FRIENDS *of Great Salt Lake*

P.O. Box 2655, Salt Lake City, UT 84110 801/355-5226

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Common Name: Greasewood
Scientific Name: *Sarcobatus vermiculatus*

Native shrub frequently found in the flat barren or alkaline soils surrounding Great Salt Lake. Important wildlife food for porcupines, jackrabbits, prairie dogs, and chimpmunks.

Reference: *North American Range Plants*, 1986, by J. Stubbendieck, S. Hatch, and K. Hirsch.

Contents

- Page 2 - Letter from the President
- Page 2 - Calendar of Events - meetings, workshops, seminars
- Page 3 - Field Notes - Joel Peterson
- Page 4 - Prehistoric Life Along the Great Salt Lake - Steve Simms
- Page 5 - General Meeting, January 23, Sugarhouse Garden Center - Western Transportation Corridor
- Page 6 - Great Salt Lake Issues Forum Sponsors
- Page 7 - Membership meeting and Strategic Planning
- Page 8 - Great Salt Lake Poetry by Ms. Ipson

The mission of Friends of Great Salt Lake is to preserve and protect the Great Salt Lake ecosystem and to increase public awareness and appreciation of the lake through education, research, and advocacy.

Dear Friends,

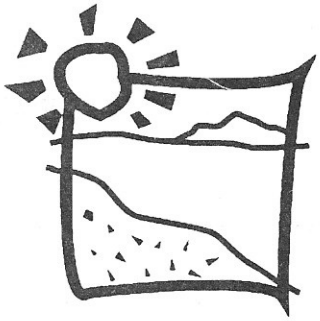
We are starting our new year and would like to invite you to do something unusual and exciting with us. We need your input on planning the type of activities that you want to do as a member of Friends of Great Salt Lake. Activities could range from lake field trips to doing background research on important issues concerning the lake's ecosystem to assembling and presenting a slide show that can educate the community about the lake ecosystem. The possibilities are endless. The Board has some activities such as the Issues Forum (brochure will be mailed separately), Antelope Island Workshop and Campout, and the lecture series lined up for the the coming year. But to make the organization more community-based, we need the group to share their ideas, enthusiasm, and energy. To that end, we are encouraging all members to attend a monthly activities planning meeting where the Board will be present to work out a schedule of short term and long term activities. With your help, we will enable this organization to grow into a stronger community based group. Join us every first Thursday of the month, 7 p.m. at the Salt Lake County Building, 2100 South and State Street, Room N3005. See you there! If there are any questions or you want to be involved but cannot attend the meeting, call me at 355-5226.

Yours Truly,

Kathlyn

Kathlyn Collins
President

1996 Winter/Spring Schedule
Friends of Great Salt Lake



Event	Date/Time	Location
Lecture Series	January 23, Tuesday/ 7-9 p.m.	Sugarhouse Garden Center
Activities Planning Meeting	February 1, Thursday/ 7-9 p.m.	Salt Lake County Building, Room N3005
Great Salt Lake Issues Forum	February 10, Sat/ 9 a.m.-5 p.m.	Quality Inn Downtown Salt Lake City
Lecture Series	February 27, Tuesday/ 7-9 p.m.	Sugarhouse Garden Center
Activities Planning Meeting	March 7, Thursday/ 7-9 p.m.	Salt Lake County Building, Room N3005
Lecture Series	March 26, Tuesday/ 7-9 p.m.	Sugarhouse Garden Center
Activities Planning Meeting	April 4, Thursday/ 7-9 p.m.	Salt Lake County Building, Room N3005
Lecture Series	April 23, Tuesday/ 7-9 p.m.	Sugarhouse Garden Center
Activities Planning Meeting	May 2, Thursday/ 7-9 p.m.	Salt Lake County Building, Room N3005
Antelope Island W & C	May 10-12	Fielding Garr Ranch House, Antelope Is
Lecture Series	May 28, Tuesday/ 7-9 p.m.	Sugarhouse Garden Center

Field Notes: Look Close, Look Far at Black Rock

Joel Peterson

I had only viewed Black Rock from Interstate 80 or from a distance when I'm on the Great Salt Lake. Although I always appreciated its uniqueness from a distance, I really learned a lot by looking close - very close!

This prominent feature of the lake was named "Black Rock" on July 27, 1847, by a reconnaissance group of the Mormon pioneers (1). This feature was commonly used as a reference point when explorers described or referred to the area, and it holds historical significance to our state. In fact, the first two white men buried in Utah were laid to rest near Black Rock.

Black Rock is within Great Salt Lake State Park and presumably enjoys protection and interpretation by its staff but it occurs on sovereign land, which may influence management responsibilities. Access to Black Rock can be made from the road behind the utility garage at the South Shore Marina. You can travel only a short distance before you must park because the sand can be impassable. Do not cheat yourself of the experience of walking the shoreline in order to test your vehicle's abilities. The walk is 3/4 - 1 mile to Black Rock and very beautiful.

As I walked the shoreline, I was immediately aware of green mats of what looked like moss, (but actually algae), pupae casings, and other matter which I collectively called 'bio mats'. In some places, the mat was over a foot thick. The mats eroded into 'bio clumps' as they extended into the reach of the lake's waves. They looked like the living version of a coral-like encrustation of calcium carbonate rock I found in the same spot. Also on the beach, small, empty channels were mysteriously eroded into the sand at various places and were oddly soft. There has been no precipitation lately to create these new channels. I dug into the sand about 3" with my fingers and saw water bubble up and fill the furrow. I dunked my finger in the water, then tasted for salt - fresh water! With a few additional checks in the same manner and working my way to the lake, I roughly mapped out the estuary just under the surface of the sand, with salt becoming more evident each taste. I excitedly walked all over the area finding more springs, grasses, a euphorbia, then pickleweed where there was more salt. A freshwater pool covered an area of about 200 square feet about 2" deep. I also found mottled eggshell fragments possibly from avocets or black-necked stilts. The end of the peninsula just east of Black Rock was also an impressive area of head-high quartzite and/or schist rocks with evidence of bird nesting - probably gulls, but mottled eggshell fragments were found here too.

I climbed atop Black Rock and could better see the foundations of the swimming area, pool and other buildings which were once here. It's slowly being eroded away. However, do take a hand full of trash with you when you leave. A monument stands at the base of Black Rock with a plaque placed by Boy Scout Troop 721 which explains more of the history of the area. Its nice to see appreciation for the history of who passed by this area rather than what we built over it, left on it, or what we can change it into. (There are new survey stakes out here).

The productivity and diversity in this area was driven home when I took a small 'bio clump' home and suspended it in a concentration of sugar water. This keeps things from settling out too fast to get a sample. Using only a 15X hand lens I found all sorts of critters I'd never seen before! An ecosystem in a jar! I sequentially removed different densities of material with sugar concentrations and rinsing. At the bottom, the whole thing seemed to be held together by the algae that surrounds small, heavier particles. There was actually very little sand in the sample. Could the mass within algae blobs have come from calcium carbonate? It is like the stuff from which tufa is made.

I was impressed with how biologically productive two tablespoons of 'bio clump'is - think about the productivity of the whole area! What an excellent example of the Great Salt Lake-type of estuary system we see! It will surely be in my spotting scope this spring (when nesting birds need their privacy).

We will all benefit by looking close, very close, to understand what is underfoot, but also remember to look far. What is this whole system about? Look far into the future. What will this place look like next year? In 100 years? Will this freshwater/saltwater area still form 'bio mats and clumps?' Will the avocet, stilt, and marsh wren still remember "this is the place of productivity and sustenance?" Don't stop looking and asking. See you at the lake.

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1. See Madsen, Brigham D. 1989. Exploring the Great Salt Lake. The Standsbury Expedition of 1949-50 (University of Utah Press) for more information.

Prehistoric Life Along the Great Salt Lake

Steve Simms,, Professor of Anthropology

Like the Wasatch Front today, the strip of land between Brigham City and Spanish Fork was likely the most populous in the region in prehistoric times. In A.D. 1000 there were dozens, perhaps hundreds, of settlements in this strip with populations ranging from a few families to over a hundred people.

The basic reasons for settlement are two: water in an otherwise dry landscape, and the compression of diverse habitats into a small space. The vertically aligned biotic zones found in a descent from mountain to valley were, to these early inhabitants, akin to the aisles of a grocery, hardware, and drug store. These zones provided wood for bows and digging sticks; duck bone for whistles; willow for baskets and cradleboards; medicine from specific plants; large game for hides, sinew, meat, fat, bone and antler. Even after reaching the elusive "edge" of the lake, there is a mosaic of biotic diversity referred to as "the Great Salt Lake Wetlands." Ponds, streams, salt grass meadows, iodine bush flats, cattail and bulrush marshes, greasewood plains, and silt dunes identify a few of these additional habitats. Fresh water abounds in the rivers and springs emanating from the mountains, the largest being the Bear, Ogden, Weber and Jordan rivers.

To a prehistoric forager the Wasatch Front would have been a place favored for reliable production and relative abundance. The climatic variability that characterizes the Great Basin would have been smoothed here, the biotic diversity ensuring alternatives when some resources failed. Far from static, the lake edge ecosystems were dynamic. Spring runoff topped the streambanks in many years, temporarily preventing use of areas and changing stream courses. Conversely, droughts were felt immediately and streams may have dried up at times. Either way, the variability promoted ecological succession and constant environmental change.

The Great Salt Lake area yields evidence of human presence consistent with the initial colonization of the western hemisphere from Siberia between 11,000 to 12,000 years ago. Archaeologists refer to this period of rapid colonization as the Paleo Indian, an advancing wave of people moving into an open ecological niche. This produced a mobile lifestyle, focused on hunting with the exploitation of plants and small animals. The high mobility fostered styles of stone dart points that were remarkably consistent across the continent and a stone technology geared toward tool maintenance and long distance movement. Several locations around the Great Salt Lake yield specimens of Clovis and Folsom dart points typical of the period.

By the time humans arrived, Lake Bonneville had shrunk considerably and by 10,000 years ago was simply an enlarged version of the Great Salt Lake. The large, now extinct animals, such as mammoth, and giant bison were present, but there are no clear associations with humans in the several dozen finds of these animals around the Great Salt Lake.

Behind the advancing wave of the brief Paleo Indian period came people who filled in the spaces. Referred to as the Archaic period, this was a locally variable hunting and gathering lifeway that continued in Utah until the adoption of farming about 1,500 years ago. In the Great Salt Lake area, there are hints of residential stability by these hunter-gathers around the large wetlands. During the Archaic period, the lake decreased in size and around 5-6,000 years ago nearly dried up. Between 3,000 and 2,000 years ago, the lake rose to a size larger than today, overflowing into the Great Salt Lake Desert.

The best-represented period of human occupation along the Wasatch Front is the Fremont, beginning about 1,500 years ago, corresponding to a moist period and a modest enlargement of the Great Salt Lake. The Fremont are visible in part because it was a time of farming and higher population density, but also a function of recency and widespread exposure of sediments of this age or younger.

The Fremont farming period is part of the development of farming cultures across the western United States. From about 2,000 years ago and up to perhaps 700 years ago, farming brought large population increases, migration and human impact to the continent. The best-known example near the Great Salt Lake are the Willard Mounds, once located near the marina at Willard Bay State Park. Over 50 mounds containing the remains of houses, granaries, and burials were present until the site was scraped up in the 1960's and used as fill for the construction of the dikes around Willard Bay.

Both the archaeology and the study of stable isotopes found in human bone indicate the Fremont farmed corn, beans and squash, but also relied on hunting and gathering. CT scans and stress analysis of bone indicate a more active life style for males than females. Skeletons tell stories of health and disease: dental problems, tuberculosis and bone cancer.

About A.D. 1600, the Great Salt Lake rose and there is no evidence of recolonization after the lake regressed. Populations may have been effected by European diseases before direct contact. The ancient past of the Great Salt Lake is not one of comfort or stability, but is in keeping with a very dynamic Great Salt Lake we know today.