



VOLUME 24, ISSUE 6

NOV/DEC 2001

## Going Native in Joseph, Utah

By Larry A. Sagers, *Deseret News*, September 23, 2001

It isn't exactly Beverly Hills 90210; in fact, it is quite the opposite. A small sign on U.S. 89 in central Utah points the way to a unique local nursery that specializes in native plants. As research for a series of columns spotlighting low-water-use plants this summer, I paid a visit there to learn more.

Wildland Nursery is an unusual business whose owner, Janett Warner, has an interesting story. Her advice will help you select water-thrifty woody plants that thrive in our area.

"My forebears were English botanists, and my parents were horticulturists by practice," said Warner. "While relying as they did on the income from their small truck farm, they raised me at the end of a hoe.

"They did not chain me to the furrow. Quite the contrary," she said. "My family and I were lovingly shoved into the

neighboring foothills and canyons where, disguised as mountain men and fur trappers, we created hideaways in shady Gambel oak groves and gathered wild nuts and berries."

After taking time out to raise eight children and send them to medical school, architectural school and on to other advanced degrees, Warner decided to pursue some of those childhood interests.

"After I had raised my own children to love Utah, I volunteered to be a docent at Red Butte Garden. I grasped every opportunity to learn about the cultivation, use and care of plants."

She became a USU Master Gardener, certified arborist and a certified nursery professional and simultaneously earned an Associate of Horticulture Science degree from Utah State University.

After serving an internship at the Conservation nursery and completing a bachelors degree at BYU, she gave in to her passion and started Wildland Nursery. First located in a small back yard in Riverton, Wildland Nursery has now moved to central Utah to a farm in Joseph where there is plenty of room to grow.

Beneath a vast sky and surrounded by the breathtaking

beauty of the Utah landscape, Warner pursues her childhood recreation.

The change has been exciting but did require changes in her lifestyle. One of the first was to sell her Mercedes-Benz and buy a tractor.

"I could not deliver plants in a Mercedes," quipped Warner, "and I could not pull a tiller with one." Hence the Mercedes is gone and in its place is a tractor that she uses to prepare the soil and plant the trees.

Why did she chose Joseph as the site for her nursery? "Good land and good water and the right elevation. I had to come here to find affordable farmland," she said.

Most of Warner's customers are from out of state and are looking for plants that they cannot find at most local nurseries. Even though the nursery is not close to them, it is near the freeway, so it is working out well.

Part of what motivates Warner in her quest for native plants is that they are also water thrifty. Water conservation is vital, and she is anxious to share her feeling about how these plants are both attractive and make good sense in our landscapes.



### Nov/Dec Contents

Going Native in Joseph, Utah
Endangered Status for Holmgren Milk-vetch and Shivwits Milk-vetch
State and Chapter News
UNPS Annual Members Meeting
Events and Activities

Utah boasts more than 3,000 different documented native plants. These are the same trees, shrubs and wildflowers you find on hikes through the canyons, foothills and deserts of the state. Native plants grown in Utah soil, under Utah conditions will establish easier and have a better chance of living longer with fewer diseases and pest problems.

Pinyon pines are excellent trees for most areas of Utah. They tolerate drought and have few pest problems. With some water they grow reasonably fast, but they usually do not outgrow their place in the landscape.

Warner also likes the limber pine. "It is so versatile and grows throughout the state. The long needles and the shape make it an excellent choice for many landscapes."

Looking at some of the deciduous plants, Warner quickly extols the virtues of the bigtooth maple. "This is the tree that is so colorful in our mountains and does equally well in our landscapes. She hastens to add that you must select a seed-grown tree that has never been grafted or one that is grown on its own root.

"Some nurseries graft the bigtooth maple onto the sugar maple rootstock. This defeats the purpose of having the native plant because sugar maple grows best in acidic soils. If we graft our native maple onto that rootstock it will never grow well

in most areas of Utah because of our alkaline soil."

Chokecherry is another one of her favorites. "I love the color in the spring from the flowers. The fruit in the late summer is very attractive, and then it has some excellent fall color."

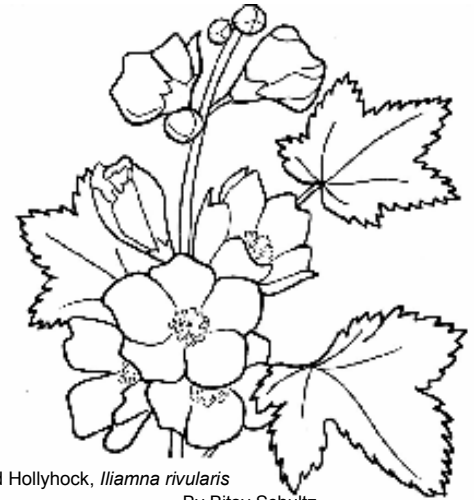
She also is enthusiastic about the native oak. "The gnarly Gambel oak is a wonderful tree for our dry hillsides. It survives well without much irrigation once it is established and will live for many years. If something damages one of the trunks, it is a simple matter to prune it out and let some new shoots replace it."

Several other excellent trees are part of our native landscape. Two that Warner recommends as understory trees are the Rocky Mountain maple and serviceberry. Both of these thrive in light shade from another tree. Rocky Mountain maple is a smaller tree but has a brilliant red color in the fall. Serviceberry is another great plant with good fall color and white flowers in the spring.

Don't forget the bristlecone pine, the Rocky Mountain and the Utah juniper and the both the curl-leaf and deciduous mountain mahogany plants. These plants will add to your landscape without adding to your water bill.

As enthusiastic as she is about native trees, Warner does think there are many introduced species that are worth considering.

"While I do enthusiastically encourage much more use of native plants, I believe we should not plant only natives. Many imported or exotic species do very well



Wild Hollyhock, *Iliamna rivularis*  
By Bitsy Schultz

here and add to the diversity. Many of the plants in the nursery trade are descendants of wild plants that have been selected and introduced to the cultivated landscape because of their desirable qualities."

Joseph 84769 just might be the right place to look to help conserve water and make your landscape a place of beauty for yourself and the other creatures of the state.

## Endangered status for Holmgren and Shivwits milk-vetch

**SUMMARY:** Effective October 29, 2001, The Fish and Wildlife Service has determined endangered status under the Endangered Species Act (Act) of 1973, as amended, for two perennial herbs-- *Astragalus holmgreniorum* (Holmgren milk-vetch) and *Astragalus ampullarioides* (Shivwits milk-vetch). Three small populations of *A. holmgreniorum* exist in Washington County, Utah, and adjacent Mohave County, Arizona. Five small populations of *A. ampullarioides* exist in Washington County, Utah. Significant portions of the habitat of both species are subject to disturbance from urban development, off-road vehicles (ORVs), grazing, displacement by exotic weeds, and mineral development. This determination that *A. holmgreniorum* and *A. ampullarioides* are endangered species implements the Fed-

eral protections provided by the Act for these plants.

*Astragalus holmgreniorum* (Holmgren milk-vetch) was first collected as a scientific specimen in 1941 by Melvin Ogden. Rupert Barneby and Noel and Patricia Holmgren rediscovered the species in 1979. Barneby (1980) recognized the species as a unique taxon occurring in a localized area on the Arizona-Utah border, and named it for its co-discoverers. *Astragalus ampullarioides* (Shivwits milk-vetch) was first collected near Shem in Washington County, Utah, by Duane Atwood in 1976. The species was originally described by Stanley Welsh (1986) as a variety of *A. eremiticus*. Barneby (1989) questioned the taxonomic significance of the species and submerged *A. eremiticus* var. *ampullarioides* within typical *A. eremiticus*. Later research work by Harper and Van Buren

(1998) and Stubben (1997) demonstrated significant genetic and ecological differences between typical *A. eremiticus* and *A. eremiticus* var. *ampullarioides*. Welsh (1998) revised the species' taxonomy elevating the taxon to full species status as *A. ampullarioides*. Both species are narrowly distributed Mojave Desert endemics restricted to the immediate vicinity of St. George, Utah.

A member of the pea family (Fabaceae), *Astragalus holmgreniorum* is a stemless herbaceous (non-woody) perennial that produces leaves and small purple flowers in the spring, both of which die back to its roots after the flowering season. The plant's pinnately compound leaves (leaves arranged on opposite side of the stem in a row) arise directly from the root crown. The leaves are pressed

close to the ground, and are 4 to 13 centimeters (cm) (1.5 to 5.1 inches (in)) long, and have 9 to 15 leaflets. The leaflets are 0.8 to 1.6 cm (0.3 to 0.6 in) long and are broadly obovate (oval with the narrow end towards the base of the leaf) in shape. The flowers of *A. holmgreniorum* are 1.8 to 2.4 cm (0.7 to 0.9 in) long, and 0.6 to 0.9 cm (0.2 to 0.4 in) wide and have the distinctive papilionaceous flower shape of a legume (pea-like flower with five petals that include a large petal on top enclosing two lateral petals and two smaller lower petals). The flowers are borne in a raceme inflorescence (flowers occur along a stalk), commonly with 6 to 16 flowers. The peduncle (flower stalk) is 2 to 8.5 cm (0.8 to 3.6 in) long and arises directly from the root crown. The peduncle is erect during anthesis (period the flower is open) and is prostrate when the plant's in fruit (Barneby 1980; 1989; Welsh, et al. 1987; Stubben 1997). The fruits are pods 3 to 5 cm (1 to 2 in) long and 0.6 to 0.9 cm (0.2 to 0.4 in) across. The pods retain seeds even after the pods fully open up along the margin. With age, each pod eventually dries out and opens up at both the top and bottom ends (Barneby 1989; Stubben 1997).

*Astragalus holmgreniorum* grows on the shallow, sparsely vegetated soils derived primarily from the Virgin limestone member of the Moenkopi Formation. The species is a principal member of a warm-desert shrub vegetative community dominated by the following perennial shrubs—*Acamptopappus sphaerocephalus* (desert goldenhead), *Ambrosia dumosa* (white burrobush), *Krameria parvifolia* (range ratany), and *Lycium andersonii* (Anderson wolfberry). In addition, plant species associated with *A. holmgreniorum* include several perennial and annual forbs and grasses; most significant are the introduced weedy species—*Bromus rubens* (foxtail brome), *Erodium cicutarium* (storksbill), and *Malcolmia africana* (African mustard) (Stubben 1997; Armstrong and Harper 1991; Van Buren 1992; Harper and Van Buren 1998, 2000b).

Only three populations of *Astragalus holmgreniorum* are known. The species primary population exists on the Arizona (Mohave County) and Utah (Washington County) border approximately 11 kilometers (km) (7 miles (mi)) south of the center of St. George, Utah (Stubben 1997). This population is fragmented by Interstate Highway 15, areas of urban development, and spotty natural habitat occurrences. The number of individual plants in all the species' populations varies considerably from year to year. This population averages about 9,000 to 10,000 plants in years with wet winters (Stubben 1997; R. Van Buren, Utah Valley State College, Orem, Utah, pers. comm. 1998). The second population is south of the town of Santa Clara about 8 km (5 mi) west of St. George. This population consists of 2 sites whose total numbers average about 1,000 individual plants (Stubben 1997; Van Buren 1992; R. Bolander, Bureau of Land Management, Salt Lake City, Utah, pers. comm. 2000). The third population consists of about 30 plants, and is located in Purgatory flat approximately 15 km (9 mi) east of St. George (Stubben 1997; R. Bolander, pers. comm. 2000). The small number of populations and restricted habitat of this species make it vulnerable to human-caused and natural environmental disturbances. Urban expansion of St. George and highway and power line construction have destroyed significant portions of the species' potential habitat and threaten additional occupied habitat. The species also is threatened by ORV use, displacement by exotic weeds, mineral exploration and development (Harper 1997, Stubben 1997, Van Buren and Harper 2000b).

*Astragalus ampullarioides* (Shivwits milk-vetch) is a perennial, herbaceous plant that is considered a tall member of the pea family, although some plants appear shorter because of grazing impacts. Stems may grow along the ground or to a height of 20 to 50 cm (8 to 20 in). However, ungrazed flowering stems may attain a height of 1 meter (40 in). Its leaves are pinnately com-

pound, 4 to 18 cm (1.6 to 7.1 in) long, and have 11 to 23 elliptical leaflets. Each plant produces about 45 small cream-colored flowers about 2 cm (0.8 in) long on a single stalk in the spring. Seeds are produced in small pods, and the plant dies back to its root crown after the flowering season. The fruit is a short, broad pod between 0.8 and 1.5 cm (0.3 to 0.6 in) in length and 0.6 to 1.2 cm (0.2 to 0.5 in) in width (Barneby 1989; Welsh 1986, 1998; Welsh, et al. 1987).

Differences between *Astragalus ampullarioides* and typical *A. eremiticus*, which also is found in Washington County, Utah, are apparent from the following morphological and ecological characteristics--(1) *A. ampullarioides* has more flowers in each inflorescence, (2) *A. ampullarioides* has more elongated flower stalks, (3) *A. ampullarioides* has wider pods, (4) *A. ampullarioides* has taller plants, (5) *A. ampullarioides* has hollow stems, while *A. eremiticus* stems are solid, and (6) *A. ampullarioides* plants are highly palatable to grazing animals, while typical *A. eremiticus* is seldom if ever eaten (Barneby 1989; Welsh 1986, 1998; Welsh, et al. 1987; Van Buren 1992; Harper and Van Buren 1998). The variation between the two species also is apparent at the genetic level. The DNA analysis of *Astragalus* species have shown significant differences in genetic markers between *A. ampullarioides* and *A. eremiticus* (Stubben 1997).

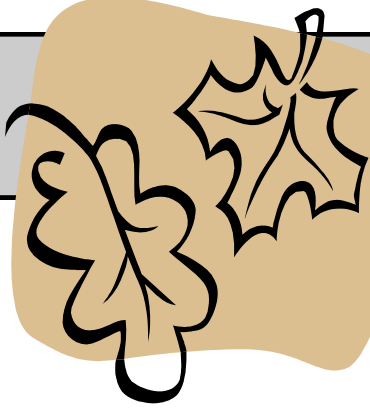
*Astragalus ampullarioides* grows only on purple clay soils derived from the Petrified Forest member of the Chinle geological formation. The species is known from five separate sites in Washington County, Utah. These sites are distributed on a narrow band of the exposed Chinle formation over a distance of about 72 km (45 mi) near St. George, Utah. These 5 populations contain a total of approximately 1,000 individual plants (R. Van Buren, pers. comm. 1998, 2000). Two of the five populations occur near Shivwits on the western edge of the species range. One population occurs on the Shivwits Indian Reservation and contains about 50 individual plants (L. England, pers. comm. 1999); the other population occurs on Bureau of Land Management (BLM) land and contains about 135 individual plants (Utah Natural Heritage Program 1999). Two other populations occur near Harrisburg Junction on the eastern edge of the species range. One of these populations with 4 disjunct sites occurs on a mixture of State and BLM lands and contains about 300 individual plants (L. England, pers. comm. 1999, Utah Natural Heritage Program 1999, Van Buren, pers. comm. 2000). The second population in the Harrisburg area is located within a rapidly expanding commercial, recreational, and residential development. This population contained over 1,000 individuals in 1995 (England, pers. comm. 1995) and had declined to about 200 individual plants in 1998 (Utah Natural Heritage Program 1999). This population declined to less than 50 individuals in 2000 (England, pers. comm. 2000). Most of its habitat has been converted to a golf course. The fifth population occurs in the southwest corner of Zion National Park with a population estimated at 300 to 500 individuals (Harper, pers. comm. 2000; Van Buren, pers. comm. 2000). Native plant species normally associated with *A. ampullarioides* include *Dichostemma pulchellum* (beautiful bluedicks), *Lotus humistratus* (birdsfoot trefoil), *Gutierrezia microcephala* (snakeweed), *Calochortus flexuosus* (mariposa lily), and several other Mojave Desert plants. Currently the most significant plant species associated with *A. ampullarioides* are the introduced weedy species *Bromus rubens* (foxtail brome), *B. tectorum* (cheat grass), *Erodium cicutarium* (storksbill), and *Malcolmia africana* (African mustard) (Armstrong and Harper 1991; Van Buren 1992, 1998; Harper and Van Buren 1998, 2000a).

*Astragalus ampullarioides* is threatened by the same activi-

ties as *A. holmgreniorum*. In addition, *A. ampullarioides* is heavily grazed by most wild and domestic herbivores, and one of its five populations is threatened by activities associated with clay quarry mining and unauthorized waste disposal (Harper 1997). *A. ampullarioides* is restricted to clay soils derived from outcrops of the Chinle formation, which naturally limits its potential habitat and population (Van Buren and Harper 2000a). The populations of both species fluctuate significantly year to year primarily due to extreme variations in local precipitation. The population num-

bers cited above reflect the highest levels observed since 1992; in an average precipitation year populations will be about half of that cited above, while drought-year population numbers will be 10 percent or less of the maximum observed levels (Van Buren and Harper 1998, 2000a; Van Buren 1999; R. Bolander, pers. comm. 2000; J. Anderson, Bureau of Land Management, Phoenix, Arizona, pers. comm. 2000).

For more information contact : John L. England, Botanist, Utah Field Office, 801-524-5001.



## State and Chapter News

### Cache Chapter

August and September continued to be busy for Cache Chapter members. We joined forces with the County Extension and Master Gardeners to present Cache Valley's first Lean-n-Green Garden Tour on August 16th. Over 60 people toured four Logan-area home landscapes which feature Utah native plants or xeriscape techniques. The response was far more enthusiastic than we anticipated as many people took pictures, grilled homeowners for seed sources, and flung off their shoes to play barefoot in prairie grass lawns. A HUGE thanks to the UNPS members who made it a success: Wendy Mee and Dick Mueller for opening their yards to the public, and to Glen Lyon and Wendall Sullivan for being tour guides extraordinaire.

Mary Barkworth of the Intermountain Herbarium led a small group up into the USU forest study area on a seed-collecting expedition in late August. We were able to collect a wide variety - let's plan on a seed swap at one of our meetings this coming winter.

But those of you who prefer to let someone else do the growing were able to do a little collecting of your own in mid-September. Virginia Markham and Janett Warner paid the Cache Valley Gardeners' Market a visit with their fine selection of native seeds and plants. We had a great time with these ladies and we hope to bring them back to the market's opening next May. Speaking of the market, make sure to stop by October 13th for the season-closing Harvest Festival, where "Best of the Market" baskets (we're contributing Utah native seed packets and UNPS posters) will be raffled off. Thanks to Gene Schupp, Mary Barkworth, and Dick Mueller for working our chapter table. Extra special kudos are due to Dave Wallace for making our little enterprise a success throughout the summer!

We held our first regular chapter meeting on September 17th at USU's Greenville Farm. Roger Kjellgren, who never seems to tire of doing so, gave our group an exhaustive tour of his native plant demonstration garden and his students' trial plots. The garden, as always, was beautiful. If you haven't visited it yet, consider doing so right now since many plants have set seed (wink, wink, nudge, nudge). Watch the UNPS website or join our Topica discussion group (send a message to [unps\\_cache-subscribe@topica.com](mailto:unps_cache-subscribe@topica.com)) for notice of our next meeting.

USU Ecologist Eugene Schupp and Soils Scientist Janice Boettinger closed out September leading a terri-

fic trip up Logan Canyon on the 30th. They and their graduate students have been studying a stand of Curl-leaf Mountain Mahogany (*Cercocarpus ledifolius*) for a number of years. They're uncovering fascinating information about these beautiful gnarled trees as well as amassing enough unanswered questions to keep a fleet of grad students working overtime. Many thanks to Tim Slocum for hauling us all out there in his enormo-van.

Last, but certainly not least, we will begin planting Cache Valley's first UNPS Heritage Garden starting on Saturday, October 13th. The teachers, students, and parents of Cache Valley Learning Center, a private K-8 school and UNPS sustaining member, have enthusiastically embraced this project. UNPS member and Landscape Architecture student Wendy Mee designed the layout and compiled the plant list. Although it has not even been planted yet, this garden has begun to generate positive effects in the community. Logan City planners were anticipating receiving the plant list so that they could use it as a basis for a future "city-approved" xeriscape plant list. If you would like to participate in or to contribute to our chapter's flagship Heritage Garden, please contact Tami Coleman at 435.258.0303 or [unps\\_cache@hotmail.com](mailto:unps_cache@hotmail.com).

### Canyonlands Chapter

No news submitted

## Mountain Chapter

Because of everyone's busy schedules, there were not that many Mountain Chapter activities this past summer. We mainly worked on maintaining our Heritage Garden. This fall, we are going to look at which plants we want to raise during the winter to plant in the Heritage Garden next spring.

## Salt Lake Chapter

**Landscape Design Forum.** The Utah County Chapter will hold a meeting on Friday, October 26. The meeting will start at 6:00 pm in the upstairs meeting room of the Monte L. Bean Museum on the BYU campus, just east of the Marriott Center and north of the Bell Tower. We will have a potluck supper with officers supplying a main course and eating utensils. Please bring a side dish or drink to share. Beginning at 7:00 we will have one or two speakers with expertise in landscaping design and an appreciation for the use of native plants in the landscape. Members are welcome to bring their own ideas, including a few slides if desired, and bring your questions on using Utah's native plants in your own yard. Visitors from other chapters and the community are welcome to attend.

### Spring Trip to Red Canyon:

We will be spearheading a spring trip to Red Canyon, a few miles east of Bryce Canyon. We intend to invite someone who has expertise in the plants of this part of Utah to lead us in a plant walk or two. This trip is still in the very early stages of planning, but we wanted to give you a chance to put it on your calendar if you've missed the last few trips. This trip will take place sometime in May, with exact dates and plans to be announced in the spring. Contact Susan Garvin if you are interested. Members and families of all chapters (and similarly inclined friends) are invited.

## Southern Utah Chapter

The Southern Utah Chapter met on August 26th. Al Tait, a retired Botanist from Southern Utah University conducted a plant ID session. He helped identify photos, twigs and even named several plants by descrip-

tions given at the meeting. Those of us attempting to learn plant names had a great time.

Our big project a this time is a Heritage Garden at Three Falls Elementary School in Hurricane. Dirt has been hauled, the area has been contoured and on October 11 we will have a workday to install a drip irrigation system and move more soil. We will keep everyone advised as this project proceeds. Margaret Malm, per Mike Empey

## Utah Valley Chapter

Rock Canyon restoration--update: The Rock Canyon viewshed (i.e., the area of Rock Canyon that is visible from the trailhead) has now been mapped using GPS. We have divided the area into ten sections, each of which has its own description, history, long range plans, management philosophy, and upcoming projects. The



viewshed covers 64 acres, of which approximately 10 acres will be involved in the most intensive restoration effort. Over 3000 volunteer hours have been contributed during the past two years to the restoration. Our limiting factor is not volunteers, it is volunteers who can lead other volunteers. Native Plant Society members are desperately needed in 2002. If you would like to get involved or would like a tour of the restoration, please contact our volunteer coordinator (Becky Wilde Peterson), who can be reached at her cell phone # 360-3625.

Coloring Book: The coloring book of native wildflowers by Bitsy Schultz is selling well. Clearly there is a need for publications on Utah native plants--public interest is certainly growing. Works in progress by our chapter members include "Wild Plants of the Bonneville Shoreline Trail", which will feature beautiful photography by April Sorensen, and a manual on restoring foothills and lower canyons along the Wasatch Front (the manual is in the planning stages and will probably be a work in progress for some time). More information on either of these is available from Phil Allen at phil\_allen@byu.edu.

## Vernal Chapter

No news submitted



## Events and Activities

### UPDATE ON HIKE TO BRISTLECONE PINE GROVE

by Kim Despain

The BLM has done good work in planning and developing the Price Canyon Recreation Area. Next time you go to Price, take the turn off to the Price Canyon Recreation Area and satisfy your curiosity as to what is at the end of the road. You will not be disappointed. The camp ground has two areas. A 20-25 space camp ground proper and a day use, group picnic area. Water is available at both sites. The restroom facilities are nice. The trail starts in maple, pinyon and ponderosa pine, white fir and mountain mahogany.

The weather was great. Late summer- 70's to 80's and almost cloudless. The maples were in good fall colors and the aspens were beginning to turn yellow.

Ten people came to the hike, four from the Price chapter. The others were from the Provo-Orem area. After introductions, the hike started about 12:30. The hike progressed at a slow pace. 3 or 4 people would split off from time to time to examine plants that were in flower, look at pack rat middens or look at something else of botanical interest.

When we arrived at a Bristlecone pine growing between some large rocks, photos had to be taken of both adults and kids climbing on the rocks and the pine tree. We marveled at how some pine trees were growing from cracks in large rocks along the trail and wondered how long the little trees had been growing. They would have made nice bonsai specimens. We also saw small groups of pine trees that had been planted by jays or squirrels.

Some increment borer core samples were taken from some bristlecone and limber pine. Many of the Bristlecone sampled had only 4-6" of good wood toward the outside before an internal heart rot condition was encountered.

Bristlecone pine rings were more compact than limber pine rings. Bristlecone averaged between 90-100 rings per inch, whereas limber pine averaged 70-80 rings per inch. A way to estimate the age of a bristlecone pine at this site is to determine the diameter of the tree, divide by 2, then multiply by 75. These are estimates only. Some the bristlecone pine at the Price Canyon Recreation Area

are probably 1000-1500 years old. These are estimates based on samples taken from 6 trees. Not a truly adequate sampling for any definitive study.

When the group returned to the trail head parking lot and rested, Kim Despain presented some information on 6 pine tree species that grow in Utah. Bristlecone pine- *Pinus aristata* or *longaeva*- depending whether you are in the eastern or western half of Utah. Limber pine- *Pinus flexilis*- which is on most every mountain in the state. Lodgepole pine- *Pinus contorta*- mainly in the Uintah Mountain range. The pinyon pines -*Pinus edulis* in the eastern half of the state and *Pinus monophylla* in the western half, and ponderosa pine- *Pinus ponderosa*.

White pines have 5 needles per fascicle and cones usually do not have a prickle at the end of the cone scale- except bristlecone pine. Yellow pines have 3 needles per fascicle and the cones usually have a prickle at the end of the cone scale.

Bristlecone pines have been used to determine the rate of slope erosion in areas like Bryce and Cedar Breaks. Estimates are that 1 foot of soil is eroded away each 1000 years.

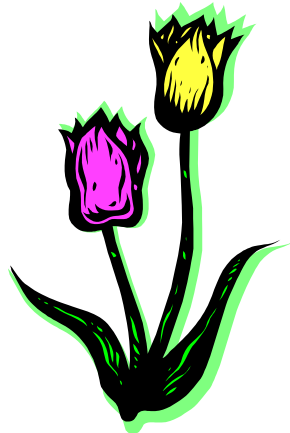
*References for further reading and information are: A Garden of Bristlecone – by Michael P. Cohen, Trees of the Great Basin- by Ronald M. Lanner, and The Pinyon Pine- by Ronald M. Lanner*

### INTERMOUNTAIN NATIVE PLANT SUMMIT

October 31st, 8 a.m. to 8 p.m. The seminar/workshop guest speaker topics range from native plant seed germination procedures to a native plant market study. Registration is free, but pre-registration is recommended. For more information, contact danielson@cc.usu.edu.

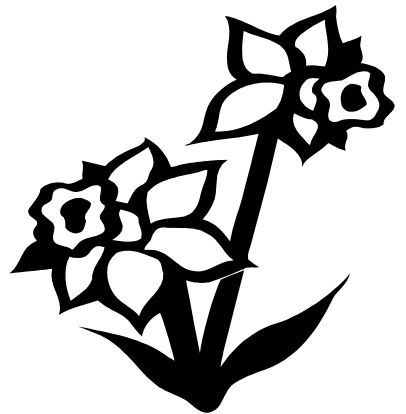
## BULB LECTURES AT RED BUTTE

Don't miss these two special lectures by nationally known bulb expert, Brent Heath at Red Butte Gardens. Brent Heath is a third generation bulb grower and co-owner with his wife, Becky, of Brent and Becky's Bulbs, a wholesale/retail mail-order flower bulb catalogue and web site business. Brent and Becky have a 10 acre display garden and trial farm where they currently grow over 3000 cultivars and species of all types of bulbs in combination with annuals, perennials and ground-covers. They are the co-authors of *Daffodils for American Gardens*, an award winning 140 page horticultural masterpiece covering all aspects of selecting and growing these beautiful bulbs. A book signing will follow both evenings. Lectures cosponsored by Wasatch Rock Garden Society, Utah Native Plant Society, UNLA, and USU Salt Lake County Master Gardeners.



**Friday November 2<sup>nd</sup>, 7 - 9pm. Native and Species Bulbs:** Learn about many wonderful species bulbs that are great landscape plants. This lecture will focus on wild and species bulbs that are available commercially and suitable for your garden. Most of these bulbs are low maintenance, drought tolerant, and naturalize in the garden. Members of Cosponsoring Organizations \$5.00 Nonmembers \$7.00 Pay at the door, Red Butte Gardens.

**Saturday November 3<sup>rd</sup>, 7- 9pm. Hooked on Daffodils:** These wonderful spring blooming landscape plants are easy to grow, insect and disease resistant, deer resistant, and are cost effective landscape plants. The number of different cultivars can be mind boggling. Come learn as Brent shares information about some of the best cultivars for your garden. Members of Cosponsoring Organizations \$5.00. Nonmembers \$7.00. Pay at the door, Red Butte Gardens.



# UNPS ANNUAL MEMBERS MEETING!

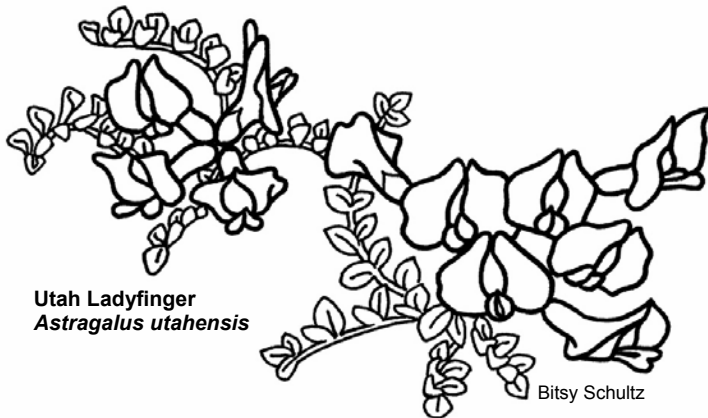
**New World Pot Luck Dinner  
Election of Directors**

**Friday November 16, 2001, 6:30 pm  
Sugarhouse Garden Center, 1602 E 2100 S  
Salt Lake City  
Questions call Bill 801-582-0432**



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

Non-Profit Org.  
U.S. Postage  
**PAID**  
Salt Lake City, Utah  
PERMIT No. 327



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: 377-5717  
Larry Meyer: 272-3275  
Or write to: [unps@unps.org](mailto:unps@unps.org)

UTAH NATIVE PLANT SOCIETY

President: Susan Meyer  
President Elect: Larry Meyer  
Treasurer: Ben Franklin  
Secretary: Therese Meyer  
Newsletter Editors: Paula Mohadjer  
and Mindy Wheeler

Check membership category desired:

- Student            \$6.00
  - Senior             \$10.00
  - Individual         \$12.00
  - Household         \$20.00
  - Sustaining         \$35.00
  - Supporting Org.   \$50.00
  - Corporate         \$250.00 and up
  - Lifetime            \$250.00
- Please send a complimentary copy of the Segó 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](http://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 Mohadjer  
at [paulam@jvwcd.org](mailto:paulam@jvwcd.org). **Dead-  
line for next issue is Dec 15.**

CHAPTER PRESIDENTS

Cache: Tami Coleman  
Canyonlands: Karen Dohrenwend &  
Sarah Haffron  
Mountain: Abby Moore  
Price: Mike Hubbard  
Salt Lake: Mindy Wheeler  
Utah Valley: Phil Allen  
Southern Utah: Mike Empey

COMMITTEES

Horticulture: Susan Meyer  
Conservation: Bill King  
Education: Mindy Wheeler  
Invasive Species: Phil Allen  
Communications: Paula Mohadjer