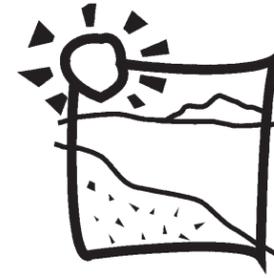




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FRIENDS of Great Salt Lake

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801-583-5593

Volume 8 Number 3

Spring 2002

Yes! I want to join FRIENDS of Great Salt Lake

Enclosed is a check or money order for my annual membership fee in the amount of: (check one)

- \$10 Student "Brine Fly"
 \$10 Senior "American White Pelican"
 (62 years of age or older)
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Contributing Memberships:

- \$31-50 "Brine Shrimp"
 \$51-100 "Eared Grebe"
 \$101-250 "Antelope"
 \$251-499 "American Bald Eagle"
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Name: _____

Address: _____

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Yes! I would like to volunteer for FRIENDS : _____

Remember, all membership donations are tax deductible.

Please consider making a donation to the following education efforts:

The Lake Affect: Living Together Along the Shores of Something Great
 2001-2002 season of the acclaimed slide-based program about Great Salt Lake.

Project SLICE - our 4th grade curriculum on Great Salt Lake, includes Speakers Network, Teacher Training Institute, Lakeside Learning Field Trip, and 10 units of study.

Be a Field Trip Sponsor
 We are still looking for class sponsors for the Lakeside Learning Field Trips. Each trip cost is \$400.

For more information on these programs, contact Bruce Thompson at 801-467-3240

Please make checks payable to:
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Table of Contents

President's Message	3
Organizational Statement	4
4th Annual Great Salt Lake Bird Festival	4
2002 Great Salt Lake Issues Forum - Overview	5
2002 Great Salt Lake Issues Forum - Keynote Speaker	5
2002 Great Salt Lake Issues Forum - Field Trips	6
2002 Great Salt Lake Issues Forum - Call for Posters	6
2002 Great Salt Lake Issues Forum - Program Schedule	7
2002 Great Salt Lake Issues Forum - Friend of the Lake Award	7
Tooele Valley Special Area Management Plan (SAMP) <i>By Cathryn Collis and Joan Degiorgio</i>	8
Fostering Conservation of Functional Landscapes - <i>The Great Salt Lake Project Goes to Peru</i> <i>By Joel Peterson</i>	9
Utah Awakenings <i>By Sally Graves Jackson</i>	10
Nesting Eagles Field Trip <i>By Margot C. Kadesch</i>	13
Member Directory	14

Spring 2002 Calendar of Events

April 19	Friday	2002 Great Salt Lake Issues Forum (See p. 5)
April 20	Saturday	Great Salt Lake Issues Forum Field Trips (See p. 6)
May 2	Thursday	Board Meeting 7PM-Alta Club
May 18-25		4th Annual Great Salt Lake Bird Festival (See p. 4)
May 28	Tuesday	General Meeting 7PM-Panel Discussion on Jordan River Shallow Aquifer Pumping (See p. 12)
June 25	Tuesday	Field Trip to the Farmington Bay Wildlife Management Area 6PM to dusk.

Watch the local papers for announcements of speakers and topics at our General Meetings, or call our hot-line at 801-583-5593, and press 1 for monthly activities. NOTE: General Meetings are held at the Sugarhouse Garden Center, located in the northeast corner of Sugarhouse Park, 2100 South 1300 East in Salt Lake City. Board Meetings are held at the Salt Lake County Complex on State Street and 2100 South in Salt Lake City. Room S3009, or as otherwise noted.

Special Thanks

**To the Tides Foundation for their generous support,
the Great Salt Lake Yacht Club for their sponsorship of a 4th grade Lakeside
Learning Program and all of you who have made donations to the legal fund
for the Transit First/Legacy Highway lawsuit campaign.**

Cover Photo by Don Paul

President's Message:

What's Democracy Got to Do With It?

“The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired, in value.”

Theodore Roosevelt

On March 20th, attorneys for Utahns for Better Transportation, Mayor Rocky Anderson and the Sierra Club argued their case against the Legacy Highway project before the 10th Circuit Court of Appeals in Denver.

The principle points of that argument were that the federal and state agencies supporting and approving the Legacy Highway project violated federal environmental laws including the Clean Water Act, the Clean Air Act, the National Environmental Policy Act, and the Federal Transportation Act.

On March 20th, the first day of spring, highway opponents continued to exercise their constitutional rights to enforce federal environmental laws by using judicial procedures before neutral federal judges. This constitutional right is a provision of our democratically-elected United States Congress and signed into law by democratically-elected United States Presidents. And exercising those rights felt good.

Throughout this long and arduous process, those of us opposed to the highway have valued the environmental laws that were created by Congress in the 1970s as tools to pursue the principles of the Public Trust Doctrine. The Public Trust Doctrine is the legal foundation for citizens' right to clean air, clean water and a healthy environment. When those life sustaining values are jeopardized, it is our collective responsibility to participate in the legal process to whatever level necessary for redress of these public trust violations.

And as we look ahead to the future of this campaign, we all realize that winning the lawsuit on appeal is only a part of the whole. The sustained commitment to protect the Great Salt Lake Ecosystem, and to preserve the quality of life for future generations should be underpinned by the Public Trust Doctrine.

The first Earth Day in 1970 was a catalyst for congressional environmental action through a series of laws.

- National Environmental Policy Act (NEPA) (1970)
- Clean Air Act (1970)
- Clean Water Act (1972)
- Coastal Zone Management Act (1972)
- Endangered Species Act (1973)
- Migratory Bird Treaty Act (1973)
- Federal Insecticide, Fungicide and Rodenticide Act (1975)
- Resource Conservation and Recovery Act (1976)
- Toxic Substance Control Act (1977)
- Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)(1980)

Although these laws are on the books, they aren't always enforced. That part is often left to us.

Yours in saline,

Lynn de Freitas

Lake Fact:

How many brine flies have been estimated to exist at Great Salt Lake during an average summer?

FRIENDS of Great Salt Lake

FRIENDS of Great Salt Lake was founded in 1994 with a guiding mission to preserve and protect the Great Salt Lake Ecosystem and to increase public awareness and appreciation of the lake through education, research, and advocacy.

Led by a highly active Board of Directors and an Advisory Board consisting of professionals in the scientific, political, literary, and broadcast communities, FRIENDS holds monthly meetings that feature guest speakers and presentations focusing on subjects and issues related to the Great Salt Lake. The organization received special recognition for its efforts in 1998, when it was awarded the Conservation Achievement Award by the Utah Chapter of the Wildlife Society.

FRIENDS has organized and sponsored an array of materials, events, and activities in pursuit of its mission. The quarterly newsletter includes information on important meetings and activities, articles pertaining to lake ecology, issues updates, maps, data tables, photographs, and future events notices.

We also sponsor a biennial Great Salt Lake Issues Forum, which provides a gathering for local citizens who care about Great Salt Lake. The goal of the Forum is to encourage

constructive dialogue about the future of the lake's ecosystem and its resources, and to illuminate the complexities involved in research, management and planning for the lake.

In 1997, FRIENDS hired its first education director and initiated a major regional education project designed to enhance both the knowledge about and care for the future of Great Salt Lake. With that goal, a live-narrative slideshow program, entitled *The Lake Affect: Living Together Along the Shores of Something Great*, was born. Audiences have included Envision Utah, the Utah Department of Natural Resources, and the Salt Lake Olympic Committee's Environmental Advisory Committee, along with numerous school and civic groups.

In an effort to reach even more citizens with its message about Great Salt Lake, FRIENDS has produced a video version of *The Lake Affect*. With this video and the Project SLICE fourth grade Great Salt Lake curriculum, we hope to achieve a positive, long-lasting impact on the future of Great Salt Lake and those who dwell upon its shores. 🐦

The 4th Annual Great Salt Lake Bird Festival, May 18-25, 2002.



The keynote speaker for the event is Kenn Kaufman. A variety of activities including bus and van tours, workshops, exhibits, food and art at the Davis County Fair Park in Farmington, Utah are planned for the entire week.

Don't miss the Fun Run/Walk and Bike Ride at Antelope Island State Park at 7:30am on May 18th. Proceeds will benefit Shorebird Sister Schools. Here's your chance to support this wonderful community effort that promotes public awareness and appreciation of our Great Salt Lake. See you there!
For more information visit the website: www.greatsaltlakebirdfest.com

2002 GREAT SALT LAKE ISSUES FORUM

GREAT SALT LAKE: A COMPLEX AND CHANGING SYSTEM

FRIENDS of Great Salt Lake's 2002 Great Salt Lake Issues Forum will be held at the Wyndham Hotel in downtown Salt Lake City (215 W. S. Temple) on April 19, 2002. The title of this year's forum is "Great Salt Lake: A Complex and Changing System."

The forum will examine the Great Salt Lake Ecosystem through space and time. The program will begin with a geologic perspective in which speakers will describe the geomorphology and paleoclimate of Great Salt Lake and its geologic predecessor, Lake Bonneville. The lake's current influence on local climate will then be examined and the potential effects of climate change discussed.

The second session of the forum will look at the ecology of Great Salt Lake ranging from the single-celled organisms at the bottom of the lake's intricate food web to the migratory and resident bird species near its top. The lake's top predator, *Homo sapiens*, will provide a segue into our keynote address and the human-oriented aspects of the lake ecosystem.

Our keynote address will focus on the lessons learned from the environmental trials, tribulations, and victories affecting Great Salt Lake's saline sister on the opposite side of the Great Basin, California's Mono Lake. Martha Davis from the Mono Lake Committee will be the speaker.

After lunch, the third session of the day will begin with an examination of the Native American prehistory and archaeology of the Great Salt Lake Ecosystem. The final speakers in this session will address Great Salt Lake in historic times, from the early exploits of explorers and fur trappers to the era of the Mormon Pioneers.

The fourth and final session of this year's Issues Forum will continue to address the human side of the equation with an examination of Great Salt Lake in the present and future. Speakers will discuss economic aspects of the lake ecosystem as well as current trends and planning efforts likely to affect the shores of its tomorrow.

A poster session presenting information relevant to the theme of the forum is scheduled throughout the day.

Field trips on and around Great Salt Lake are scheduled on Saturday, April 20th. Registration is required with an additional charge of \$10.

FRIENDS of Great Salt Lake's first Friend of the Lake award will be presented.

KEYNOTE SPEAKER - MARTHA DAVIS

Ms. Martha Davis is the Manager of Strategic Policy Development and oversees the Water Resources Dept. at the Inland Empire Utilities Agency (IEUA), a municipal water district serving 700,000 people in the western portion of San Bernardino County. IEUA provides regional sewage treatment services, distributes imported water and recycled water supplies, and provides other utility services for the Chino Basin.

Previously, Ms. Davis served as the Executive Director for Californians and the Land (1998-2000) and for the Mono Lake Committee (1984-1996). Under her leadership, the Mono Lake campaign culminated in a unanimous landmark public trust decision by the State Water Resources Control Board to protect Mono Lake.

Ms. Davis graduated from Stanford University cum laude with a degree in human biology and received her master's degree from the Yale School of Forestry and Environmental Studies.

Since 1998, she has served as the Co-Chair of the CalFed Watershed Workgroup. Ms. Davis is currently a board member for the Mono Lake Committee and the WaterReuse Foundation, and is a member of the Manzanar National Historic Site Advisory Commission. In addition, Ms. Davis serves as a member of the California Bulletin 160 Advisory Committee and of the CALFED Bay Delta Public Advisory Committee.

FIELD TRIPS

Field trips are on Saturday, April 20th. There is a \$10 registration fee. Select a first and second choice. Van transportation will be provided for all trips. Trip arrangements will be confirmed by Barbara Bentley. Please direct questions to her at bbentley@biology.utah.edu or call 801-582-5854.

Field Trip #1: Late Pleistocene Lake Level and Glacial Changes: Geomorphic and Stratigraphic Evidence, and Paleoclimate Interpretations

Elliott Lips, adjunct professor from the Geography Department at the U of U, will explore the interactions between Lake Bonneville and Wasatch Mountain glaciers. During the late Pleistocene, Lake Bonneville rose to its highstand about the same time that the glaciers from Little Cottonwood Canyon and Bells Canyon reached their maximum extent in Salt Lake Valley. We will examine shore deposits from Lake Bonneville and discuss the chronology of the rise and fall of the lake. Next we will examine the glacial deposits from the Little Cottonwood Canyon and Bells Canyon glaciers. Moraines from these glaciers extended about one mile into Salt Lake Valley and are interbedded with lacustrine deposits from Lake Bonneville at and near its highstand. By examining the deposits from the lake and glaciers we can begin to interpret the climatological conditions that existed at the time of the lake highstand and glacial maximum. 9:00a.m. to 12:00p.m. Space limited to 13.

Field Trip #2: Antelope Island Walkabout

Genevieve Atwood, former Utah State Geologist and member of FRIENDS Advisory Board, will explore the fascinating geology of Antelope Island. This trip begins at the visitors center with an overview of Antelope Island's geology, and a leisurely 1-1.5-hour naturalists walk around Buffalo Point. Lunch is dutch treat at the Buffalo Point Concession Overlook, while admiring evidence of major levels of Great Salt Lake and Lake Bonneville. 9a.m. to 3p.m. Space limited to 13.

Field Trip #3: Inland Sea Shorebird Reserve Wetland Mitigation Bank (ISSR)

Ann Neville, ISSR site manager, will explore this 3,700 acre mitigation site. The ISSR was created as the KUCC tailings wetland mitigation project located near the south shore of GSL and constitutes the largest mitigation bank in Utah and is one of the largest wetland mitigation banks in the Western U.S. Peak shorebird migration is April-May so bring along your binoculars. 9:00am to 12:00pm. Space limited to 12.

Field Trip #4: Learning About the Great Salt Lake Ecosystem Project

Clay Perschon, GSL Ecosystem Project Coordinator for the UDWR, will conduct a boat tour while discussing the research management and conservation of this ecosystem. Brine shrimp and limnological sampling will be demonstrated and brine shrimp egg streaks may be encountered. Bring lunch, sunglasses, binoculars or camera and appropriate clothing (boat or running shoes recommended). We should see a variety of water birds and magnificent views of the Wasatch and Raft River mountains surrounding the lake. Boats depart from the Antelope Island State Park Marina at 11:00 a.m. and return at approximately 2:00 p.m. If high winds create rough water, the trip may be cancelled and participants will be notified the morning of the tour. Space limited to 12.

CALL FOR POSTERS!

FRIENDS of Great Salt Lake (FoGSL) is soliciting posters relevant to this theme of this year's forum "Great Salt Lake: A Complex and Changing System". The poster session will run all day.

The goal of the poster session is to feature biological, hydrological, geological, ecological, archaeological, historical, economic, and/or planning issues pertinent to Great Salt Lake and its management. Posters highlighting one or more of the above topics relevant to other saline

lakes will also be considered. Posters presenting the results of historical or scientific research as well as those describing federal, state, and local watershed education and monitoring programs are encouraged to apply.

If you are interested in presenting a poster, please contact Spencer Martin at (801) 484-5703 and/or submit abstracts to rsmartin@vii.com. The display area is limited so please submit abstract as soon as possible to ensure a space. Issues Forum registration is free to all poster session participants.

PROGRAM SCHEDULE

7:30am - 9:00am Continental Breakfast

7:45am - 10:30am REGISTRATION

8:30am Opening Remarks Lynn de Freitas

8:45am - 10:30pm Great Salt Lake in Geologic Time - Intro by Katrina Moser

8:45am Geological History of the Great Salt Lake Basin - Don Currey

9:15am Paleoclimate of the Bonneville Basin - Walt Dean

9:45am Neoclimate of Great Salt Lake - John Horel

10:15am Panel Discussion

10:30am - 11am BREAK & POSTERS

11:00am - 12:45pm Great Salt Lake in Recent Times 1 - Intro by Lindsey Oswald

11:00am The Bird Life of Great Salt Lake - Don Paul

11:30am The Great Salt Lake Ecosystem Project - Clay Perschon

12:00pm Limnology of Pollution in Farmington Bay - Wayne Wurtsbaugh

12:30pm Panel Discussion

12:45pm - 2pm LUNCH

Keynote Address - Martha Davis of the Mono Lake Committee:

Lessons Learned from a Successful Struggle to Save an Endangered Saline Lake
Friend of the Lake Award

2:00pm BREAK & POSTERS

2:30pm - 4:15pm Great Salt Lake in Recent Times 2-Intro by Brian Nicholson

2:30pm Ancient Peoples of the Great Salt Lake Basin - Steve Simms

3:00pm Fur Trappers and Pioneers Around Great Salt Lake - Will Bagley

3:30pm Economics of Great Salt Lake Past and Present - Steve Burr

4:00pm Panel Discussion

4:15pm - 4:45pm BREAK & POSTERS

4:45pm - 6pm Great Salt Lake Present and Future - Intro by Spencer Martin

4:45pm The Great Salt Lakekeeper Program - Jeff Salt

5:15pm Growth and Urban Sprawl Along the Wasatch Front - Greg Bell

5:45pm Panel Discussion

6:00pm Closing Remarks - Lynn de Freitas

THE FRIEND OF THE LAKE AWARD

The Friend of the Lake Award is given to a person or organization performing outstanding work in education, research or advocacy to benefit Great Salt Lake.

There is a vibrant and active community of people working on behalf of the lake. To recognize their talents and contributions, FRIENDS of Great Salt Lake has established an award to be presented at our Biennial Issues Forum.

The recipient of this year's award will be announced on April 19th at our 2002 Issues Forum.

Tooele Valley Special Area Management Plan (SAMP)

By Cathryn Collis, SWCA Environmental Consultants and Joan Degiorgio, Utah Reclamation Mitigation and Conservation Commission

FRIENDS of Great Salt Lake are well aware of the Lake's wetlands and their value for wildlife. Given the recent Legacy Highway debate it is also clear that there are ever increasing development pressures on these important wetlands. For years, many groups have been working to preserve these shoreline wetlands for wildlife, often through direct purchase, such as the Nature Conservancy's Great Salt Lake Shoreland Preserve; or through mitigation for other development such as the Inland Sea Shorebird Reserve; or, through purchase and donation as is the case for Audubon's South Shore Ecological Reserve. Wetland planning has also served as a complementary tool to protect key wetlands.

County-based wetlands planning began in Davis County in the mid-90s and over the years has helped to guide protection efforts there. A wetlands plan in Box Elder County was completed in 1999. Through that process, unprotected wetlands under development pressure were identified and a County wetland coordinator hired. Seeing the benefits of planning for wetland protection on a county basis, two new planning efforts have been initiated in Tooele and Salt Lake County.

Tooele Valley, located in the eastern portion of Tooele County, Utah is currently experiencing rapid population growth due to a variety of factors. Probably the key factor in this growth is the increasing availability of relatively low-cost housing which, along with the semi-rural setting, is attracting home buyers from the more densely populated, higher cost communities located along the Wasatch Front. Other factors likely contributing to this growth include development and expansion of local industrial areas (such as the Utah Industrial Depot) and expansion of the Tooele Airport by the Salt Lake City Airport Authority.

With the exception of northern Grantsville and developed lands stemming from Burmester Road, a significant portion of Tooele Valley north of State Route 138 (SR-138) and south of Interstate 80 (I-80) comprises jurisdictional wetlands (those regulated by the U.S. Army Corps of Engineers) associated with the southwestern shore of Great Salt Lake. Wetlands are also prevalent to the southwest of SR-138 between SR-36 and Marshall. Wetlands north of SR 138 consist primarily of depression wet meadow and saline playa communities. Emergent marsh and riparian shrub-scrub communities occur in scattered areas having perennial supplies of freshwater (e.g., Six-mile Creek and various artesian wells). Despite the impacts associated with past and on-going ranching practices, the juxtaposition of wetlands and uplands in this area create a complex habitat mosaic that likely renders this the most biologically diverse area in Tooele Valley.

Given these factors, Tooele County is conducting a collaborative process involving stakeholders with the purpose of completing a Special Area Management Plan (SAMP). The SAMP will be a more detailed wetland plan than those completed in Davis or Box Elder County that provides a comprehensive wetlands plan to guide the preservation, restoration, and maintenance of the Valley's wetlands in perpetuity and allow for continued economic development. This planning process is particularly important and timely due to Tooele Valley's rapid growth rate and the anticipation that there will be increased pressure for commercial, residential, and transportation-related development in and immediately adjacent to the area described above. The full and active involvement of stakeholders such as private property owners, Federal and State government agencies, local government representatives, and conservationists is being solicited to ensure the long-term success of the SAMP.

A SAMP Steering Committee has been formed and has met twice. It is anticipated that the planning process will last two years. The Steering Committee will meet monthly and through the course of the planning process, review technical information resulting from wetland mapping, functional analysis, and classification. Information from a Regional Plan, currently being developed, will also be incorporated into the SAMP process. Updates on the SAMP will be included in future newsletters.

A Salt Lake County SAMP will be developed in conjunction with a shorelands plan (similar to that prepared for the Davis County shorelands) for the area comprising: Jordan River west to the Tooele County line and north from I-80 to the Great Salt Lake. That effort will also involve landowners, agencies, conservationists and the public. A consultant is currently being selected for that project. It is also anticipated to take approximately two years. If you are interested in the Salt Lake County SAMP, you can contact Joan Degiorgio at the Mitigation Commission (801) 524-3146 or Spencer Martin, SWCA Environmental Consultants (801) 322-4307.

Planning is not for the impatient. It involves working over time with diverse interests over sensitive issues. But step-by-step, county-by-county, there is beginning to emerge a vision of a wetland buffer where a dynamic Great Salt Lake can fluctuate and resident wildlife and migratory shorebirds and waterfowl are assured resting, feeding and nesting habitat. 🌿

Fostering Conservation of Functional Landscapes The Great Salt Lake Project Goes to Peru

By Joel Peterson, The Nature Conservancy of Utah

Last May at Great Salt Lake, The Nature Conservancy hosted the first of 3 workshops for participants in The Conservancy's Wetlands Network. The Wetlands Network is one of TNC's Landscape Conservation Networks (LCN), a new means for implementing innovative landscape-scale ecological management and restoration strategies. The 3 Conservancy wetland focal sites were the Pacaya Samiria National Reserve in the Amazon Basin of Peru; the Mukwonago River Watershed in Wisconsin and the Great Salt Lake Project.

Through these progressive workshops, participants "learn by doing" using an advanced site conservation planning process, coupled with peer review. LCNs tackle some of the most critical threats faced by The Nature Conservancy, including incompatible grazing and forestry, invasive exotic species, altered fire regimes and wetland degradation.

As a Western Hemispheric Shorebird Reserve site and the location of the Utah Conservancy's Great Salt Lake Shorelands Preserve, it was a logical place for national and international Conservancy colleagues and partners to gather to begin the conservation planning process.

In February 2002, site managers and partners from the three wetland focal sites met again, but this time, at the Yarapa River Lodge on the Amazon River in Peru. It was here, in the jungle, among pink dolphins, red howler monkeys, the tan throated- tree sloth and piranha,

that the participants presented their findings from the first workshop and provided critical reviews of each other's projects.

Meeting in Peru also let the teams visit another wetland focal site, the Pacaya Samiria National Reserve. The Pacaya Samiria National Reserve is roughly the size of Massachusetts and is the largest tropical flooded forest protected area in the world. Although the reserve is under the overall management of the Peruvian Park Service, The Nature Conservancy provides financial and technical support to the park and to projects operated by the World Wildlife Fund, Pro Naturaleza and others. These projects encourage biodiversity conservation with the sustainable use of natural resources.

The landscape-scale Great Salt Lake Project, led by Joel Peterson, (TNC's Great Salt

Lake Science, Research and Planning Coordinator), was joined by six other Utah participants: Justin Dolling (Farmington Bay Wildlife Management Area), Ella Sorensen (Gillmor Sanctuary Manager, National Audubon), Wayne Martinson (Utah Wetlands Coordinator, National Audubon), Ann Neville (ISSR Manager, Kennecott Utah Copper), Maunsel Pearce (President of the Utah Wetlands Foundation), and Lynn de Freitas (President of FRIENDS).

When the Great Salt Lake Project team considered the requirements to maintain the key ecological (continues pg. 12)



Photos by Lynn de Freitas

Utah Awakenings

By Sally Graves Jackson

On a winter day some fifteen years ago, not long after I arrived in Utah for graduate school, a fellow student took me to the vast, flat patchwork of wetlands where the Bear River joins the Great Salt Lake. He needed to get some mud. I went along out of curiosity, wanting to see the place that so many of my birdwatching friends had told me about.

The mud-seeker, whose name is Lee, drove us out to the Bear River Refuge where he was studying marshes that had recently been flooded with lakewater. The lake's extreme saltiness had killed tens of thousands of acres of plants that had thrived on the Bear River's fresh water, and although the lake had receded, no one was sure how long recovery would take.

On that first visit the marshes were frigid, birdless, silent. The landscape was so flat that it seemed to have only two dimensions, and its stark strangeness unsettled me. A few dead gray stems fought the wind and swirling snow, and the open patches of water were frozen white. From under the ice we dug out a bread-box size hunk of mud to take back to Logan. It was featureless, black, and quite smelly, not what I would have considered treasure. But it woke up in our laboratory aquarium with warmth and fresh water, giving us bulrush, mint, duckweed, and a festival of crustaceans, leeches and diving beetles.

In the spring I went back to the marshes and kept going back through two whole summers to help Lee and another student, Sarah. I spent days and days there, some in the refuge and some in other public and private wetlands nearby. At the time I treated those mud-caked days as a little detour off of life's otherwise linear journey; I did not realize how easily and inevitably the lines become circles.

The awakening of some of those marshes was as miraculous as it had been in our laboratory microcosm. From the anaerobic underworld of mud sprang an incredible green tangle of bulrushes, cattails, saltgrass, pickleweed, pondweeds, and algae. In them, over them, hummed deerflies and brineflies and mosquitoes,

and clouds of baetids so thick that they stained my khakis green where they got trapped inside my hip waders. The larvae of brineflies wriggled in our sampling nets, and during their synchronized emergence to the air they left drifts of amber skin along the shores.

From southern wintering grounds came an amazing cacophony of birds to mate and multiply. Ducks and geese and coots nested in the denser vegetation along with secretive rails and bitterns. Red-winged and yellow-headed blackbirds and marsh wrens hung tight-woven nests in tall cattails and hardstem bulrush, defending their territories with constant chatter and chasing. Herons established colonies of loosely-built stick-nests on dead trees, and avocets and black-necked stilts clustered their simple platforms on flats where plants were sparse. Above us flew lines of white pelicans, strings of sky-beads undulating behind the leader. Terns called as they hovered over the shallows, and occasionally a peregrine falcon scared up shorebirds that rose and flocked in twisting whistling synchrony.

It was a luxury to step ankle-deep in water surrounded by a landscape so arid; Utah is so often a land of thirst. The hills to the north and west of the marshes, where grass and sagebrush survived on on scarce rain and snow, were like old, old men, blowing their dusty old stories back and forth in the breeze. Sometimes a few clouds gathered and darkened and even thundered a little, and often they rained -- but halfway to the ground, the raindrops literally evaporated. Down below the old man hills stayed thirsty, listening to those pretty young clouds rumble with laughter as they disappeared.

In the marshes there was thirst too, for fresh water. On sunbaked flats that had been flooded the year before, the mud-crust was cracked into the texture of magnified skin. Each section was salty and dry and slightly curled, but underneath was the smell of moisture and warmth. Across it, Lee walked a series of straight lines, looking for plants. "Zero. . . zero . . . zero" he called every two steps. "Nil . . . nada . . . nothing . . . zilch . . . zip . . . aught. Goose egg."

I filled pages of tidy columns with O's and wondered what story would come from this monotony. Once in a great while, though, we would find a tiny pickleweed plant -- a minute shade tree providing refuge for a few scurrying bugs and spiders, and I would promise them that the mud held more seeds waiting to break dormancy.

We were thirsty too, and carried frozen bags of juice with names meant to conjure up exotic islands with grass huts. But I did not want to be transported. I was being pulled into this strange landscape; I was familiar now with the smells of methane and birds and turbid brown water, and the feeling of mud sucking at my hip-boots. The winding channels that Sarah and I canoed gave away new secrets with each visit, and I gathered them inside me: the high, descending laughter of a rail, the emergence of a coot chick from its egg, the dry tufts of last year's cattails exploding into seed-clouds at just a touch. Familiar too was the salt-dusted breeze, so dry sometimes that I almost felt shrunken by the time we drove home. I remember stopping with Sarah one afternoon to return a key at somebody's farmhouse. Nobody was home, but a sprinkler was throwing a huge arc of water to some grass and a tree laden with ripe apricots. We each ate one, guiltily, and then a couple more, less guiltily, and then the sprinkler swung around -- k-chik! k-chik! k-chik!-- and soaked us. There seemed nothing else to do but lie down in its path and join this very western version of the water cycle, eating more fruit and growing back to size like raisins in a pie.

During one of those summers my husband and I visited New York City to see my sister, who gathered friends in her apartment for a dinner in our honor. As the room filled, Rob and I found ourselves sitting quietly to one side, just watching. Somebody's girlfriend joined us. Wineglass in one hand and cigarette in the other, she turned her head toward us. "Now where'd you say you're visiting from?" "Utah," we answered in unison.

Somebody's girlfriend stared at us. "Oh my God!" she said, much amused, "There really is a Utah!" And she wandered off, shaking her head.

We moved away from Utah after only five years, but I find that it has become absolutely woven into my life's fabric. I often make mental migrations back to the marshes. In their nesting grounds I still find treasure -- not the clinking gold coins of a children's story, but treasure I have to dig for, without maps, in life's messiness.

Perhaps you cannot know the whole wealth of an experience until the years have separated you from its immediacies.

At the day's end, after you've dozed a while in a sunscreeny mud-scented stupor, after you've settled, and sat patient and still, like the ibis on its egg, something will hatch . . . A festival of creatures, movement and light, seeds bursting and hearts pumping, silence and song. A knowledge of the cacophony of life that can reside in a desert; a sense of how that life can be erased but then renewed, like a soul emerging from pain and doubt to grace and back to pain again, and back to grace. 🐦

About the author:

Sally Graves Jackson grew up in Texas and attended college there. She lived in Utah during her years as a graduate student at Utah State University, studying wildlife ecology in Yellowstone National Park. She now lives and writes near Durham, NC with her husband and three sons. scgjackson@aol.com

Jordan River Shallow Aquifer Pumping

Tuesday, May 28th FRIENDS hosts a panel discussion on shallow aquifer pumping of the Jordan River.

The panelists will include Jeff Salt (Education Director Great Salt Lake Audubon), Richard Bay (Jordan Valley Water Conservancy District), Bert Stolp (US Geological Survey) and Jim Riley (State Division of Water Rights). Moderated by Wayne Martinson (National Audubon).

Join FRIENDS at the Sugarhouse Garden Center at 7pm for this timely and important discussion. 🐦

2002 Calendars On Sale!

A few of Gary Crandall's splendid, full color calendars, *Birds of the Great Salt Lake* are available for only \$8.00.

Half of the purchase price for each calendar will be donated to the Doyle Stephens Research Assistance Scholarship Fund.

Order now and send your check to FRIENDS
PO Box 2655 Salt Lake City, Utah 84110-2655.
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We will mail your calendar to you asap.

"The Great Salt Lake Project Goes to Peru"

(continued from pg. 9)

factors that sustain the overall Great Salt Lake Ecosystem, it became obvious that the conservation focus needed to expand beyond the shoreline of the lake and include its watershed.

One major goal shared by all Wetlands Network participants is to identify the critical thresholds of these ecological factors. Knowing what supports the ecosystems and knowing how much is too much stress on those systems is a key consideration in implementing effective ecological management and restorative strategies.

For example, as nutrient levels entering the Great Salt Lake increase, at what point does it exceed the capacity of the lake to function naturally? Or, how much can we alter the hydrology of the primary rivers entering the lake before we impact the lake's ability to function within its natural range of variability?

It is a continuing goal of the Great Salt Lake Project to identify these critical pieces of information necessary to maintain a sustainable Great Salt Lake Ecosystem.

"A conservation project at a watershed scale will need to address how we, as a regional community, live within our landscape and what criteria we will use to measure how successful we are at living sustainably within this landscape", says Joel Peterson.

Although there are great challenges ahead in developing an effective land-scale ecosystem management process for Great Salt Lake, the strength of partnerships will help achieve such goals more effectively.

The third workshop will be held in Wisconsin in the Mukwanago River Watershed in the fall of 2002. 🐦

Nesting Eagles Field Trip

by Margot C. Kadesch

No one who's not a birder or passionate about the outdoors would ever believe that 12 relatively sane adults would stand in a dirt road for more than two hours on a brilliant, but bitter, Saturday morning staring fixedly at a large, untidy bunch of twigs on a platform erected on a telephone pole with a small ball of white just protruding over the top.

The event was the March 9 FRIENDS of Great Salt Lake field seminar led by Bob Walters, Division of Wildlife Resources Watchable Wildlife Coordinator, to see a pair of nesting bald eagles on the south shore of the Great Salt Lake. Walters discovered the nest site in 1996, and has been observing the pair ever since. In the intervening years, the pair have produced 14 offspring and, judging by the tenacity with which the female hunkered down in the nest that Saturday, it's likely they'll add to their progeny again this year.

Utah is home to only four known nesting bald eagle pairs, out of the 1,000 plus eagles who winter over between November and March, so being able to observe the nest and listen Walters talk about it was a rare treat. Even more rare--and the payoff for our frosted toes and tingling fingers--the group was able to witness an incubation transfer. The male eagle flew in and perched on the edge of the nest while the sitting female got up and very gingerly inched her feet away from the eggs. Then, just as gingerly, the male eased himself down, settled the eggs in his brood patch, and began his shift.

"You've got to hand it to them," Walters says. "Imagine what it takes to sit there for hours at a time, blasted by winds, pelted by rain and snow, or broiling under the sun. I couldn't do it."

The eagles' original nest was a more orthodox affair--an abandoned heron's nest in a cottonwood snag--but in spring 2001 a violent wind storm blew the snag down. Luckily, the young were just beginning to fly and didn't go down with the nest, but Walters worried about what the parent birds would do the following year. Eagles are not known to take kindly to man-made nesting sites. Nevertheless, he had the telephone pole erected close to the original nest site and constructed a platform on it at the height of the original nest. Then, using a cherry

picker, he transferred the twigs from the nest to the platform. "It was pretty ugly when it was done," he says, but when the eagles returned they settled down to raise a family in it.

En route to the nesting site, the group crossed the path of the projected Legacy Highway. Though broad fields buffer the nest from it, there is still a question of how the disturbance and traffic noise will effect the birds if the highway is built. As we watched the eagles, the disrupted earth and future traffic seemed uncomfortably close, and it was impossible not to think how much the eagles' lives depended on property rights and legal process, on human desires and human ambition.

As the group continued to watch the nest, binoculars up and three scopes at the ready, Canada geese honked in the surrounding fields and gulls, dazzlingly white against the immaculate blue sky, kept winging by. The day even produced a raptor on the wing, a mystery bird: very pale, with broad wings and a possibly falcon-like face. Morphed peregrine? Gyrfalcon? Three bird books and any number of opinions couldn't pin it down. The starlings roosting nearby in a nearby tree didn't stop to puzzle over identification, though. They just skeedaddled. 🐦



Photo by Lynn de Freitas



Photo by Gary Crandall

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**Doyle W. Stephens
 Research Assistance Scholarship**

FRIENDS of Great Salt Lake has established a fund in memory of Doyle W. Stephens, one of the finest scientists dedicated to understanding Great Salt Lake and its systems. Income from the fund, administered by the FOGSL research committee, will be awarded to supplement under-graduate and graduate level research projects that are investigating Great Salt Lake systems. We need your help building the fund. Please send your check to payable to FRIENDS of Great Salt Lake indicating that it is a contribution for the Doyle W. Stephens research assistance scholarship. When developed, guidelines for the scholarship will be posted on our website and appear in subsequent newsletters.

Thank you!

FRIENDS of Great Salt Lake wants to thank the following businesses for their generous support: **Xmission.com** for donation of services to support us on the World Wide Web and **Tooele Transcript Bulletin** for supporting our printing needs.

SUBMITTING MATERIAL FOR PUBLICATION

WANTED: Original articles (historical, geological, geographical, biographical, political, fiction, poetry, etc.) or art work (sketches, photographs, etc.) which pertain to Great Salt Lake.

Mail or Deliver to: 1117 E. 600 S. Salt Lake City, UT 84102,
E-mail to: ldefreitas@earthlink.net. Please call 801-583-5593 to confirm receipt of e-mail or with any questions, suggestions, comments, or ideas.

Deadlines: Sept. 16 (Fall), Dec. 16 (Winter), Mar. 16 (Spring), and June 16 (Summer).

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The Importance of Your Membership

The strength of FRIENDS comes from its members. All of you, with your individual contributions to Great Salt Lake awareness, help provide this organization with the momentum it needs to carry on its work for the lake. We all know about the tremendous challenges and opportunities for Great Salt Lake. Knowing those challenges and opportunities, FRIENDS' board of directors works hard to identify the best ways to respond to them. Some of our critical activities:

- The Legacy highway campaign
- Commenting on the Great Salt Lake Comprehensive Management Plan
- Educating the public at large about the importance of our big, salty neighbor
- Participating in public hearings and on committees that address development around the lake,

But without the support and participation of the membership, the work of the board is limited. General meetings, field trips, and volunteering are all ways that you can help build public recognition of FRIENDS and its mission. Through these means, you also become more knowledgeable about the lake, its science, its history, and our relationship to it.

One of the goals that the board continues to identify at its annual retreat is building membership. How can we develop a robust and active membership ? We need to develop a critical mass of lake advocates, true friends of Great Salt Lake.

So, FRIENDS is asking you, our members, to keep active through participation and by keeping your membership current. Check your mailing label for your membership renewal due date. Renew promptly if you have expired. If you have questions about your membership, please call Lynn at 801-583-5593.

And do what you can to help recruit new members to strengthen our voice for Great Salt Lake protection and preservation. Consider a new year's gift to FRIENDS - recruit a new member. Pass on your newsletter to a friend or neighbor. Spread the news about who we are and how we are working for Great Salt Lake.

Big Thanks!

PS. Does this sound like your mother?

Lake Fact Answer:

5 billion

Thank You to Our New and Renewed Members for Your Support

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