified attributes and does away with the rigidity of a dichotomous key.

The CD's should be a welcome addition in the hands of teachers, nature lovers and scientists/botanists alike.

For more information go to our Store page (www.unps.org and then click on Store) and click on the title or picture link for more details about the CD's.

UNPS offers Penstemon CD

UNPS is pleased to offer William Gray's second CD, Penstemons: a Photographic guide. Mr. Gray is also the author of Cyberflora: Plants of the Central Wasatch Front and a resident of Salt Lake City (and UNPS member!).

Penstemons only occur in North America, a number of which are found in Utah. For more information go to our Store page (www.unps.org and then click on Store) and click on the title or picture link for more details about the CD and a review.

A Utah Flora update available !

The third edition of A Utah Flora became available in January of this year. This is the much awaited update to the 1993 edition by Welsh, Atwood et al.

While not at press time available "on-line" from any source that we are aware of, the book can be ordered from the Monte L. Bean Museum of Life Science. The cost is \$85 (plus there may be a shipping charge). Call 801-422-5052 to order.

***Draba burkei* published:**

A paper by Michael Windham, curator of the Garrett Herbarium, has been published in **Madrono** officially naming this rare Utah native which is endemic to the Wellsville Mountains and northern Wasatch Range of northern Utah in Box Elder, Cache, and Weber Counties.

Trips

Wildflowers of Mongolia with Red Butte Garden June 19 to July 5, 2004

Journey with Red Butte Garden through the wildlands of Mongolia, and experience summer in a remote region of Asia that still lives to the heartbeat of natural and traditional rhythms. We'll roam verdant river valleys, the shores of crystal-blue lakes, explore a Buddhist monastery and overnight in comfortable yurt camps.



The ten-day wildflower trip, led by Professor Ganbold Enebish of the Institute for Botany at the Mongolian Academy of Sciences, is complemented by a menu of four six-day extensions, which offers you a choice among visiting the Kazakh eagle-hunters of the western Altai Mountains; the Tsaatan, "Reindeer People," of the Lake Khovsgol region; the great dunes and canyons of the Gobi Desert; or to fly fish along the Kherlen, Mongolia's longest river.

For those who are passionate about wildflowers, bird-watching, traditional cultures, and immersion in pristine wilderness, this is an exceptional opportunity to encounter the fascinating diversity of Mongolia.

Travel options include 12 and 17 day "Wildflowers of Mongolia" packages starting at \$3,300, including international airfare from Salt Lake City.

To find out more, call Snow Lion Expeditions at 1-800-525-8735 or visit

www.snowlion.com.

Native Plants and Birds of Peru in the Andes and the Amazon Aug. 31st- Sept 15th with an extension to Lake Titicaca to the 19th



Peru is a country of amazing geological and biological diversity. On this educational adventure to Peru we will explore the native plants of the Peruvian Andes and Amazon. Walking with scientists, professors and tribal people we will explore some of the ecological zones, agricultural crops, medicinal plants and traditional uses of Peru's native Plants.

For more info. go to: http://www.crookedtrails.com/peru_nativeplants.htm

Workshops

Workshops sponsored by the Intermountain Herbarium and Utah Native Plant Society

GRASSES 2

A workshop on grasses will be held in the Intermountain Herbarium (below Junction Cafeteria, USU Campus) on Friday, March 5, from 9 am to 4 pm (with some time for lunch) and again on Saturday, March 13. The workshop will be led by Mary Barkworth

Topics include : Grasses, grass structures, common genera, some keying, including use of an interactive key

Cost: \$20 for UNPS members; \$25 for non-members.

There is a maximum limit of 20 people and registration has already started.

SEDGES

Sherel Goodrich, coauthor of the "Field Guide to Intermountain Sedges," has kindly agreed to offer a workshop on sedges at Utah State University on Saturday, March 27 from 9 am to 4 pm with an hour for lunch. This workshop will be held in Geology 301 - the building south of the University inn.

Registration \$15 for UNPS members, \$20 for non-members, handouts - \$15

INTRODUCTION TO MUSHROOMS

Michael Piep will offer his introduction to mushrooms over two meetings the first is on Friday, May 14 from 6 - 9pm in the herbarium.

During the first workshop meeting, you will learn basic fungal facts and collection tips. You will also have an opportunity to practice identifying fungi with the help of a local expert.

You can test these identification skills during the second meeting, Saturday, May 15 from 9 - 3pm (later if required) where you will go on a field excursion to a local canyon. You will collect fungi with the instructor who will show you how to find the vast array of local species. It is suggested that you bring the following items,

Water and lunch, Paper bags for collecting specimens, Field guide, Notebook, Digging implement, Pocket knife, Magnifying glass, Camera

Costs – \$20 for UNPS or BMS members, \$25 for non-members, this cost includes handouts.

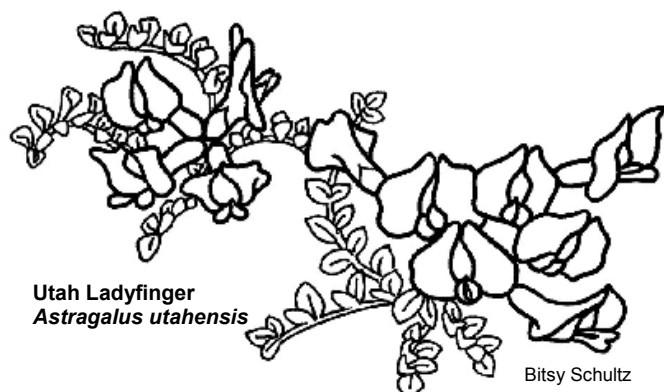
Registration begins Thursday, April 1st

For information on these and upcoming trips go to <http://herbarium.usu.edu/>

Please note all of the workshops are booked on a first-come, first-served basis so if you are interested in any of the above, don't leave it too late to book!

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

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Utah Ladyfinger
Astragalus utahensis

Bitsy Schultz

Utah Native Plant Society Membership and Information

☐ New Member ☐ Renewal ☐ Gift

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

For more information about the
Utah Native Plant Society call:

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

UTAH NATIVE PLANT SOCIETY

President: Susan Garvin
President Elect: Mindy Wheeler
Chairmen: Larry Meyer/Dave Wallace
Treasurer: Ben Franklin
Secretary:
Newsletter Editor: Paula Longhurst

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

**Check out our
website!**

www.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 scoobydo@xmission.com.

**The deadline for the next
issue is April 18, 2004**

CHAPTER PRESIDENTS

Cache: Steve Ripple
Canyonlands: Steve Budelier
Mountain: Abby Moore
Price: Mike Hubbard
Salt Lake:
Southern Utah: Margaret Malm
Utah Valley: Phil Allen
Escalante: Winnie Washburn

COMMITTEES

Horticulture: Susan Meyer
Conservation: Bill King
Education:
Invasive Species: Phil Allen/
Susan Garvin
Communications:



VOLUME 27 , ISSUE 3

MAY/JUNE 2004

Rare Plant Conservation Field Trip Scheduled in St. George, Utah

By Tony Frates and Susan Garvin

The Utah Native Plant Society Conservation Committee has planned a field trip to St. George on Saturday, May 1 to look at lands that would be initially impacted by the proposed Southern Corridor highway project and nearby habitat for several endangered species similarly threatened by development, recreational abuse, and invasive species in this endangered ecosystem. This trip will be led by one of the experts who have been studying this rare ecosystem for over 20 years.

If you are interested in helping us with the Southern Corridor conservation project or other Washington County rare plant conservation concerns, (whether or not you can join us for the field trip), please call :

Tony Frates, Washington County Conservation Coordinator, at 801- 277-9240
or Susan Garvin, Washington County Public Relations Coordinator, at 801-756-6177
or send us an e-mail at unps@unps.org.

For more information about the proposed Southern Corridor project, see the News section at www.unps.org.



MAY/JUNE 2004

Rare Plant Conservation Field Trip Scheduled in St George Utah
/ TNC Announcement : P1

Washington County prepares South Block Planning/ Utah Rare
Plant Stats : P2 & 3

UNPS Mobilizes to Defend Rare Plant Ecosystems in Southern
Utah P4

Rock Canyon Heritage Garden Threatened / Chapter News P6

FYI / Shake Hands with a Tree/ Now Available : P9

Calendar of Events/ Vacancies at UNPS : P10 & 11

**TNC Announcement : - Do you care about
the future of Utah's clean water, wildlife
habitat, family farms and community parks?**

Utahns for Clean Water, Clean Air & Quality
Growth is working to put Utah's first statewide
conservation initiative on the ballot. We need help your
help now to gather signatures for this historic effort!
Visit www.utahlands2004.org or call (801) 531-7304.

Additional materials will be available on UNPS web-
site soon.

WASHINGTON COUNTY PREPARES: SOUTH BLOCK PLANNING

by Tony Frates

There will be a public workshop on May 5, 2004 in St. George to discuss the "South Block" property, some 10,000 or so acres from Bloomington Hills to the Arizona border owned primarily by the State of Utah School and Institutional Trust Lands Administration aka SITLA. This area includes White Dome and the area where the Southern Corridor highway will initially be built. (For more information about the Southern Corridor, see the News section at www.unps.org). It includes almost all of the known habitat of the Holmgren milkvetch (*Astragalus holmgreniorum*) and critical habitat for the bearclaw poppy (*Arctomecon humilis*), both endangered species. Another federally listed species, the Siler pincushion cactus, *Pediocactus sileri*, will also be impacted along with several other rare and sensitive species which to date have been completely ignored such as the unique Parry sandpaper bush, *Petalonyx parryi*.

This meeting will be held at the St. George City Office Building, 175 E. 2nd North in St. George, Utah in the City Council chambers; however there will be three breakout sessions that will be held concurrently - the breakout sessions relate to: (1) White Dome - to be moderated by SITLA, (2) Residential neighborhood design and (3) Business park and transportation issues. Officials have indicated that rare plant species will only be addressed in connection with White Dome yet in fact rare plant species will be impacted in connection with all of these proposed activities.

The purpose of the meeting is to provide to the public a brief overview of a sustainable growth study that has been conducted to date and to receive public feedback.

A follow-up meeting will occur later this year on May 26 to present the information that was received during the May 5 workshop. It is unknown how the feedback and issues raised at the May 5 meeting will be capable of being assimilated and analyzed in such a short period of time.

The workshop is part of an initial \$20,000 EPA grant for to study improved development patterns in Washington County which was then piggy backed with a grant from the FWHA for \$50,000 to allow for additional study of sustainable growth and the impacts of that growth. That money somehow flowed to UDOT and then via a secondary contract to the City of St. George who in turn hired a planner to assist them in this study, Winston & Associates of Boulder, Colorado. This study has been in process for a while and the initial work done by the planner, referred to as the "St. George General Plan" is referenced at <http://www.winstonassociates.com> (see "Current work").

This activity has been happening subsequent to the approval of the new St. George airport (not yet built) and as the environmental impact analysis of the Southern Corridor project winds it way thru what may end up being a rote approval process.

SITLA had previously hired their own San Diego-based planner and has likely on its own spent tens of thousands of dollars in planning for development in the area. How the two different planners will work together exactly is unknown. Reportedly both planners are at least somewhat aware of issues relating to endangered plant and animal species.

Rare plants are typically indicators of a much broader, complex and delicate ecological system. Environmental impact assessments to rare plant species usually fail to consider critical interactions and

interdependencies upon which these and other species depend. Rare plant surveys (the only rare plant impact related activity which has been undertaken in connection with South Block planning or in connection with the Southern Corridor project to date) are only the beginning. Seed banks are for example of huge importance to the often boom and bust cycles of highly restricted desert endemics yet are typically overlooked.

The identification of pollinators (which more often than not are native bee species) which are critical to the survival of rare plants (which usually require cross pollination, i.e. most do not self-pollinate) and their habitat is typically ignored. The pollination ecology of the rare plant species impacted by rapid South Block development (which in turn will be vastly facilitated by the proposed Southern Corridor highway project) is not well understood. No study with respect to the nesting sites of the pollinators has been undertaken; no study has been conducted to determine what the impact of building roads will have on fragmenting the pollinator nesting sites from the rare plant habitats; no study has been conducted to determine what the impact of chemical sprays on nearby residential housing developments and introduced species will have on pollinators. Yet we know that the fragile pollination systems in place now are likely already stressed to the breaking point. These systems will instead likely be destroyed or fragmented to the extent that we will never know what we did not learn, and the school children of the state of Utah for whom the lands will supposedly be developed (and school children everywhere) will ironically never be able to learn about them.

Preliminary congressional funding for the Southern Corridor, even though not yet even officially approved thru the NEPA process, was requested on March 26, 2004. The entire area appears to be destined for fast track growth despite unanswered questions relating to what kind of population that area can support and without taking into account the long term (and 25 years ahead, the typical "long term" period considered in these kinds of studies, does not represent the kind of long term thinking that is appropriate).

It will be important for those concerned about open space, rare ecosystems, biological diversity and quality of life issues to attend the May 5 workshop. We can only hope that Washington County planners will do a better job than in counties along the Wasatch Front.

UTAH RARE PLANT STATS

Currently federally listed	24
Federal candidates	6
Emergency listing requested	2
Globally rare*	300+
Globally rare/native taxa**	10%
Species delisted	3
Year first species listed	1978
Year last species listed	2001
Primary threats	Habitat destruction, invasive species, pollinator fragmentation
Most important pollinator	Native bees (over 1000 Utah native bee species)
Rare bees listed	None
Counties with most rare plants	(1) Kane (2) Garfield (3) Washington
Genus with most rare plants	(1) <i>Astragalus</i> (2) <i>Penstemon</i>

*266 of these are currently identified at www.utahrareplants.org

**Rough estimate, the percent of our flowering plants which are globally rare

UNPS MOBILIZES TO DEFEND RARE PLANT ECOSYSTEMS IN SOUTHERN UTAH

By Susan Garvin

Rare plants in Utah have been under threat on several fronts and at varying levels of intensity ever since the pioneers settled in Utah more than 150 years ago. The threats to native plant systems have included agriculture, homebuilding, cattle grazing, importation of exotic species for landscaping and other purposes, and increasing use of pesticides, among many others. In modern days, the biggest threats to rare plants and the ecosystems that support them come from disturbance and eradication by development, both public and private, increasing invasion by noxious and other exotic weeds, and indiscriminant off-road recreation vehicles, in that order in many places, and in Utah as well.

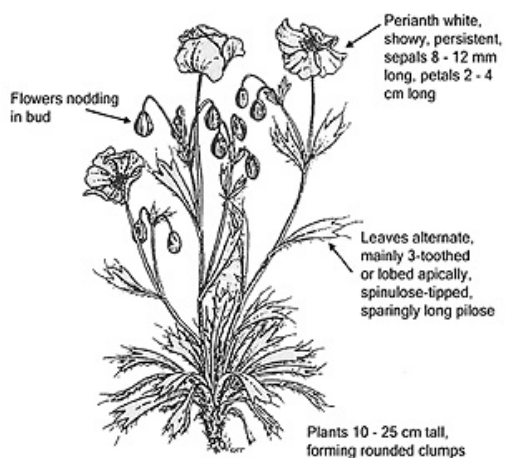
For the first time in many years, UNPS is getting geared up to begin a big public education campaign in Washington County. Growth rates in that region of Utah exceed most if not all other parts of the state. In the same area, many unusual conditions exist for the development of rare plants due primarily to the rather abrupt transition from Colorado Plateau and Great Basin ecosystems to Mojave Desert climatic and geophysical conditions.

Our Conservation Committee has been quietly engaged in efforts to protect native species and rare plants in particular for well over 20 years without a break. But much of this work occurs outside public notice, without much political or press notice, and often our own membership is unaware of the effort being made to hang on to native plant ecosystems. In the last few years, public awareness of native plants has increased dramatically in Utah, due in large part to the efforts of UNPS to promote the use of native plants for horticultural purposes. We have had 8 chapters born at least partly out of this effort, and we want to congratulate Dr. Susan Meyer, our former board chairperson for initiating and nurturing the remarkable success both within UNPS and in communities and newspapers around the state.

Now we feel that we have an emergency in Washington County worthy of a similar effort in the area of conservation of rare plants and ecosystems. So the Board of Directors has approved a new (volunteer) position on our Conservation Committee and filled it with Tony Frates, Webmaster Extraordinaire for UNPS and primary instigator, author and maintainer of the online guide Utah Rare Plant Guide, available free of charge at <http://www.utahrareplants.org/rpg.html>. Tony has been keeping track of rare plants in Southern Utah since at least 1983, when he was also one of the primary forces - along with Duane

Atwood and several other concerned conservationists - behind the federal listing of the first rare plant in Utah, the beautiful dwarf bearclaw poppy, *Arctomecon humilis*. Tony's new position is called Washington County Conservation Coordinator, which only begins to describe the efforts he has been making to preserve at least a small viable percentage of rare plant habitat in the St. George area.

Tony has been keeping track of development issues in connection with a new federally funded highway proposal to build a highway from west of Hurricane, with three possible routes proposed in the Hurricane area, between Washington and Punchbowl Domes, extending south to run west of the new airport property, then heading south through the outskirts of White Dome to intersect with I-15 south of Bloomington.



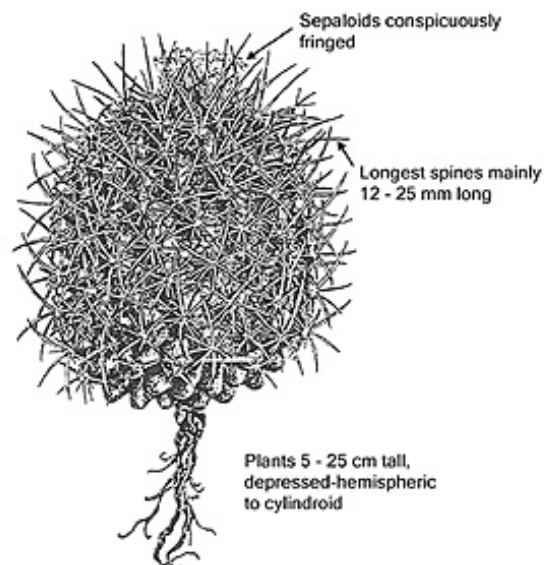
ARCTOMECON HUMILIS

See <http://www.udot.utah.gov/sc/> for more details on the highway proposal. A bill has recently been introduced in Congress asking for funding for this highway, even though the Final Environmental Impact Statement has not yet been released for public scrutiny. UNPS wrote letters to protest the premature funding proposal at that time, but no answer has been received by the Conservation Committee at this date.

No alternate routes have been proposed by UDOT to avoid any of the several rare plant concentrations known in the Washington City area, surrounding the new airport site, on the outskirts of White Dome, and in the area of the Atkinville exchange south of Bloomington. UNPS submitted a 12 page response to the Draft Environmental Impact Statement in May of 2003, along with Center for Biological Diversity and Grand Canyon Trust. The response letter detailed many areas of concern for the survival of the 6 or more species of rare plants and some of their pollinators known to be in or near the proposed highway route and asked for considerably more study by biologists and other expert scientists to determine the impacts of construction on rare plant habitat and species survival. It asked for Critical Habitat Designation by the Fish and Wildlife Services for two critically threatened *Astragalus* species as well as the poppy, all at risk from the highway and from other proposed development nearby. The Critical Habitat Designation has been agreed to by FWS but not yet accomplished. It also asked for plant inventories to be conducted for at least 12 other species of relatively rare plants, not federally listed but either listed by the State of Utah's Heritage Program or known by botanists to be rare, which could reasonably occur and be critically impacted by highway construction related to the Southern Corridor proposal.

The letter also asked for specific mitigation activity including more scientific study should the proposed highway be built as planned. To this date, the only known response to these requests has been increased inventory work on the two threatened *Astragalus* species and no response has been directed to UNPS at all. This letter can be studied in its entirety on our website at <http://www.unps.org/miscpdf/UNPSSCDEISResponse.pdf>. The Final EIS is due out this summer; no announcement of the date of the FEIS has been made public at this time, but it is expected in May or early this summer. Most of the recommendations of conservation organizations have not been responded to either in public or in private, to our knowledge.

In addition to the Southern Corridor highway proposal other road proposals have been rumored. And private developers have been proceeding to buy private land and possibly arrange purchases of land owned by the School and Institutional Trust Lands Administration (SITLA). These lands were originally designated to be used for the education of Utah school children and are still designated for that purpose. SITLA has begun to sell many of these parcels to high end developers to get maximum financial gain from the lands, but UNPS believes that at least some of these lands are valuable intrinsically to be designated as conservation parks or children's learning centers and onsite museums, teaching the children of Utah more about their natural heritage and about ecosystems. We believe that perhaps White Dome in particular might be an ideal site to turn into such a place, if appropriate buffer zones are also set aside around the park to avoid weed invasion and impacts of



PEDIOCACTUS SILERI

pesticide use. The transactions of SITLA are not subject to environmental impact statements unless federal dollars are being used for their development and are seldom aired in public.

UNPS is also in the process of mounting an educational campaign to let citizens of all ages in Washington County become more aware not only of the natural treasures surrounding their communities, but also more about the probable effects of development on the native plant ecosystems near their homes. Most people in St. George are barely aware, if at all, that the Southern Corridor Highway is proposed to be routed between and near rare plant communities, and if they know some of the issues, they likely do not know about the more subtle effects of population fragmentation on the eventual fate of rare plant populations that are already recognized as being endangered. Many have never even seen a dwarf bearclaw poppy or a *Pediocactus sileri* but they would appreciate them if they did, and perhaps even appreciate the effects of endangering the populations of insects which pollinate them.

We will need lots of help from UNPS members who believe as we do that Utah's natives are unique and that their ability to continue to evolve in their natural habitats are very important to life on earth. These ecosystems have evolved over thousands of years to be able to survive and reproduce in spite of the harsh climate of a desert area, and the loss of them may at some point make the difference between life and death for humans and all species subjected to similar harsh environments. Much study of these communities remains to be done by scientific experts, and management decisions should allow for that possibility according to the latest scientific information available and go further and seek more information in many cases.

Please see our website for more information on this evolving campaign. We will be adding materials to the conservation page on a frequent basis as we find time to write them and search out illustrations, informative maps, water conservation information, and many other aspects of these rare ecosystems that are little known by the general public. Some of us will be going to St. George on May 1 to meet with conservation partners and local conservationists who would like to help us teach the folks of the area about the issues involved and slow down the planning process to allow for appropriate studies to be done. See announcement on the front page of this issue. And some of us will be staying for the public workshop on May 5 to see what the St. George City Planners have in mind for the South Block property described in the article on pages 2 and 3 of this issue. Please contact us at unps@unps.org if you have time and energy and talent to devote to this educational campaign or any other aspect of the situation we are describing, including legal help, PR skills, organizational skills, highway engineering expertise, or many other skills relevant to protecting rare plant ecosystems in situ. We can also use help in collecting petitions, distributing educational materials to citizens and students, telling community leaders the whole story, designing plans for children's parks and on site museums, and a hundred other things you might have interest and talent for doing that would help this effort.

This will be a long term project and will of necessity develop slowly since UNPS is a volunteer organization, so if you can't help this summer or this year, get in touch with us anyway to discuss what you might be able to do next year. We will be using this campaign also to attract more members to UNPS, so if you have friends that believe in the value of native plants, show them this Sego Lily edition and encourage them to become members of UNPS as well.

Wish us luck in our various efforts; Utah sometimes seems oblivious to the value of native plants, but we believe that there are many people living here who believe or will come to believe as we do, that these plants and their habitats are an important part of our heritage and should be preserved for our grandchildren and great grandchildren to enjoy as well. And Utah will be a nicer place to live and play because of the native ecosystems than it would if all of Utah were planted in bluegrass and Norway maples!

Rock Canyon Heritage Garden Is Threatened by Gas Pipeline Replacement

Questar Gas is replacing an existing pipeline that runs through Rock Canyon in Provo. The existing 18" pipeline is located 6 feet deep and approximately 15-20 feet inside the UNPS Restoration Garden in the area. Unfortunately both net hackberry trees will have to be removed before the work starts in order to save them. And almost the entire garden is located within the proposed 60 foot right-of-way which is used to allow equipment access to the existing pipeline and for storing excavated dirt.

Questar has been very willing to work with the Utah Valley Chapter of UNPS within the confines of the project. They notified the UNPS of the project so that we could move any plants out of the area. The nature of the rocky soil makes it very hard to move plants effectively or to use light weight small equipment to replace the pipeline with a 24" pipe. In addition they are planning on running their equipment out of the parking lot to minimize soil compaction in the area. They are also planning on using only one side of the right-of-way for soil storage to minimize harm to the Restoration Garden. The UNPS has offered to provide them with a suggested seed mix for their nearby restoration work after the pipeline is replaced, and Questar seemed eager to have the valuable input from our plant experts.

Our hope is that good cooperation and more public visibility may benefit both parties in this situation, and though the garden will be temporarily withdrawn from public access and many years of work will sadly be lost in parts of the garden, The Rock Canyon Heritage Garden will emerge in better shape than previously expected.

Our thanks go to Tamara Bahr and Celeste Kennard for putting energy into this negotiation effort, and to the whole Utah Valley Chapter for all the work they have put into this garden over the years and the work they will undoubtedly be doing in future years to restore and maintain it.



Chapter News

NEW CHAPTER!

Escalante Chapter

We would like to Welcome the Escalante Chapter of UNPS! Winnie Washburn - Chapter President has turned the three year Main Street Beautification Project into our newest chapter. As we went to press they already had 22 members.

As you will see in the Calendar section Escalante are wasting no time in organizing their first event. Any UNPS members are welcome we hope you will support their efforts.

SOUTHERN UTAH CHAPTER

May 1 There will be a small group down in Southern Utah from the board of directors, and also from several other conservation-oriented organizations. The purpose of the visit will be two endangered plant species; the bearclaw poppy and *Astragalus holmgrenorum*, both of which are being threatened by the Southern Corridor (as well as ATV'ers). There will be several experts on hand to take the group out to see the sites, and discuss plans for trying to protect these rare and threatened species. If you are interested, and particularly if you are interested in becoming active in this effort, we invite you to come. **Please see the article on the main page if you are interested in participating in this field trip.**

Want to know what's currently blooming in Zion? Then go to http://www.unps.org/zion/zion_index.html for a fascinating look at what you can currently see.

SALT LAKE CITY CHAPTER

At the March meeting of the UNPS board Bill Gray agreed to act as interim president of the Salt Lake City chapter. Bill's priority will be to reestablish programs where local members can take part in meetings, flower hikes, plant propagation workshops etc., and also get opportunities to assist in conservation efforts. Stay tuned.

PRICE CHAPTER

The Price Chapter of the UNPS will be hosting a field trip, to be led by Bob Thompson, within the Manti-La Sal National Forest (MLNF) on a Saturday in mid or late July (depending on flowering condition). The group will meet in the morning at the Tucker Rest Stop on highway 6 and proceed up Clear Creek Road to Bear Ridge to investigate a larkspur tall forb community. The group will continue down Skyline Drive stopping at several different community types. The field trip will end at the Mont E. Lewis Botanical Area. The botanical area is a montane, cold-calcic spring site containing many species not normally found outside of arctic and alpine habitats. For those who wish to stay overnight on the MLNF, there is a campground nearby our final destination.

Anyone wishing to attend should contact Mike Hubbard (at (435) 637-4834 or mhubbard@sisna.com) by July 1st.

UTAH VALLEY CHAPTER

Meetings :- May 14 (please note the changed date) - Wayne Padgett, Wasatch-Cache National Forest Ecologist, will give a power-point presentation on the tall forb communities of the Wasatch Mountains.

August 20, the speaker will be Beth Corbin, Forest Service Fire Ecologist, whose topic is ecological responses to fire.

The chapter's native plant sale will be held Saturday May 22, from 9 a.m. to noon, at the Rock Canyon trailhead park heritage garden in Provo. Lots of liners of a variety of perennials and grasses, and some gallon sized plants. Contact Susan Garvin for details.

The chapter will be holding a native plant garden tour on June 5th, viewing how four families have based or integrated into their landscapes a wide variety of native species. Contact Lyle Jenkins (ljenkins265@msn.com) or Denise Van Keuren (dvk@xmission.com for details).

Contact Celeste Kennard (celeste@byu.edu) for details on the Heber Creeper railroad-based field trip (see last month's Sego Lily for details) The deadline has been extended to May 3rd.

CACHE CHAPTER

Most Saturdays, starting May 8 Cache Chapter will be represented at the Logan Farmers' Market, usually with plants to sell

UNPS LIFETIME MEMBER UPDATE!

By Tony Frates

Noel and Pat Holmgren have become the latest Utah Native Plant Society lifetime members. UNPS now has 16 lifetime memberships.

Thanks to Noel and Pat for their support.

FYI

Grant in aid program

At their last meeting, the board agreed that the Capitol Reef project would receive \$500 for a technician and Nathan Phillip's *Allium* project another \$500; each applicant was awarded 50% of the requested amount due to budget constraints.

3rd Annual Rare Plant Conference – Co-sponsored by UNPS and Red Butte Gardens

This conference took place at Red Butte Gardens on March 1st 2004. The meeting was a huge success with an extremely diverse group of over 40 attendees. We would like to thank Bill King (UNPS) and Jena Lewinsohn (Red Butte Gardens) for putting together such an interesting set of presentations.

Shake Hands with a Tree: Get to Know the Natives

By Harriet Wallis

Try something different. Take a walk in the woods and get to know the native trees by shaking hands with them.

For several years, my husband and I volunteered as skiing good will ambassadors for the U.S. Forest Service at Alta in Little Cottonwood Canyon and at Brighton and Solitude in Big Cottonwood Canyon. Our mission was to take skiers and snowboarders on a tour along a gentle trail and help them understand and appreciate the winter world.

Locals and out-of-staters usually looked at the towering evergreens that bordered the trails and assumed they were "pine trees." They were delighted to discover they could identify trees by taking off their gloves and literally shaking hands with a branch.

Here's the native tree memory guide.

A handshake with a spruce tree is uncomfortable. It pokes at your hand and you let go quickly. It's spikey and sharp. A close look at the needles show they are square, and because of that you can roll them back and forth between your thumb and index finger. So, just remember: Spikey, sharp, square spruce. It rhymes.

Fir trees provide a different handshake. They are soft, gentle and friendly. The needles are flat and cannot be rolled. So the rhyme is: Friendly, flat fir.

As to pine trees, they have needles that are bundled together in groups of two, three, or more depending on the species. Pine trees have needles that come in packets. So it's: Pines have packets.

Engelmann spruce and sub-alpine fir are dominant natives in the canyons, and some Douglas fir can be found also. Enjoy your

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**Calendar of Events****Saturday May 1st KAYENTA COMMUNITY GARDEN TOUR FUNDRAISER**

The Kayenta Community is hosting its first annual **Desert Garden Tour**. The theme this year is "The Healing Garden" . Special guest speakers, Paula Askereth Philips and Gary Paulson

Time: 10am to 2pm Guest Lectures: 12 noon Tickets: \$10 each and available at Coyote Gulch Art Village shops or the Kayenta Sales Office 435-628-7234

The unusual and exquisite private gardens of local Kayenta residents will be open to the public for this special one-day only event. The tour will feature seven gardens, each with a different emphasis. Another special treat will be the much-anticipated tour of the soon to be completed Rose Labyrinth.

The Intermountain Herbarium, Bridgerland Mushroom Society, and Cache Chapter of the Utah Native Plant Society are proud to present the 2nd annual Spring Mushroom Identification Workshop.

Friday May 14 from 6-8(9) pm at the Intermountain Herbarium on the USU campus in Logan, Utah.

Saturday May 15 from 9 am – to whenever we get tired of looking at these marvelous organisms in Logan Canyon. There will be car pooling so the meeting place will be announced on Friday evening.

Topics to be covered include: Ecological roles, What do I call this structure? Major groupings, and a hands on look at the structures and mushrooms themselves. On the fieldtrip you can see mushroom in their native habitat and discuss on site their roles and how to identify some of the more common and a few of our wild edibles (if our luck holds we may even find enough to sample).

Cost: \$20 (\$15 if you are a member of BMS or UNPS) There are a limited number of places available, and last year the spots filled early. Contact Michael Piep (funqi@biology.usu.edu or 435-797-0061) to register.

Tuesday May 18th (7:30 pm in the Sugarhouse Garden Center, SLC) Bill Gray will be giving a talk to the Great Salt Lake Audubon Chapter on his Cyberflora CDs, and his current projects. Meetings are open to all interested people.

May 22; Water Smart Landscapes. Held at the Tonaquint Nature Center, 1581 Dixie Drive. Southern Utah. Cost \$5, space limited so reservations required. Call 673-3617 to reserve, or for more information.

Saturday, June 5th Zion Canyon Field Institute is presenting "Edible Plants of Utah" It is limited to 15 participants and there is a 20% discount for UNPS members (send SASE to Margaret Malm, PO Box 460926, Leeds, Ut 84746-0926 to obtain discount certificate.) Fee: \$60 (includes dinner) Instructor: Ron Kay Meets: 1 pm at the Zion Human History Museum Call to register: 435-772-3264

Saturday June 5, The newly formed Escalante chapter of UNPS has extended an open invitation to all members to visit their Main Street Beautification Project and attend their monthly meeting. At the moment the plan is to have a walk-through Main Street around 4pm where you will see all the chapter have accomplished in the beautification of Escalante's Main Street with native plant gardens and other amenities, then enjoy a picnic pot-luck supper at the Garden Gate Sanctuary.

This project is already in it's third year, and Winnie Washburn has turned the existing effort into a brand new Escalante chapter of UNPS. The project has attracted a lot of tourist attention and they have recruited members from outside Utah and even outside the U.S. as part of their chapter! Hooray for the Escalante Chapter! Please RSVP to Winnie Washburn or Kathy Munthe by May 18th if you would like to attend. If you are planning on an overnight stay please let us know as Escalante will have to make the arrangements.

Saturday June 5 Hike to the Bristlecone Pine Grove. The hike - led by Kim Despain - will start from the parking lot at the Price Canyon Recreation Area campground at about 10:00 AM. The trail to the bristlecone pine grove is about a 3 mile round trip hike. The trail goes through a spectacular grove of mountain mahogany and there are very good examples of limber pine along the way, along with an abundance of native forbs and grasses. Hopefully the leopard lily will also be blooming again. The trail is not steep. The hike isn't strenuous but will take 2-4 hours. Kim takes it slow because he likes to take photographs.

Anyone in the Utah Native Plant Society , or any one interested for that matter is welcome to come along.

June 19 Field trip – all day, with option of staying over, to western Box Elder County. The lower areas adjacent to the road are beautiful around this time of year. Contact Michael Piep (435-797-0061) or Mary Barkworth (435-797-1584) to register. For many other Cache chapter events see news page at www.unps.org

UNPS SEEKING WEBMASTER, STORE MANAGER FOR OUR WEBSITE

Our Website designer, Webmaster, and Store Founder and Manager has done such a good job of improving Information Technology for UNPS that we are now in need of at least two dedicated volunteers to maintain the flow of information to our members and other interested internet viewers. Please see the following ads if you have talents and time that might help us fill these positions.

WEBMASTER FOR UNPS WEBSITE

Utah Native Plant Society is seeking a dedicated member to volunteer to maintain and update our website, in cooperation with our present webmaster and other large contributors to our website. This position requires a fairly long-term commitment to the organization and a desire to understand the philosophy and operation of UNPS so the website reflects our organization in the way the board desires. It also requires good and timely communication skills with our board and committee chairs and program coordinators. Hours can be extremely flexible within these parameters. UNPS will pay for expenses incurred, at the discretion of the board. Please see our goals and mission statement on our home page at www.unps.org, and take a look at our Articles of Incorporation and ByLaws by searching for "Bylaws" at the same site.

If you are interested in this position, please communicate with us at unps@unps.org and introduce yourself, with qualifications, to our present webmaster and designer of our website, Tony Frates.

WEBSITE STORE MANAGER

Utah Native Plant Society is seeking a dedicated member to take over the management of our website store. This will be a long-term volunteer position under the direction of our current webmaster and Store Manager. UNPS will pay for expenses incurred to carry out the job on the volunteer's personal computer, as approved by the Board of Directors. The job would involve communicating effectively and in a timely manner with our current Store Manager, our Treasurer, and with present and potential suppliers of books, CD's and posters. In some cases, the Store also mails these items to customers. These items for sale on our website are related to our goals and mission and to programs UNPS is running or promoting, at the discretion of the Board. The Store Manager would also be re-sponsible for responding to members who pay dues electronically and forwarding information about those transactions to our Membership Chairperson promptly. Hours are very flexible within those parameters but probably will require at least 5 hours per week. Please visit our website at www.unps.org to learn more about our goals and mission and also search for "Bylaws" to see our Articles of Incorporation and Bylaws. The Store is located at this address as well.

Interested volunteers can get more information by citing qualifications for the position. Correspond with our Webmaster, and Store Manager and Founder, Tony Frates, at unps@unps.org.

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FLASH! UNPS OFFERS TWO STATE FIELD TRIPS THIS YEAR!!

UNPS has sponsored field trips to the whole membership in past years, but we have not done so for the last several years. Now, with the increasing membership in chapters around the state, we are fortunate to have *two* field trips being offered to our members. Both the long-established Price chapter, faithfully presided over for many years by Mike Hubbard, and the brand new but already going strong Escalante chapter, under strong leadership as well by Winnie Washburn, have invited UNPS to attend field trips sponsored by their chapters. Mark your calendars for Escalante on June 5 (with a possible hike into Bryce Canyon on Sunday, June 6 if participants are interested) and a weekend in mid-to-late July (date to be decided by July 1, watch our website and June Sego Lily for late details). Note that both trips have sign-up deadlines (see Calendar section of this Sego Lily.) Bring family and interested friends; we are looking for new members all the time.

Utah Native Plant Society Membership and Information

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Zip: _____ Phone: _____
Email: _____

For more information about the
Utah Native Plant Society call:

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

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President Elect: Mindy Wheeler
Chairmen: Larry Meyer/Dave Wallace
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**Check out our
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Many thanks to Xmission for
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Plant Society website.

Please direct all suggestions,
articles and events for the
newsletter to Paula Longhurst
at scoobydo@xmission.com.

No later than June 8th

CHAPTER PRESIDENTS

Cache: Steve Ripple
Canyonlands: Steve Budelier
Mountain: Abby Moore
Price: Mike Hubbard
Salt Lake: Bill Gray
Southern Utah: Margaret Malm
Utah Valley: Phil Allen
Escalante: Winnie Washburn

COMMITTEES

Horticulture: Susan Meyer
Conservation: Bill King
Education:
Invasive Species: Phil Allen/
Susan Garvin
Communications:

Sego Lily

Newsletter of the Utah Native Plant Society

VOLUME 27 , ISSUE 4

JULY / AUG 2004

BIOLOGISTS MOVE TO PROTECT MOJAVE RARE PLANT HABITAT

ST. GEORGE – The Center for Biological Diversity (Center), Utah Native Plant Society (UNPS) and Southern Utah Wilderness Alliance (SUWA) today noticed the Bush administration Interior Dept. – Fish & Wildlife Service (FWS) of an intent to sue over their failure to designate critical habitat and to implement a recovery plan for two endangered Mojave Desert plants, the Holmgren milkvetch and the Shivwits milkvetch, as required by the Endangered Species Act (ESA).

Initially discovered in 1941 but not rediscovered again until 1979, the rare Holmgren milkvetch (*Astragalus holmgreniorum*, named in honor of Drs. Noel and Patricia Holmgren and also known as Paradox milkvetch), and the Shivwits milkvetch (*Astragalus ampullarioides*, also known as Shem milkvetch, in reference to a site where the species was first found in 1976) were both listed as endangered species by FWS on 9/28/01, under an agreement with the Center. Both species occur only in Washington County near sprawling St. George, Utah (except for a small area just over the state line in Mohave County AZ historically occupied by the Holmgren milkvetch, but the plant may now be extirpated there).

The Holmgren milkvetch is known from only three populations. The primary population exists within a limited area south of St. George along the Utah-Arizona border. The remaining plants in the primary population are seriously threatened by a proposed interchange that would connect I-15 to the proposed Southern Corridor highway, as well as urban sprawl planned by the state of Utah, and other habitat loss that would follow the highway.

The Shivwits milkvetch is known from only five sites. Most habitat at one site that formerly harbored several hundred plants was nearly destroyed by recent golf course development. Both species are also threatened by non-native invasive plant species, off-road vehicles, mining, and livestock grazing.



Holmgren milkvetch, a Mojave Desert member of the Pea Family, has attractive white-tipped purple flowers.



Holmgren milkvetch plants only live for 2-3 years and need specialized habitat.



JULY/AUG 2004

Biologists Move to Protect Mojave Rare Plant Habitat P1

ATV Man versus Microbe P3

Chapter News P4

Volunteer News / Be Water Wise at JWWCD P5

Habitat destruction is the primary threat to both of these endemic species. "These species are truly in peril. Critical habitat designation will add significant strength to the mitigation of future impacts," said Dr. Renee Van Buren, a Botanist with Utah Valley State College who specializes in endangered species.

A primary purpose of the ESA is to provide a mechanism so that "...the ecosystems upon which endangered species and threatened species depend may be conserved..." These species are severely restricted geographically, just as if they were living on islands. Typically rare plant species have adapted to specific soil types and microenvironments outside of which they cannot survive. This includes a complex association with other living things not the least of which are typically ground nesting, solitary native bees (rare plants usually do not self-pollinate).

FWS' own data proves that endangered plants & animals with critical habitat are less likely to be declining, and twice as likely to be recovering, than those without. Yet, only 37% of endangered wildlife in Utah has critical habitat.

While not the case for most of Utah's 24 federally listed plant species, the Holmgren milkvetch and the Shivwits milkvetch each included a critical habitat proposal when listed. Yet 2½ years after listing, FWS still has not designated critical habitat or finished recovery plans for the two species as required by U.S. law. Private landowners are not affected by the federal listing of plant species, nor the designation of critical habitat.

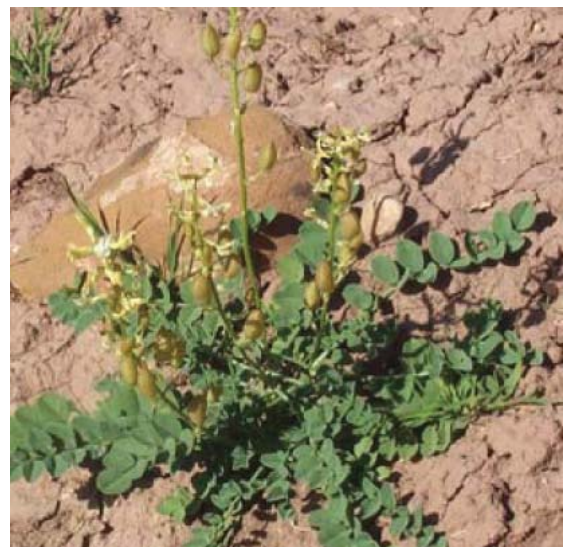
"Critical habitat works – it's the most important action to give wildlife a safe harbor for recovery," said Daniel Patterson, the Center's Desert Ecologist. "As wildlife habitat in the Mojave Desert is lost, so is the human quality of life."

Utah has over 2700 species of native plants and it is estimated that over 10% of these are globally rare and potentially vulnerable. The extent to which a species is considered rare involves a variety of factors including the number of populations and remaining individual plants, and the area over which it occurs.

**Contact & Photos: Tony Frates, Rare Plant Coordinator, UNPS 801.277.9240
Daniel R. Patterson, Desert Ecologist, Center 520.623.5252 x306**



Shivwits milkvetch, also a member of the Pea Family, has nice yellow flowers.



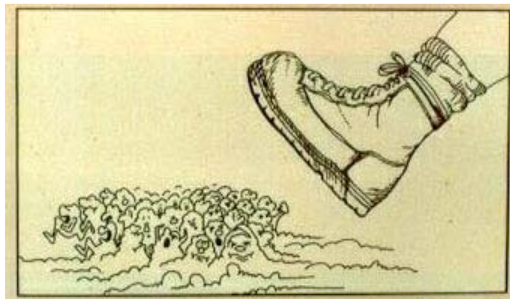
Shivwits milkvetch has a longer lifespan, but can only live on the purple clay soils of the Chinle formation

ATV's - Man versus Microbe

Words Paula Longhurst Pictures Ray Trussell

ATV – those three letters can inspire love or hate in some people. The issues attached to ATV use are as contentious to the American people as Fox Hunting is in the UK. On the one side we have the riders who want to exercise their pioneer spirit and explore as and when they want and on the other we have heavyweight environmental groups who want to ban anything that moves from going into the backcountry. In the middle of this are the responsible riders who are content to stay “on-trail” and groups like the BLM who’s job it is to keep everyone in line.

But why do ATV riders have to be monitored? It’s just an empty desert right? Well no it’s not and that is what has environmental groups up in arms. Soils are very vulnerable to impact damage. In the desert for example, there’s a magic mixture on the desert floor called *Cryptobiotic crust*. It’s not the sort of thing you can re-create in a lab even if you had the 50 to 100 years it takes to fully mature.



These black, knobby mats – almost invisible in the early development stages - make up over 70% of living desert ground cover. They can hold up to 10 times their weight in water and release moisture gradually back into the soil.

If you were to break the crust open (not recommended!) and look at it under a microscope, you would find a symbiotic microbial community of bacteria, blue green algae, lichen and fungi that covers much of the soil surface in desert areas.

Blue-green algae - also known as Cyanobacteria are particularly important in maintaining the crust. The Utah variety are filamentous. When they are moistened they progress through the crust leaving behind a sticky sheath, rather like a snail trail. This adheres to surfaces, such as rocks or soil particles forming an intricate network of webbing, which helps reduce wind and water erosion on previously unstable surfaces. The binding process is not dependent on living cyanobacteria, layers of older webbing have been found at depths of 15cm or greater.

Cyanobacteria also make nutrients and fix carbon and nitrogen (Nitrogen is especially important because Utah

soils lack this element) turning them into amino acids which enable larger plants to grow. Fossilized cyanobacteria have been carbon dated back past 3.5 million years old. It is thought that these tiny organisms were essential to transforming the earth’s carbon dioxide rich atmosphere to a more breathable oxygen one.

Although it can take nearly a century for the crust to fully function, tire tracks, boot steps and hooves can crush it in seconds. Continuous tracks are especially damaging because the ruts collect water when it rains and this erodes the crust from the inside out.

If the crust is damaged it is unlikely that it will be fully re-colonized in our lifetime. To regenerate a *thin* layer takes 5-7 years and that is only when conditions are favorable. It is only a small part of the desert ecosystem but an essential one.

If all of the crust was destroyed the plants would quickly die off and all you would be left with was a gigantic sandbox, with no shade and no water. In order to venture into the desert you would need to be fully covered and I mean fully, being sandblasted is not good for any part of the human body!

So the question is how can we strike a balance between off road use and ecology? Groups for and against are increasingly turning to legal means to achieve their desired outcome. All this is doing is muddying the waters and making the legal profession rich!

Here in Utah, land management organizations are trying to keep the situation under control by providing maintained trails for the ATV riders to use such as the Paiute trail which spans 4 counties Sevier, Millard, Beaver and Paiute.

Administering the trail are Fishlake National Forest, the Sevier River Resource of the BLM, and the Utah Division of Parks and Recreation. Overseeing all this is a cross-discipline coalition called the Paiute ATV Trail Committee. The trails are maintained by volunteers through the Adopt-A-Trail program.

I talked to a responsible ATV rider from California. He documented his visit to the Paiute trail in 2001 using a digital camera. Locals told him that volunteer groups using federal funds were recording authorized trail use with camera units.

This information was needed for further funding considerations and this rider could see no problem with

monitoring the trail's use because "everybody loved the Paiute Trail and would never want to jeopardize it."

Certain ATV activist groups are trying to trick ATV riders into leaving the Paiute trail by tampering with signs. Again it seems the actions of a few will cement the reputation of ATV riders as public land outlaws.

Should ATVs be banned?

I don't think so – if you ban them there is no way to regulate their use. The issues may seem very black and white when you are standing in one or other of the opposing camps but discussion and compromise on *both* sides are vital in order to work out a viable solution that, while not pleasing everybody, can benefit both the ATVers and those trying to protect the land for future generations.



Camera (top right) and recording equipment (shown here) used to monitor ATVs on the Paiute Trail

The Paiute Trail is an example of successful co-operation between the two sides, which could provide a model for further progress.

The nuisance/noise issue could be tackled by allowing off-road use on odd numbered days, much like the dog-on-leash laws currently operating in areas like Mill Creek Canyon. There also needs to be more funding for rangers to police the trails, protecting what still remains of the crust, because once it's gone, it's gone.



Chapter News

Utah Valley Chapter

At the May meeting, Forest Service ecologist Wayne Padgett gave a colorful and enlightening presentation on tall forb communities.

New officers were elected: Celeste Kennard as president, with Randall Nish as treasurer and Robert Fitts as field trip coordinator.

Utah Valley's next meeting will be August 20 at the Federal Building, 100 N 100 W in Provo. Potluck at 6 p.m., meeting at 7. Our speaker will be USFS fire ecologist and botanist Beth Corbin, who will discuss local fire ecology.

Members of the chapter have been hosting some interesting field trips featuring Beckwith viola, bristlecone pine and others. We sponsored a very popular tour of three native plant residential gardens. Big thank yous to Lyle and Annette Jenkins, Annette Brigham, Susan Meyer and Bitsy Schultz who opened their gardens to us.

Contact Robert Fitts at 801-796-8631 to learn about upcoming field trips, or keep an eye on the UNPS web site for more field trip info.

Price Chapter

Mike Hubbard is organizing a field trip to Manti LaSal National Forest on July 10th. The group will meet in the morning at the Tucker Rest Stop on highway 6 and proceed up Clear Creek Road to Bear Ridge to investigate a larkspur tall forb community. The group will continue down Skyline Drive stopping at several different community types. The field trip will end at the Mont E. Lewis Botanical Area. The botanical area is a montane, cold-calcic spring site containing many species not normally found outside of arctic and alpine habitats. If you are interested please contact Mike at (435) 637-4834 or mhubbard@sisna.com

Volunteer News

Joint UNPS/ Red Butte Conservation Project

On May 1st, about 10 of us joined Matthew Uttley and Ryan from Red Butte. After a short walk to the natural area Matthew gave us a basic lecture on what we were looking for – Dyers Wode and Butter and Eggs (both invasive weeds) We learned why just one weed can generate a massive underground seed bank and keep coming back year on year. We also learned how to recognize alternate leaves from opposite ones (very handy if you only want to pull out Dyers Wode and **not** blue Penstemon!)

The Dyers Wode wasn't in flower so all we had to do was rip it out—I have to confess to not seeing any Butter & Eggs.

After half an hour of weed pulling we went back up to the rest area for the second stage – planting native plants around the area so that visitors would have something to look at on the hill.

I think the other volunteers would agree we could have done with more time, but Matt and Ryan shared their knowledge with us and made the project both interesting and fun.

Thanks to Jude, Kody and Jan, who gave up her lunch hour!

If you are interested in helping out with a similar volunteer project or joining our small-but-growing pool of volunteers, please contact me, the UNPS volunteer co-ordinator. My e-mail is plonghur@xmission.com

Be Waterwise at Jordan Valley Water Conservation District

Design Principles for Low-Water Landscapes

Clifton Smith, Landscape Designer

Saturday, August 14, 10 a.m. - noon

Attractive landscapes develop from good landscape planning and design. Gain some knowledge and understanding of basic design principles that you can use to create a gorgeous water-wise landscape.

A Wander with Joy in the Garden

Get Answers to Questions on all Aspects of Water-Wise-Gardening with Joy Bossi, radio host of "Joy in the Garden"

Thursday, August 19, 6-8 p.m.

Radio host Joy Bossi will take us on a tour of the Demonstration Gardens and talk about water-wise gardening basics while answering any questions that you may have regarding water efficient landscaping. Come and get some great advice, answers to questions, and enjoy an evening at the beautiful Demonstration Gardens.

Bold and Beautiful Low-Water Perennials for Every Garden

Barney Barnett, Willard Bay Gardens

Saturday, August 28, 10 a.m. - noon

There are a lot of perennials to choose from at the nursery. Come and learn which will provide lasting color and beauty for any site and thrive with much less water. Also learn about fall planting for a great start to a beautiful spring and summer garden.

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Utah Ladyfinger
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Utah Native Plant Society Membership and Information

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City/State: _____
Zip: _____ Phone: _____
Email: _____

Check membership category desired:

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☐ Senior \$12.00
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☐ Please send a complimentary copy of the Segó Lily to the above individual.

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Salt Lake City, Utah 84152-0041

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

**Check out our
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www.unps.org

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Plant Society website.

Please direct all suggestions,
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at plonghur@xmission.com
**The deadline for next issue
is 8th August**

UTAH NATIVE PLANT SOCIETY

President: Susan Garvin
President Elect: Mindy Wheeler
Chairmen: Larry Meyer/Dave Wallace
Treasurer: Ben Franklin
Secretary:
Newsletter Editor: Paula Longhurst

CHAPTER PRESIDENTS

Cache: Steve Ripple
Canyonlands: Steve Budelier
Mountain: Abby Moore
Price: Mike Hubbard
Salt Lake: Bill Gray
Southern Utah: Margaret Malm
Utah Valley: Celeste Kennard
Escalante : Winnie Washburn

COMMITTEES

Horticulture: Susan Meyer
Conservation: Bill King
Education:
Invasive Species: Phil Allen/
Susan Garvin
Communications:

Sego Lily

Newsletter of the Utah Native Plant Society

VOLUME 27 , ISSUE 5

SEPTEMBER / OCTOBER 2004

BOTANISTS HOPE TO FIND VANISHING PLANTS

Article reproduced courtesy of The Center for Plant Conservation : website www.centerforplantconservation.org

Going on a wildflower hunt along Utah's Green River.

What's harder than finding a needle in a haystack? How about combing unforgiving southwestern landscape for a small, rare plant that grows among mixed desert shrubs along the steep shale slopes of Utah's Green River Formation? It may be daunting, but it's worth it, according to Jennifer Lewinsohn, conservation botanist at Red Butte Garden and Arboretum, a CPC participating institution in Salt Lake City.

Photo courtesy of Matthew Uttley



The White River Penstemon (*Penstemon scariosus* var. *albifluvis*), a perennial herb that grows from 15 to 30 cm tall and offers delicate lavender or pale blue flowers in May and June, is a candidate for listing under the federal Endangered Species Act. This taxon was discovered in the mid-1970's by Larry England, the botanist at the USFWS in Utah at that time. The number of individuals was estimated at 22,780 plants in 1994, and approximately 73% of those individuals occur on BLM lands. Threats to this taxon include livestock grazing, and oil and gas exploration and development, and recreational off-road vehicle use.

Throughout April and May, Lewinsohn and Drs. Sylvia Torti



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and Vincent Tepedino, will be working with Bureau of Land Management. They will select two populations for long-term monitoring of this and another candidate *Penstemon* species, Graham's *Penstemon* (*Penstemon grahamii*). Once the long-term monitoring plots are established, ecological and life history data will be collected on both taxa.

In addition, the breeding system, pollinators and pollinator requirements of each taxa will be studied over the next two years. "Studying the breeding system of rare plants enables us to determine if pollinators are necessary accomplices for the plant's sexual reproduction," explains Tepedino. "Once that has been shown, we need to identify the important pollinators and learn something of their natural history so that any management decisions can also plan for their needs."

If all goes well in this 6th year of drought for the state of Utah, researchers will be able to collect seed in late July. This will add to an ex situ seed collection that will allow further research and could be used to help restore this plant to its habitat in the wild.

FROM THE MULCH PILE

By Tony Frates

Almost two decades have passed since the last "mulch pile." It appears that another one is overdue. Space in this issue prevents inclusion of everything that should be mentioned. The order, as normal, is random except for the first topic. Here goes.

In memoriam - Kaye H. Thorne (1939-2004):

A number of us only became aware in late July that we lost Kaye Thorne on April 30, 2004. Kaye had suffered a long and tragic illness. While she will no doubt be best remembered as a superb botanical illustrator, her contributions to botanical science far exceed that and she deserves much more than just a brief mention here. We are working on a tribute, but time has run out to include it in this issue. If you knew Kaye and would like to share a story, anecdote or memory, please e-mail us at unps@unps.org or call me at 801-277-9240.

UNPS members receive awards: Member **Leslie Wright** was one of two students to recently receive a BEST (Biology Environmental Science Trust) undergraduate research scholarship at the University of Utah. News of the scholarship was reported in *Notebook*, a University of Utah College of Science publication. Her research is focusing on the role of insect herbivores in shaping plant defense strategies in a tropical plant genus.

In the same publication, mention was made of **Abby Moore's** Barry M. Goldwater Excellence in Education scholarship aimed at students with top research experience. Abby will be attending UC-Berkley this fall for graduate school and we will miss her membership committee work, her service for many years on the UNPS board as well as her leadership in our Mountain (Park City) chapter.

And on a belated note, congratulations are also due **Sherel Goodrich** for the Society for Range Management Excellence award he received near the end of 2003 in recognition of some three decades of vegetative monitoring on the Ashley National Forest where Sherel works as an ecologist.

TNC's new West Desert director:

Elaine York is now the West Desert Regional Director in addition to continuing with all of her Conservation Programs Manager and other work at the Utah Field Office of The Nature Conservancy. Lucky for us, Elaine has a botanical background and has been tirelessly working on many projects relating to Utah endangered plant species, especially our imperiled friends in Washington County. She is also a member of UNPS. Congratulations, Elaine.

Welcome Heather Barnes: There is a new Fish & Wildlife Service (FWS) in town, Heather Barnes. Heather previously worked for the USDA Forest Service in Wisconsin and California in connection with rare and endangered plant species. Despite lacking an immediate knowledge of the flora of our area, everyone seems to be impressed with her enthusiasm and dedication.

Spearheading efforts to develop a multi-species recovery plan for *Arctomecon humilis*, *Astragalus holmgreniorum* and *Astragalus ampullarioides* is but one of the things that Heather is working on.

On the war front: Heather reports that FWS endangered species botanist **Larry England**, currently serving in Iraq is apparently okay and is expected to return in March of next year (Heather's position will continue). Our hearts go out to Larry's family and we wish him a speedy and safe return.

Washington County watchdog: **Margaret Malm**, our Southern chapter president, continues to keep us advised of happenings in Washington County and we're glad to hear that she has safely returned from another trip "down under."

BLM sensitive species list: This list was last updated in August of 2002 (the list is on the UNPS web site, www.unps.org, under Rare Plants) and is coming up for review. If you have suggestions of any kind, contact **Ron Bolander** at the BLM State Office or e-mail us at unps@unps.org and we will be happy to pass the information along.

Botany 2004: Many UNPS board and other members participated in the recent Botany 2004 conference held at Snowbird. Numerous topics from researchers and experts representing Utah educational institutions were presented (most notably and in no particular order: BYU, U of U and USU). During a lunch break, **Mary Barkworth**, director of the Intermountain Herbarium (USU), held an informal meeting that was well-

attended by representatives of various herbaria from throughout Utah to discuss a cooperative project revolving around a web site devoted to Utah native plants and fungi that would provide voucher documented image maps, descriptions, photographs and other information; in short an authoritative reference available on the web for the use of secondary teachers, professionals and the general public alike. Nothing like it as currently envisioned exists (whether for Utah or elsewhere). Discussions are continuing (via a list serve to soon be established) and participation in the potential project is open to anyone who may be interested.

Endangered species news: The 60-day comment period in connection with the notice of intent relating to the failure by the Dept. of Interior/FWS to designate critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* filed by The Center for Biological Diversity, UNPS and SUWA expired on July 27. It is expected that a lawsuit will soon be filed. A prior unrelated lawsuit based on a petition to list *Penstemon grahamii* was filed in November of 2003 and is still pending. *P. grahamii* has been a candidate species since 1983, has no protected populations and remains very much under siege by oil and gas leasing activity. **Erin Robertson** of Center for Native Ecosystems (in Colorado) did an incredible job on the original listing petition and the complaint that followed (*P. grahamii* occurs in both Utah and Colorado, most significantly in Utah) which was filed in October of 2002. Center for Native Ecosystems, UNPS and SUWA are co-plaintiffs. **Vince Tepedino** of the USU Bee Lab and **Jennifer Lewinsohn** of Red Butte Garden have been doing pollinator-seed studies in connection with Graham's penstemon funded by the BLM (see our front page story). And in a yet a completely different matter, a 60-day notice of intent in connection with *Gilia tenuis* (identified on the Utah Rare Plant Guide site as *Aliciella tenuis*) was filed in July 2004 by SUWA, Center for Native Ecosystems and UNPS as follow-up to

Natives in the News

This is a new section - featuring some stories you may have missed. All are re-produced with permission from the authors and I would like to thank Kelly McNulty who did some great research!

Seed facility changing landscape

By Ray Grass— Deseret News

EPHRAIM — There is, near the outskirts of town, a large building that may well change the face of Utah . . . , portions of it, anyway. It's called the Great Basin Research Center. Most people, however, simply refer to it as a "new seed warehouse."

"Which doesn't offend me at all," said Scott Walker, the center's new project leader for the Utah Division of Wildlife Resources. It is, of course, a seed warehouse. "But that's only a portion of what we do" he continued. "This new facility will allow us to do increased research on germination, plant breeding and other aspects of range restoration that we've never been able to do in the past . . . Which, faced with range conditions today, is vital to our future."

Utah is currently in the midst of a sagebrush crisis. More than 600,000 acres of sagebrush, most of it being critical winter range for deer, is dead or dying. It will take years to restore the range. It could take far less time because of research, new seeding equipment and storage capabilities at the center.

The new 17,100-square-foot center was officially dedicated on June 23. The significance, pointed out Miles Moretti, assistant director of the DWR, is that Utah will now be able to expand its land restoration work tenfold.

"This new facility will put us on the map here in the West as far as range restorations. There's nothing else like it. The research we're doing and our seed mixing capabilities are second-to-none. "We were able to do range restoration work before, but only 100- to 200-acre parcels at a time. Our goal is to do 50,000 acres of range rehabilitation a year. In the past we've been able to do less than 10,000." The significance of the expanded programs is not fully understood by most people, explained Bill Christensen, director of the Utah chapter of the Rocky Mountain Elk Foundation, a major contributor to the new center. "With the fires we've had, and those we'll continue to have, being able to restore the range quickly is vital to our wildlife, not only for big game animals like deer, elk and moose, but for other animals as well," he noted.

Range restoration is also a benefit to water shed, water quality and water flow. New seed mixing equipment at the center will allow land managers to produce custom mixes for Utah's diverse habitat and climate, which, again, will result in better growth.

There will be storage area now for 600,000 pounds of seed in the new center. There was room for only 200,000 pounds in the old facility. The expanded storage area will allow the DWR and U.S. Forest Service to buy seed when prices are low and store it until needed. It will also allow them to buy seed in anticipation of upcoming projects.

Walker also pointed out that some seeds do not store well. "They lose their viability. For example, we should plant sagebrush at the end of October when soil conditions are best, but sagebrush doesn't come into seed until November and December," Walker also noted that there will be an increased attention to native plants at the center. Re-vegetating areas with native plants, even though they might be the best solution, can sometimes be a problem because of a limited seed supply.

Often, private collectors are the only ones out gathering the seeds of some native plants, and there are generally not enough seeds available for a large-scale restoration project. "We will be doing some research here to bring native species into cultivation to where we can produce large amounts of seeds," Walker explained.

This research will carry over to see if the planting of native species can hold out invasive weeds, such as cheat grass. The use of chemical treatment of invasive weeds will also be part of the research. The new building was made possible under cooperative funding by the DWR, U.S. Forest Service and the Rocky Mountain Elk Foundation.



Events and Chapter News

“Escalante Native Plant Chapter News”

By Winnie Washburn

As a new chapter in Southern Utah, our Native Plant Group came into being to fill a specific need. Founder of the Main Street Project, Karen Munson, needed a committed group of Native Plant Gardeners to maintain the very successful and beautifully landscaped Main Street planted in the easements and planter boxes the full length of town. Escalante is probably the only town in the United States whose Main Street is completely Xeriscaped with our own state's native plants.

The Escalante Native Plant Chapter took on the mission of maintaining Main Street. We began with 20 members in January on 2004. To date we have 44 members and a long prospect list. Main Street has never looked more beautiful with flowering trees and other native trees lining it from East to West, nearly two miles long. The many varieties of Penstemon are 5ft tall, mixed in with graceful grasses and 25 other species of native plants. Alysia Angus of Kanab and Tim Clarke of Boulder, both landscape architects, designed the intricate combinations of plants, matching colors, and shapes, and placement near shops and water usage...altogether a lovely sight this year.

We have just finished gathering our first batch of seeds, marking them and now they are on the drying shelves away from insects and dust. We plan another collection of seeds in a few weeks when the late bloomers are finished. We also hope to propagate some, give some seed to members, and possibly grow some for plants to sell next Spring.

Our programs early this year were on propagation, and seed gathering by American Indians, creating home gardens with native plants, and most recently in May, we were treated to an evening wildflower walk along the upper rim of the Escalante River Canyon, where we found an abundance of rare desert species of native plants. Drew and Julie Crosby, (pictured) professional trail guides and members of our Chapter, led us on a delightful hike, helping us to identify and locate over 2 dozen species of Utah natives.

In June, our last meeting before Summer, was a barbeque, with fellowship and sharing of Summer planting plans and information on how to keep Main Street beautiful. We were honored to have as our guest, Susan Garvin, President of UNPS, and her lovely daughter Jessica. Susan shared her Chapter's success on raising native plants, then having a plant sale; her group raised over \$1,000 from home grown plants. Susan left some plants and growing supplies with us; we hope to do something similar next Spring. Highlighting our meeting was the awards of recognition to two of our guardian angels that have overseen the drip system on Main Street, trouble shooting, and giving many hours to keep things in order. We are grateful to Clover Marks and Gayla Anderson (pictured below) for their commitment as “Irrigation Angels” for Main Street and for our Chapter.



Left to right, Cindy Calbaum, Drew Cosby, Winnie Washburn, Julie Cosby



The “Irrigation Angels” Clover & Gayla

Summer has seen teams of volunteers doing weeding, checking drip systems and more weeding! A monthly newsletter keeps us all connected. Our next meeting will be the second Thursday in September on the 9th at the Garden Gate Sanctuary. We plan to invite Dr Susan Meyer to visit us and do a program. Our group is blessed with many experts in gardening subjects.

Upcoming programs include,

Trees - methods of planting and their ability to draw moisture to an area, to modify heat and cold, as well as provide shade and beauty.

A study on “International Seed Savers” and related projects;

Organic gardening, using native vegetable seeds;

Raised bed gardening;

Protecting plants from heat and cold, insects, birds and rodents;

Our resident professor, Dr. Dennis Bramble will do a program on growing and uses for grasses in the home garden.

The list goes on and on; we are grateful for the willingness of our members to share their knowledge and expertise.

Price Chapter News

Field Trip to Mont. E. Lewis Botanical Area

On July 10 about 15 members of UNPS participated in a field trip organized by Mike Hubbard, president of the Price Chapter. We traveled from the Tucker rest stop on Highway 6/50 on Skyline Drive in the Manti LaSals and enjoyed several botanical stops along the way. The trip was led by Mike and by Bob Thompson, Forest Botanist. Our final stop was at the Mont. E. Lewis Botanical Area, which is in Scad Valley at the base of Seeley Mountain.

Lots of unusual species were in flower; it was an ideal time to visit. There are 170 species on the current plant list, some of which are quite rare, and we found at least one species to add to the list. Mike, a GPS specialist, also gave us a talk and showed us maps from a mapping project the Forest Service has been working on. If you would like to visit the Botanical Area, you can contact Mike Hubbard mhubbard@fs.fed.us or the Price office of the US Forest Service to obtain a plant list and description and history of the Botanical Area.

Thank you, Mike and Bob, for the nice trip, the botanical expertise, and the introduction to your inventory maps and discussion.

Utah Valley Chapter News

Exciting things have been happening around Provo's Rock Canyon Park. Questar proved to be very interested in working with Celeste and the Utah Valley Chapter, as well as with Provo Parks Department, in laying out the route for their gas pipeline replacement. They were able to work out a route that avoided the Heritage Garden, and goes through only a small portion of the native arboretum. Many thanks to the people of Questar and their willingness to work with the community! While we thought the Heritage Garden was doomed, it was hard to work up enthusiasm for weeding. After the pipeline was rerouted, Celeste, Susan and a few others assembled to face a huge backlog of weeds, but good luck appeared in the form of thirty volunteers whose scheduled project had been cancelled. The garden was weeded in one fell swoop. And we see in the newspaper that some local politicians are getting together donations of their own money to buy a part interest in the private land cliffs that were being quarried out of existence. They have worked out a deal where the land goes into a conservation easement to preserve the landmark cliffs. Thanks to the Rock Canyon Alliance for continued efforts in getting out the word about the quarrying.

The chapter is planning a field trip to see moonworts and summer flowers in the eastern portion of the Uinta National Forest. The date is Saturday, August 14. We plan to meet at the Federal Building in Provo at 9 a.m., and pick up any other participants at the USFS Heber Ranger Station near Heber about 9:45 to 10 a.m. Then we will head northeast to the Wolf Creek Summit area and points south. Contact Denise (dvk@xmission.com) for details. All interested folks are welcome.

Susan Garvin, Paula Longhurst, and Denise Van Keuren together with volunteer Jan Reed have been helping Heather Barnes of the U. S. Fish and Wildlife Service and Jena Lewinsohn of Red Butte Garden in collecting seeds of the endangered clay phacelia from the Nature Conservancy property, for the upcoming project to establish new populations on suitable sites on the nearby Uinta National Forest. This was a pretty good year for the phacelia, lots of plants up, but revisiting the site makes it clear some of the adult plants disappear from one visit to the next, while new little rosettes show up unexpectedly.

Salt Lake City Chapter News

Informal Wildflower Walks Bill Gray, president of the Salt Lake City Chapter, invites you to come along on informal flower walks. Most of them will take place midweek on fairly short notice - basically they are just rambles to see what is up and blooming, nothing prepared ahead of time.

If you would like to be notified of these, it is essential that you let Bill (cyberflora@xmission.com) have an e-mail address where you can be reached. That is the only notice you will get. Your e-mail address will only be used for this purpose, and will not be made available elsewhere without your permission.

Cache Valley Chapter - Events

Grass field trip: September 11th, leader Mary Barkworth. Meet at the Intermountain Herbarium at 8.30am. Participants will head by van up Logan Canyon and, depending on how time goes, come back via southern Idaho (if the group are still in Logan canyon at 5 pm, they will head straight back.

Mary's goal is to hit weedy and introduced species, some riparian species, a few subalpine species and then a few things that she knows of best in southern Idaho. Cost \$20.00 Lunch provided. Bring sturdy boots, sun protection and plenty of water.

Fall Mushroom ID workshop. Led by Michael Piep. It will be held this year on Friday Sept. 24 & Saturday Sept. 25 (again a Friday evening lab session and introduction and a Saturday field session). Cost is \$25 for non UNPS, BMS (Bridgerland Mushroom Society), or MSU (Mushroom Society of Utah) members and \$20 for members of any of those groups. More details are available on the Herbarium website under fungal workshops.

Botanical Adventures in Southern Utah: Lick Wash, Grand Staircase-Escalante National Monument

By Walter Fertig

Southern Utah is blessed with an abundance of spectacular multi-colored slickrock canyons and an equally impressive array of rare, unusual, and handsome native wildflowers, shrubs, and trees.

The most famous of these canyons tend to be in national parks or popular recreation areas that attract throngs of sightseers, shade-seekers, and wild plant enthusiasts each summer. Fortunately, many beautiful (but relatively unknown) canyons exist off the beaten track for plant lovers seeking solitude along with floristic diversity. Lick Wash in Grand Staircase-Escalante National Monument is one such place.

Lick Wash begins as an unremarkable gully on gray mudstone slopes below Bryce Canyon's Pink Cliffs. From here it meanders to the southeast for a few miles before merging with Podunk Creek in the aptly named Dry Valley, on the north side of the Skutumpah Road between Kanab and Cannonville. The wash is parched most of the year, but can churn with



Above: Narrows of Lick Wash by W. Fertig

muddy water following summer monsoon rains. Less than one-half mile after crossing the Skutumpah Road, the wash slices through a thin band of orangish-red Carmel limestone before cutting into the soft Navajo Sandstone of the White Cliffs. Gradually, Lick Wash transforms from a dusty sagebrush and rabbitbrush gulch into a shady, pine-scented sandstone slot.

Before plunging into the canyon, however, it is well worth exploring the rocky Carmel terraces at the canyon's mouth. Visitors in late spring and early summer will find the Paria breadroot (*Pedimelum pariense*), a low-growing perennial herb with clover-like leaves and prominent white leaf venation. The purplish or creamy unobtrusive pea-like flowers of this plant are borne at the base of the leaves. Paria breadroot is restricted to rocky outcrops of the Claron and Carmel limestones from the vicinity of Mount Carmel Junction, Bryce Canyon, and the Skutumpah Terrace in Kane and Garfield counties and was once considered for listing under the Endangered Species Act. A much more showy plant is the bright yellow

Lavandula evening-primrose. Although closely related to the true evening-primroses (genus *Oenothera*), this species is actually a *Calylophus*, as evidenced by its undivided, disc-shaped stigma. Thompson's penstemon (*Penstemon thompsoniae* for those who prefer Latin), a small matted forb with over sized violet flowers, also occurs here. The leaves of this plant are covered by unusual, scale-like, grayish hairs that distinguish it from all other matted beard-tongues in the area. In late summer, look for the white, pincushion-like inflorescences of Panguitch buckwheat (*Eriogonum panguicense*), another southern Utah endemic.

Once one's curiosity with the Carmel flora is satisfied (or been overwhelmed by heat), the cool, shady mouth of Lick Wash beckons. Steep walls of Navajo Sandstone block the mid-day sun, aided by tall Ponderosa pines and Douglas-firs growing at the base of the cliffs or often perched precariously on ledges and cracks in the sandstone walls themselves. Smaller shrubs complement the deep greens of the conifers with splashes of color: bushy white panicles of Ocean-spray (*Holodiscus dumosus*), fuzzy reddish fruits of Squaw-bush (*Rhus aromatica*), and occasionally the white flowers or powdery blue berries of Blue elderberry (*Sambucus cerulea*).

Several wildflowers make the slickrock walls and sandstone ledges their home. One of the most common is the Red alum-root or Jack o' the rocks (*Heuchera rubescens*) which can be recognized by its maple-like leaves and drooping panicle of glandular pinkish-white flowers. Red alumroot is closely related to Coral-bells (*H. sanguinea*), a common garden plant, as well as several species used medicinally by Native Americans and early 20th Century doctors as an astringent to promote healing of wounds and rashes. Commonly associated with alumroot is Tufted rockmat (*Petrophyton caespitosum*), a member of the rose family that either forms tight mats appressed to the rock surface or hangs from a stout taproot. The vine-like Rocky Mountain clematis occurs more sporadically in the crevices. In early spring it can be recognized by its large, solitary, purple, bell-shaped flowers. In summer its clusters of white achenes topped by feathery stigmas readily catch the eye.

Perhaps the most distinctive plant of the canyon walls is Lori's columbine (*Aquilegia loriae*). This red and yellow-flowered herb was only described as new to science in 2001 by Drs Stan Welsh and Duane Atwood of Brigham Young University (intrepid surveyors of Lick Wash and the Grand Staircase's flora) and was named in honor of BLM botanist Lori Armstrong. The columbine is nearly endemic to Grand Staircase-Escalante National Monument, where it is known from only a handful of slickrock canyon and hanging garden sites. It is fairly common within Lick Wash itself, where it occurs in shady sandstone crevices and alcoves, rounded cliff faces in full sun, or rarely on sandy fans on the wash bottom itself.

Sandy spits occur sporadically in the canyon in areas where deep scouring by high flood waters is infrequent. These sites often support stands of Gambel's oak, manzanita, tarragon, Kanab yucca, and a rich assortment of blue and red penstemons (including *P. comarrhenus*, *P. laevis*, *P. barbatus*, *P. caespitosus*, and *P. x jonesii*). Deep sand terraces in shady sites support woodlands of Big-tooth maple, Utah serviceberry, and the low-growing evergreen shrub Mountain-lover



Illustration by E S Kneller

Above: Lori's columbine by Elaine Kneller

(*Pachystima myrsinites*). In spring, Mountain-lover produces beautiful, deep maroon flowers in the axils of its glossy, toothy leaves. It is a shame these flowers are less than ¼ inch across and are best enjoyed under a 10x hand lens!

After about two miles Lick Wash begins to slowly open up and is gradually transformed once again from a slickrock canyon to a deep sandy gulch. Utah juniper and pinyon reappear, as do sagebrush and rabbitbrush. Several narrow side canyons and high alcoves embedded in the sandstone cliffs, however, continue to support unusual species more typical of higher elevations of the Markagunt and Paunsaugunt plateaus. Among the rare or regionally endemic species in these slickrock or deep sand sites are Sevier ivesia (*Ivesia sabulosa*), Zion daisy (*Erigeron sionis*), Canaan daisy (*Erigeron canaanii*), Sandloving penstemon (*Penstemon ammophilus*), Zion draba (*Draba asprella* var. *zionensis*), and MacDougal's aletes (*Aletes macdougalii*). Several more probably still await discovery.

In another mile and a half Lick Wash joins up with Park Wash and continues southward as a broad sandy arroyo cut into a valley of Basin big sagebrush. The canyon forks at the base of an impressive mesa of smoothly-sliced shear cliffs: No Man's Mesa. As its name implies, No Man's Mesa is uninhabited and rarely visited, largely due to poor accessibility. The summit of the mesa is regarded as a relict area of undisturbed sagebrush and juniper woodlands, scarcely influenced by the trappings of humanity.

For now, No Mans needs to wait. The trek back through Lick Wash is always longer than it seems it should be – in part due to a largely imperceptible drop in elevation through the length of the canyon, partially because the cool shadows of morning have been replaced by a hot sun overhead, and partly from processing the dizzying array of wildflowers seen enroute.

From The Mulch Pile - continued from p3

the petition to list that species filed in May 2003 to which no response was received.

It should be noted that the Utah Native Plant Society normally seeks cooperative, non-litigious solutions when it comes to rare plant conservation and protection issues.

Over the last four years however not a single plant or animal species has been listed under the Endangered Species Act absent a lawsuit.

Folks working for federal agencies in the state are good people doing the best job they can under the current administration's policies; *these suits are not in any way meant to be a reflection or criticism of their efforts*. As far as I'm aware, in our 25 years we've never previously been a party to a lawsuit; currently we feel however that we have no other choice. And, at least to date thanks to the tremendous support and connections of our conservation partners, not a single cent of your UNPS membership dues have been required to cover legal or any other fees or costs related to any of these actions.

Dr. Theodore M. Barkley died suddenly on the morning of Saturday 24th July , at the age of 70. No one expected such a sudden departure, and it came as a shock to all, particularly the Flora of North America Comp Eds, since they had been working intensely with him for the last 2 years and more.

His dedication to the FNA project and the FNA, as well as to the publication of the Compositae volumes, will be well remembered.

He is probably already trading bad jokes with Art Cronquist in the herbarium in the sky (as he was fond of saying)

Dr Barkley was an author for the "Flora of the Great Plains" and a founding member of the Flora of North America editorial committee. He will be missed.

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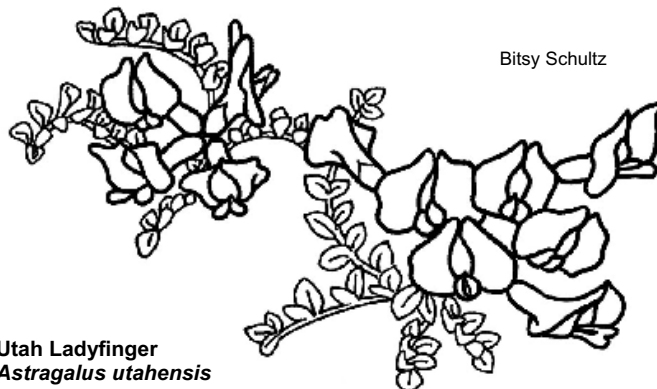
NOTICE OF UNPS ANNUAL MEETING

SATURDAY OCTOBER 2ND
START TIME 2PM

AT PROVO PUBLIC LIBRARY
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SPEAKER SHEREL GOODRICH

There will be a pot-luck dinner. To give us an idea of numbers, please RSVP to unps@unps.org
All members welcome.



Utah Ladyfinger
Astragalus utahensis

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

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Check out our website!

www.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 submissions to go in the next issue is 8th October**

CHAPTER PRESIDENTS

Cache: Steve Ripple
Canyonlands: Steve Budelier
Mountain: Abby Moore
Price: Mike Hubbard
Salt Lake: Bill Gray
Southern Utah: Margaret Malm
Utah Valley: Celeste Kennard
Escalante: Winnie Washburn

COMMITTEES

Horticulture: Susan Meyer
Conservation: Bill King
Education:
Invasive Species: Phil Allen/
Susan Garvin
Communications:

Sego Lily

Newsletter of the Utah Native Plant Society

VOLUME 27 , ISSUE 6

November/ December 2004

Yes On 1!

Words and Photo by William Gray

At its meeting on 23 September the UNPS Board of Directors voted unanimously to support Initiative 1. In doing so we joined a long and varied list of sponsors and supporters. Just a few: Salt Lake Tribune and Deseret News; KSL Television; The Nature Conservancy, Great Salt Lake Audubon, Trout Unlimited, Utah Open Lands; many prominent individuals from both sides of the political spectrum.

The fundamental proposal is for a statewide bond issue to support several facets of what can generally be called "Clean Water, Quality Growth and Open Space". Getting the initiative onto November's ballot was a real cliff-hanger - it had to receive a certain percentage of signatures in almost every county, not just a big lump number. At first it seemed to have narrowly missed the mark in a couple of counties, but a recount showed it was OK.

What would it raise? \$150 million dollars. If the measure is approved, funds will be spent for statewide needs such as protecting and improving:

- sources of drinking water
- land around rivers, lakes and streams
- wetlands and critical wildlife habitat
- family farms and ranches
- historic and cultural landmarks
- city, county and state parks
- trails, greenways and outdoor recreation facilities



The proposal includes a tentative breakdown for the amounts to be directed to the various categories, and a seemingly thorough mode of oversight for the funds.

How would it be funded? State sales tax would be raised from 4.75% to 4.80% for approximately 13 years (local sales taxes would be unaffected).

Can we afford to do it? *Can we afford not to do it?*

November/ December 2004



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GOODRICH ON BADLANDS

by Tony Frates

Ashley National Forest ecologist Sherel Goodrich was the featured speaker at the Utah Native Plant Society's October 2004 annual meeting. Sherel is also a co-author of *A Utah Flora* and an expert on the flora of the Uinta Basin and in the genus *Carex*. His topic related to the association of narrow endemic plants of the Uinta Basin with geologic strata.



Badlands are good lands for endemics

UNPS October 2, 2004 annual meeting in Provo, Utah

Taking members on a tour of botanical exploration of the region as well as its unique geologic formations and the plants that grow on them, Sherel gave us a glimpse of the rich diversity of endemic plants in this area. Some 17 endemic species are found on the Duchesne River formation and may slip onto the Moenkopi or Morrison, lands which tend to erode into badlands. This includes plant species like *Penstemon fremontii*, *Gilia stenothyrsa*, *Cymopterus duchesnensis*, *Astragalus saurinus*, *Chrysothamnus nauseosus* var. *uintahensis*, *Eriogonum brevicaule* var. *viridulum*, *Penstemon goodrichii*, and *Astragalus hamiltonii*.

"Badlands are good lands when it comes to endemic plant species," Sherel explained.

On the Green River Shale are some 21 endemics, several named in honor of Rupert C. Barneby (1911-2000), who early on in his botanical explorations in Utah and elsewhere in the West figured out that he would find good stuff on bad stuff, species like *Cryptantha barnebyi*, *Cirsium barnebyi* and *Aquilegia barnebyi*. Other Green River Shale species include *Astragalus asclepiadoides*, *Mentzelia goodrichii*, *Astragalus lutosus*, *Erigeron untermanii* and *Penstemon grahamii*.

On the Morrison not as many endemics are found. There however one can find plants like *Cleomella palmeriana* var. *goodrichii* and *Phacelia demissa*; and on the Moenkopi in the Uinta Basin, fewer still, with one example represented by the relatively recently described *Lepidium huberi*.

In the Weber Sandstone, endemic plants such as the red flowered *Aquilegia grahamii* again illustrate the point that different types of geology give rise to different kinds of native plant species.

Continued on page 4

FYI

Intermountain Native Plant Summit III

Where? : Boise State University

When? : November 3-5, 2004

This event is sponsored by the Boise State University Dept. of Biology and is open to the public and free of charge (pre-register by e-mailing dale.nielson@usu.edu use subject line "INPS" Details required are name(s), full mailing address and phone, business, non-profit organization, university, or government affiliation)

General Sessions

Wednesday & Thursday, November 3 & 4
Special Events Center

Rangeland Germplasm Workshop

Friday morning, November 5
Bishop Barnwell Room, Student Union
Boise State University

For more information, including a tentative agenda and directions go to <http://www.unps.org/PAGES/NEWS.html> and click the more information link.

UNPS Files Joint Lawsuit

On the 27th September 2004, The Center for Biological Diversity and the Utah Native Plant Society filed a lawsuit against the Director of the US Fish & Wildlife Service and the Secretary of the Interior in light of the failure to designate critical habitat for the *Astragalus holmgreniorum* (Holmgren milkvetch) as well as for *Astragalus ampullarioides* (Shivwits milkvetch), both federally listed as endangered species. Both species occur only in Washington County.

The Holmgren milkvetch is considered by many to be the plant species most currently in danger of becoming extinct in Utah and is threatened by rapid expansion of areas around St. George, Utah.

This is only the **2nd** lawsuit that UNPS has joined in its 25 year history.

There was a notice of intent to sue issued May 27th, 2004.

(See report in July/August 04 Sego Lily) but this received no response.

To see the letters in full go to <http://www.unps.org/PAGES/NEWS.html>

Goodrich on Badlands continued ...

High Uinta mountain species Sherel discussed included *Papaver radicum* var. *pygmaeum*, *Penstemon uintahensis* and *Penstemon acaulis*, (our smallest *Penstemon*), *Erigeron huberi*, *Oenothera flava* var. *acutissima* and *Artemisia norvegica* var. *piceetorum*. Another endemic with a very small range on either side of the town of Duchesne, Utah is *Penstemon duchensis*.

Sherel summed up by stating that, "These specialists don't like competition." This lack of competition may have as much to do with why they continue to exist as their adaptations to, and preferences for, unusual soil chemistry. Habitat harshness provides an opportunity for those taxa that can take advantage of it.

We are very grateful to Sherel and his wife for making the trek from Vernal to Provo just for our meeting. If you were in the audience, you were listening to one of Utah's foremost native plant experts (past or present).

To the extent that invasive species gain a foothold in the habitats of these species, they represent a potentially serious threat. Like animals species that evolved on oceanic islands devoid of certain types of predators, these plant species too have evolved without intense competition on these substrates.

A discussion relating to Uinta Basin plants was particularly timely. Many of these species have an unfortunate affinity for oil-rich shale substrates and grow in direct association with one another (example: *Astragalus lutosus* with *Aquilegia barnebyi* and *Cryptantha barnebyi* and *Penstemon grahamii*).

Oil and gas activity in the area is booming. These endemic species are a part of not only our Utah heritage but also of our natural heritage. Reasonable compromises between development and conservation must be achieved. This requires awareness and concern on the part of our citizenry, federal and state agencies, and developers alike. Populations of rare endemics should not be disturbed and their pollinators and pollination requirements need to be further studied and understood on an urgent basis.

Modern day Utah botanists and biologists who have long worked in the Uinta Basin such as Goodrich, Neese, Shultz, Atwood, Franklin, England, Welsh, Tuhy, Huber, Naumann, Tepedino and others have given us the gift of knowledge which we collectively must now use and consider in managing these precious resources.

While the drought of recent years is also of concern to biologists (some rare plant species will be at risk and it is unknown how pollinators, seed dispersers, etc. will react), these species have perhaps survived worse conditions over the thousands of years that they have likely existed. Understanding them may be a key to our own survival.



You won't find rare plants in Aspen groves.

BADLANDS, GOOD PLANTS



Penstemon goodrichii



Cleomella palmeriana var. goodrichii



Mentzelia goodrichii

Goodrich on Badlands continued ...

Selective list of Uinta Basin area endemics and rare plants*

To supplement the foregoing, a list that includes many of the species that Sherel discussed plus a few others was prepared (but there just wasn't enough room for it in this newsletter so, see the link to the full article- which includes the table - below):

This is not meant in any way to be a definitive list of all endemics in the area. Nor it is meant to be by any means a list of all rare plants in the region. It is rather being provided in order to (a) give the reader more information about the plant names listed above and thereby help to bring these species to life, (b) further outline the amazing amount of diversity in the Uinta Basin and surrounding area and help to illustrate how many (although not all!) of these species are related to specific geologic strata, the subject of Sherel's talk, and (c) provide a cross-reference to pictures and additional information that exists for many of these species on the Utah Rare Plants Guide web site (www.utahrareplants.org) hosted by the Utah Native Plant Society (UNPS).

This list and text was inspired but not prepared nor reviewed by Sherel; any and all errors are mine.

It should be noted that four of Utah's currently 24 federally listed species are Uinta Basin endemics.**

Here's the link to the article with the table: <http://www.unps.org/miscpdf/GoodrichOnBadlands.pdf>

****A note about endemics and rare plants:***

Endemics are taxa which are typically contained within a confined or restricted area due to topology and/or are restricted to certain soils or geologic substrates. The varied, rugged, and harsh climates and terrains found in Utah and adjoining states have created the stage for these plant specialists.

Rare plants are not necessarily endemics and endemics are not necessarily rare plants. An endemic found within a very limited area may occur with relative abundance within that range and therefore not be considered rare (even though it is nonetheless unusual and unique: rarity does not per se imply importance, except in terms of conservation priority; nor does it imply lack of success). And, a rare plant may occur in different states at disparate locations and may not therefore be an endemic.

That being said, Utah's rarest plants are primarily endemics. The Utah Rare Plant Guide site focuses on species which are considered "globally rare" rather than just "Utah rare only" (or "state rare") and invariably those tend to be endemics.

Species federally listed under the Endangered Species Act are indicated as **LE** (listed as endangered) or **LT** (listed as threatened) under the "Yes" indication in the "on URPG web site" column. Species which are formal federal candidates and awaiting listing are denoted by a **C**. The year the species was listed (or proposed as a candidate if appropriate) follows its status.

URPG = <http://www.utahrareplants.org>. Click on the Utah Rare Plant Guide link in the lower left hand corner and then click on Rare Plants and you will see the alphabetical list. "Yes" means there is (normally) a line drawing, habitat shot, closeup shot and general information about the taxon. All rare plants which occur in Utah are not necessarily identified on the rare plants web site as indicated above; a "No" in this column can be assumed to mean that the taxon is not rare.

Family names are the common rather than scientific names. **Counts *Sclerocactus brevispinus* as listed "under" *S. glaucus*.

Drawings by Kaye H. Thorne (from Utah Rare Plant Guide)

***Cloemella* photograph by Sherel Goodrich (from Utah Rare Plant Guide) other photographs by Tony Frates**

Thanks also to Susan Garvin, UNPS President, for arranging the annual meeting and inviting Sherel to speak to us, and in providing helpful comments and encouragement in the course of proofreading this article.

Continued on Page 6

Goodrich on Badlands continued

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Chapter News

Budding UNPS Chapter in Kane County!

On September 18, over 30 plant enthusiasts from the greater Kanab area converged on the Best Friends Animal Sanctuary for the first organizational meeting of the nascent Kane County Chapter of the Utah Native Plant Society. The meeting began with a short hike along Kanab Creek in the red rock splendor of Angel Canyon. Though the height of the wildflower season was past, meeting participants were treated to a colorful mix of blossoms, including Pale evening-primrose, Nelson's globemallow, Tansyleaf tansy-aster, Scarlet gilia, Wyoming paintbrush, Siskiyou aster, and Hopi blanketflower. In all, over 50 different wildflower, shrub, and tree species were in full flower or otherwise still recognizable.

About one-half of the group stayed on for the business portion of the meeting. The attendees agreed to pursue developing a full-fledged chapter for Kane County. Six people even joined on the spot, tripling the Society's membership in the Kanab area. Participants brain-stormed about future chapter activities and outings for the fall and winter months, including additional hikes, evening programs, possible field trips to native plant nurseries in Utah, seed-collecting expeditions, development of a community demonstration garden with native plants, and various volunteer service projects in southern Utah national parks and monuments.

Building on the momentum of the first meeting, the budding chapter held a second event on October 2, drawing a somewhat smaller, but no less enthusiastic group (including two additional paid members) for a wildflower hike in The Sand Hills area north of US Hwy 89. A full suite of fall wildflowers were still in abundance following recent hail and rain storms, including Spectacle-pod, Sand buckwheat, Broom groundsel, and Shrubby gilia. The group was also treated to zestful tales of botanical folklore and wisdom, many of which were undoubtedly true.

In the next few weeks, the Kane County group will formally submit an application for chapter status, select chapter officers, and develop a full slate of winter programs. The next meeting is scheduled for the evening of Monday, Nov 1 and will feature an invited speaker.

For more information on the group and upcoming activities, contact Walter Fertig at 435-644-8129 or walt@xpressweb.com. —

Natives in the News

These articles are re-produced with permission from the authors, thank you to Ray Grass and UNPS Member Maggie Wolf for their contributions.

Utah's sagebrush die-off is wreaking havoc on desert life

Ray Grass— Deseret Morning News

Utah received a rather subtle wake-up call last year. Sagebrush that was once lush and tall, which offered feed and protection for wildlife, died — roughly 600,000 acres. Some have placed the loss at closer to 1 million acres.

But the problem goes more deeply than just sagebrush, said Rory Reynolds, wildlife program coordinator for the Utah Division of Wildlife Resources. "We're dealing with land health . . . and not just public land, but all land here in Utah and in other states as well."

And there are other issues as well that much be addressed, such as native biological diversity, that is, dealing the plants and animals, along with water, sustainable agriculture and recreation.

"All are important," said Reynolds, "and we need to look at what's at risk to these values." Threats to the health of the land include invasive weeds taking over where native plants once thrived; once productive farmlands being fragmented through urban sprawl; oil and gas leases splitting up ranchlands; fires wiping out acres of native vegetation, which is allowing for the invasion of less desirable weeds and grasses; and wildlife populations being severely impacted by unhealthy land.

All of these problems are being further exacerbated by the public's "lack of understanding of the ecological process," offered Reynolds. "The feeling is that if you leave things alone they'll take care of themselves. . . . But, Mother Nature doesn't care what's on the land as long as it's something, and it could be invasive weeds as far as she's concerned, such as cheat grass or thistle. . . . She's fine with that, but we're not. "The public needs to understand that certain things need to happen. The public needs to demand that the various agencies work together to correct the problems. We've past the point of no return on many areas. Economically, we simply don't have the money. The cost to restore an acre of land is between \$100 and \$150. Multiply that by the acres of land we've lost and we simply don't have enough money.

"We need to act on those lands that can be restored before they get to the point of no return." In the case of the sagebrush die-off, for example, consensus is that it was a result of past land-management practices and six years of drought, which pushed the plants beyond their ability to recover. In many cases, the sagebrush lost was old decadent stands and stressed to the point where it simply died.

What is needed, said Reynolds, is a more diverse age class that can survive hard times and the invasion of non-native weeds. Healthy land can then sustain a healthy wildlife population, most notably species such as mule deer and sage grouse, which are on the decline in many areas of the state, primarily because of poor habitat. Trying to maintain the health of the land is a problem that is not going to go away anytime soon. And, for that matter may never go away.

"Right now we need to work together — government agencies and the public — more than at anytime in our history. Once something is lost, we can never go back . . . we see a decline in the integrity and health of our ecosystem . . . we need to learn how to manage fires and the invasion of exotic plants. We need to do a better job of managing grazing and managing our wildlife populations.

Continued on page 8

Utah's Sagebrush die off Continued

"The first thing that needs to happen is agencies that sometimes have competing goals need to work together to solve these problems, and we need public support to do it."

Currently, the various state and federal agencies are coming together to identify problems and establish goals. It is, as Reynolds, explained, "the first baby step" in what will be long, long walk to recovery.

Don't kill native plants with too much kindness

By Maggie Wolf

Utah native perennial and woody plants are increasingly popular choices for Wasatch Front landscapes. If you choose to plant some natives this fall, you can achieve best plant establishment and vigor by following a few basic principles:

Plants with common water needs should be grouped together so that they can be watered properly.

Soil amendments are not necessary and may even be detrimental for native plants.

Organic mulch may hold too much moisture for some Utah native plants, so gravel or no mulch is recommended.

For the most part, planting Utah native plants is much like any other perennial, shrub, or tree. Dig a dish-shape hole only as deep as the root ball, but three times as wide, always remove the container and/or as much of the burlap wrapping as possible, fill in and firm soil around the root ball to eliminate air pockets, and water thoroughly *after* the planting is complete.

"One of the more common mistakes I see is that people will plant a very drought resistant plant near their aspen trees. They think, 'These are both native plants, so I can water them the same', and they usually kill the drought tolerant plant with overwatering just to keep the aspen alive," notes Janette Diegel, a Salt Lake area water-wise landscaper.

Soil type (sandy or clay) will have a big effect on how often plants need irrigation. Sandy soil drains quickly, so will need irrigation more frequently. In clay soil, particles are very small and the tiny spaces between particles hold water a longer time, so irrigations should be less frequent. A routine soil test from the Utah State University Analytical Labs (www.usual.usu.edu) will tell you what soil texture your landscape contains. Before planting, be sure that the soil is not compacted and that it drains well. Soil amendments such as compost, peat moss, or manures will tend to hold moisture near the native plant roots too long, leading to root rot.

"I use organic mulches in some of my designs, probably more than I should," admits Janette. "But I'm careful to apply the mulch so that it's at least six inches away from the crown of the plant." Organic mulches, such as pine bark mulch, can hold too much moisture for some native plants. Rock mulch is usually recommended because it holds less moisture.



Plant as deep as root system

Plant your Utah native in a hole just as deep as the plant's root system and three times as wide. The hole should be shallower as it approaches the edges, so that a cross-sectional view would look like a dish. Prepare the plant by removing the container and/or wrapping.

If there are any roots larger than one-quarter inch diameter circling in the bottom of the container, loosen, straighten, and trim them. Place the plant in the hole, checking to be sure that the root collar (where root system meets stem or trunk) is at or is slightly above grade.



Tease loose matted roots

Backfill around the plant with the soil dug from the hole. Firm the soil around the root system so that air pockets are eliminated. When you have completely filled the hole, water the plant with a slow trickle, moving the hose every so often, so that newly dug area is saturated at least as deep as the root ball. Cover the dug area with mulch, except for an area at least six inches diameter around the plant stem, trunk, or crown. Depending on your soil texture, water again when needed.



Backfill with Native Soil

More information about Utah Native Plants and sources:

Jordan Valley Water Conservancy District (www.slowtheflow.org)

Utah Native Plant Society (www.unps.org)

Utah's Choice (www.utahschoice.org)

Center for Water Efficient Landscaping (<http://www.hort.usu.edu/natives/index.html>)

Now Available

New Native Plant Landscaping Resource Now Available

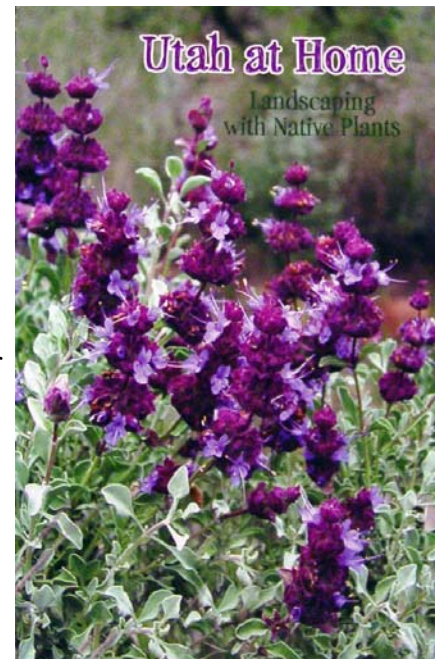
By Linda Oswald, Intermountain Native Plant Growers Association

Utah at Home: Landscaping with Native Plants is a 20-page booklet with full-color illustrations recently produced by the Intermountain Native Plant Growers Association. The booklet was created to fill a need for an attractive, reasonably priced how-to guide for using native plants in the home landscape. It features a center page spread describing characteristics and cultural requirements for the 40-species Utah's Choice plant line-up, as well as procedures for coping with excess turf and a user-friendly step-by-step guide to designing and installing a native plant landscape.

Several UNPS members were instrumental in the booklet's creation. Janett Warner spearheaded the effort, Tami Coleman authored the text, Tim Clarke provided sample landscape designs, and Dave Wallace and Susan Meyer provided photographs. Layout and graphic design are the work of Alicia Garcia of The Missing Ink in Richfield, and the booklet was printed by North Star Printing of Spanish Fork.

Funding for the production of the booklet was provided by the Utah Division of Water Resources, the Central Utah Water Conservancy District, and the Center for Water Efficient Landscaping at Utah State University.

Utah at Home is available at many garden centers and nurseries, at Red Butte Garden, on the UNPS website and at the Utah Geological Survey bookstore in the Natural Resources Building on the corner of North Temple and Redwood Road. Individual copies can be ordered by sending \$2.75 to: INPGA, c/o Linda Oswald, 1827 Princeton Ave., Salt Lake City, UT 84108. To order the booklets in quantities of 15 or more at the wholesale price (\$0.90 +10% for shipping and handling), please use the order form on our website at: www.utahschoice.org. For questions, please call 801-582-1350 or e-mail linda@utahschoice.org.



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**Check out our
website!**

www.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 submissions deadline
for the next issue is
8th December 2004**

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