



Sego Lily

Newsletter of the Utah Native Plant Society

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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?*

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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 saurus*, *Chrysothamnus nauseosus* var. *uintahensis*, *Eriogonum brevicaulis* 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.

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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 Seego 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 duchensensis*.

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.

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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.

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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.



