

THE SEGO LILY

NEWSLETTER OF THE UTAH NATIVE PLANT SOCIETY

Volume 9; Number 1

February 1986

WHAT'S GOING ON?

- February 12
Wednesday
7:30 p.m. Wildflowers of Arctic Alpine. UNPS Cache Valley chapter meeting. Dr. Richard Shaw. For further information, call Wayne 752-1311.
- February 15
Saturday
9:00 - 12:00 noon Vegetative Propagation Workshop. State Arboretum of Utah. Dick Hildreth and Mary Pat Matheson. \$3.00. Call 581-5322 for registration.
- February 19
Wednesday
6:30 p.m. UNPS Board Meeting. State Arboretum Office. For further information, call Dave Okelberry, 539-7677.
- February 19
Wednesday
7:00 p.m. Temperate Rainforests of the Olympic Peninsula. State Arboretum Garden Lecture Series. Dr. Mark Harmon, Oregon State University. Room 323 University of Utah student Union Building. Free.
- February 24
Monday
7:30 p.m. A New Concept of Wilderness. Utah Museum of Natural History. Wasatch Lecture Series. Thomas J. Lyon. Highland High School. \$3.00.
- February 27
Thursday
7:30 p.m. Winter Botony. UNPS Salt Lake Chapter meeting. Alyce Hreha. Room 323 University of Utah student Union Building.
- February 28 -
March 2
All day. Tribune Home & Garden Show. Salt Palace.
- March 8
Saturday
9:00 - 12:00 noon Gardening with Annuals and Perennials Seminar. State Arboretum of Utah. Peter Lassig, L.D.S. Church Horticulturist. \$3.00. Call 581-5322 for registration.
- March 8
Saturday
9:00 a.m. -
4:00 p.m. Native Basketry Workshop. State Arboretum of Utah. Becky Menlove, Textile Lab Supervisor, Utah Museum of Natural History. \$8.00. Call 581-5322 for registration.
- March 12
Wednesday
7:30 p.m. Wildflowers of Utah's Dixie. UNPS Cache Valley Chapter Meeting. Pam Poulson. For further information, call Wayne 752-1311.

WHAT'S GOING ON? CONTINUED

- March 15 Seed Propagation Workshop. State Arboretum of Utah. Dick
Saturday Hildreth and Mary Pat Matheson. \$3.00. Call 581-5322 for
9:00 - 12:00 noon registration.
- March 19 The Vanishing Tropical Rainforests. State Arboretum Garden
Wednesday Lecture Series. Dr. Mildred Mathias, UCLA Botanical Garden.
7:00 p.m. Room 323, University of Utah student Union Building. Free.

FIELD TRIPS

Committee Chairman: Andrew Boyack

Phone 278-8596

The following field trips are being considered by the Salt Lake Chapter committee. These are tentative and open to suggestions from our many field trip enthusiasts. Circle the following days on your 1986 calendar!

- April 26 - 27 A trip to the St. George area to experience the early blooms
two day trip of familiar wild flowers, to view rare cactus plants and
DESERT renew acquaintance with the endangered Bear Claw Poppy.
We will plan to meet at some convenient spot near St. George
on Saturday morning. Facilities at Snow Canyon State Park
will be investigated for those who want to camp.
- May 31 A trip to hunt for what is left of the uncultivated pristine
one day trip flora of the Salt Lake Valley and foothills as it may have
VALLEY AND LOWER existed before the pioneers. This will be led by Ty Harrison
MONTANE who so ably described these areas in his lecture of January
23, "Wild Flowers of the Wasatch Foothills: A Natural History
of Dry Creek Canyon in Salt Lake County".
- June 28 A trip to the Beaver Creek-Upper Provo areas in the Uintas.
one day trip This will be a chance to observe the progress of the flowering
MID AND UPPER seasons at successively higher elevations.
MONTANE
- July 26 Trip to the Albi6n basin above Alta in Little Cottonwood
one day trip Canyon at the time of year when the alpine flowers bloom in
ALPINE lush masses in the high mountain meadows among Engelmann
Spruce and Alpine Fir.
- August 23 Our annual mushroom hunt and picnic in the Uintas. These
one day trip field trips have become legendary for their popularity in
MUSHROOMS the annals of our Society. Even the vagaries of the weather
have failed to dampen the enthusiasm of our mushroom hunters.

WASATCH WILDFLOWERS

by Pam Poulson and Ty Harrison

Over 35 members were introduced to the wildflowers of the Wasatch Foothills at the Salt Lake Chapter on January 23. Ty Harrison, a professionally trained ecologist, naturalist and environmental educator presented a slide show illustrating the colorful, native spring wildflowers, grasses and native shrubs and trees which covered the Salt Lake Valley before settlement.

The old, original pioneer community of Dry Creek (then Crescent, now Sandy City) was established in the 1870's-80's along the creek since the native streamside vegetation provided shelter, wood, water and native grasslands for grazing and haying. It was a stopping place for stage coaches, wagon freight teams, etc. along what is now State Street at approximately 10200 South.

However, the low elevation native grasslands and streamside trees which the pioneers saw when they settled the valley or traveled through the area are practically gone; replaced first by creek diversion to irrigated farms, overgrazed by domestic animals, and now destroyed or threatened by rapid urban sprawl, stream channelization and "development."

A few native, undisturbed areas still remain along the small creeks in extreme southeastern Salt Lake County from which we can reconstruct the original native valley vegetation which the pioneers experienced.

Dry Creek which heads in Bell's Canyon just south of Little Cottonwood Canyon, flows through the middle of Sandy City from the foothills of Lone Peak, almost to the Jordan River, in a linear, undeveloped Salt Lake County Park. This undeveloped parkland now "protects" in public ownership scientifically important examples of original native valley vegetation. Examples of native habitat include perennial grasslands containing showy wildflowers such as the Sego Lily, native shrublands, and low elevation streamside vegetation so important for wildlife especially in the winter. Animals such as mule deer, fox, badger, skunk, raccoon, mice, voles, cottontail and a variety of native resident birds and insects live in the midst of a growing urban landscape.

The small foothill streams and adjacent vegetation of this rapidly growing area of Salt Lake County provide an outstanding opportunity to observe, preserve and learn about our native plants and animals, examples of our "Natural Heritage." A legacy which we need to know and treasure along with our cultural and religious heritage. And critical for achieving a needed "Sense of Place" for us and our children, here at the foothills of the Wasatch.

Utah Native Plant Society 1986 Officers and Committee Chairmen

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Seed Committee
Photography Committee
Rare & Endangered Plant Committee

Newsletter Committee
Conservation Committee
Membership & Publicity Committee
Field Trip Committee

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Jennifer Harrington
June Sullivan
Duane Atwood
Sherel Goodrich
Karen Milne
Tony Frates
Kathy Mutz
Andrew Boyack

Utah Native Plant Society 1985 Committee Activities

Conservation: Tony Frates

Conservation activities were concentrated in two areas and consequently some areas were not actively pursued during the year, most notably watchdog (proposed project monitoring, EIS review, etc.) activities. Actions primarily fell into one of two categories:

Legislation:

Close monitoring of the Energy, Natural Resources and Agriculture Interim Committee review process of the Land Law Act was maintained especially during the summer and fall of last year (see September 1985 edition of the SEGO LILY). Substantial written comments were made to interim committee leaders. Oral comments were also made at a public hearing. The advice of the Environmental Defense Fund continued to be sought when needed and some limited research conducted with respect to the issues involved. Close contact was maintained with the Division of State Lands & Forestry.

Unfortunately, despite our efforts over the past two years, the interim committee did a very poor job in studying the bill and in particular did not seem to understand the need for the language proposed by UNPS and adopted by the Land Law Review Commission. In addition, the interim committee has stripped the land bank concept from the bill. It is possible that the land bank concept will be contained in a separate bill but such a bill won't possibly be able to be introduced until next year's session. Meanwhile, one of the interim committee members has proposed that forestry and fire related measures be transferred to the state's Department of Agriculture, an agency which has extremely limited authority (in the past this department has served strictly in an advisory capacity to private landowners). A separate bill has been introduced in an attempt to make this change.

As a result of recent developments, all conservation activities at least during the first part of 1986 will be devoted to doing anything possible to regain the language

lost (the interim committee cut out language referring to plant species generally, stripped the critical "investigations" language and even eliminated the "advisory capacity" language recommended by the Land Law Review Commission.

Turning to other legislation, developments with respect to the reauthorization of the Endangered Species Act were monitored and contact maintained with Faith Campbell of the Natural Resources Defense Council. Discussions with Dave Livermore of the Nature Conservancy produced useful information concerning Utah's new conservation easement law which hopefully UNPS will be able to utilize at some point.

Rare/Endangered Species:

The past year was spectacular one for additional Utah listed plant species and Fish & Wildlife Service actions generally were monitored as closely as possible and contact maintained with our Rare & Endangered Plant Species Committee. Two plant species have been specially targeted by the Conservation Committee for action over the past several years, namely, Phacelia argillacea (clay phacelia) and Arctomecon humilis (bearclaw poppy). Following a field trip set up by Dave Wallace (during which various conservation activities took place thanks to the assistance of Kevin Carter), contacts were initiated with Sierra Club members in Washington County. To date, no "poppy patrol" has been established but attempts will continue to be made until some group of local residents is located that will help to monitor some of the poppy's populations. Concerning the clay phacelia, Dave Livermore is continuing in his efforts to obtain a donation from the private landowner where most of the plants occur. The other major issue with the clay phacelia is funding of the signed off recovery plan. Correspondence and phone contacts were made with Fish & Wildlife Service officials in an attempt to get some funding for this species in 1986. Comments were also sent to the Fish & Wildlife Service concerning the listing of Glaucocarpum suffretescens.

The success of future UNPS conservation efforts hinges on the participation of others (members or not of UNPS).

Endangered Species: Duane Atwood & Sheryl Goodrich

Our 1985 Activities included:

1. Field inventory of 9,000 acres of potential habitat for listed and sensitive species.
2. Continued monitoring studies on Astragalus perianus, Astragalus montii, Echinocereus triglochidiatus var. inermis, and Hedysarum boreale var. canone.
3. Provided sensitive plant data to National Forests for forest plans.
4. Field review of numerous projects on the National Forests with impacts to listed and sensitive plants.
5. Organized and conducted annual T/E meeting for Utah.
6. Assisted graduate student on rare plant study of the La Sal Mountains.
7. Assisted Navajo Heritage Study of rare plants in Utah.
8. Collected field data for developing proposed delisting package on Astragalus perianus.

Newsletter: Pam Poulson

In 1985, The Sego Lily, Newsletter of the Utah Native Plant Society was published 8 times. Unforeseen circumstances prevented publication of the required 9 issues.

The Newsletter Committee members, otherwise known as the Utah Native Plant Society News Reporters, were very active this year, contributing a wide variety of articles, illustrations, maps and suggestions. Each issue had a central theme, to which the articles and illustrations were directed.

Suggestions for 1986 include encouragement of present and additional reporters, as well as hands-on laborers, including typists (perhaps even a paid position), collators, staplers, mailing label attachers, zip code sorters and mailers.

Publicity & Membership: Kathy Mutz

Public Service Announcements

Once a month Pam Poulson sends UNPS announcements out to 40 T.V. and radio stations, organizations, etc. These announcements include information on chapter meetings, state organization functions, field trips, etc.

Newspaper Articles

Both the Mushroom meeting and field trip were advertised via a feature article in the Salt Lake Tribune. Response was incredible. An interview with Bill Wagner provided information on the Fall Plant Sale through an article in the Tribune.

Radio

In addition to PSA announcements, radio interviews have provided information on the society. Interviews have been primarily Arboretum events with a good word interjected for UNPS. Dick Hildreth was on the air the morning of the plant sale.

Posters

Dave Okleberry used a poster campaign to effectively advertise the Mushroom Hunt.

Blue Cards

Reminders of both chapter meetings and field trips are sent out just before each event.

General Information

As always, the best advertisement for the society is the Sego Lily. In addition to regular members and organization exchange copies, Pam sends complimentary copies of the newsletter. Another way to advertise UNPS is participation in the local Home and Garden shows. Jennifer Harrington coordinated participation in the Salt Lake event this year. This is a time consuming activity which could use additional volunteers next year.

Current membership is 165 with 12 new members this year. Pam Poulson maintains the membership list on the computer at the Arboretum. If anyone has need of a current list, they could contact Pam. In addition to the membership list, Pam keeps a "potential members" list of non-members who attend chapter meetings, an "interested persons" list of those who signed up for information at the Home and Garden Show and a "mushroom hunters" list.

In an up-coming newsletter we will be asking old and new members if they would like to participate in any committee activities.

The potential membership of the UNPS is large. A renewed effort to reach that population must be our goal for 1986.

Seed: Jennifer Harrington

In 1985, we were relatively successful in each of these categories:

1. A. At the beginning of the year our seed sales were breaking even but we had a good inventory to begin the year.

Utah Native Plant Society 1985 Committee Activities continued

- B. Our expenditures will be approximately \$350.00 to \$400.00 and our income over the year has been \$500.00 and \$550.00. These figures are still preliminary as some seed was purchased on consignment and we have not been billed for it yet.
2. For the plant and seed sale we put together some photographic posters showing pictures of several of our seed offers.
 3. We had 13 different varieties of commercial seed available last year and this year we added 8 new varieties.
 4. We did not collect a lot of non-commercial seed this year but we have made a step philosophically. That is we should offer two distinctly different types of seed; commercially harvested and tested seed and hand collected, non-commercially available untested, experimental seed.
 5. We have developed a seed order form which can be distributed easily at displays or through the newsletter.
 6. We prepared an exhibit for the Home and Garden Show.

Treasury Report: June Sullivan

Summary of 1985

Beginning Balance	February 1985	\$4,886.81
Final Balance	January 1986	\$6,195.83

Income Source:

Memberships	\$1,228.00
Plant Sale	1,285.57
Seed	302.68
Books	48.50
Hats	42.50
Total Deposits	\$2,913.20
Interest	299.09
Total Expense	\$1,966.34

Cache Valley Chapter: Wayne Padgett and Kate Dwire

This past year turned out to be a very bright year in Cache Valley with the re-organization of our local chapter of the Utah Native Plant Society. We are very excited about the response we've had to our meetings and field trips. Our field trips included one to view a population of Primula maguieri led by Leila Shultz from the Intermountain Herbarium, a hike along the Crimson Trail in Logan Canyon led by Joel Tuhy of The Nature Conservancy, and an informal hike around Tony Grove Lake. John and Leila Shultz also gave a talk at our November chapter meeting on rare plants of Utah.

We have big plans for 1986 that will include field trips and monthly meetings with speakers (scheduled are Dr. Richard Shaw in February to talk about Utah's alpine plants, and Pam Poulson in March to talk about plants of Utah's Dixie). We have plans to map the populations of Primula maguieri in Logan Canyon in May and again have a field trip for new members to see it in some of its most beautiful settings. Other proposed field trips include the wetlands of Cache Valley and wildflowers of the Bear River Range. We have also had some interest from our local members to join with other state members in a long weekend fieldtrip to southern Utah in April. Any takers?

Faculty staff, students and Administration of West Bountiful Elementary, Davis School District, have approached UNPS with an enthusiastic interest to create and maintain an educational garden of native species. The site is an open air atrium (approximately 24 x 36 feet) in the center of the building. Exposures include everything from hot and sunny to cool and shady. The Davis School District will provide a \$200.00 budget for plant purchase. We are free to do anything we want except remove the Flowering Crab Apple and raised planters.

The Utah Native Plant Society would be responsible for design, implementation and plant purchase. Although the School will maintain the planting, we would probably want to monitor the condition of the site for at least two years as a follow up. The School has also agreed to allow visits and tours of the site. Not only could this site serve as a fine example of native plant landscaping, it could also serve well as publicity and community involvement for UNPS.

PROMOTE AND SUPPORT UNPS. BUY OFFICIAL UNPS CAPS.
by Bill Wagner

Be known as a member of the Utah Native Plant Society. Buy and wear one of our great new baseball caps. They come in blue, red or green and are decorated with a custom designed Utah Penstemon illustration and the words Utah Native Plant Society on the white front panel. The intent of the caps is for UNPS exposure, not for fund raising, so the caps are for sale at cost. The caps will be available at all Salt Lake Chapter Meetings at \$3.00 for members or \$3.50 for non-members.

Members are encouraged to submit original articles to the Segó Lily Newsletter. Please state if articles have been published elsewhere and need permission of the publisher. Drawings with or without articles are also welcome. The editor reserves the right to edit as needed and to select suitable articles for publication.

The Segó Lily is published nine times a year. Copyright Utah Native Plant Society, 1986. Deadline for submission of articles is the 10th of each month of publication.

WILDFLOWER HOTLINE REPORT IN WINTER?

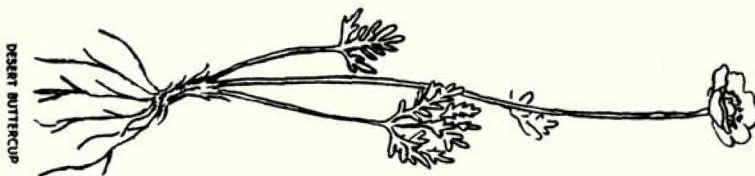
by Pam Poulson

Victor Jackson, Chief Naturalist at Zion National Park was the winner of the Arboretum's "First Bloomin' Utah Wildflower of 1986" competition -- again. (We may have to disqualify him next year.) He called me to report that the first wildflower was spotted on a sunny south facing slope of Sand Bench by an anonymous Park visitor on Sunday, January 26, beating the previous earliest record (of both the Arboretum and Zion Park) of February 9 by a good two weeks. The flower? Sand Buttercup or Desert Buttercup (Ranunculus juniperinus) -- again.

Desert Buttercup is a fibrous rooted perennial that grows on sagebrush slopes or in open juniper and pine woods. It has basal leaves and one or two flowers at the top of scapes two to twelve inches tall. The flowers are one-half to three-quarter inches across with five greenish sepals and five petals that are creamy white when they open, but become pink, red or lavender tinged with age. They bloom (usually) from April to June, depending on elevation.

Vic also said that temperatures at Zion had been in the upper 60's and there had been no precipitation in the Park since November, which may indicate poor flowering desert annual displays this year. Maybe there will be some rain between now and April, which would help the flowering perennials. Another comment from Vic was that the grass is green and the Wanderer Violets (Viola nephrophylla) are coming up in the lawns, but that goes on all winter!

I saw violets (Viola odorata) blooming in my lawn this week, right here in SLC, so keep your eyes peeled. Spring wildflowers may come early and be short lived this year!



HEDGEHOG NAMES: A REVIEW OF A CACTUS MONOGRAPH

by Marv Poulson

The Genus ECHINOCEREUS by Nigel P. Taylor. Published by Collingridge Books in association with The Royal Botanic Gardens, Kew, 1985. Available in the U.S. from Timber Press, Portland Oregon.

The Cactus family presents botanists with a complex taxonomic maze and a major challenge for understanding relationships and evolutionary links among the species. During the last few years several cactus specialists have made valuable contributions in recognizing kinship among cacti. From the monumental work of Lyman Benson in The Cacti of The United States and Canada to the many articles which have addressed single genera in the Family, considerable new knowledge is bringing Cacti closer to organized understanding. Nigel Taylor's new book: The Genus ECHINOCEREUS, sheds a twinkling of insight on the geographically and evolutionarily diverse hedgehog cacti.

This new author has worked as Horticultural Taxonomist at the Royal Botanic Gardens, Kew in the United Kingdom after graduating from Reading University with an Honours Degree in Botany. He associates with several British cactus societies as well as the International Organization for Succulent Plant Study. From his scholarly base and association with amateur and commercial cactus growers, Mr. Taylor has correlated the literature on the genus Echinocereus and compiled horticultural notes from the advice of experts to provide growers and collectors with a helpful guide to history, identification, and culture.

The book contains 160 pages and includes descriptions of 44 species and 56 varieties, with 14 watercolor illustrations, and 33 species detailed in line drawings. Six distribution maps are also included. The author has elected to organize the genus into seven sections, which contain the 44 species discussed. Adding the extra organizational level of sections departs from the work of others, which in the face of convention is confusing, though the author handles it systematically. Even though the author emphasizes the interests of hobbyists, collectors and growers seeking precise identification of their plants, he also makes a contribution to those seeking references and historical basis in studying Echinocereus by bringing together references and descriptions of both American and Mexican species. The author capsulizes this theme in his introduction saying: "Hopefully, the account presented here will make a sometimes almost impossible task [identification] a little easier, and perhaps stimulate further interest in the genus at the same time." By departing from conventional nomenclature Mr. Taylor will certainly generate interest, if not controversy.

Dwelling as he does on names and horticultural interests, Mr. Taylor skirts the issue of conservation, a disconcerting omission considering the heavy pressure enthusiasts are putting on members of the genus in the wild. The author says nothing of the precarious position faced by the 14 species or varieties of Echinocereus which are considered extinct, endangered or threatened in the United States, nor the vulnerability of species which are afforded less protection in Mexico. (Two Utah endemic Echinocereus cacti, E. englemannii var. purpureus and E.

triglocidiatus var. inermus, are Federally listed as endangered.) In this light the author's conservation perspective and that of his sponsoring organization is tempered. Hopefully, conservation of cacti means more than growing plants in pots.

While this new book takes a stab at contributing to organizational clarity and nomenclature, its value remains obscure with respect to field study and ecological understanding. Shortcomings in the text may well be overcome as the author balances his library searches with significant first hand familiarity with his subject in the field.

Donation

The editor would like to thank Dave Wallace for donating a portable typewriter for the Sego Lily Newsletter.

UNPS SEGO LILY
c/o Karen Milne
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Murray, Utah 84123

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() Please send a complimentary copy of the Sego Lily Newsletter to the above.

Check membership category desired:

() Individual.	\$.00	() Student/Senior.	\$.40
() Family.	\$12.00	() Life.	\$250.00
() Supporting.	\$25.00	() Corporate.	\$25.00
			or greater

Please enclose check made payable to Utah Native Plant Society and send to:

Pam Poulsen, Treasurer, 3631 South Carolyn Street, Salt Lake City, Utah 84106



THE SEGO LILY

NEWSLETTER OF THE UTAH NATIVE PLANT SOCIETY

Volume 9; Number 2

March 1986

WHAT'S GOING ON?

- March 14
Friday
9:45 AM to 3:15 PM
- Annual Endangered Species Meeting. UNPS Cache Valley Chapter. Representative of plant society chapters and federal agencies will be present to provide information on the status and future of Utah's rare plants program. Intermountain Herbarium (Junction Building). For information call Wayne or Kate, 752-1311.
- March 19
Wednesday
7:00 PM
- The Vanishing Tropical Rain Forests. State Arboretum Garden Lecture Series. Dr. Mildred E. Mathias, Emeritus Director of the UCLA Botanical Garden. Free and open to the public. Room 323, University of Utah Student Union Building.
- March 22
Saturday
9:00 AM to 12:00 Noon
- Gardening with Trees, Shrubs, Vines and Ground Cover Seminar. Bill Varga, Director of Utah Botanical Garden and Dick Hildreth, Director of State Arboretum of Utah. \$3.00. Call for reservation, 581-5322.
- March 27
Thursday
7:30 PM
- Cacti of Utah. UNPS Salt Lake Chapter Meeting. Marv Poulson. Room 323, University of Utah Student Union Building. Free.
- April 1 - June 7
Tuesdays
6:00 - 8:00 PM
- Introduction to Utah Wildflowers. University of Utah Division of Continuing Education. Taught by Pam Poulson. No experience necessary! To register, call 581-6483. \$50.00. Non-credit.
- April 1 - October 31
- Utah Wildflower hotline. Phone to find out what's blooming and where. 581-4969.
- April 16
Wednesday
7:00 PM
- Fossil Forests of the Intermountain Region. State Arboretum Garden Lecture Series. Dr. William D. Tidwell of BYU Department of Botany. Free and open to the public.
- April 16
Wednesday
6:30 PM
- UNPS Board Meeting. State Arboretum Office. For further information, call Dave Ckelberry, 539-7677.

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SUMMER SCHOOL

Jo Stolhand

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Adult education classes are offered at a number of places in the intermountain area. Below are the addresses of schools where you can write to get free brochures and more information on classes that are offered.

Teton Science School, P.O. Box 68, Kelly, Wy. 83011 (307) 733-4765

- | | |
|--|---|
| 1. Vascular Flora of Jackson Hole
Dr. Leila Schultz
July 21-25 \$145
Credit available | 2. Alpine Ecology
Dr. Jim Halfpenny
Aug 15-19 \$150
Credit available |
| 3. Nature Illustration
Beth Merrick, MFA
July 7-11 \$145 | 4. Advanced Illustration Techniques
Beth Merrick, MFA
July 14-16 \$95 |
| 5. Summer Photography in the Tetons
Kim Fadiman
July 16-18 \$170 | |

The Yellowstone Association, P.O. Box 117, Yellowstone National Park, Wy 82190
(307) 344-7381 ext. 2384

- | | |
|---|---|
| 1. Wildflowers of Yellowstone
July 12-13 (Lamar Valley) 1 st Sess
July 15-16 (Canyon Village) 2 nd
\$65/ 2 day session
Wayne Phillips | 2. Backcountry Photography
July 15-19 Yellowstone Lake Trip
Aug 4-8 Absaroka Range Trip
\$280/ course
Tom McBride |
| 3. Mountain Medicene: The Wild Herbs of Yellowstone
July 18-20
\$105 Wayne Phillips | |

Canyonlands Ed Ventures contact:

Canyonlands Field Institute
Professor Valley Ranch, P.O. Box 68F, Moab, Ut. 84532 (801) 259-7750

White Mesa Institute, San Juan Division, 639 W., 1st So., Blanding Ut. 84511
678-2201

Utah Museum of Natural History (their schedule is not yet ready)

The establishment of the National Wildflower Research Center reflects the growing interest in native flowers. But more, it is the first national effort to study a vast group of native and naturalized plants and find methods of cultivation that will bring their beauty and benefits (water conservation, wildlife protection, low energy needs) to gardens and the landscape.

The Center will act as a national computerized clearinghouse for information on wildflower culture and conservation. It has already established 72 test plots on its 60-acre tract, and testing has begun on commercial wildflower mixes, soon to be supplemented with tests of native grasses. Most important are experiments with planting techniques, from simple broadcasting of seed and planting with a grain drill to mulching with seed-bearing cut wildflowers.

The planting tests are vital because of difficulties which have been encountered in establishing naturalized plantings. Often many of the perennials in a mix simply do not appear, annuals do not self-sow as expected, and weeds may provide severe competition. Seedbed preparation, reduction of weeds with herbicides or by covering the soil with black plastic before planting and regular watering are all apparently essential under all but ideal conditions.

Eventually the Center will coordinate similar testing by institutions and agencies all over the country. One of its first projects has been the compilation of state lists of recommended wildflowers and sources of information (for the list of your state, send a #10 SASE to Clearinghouse, National Wildflower Research Center, 2600 FM 973 North, Austin, Tx 78725).

Also useful is the 330-page "Directory of Resources on Wildflower Propagation", compiled by the Missouri Botanical Garden, \$3 postpaid from the National Council of State Garden Clubs (4401 Magnolia Avenue, St. Louis, MO 63110).

Wildflower Watch

Elizabeth Neese

Originally published in the March and April/May, 1981 UNPS Newsletter

With March, the long-awaited blooming season for our wildflowers begins and it is appropriate to repeat some of Elizabeth Neese's comments on the early blooming plants of Utah:

Do you head for the hills at the first warm day looking for some green sprig to attest that spring is really on its way? I invariably do! The earliest bloomers I've found consistently over the years on the foothills around Provo and Salt Lake City are now eagerly-greeted old friends.

The mustards, especially introduced annuals, seem especially early bloomers. Ones I've found in March, often in full fruit by mid-April, are Draba cuneifolia, D. nemorosa, D. reptans, and the introduced D. verna. Arabis thaliana and several alyssums, including A. alyssoides, A. desertorum, A. minus, and A. szowitsianum are other Eurasian species which have recently become established in disturbed places in the foothills. The bur buttercup, Ranunculus testiculatus, is perhaps the earliest and commonest of these tiny weedy plants. They have earned the name "belly plants" because they are apt to be overlooked unless one lies flat to look for them.

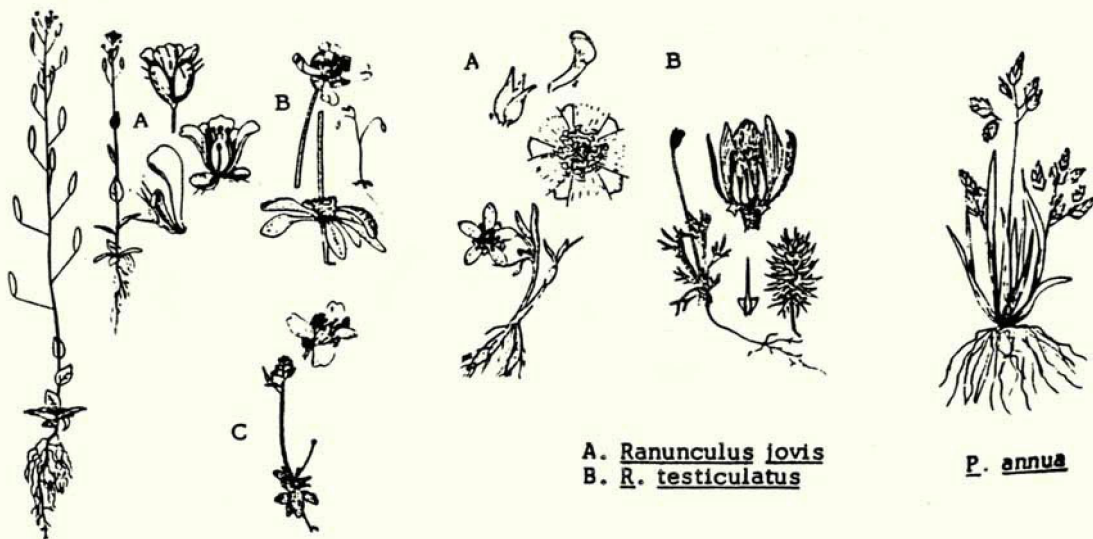
Wildflower Watch Continued

The early blooming perennials are mostly native. Cymopterus longipes, Orogenia utahensis can usually be found blooming by the last of March or sometimes much earlier. In protected spots near buildings, in gardens, or along sidewalks Senecio vulgaris, Poa annua, Malva neglecta, and Stellaria media bloom sporadically all winter.

Many of our trees, including aspen, maple, box elder, and Mountain Lover (Pachistima myrsinites), are early bloomers; because their flowers are inconspicuous they are sometimes discounted as spring flowers. Try cutting branches in January to force into bloom for midwinter arrangements. Mountain Lover, with its glossy evergreen leaves and delicate wine-red flowers, is especially lovely.

Many of the spring flowers in the southern part of the state will be flowering during March. Cymopterus, Phacelia, Cryptantha, Physaria, Castilleja, Camissonia, Echinocereus are some of the early common or showy things. Astragalus, the locoweeds and milkvetches, is one of the most notable and ubiquitous of the early spring genera. With over 100 species occurring in the state, there is almost no area but what has a series of characteristic species. For the most part, in any area the species are easily distinguished from each other by characteristics of pod shape, flower size and color, leaf shape, and plant habitat. Peak flowering times vary within the state according to the elevation and climate.

To be able to observe the greatest number of flowers, a general time schedual follows: Peak flowering times in Washington County--mid-April to first of May. Foothills and local valleys--May to June. Mid-elevation plateaus and canyons--June to July. High Uintas--late July through August.



- A. Draba nemorosa
- B. Draba reptans
- C. Draba cuneifolia

WINTER BOTANY

Salt Lake Chapter Meeting for February, 1986

David Wallace

Thursday February 27 was one of those problem days we can occasionally expect at the University of Utah. Cars were everywhere and parking was scarce as one of the biggest basketball games of the year was getting ready to start. The meeting was delayed a few minutes to accommodate those who had trouble finding a parking spot, but the wait was worth it.

Alyce Hreha, who is currently teaching a course in winter botany at the University, did a fine job of introducing us to the subject. She came well prepared with references and handouts, and a few armloads of specimens. The identification of woody plants in the winter can be a rewarding activity, and it can add some interest to what may otherwise be an uneventful season for botanists.

The form of the plant can be a clue to the identity, but Alyce says this is not as helpful as it may seem. While the branching pattern of the tree or bush will determine its shape and development, there are many factors which can interfere with it. The growth patterns of wild plants are usually altered by the environment, and pruning or other factors can alter the form of cultivated plants.

Twigs and fruit are much more useful in winter botany. Most twigs are gray or brown, so species with colored twigs can be easy to identify. Distinctive bark characteristics such as lenticels (pores) can be helpful, but buds are the most important feature.

The terminal bud is at the tip of the twig. Its size, shape, and the bud scales are all good characteristics. The bud scale scars from the last terminal bud also show how much the twig grew in a year.

Lateral buds on the sides of the twig can be alternate or opposite. Only a few species have opposite branching, so it is a very useful feature for identification. (Just remember "MAD CAP HORSE". The Maples, Ashes, Dogwoods, Caprifoliaceae, and Horsechestnuts all have opposite leaves.) Leaf scars can also be very distinctive. The size and shape of the scar along with the bundle traces (marks left by veins) and the axillary bud are different for each species.

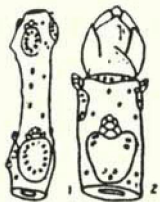
With any luck you may even find a few fruits. This is a big help in identification, since fruit type is one of the characteristics which define plant families. Other features which can help identify plants in winter are colored or chambered pith, or even the smell of the twigs when they are crushed or scraped. (Alyce demonstrated this with a Chokecherry twig.)

A local book of interest for those who may want to try their hand at winter identification is the Guide To The Woody Plants Of The Mountain States by Treshow, Welsh and Moore. This BYU Press publication includes a "winter" key to the genera along with a "summer" key and species keys for each family.

Like many of the chapter meetings, discussions continued on after the meeting was over. Unfortunately, this resulted in at least one member (me) getting stuck in the traffic when everyone rushed home after the basketball game. (Utah won.)

TWIGS OF COMMON TREES

Text and drawings by JOHN W. THOMSON, Professor of Botany, The University of Wisconsin



1. Catalpa**
2. Horse Chestnut*
3. Flowering Dogwood*
4. Black Haw
5. Box Elder*
6. Silver Maple*
7. Red Maple*
8. Hornbeam
9. Peppercorn
10. Sugar Maple*
11. Norway Maple*

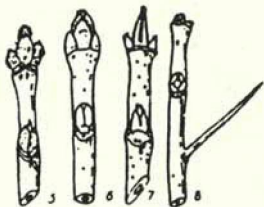
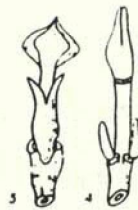
12. Black Ash*
13. White Ash*
14. Green Ash*
15. Red Ash*
16. Honey Locust
17. Black Locust
18. Satternut
19. Black Walnut
20. Tulip Tree
21. Persimmon
22. Hackberry

23. Sour Gum, Tupelo
24. Sassafras
25. Sycamore
26. Willow
27. Black Birch
28. Yellow Birch
29. Paper or Canebo Elm
30. Gray Birch
31. Hop Hornbeam
32. Chestnut

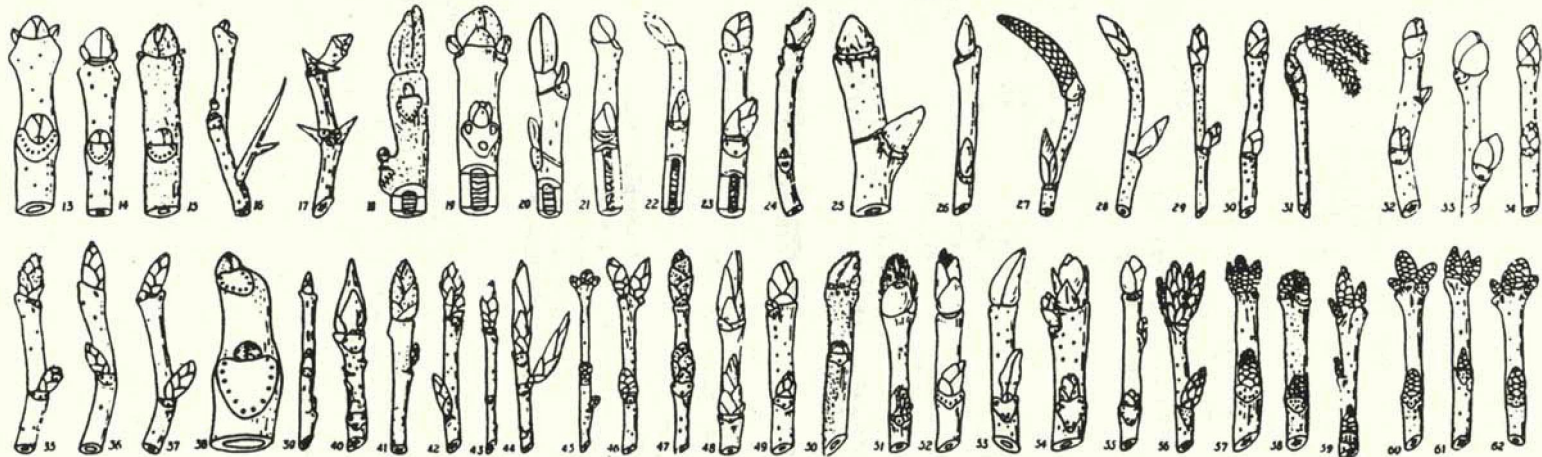
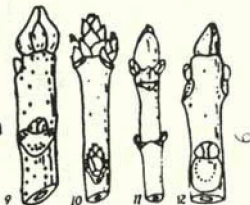
33. Boxwood
34. American Hornbeam or Blue-Beech
35. Slippery Elm
36. Rock Elm
37. American Elm
38. Alnus
39. Lombardy Poplar
40. Cottonwood
41. Silver Poplar

42. Large-toothed Aspen
43. Quaking Aspen
44. Beech
45. Pin Cherry
46. Wild Black Cherry
47. Choke Cherry
48. Shadbush, Serviceberry
49. Pear
50. Apple
51. Brown Tree

52. Mountain Ash
53. Sittartnut
54. Shagbark Hickory
55. Pignut Hickory
56. Black Oak
57. Scarlet Oak
58. Bur Oak
59. Red Oak
60. White Oak
61. Chestnut Oak
62. Swamp-White Oak



Identify twigs easily by observing:
buds—their shape, size, scales
bark—its color, the pattern
leaf scars—their shape, pattern, if scars are opposite*, in circle of 3**, or alternate
pith—its color, if chambered in s. No. 19



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WELCOME NEW MEMBERS

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Dick Carman	Salt Lake City, Utah
Carol Braddock	Logan, Utah
Stuart Becher	Salt Lake City, Utah
Sherrie Harbrecht	Salt Lake City, Utah
Vo Belnap	Sandy, Utah
Betty Ivanovich	Beaver, Utah
Charlotte Wright	Logan, Utah
Lloyd Alexander	Cisco, Utah
Nancy Nelson	Logan, Utah
Doti Marden	Park City, Utah
Richard Aguilera	Salt Lake City, Utah
Ron Lanner	Logan, Utah

FIELD TRIPS

by Andrew Boyack

Phone 278-8596

Field trips planned for this spring and summer are as follows. Dates are tentative.

April 26	<u>St. George</u> for the endangered Bear Claw Poppy. We will meet with our guide and mentor, Kevin Carter, at the Bloomington off-ramp at 10:00 AM. Interest in this trip has been expressed by our Cache Valley chapter, by conservation groups and my many members and friends in Provo, Cedar City and St. George.
May 31	Wasatch Foothills
June 28	Uintas
August 2	Albion Basin
August 23	Mushroom Hunt

Several other field trips have been suggested particularly the Cache Valley chapter Primula maguieri trip in May.

Everyone is invited to go on our field trips, members, friends and particularly novices who would like to know more about Utah flora. Experts help identify plants and explain their role in the natural environment.

The trips are informal leisurely jaunts usually starting on a Saturday morning and ending by mid afternoon. Bring a brown bag lunch. A small magnifying glass and a notebook to record discoveries would be usefulas 30 or 40 or more different flowering plants may be found on a single trip.

UNPS SEGO LILY
c/o Karen Milne
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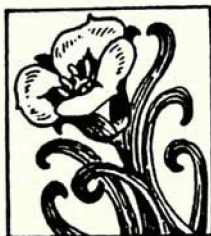
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<input type="checkbox"/>	Family.	\$.12.00	<input type="checkbox"/>	Life.	\$.250.00
<input type="checkbox"/>	Supporting.	\$.25.00	<input type="checkbox"/>	Corporate.	\$.25.00

or greater

Please enclose check made payable to Utah Native Plant Society and send to:

Pam Poulsen, Treasurer, 3631 South Carolyn Street, Salt Lake City, Utah 84106



THE SEGO LILY

NEWSLETTER OF THE UTAH NATIVE PLANT SOCIETY

Volume 9; Number 3

April 1986

WHAT'S GOING ON?

April 24
Thursday
7:30 p.m.

"Wildflowers of Zion National Park". UNPS Salt Lake Chapter meeting. Dotie Marden. Room 323 Student Union Building, University of Utah. Free and open to the public.

April 26
Saturday
10:00 a.m.

Field Trip to St. George to see the endangered Bear Claw Poppy. We will meet with Kevin Carter at the Bloomington off-ramp south of St. George. For more information call Andrew Boyack 278-8596.

April 30
Wednesday
7:00 - 10:00 p.m.

"Chefs for all Seasonings". State Arboretum of Utah Herb Cooking Workshop. Sheraton Triad Hotel. Pre-registration required. \$18.00. 581-5322.

May 2
Friday
7:30 - 9:00 p.m.

"A Friend of John Muir". Museum of Natural History Special Event. Garth Gilchrist. Social Work Auditorium, University of Utah. \$5:00.

May 3
Saturday
9:00 a.m - 4:00 p.m.

"Sharing Nature with Children: A Workshop". Museum of Natural History Special Event. Utah Museum of Natural History. \$25.00.

May 7
Wednesday
6:00 p.m.

UNPS Cache Valley Chapter Field Trip to find the Primula maguieri. Plans are being made for a pot-luck dinner. For more information call Wayne Padget. 752-1311.

May 10
Saturday

UNPS Cache Valley Chapter Repeat Field Trip to find Primula maguieri for everyone who could not attend Wednesday's trip. For more information call Wayne Padget. 752-1311.

May 14
Wednesday

UNPS Board Meeting. State Arboretum Office. For further information, call Dave Okelberry. 539-7677.

May 17
Saturday
9:00 a.m. - 3:00 p.m.

"Captivating". The 7th Annual Plant Sale and Green Spree. State Arboretum of Utah. Open to the public.

May 31
Saturday
8:00 a.m. - 12:00 noon

"Trees of the Wasatch". Museum of Natural History Day with a Naturalist. Walk in Millcreek Canyon. Mary Pat Matheson. \$7.00.

May 31
Saturday
To be announced

UNPS Salt Lake Chapter Field Trip in the Wasatch Foothills with Ty Harrison. For more information call Andrew Boyack. 278-8596.

FIELD TRIPS

by Andrew Boyack

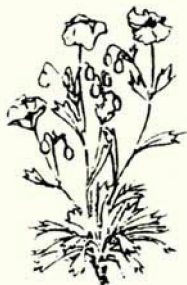
Phone 278-8596

Field trips planned for the spring and summer are as follows.

- April 26 St. George for the endangered Bear Claw Poppy.
We will meet with Kevin Carter at the Bloomington
off-ramp south of St. George at 10:00 AM.
- May 10 Cache Valley chapter field trip to find the
Tentative Primula maguirei with Wayne Padgett.
- May 31 Wasatch Foothills with Ty Harrison.
- June 28 Uintas
- August 2 Albion Basin with Dr. Stanley Welch.
- August 23 Mushroom Hunt with Dr. Frank Anderson.

Everyone is welcome to join these field trips whether you are a member of UNPS or not. Bring a brown bag lunch and be prepared for a pleasant day, rain or shine.

These field trips provide direct first hand experience with the habitat of our wild plants and a chance to renew our respect for the world of nature, a world incidentally, that is often endangered. Our April and May 31 trips in particular will illustrate. In April we will see the Bear Claw Poppy, a small population of plants endangered by its proximity to a large population of men. In May we will visit a pristine section of the Salt Lake Valley, a natural habitat that may soon succumb to the valley's economic growth.



Arctomecon
humilus



Primula
maguirei

Leila Shultz, Curator of the Intermountain Herbarium, Utah State University, welcomed the participants. She noted that the Utah Atlas of Plants (Albee and Shultz) will soon be completed, and will be published within a year. The maps in the atlas will show topographic features and include the collection sites from all Utah herbaria.

Duane Atwood, US Forest Service Regional Botanist and Chairman of the UNPS Endangered Species Committee, mentioned that the Flora of Utah will be available in the fall, 1986, and will be published as part of the Great Basin Naturalist Memoirs. The flora will contain no illustrations and will sell for \$40.00 - \$50.00.

Tony Frates, Chairman of UNPS Conservation Committee, discussed the Utah Land Law Act. This bill has already been presented to the State Legislature, and unfortunately did not pass. Originally the bill made recommendations on the management of lands and included: (1) the presentation of the Land Bank Concept, a provision for lands with a natural resource asset; (2) authority granted to the State Division of Lands to obtain funding for rare plant management, i.e. allowing the state to qualify for Section 6 funds through an agreement with the US Fish and Wildlife Service. Tony stated that Utah has a well funded program for endangered animal monitoring and management, and that funding for plant work is overdue. The bill was studied by an Interim Committee, and gained the support of Carl Swan, Utah State Senator (Democrat). Milo Barney, Utah Department of Natural Resources, would like to establish an Interim Agreement with the US Fish and Wildlife Service. Tony suggested that UNPS members write to the governor requesting a state agreement with the US Fish and Wildlife Service regarding financial support for rare plant work.

Joel Tuhy, Public Lands Coordinator, The Nature Conservancy, gave a progress report on work done in federal land Research Natural Areas. Joel has been working on 5 national forests in Utah and 1 national forest in Nevada, writing establishment records for research natural areas and commenting on forest plans. He noted that 20 rare plant candidate species occur in Utah's national forests. On BLM administered lands in Utah, The Nature Conservancy has a Memorandum of Understanding regarding rare plants. Joel has been working with 5 BLM districts, providing comments and recommendations on management plans, and has suggested a plan amendment on the Henry Mountain Plan. Mary Poulson mentioned that the House Range EIS is currently in the review process and that interested UNPS members should comment on the proposed RNA in the Deep Creek and Rockwell Areas. Joel is also planning work on National Park Service land; he will be conducting inventories at Glen Canyon NRA this field season and has submitted a proposal to the NPS Research Center in Laramie, Wyoming to do similar work in Bryce Canyon NP. The Nature Conservancy has not yet approached the Department of Defense regarding rare elements on military lands, although several people present expressed interest in this. There was a short discussion regarding the availability of information about RNAs: Leila suggested that a state map with the RNA boundaries marked be drawn up for use by botanists; Al Winward, Regional Ecologist for the US Forest Service, mentioned that there is no way to protect RNAs (little funding for fencing or signs) and that their locations should not be advertised to the general public. All agreed, however, that information in herbaria would be appropriate.

Wayne Padgett, President of the Cache Valley Chapter of UNPS, discussed summer monitoring plans. In May, UNPS volunteers will conduct a methodical search of suitable habitat in Logan Canyon (and possible adjacent canyons) for Primula maguirei plants, and map all known locations and new occurrences. This inventory is timely since the Utah Department of Transportation is making plans to widen Highway 89 through the canyon, and has recently contracted CH2M Hill, a California consulting firm, to evaluate this proposed highway project. Stan Miller, Forester, Wasatch-Cache National Forest, stated that a walking trail in Logan Canyon is being planned; Duane Atwood suggested the the Forest Service recruit UNPS members as volunteers to assist with plant inventory on the project. Wayne also mentioned that survey efforts will begin this season on other Cache County rare plants including: Erigeron cronquistii, Musineon lineare, and Penstemon compactus.

Kate Dwire, Cache Valley Chapter UNPS, described the following ways that chapters can help monitor rare plants: (1) provide volunteers to conduct the labor intensive ground work required for mapping and monitoring of rare plants; (2) establish monitoring methodology so that data is useful to resource agencies, consistent with Natural Heritage Program criteria, and collected in the same way on a regular basis; (3) organize area searches for local rare plants and field trips to potential habitat locations. Kate also mentioned that local chapters can increase community awareness of rare plants by planning outings, hosting programs, and interacting with other conservation organizations.

Betsy Neely, Contract Botanist and member of Cache Valley Chapter UNPS, discussed the following points regarding methodology of monitoring rare plants: (1) the best review of rare plant population monitoring is an article by Davy and Jeffries (1981) in Biological Aspects of Rare Plant Conservation; (2) methods depend on the conservation concerns, morphology, and life cycle of plant species; (3) methods include photography, tagging with nails and aluminum tags in permanent plots, and mapping using a plexiglass mapping table base with acetate overlays; (4) minimally, monitoring should be done once a year; however, if more information is required or populations are declining, monitoring may be necessary more frequently. Betsy stressed that monitoring, particularly following the fate of marked individuals in permanent plots over time, is necessary to determine if and how populations of rare plants are changing. This information promotes better management decisions regarding plant preservation.

Bob Thompson, US Forest Service, Price, reported a decline in cover of Astragalus montii, which he has been measuring in permanent plots (Wasatch Plateau) for several years. Bob has also been monitoring Echinocereus triglochiiad, and reported that these spineless cacti are particularly susceptible to infestation by insect larvae (Dipteran maggots). The difficulties in monitoring and measuring certain plant populations were discussed; Sherel Goodrich pointed out that biennials such as Phacelia argillacea are difficult to follow over time.

Larry England, Botanist US Fish and Wildlife Service, Salt Lake City, reported that the recovery plan for the Dwarf Bear Poppy, Arctomecon humilis, has been completed. Larry stated that ORV traffic constitutes a major threat to the poppies, and described a recent motorcycle race in Arctomecon habitat south of the Virgin River. Although vegetation was destroyed, Larry commended the motorcycle club for their police watch of the route and noted that no rare or sensitive plants were affected. Kevin Carter, Land Specialist, Division of State Lands and Forestry, has been monitoring Arctomecon humilis; UNPS is trying to establish a "poppy patrol".

Jean Nitschke-Sinclair, Range Conservationist, BLM Vernal, presented a slide show and reported on an extensive Sclerocactus glaucus monitoring effort

UNPS Fifth Annual Threatened and endangered Plants Meeting continued

last season. Using in-house employees who were trained to key in on the cactus, Jean and Frank Dudley coordinated a ground search covering many square miles in the Vernal district. Jean discussed the variation in S. glaucus spine length, explaining that plants with a short central spine occurred on clay soils while plants with a long central spine occurred on rocky soils. These cacti, particularly the long spined variety, are being attacked by insect larvae. Jean has plans to initiate a less intensive study of Glaucocarpon suffrutescens next field season. Leila Shultz commented that professional botanists need to be consulted in verifying new finds and in exploratory work.

Larry England reported on the recovery plans, listings, and status reports of species throughout the state, and requested new information regarding rare plants. Please see the revised candidate list contained in this issue.

John Anderson, Botanist US Fish and Wildlife Service, Grand Junction, Colorado led an open discussion regarding 1986 field plans and coordination of data collection through the next year. John mentioned that Utah is the 6th state in the nation in the number of federally listed rare plants.

FEDERALLY LISTED AND PROPOSED ENDANGERED (E) AND THREATENED (T) PLANT SPECIES IN UTAH AS OF MARCH 1986

Definitions:

Listed: Officially designated by the USFWS as endangered or threatened, and protected under the Endangered Species Act.

Proposed: A proposed rulemaking has been published in the Federal Register. For listing the plant as threatened or endangered. After the review period a decision about final listing will be made by the USFWS.

Category 1: Plants for which sufficient data exist for listing.

Category 2: Plants which are probably appropriate for listing, but have not yet achieved officially listed status or for which sufficient data to be used in the listing process is not yet available.

Category 3: Plants which are no longer being considered as candidate for the listing process, though they may be rare, site specific, endemic or potentially threatened in the future.

Category 3A: Plants for which there is evidence of extinction. If rediscovered, would demand top priority.

Category 3B: Species of doubtful taxonomic validity.

Category 3C: Plants that have been proven to be more abundant or widespread than was previously believed and/or those that are not subject to any identifiable threat.

F: The 1984 UNPS Workshop suggested that these species receive priority funding for additional field work.

P: Proposed.

*: Possibly extinct.

Federally Listed and Proposed Endangered (E) and Threatened (T)
Plant Species in Utah As of March 1986:

Dwarf Bear Poppy	<u>Arctomecon humilis</u>	E
Purple-spined Hedgehog Cactus	<u>Echinocereus engelmannii</u> var. <u>purpureus</u>	E
Spineless Hedgehog Cactus	<u>Echinocereus triglochidiatus</u> var. <u>inermis</u>	E
Siler Cactus	<u>Pediocactus sileri</u>	E
Clay Phacelia	<u>Phacelia argillacea</u>	E
Wright Fishhook Cactus	<u>Sclerocactus wrightiae</u>	E
Uinta Basin Hookless Cactus	<u>Sclerocactus glaucus</u>	E
Rydberg Milkvetch	<u>Astragalus perianus</u>	T

Proposed

Heliotrope Milkvetch	<u>Astragalus limnocharis</u> var. <u>montii</u> (Syn.= <u>A. montii</u>)	E
Maguire Primrose	<u>Primula maguirei</u>	T
Last Chance Townsendia	<u>Townsendia aprica</u>	E
Welsh's Milkweed	<u>Asclepias welshii</u>	E
Maguire Daisy	<u>Erigeron maguirei</u> var. <u>maguirei</u>	E
Jones Cycladenia	<u>Cycladenia humilis</u> var. <u>jonesii</u>	E

Background of Legislation Pertaining to Utah's Rare Plants

The Endangered Species Act directs federal agencies to take under management consideration species threatened with extinction. A preliminary list of plants to be considered was prepared by the Smithsonian Institution in 1975. refined and updated lists have been published in the Federal Register in 1976 and 1980. Much additional field work and data has since accumulated. Consequently a supplemental list amending the 1980 list has been published in the Federal Register (Vol. 48:53640, November 28, 1983). This publication primarily involves additions of taxa to and deletions from active consideration for federal listing. It should be noted that this federal updated list closely reflects the recommendations of past Utah Native Plant Society rare plant wrkshops.

Species Under Review

The following list is of those Utah plant taxa currently under review for listing as threatened or endangered. The list is taken from the 1980 and 1983 Federal Register listings, and includes only Category 1 and Category 2 species. Species no longer under review (Category 3) are not included.

<u>Taxon</u>	<u>1983 Federal Review Status</u>	<u>Status Recommended by UNPS 1986 Workshop</u>	<u>Known Counties of Occurrence</u>
<i>Asclepias cutleri</i>	2	2	San Juan, Emery, AZ?
<i>A. welshii</i>	P	-	Kane
<i>Astragalus ampullarius</i>	2	2	Kane, Washington
<i>A. barnebyi</i>	2	3C	Garfield, Wayne
<i>A. cronquistii</i>	1	2	San Juan
<i>A. desereticus</i>	2	2	Sanpete, Utah
<i>A. equisolensis</i>	-	1	Uinta
<i>A. hamiltonii</i>	1	2	Uinta
<i>A. harrisonii</i> (F)	2	2	Wayne
<i>A. iselyi</i>	1	2	Grand, San Juan
<i>A. lentiginosus</i> var <i>ursinus</i> F	2*	2*	Iron
<i>A. limnocharis</i> var <i>montii</i>	P		Sanpete, Sevier
<i>A. lutosus</i>	2	3C	Uinta, Wasatch, Utah; CO
<i>A. sabulosus</i> (F)	2	2	Grand
<i>A. striatiflorus</i>	2	2	Washington, Kane; AZ
<i>A. subcinereus</i> var <i>basalticus</i>	2	2	Sevier, Emery
<i>A. uncialis</i>	2	2	Millard; NV
<i>Castilleja aquariensis</i> (status report completed)	2	2	Garfield, Wayne
<i>C. revealii</i>	1	2	Garfield, Iron
<i>Cirsium virginensis</i> (F)	2	2	Washington; NV
<i>Coryphantha missouriensis</i> var <i>marstonii</i> (F)	2	2	Garfield, Kane; AZ
<i>Cryptantha barnebyi</i> (listing package under review)	1	1	Uinta
<i>C. compacta</i>	1	2	Millard
<i>C. creutzfeldtii</i>	(add)	2	Emery, Carbon
<i>C. elata</i>	2	3C	Grand; CO
<i>C. jonesiana</i>	2	3C	Emery, Carbon
<i>C. ochroleuca</i> (F)	1	1	Garfield
<i>Cuscuta warneri</i>	2*	2*	Millard
<i>Cycladenia humilis</i> var <i>jonesii</i>	P		Emery, Grand, Kane
<i>Cymopterus beckii</i> (F)	2	2	Wayne, San Juan
<i>C. higginsii</i>	1	2	Kane
<i>C. minimus</i> (F)	1	2	Iron
<i>Dalea epica</i>	2	2	Kane, San Juan
<i>Draba maguirei</i> var <i>burkei</i>	2	2	Box Elder, Weber
<i>Epilobium nevadense</i>	2	2	Washington, Millard; NV
<i>Erigeron cronquistii</i>	1	2	Cache

<i>E. kachinensis</i> (F)	2	2	San Juan, Grand; CO
<i>E. maguirei</i> var <i>maguirei</i>	P		Wayne, Emery
<i>E. maguirei</i> var <i>harrieonii</i> F (add)		2	Wayne
<i>E. mancus</i>	2	2	Grand, San Juan; CO
<i>E. proselyticus</i>	1	3C	Iron, Kane
<i>E. sionis</i>	2	2	Washington
<i>E. untermannii</i> (F) (add)		2	Duchesne
<i>Eriogonum ammophillum</i>	1		Millard
(listing package under review)			
<i>E. aretiodes</i>	1	2	Garfield
<i>E. corymbosum</i> var <i>cronquistii</i>	2	2	Garfield
<i>E. corymbosum</i> var <i>humivagans</i>	2	2	San Juan
<i>E. lancifolium</i>	2	3B	Carbon, Emery
<i>E. brevicaulis</i> var <i>loganum</i>	2	3C	Cache, Morgan, Rich
			Rich
<i>E. natum</i>	1	3C	Millard
<i>E. smithii</i>	1	2	Emery
<i>E. soledium</i>	2	2	Beaver
<i>Festuca dasyclada</i>	2	2	Emery, Wasatch,
			Garfield; CO
<i>Frasera gypsicola</i> (F)	1	2	Millard; NV
<i>Gaillardia flava</i>	2	2	Emery, Grand
<i>Gilia caespitosa</i> (listing package under review)	1	1	Wayne
<i>Glaucocarpon suffrutescens</i>	1	1	Uinta
(listing package under review)			
<i>Hackelia ibapensis</i>	2	1	Juab
<i>Hedysarum occidentale</i> var <i>canone</i>	1	2	Carbon, Emery
<i>Heterotheca jonesii</i>	2	2	Washington,
			Garfield, Kane
<i>Hymenoxys depressa</i>	2	2	Emery
<i>H. helenioides</i>	2	2	Garfield, Sanpete,
			Sevier, Emery; CO, AZ?
<i>Lepidium barnebyanum</i>	1		Duchesne
(listing package under review)			
<i>L. montanum</i> var <i>neesae</i>	2	2	Garfield
<i>L. montanum</i> var <i>stellae</i>	2	2	Kane
<i>L. ostleri</i>	1	2	Beaver
<i>Lesquerella tumulosa</i>	1	2	Kane
<i>Lomatium latilobum</i>	2	2	Grand, San Juan; CO
<i>Mentzelia argillosa</i>	(add)	2	Sanpete, Sevier
<i>Musineon lineare</i>	2	2	Cache
<i>Najas caespitosus</i> (F)	2*	2*	Sevier
<i>Oenothera acutissima</i>	2	2	Daggett, Uinta; CO
<i>Opuntia basilaris</i> var <i>woodburyi</i>	2	3B	Washington
<i>Pediocactus despainii</i>	2	1	Emery
(listing package under review)			
<i>P. winklerii</i>	2	1	Wayne
(status report completed)			
<i>Penstemon scariosus</i> var <i>albifluvis</i> (listing package under review)	1	1	Uinta
<i>P. atwoodii</i>	2	2	Garfield, Kane
<i>P. bracteatus</i>	1	2	Garfield

<i>P. compactus</i>	2	2	Cache
<i>P. concinnus</i>	2	2	Beaver, Millard, Iron
<i>P. flowersii</i>	(add)	2	Uinta, Duchesne
<i>P. goodrichii</i>	2	2	Uinta, Duchesne
<i>P. grahamii</i>	1	1	Uinta; CO
<i>P. leptanthus</i>	2	2	Sanpete
<i>P. nanus</i>	2	3C	Millard, Beaver
<i>P. parvus</i>	(add)	3C	Garfield, Wayne Piute
<i>P. tidestromii</i>	2	2	Sanpete, Juab
<i>P. wardii</i>	2	2	Sevier, Sanpete
<i>Primula maguirei</i>	P		Cache
<i>Psoralea epipsila</i>	2	2	Kane
<i>P. parienis</i>	1	2	Garfield, Kane
<i>Psorothamnus polyadenius</i> var <i>jonesii</i>	2	2	Emery
<i>Ranunculus acriformis</i> var <i>aestivalis</i> (status report completed)	2	1	Garfield, Sanpete?
<i>Schoenocrambe barnebyi</i> (status report completed)	2	1	Emery
<i>Sclerocactus pubispinus</i>	(add)	3C	Sevier, Beaver, Juab, Tooele, Millard
<i>Selaginella utahensis</i>	2	2	Washington; NV
<i>Senecio dimorphophyllus</i> var <i>intermedius</i>	2	2	San Juan; CO
<i>Silene petersonii</i> var <i>minor</i>	1	3B	Garfield, Iron
<i>Silene petersonii</i>	2	2	Sanpete, Garfield, Iron
<i>Sphaeralcea caespitosa</i>	2	2	Millard, Beaver; NV
<i>S. psoraloides</i>	2	2	Wayne, Emery
<i>Sphaeromeria ruthiae</i>	2	2	Washington
<i>Talinum validulum</i>	2	2	Emery
<i>Thelypodopsis argillacea</i>	1	1	Uinta
<i>Townsendia aprica</i>	1		Sevier, Emery
<i>Trifolium andersonii</i> var <i>friscanum</i>	1	2	Beaver, Millard
<i>Xylorhiza cronquistii</i>	2	2	Kane

1985 Recommended Additions for consideration:

<i>Astragalus holmgreniorum</i>	(add)	2	Washington; AZ
<i>Atriplex canescens</i> var <i>gigantea</i>	(add)	2	Juab
<i>Cirsium owenbyi</i>	(add)	2	Daggett
<i>Penstemon ammophilum</i>	(add)	2	Washington, Garfield
<i>P. navajoa</i>	(add)	2	San Juan

<i>Physaria acutifolia</i> var <i>purpurea</i>	(add)	2	Grand
<i>Sphaeralcea leptophylla</i> var <i>janeae</i>	(add)	2	San Juan, Wayne, Garfield
<i>Thelesperma subnudum</i> var <i>alpinum</i>	(add)	2	Wayne

1986 Recommendations for Consideration:

<i>A. preusii</i> var <i>cutleri</i>	(add)	2	Rare!
<i>Atriplex pleiantha</i>	(add)	2	New UT record
<i>Asplenium andrewsii</i>	(add)	2	Rare!
<i>Lygodesmia dolorensis</i>	(add)	2	Rare; New species
<i>M. shultziorum</i> , ined.	(add)	2	Rare; New species
<i>Penstemon pinorum</i>	(add)	2	Threat at type
<i>Primula domoensis</i>	(add)	2	Rare; new species
<i>Shaeromeria capitata</i>	(add)	2	Rare!

New Information Reported For:

Talinum validulum, which should be changed to *Talinum thompsonae* in Utah.
Psoralea epipsila and *P. pariensis*, change generic category to *Pediomelum*.
Haplopappus zionis and *H. crispus* should be considered for listing.

New Records reported for:

Cryptantha compacta (also in White Pine County, Nevada)
Cuscuta warneri (reported from Coconino County, Arizona)
Cymopterus minimus (also from Garfield & Kane Counties)
Hymenoxys helenoides

THE ELUSIVE TRILOBITE

anonymous

On the map the trilobite beds were marked about 25 miles west of Delta, a nice two day outing for the last weekend in March when it was still too early to look for wildflowers. The first camping trip of the season can only be enjoyed by gameboard enthusiasts who rally to the delays and detours inherent in finding all the equipment which was stored for the winter, food which can be readily prepared on a one-burner stove, and clothes to cover the gamut of temperatures to be expected this early in the season. Stops to buy a rock hammer, food, then gas, and rerouting where a Spring lake crossed our road made a mid-afternoon arrival inevitable. But, at last, here we were with what would appear to the inexperienced as trilobite beds all around. Where to begin? Full of enthusiasm and high expectations we started up the nearest hill, rock hammer in hand.

Three hours later, dejected and tired, we drag back to our starting point with a too heavy rock hammer and an empty pack. Out comes the map. Reconnoiter. We'll move over to the very spot where the "bite" of Trilobite Beds is printed on the map. Surely we will find the crusty crustaceans there.

Coyote serenade, a good night's sleep, a brilliant sunrise...all are omens of a successful day and our spirits are revived. Today we'll find them. Walking up a draw with promising outcrops of shale we make our first find of the morning. Castilleja. While I am busy inspecting the different shades of Indian Paint Brush a call from my companion reawakens me to the purpose of this trip. But no, not an elusive trilobite. This time it is an Oenothera caespitosa, an Evening Primrose still in full bloom.

Early morning on the desert emboldens the senses with sharper vision, brighter colors, and stronger smells. Not too slowly thoughts drift from trilobite hunting. Here at my feet blooms an Astragalus, and nearby patches of Cymopterus, Lomatium, and Storksbill add color to the wasteland. Invisible cactus waiting in ambush attack the unwary. Sage wafts through the air. On the peak above are Yucca and prickly Shadscale. Large clumps of Ephedra, Artemesia, and an occasional Juniper dot the landscape. Climbing to the top of the peak we are not greeted by trilobites, fossilized forms, encrusted insects, ancient arthropods, but by Cryptantha. And at least for this Spring day it is enough.

Members are encouraged to submit original articles to the Sego Lily Newsletter. Please state if articles have been published elsewhere and need permission of the publisher. Drawings with or without articles are also welcome. The editor reserves the right to edit as needed and to select suitable articles for publication.

The Sego Lily is published nine times a year. Copyright Utah Native Plant Society, 1986. Deadline for submission of articles is the 1st of each month of publication.

Editors Note: Due to the length of this months Sego Lily, the report for the UNPS Salt Lake Chapter Meeting, Cacti of Utah by Marv Poulson will appear in the next issue.

AND

Thank you anonymous for a wonderful article!

UNPS SEGO LILY
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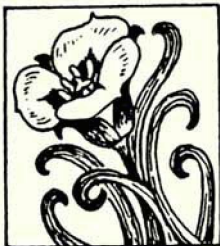
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THE SEGO LILY

NEWSLETTER OF THE UTAH NATIVE PLANT SOCIETY

Volume 9 ; Number 4

May 1986

WHAT'S HAPPENING?

Saturday
May 17
9:00 am
3:00 pm

"Captivating" State Arboretum of Utah's 7th Annual Plant Sale and Green Spree. On the lawn in front of the Arboretum offices. Be there early for best selection! For further information, call 581-5322.

Monday
May 19
7:00 pm

"Australian Flora: A Chrisie Potpourri" UNPS Cache Valley Chapter Meeting. Jeanne Chambers. New Logan City Building. A variety of Australia's spring flora will be shown. Come and see what November can be like in other parts of the world!

Thursday
May 22
7:30 pm

"A Double-header" UNPS Salt Lake Chapter Meeting. The first half of the meeting will feature Keith Wallentine on Orchids and where to find them. For the second half of the meeting the membership is invited to bring a picture of their favorite flower and details on where to find it. Room 323 Student Union Building, University of Utah. Free and open to the public.

Thursday
May 22

Deadline for comments concerning the proposal to list Eriogonum humivagans (spreading wild-buckwheat) as endangered. Send comments to U.S. Fish & Wildlife Service, 2078 Administration Building, 1745 W. 1700 S., Salt Lake City, Utah 84104.

Weekend
May 23 -
May 26

Utah Nature Study Society Memorial Weekend Event. Tule Valley, Painter Springs, Trilobite Beds. For further information, call Peter Hovingh, 359-4791.

Tuesday
May 27

Deadline for comments concerning the proposal to list Pediocactus despainii (San Rafael cactus) as endangered. Send comments to U.S. Fish & Wildlife Service, 2078 Administration Building, 1745 W. 1700 S., Salt Lake City, Utah 84104.

Saturday
May 31
8:00 am -
12:00 noon

"Trees of the Wasatch" Museum of Natural History Wild Plant Walks in the Wasatch. Mary Pat Matheson, Arboretum Horticulturist. Pre-registration required. \$5.00. For further information, call 581-6927.

Saturday
May 31
1:00 pm

UNPS Salt Lake Chapter Field Trip in the Wasatch Foothills with Ty Harrison. Meet at the ski information sign at the mouth of Little Cottonwood Canyon. Free and open to the public.

What's Happening continued

- Saturday "Wildflowers of Dry Creek" Museum of Natural History Wild
June 7 Plant Walks in the Wasatch. Ty Harrison, Field Ecologist.
8:00 a.m.- Pre-registration required. \$5.00. For further information,
12:00 noon call 581-5322.
- Saturday "Wildflowers of Big Cottonwood Canyon" Museum of Natural
June 14 History Plant Walks in the Wasatch. Pam Poulson, State
8:00 a.m.- Arboretum. Pre-registration required. \$5.00. For further
12:00 noon information, call 581-5322.
- Wednesday "Fertilizers and Weed Control" State Arboretum of Utah Tree
June 18 Walk. Larry Sagers, U.S.U Extension Horticulturist. Meet on
7:00 p.m. the steps of the Museum of Natural History. Free. For further
 information, call 581-5322.
- Thursday "Fertilizers and Weed Control" State Arboretum of Utah Brown
June 19 Bag Tour. Repeat of above.
12:00 noon
- Saturdays "Edible Wild Plants Workshop" State Arboretum of Utah
June 21 Summer Series Workshop. Ty Harrison, Field Ecologist. This
August 9 foraging workshop runs over four months: June-aquatic
Sept. 13 plants; August-berries; September-fruits. Pre-registration
9:00 a.m.- required \$7.00 for each or \$20.00 for the entire series. Call
1:00 p.m. 581-5322 for further information.
- Saturday "Wildflowers of Albion Basin" Museum of Natural History
June 26 Plant Walks in the Wasatch. Alyce Hreha, Field Botanist.
12:00 noon Pre-registration required. \$5.00. For further information,
 call 581-5322.
- Mondays "Exploring Greenspace" Arboretum sponsored University of
Wednesdays Utah course. Dr. Betty Wullstein, Arboretum Curator of
Fridays Education. Pre-registration required \$75 non-credit. For
9:00 a.m.- further information or registration, call 581-6463.
4:00 p.m.
- Tuesday "Wildflower Photography Workshop" State Arboretum of Utah
July 8, Summer Series Workshop. Mary Poulson, Environmental
Saturday Photographer. Lecture, hands-on field session and final show
July 12 and tell. Pre-registration required. \$25.00. For further
Thursday information, call 581-5322.
July 17

Whats Happening continued

7 days a State Arboretum Red Butte Development Site OPEN TO THE
Week PUBLIC! for further information, call 581-5322. Watch the
9:00 a.m.- development
4:00 p.m.

Anytime Call the Utah Wildflower Hotline at 581-4969 for the latest
"hot" wildflowers in state.

Anytime Call the Utah Birdline at 530-1299 for the latest "hot" birds
in the state.

Thanks, Sherel!

The Utah Native Plant Society would like to acknowledge the generous gift of one of our founding members, with an advertisement for "Advanced Native Plant Identification", a popular course sponsored by the State Arboretum of Utah and offered by the University of Utah Division of Continuing Education. The course is offered Winter Quarter, and is moderated by Kathy Mutz. At each class, experts in the subject cover the more difficult divisions of the plant kingdom. Sherel Goodrich, from the Ashley National Forest in Vernal, covered two tricky plant genera this year: the Willows (*Salix* spp.) and the Sedges (*Carex* spp.). He was offered an honorarium by the University of Utah for his efforts, but he declined the money and donated it instead to the Utah Native Plant Society. Thanks again, Sherel.

Don't miss "Advanced Native Plant Identification", offered again, by popular demand, winter Quarter of 1987 (sorry, but that's March of 1987!).

WELCOME NEW MEMBERS

Ernest & Lialiah Runyon, Salt Lake City
John Ellerbeck, Logan
Jeanne M. Moe, Salt Lake City
Bill Eckerle, Salt Lake City

FIELD TRIPS

Andrew Boyack

Phone 278-8596

Field trips planned for the summer are:

- May 31 Wasatch Foothills. We will meet at 1:00 PM at a place to be announced later. This will be a trip to explore the native flora of the Salt Lake valley much as it was in pioneer days. Ty Harrison will be our mentor and guide.
- June 28 Uintas
- August 2 Albion Basin
- August 23 Mushroom Hunt

Everyone is welcome to join these trips, experts and novices alike.

Our field trips offer the novice a fine opportunity to learn the names, both common and scientific, of Utah's plants and flowers and how to identify them. The scientific names and terminology, though forbidding at first, should not discourage the novice. They form part of an intriguing key by means of which even an amateur can identify unfamiliar plants.

And besides, these Sege Lily newsletters, which are loaded with scientific names of flowers, are a lot more fun to read when you know the flowers to which they refer.

The May 31 Wasatch Foothills trip has been set for 1:00 PM so as not to conflict with the Museum of Natural History walk "Trees of the Wasatch" from 8:00 to 12:00 AM on the same day.

THE LOGAN CHAPTER MAY 10th PRIMULA MAGUIERI SEARCH RESULTED IN A MAJOR DISCOVERY ABOUT THE DISTRIBUTION OF THIS ENDANGERED PLANT. VOLUNTEERS ARE NEEDED DURING THE NEXT COUPLE OF WEEKS TO CONTINUE THE SEARCH WHILE IT IS STILL IN BLOOM. CALL WAYNE PADGETT 752-1311 OR 753-3854 IN LOGAN OR DAVE WALLACE 466-2719 IN SALT LAKE IF YOU CAN HELP.

Though not the most common plant there is no scarcity of cacti in Utah and different species represent genera in every floristic region of the state from the Dixie Corridor to the Uinta Mountains. The botanical enthusiasts who were in attendance at the March 27 meeting of the Salt Lake Chapter of the Utah Native Plant Society were doubly treated to an informative lecture and outstanding slide show by Marv Poulson. The following is Marv's key to the genera of Utah cactus and he invites us to use it and let him know how it works.

Utah Cactus
by Marv Poulson

Those familiar with the American Southwest come to recognize cacti as the legendary indicators of the desert. The unusual character of cacti contrasts dramatically with the more common leafy, woody and herbaceous plants.

By my reckoning, 52 different cacti are known to grow in Utah, of these a quarter survive in restricted habitat locations large enough to support only a few plants, making the survivors very rare. For these, almost any disturbance threatens extinction.

Contrary to the myth, cactus are a minority among desert plants, at least in Utah. Despite apparent rarity, surprising variety of form and distribution mark Utah's cacti. In Utah, cacti sport some distinctive features that separate them from other plants.

Cactus Description

The cacti that occur in Utah take the form of succulent trees, shrubs, or herbs with greatly swollen stems, usually with spines clustered, in definite, special areoles on the surface of each stem. As with most desert species of cactus, ours generally have no leaves, or when they occur are succulent and deciduous, and appear only on the new joints of the stem to disappear within a month or two. Showy flowers separate cacti as among the most beautiful of desert plants. The flowers have numerous sepals and petals that gradually merge, on the floral tube. Each bloom has only one style with 3-24 stigmas and from perhaps 50 to 1,000 stamens. Cactus fruit are considered to be a fleshy berry that sometimes dries at maturity.

Key to the Genera of the Cacti of Utah

- 1a. Stems with joints; the joints flattened, club, or cylinder shaped; areoles with glochids and spines (or spineless).
 - 1. Opuntia.
- 1b. Stems globe or cylinder shaped, without joints; areoles with hair or spines but no glochids.
 - Go to 2.
- 2a(1). Flowers borne from the side and below the top of the stem.
 - Go to 3.

3a(2). Flowers borne and leaving an irregular scar just above a mature spine-bearing areole of a tubercle; stem length usually 2-5 times the diameter; fruit, elliptic, fleshy and spiny.

2. Echinocereus

3b. Flowers borne in obscure areoles deep between and not connected with the tubercles; stems globe shaped; fruits, elongate, fleshy, red, smooth, generally spineless.

9. Mammillaria

2b. Flowers borne on top of the stem.

Go to 4.

4a(2). Stems with ribs; central spines straight, curved or hooked.

Go to 5.

5a(4). Stems shaped like large barrels, mostly 20-100 cm tall and 10-50 cm in diameter.

Go to 6.

6a(5). Upper areoles and fruit without wool; fruit remaining fleshy for several months; stems large, stout, 20-50 cm in diameter or more.

3. Ferocactus

6b. Upper areoles and fruit wooly; fruit drying soon after maturity and encased in matted dense white hairs; stems 12-25 cm diameter.

4. Echinocactus

5b. Stems shaped like small barrels, mostly 3-20 cm tall and 3-12 cm diameter.

Go to 7.

7a(4). Central spines hooked (except S. glaucus), or if straight then the flowers being rose-pink to violet or more than 2 cm long, otherwise flowers being white, yellow, rose-pink or violet; fruit dry, with few if any scales, capsule either splitting crosswise or with 2-3 vertical slits.

5. Sclerocactus

7b. Spines all straight, purplish or reddish, 2-5 cm long or more; flowers rose-pink; flower and fruit

bearing 1 to many scales; fruit dry, splitting
along back side.

7. Neolloydia

- 4b. Stems without ribs; central spines straight or curved,
rarely hooked.

Go to 8.

- 8a(4). Tubercles distinctly grooved on the upper side;
flowers pink to magenta or yellow; fruit fleshy,
not bearing scale leaves, and without a distinct
split or opening.

8. Coryphantha

- 8b. Tubercles without a distinct groove; flowers white,
yellow, bronze, or pale pinkish; fruit dry,
bearing several scale leaves, capsule splitting
along one side and the top, with the dried flower
parts, lifting off like a lid.

6. Pediocactus

Recommended Book List for Utah's Cacti
Compiled by Marv Poulson

The following book list includes several very good references for
identifying Utah's cacti.

- Benson, Lyman. 1982. The Cacti of The United States and Canada.
Stanford University Press, Stanford, California. ***
This is by far the best reference for getting to know our
cacti. It is a very complete, well illustrated and
clearly written study of cactus.
- Benson, Lyman. 1969, 1981. The Cacti of Arizona. University of
Arizona Press, Tucson, Arizona.
- Earle, W. Hubert. 1980. Cacti of The Southwest, Revised with
Color. W. Hubert Earle, Phoenix, Arizona.
- Welsh, Stanley L. 1984. Utah Flora: Cactaceae. Great Basin
Naturalist 44: 52-69.

Utah Cacti
by Marv Poulson

The Cacti of Utah Compared

	Opuntia	Echinocereus	Ferocactus	Echinocactus	Sclerocactus	Pediocactus	Neolloydia	Coryphantha	Mammillaria
<u>Character</u>									
<u>Item</u>									
Length	5-30cm (60cm)	5-30cm (40cm)	1-3m	30-60cm	5-15cm (5-45cm)	1-7.5cm (0.7-25cm)	10-15cm (25cm)	2-15cm	7.5-15cm
Width	0.6-5cm Cylindroid 2.5-30 Flattened	2.5-8.7cm (10cm)	Averaging 30cm	10-20cm	4-10cm (15cm)		5-10cm (12.5cm)	2-10cm	4-6cm
Character	Jointed, cylindroid or flattened	Cylinder shaped; 5-13 ribs	Barrel shaped; 18-27 ribs	Sphere to cylinder shaped; 13-21 ribs	Short globe to oval or cylinder shaped; 12-17 ribs	Short globe to cylinder shaped; no ribs	Oval- cylindric to ellipsoid- cylindric; 17-21 ribs	Short globe to cylinder shape; no ribs	Oval to cylinder shaped; no ribs
<u>ubercl</u>	When present, separate	Blending into ribs	Nearly blending together	Nearly blending together	Blending into ribs	Prominent, not blending together	Protruding above ribs	Separate, prominent	Separate, prominent, protruding
<u>Spines</u>									
Centrals	1-10(15), blending w/radials	Various	Usually 4	4	1-6(0-11) up to 3 types	0-10	4-9	3-12	1-4
Length	Various	0.1-10cm	5-14cm	6-7.5cm	1.5-9.0cm	0.5-3.2cm	3-4cm	1.2-2.5cm	1.2-2.5cm
Character	Smooth, straight or curved, sometimes sheathed	Smooth, straight or curving	Thick, curving, densely covering	Thick, spreading irregularly, densely covering	Needle-like, flattened, usually w/ 1 or more hooked	Needle-like, hairlike or corky, rarely hooked	Straight or slightly curving, all similar, densely covering	Straight, spreading	Dense, spreading; longer ones hooked, densely covering
Radials	glochids present	5-12	6-8(14)	6-8	6-15	3-35	9 or 10	12-40	30-46(60)
<u>fruit</u>									
Character	Fleshy or dry; not splitting	Fleshy; not splitting open; dried flower remaining attached	Yellow, fleshy; splitting between base and middle; dried flower remaining attached	Dry, encased in matted dense woolly white hairs; opening at the top; dried flower falling off	Dry; splitting horizontally near the base; 1 species splitting vertically; dried flower remaining attached	Dry; splitting vertically on one side; top cap and dry flower lifting off like a lid	Dry; splitting vertically on one side; dried flower ? falling off	Fleshy; not splitting open; dried flower falling off	Red, fleshy; not splitting open; dried flower falling off

On Saturday April 26 while Salt Lakers were experiencing a spring snow storm, it was blustery but warm and clear in and around St. George where a group of UNPS and Sierra Club members paid a visit to the federally listed dwarf bearclaw poppy (Arctomecon humilis Coville).

Included in the twenty-one participants were Kevin Carter (guide for the outing and Division of State Lands & Forestry lands specialist), Dave Wallace (UNPS President-Elect), Karen Milne (editor of The Segó Lily), Hal McMurrin (President of the Sierra Club's Kolob Chapter) and myself. Kate Dwire represented the Logan Chapter and rounded out a well attended field trip given its location.

After a brief discussion concerning the endangered species, Kevin led the group to the ORV parking lot at the White Dome site south of Bloomington Hills. There State of Utah signs were found broken or at least displaced. Kevin indicated that the signs had been in place the last time he checked in March. Two of the signs were re-erected.

Moving to a different spot, the group looked at an area where Kevin had previously taken extensive data. The small area which last year apparently boasted a fairly large number of plants this year contained very few. At least a half-dozen small dead plants were noted. The cause of the mortality is unknown but it did not appear to be from off-road vehicle use, a primary threat to the poppy.

Nearby there were seemingly vigorous poppy colonies which could be easily seen as their white flowers glistened in the St. George sun. Certainly at least several thousand plants exist at the White Dome site alone.

While most mature plants still had a number of the characteristic pendulant buds, plants seen at the White Dome site appeared somewhat past their flowering prime. The group had to be careful not to step on very small juvenile plants at Kevin's research area.

After noon, Kevin led mainly UNPS members to a ridge near the town of Washington where some spectacular clumps of Echinocereus engelmannii (the listed var. purpureus?) were in bloom. Growing with the hedgehog cactus between the black rocks was Mammillaria tetrancistra (not visibly in bloom), the only Mammillaria species to occur in Utah.

Bearclaw Poppy revisity continued

At this point the field trip concluded; however, some additional sign re-posting activity was undertaken by Dave Wallace and company. Additional poppy populations were also visited.

A pamphlet entitled "The Endangered Dwarf Bearclaw Poppy" was made available to field trip participants. This pamphlet is the first UNPS conservation committee publication. Its purpose is to increase awareness of the poppy's tenuous existence and promote the conservation of native plant species generally.

The pamphlet is available to anyone that requests one (please include a self-addressed stamped envelope). Write to:

UNPS Conservation Committee
P. O. Box 1555
Salt Lake City, Utah 84110

PRIMROSE FIELDTRIP A SUCCESS

Kate Dwire and Wayne Padgett

We would like to thank all of those who participated in the search for Primula maguirei this year. Though the rain came down the entire time, spirits were high as everyone surveyed their assigned sections of Logan Canyon. Dave Wallace made a discovery that potentially links the Maguire Primrose to two dolomitic formations on which we are now basing a continued search for new populations. These formations typically occur as steep vertical outcrops through much of northern Utah's Bear River Range and new areas will be looked at as the snows begin to melt; Areas such as Naomi Peak, Mt. Magog, and Left Fork Blacksmith Fork. Many questions are now being raised about the autecology of this species and, as we continue our work, we hope to begin addressing these. A final report on Primula maguirei will appear in a future issue of the Sege Lily. Meanwhile, thanks again to the following folks for their help, support, and good humor: Dave Wallace, Doug and Barrie Gilbert, Linda Gottshalk, Karrol Braddock, Ann Williams, Keith and Kathy Wallentine, Dennis Welker, Joanne Hughes, John Ellerbeck, Marv Poulson, and Jo Stolhand.

The April 25 field trip to the Bearclaw Poppy broke up early in the afternoon, but the northern Utahns who came down for the weekend weren't ready to quit. We got a little to eat and went right back out for more. After replacing all the broken signs we went back to Kevin Carter's White Dome study area for a closer look.

What we saw was quite discouraging. The off-road vehicle damage was worse than last year, there was even a motorcycle riding around on the hills as we put the signs back up. The most disturbing thing was the condition of the poppy. It did not seem to be doing nearly as well as before. Last year tiny seedlings could be easily seen throughout the plot, but now there were hardly any. Only a few healthy plants remained on the ridge where photos from 1985 show dozens. A number of plants which bloomed last year were not flowering now, and others had died. It would be very interesting to see what Kevin Carter's survey shows.

The area south of Bloomington (Atkinville?) looked much the same as it did last summer. In spite of the off-road vehicles there was a fair population of healthy plants, especially toward the south where the damage is not as severe. We also saw evidence of the problems at the White Dome site across the freeway. Dead plants, poor reproduction, and non blooming plants were noted, even in undisturbed areas.

These observations emphasize how little we know about the poppy. Is this the normal fluctuation of a stable population or a sign of trouble? Why are the plants suffering? Is it due to disease, old age, environmental factors, or abuse? Would the poppy be struggling to survive even if there were no off-road vehicles? And why is so little being done to protect it on these state lands?

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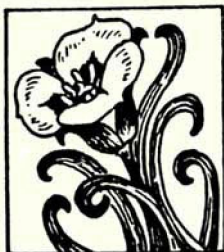
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Pam Poulsen, Treasurer, 3631 South Carolyn Street, Salt Lake City, Utah 84106



THE SEGO LILY

NEWSLETTER OF THE UTAH NATIVE PLANT SOCIETY

Volume 9 ; Number 5

June 1986

WHAT'S HAPPENING?

- Thursday July 8** State Arboretum Wildflower Photography Workshop with Merv Poulsen. 7:00 p.m.. \$25.00. Class also held Saturday July 12 and Thursday July 17. Preregistration required. 581-5322.
- Sunday July 13** Red Butte Garden Concerts. Jensen/Woodbury Duo. 5:00 p.m. Bring Picnic and blanket. \$3.00. Tickets at Special Events Center. 581-5322.
- Wednes. July 16** State Arboretum Tree Walk. "New Insect and Disease Problems" by Dr. Fred Baker, U.S.U. Extension Forester. 7:00 p.m. Meet on the steps of the Museum of Natural History. Free. 581-5322.
- Thursday July 17** Museum of Natural History Wildflower Identification Workshop with Pam Poulsen. 7:30. \$15.00. Pre registration required. 581-5322.
- Thursday July 17** State Arboretum Brown Bag Tour. Abbreviated repeat of above. 12:00 noon. Meet on the steps of the Museum of Natural History. Free. 581-5322.
- Saturday July 19** Museum of Natural History Snowbird Naturalist's Weekend. For further information, 581-6927.
- Saturday July 19** UNPS Field Trip. Beaver Creek and Upper Provo River. 278-8596
- Saturday August 2** UNPS Field Trip. Albion Basin with Dr. Stanley L Welsh. An annual event. 278-8596.

What's Happening continued

Saturday State Arboretum Wild Edible Plants Workshop. Berry foraging
August 9 in East Canyon with Tye Harrison. \$7.00. 9:00 a.m. to 1:00 p.m..
Preregistration required. 581-5322.

Sat-Sun State Arboretum Field Trip. Bristlecone Pines of Wheeler
Aug 9-10 Peak with Kaye Thorne. For further information, 581-5322.

Sunday Red Butte Garden concerts. Oquirrh Ridge Drifters. 5:00 p.m.
August 10 Bring picnic and a blanket. \$3.00. Tickets at Special Events
Center. 581-5322.

Wednes. State Arboretum Tree Walk. "Prescription Pruning for Trees
August 20 and Shrubs" by Steve Schwab, Salt Lake City Urban Forester.
7:00 p.m. Meet on the steps of the Museum of Natural History.
Free. 581-5322.

Thursday State Arboretum Brown Bag Tour. Abbreviated repeat of above.
August 21 12:00 noon. Meet on the steps of the Museum of Natural History.
Free. 581-5322.

Thursday UNPS Monthly Meeting. Mushrooms by Dr. Frank Anderson. An
August 21 annual event. 521-0069.

Saturday UNPS Field Trip. Annual Mushroom Hunt.
August 23

WELCOME NEW MEMBERS

William A. Lewis
Robert Marzec
Mike and Joanna Shulsky
Susan Nordstrom
Douglas B. Osmundson
Linda J. Gottschalk
Steven Briggs
Donald P. Hartman

Logan
Riverton
Sandy
Logan
Logan
Logan
Orem
Salt Lake City

WILDFLOWER WATCH FOR LATE JUNE/EARLY JULY

by Pam Poulson

At low desert elevations the wildflower blooming display is virtually over. For wildflower displays now, look above 6,000 feet elevation. From now through the rest of the wildflower season, head for the mountains anywhere in the state. Follow the progression of seasons from summer in the mouths of the canyons to early spring along the melting snowbanks in the higher elevations.

Look on the mountainsides or in the canyons at 6,000 feet just above the Mountain Brush vegetation zone marked by Gambel Oak (Quercus gambelii), Pinyons (Pinus monophylla or P. edulis), Junipers (Juniperus osteosperma), Mountain Mahogany (Cercocarpus ledifolius) and grasses (various).

From here, among the Quaking Aspen (Populus tremuloides), White Fir (Abies concolor) and Douglas Fir (Pseudotsuga menziesii) of the Aspen/Fir vegetation zone, and continuing up the mountain, wildflowers are profuse. Be on the look out for: Yarrow (Achillea millefolia), Wild Lily of the Valley (Smilacina stellata), False Solomon's Seal (Smilacina racemosa), Angelica (Angelica ssp.), Baneberry (Actaea rubra), Chokecherry (Prunus virginiana), Columbine (Aquilegia ssp.), Cow Parsnip (Heracleum lanatum), Currant (Ribes ssp.), Jacob's Ladder (Polemonium ssp), Meadow Rue (Thalictrum fendleri), Miterwort (Mitella ssp.), Mountain Ash (Sorbus aucuparia), Parrot Beak Lousewort (Pedicularis racemosa), Penny Cress (Thlaspi ssp.), Red Osier Dogwood (Cornus stolonifera), Wild Geranium (Geranium ssp.), Wild Snapdragon (Scrophularia lanceolata), Serviceberry (Amelanchier alnifolia), California Corn Lily (Veratrum californicum), Chickweed (Stellaria jamesiana), Thimbleberry (Rubus parviflorus), Wild Strawberry (Fragaria americana), Western Valerian (Valeriana occidentalis), Blue, white or yellow Violets (Viola ssp.), Heartleaf Arnica (Arnica cordifolia), Balsamroot (Balsamorhiza ssp.), Cinquefoil (Potentilla fruticosa), Groundsel (Senecio ssp.), Monkeyflower (Mimulus ssp.), Creeping Oregon Grape (Mahonia repens), Stonecrop (Sedum ssp.), Golden Aster (Heterotheca villosa), Indian Paintbrush (Castilleja ssp.), Skyrocket Gilia (Gilia aggregata), Wild Rose (Rosa ssp.), Bluebell

Wildflower Watch Late June/Early July

(Mertensia ssp.), Rock Penstemon (Penstemon humilis), Lupine (Lupinus ssp.), Wild Sweetpea (Lathyrus ssp.), Mountain Ninebark (Physocarpus ssp.), Woodland Star (Lithophragma ssp.), Wild Clematis (Clematis ssp.), Fireweed (Epilobium angustifolia), Western Coneflower (Rudbeckia occidentalis), Snowberry (Symphoricarpos ssp.), Mountain Hollyhock (Illiamna rivularis) and Elderberry (Sambucus ssp.).

Along the Wasatch Front some good late-June and early-July hiking trails for walking wildflower watchers are: Mount Olympus, Neff's Canyon, Bowman Fork, Alexander Basin, Little Mountain, Mount Aire, Grandeur Peak, Church Fork, Thaynes Canyon, Terraces to Elbow Fork, Big Water, Mule Hollow, Ferguson's Canyon, Kessler Peak, Perkins Peak, Beacon Peak, Pencil Point, Little Black Mountain, Corner Canyon, Mill B North Fork, Mineral Fork, Butler Fork, Mill D, Silver Fork, Honeycomb Cliffs, Lake Solitude, Twin Lakes, Lake Mary and Brighton Lake.

Follow the melting snowline in the higher portions of the canyons and in the Uintas to see Glacier Lilies (Erythronium grandiflorum), Spring Beauties (Claytonia lanceolata), Snow Buttercups (Ranunculus ssp.), Indian Potatoe (Orogenia linearifolia) and Steers Head (Dicentra uniflora).

Remember that this list of wildflowers is only a partial list. There are over 3,000 species of plants in Utah, with 1,200 of them in the Wasatch Mountains alone. No doubt you will see something that wasn't listed. If you do, the State Arboretum of Utah would be interested in hearing from you, with your contribution to the Utah Wildflower Hotline Report. Call them at (801) 581-5322.

Floristic Regions of Utah

INTRODUCTION

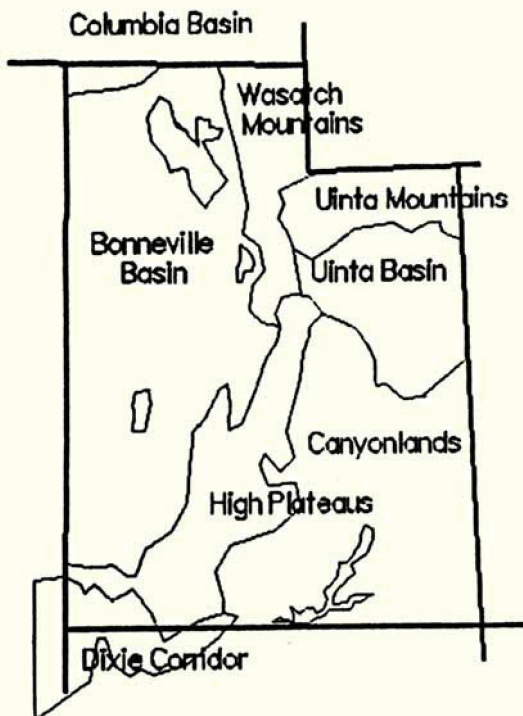
With the broad range of plant/land types and elevations in Utah, cactus can be found blooming from March to July.

The plant/land types range from the Lower Sonoran (upper) of the Mohave Desert near St. George (lowest elevation in Utah 2,200') to the Arctic-Alpine Zone above timberline at King's Peak in the Uinta Wilderness Area (highest elevation in Utah 13,500'). Throughout much of these diverse ranges, various cacti may be found.

DIXIE CORRIDOR: Southwestern Utah. The States richest cactus area and the only representative of Mohave Desert in Utah. Lower Sonoran (upper) Life Zone indicated by Mesquite, Creosote, Joshua Tree and Golden Barrel Cactus. Elevation: 2,200'-5,400'. Average annual precipitation: 10". Average July temperature: 82 deg. F.

CANYONLANDS: Southeastern Utah. Broad high desert plain dissected by many deep canyons of the Colorado and Green River drainages with several isolated igneous intrusive mountain ranges. This region is rich in endemic species, including cacti. The Upper Sonoran Life Zone is typical here, indicated by sagebrush, pinyon/juniper and blackbrush. Elevation: 4,000'-12,720'. Average annual precipitation 6"-10". Average July temperature: 76-80 deg. F.

BONNEVILLE BASIN: Western Utah. Hydrologic basin with no outlet to the sea. Series of broad flat basins (average 4,500' elevation) separated by nearly parallel mountain ranges (to 12,100' elevation). The basin is most typically of Upper Sonoran Life Zone, which is indicated by sagebrush, pinyon/juniper and shadscale in the valleys. Higher elevations include the Transition Zone of ponderosa pine up to typically mountain zones in the Canadian/Hudsonian marked by spruce, fir and pine. Mountains above 8,500' are frequently "forested" with the famous Bristlecone Pine. Elevation: 4,100'-12,100'. Average annual precipitation: 6"-10". Average July temperature: 72-80 deg. F.



UINTA BASIN: Eastern Utah. A natural depression created by the uplift of the Uinta Mountains and bisected by the Green River. Bordered on the north by the Uinta Mountains and on the south by the Tavaputs Plateau. Basin is Upper Sonoran Life Zone indicated by sagebrush and pinyon/juniper. The Uinta Uplift exposed strata of sandstone, clay and white shale which formed knolls and bluffs which are rich in endemic plant species. Elevation: 4,200'-10,285'. Average annual precipitation: 8"-10". Average July temperature: 64-72 deg. F.

WASATCH AND UINTA MOUNTAINS AND HIGH PLATEAUS: These three regions have many floristic similarities and include the following Life Zones in ascending elevation: Upper Sonoran (sagebrush, pinyon/juniper), Transition (ponderosa pine), Canadian (fir & spruce), Hudsonian (spruce & pine), and Arctic-Alpine (above timberline-plants small and/or matlike). Elevation: 4,500'-13,500'. Average annual precipitation: 14"-20". Average July temperature: 60-64 deg. F.

COLUMBIA BASIN: While this great basin drainage is generally much to the north and west of our range, many floristic influences in the northwestern part of Utah may be attributed to it. As a result, this floristic area plays a comparatively minor role in the State's botanical character. Elevation: 4,800'-10,000'. Average annual precipitation: 15"-20". Average July temperature: 60-80 deg. F.

REALLY? ORCHIDS IN UTAH?

A summary report of Utah Native Plant Society Meeting held May 22, 1986.

By Sherrie Harbrecht

According to Keith J. Wallentine, the guest lecturer, Utah has at least 15 native species of orchids with Salt Lake County having as many orchids as any place in the state. Willingness to search from the banks of northern Utah mountain streams to the seeps in southern redrock country may reward you with sights of these exotic plants. Keith listed eight genera that live in Utah and showed us slides.

1. Cypripedium calceolus (nr parviflorum), known as Yellow Ladyslipper, is the Utah orchid least likely to be found these days. The lip forms a mocassin or "little shoe" which is what calceolus means as a Latin noun. The few that might be found hide along small northern Utah streams. The Brown Orchid, Cypripedium fasciculatum, is a rare subalpine flower that locates near spruce trees. With inconspicuous flowers of purplish-brown to yellowish-brown, it may be found in the Lake Blanche area on the south side of Big Cottonwood Canyon, east of Salt Lake.

2. Calypso bulbosa, the Fairyslipper Orchid, can be found in a number of spots throughout the Uintas. An exact location was given. Go to Kamas. Start at Route 150 and go 16 and 7/10 miles from the beginning of route 150. Stop and look on both sides of the road. Look near water. These bloom at the same time as Erythronium. The single leaf on this orchid is often fading when the blossom appears. Rosy petals and sepals and an inflated pouch for a lip make it distinctive and its white and yellow accents provide the basis for a fairylike name. Calypso often favors a home near decayed wood.

3. Listera convalloroides may be found in the same places as the Brown Orchid, namely the old Lake Blanche Trail. Proceeding up the trail you encounter a bridge which starts the new trail. Turn right. The new trail goes left. About 20 feet from the bridge look for L. convalloroides. Spend the 24th of July hiking this trail and looking for these and other orchids. This orchid is known as Twayblade with its two opposite leaves and a characteristic translucent lip which is elongated and flattened. Several flowers appear on a single stem. A second twayblade, L. cordata, is characterized by heart-shaped leaves and by a deep split in its lip.

4. Epipactis gigantea is known as the Helleborine or stream orchid. Along the creek near the entrance to Le Caille Restaurant in southeastern Salt Lake County is a colony of Epipactis that blooms about July 4. Watch out for leaves of three and let them be (poison ivy)! In northern Utah (Uinta and Weber counties and Horseshoe Bend in Logan Canyon) this orchid grows tall with a raceme of blossoms of up to a dozen flowers in colors ranging from purplish-red to yellowish-orange. In the weeping gardens of the southern Utah rock country (Arches Nat'l Mon.) the orchid appears in miniature.

Orchids in Utah continued

5. Goodyera oblongifolia is known as Rattlesnake Plaintain because of a superstition that it could cure bites. Easily overlooked but quite common and more widely distributed in Utah, it is found sometimes in areas that seem to have been without much moisture. Watch for its dark green basal leaves with a white reticulation along the mid nerve. Look in Big Cottonwood and Millcreek Canyons. Late blooming flowers are inconspicuous, white tinged with green and brown and appearing in a raceme.

6. The Habenarias or Bog Orchids are the most common genera in Utah. Ranging from white to green and in height from a few inches to more than 18 inches, the green H. hyperborea and the snow white H. dilatata (which smells good) are the most showy. They can be found in many mountain locations at varying altitudes. H. unalascensis has whitish green flowers and can be found on the old Lake Blanche Trail. Its basal leaves will be yellowing when the flowers bloom. H. sparsiflora has few blooms and grows in the weeping gardens of the redrock country in southern Utah.

7. Spiranthes romanzoffiana was named after a Russian Secretary of State. This charmer of an orchid has a tightly packed raceme that runs in a spiral. It looks like ladies curls so is called Ladies Tresses. Blooms usually are white. The flower is found fairly widely in Utah's mountain wet spots.

8. Corallorhiza, the last genera of Utah's orchids is one of the most unusual in that it does not possess either leaves or true roots and is a saprophyte. Roots appear somewhat like coral, hence the name. These appear fairly early in spring with brownish stems terminating in dense racemes. C. maculata, the spotted coralroot, has a white, elongated and flattened lip with reddish-purple spots. A "tooth" at the base of the lip provides positive identification. C. striata, the striped coralroot, is relatively easy to spot. C. trifida, the third species in Utah is often greenish-yellow with a white lip of three lobes. The lip may contain purple spots. Coralroots like forest duff, apparently living on dead plant material in equilibrium with fungi.

Orchids are difficult to transplant. They are highly specialized and some seem to need certain fungi in the environment to thrive. Native orchid seed is very difficult to germinate. Go see them in their own homes; don't bring them to yours.

FIELD TRIP REPORT - DRY CREEK AND BELLS CANYON
by Ty Harrison, Field trip Leader (notes by AMB)

(On our May 31 field trip we explored three locations in Salt Lake county under the able direction of Ty Harrison. 20 of us made the trip which, though more arduous than our usual field trips, was nevertheless rewarding.)

Dry Creek is the longest creek and riparian habitat left in it's nearly natural state in the Salt Lake Valley. It flows from Bell's Canyon to the Jordan River. This trip explored Dry Creek at its upper end from appx. 2100 E. We had three stops.

1. Dry Creek Overlook This high point is located on the N. side of the DryCreek Wash within Dimple Dell Regional Park at 2100 E. and 10375 S. with access from 9400 S. at the foot of Granite Hill. It has an impressive panoramic view of the upper part of the park. Sand loving wildflowers inhabit the upper rim, with shrubs such as Squawbush, Oak, Bitterbrush and Twisted Leaf Rabbitbrush on the canyon side. A population of Sege Lily occurs on the clay slope inside the wash. Narrowleaf Cottonwood, Sandbar Willow, Black Hawthorn, Woods Rose and Golden Currant are found along the stream-bottom. Oak, Chokecherry and Mesic wildflowers such as Wild Geranium, Wild Sweetpea and Western Tickweed are found on the north-facing slope.

Plants found blooming included:

Snowball Sand Verbena (*Abronia fragrans*)
Pale Evening Primrose (*Oenothera pallida*)
Threadleaf Scorpionweed (*Phacelia linearis*)
Needle & Threadgrass (*Stipa comata*)
Indian Ricegrass (*Oryopsis hymenoides*)
Bluebunch Wheatgrass (*Agropyron spicatum*)
Western Wheatgrass (*Agropyron smithii*)
Scarlet Gilia (*Gilia aggregata*)
Utah locoweed (*Astragalus utahensis*)
Wooly Plantain (*Plantago patagonica*)
Sego Lily (*Calochortus nuttallii*)
Spreading Fleabane (*Erigeron divergens*)

2. Upper Dry Creek at Bells Canyon Entry via Cal Richardson residence. We had permission to use a private nature trail to hike to lower Bells Canyon Reservoir on Dry Creek. (Cal Richardson, himself, accompanied us and gave us a fine talk on the value of nature. In his words "You will enjoy life more, the more you learn about the earth surrounding you.") This site is on top of the lateral morains of both the Little Cottonwood and Bells Canyon glaciers. It afforded the best view of the most recent Wasatch Fault movement where the fault cuts across the morains and across Little Cottonwood Creek. A variety of foothill wildflowers were found along the trail. such as Wild Onion, Lupine, Northern Sweetvetch and Mules Ears.

Bog Orchid in bloom was found near the reservoir spring.

3. The Granite Beaver Ponds Located at Wasatch Boulevard and Little Cottonwood Creek. The aquatic vegetation of the ponds include Cattails, sedges, Yellow Willow (*Salix rigida*), Reed Canary Grass, Large Leaf Avens (*Geum macrophyllum*), Mares Tail (*Hippuris vulgaris*) and Yellow Monkeyflower.

An adjacent, botanically amazing site on the south bank of Little Cottonwood Creek is a cool, shady, Narrowleaf Cottonwood and River Birch forest. A few Mountain Alder, Box Elder and Concolor Fir trees are also found. Common shrubs include Red Osier Dogwood, Woods Rose, Poison Ivy, Oregon Grape and Western Thimbleberry. The interesting forest understory included Field Horsetail, Common Scouring Rush, False Solomons Seal and Bracken Fern. Of special interest were the Giant Helleborine (*Epipactis gigantea*) and at least two species of Bog Orchids (*Habenaria*) scattered under the trees, in bud but not in bloom.

Members are encouraged to submit original articles to the Sego Lily Newsletter. Please state if articles have been published elsewhere and need permission of the publisher. Drawings with or without articles are also welcome. The editor reserves the right to edit as needed and to select suitable articles for publication.

The Sego Lily is published nine times a year. Copyright Utah Native Plant Society, 1986. Deadline for submission of articles is the first of each month of publication.

FIELD TRIP REPORT - SEGO LILIES
by Andrew Boyack and Ty Harrison

A "quickie" field trip was conducted on June 8 to hunt for Segó lilies reported to be in full bloom. And we found them in profusion while scouting the higher Lake Bonneville shoreline from 5000 to 5400 ft elevation south of Red Butte Canyon.

The lower portion of this area is scrub oak woodland interspersed with small meadows, glens and glades. It was in these little meadows that the densest population of Segó lilies occurred averaging one plant pr 4 sq. yds. with small stands as dense as 20 plants pr sq. yd. These meadows contained, beside Segó lilies, a wide variety of wild flowers in bloom together with excellent stands of native and introduced grasses. The arrowleaf balsamroot, though past bloom, seemed to be a geographic companion of the Segó lilies.

The higher portion of the area along an old pipeline road contained a lesser number of Segó lilies and on the mountain slope proper above 5400 ft. they were very scarce. This area, however, contained many flowering plants not found lower down.

The lilies began budding as early as May 22, first blooms about June 1 and full bloom by June 4, They will probably be gone by June 20.

Some of the other plants in bloom arranged from lower to higher elevation were;

Wild Onion	Taperleaf Hawksbeard
Fleabane	Western Hawksbeard
Yarrow	Rhomboid Clarkia
Salsify	Penstemon Platyphyllus
Skeletonweed	Pale Evening Primrose
Scarlet Globemallow	Tufted Evening Primrose
White Tickweed	Sweet Vetch

Native grasses

Blue Bunch Wheatgrass
Red Threeron
Sand Dropseed
Western Wheatgrass
Mutton Grass
Needle and Thread Grass

Introduced Grasses

Japanese Brome
Cheat Grass (June Grass)
Rattlesnake Brome

The area we explored is mostly within the upper undeveloped section of the Research Park. It is hoped that the Research Park plans will leave at least a few acres of this scrub oak woodland in its native state to preserve its virgin condition.

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THE SEGO LILY

NEWSLETTER OF THE UTAH NATIVE PLANT SOCIETY

Volume 9 ; Number 6

November 1986

WHAT'S HAPPENING

Daily
Nov. 3-5
4:00

Lectures on Plant Systemics and Biogeography: Dr. C. J. Humpheries of the British Museum of Natural History will speak each day in the Wilkinson Center. For more information contact the Brigham Young University Department of Botany and Range Science.

Thursday
Nov. 13
6:30

Executive Committee Meeting: New board members are encouraged to come. Arboretum office, University of Utah.

Tuesday
Nov. 18
7:00

Logan Chapter Meeting: A Pictorial Tour of the Denver Botanical Gardens. Meet at the Logan City Building. Please confirm time and date with Wayne Padgett at 752-1311 (days). Free and open to the public.

Thursday
Nov 20
7:30

UNPS Salt Lake Chapter UFO Meeting: UNPS botanists will indentify your "Unknown Flowering Objects" at this favorite annual meeting. Feel free to bring other slides for the audience to enjoy as well. Room 323, Student Union building, University of Utah. Free and open to the public.

Thursday
Nov.28

Happy Thanksgiving! Many of the plants in your Thanksgiving feast are natives!

T.B.A.
(Dec.)

Logan Chapter Meeting: Pot Luck Dinner The details haven't been finalized yet, but this should be worth looking forward to! (Call Wayne Padgett at 752-1311).

Mon_Thur
Beg Jan. 5
7:15-9:45

Introduction to Dendrochronology: This evening class is being offered during Spring quarter, 1987. Call 581-7087 for more information.

Wednesday
Jan. 8
1987

Annual Board of Directors Meeting. All board members should plan to attend. Further details to be announced. Call Dave Okelberry (968-6190) for more information.

Our annual Uinta field trip was conducted July 19 covering the Mirror Lake highway from Kamas to Bald Mountain. Dave Wallace was our excellent guide.

Our first stop was in the lower montane zone, transition from sagebrush to pine. Here we found Wild Geraniums, Cinquefoil and Buckwheat in profusion. Isolated plants of Oregon Checkermallow and Mountain Thermopsis were also found.

At a stop in the transition from mid to upper montane good stands of Northern Bedstraw were found as well as scattered stands of Scarlet Gilia, James Chickweed and Parrotbeak Lousewort.

In the subalpine zone from Lily Lake to Bald Mountain were veritable fields of Glacier Lily, Marsh Marigold, Spring Beauty and Wild Onion. Marshy areas contained Bog Orchid, Shooting Star and Elephanthead as well as a small stand of Mountain Death Camas.

A partial list of the many flowers in bloom follows:

ASTERACEAE

Yarrow	<u>Achillea millefolium</u>
Heartleaved Arnica	<u>Arnica cordifolia</u>
Groundsel	<u>Senecio sp</u>
Goldeneye	<u>Viguiera multiflora</u>
Mulsear	<u>Wyethia amplexicaulis</u>

BORAGINACEAE

Western Tickweed	<u>Hackelia floriunda</u>
Mountain Bluebells	<u>Mertensia ciliata</u>

BRASSICACEAE

Whitlowgrass	<u>Draba cana</u>
--------------	-------------------

CARYOPHYLLACEAE

Ballhead Sandwort	<u>Arenia congesta</u>
Moss Campion	<u>Silene acaulis</u>
Douglas Campion	<u>Silene douglasii</u>
Starry Chickweed	<u>Stellaria jamesiana</u>

GERANIACEAE

Richardson Geranium	<u>Geranium richardsonii</u>
Sticky Geranium	<u>Geranium viscosissimum</u>

HYDROPHYLLACEAE

Spearleaf Scorpionweed	<u>Phacelia hastata</u>
------------------------	-------------------------

LILIACEAE

Wild Onion	<u>Allium sp</u>
Mountain Death Camas	<u>Zigadenus elegans</u>

MALVACEAE	Oregon Checkermallow	<u>Sidalcea oregana</u>
ORCHIDACEAE	Bog Orchid	<u>Habenaria dilatata</u>
POLEMONIACEAE	Scarlet Gilia	<u>Gilia aggregata</u>
	Sky Pilot	<u>Polemonium viscosum</u>
POLYGONACEAE	Wyeth Buckwheat	<u>Eriogonum Heracleoides</u>
PORTULACACEAE	Spring Beauty	<u>Claytonia lanceolata</u>
PRIMULACEAE	Shooting Star	<u>Dodecatheon pulchellum</u>
RANUNCULACEAE	Colorado Columbine	<u>Aquilegia caerulea</u>
	Marsh Marigold	<u>Caltha leptosepala</u>
RUBIACEAE	Northern Bedstraw	<u>Galium boreale</u>
SCROPHULARIACEAE	Indian Paintbrush	<u>Castilleja sp</u>
	Elephanthead Lousewort	<u>Pedicularis groenlandica</u>
	Parrotbeak Lousewort	<u>Pedicularis racemosa</u>
	Whipple Penstemon	<u>Penstemon whippleanus</u>

Announcements

Freeway Beautification Project: Two sites are being set aside by the State for experimental UNPS plots (seed provided by NPI). Others are providing the labor for ground preparation, but volunteers may be needed to help with planting. Contact Dave Okelberry at 968-6190.

Conservation Committee vacancy: This could be a rewarding activity for environmentally oriented members who want to do something to help preserve our native vegetation. Call Dave Wallace at 466-2719 (evenings) or Tony Frates at 532-1922 (days).

Albion Basin was the object of a summer field trip on August 2. Despite the rough road into the Basin we had an excellent turnout. Elizabeth Neese and Ron Cass did a superb job conducting the tour.

Two different types of habitat were examined. One was a moderately steep South facing rocky slope on which Ivesia, White Gilia and Indian Paintbrush (Castilleja) were found in profusion with scattered patches of Potentilla and Blue Flax.

The second habitat was a gentle North facing slope with scattered stands of Alpine Fir and Spruce interspersed with marsh. Here the open spaces were literally covered with fields of flowers in various colors, the white of Polemonium and Columnbine (Aquilegia caerulea), red of Castilleja and blue of Wild Forget-me-not (Hackelia micrantha).

A great many species of plants were found including such shy retiring plants as Anemone, Miterwort (Mitella) and Alumroot (Huchera rebescens).

It is interesting to note that although a few isolated plants were similar to those in the High Uintahs, which we visited two weeks earlier, the showy stands of flowers that typically carpet the ground during high elevation "springtime" were entirely different in the Albion Basin.

The group led by Liz Neese took notes as we went, so we are providing this list for all to use (both groups did not see all the same plants). Perhaps eventually a complete checklist for this popular area can be compiled.

Not all the plants listed were flowering, and no attempt was made to place the list in any order. Plants are listed as they were encountered (readers may enjoy mentally recreating the route as they follow the list). Although the list is broken down by area, it is not comprehensive; plants were not noted if they had been identified previously. Common names are from Flora of the Central Wasatch Front, L. Arnow, et al.

Campground area (includes wet and shady environments):

<u>Potentilla glandulosa</u>	Gland Cinquefoil
<u>Aquilegia caerulea</u>	Colorado Columbine
<u>Sambucus racemosa</u>	Red-berried Elder
<u>Polemonium foliosissimum</u>	Leafy Jacobs Ladder
<u>Picea engelmannii</u>	Engelmann Spruce
<u>Hackelia floribunda</u>	Western Tickweed
<u>Swertia radiata</u>	Green Gentian
<u>Geranium richardsonii</u>	Richardson Geranium
<u>Valeriana edulis</u>	Edible Valerian
<u>Epilobium angustifolium</u>	Fireweed
<u>Castelea rhexifolia</u>	Splitleaf Indian Paintbrush
<u>Senecio streptanthifolius</u>	(Butterweed)
<u>Penstemon whippleanus</u>	Whipple Penstemon
<u>Potentilla gracilis</u>	Soft Cinquefoil
<u>Geranium viscosissimum</u>	Sticky Geranium
<u>Veronica wormskjoldii</u>	Alpine Speedwell
<u>Epilobium alpinum</u>	Alpine Willowherb
<u>Anenome multifida</u>	Globeflower
<u>Erysimum asparum</u>	Western Wallflower
<u>Rudbeckia occidentalis</u>	Western Coneflower
<u>Lupinus argenteus</u>	Silvery Lupine
<u>Mertensia ciliata</u>	Mountain Bluebells
<u>Heracleum sphondylium</u>	Cow Parship
<u>Veratrum californicum</u>	False Hellebore
<u>Ranunculus adoneus</u>	Alpine Buttercup
<u>Carex sp</u>	Sedge
<u>Juncus sp</u>	Rush
<u>Epilobium ciliatum</u>	Northern Willowherb
<u>Saxifraga odontoloma</u>	Brook Saxifrage
<u>Limum kingii</u>	King's Flax
<u>Hackelia micrantha</u>	Jessie's Tickweed
<u>Ranunculis jovis</u>	Utah Buttercup
<u>Machaeranthera kingii</u>	King's Tansyaster
<u>Cystopteris fragilis</u>	Brittle Bladder Fern
<u>Heuchera rubescens</u>	Red Alumroot
<u>Asplenium viride</u>	Green Spleenwort
<u>Aconitum columbianum</u>	Columbia Monkshood
<u>Cardamine cordifolia</u>	Heartleaf Bittercress
<u>Dodecathion pulchellum</u>	Beautiful Shooting Star
<u>Habenaria dilatata</u>	White Bog Orchid
<u>Pedicularis groenlandica</u>	Elephanthead Lousewort
<u>Parnassia fimbriata</u>	Rocky Mountain Parnassia
<u>Valeriana acutiloba</u>	Sharpleaf Valerian
<u>Stellaria jamesiana</u>	Tuber Starwort, James Chickweed
<u>Salix sp</u>	Willow
<u>Ribes montigenum</u>	Gooseberry Currant
<u>Abies lasiocarpa</u>	Subalpine Fir
<u>Polemonium pulcherrimum</u>	Skunkleaf, Pretty Jacobs Ladder

Open hillside area (includes some wet habitat)

<u>Thalictrum fendleri</u>	Fendler Meadowrue
<u>Phleum alpinum</u>	Alpine Timothy
<u>Artemesia ludoviciana</u>	Louisiana Sagewort, White Sage
<u>Lonicera involucrata</u>	Bearberry Honeysuckle
<u>Orthocarpus tolmiei</u>	Tolmie Owl Clover
<u>Linanthus nuttallii</u>	Nuttall's Flaxflower
<u>Cirsium eatonii</u>	Eaton Thistle
<u>Helianthella uniflora</u>	Little Sunflower
<u>Ivesia gordonii</u>	Gordon Ivesi
<u>Achillea millefolium</u>	Common Yarrow
<u>Castilleja applegatei</u>	Sticky Indian Paintbrush
<u>Eriogonum heracleoides</u>	Wyeth Buckwheat
<u>Erigeron speciosus</u>	Showy Fleabane
<u>Eriogonum umbellatum</u>	Sulfurflower
<u>Silene douglasii</u>	Douglas Campion
<u>Gilia aggregata</u>	Scarlet Gilia
<u>Monardella odoratissima</u>	Cloverhead Horsemint
<u>Lesquerella utahensis</u>	Utah bladderpod
<u>Mimulus tilingii</u>	Tiling Monkeyflower
<u>Mimulus moschatus</u>	Musk Monkeyflower
<u>Pachistima myrsinites</u>	Mountain Lover
<u>Juniperus communis</u>	Common Mountain Juniper
<u>Penstemon humilis</u>	Low Penstemon
<u>Penstemon cyananthus</u>	Wasatch Penstemon
<u>Phacelia hastata</u>	Spearleaf Scorpionweed
<u>Symphoricarpos oreophilus</u>	Mountain Snowberry
<u>Amalanchier alnifolia</u>	Saskatoon Serviceberry
<u>Happlopappus macronema</u>	Whitestem Goldenweed
<u>Aster perelegans</u>	Nuttall Aster

Our Annual Native Plant Sale was held at Millcreek Gardens again this year. This event is our most important fund raising activity, so it was gratifying to see things go so well. Excellent preparation, a large selection of plants and plenty of helpful volunteers made it an unqualified success. Congratulations and thanks to everyone involved!

The good supply meant several volunteers took unsold plants home to care for until the next sale. While these plants will be mulched or planted over the winter, it would be much better to plant them in a permanent location. Since this is probably the very best time of year to do this planting, we are making them available to for members who may have missed the sale. The following people will gladly make you a deal if you want some of their plants (most are "gallon" size).

NAME:	Dave Okelberry	Pam Poulson
PHONE:	968-6190	486-2131
	594-4180 (work)	581-5322 (work)
PLANTS:	Royal Penstemon	Joshua Tree
	Sugarloaf Aster	Purpletorch Cactus
	Tansy Aster	Spineless Beavertail Cactus
	Bigtooth Maple	Utah Agave
	Mountain Ash	Wild Strawberry
	Cliff Jamesia	Shadscale Saltbush
	Thimbleberry (two var.)	Bristlecone Pine
	Wild Strawberry	Lodgepole Pine
	Dwarf Rabbitbrush	Common Juniper
	Redosier Dogwood	Cliff Jamesia
	Redberry Juniper	Mormon Tea
	Antelope Bitterbrush	Serviceberry
	River Birch	Goldenweed (<u>Happlopappus</u>)
	Eastern Bergamont (mint)	

NAME: Dave Wallace
PHONE: 466-2719
532-1522 (work)

Lisa McClanahan
487-0094
584-1208 (work)

PLANTS: Blackeyed Susan
Missouri Iris
Shrubby Potentilla
Blue Elderberry
Gambel Oak
Burning Bush
Sulphur Flower
Thimbleberry
Foxglove

Western Thimbleberry
Penstemon barbatus
Columbine
Oregon Grape

NAME: Cheryl Parsons
PHONE: 485-7728
594-6019 (work)

PLANTS: Dwarf Rabbitbrush
Dwarf Mountain Lover
Wild Geranium
Columbine
Apache Plume
Bergamont
Bee Balm

The U.S. Senate passed a bill to establish the Great Basin National Park within days of our Sept. 25 UNPS meeting. Dr. Robert Waite presented features of the park and political pressuring that had gotten the bill before congress.

Geological highpoints of the area are Wheeler Peak with its glacier and lakes, Mt. Washington, Lincoln Canyon, Lexington Arch and Lehman Caves. Members of UNPS will probably associate the park with a 5000 year-old Bristlecone Pine and a large Mountain Mahogany. Archaeological and historical sites are also of human interest.

Although the park will be in Nevada on Utah's western border, Dr. Waite estimates 500,000 people a year would visit the park, and many of these would pass through Salt Lake City. Beyond the economic value to Utah, its relative closeness also offers diverse ecosystems for study and enjoyment. From desert to alpine, rattlesnake to big horn sheep, cactus to Bristlecone pine, prehistoric Indian sites to abandoned ranches and mining operations, Great Basin National Park will have something for everyone when it is finally approved and in operation.

EDITORS NOTE:

Congress approved a compromise bill creating the Great Basin National Park, and President Reagan signed it into law as this newsletter was going to the printer. This 76,000 acre preserve becomes the closest national park to Salt Lake City.

The annual business meeting of the organization was held October 2 in the Utah Power and Light building. The bylaws of the Society require this meeting to receive reports from the officers and committees, and to elect members of the Board of Directors.

Most of the reports concerned topics UNPS members are probably familiar with, such as field trips, the plant sale, finances, and so forth (look for details in coming newsletters). However, a new program to assist the recovery of the Bearclaw Poppy was announced.

The endangered Bearclaw Poppy has been the object of much concern, as readers of the Sego Lily are aware. The plan announced by Dick Page, Chairman of the Board, is a proposal to area universities to encourage a graduate student study of the reproduction, growth and habitat of the Bearclaw Poppy. The UNPS will provide financial support, and there are possibilities for supplemental funding from governmental organizations.

The Board members for next year were recommended by the Nominating Committee and approved by the members as listed below. These Board members are eligible to serve as committee chairmen or state officers:

Duane Atwood	Andrew Boyack
Sherel Goodrich	Sherrie Harbrecht
Jennifer Harrington	Lisa McClanahan
Chad Milne	Kathy Mutz
Debbie Noel	Dave Okelberry
Dick Page	Cheryl Parsons
Pam Poulson	John Schultz
Leila Schultz	Kay Thorne
David Wallace	Janet Williams

All wasn't business, however. Entertainment was provided by a multimedia slide show, and members brought their favorite native plant food dishes for a pot luck dinner.

WELCOME NEW UNPS MEMBERS

Chuck and Kittie Wright	Centerville
Martha Hayden	Salt Lake City
Frank Erickson	Peoa
Lynda Miner	Bountiful
Joseph E. Leigh	Kearns
Adalee Muse	Midway
Margy Halpin	Salt Lake City
Joan Livingston	Bountiful
Ann O'Connell	Salt Lake City
Barton Johnson	American Fork
Cheryl Parsons	Salt Lake City
Sherry Childers	Salt Lake City
Lisa McClanahan	Salt Lake City
Patricia S. Bernstorm	Salt Lake City
Donald Lee Anderson	Logan
Rebecca Rusho	Salt Lake City

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					or greater

Please enclose check made payable to Utah Native Plant Society and send to:

Pam Poulsen, Treasurer, 3631 South Carolyn Street, Salt Lake City, Utah 84106



THE SEGO LILY

NEWSLETTER OF THE UTAH NATIVE PLANT SOCIETY

Volume 9; Number 7

December 1986

WHAT'S HAPPENING

Beginning
Jan. 5

Evening Classes at the University of Utah: Winter quarter courses of interest include Advanced Native Plant Identification, Winter Botany, and Introduction to Dendrochronology. Call the Division of Continuing Education at 581-6461 for more information.

Wednesday
Jan. 8
7:00

Annual Board of Directors Meeting. All board members should plan to attend. The agenda includes reviewing 1986 committee reports, installing the 1987 Board, budget items, etc. Call Dave Okelberry (968-6190) for more information.

Thursday
Jan. 22
7:30

Salt Lake Chapter Meeting: "Woods rose by any other name..." Pam Poulson's entertaining presentation takes the mystery out of plant names and botanical terms. Room 323, Student Union building, University of Utah. Free and open to the public.

Saturday
Jan. 24
9:00 AM

Vegetative Propagation Workshop: Learn selection, cutting and rooting techniques and care of newly rooted woody plants at this State Arboretum of Utah workshop. Call the Arboretum at 581-5322 for more information. (Register by Dec. 31, Small fee required.)

Saturday
Feb. 11
9:00 AM

Seed Propagation Workshop: Learn selection and buying of seed, stratification and starting at this State Arboretum of Utah workshop. Call the Arboretum at 581-5322 for more information. (Register by Jan. 31, Small fee required.)

Saturday
Feb. 21
9:00 AM

Playing With Herbs: (This State Arboretum of Utah workshop is co-sponsored by Pioneer Trail State Park) Learn how to use herbs in cooking. Make Fennel Bread and Tabouli Salad while sipping herb teas. Call the Arboretum at 581-5322 for more information. (Register by Jan. 31, Participants must supply some cooking utensils. Small fee required.)

Thursday
Feb. 27
7:30

Salt Lake Chapter Meeting: Dr. Elisabeth Neese will review Utah's rare and endangered plants and the factors which contribute to their scarcity. Room 323, Student Union Building, University of Utah. Free and open to the Public.

Announcements

Conservation Committee vacancy: This could be a rewarding activity for environmentally oriented members who want to do something to help preserve our native flora. Call Dave Wallace at 466-2719 (evenings) or Tony Frates at 532-1922 (days).

A Utah Flora: BYU is making a prepublication offer of \$32 for this comprehensive treatment of Utah's vascular plants (authors Welsh, Higgins and Goodrich). Members should have received a flier in the mail, but you can also call Dave Wallace at 466-2719 for information on ordering or write directly to:

Brigham Young University
Great Basin Naturalist
290 M. L. Bean Life Science Museum
Provo, Utah 84602

Uinta Basin Flora: The Forest Service has published a very good key for the Uinta Basin area, including Strawberry Valley on the west and Moffat and Rio Blanco Counties in Colorado on the east as well as most of the Uinta Mountains. This book is intended as a field manual, and authors Sherel Goodrich and Elizabeth Neese (both UNPS members) have written the key for ease of use in these conditions. Information given for each species includes common names, elevation limits, characteristics, habitat, abundance, distribution within the basin, and helpful notes about taxonomic and nomenclatural problems. Copies can be obtained free of charge from the Forest Service or Bureau of Land Management, and the UNPS also has a few on hand (call Dave Wallace at 466-2719).

Bearclaw Poppy Photographs: The newly formed Education Committee needs photos of this endangered plant, its habitat, threats, etc. for use in preparing an educational show. Please phone Janet Williams at 487-2017 or mail copies of your favorite slides to her at 1822 E. 2100 S., SLC, UT 84106

Penstemon Society Conference: The American Penstemon Society (a horticultural organization) will be having their annual conference in New Mexico with the intention of attracting enough people to form a Southwestern regional chapter. The three day event is scheduled for June 20 - 23 at St. John's College in Santa Fe. Penstemon enthusiasts are invited to join the society and attend the conference. Send \$7.50 dues to Mr. Orville Freeman, Box 33, Plymouth, Vermont 05056. Contact Ellen Wilde (505) 982-1406, 110 Calle Pinonero, Santa Fe, N.M. 87505 for conference information. The cost is reasonable, but register by March 15. Pam Poulson at the Arboretum (561-5322) can answer some questions.

In June of 1986, the U.S. Forest Service's regional office based in Ogden (responsible for Forest Service lands in Utah, Nevada, a large portion of Idaho, the Bridger-Teton Forest in Wyoming and the east slope of the Sierras in California) was considering the termination of the regional botanist position in view of Graham-Rudman budget cuts. Thanks to public and legislative pressures, the regional office decided by early October to retain the position.

Dr. Duane Atwood (UNPS's first president and co-chairman of the rare and endangered plants committee for the past several years) has been the regional botanist since its creation. From 1978 to 1981 he was responsible for Utah and Nevada and since 1981 his responsibility shifted to the entire region. During this eight year period substantial field work has been undertaken including surveys for listed and sensitive plant species involving 10,000 to 20,000 acres per year.

In conjunction with project clearance and coordination with other agencies, the position has been vital to the overall conservation of Utah's flora. From a purely scientific standpoint, the position has been significant: 800-1200 plant collections per year have been made by the regional botanist.

The Forest Service's sensitive plant species policy specifies that states be assisted in conserving their endemic species. In a state such as Utah which has had no state government botanist position and really no state legislation of any kind directed to the protection of rare plant species, the position has extended far beyond federal lands.

At about the same time pressure was being placed by the public (including UNPS) opposing the elimination of the position, the House Subcommittee on Interior Appropriations directed the Forest Service and BLM to hire additional botanists and to implement conservation programs for endangered plants. Later when the issue was being considered by the Senate, congressional intention was clear: hire more botanists. This background coupled with the apparent fact that the region could not possibly carry out its own policies without the position (or without a botanist or botanists on staff) culminated with the decision to keep the position.

The regional botanist will be relocated from the Uintah National Forest office in Provo to the regional office in Ogden and will report to the region's director of wildlife management.

I am very happy to announce that the Cache Valley Chapter continues to grow monthly and am encouraged by our local members that have volunteered to help out this year. Madeline Mazuraki is in charge of creating and mailing postcards while Swede Dahl and Ann Williams are distributing posters announcing our monthly chapter meetings. Several folks have offered to bring refreshments and/or to take notes at our meetings, while others will be helping to contact potential speakers. All of this input is greatly needed and very much appreciated.

In September, I sent out questionnaires to our chapter members asking for input into our 1986-87 program and received the following suggestions for speaker topics, field trips, and workshops:

Topics

Landscaping with native plants, Other conservation organizations, People involved in protecting native plants, and Focus on interesting plant families.

Field Trips

Field identification of local plants and plant communities, Native plant gardens, Bear River Marsh, Mollens Hollow (candidate research natural area), and Geology and plants.

Workshops

Nature photography, Landscaping with native plants, Cooking and/or weaving with native plants, The Endangered Species Act, and Plant ID and Taxonomy for the beginner.

All of the above suggestions are excellent and we will do what we can to fulfill these requests. Ross Murdock, a student of Vocational Horticulture at USU, was our November speaker. He offered a terrific slide presentation on the Denver Botanic Garden where he did an internship last summer. The Denver gardens offer a chance to see various native plant communities of the United States without venturing off the grounds-with desert ecosystems adjacent to more mesic or wetland communities. Dave Livermore of The Nature Conservancy has already accepted our invitation to speak in late winter or early spring and will bring us up-to-date on their new Utah operation. Dick Hildrith of the Utah Arboretum will be speaking in February about the plans for the arboretum. I hope to lead a field trip in the spring somewhere in Cache Valley (perhaps the Bear River Marsh) to talk about some common riparian and wetland plants and help the novice learn some of the different willows of the area. I am currently trying to arrange for a photography student at Utah State University to show us all how we can improve on our photographic skills. We will, of course, continue our annual Primula maguirei fieldtrip and survey and may repeat our Tony Grove fieldtrip or possibly go to another area up Logan Canyon.

Again, thanks to all of those that responded to the September questionnaire and to those that have volunteered their services.

The California Native Plant Society sponsored a tremendously successful Rare and Endangered Plant Conference at Sacramento early in November, and several Utah Native Plant Society members were able to attend. It was a great opportunity to learn, and we made the most of it!

The keynote address on extinction by Dr. Paul Erlich set the tone for the rest of the conference by stressing the effects of habitat loss and the pressures of an ever increasing population. Most of the four day conference consisted of concurrent sessions, which often made it difficult to decide which event to attend. Topics included legal aspects of plant conservation, management, case studies, assessment techniques, mitigation, ecology and population dynamics, monitoring, systematics, land use planning, education, and many other subjects.

Another feature of the conference was the poster session where authors could report their work informally. The UNPS was represented by an excellent display featuring the threatened Maquire primrose. This quality exhibit was prepared by Kate Dwire of the Logan chapter. Photographs of the primrose and its habitat helped make it a popular entry. (The poster is currently available for display from the Logan chapter.)

California can be a good example for us. Our Utah group was impressed by the emphasis on rare plants and conservation, and on the size and effectiveness of the CNPS. For example, California has state rare plant legislation, the Department of Fish and Game maintains a Natural Diversity Data Base, and the 800 people attending the conference are three times the entire membership of the UNPS. But instead of creating feelings of inadequacy, it helped us realize how fortunate we are. The strength of California laws and the emphasis on rare plants is a reflection of the environmental damage that already has been done. Let's keep Utah from following California's destructive example of the past by learning from their admirable efforts of the present.


(UNPS members included Duane Atwood, Kate Dwire, Larry England, Betsy Neely, Elisabeth Neese, and Dave Wallace.)

Note: Writing this article aroused my curiosity! The information I found shows Utah compares very well to California when geographic area is considered. The number of Utah's listed plants is a testimony to the success of our conservation efforts in spite of a lack of support from the state government.

	<u>Utah</u>	<u>California</u>	<u>Factor</u>
Population:	1.6 million	26.4 million	16.5
Area:	85,000 sq mi	159,000 sq mi	1.9
Native plants:			
Species:	2800	5000	1.9
Total taxa:	2900	8500	2.2
Listed:	11	24	2.2

(1985 population data; plant numbers from Welsh, Jepson Herbarium and California Fish and Game estimates, and the list of threatened and endangered plants in the 1985 Federal Register.)

California is renowned for the variety of its flora, but Utah's rich diversity has resulted in just as many native species (for our size). We can enjoy an unsurpassed botanical environment while there is still time to protect it from the impact of unrestrained development and population growth.



MERRY CHRISTMAS
AND A
HAPPY NEW YEAR !!

WELCOME NEW UNPS MEMBERS

Geri Sullivan	Logan
Rick Lasco	Logan
Robert Bayn	Logan
Lynn Firestone	Logan
Tamara Stoor	Logan

12 percent of UNPS members are from the Logan area!

ADVANCED NATIVE PLANT IDENTIFICATION
State Arboretum of Utah and University of Utah

Winter Quarter, 1987
Tuesday Evening, 7:15 - 9:30
January 6 through March 10, 1987
Biology Room 305

January 6	Dr. Charles Mullstein	Evolution of the Utah Flora
January 13	Pamela Poulson	Liliaceae
January 20	Dr. Howard Stutz	<u>Atriplex</u>
January 27	Wayne Padget	Wetland Communities
February 3	Frank Smith	Brassicaceae
February 10	Dr. Patrick Collins	Polemoniaceae
February 17	Sherel Goodrich	Apiaceae
February 24	Dr. Richard Shaw	Alpine Communities
March 3	Dr. Del Weins	Pollination Ecology
March 10	Dr. Stanley Welsh	Asteraceae (at BYU Herbarium)

For Information Contact Kathy Mutz; Office: 538-5340, Home: 544-0688

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