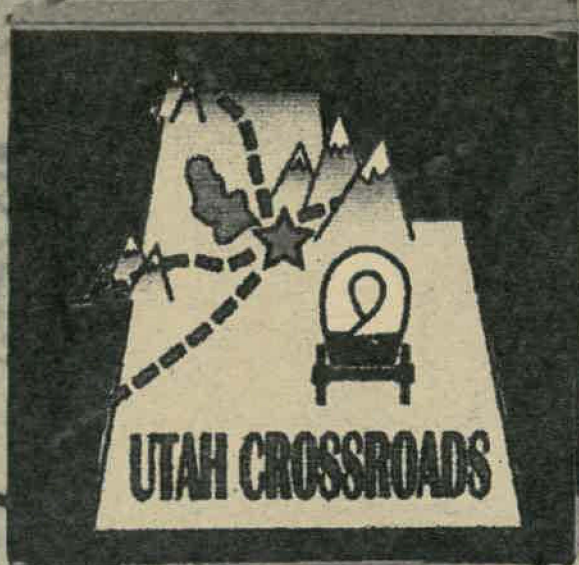


# Trailing the Pioneers

**Oregon-California  
Trails Association**

**Salt Lake City, Utah  
August 15-21, 2005**

**23rd Annual  
Convention**



**Host:  
Utah Crossroads  
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Echo Canyon, near present-day Utah-Wyoming state line, an important passage through the Wasatch Mountains in which a segment of Hastings Cutoff passes as well as the Mormon and Pony Express Trails. Photograph taken about 1866. Photograph courtesy Utah State Historical Society Library.

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## ~ Acknowledgments ~

*In compiling this booklet we have been assisted by many individuals and organizations. Because this is not a technical or scholarly publication we have freely eliminated footnotes and acknowledgments in the articles themselves. We have also condensed some of the stories to fit the space available. If these actions have offended the authors we apologize and suffer the blame. Authors have received no compensation for the use of these articles, but we have made an effort to list by-lines, wherever appropriate.*

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*South Dakota native artist Glen Rounds has provided the fine mountain men sketches, which are in his book Mountain Men, published in 1966.*

*Although we would like to copyright this booklet, we have probably infringed on several copyrights already in force. Therefore, please do not print any articles or photographs without permission of the respective authors or owners.*

*We hope you enjoy the articles.*

## Greetings from Crossroads President

Utah Crossroads Chapter is the proud host of the 2005 Oregon-California Trails Association (OCTA) Convention. We in this Chapter have made every effort to make this an enjoyable and productive meeting, hopefully, one that will be remembered among the many fine conventions as one of the best.

Utah, as a state, and as a phenomenon of American culture, is indeed somewhat different from other fine states of the Intermountain West, mostly due to our religious heritage. Yet our history, with its triumphs, disappointments and occasional failures, is a fascinating account of utopian ideals confronted with environmental realism. Except for the Indians, the white invasion of Utah began first with Spanish Priests, then Mountain Men, and finally in 1847 by permanent settlers.

Utah has always been a key player in the building of the West. From Salt Lake City emigrant trails fanned out in all directions. Tens of thousands of emigrants made their way here, many went onto other destinations, many stayed. Utah also played an important role in linking the continent with the Pony Express, telegraph, railroads and Lincoln Highway.

Again the Crossroads Chapter welcomes you and the opportunity to share with you some of our history and culture, of which we are extremely proud.

Enjoy your visit.



*Brent Reber  
President  
Crossroads Chapter*



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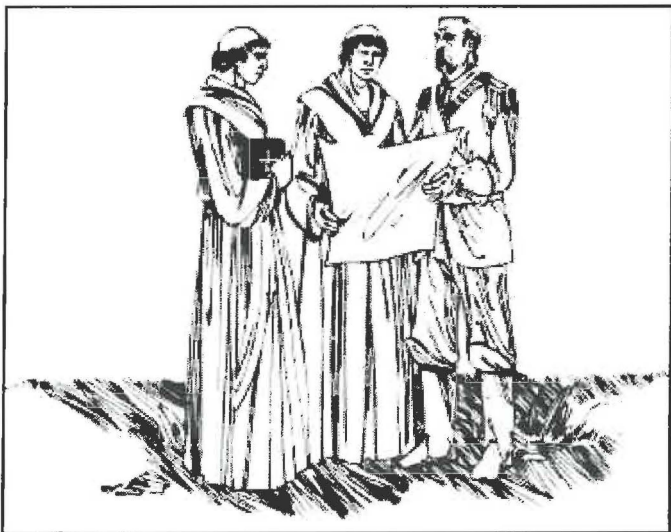
# Utah's Historic Trails

Utah has a rich and colorful history of travel and exploration within its boundaries. The first recorded journey into the heartland of Utah coincided with the signing of the Declaration of Independence.

## 1776 – The Escalante-Dominguez Explorations

Two Spanish priests, Fray Francisco Atanasio Dominguez and Fray Silvestre Velez de Escalante, sought to locate a route from the village of Santa Fe, New Mexico, to Monterey, California. Accompanied by no soldiers and eight other men, they set out on July 29, 1776, heading northwest, then north into Colorado. On Grand Mesa they found a Ute Indian gathering and among them an individual who offered to guide them west to the Ute homelands on the shores of Utah Lake. Their journey took them across the Green River near Jensen, up the Duchesne and Strawberry rivers, and over the mountains to Diamond Fork Creek and the Spanish Fork River, and then to the shores of Utah Lake where hundreds of Indians subsisted largely on fish caught from the lake.

Dominguez and Escalante departed from the lake in late September, still trying to find a route to California. Veering southwest they were hit by snow. After casting lots to determine whether to continue to California or return home, they headed back to



*Dominguez, Escalante and Miera confer on their location – and where to go next – 1776*

Santa Fe. With no apparent route, they wandered for many days through the sands, cliffs, and mesas of southern Utah and northern Arizona. Learning of a ford across the Colorado River, the padres ventured into still more rugged country. Finally they found their goal. This crossing was later named the Crossing of the Fathers, or El Vado de los Padres. They continued on reaching Zuni in December, where they made their report to the New Mexico governor on January 2, 1777. (WLR)

## 1825 – The Ashley Explorations

William H. Ashley's famous advertisement calling for "100 enterprising young men" to ascend the Missouri River to its source and to be employed from one to three years changed the fur trade forever. Ashley and his partner, Andrew Henry, founded the Henry-Ashley Fur Company in 1822, and with their new recruits set off up river. This expedition ultimately took a number of men west over the Continental Divide, and owing to great distances, the legendary rendezvous system and the era of the mountain man was born.

In 1824, Ashley led the first supply caravan from St. Louis with plans to rendezvous on the Green River in July of the following year. Arriving early, Ashley divided his men into groups to trap while he constructed a small boat and headed down the Green. He passed through the Uinta Mountains and into the Uinta Basin where he then followed the Duchesne River to Red Creek. Here he encountered a small group headed by Etienne Provost, a trapper from Taos, and the two parties combined forces and continued around the western end of the Uinta Mountains, eventually arriving at the pre-arranged place on the Green River. The first of sixteen annual rendezvous was held on Henry's Fork of the Green River on July 1, 1825. In 1824, Andrew Henry left the mountains, dissolving his partnership with Ashley. Jedediah Smith became the new partner, forming the Ashley-Smith Fur Company in 1825. Ashley brought out the supplies for the 1826 rendezvous in Cache Valley where he sold his share of the partnership to the Smith, Jackson and Sublette Fur Company. (FRG)



## 1825-29 – The Ogden Explorations

Simultaneous with Ashley's explorations were those of the Hudson's Bay Company's great brigade leader, Peter Skene Ogden. The British fur trader brought a large expedition south out of the Oregon country to make an independent discovery of Great Salt Lake in May 1825. Three days later he had the misfortune to meet with a party of American trappers, who induced many of his men to desert with their furs. Where this happened is not known, but it may have been the circumstance that gave rise to the name, "Ogdens Hole," applied to the mountain valley east of Ogden, Utah.

Ogden's route of 1825 back to the Snake River is not known for certain, except that it was "by a different Route" than he had taken traveling south. Not until the winter of 1828-29 did Ogden enter present Utah again. After discovering the Humboldt River, he came to Utah from the west, circling the north shore of Great Salt Lake and going on up the Malad River retracing his new trail to the Humboldt, before returning to his base in the Oregon country.

## 1826-27 – The Smith Explorations

One of the first to join Ashley was Jedediah Smith who led a company of fur trappers westbound through the South Pass in central Wyoming. After many adventures in the mountains, he became senior partner in the firm of Smith, Jackson & Sublette, and in the summer of 1826 set out on a journey of exploration to California, thus becoming the first white man to traverse Utah from north to south. Returning from California the next spring, he crossed the arid waste of Nevada to rejoin his partners at the annual rendezvous, held at Bear Lake. He arrived July

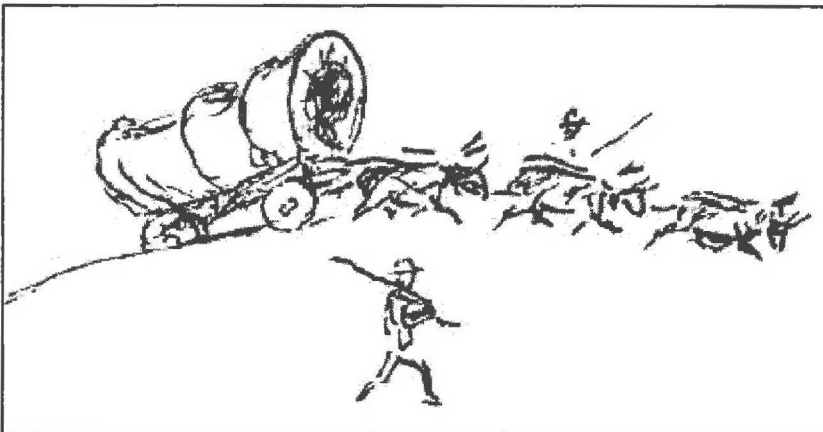
3, 1827, to be saluted by a cannon which Ashley had sent out early that year – the first wheeled vehicle known to have crossed the Continental Divide. After only 10 days at the rendezvous, Smith set out for California again. A succession of disasters befell him, including the massacre of 25 of his men by the Mojave and Umpqua Indians. Though he survived all these hazards, in May 1831, while on a trading expedition to Santa Fe, he was slain by Comanches on the Cimarron Desert.

## The Spanish Trail

Sometimes called the "Old" Spanish Trail, it was actually a Mexican trail employed from 1829 to 1848 that connected Santa Fe with Los Angeles. Used only by horse-mounted traders, not wagons, the trail looped through present central Utah, passing the sites of Moab and Green River, then turning southwest through Las Vegas. This route avoided harsh deserts and sometimes-hostile Indians in Arizona. Trade was carried in both directions, with sheep, wool, and textiles to the west, and horses to the east. The traders often purchased young Indian children who were taken to New Mexico as slaves. Mormon authorities tried, with some success, to halt the slave trade by buying captive children from the traders.

## 1833 – The Walker Explorations

The trapping expedition Captain B. L. E. Bonneville dispatched in 1833 "to explore the Great Salt Lake," as he claimed later, but actually to go to California, was commanded by the mountain man, Joseph Reddeford Walker. The chief discoveries of this company were not in Utah, but in California. Walker passed near enough to Yosemite to give him his claim as first discoverer; and on his return journey he discovered Walker Pass. Bonneville never visited the valley of the Great Salt Lake, and is one of the vagaries of history that his name has been given to the prehistoric lake of which Great Salt Lake is the shrunken remnant.



## 1841 – Bartleson-Bidwell Party

Determined to go to California, though vague about how to get there, the little emigrant company headed by John Bartleson, of which John Bidwell became the most famous member, made the first wagon trail across Utah. In the summer of 1841 they came down the Bear River to the Great Salt Lake Valley, and then turned northwest around the lake. Scouts surprisingly reported that wagons could not be taken directly west, so they hauled their nine wagons south around the rim of the Salt Desert. One had to be abandoned near the eastern base of the Pilot Range, and the others were abandoned a few days later in eastern Nevada. The little company finally reached California ragged, footsore, and worn down to skin and bones. The lone woman in their number, 19-year-old Nancy Kelsey, is the first white woman known to have set foot in Utah.

## The Oregon and California Trails

The famous Oregon Trail at no point entered the state of Utah. However, the California Trail did at two locations. An 1843 Emigrant Company hired Joe Walker as a guide. This company blazed much of the California Trail from the Bear River to California. Walker, following the Bear River, entered and left Rich County, Utah. At Soda Springs, Idaho, Walker directed the company southwest, following sections of the Raft River and Goose Creek a few miles in northwestern Utah. It may be that Walker had used this route in reverse, returning from California in 1834.

## 1843-45 – The Fremont Explorations

The celebrated explorations of John Charles Fremont first brought him into Utah in September 1843. After a voyage in a leaky India-rubber boat to the island in the Great Salt Lake, later named for him, he returned north to go to Oregon and California. The following spring he returned to Utah from the south, journeying north to Utah Valley and then turning east into the mountains. After visiting Antoine Robideaux's Fort, he crossed Diamond Mountain Plateau into Brown's Hole and then on east through present Colorado. In 1844 he returned to Utah from the east by way of the Uinta Basin, crossing the Wasatch Mountains to the Great Salt Lake Valley. After reaching the site of Salt Lake City and making a horseback

reconnaissance of Antelope Island, Fremont continued on west to California, making the first known crossing of the the Great Salt Lake Desert. It was he who gave Pilot Peak its famous name.

## 1846 – The Hastings Cutoff

Utah's first significant emigrant trail was opened in 1846 by promoter Lansford W. Hastings and his partner James Hudspeth. Heading east from Sutter's Fort, they met westering wagon trains at Fort Bridger, persuading them to travel by the alleged shortcut south of Great Salt Lake. The feasibility of the route by horseback was demonstrated the year before by John C. Fremont.

## 1846 – The Clyman Party

Mountain man James Clyman led a group east across the Sierra Nevada, northern Nevada, and into Utah south of Pilot Peak on the Utah-Nevada border. Crossing the Great Salt Lake Desert, they reached Salt Lake Valley. Moving through Parleys Canyon, Mountain Dell Canyon, and over Big Mountain, they approached the Weber River. From present-day Henefer, they traveled up Echo Canyon to Fort Bridger. Finding the Fort deserted, they continued east on the Oregon Trail where on the North Platte near Casper, Wyoming, they meet the season's first wagons. For many emigrants, this was a fateful encounter. (DLB)

## 1846 – The Bryant-Russell Party

The first of some 300 emigrants to risk the Hastings Cutoff in 1846 was a nine-member pack party led by William H. Russell and Edwin Bryant. Guided by James Hudspeth, they left Fort Bridger July 20 on mules and followed the Bear River to about two miles north of Evanston, Wyoming. Leaving the stream, they looked for a new wagon route to the north of Echo Canyon. Emerging from Lost Canyon, they traveled from Henefer to East Canyon Creek, which they followed to the Weber River and from there to the Wasatch Front. The pack party rode to the site of Salt Lake City and camped before heading west. Reaching the crest of the Cedar Mountains, Hudspeth pointed to the Great Salt Lake Desert ahead and yelled, "Now boys, put spurs to your mules and ride like hell!" They did so, making the 80-mile stretch in 17 hours and reached Donner Spring on August 3. The party rode into Sutter's Fort on September 1.



## 1846 – The Harlan-Young Party

The first wagons over the Hastings Cutoff were 200 emigrants led by the heads of its largest families, George W. Harlan and Samuel C. Young. Leaving Fort Bridger on July 20, the company numbered about forty wagons, adding a dozen more before fording the Bear River south of the later Mormon Trail crossing. Hastings himself usually guided the procession, but in his absence, near the mouth of Echo Canyon, his partner, James Hudspeth, advised traveling down the Weber River. The cost of this advice was six days of hard labor to pass the river's narrows before reaching Salt Lake Valley near Ogden. The party rested at Grantsville while Hastings returned to direct the Donner-Reed party. John Hargrave, a member of the Harlan-Young Party was buried here on August 20, the first emigrant laid to rest in Utah soil. Hastings said it was forty miles across the Great Salt Lake Desert, but the first company to cross the simmering salt plain with wagons found the distance to be twice that. Before reaching Donner Spring, the party would abandon a third of its wagons, oxen would "drop down dead" or go crazy from thirst, and it would seem "as if all were lost." It took over two days to complete the journey. Recovering at the fresh water pool and reclaiming wagons took even longer. (DLB)

## 1846 – Lienhard Party

Emigrants who took the Hastings Cutoff in 1846 called this little party the "Hoppe Company," but more fittingly it became known for the 24-year-old Swiss pioneer, Heinrich Lienhard, who kept a journal of the trip to California. But Lienhard's story is only one reason that this party of four wagons stands out from the larger Harlan-Young company, which it closely trailed most of the way. Among its members

was a mysterious cartographer, T. H. Jefferson, whose map is a rich source of information about Utah's emigrant trails. The Lienhard party left Fort Bridger on July 26. Taking advantage of the earlier company's work, the little band had "relatively little trouble" getting through the narrows of the Weber River. Being better organized, it also completed the terrible journey across the Great Salt Lake Desert without losing an animal or wagon. The Swiss emigrant and his companions would be among the last to cross the Sierra Nevada that season. (DLB)

## 1846 – The Donner-Reed Party

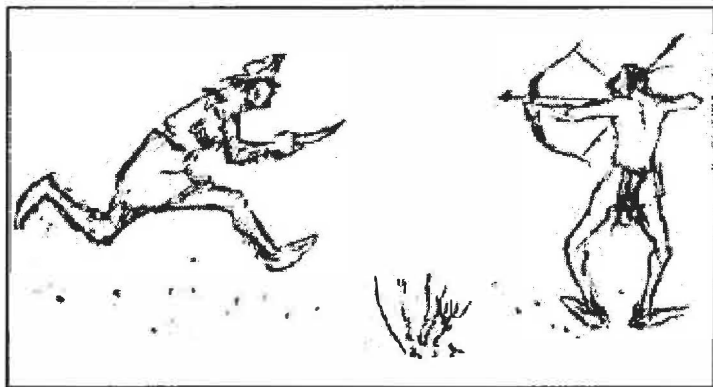
This tragically famous company came along on the Hastings Trail a week behind Lienhard. Advised that they would do better to cut a road over the Wasatch Mountains than try to get through the canyons of the Weber, they turned south at present Henefer, following in reverse the Clyman route, except that they emerged from the Wasatch by Emigration rather than Parleys Canyon. This toilsome crossing of the mountains cost them 20 days labor, and were further delayed by their near-disastrous crossing of the Salt Desert. Eventually caught by the snows of the Sierra Nevada, only 47 of the 87 men, women, and children reached California alive.

## 1847 – The Mormon Pioneers

Seeking a haven in the Rockies, the first group of the Mormon Pioneers journeyed to the mountains in the summer of 1847. The Donner Trail led them across the Wasatch to Salt Lake Valley, where their first scouts entered the valley July 21. The main body, which included LDS Church President Brigham Young, reached the site of the future city of the Latter-day Saints on July 24. The day is now commemorated as Utah's Pioneer Day.

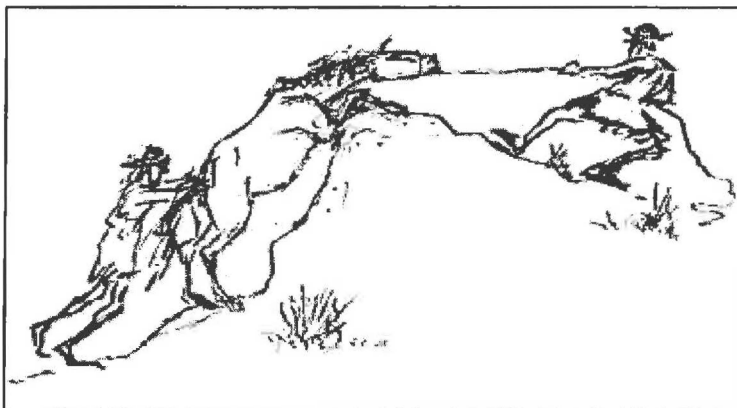
## 1848-50 – Pratt's Golden Pass Road

The outcome of explorations by Parley P. Pratt for an easier route into Salt Lake Valley through the Wasatch Mountains was his toll road opened in June 1850, through Parleys Canyon. This road saw heavy travel in 1850, but after Pratt sold it in 1851 to finance his church mission to Chile, it fell into disuse.



## 1848 – Hensley's Salt Lake Cutoff

The wagon road north around the Great Salt Lake was pioneered in 1848. In August of that year, a small party under Samuel Hensley went north around the lake from the Mormon settlements. Far down the Humboldt River, Hensley encountered a detachment of the Mormon Battalion eastbound from California, and gave them a map of his route. The battalion members had several wagons and with these they pioneered Hensley's route as a wagon road. Next year, the flood of "forty-niners" who came by way of Great Salt Lake City permanently established the Salt Lake Cutoff as a branch of the California Trail.



men were purported slain by Pahvant Utes. Lt. E.G. Beckwith took the survivors north to Great Salt Lake City, and in the spring, after a reconnaissance of the mountain valleys of the Wasatch, including a side-journey to Fort Bridger by way of Chalk Creek, he finished Gunnison's job by carrying out an exploration the rest of the way to California.

## 1849 – The Death Valley Party

Some of the "forty-niners" who reached Utah too late to attempt the northern route turned south in October 1849 to reach California by the Spanish Trail. Hearing of a supposed cutoff west across the Nevada deserts, many of them diverged from the known trail at present Enterprise, Utah. The sheer walls of Beaver Dam Wash forced a long northern detour, and when they turned west again, they blundered into and give the name to Death Valley.

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*Articles courtesy of USHS, David L. Bigler, Peter H. DeLafosse, Fred R. Gowans, Brigham D. Madsen, Steven K. Madsen, Jesse G. Petersen, and W.L. Rusho. (Contributors identified by their initials.)*

## 1849 – The Stansbury Expeditions

Captain Howard Stansbury arrived in the Grand Salt Lake Valley in August 1849 to explore a better route to the valley and conduct a survey of the Great Salt Lake. Returning from Fort Hall to arrange for supplies, Stansbury embarked upon his survey of the lake. He found it impossible to follow the miry west shore of the lake, and was forced to bend his course further west, to Pilot Peak, from which he journeyed back to the Mormon Settlements by Hastings Cutoff. The following spring, he made his celebrated survey of the Great Salt Lake, and in the autumn of 1850 returned east to publish his famous report.

## 1853-54 – The Gunnison-Beckwith Explorations

Captain J. W. Gunnison, who had been Stansbury's subordinate, returned to Utah in the fall of 1853 to explore for a trans-continental railroad route. Soon after he emerged from the Wasatch Mountains, while reconnoitering the Sevier Lake area, he and six of his

### UTAH TRIVIA

~ 1858 ~

Camp Floyd - Established in 1858 by Col. Albert Sydney Johnson as the first federal presence in Utah. Along with nearby Fairfield, the two communities boasted a combined population of almost 7,000 people, 3,500 officers, enlisted men and civilian employees at the fort, and another 3,500 in Fairfield. At the same time, the population of Salt Lake City was only 15,000.





# Lake Bonneville

## Genevieve Atwood

Great Salt Lake is the latest in a long succession of often more extensive lakes that have occupied the large basin west of the Wasatch Mountains over the past several million years. The sediments deposited in the lake and features formed by the waters of these successive lakes provide impressive geologic evidence about the past, and also provide sand and gravel for construction materials, benches and flat spaces for urban development, and scenic horizontal "bathtub rings" along the surrounding foothills. Lake Bonneville, the most recent larger lake, formed the most striking of these beaches, deltas, spits, and wave-cut cliffs that are as high as a thousand feet above the present Great Salt Lake.

Because the basin of Great Salt Lake has no outlet, water leaves only through evaporation. The temperature and the surface area of a closed-basin lake primarily control the amount of water evaporated from the lake. When precipitation is high, more water is added to the lake by direct precipitation on the lake and from rivers and streams flowing into the lake than is evaporated from the lake; the result is that the lake rises and expands across a larger area of the basin. The surface area of the lake continues to increase until the amount of water evaporated equals the total amount of water entering the lake. During the last 10,000 years the level of Great Salt Lake has gone through many cycles but the lake has not risen more than about twenty feet higher than its average historic elevation of 4,202 feet above sea level. When the climate of the region was dramatically cooler and wetter, such as during ice ages, the lake in the Great Salt Lake basin rises to much higher levels. Two such levels occurred about 140,000 years ago when the lake in the basin rose to an elevation about 700 feet above the current level of Great Salt Lake, and again about 65,000 years ago when the lake rose about half that high. The highest and most recent high lake cycle began about 25,000 years and produced Lake Bonneville, a huge lake over 1,000 feet deep.

Explorers as early as Captain J.C. Fremont in 1843 recognized shoreline evidence that a succession of

deep lakes had once existed in the Great Salt Lake basin. However, G.K. Gilbert, first with the Wheeler Survey in the 1870s and later with the U.S.

Geological Survey, was the first to study these prehistoric lake features and describe the major features of Lake Bonneville. He named the lake after Captain Bonneville, an earlier explorer in the region to the north, but one who never visited Great Salt Lake.

Gilbert established that the lake, with a maximum depth of at least 1,000 feet, covered an area of about 20,000 square miles in what is now western Utah, northeastern Nevada, and southeastern Idaho. He determined that at its highest level, which he named the Bonneville Shoreline, Lake Bonneville overflowed the rim of the Great Basin near Red Rock Pass in southeastern Idaho at an elevation of about 5,100 feet above sea level and spilled into a tributary of the Snake River, eventually flowing into the Pacific Ocean. He concluded that when these waters suddenly breached the relatively unconsolidated sediments forming the pass, they quickly scoured a channel down to the bedrock and released a catastrophic flood down the Snake River. This event, now known as the Bonneville Flood which occurred about 15,000 years ago, lowered the outlet elevation and reduced the surface elevation of Lake Bonneville in a short time, probably less than a year, to a more stable level at about 4,750 feet above sea level. Gilbert named this post-flood level the Provo Shoreline.

A plaque at Massacre Rocks, Idaho, reads:

A remarkable event occurred about 14,500 years ago when an estimated 1,000 cubic miles of water rushed north from Lake Bonneville, through Red Rock Pass, Marsh Valley, the Portneuf Narrows and Pocatello on its way to the Snake River and the Pacific Ocean. The flood probably lasted about eight weeks and was caused by the failure of a natural dam that lowered the level of Lake Bonneville by about 400 feet. It is the second largest flood known to have occurred in the history of the world and the estimated volume of water exceeds the total yearly discharge of all major rivers in North America.

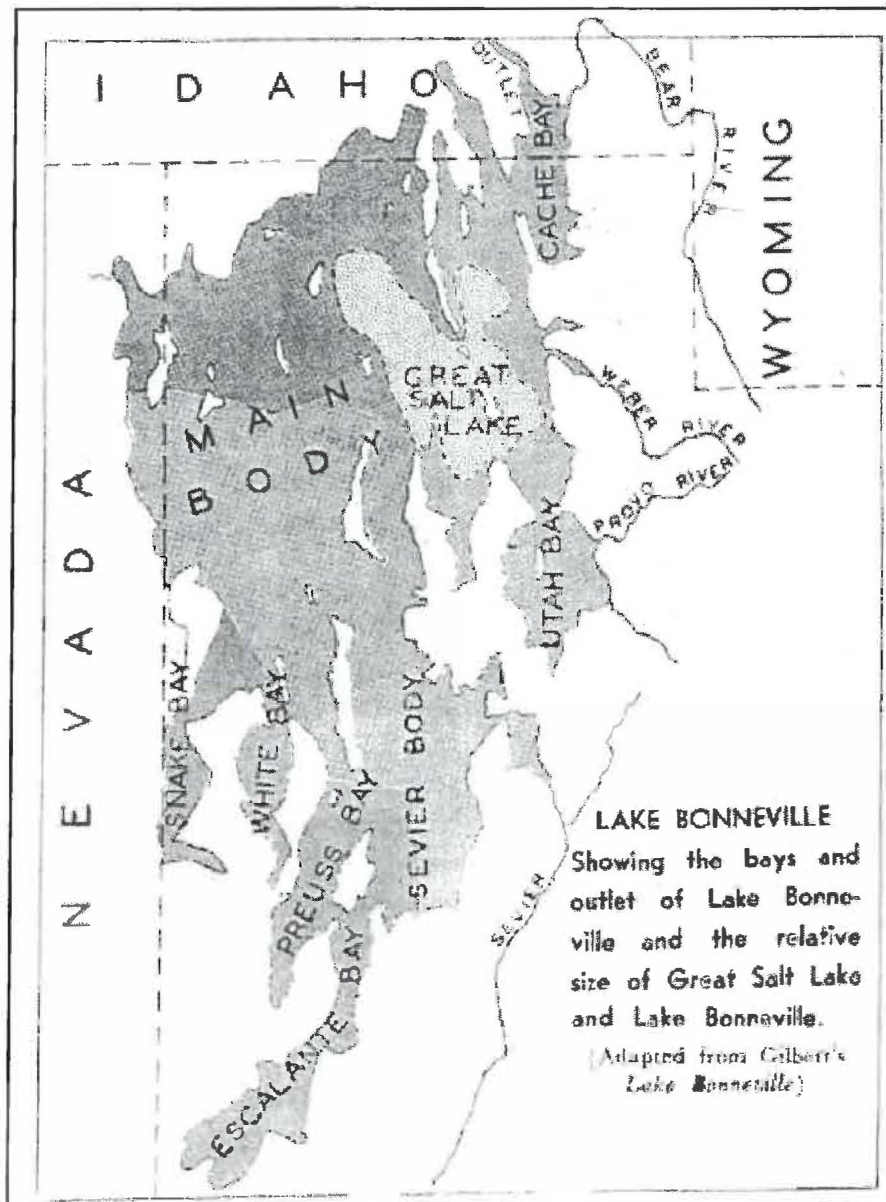
Gilbert noted that the shorelines which formed when the lake was at the Bonneville and Provo levels are now at considerably higher elevations in the central part of the lake basin than they are around its edges. He correctly concluded that the weight of the water in the deep lake had depressed the earth's surface when the shorelines were formed. When the water was removed, what geologists call "crustal rebound" elevated the shoreline in the central part of the basin. Gilbert noted that an excess of evaporation over inflow must have drawn the lake down from the Provo Shoreline. His final report on Lake Bonneville was published in 1890. For the next half century very little was added to the understanding of the lake developed by Gilbert.

Since the 1940s, numerous studies using new topographic maps, aerial photographs, new techniques for soil and lake-bed studies, and new techniques for dating sediments and archaeological materials have contributed to a rapidly growing body of information on Great Salt Lake and Lake Bonneville. These studies have confirmed much of Gilbert's general history of Lake Bonneville. They have also refined the chronology of major deep-lake events and are leading to a better understanding of many of the lower lake stages that postdate Lake Bonneville.

Lake Bonneville's birth and development were under way about 25,000 years ago. The climate associated with the most recent major ice age filled the lake to

approximately 300 feet above the present Great Salt Lake elevation at what is now known as the Stansbury Level. This lake covered approximately 9,300 square miles and its shorelines stand out clearly above the oil refineries near the State Capitol, by the Kennecott Smelter on the Oquirrh Mountains west of Salt Lake City, and immediately east of Wendover.

The lake then resumed its rise until by about 15,000 years ago it reached the lowest pass out of the Bonneville Basin and flowed into the Snake River drainage. This lake level, the Bonneville Level, was controlled by the height of the pass near Red Rock Pass, at approximately a 5,090-foot elevation. The immense lake, with a surface area of 19,800 square miles, left shorelines traces for over 2,000 miles. Its relatively fresh waters supported a diverse biota including many species of fish. This highest shoreline of Lake Bonneville and its beaches now forms a high bench for residential developments of the Wasatch Front communities. The steeper terrain above this shoreline generally has not been developed. Virtually all of the Wasatch Front area that now is home to most of the



*Lake Bonneville*



residents and industries of Utah was below the waters of Lake Bonneville at this time.

Following the Bonneville Flood, the level of Lake Bonneville dropped more than 300 feet to the Provo Level (4,740 feet above sea level). The 14,400-square-mile lake remained at this level for more than a thousand years. It also was relatively fresh, which supported a diverse biota including many species of fish.

Prominent deltas at the mouths of rivers entering the lake, and shoreline features such as spits, lagoons, and wave-cut benches mark this level. The University of Utah, Brigham Young University, Utah State University, and Weber State University campuses all are located on the Provo Level of Lake Bonneville. Were the lake to rise again in response to dramatically changed climate conditions, it could go no higher than this level because it, too, would flow out of the Great Basin into the Columbia River Basin at Red Rock Pass. The Gilbert Level Shoreline ended about 10,000 years ago and left its mark about fifty feet above the present level of Great Salt Lake. It marks the last gasp of the Bonneville Lake cycle and the beginning of the story of the Great Salt Lake.

Lake Bonneville is a very young geologic feature, with its age measured in thousands of years rather than in millions or billions of years as are most of the geologic features in Utah. But it is very important. Most of the large deposits of sand and gravel mined along the Wasatch Front were formed by Lake Bonneville. Features formed by the lake provide an excellent laboratory to study how land forms develop beneath the surface of lakes and along lake shores. The deformation of the lake's shorelines provides important information about the physical properties of the earth's crust. The lake's features provide a striking example of how dramatically changes of climate can affect the surface of the earth in only a few thousand years. The development of another Lake Bonneville would flood most of the thickly populated area of Utah. Fluctuations of Great Salt Lake, which are minor in comparison, can be expected every hundred years or so and can alter the lake level by a few feet to perhaps 4,219 feet above sea level. Yet even this would flood billions of dollars of development along the Great Salt Lake's shoreline.

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## The Great Salt Lake Today

The present Great Salt Lake is a shallow body of water, and its size and depth vary greatly with the rates of evaporation and precipitation. From 1850 to the present, the level of Great Salt Lake has fluctuated over a range of more than 20 feet (4,191 to 4,212 feet above sea level). The lake's area has also changed from 970 to 2,280 square miles, making it the largest lake in the United States after the Great Lakes. It is the fourth largest terminal lake in the world.

Within the salt waters of Great Salt Lake are five major elements or ions. These include sodium, magnesium, potassium, chloride, and sulfate. Calcium, lithium, bromine, and boron are present in lesser quantities. The salinity of the lake rises and falls inversely with the level of the lake, from 5 to more than 25 percent. Its waters are density stratified.

A dozen species of bacteria, special species of protozoa, two species of the brinefly *Ephedra* and the brine shrimp (*Artemia franciscana*) thrive in the lake. Swarms of brine flies and a variety of aquatic insects also are common along its shorelines in certain seasons of the year. Industries pump their waters to evaporation ponds to extract valuable salts. Besides common salt, potassium sulfate (fertilizer), sodium sulfate (chemicals and medicine), magnesium metal, chlorine gas, and a highly concentrated magnesium chloride brine area are produced. A thriving brine shrimp industry harvests millions of pounds of shrimp eggs from the lake each year.

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*Credit: USU Engineering Department*  
[www.engineering.usu.edu](http://www.engineering.usu.edu)

# Brine Shrimp in the Great Salt Lake

Brine shrimp, *Artemia*, belong to the phylum Arthropoda (joint-legged invertebrates), class Crustacea (shrimp, crab, lobster). There are several species of *Artemia* worldwide; *Artemia franciscana* is the species living in Great Salt Lake (and also in San Francisco Bay). Brine shrimp live in hypersaline lakes in which the salt content may be 25%, predators and competitors are few, and algal production is high. The lifecycle of *Artemia* begins from a dormant cyst that contains an embryo in a suspended state of metabolism (known as diapause). The cysts are very hardy and may remain viable for many years if kept dry. Water-temperature and salinity changes in Great Salt Lake occur in about February that cause the cysts to rehydrate and open to release the first growth stage, known as a nauplius larva. Depending on the water temperature, the larvae remain in this stage for about 12 hours, subsisting on yolk reserves before molting to the second nauplius stage, which feeds on small algal cells and detritus using hair-like structures on the antennae known as setae.

Although the cysts are very small (about 200 micrometers in diameter; 50 could fit on the head of a pin), at times they become so numerous that they form large red-brown streaks on the surface of the lake. Under optimum conditions of food supply and lack of stress from increasing salinity or decreasing dissolved oxygen, fertilized female shrimp may produce eggs that hatch soon after emerging from the ovisac to produce nauplius larvae, which is known as ovoviparous reproduction. If conditions are perfect, the female can live as long as 3 months and produce as many as 300 live nauplii or cysts every 4 days. However, the cold spring-time temperatures and variable food supply in Great Salt Lake usually limit the population to two or three generations per year.

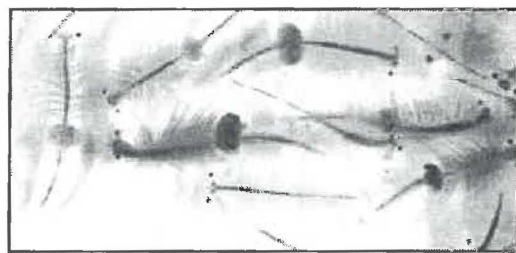
The nauplii molt about 15 times before reaching adult size of about 10 millimeters in length. Adult male shrimp are easily identified by the large pair of “graspers” on the head end of the animal. These are modified antennae and are used to hold onto the female during mating. The population of *Artemia*

*franciscana* in Great Salt Lake includes both males and females

and reproduces sexually, but some

species of *Artemia* exhibit parthenogenesis, a reproductive mode in which only females are present that give rise to young females in the absence of males. Adult shrimp feed primarily on phytoplankton (algae) suspended in the water but can also “graze” on benthic algae such as blue-greens or diatoms growing on the bottom of Great Salt Lake in shallow areas. They also may reprocess fecal pellets excreted earlier in the year when large numbers of phytoplankton present in their diet were incompletely processed. A recent study showed that the shrimp can graze on diatoms that colonize shrimp exoskeleton parts released from their many molts. As the food supply becomes exhausted, salinity increases, dissolved oxygen decreases, or a combination of these conditions occurs, the female shrimp switch from producing live young to producing cysts through oviparous reproduction. In Great Salt Lake, the adult shrimp typically die from lack of food or low temperature during December. Although, live brine shrimp have been observed in the lake at a water temperature of 3 degrees Celsius (37 degrees Fahrenheit), it is unlikely they can reproduce at that temperature. The cysts, which in Great Salt Lake are lighter than the lake water, float on the water surface where they may be harvested or may overwinter to form the source of shrimp for the following year.

Brine shrimp are also called “Sea Monkeys” and are raised in aquariums for their entertainment value.



*Group of Brine Shrimp magnified. An adult Shrimp is approximately 1/2 inch in length or about the size of a dime*

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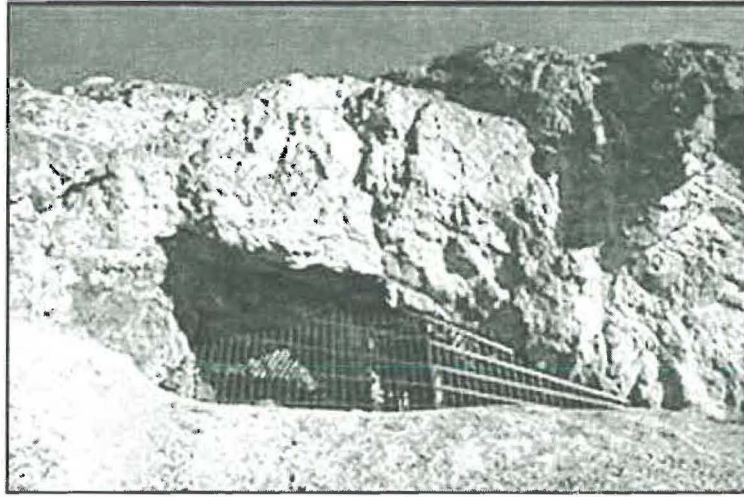
*Credit: Utah Division of Wildlife Resources*

# Danger Cave

W. Paul Reeve

Some 11,000 years ago members of the Great Basin Desert Culture left behind fascinating evidence of their existence at a site known as Danger Cave, less than two miles east of Wendover, Utah. Renowned University of Utah archaeologist Jesse D. Jennings first explored the cave in 1949 and over the next several years directed extensive excavations there. His report broke new ground by suggesting that there had been a very ancient, uniform way of life blanketing the dry steppes of the western United States for several thousand years.

Despite the challenging working conditions at the cave, which included blinding and choking dust, Jennings and his crew persevered until they finished excavating in 1955. The extremely dry cave had been an ideal storage condition for preserving a variety of fascinating artifacts from beetle wings to textiles and human coprolites, leather scraps, pieces of string, nets of twine, coarse fabric, basket fragments, and bone and wood tools such as knives, weapons, and millstones. Carbon-14 dating showed that the age of



*Danger Cave*

the oldest material was over 11,000 years, which surprised even Jennings and exceeded in age all but a few of the excavated sites in North America.

Disclosed was an previously unknown ancient Desert Culture in the western U.S. This desert population was sparse, with small social units of extended families numbering no more than 25 to 30

people. The quest for food in cyclic wanderings required most of the energy of these kinship groups. They harvested pine nuts and small seeds, roasted their meats, and utilized caves and overhangs for shelter. Life in this primitive culture, according to Jennings, was "directly and continuously focused on sheer survival. In such situations there is little leisure, and almost no certainty about the morrow. No long-term building projects, no complicated rituals, no extensive amassing of personal property nor any long range plans can be undertaken in such circumstance." Despite its uncertainty the Desert Culture persisted for thousands of years and eventually became the basis for other early Utah cultures such as that of the Fremont.

## UTAH TRIVIA

~ 1859 ~



Capt. Richard F. Burton visits the area. Burton entered the valley via Emigration Canyon, the same as the Mormon settlers had thirteen years before. Burton was an explorer and linguist who was famous for having infiltrated the sacred city of Mecca. In 1860 he added Salt Lake City to his list of Holy Cities. He said. "Truly the Mormon prophecy had been fulfilled: already the howling wilderness...has blossomed like the rose."



# The Mormon Pioneer Company: From Green River to the Salt Lake Valley – July 1847

Richard E. Turley Jr.

Brigham Young and his advance company of Mormon pioneers left their winter quarters on the Missouri River in April 1847 and headed west, seeking a place of refuge for their people. Young and many other members of The Church of Jesus Christ of Latter-day Saints had abandoned their temple city of Nauvoo, Illinois, in 1846, some two years after vigilantes murdered Church founder Joseph Smith. After their departure, other Nauvoo Saints were driven out by rogue militia led by a man described by Illinois governor Thomas Ford as “a large, awkward, uncouth, ignorant [and] semi-barbarian.” Traveling hundreds of miles on the overland trail along the Platte and the Sweetwater, through South Pass and beyond, Young’s company finally reached the Green River.

“We are now in Cal[i]fornia,” Mormon apostle Wilford Woodruff wrote under date of July 1, 1847, the day he crossed the Green. The valley of the Great Salt Lake, at which members of the company would arrive three weeks later was then Mexican territory, part of the region known as Upper or New California. Before leaving Nauvoo, apostle John Taylor had penned a song proclaiming, “The Upper California, O that’s the land for me, It lies between the mountains, and the great Pacific Sea, ... Then join with me my brethren and let us hasten there, And lift our glorious standard, and raise our house of prayer.” Once the Saints arrived in the Salt Lake Valley, they would indeed lift an ensign and raise a temple that would become one of the most recognized symbols of Mormonism. But before reaching the valley, the company had to pass over one of the



*Brigham Young*

most challenging parts of the trail between the Missouri and their future home.

Crossing the Green River proved a challenge itself. “This river is about 16 or 18 rods wide and altogether to[o] deep to be forded,” observed William Clayton, who would prepare a trail guide from Council Bluffs to the Salt Lake Valley for those who followed. After building rafts, the pioneers spent from July 1 to 3 ferrying their wagons over the river, most of their cattle having to swim over. The company’s stay at the Green River would prove memorable for other reasons too.

One was the arrival of Samuel Brannan, who had sailed aboard the ship *Brooklyn* from New

York around Cape Horn to Yerba Buena (San Francisco) with Saints from the eastern United States. Brannan had established a colony on the Stanislaus River and then traveled overland in search of Brigham Young and his party, meeting them on June 30. Brannan tried to persuade the vanguard company to press on to the San Francisco Bay area, boasting of the good conditions. Brannan’s boosterism did not sway Young, who affirmed, “our destination is the Great Basin, or Salt Lake for the present.”

At and near the Green River, company members contracted what they called “mountain fever,” a malady that modern medical scholars believe was likely Colorado tick fever. It continued to afflict various company members for the balance of the journey. “About 15 persons have been taken sick within A few days with fever Ague &c,” Wilford Woodruff recorded on July 1. The same day, William Clayton, one of the stricken, wrote, “This morning found myself laboring under a severe attack of the fever,

accompanied with violent aching in the head and limbs.” Erastus Snow, a man in his late twenties who would be ordained an apostle in 1849, described the symptoms of the disease in more detail: “Its first appearance is like that of a severe cold producing soreness in the flesh, and a pain in the head and all parts of the body and as the fever increases the pain in the head & back becomes almost insufferable.” Snow claimed that “an active portion of Physic,” along with medicinal teas, often broke the fever, “though it left the patient sore, weak & feeble.”



*Thomas Bullock*

Mosquitoes also vexed the group. On July 2, Thomas Bullock, a British Latter-day Saint who was clerk of Young’s company, recorded, “Mosquitoes in great numbers, very plaguing.” The next day as the company moved away from the ferry, he noted that they “passed a Mosquito manufactory, immense swarms of them.” William Clayton wrote that they camped that evening “in the midst of an army of mosquitoes. These insects are more numerous here than I ever saw them any where, every thing was covered with them, making the teams restive.” Apostle Orson Pratt likewise encountered “mosquitoes in dense swarms.” The insects even hindered Wilford Woodruff, a faithful journal keeper, as he tried to make his nightly entry on July 4. “I must stop writing,” he apologized, because “the Musketoos have filled my carriage like A Cloud And have fallen upon me as though they intende to devour me.” The only respite the company could find from the hordes of mosquitoes was when the nights became cool, and “they leave us to rest quietly.”

Yet these annoyances did not deter the company from its pioneering objectives. Young’s company, made up mostly of adult men, had the mission to prepare the way for the much larger number of Saints who would follow them to the Salt Lake Valley later that season and in succeeding years. Howard Egan, a major in the Nauvoo Legion and later an agent for the Pony Express and overland mail, noted that after ferrying the last wagon over the Green River on July 3, “we hauled one of the rafts up on the east side of the river for the next company.”

While at the Green River, Thomas Bullock and apostle Willard Richards planted three patches of early yellow and white corn for those following. Some of the Mormon leaders met and decided to send messengers back along the trail to report on their travels and pilot the Saints in the company following. They hoped succeeding groups might learn from their experience. Apostle Heber C. Kimball’s journal concluded, for example, “that a company of fifty wagons is quite plenty to travel together, both on account of the scarcity of grass” and because “small companies will travel several miles further in a day than large companies can.”

On the Fourth of July, some in the company felt little inclined to celebrate American freedom when their constitutional rights had been repeatedly denied them. “This is Uncle Sam’s day of Independence,” wrote Norton Jacob, a captain in the company. “Well[,] we are independent of all the powers of the Gentiles[,] that’s enough for us.” Later in the day, however, the company found a different cause for celebration. Brigham Young and others started back along the trail to help ferry the messengers across the Green River. When they arrived at the ferry, they were surprised to meet thirteen members of the Mormon Battalion group that had enlisted in the U.S. Army for the Mexican War. They were among dozens who had wintered at Pueblo with Saints from Mississippi. After meeting Young and the others, one of the soldiers went with the east-bound messengers, and the remaining twelve went westward with Brigham Young to the pioneer company’s camp, where their arrival was greeted with cheers and expressions of gratitude and glory to God for the joyous reunion.

The pioneer company resumed its journey on July 5. The road was dusty, steep in places, “destitute of grass,” and “without sight of water” for nearly seventeen miles. After traveling through twenty miles of barren plains, they reached Black’s Fork, which was swift but shallow and “somewhat roily.” The grass was still poor and there was no timber. The following day, they crossed Ham’s Fork and a little farther



crossed Black's Fork, where they left the river on an "uneven road with many pitches, caused by heavy rains washing the land generally barren." In the early evening they recrossed Black's Fork and camped for the evening, having traveled around eighteen miles. The scenery of the trail had improved on this day, and several of the pioneers commented on the "prairies ... lined with beautiful flowers of various colors, chiefly blue, red and yellow, which have a rich appearance and would serve to adorn and beautify an eastern flower garden." Although grass was still scarce, the travelers discovered an abundance of wild flax and currants.

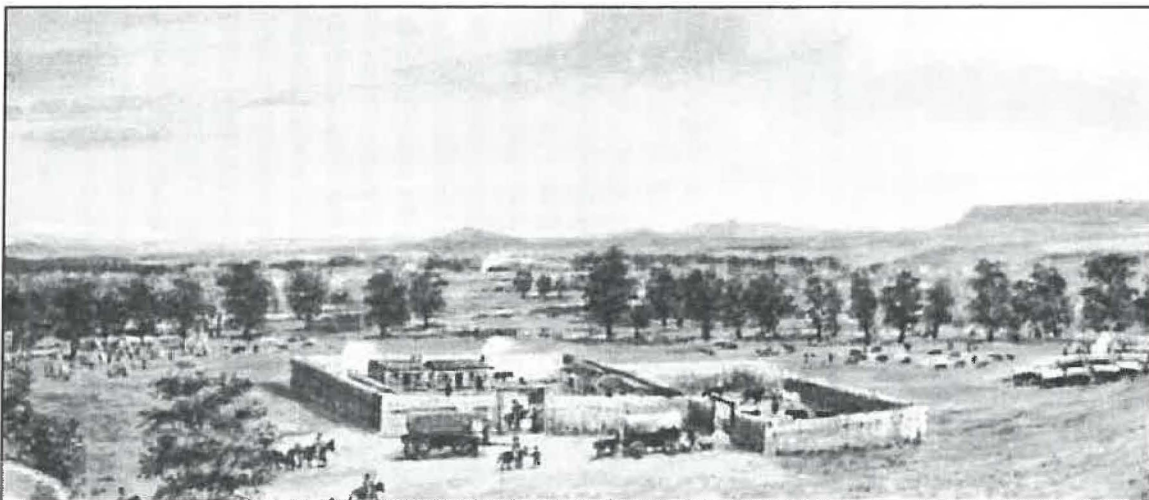
On July 7, the company arrived at Fort Bridger, the last charted settlement they would encounter before reaching the Salt Lake Valley. After all the talk about the famous Fort Bridger, some in the company were disappointed to find that "the Fort was merly A small traidi[n]g post." Several Indian lodges stood nearby. Clayton described the fort itself as "two double Log houses about 40 feet long each and joined by a pen for horses about 10 feet high, constructed by poles upright in the ground, close together, which is all the appearance of a Fort." Though the fort itself proved unremarkable as a structure, its lovely situation among streams and plentiful vegetation impressed the pioneers, who in recent days had traveled mainly across dry, dusty country. The company went about a half mile past the fort before setting up camp, remaining near Fort Bridger from July 7 to 9. During their stay, they made wagon repairs and traded at the fort. In an attempt to exchange such goods

as rifles, knives, and clothing for buckskins and buffalo robes, the company found prices rather high.

Several also tried fishing in the nearby streams. Orson Pratt in his entry for July 6 had observed that "salmon trout" ranging from one to ten pounds had "been caught with the hook" in streams west of South Pass. On July 7, Thomas Bullock noted, "Several Speckled Trout were caught which did my eyes good to look at once more." An avid fisherman who had learned fly-fishing while on a mission in England, Wilford Woodruff had taken careful note of the catches and fishing conditions. On July 2, for example, he had recorded that "several Salmon trout were Caught at the mouth of a slue on green river near the ferry" On July 7, he wrote of crossing "more than A dozen trout Brooks" with "swift but clear" water and "hard, cold, gravelly, bottoms." Some of his companions "cought several brook trout[,] the first I had seen since I left England." While the company paused near the fort, Woodruff's thoughts again turned to fishing.

Woodruff wrote that on July 8 after breakfast, "I riged up my trout rod that I had brought with me from Liverpool, fixed my reel, line, & Artificial fly & went to one of the brooks Close by Camp to try my luck cetching trout." Men at the nearby "fort said there were but vary few trout in the Streams." Several Mormon men "were already at the Creeks with their Rods & lines trying their skill baiting with fresh meat & grass hoppers, but no one seemed to ketch any." Woodruff had never fly fished in North America "or ever saw it tried," but thought he would test his skills.

"I went & flung my fly onto the wa[ter] And ... watched it as it floated upon the water with as much intens interest As Franklin did his kite when he tried to draw lightning from the skies," he wrote. "I saw the nimble trout



*Fort Bridger Painting by William Henry Jackson*



dart my fly hook himself & run away with the line but I soon worried him out & drew him to shore." Fishing morning and evening for a total of two or three hours, Woodruff "caught twelve in all And About one half of them would weigh about : of a pound eac[h]." His fellow camp members "did not ketch during the day 3 lbs of ... trout in all," which, to Woodruff, "was proof positive ... that the Artificial fly is far the best thing now known to fish trout with."

When the company reached the fort, the Mormon Battalion members in the group recognized trapper-trader Tim Goodale, whose men had stolen Mormon mounts in Pueblo. Battalion sergeant Thomas Williams wanted to arrest Goodale or one of his men, but as William Clayton reported, "he can get no encouragement from president Young to make the attempt." Brigham Young seemed to recognize the folly in creating bad will at the fort when thousands of Saints would yet pass by it. Despite Young's discouragement, Williams seized a horse from Goodale, gave him a receipt for it, and told him to settle the matter with his man who was guilty of the theft. The next morning, after Williams and Samuel Brannan were sent back along the trail to deliver a message, Brigham Young wisely returned the horse to Goodale in what Thomas Bullock described as "the neatest, quietest, prettiest way possible." The grateful trader "expressed his thankfulness to 'Capt[ai]n Young."

Before he left California in early 1847 to head east in search of Young, Brannan had obtained directions from the enterprising Lansford W. Hastings, who was anxious to direct settlers to California via a cutoff south of the Salt Lake. On July 8, Bullock copied "Hastings directions from Bridgers Fort to the



*The Needles, Southwest Wyoming*

Settlements in California[;] also a map of the route, returning the originals to brother Brannan." Leaving Bridger on July 9, Erastus Snow noted that they left "the Or[e]gon road" and headed toward "the Southern extremity of the Salt Lake," the area of interest to the company's leaders. "Fortunately for us," Snow remarked, "a party of Emigrants bound for the coast of California passed this way last fall." The Donner-Reed party's track helped illuminate Hastings's crude map, though Snow worried that "their trail is now in many places scarcely discernable." The faint, rough trail southwest would require frequent repairs or improvements on the part of the Mormon pioneers.

On July 10, they traveled over what William Clayton termed "the most mountainous country we have yet seen." Their lengthy journey that day took them over lofty ridges, the highest being described by camp scientist Orson Pratt as "the summit of the dividing ridge between the waters of the Gulph of California & those of the great Salt lake" and measured by him as "7700 feet [above sea level], being 615 feet higher than the South Pass at the head of the Sweet Water." This point on Quaking Asp Ridge, below the summit of Aspen Mountain, was the highest point on their trip.

As they journeyed, the pioneers noted wild animals and natural features of the landscape. Some of the group saw three grizzly bears, a sow and two cubs, which bounded over an even higher ridge to the south. One camp member caught a young eagle with a six-foot wingspan. The camp also discovered several mineral springs, one of which they called "Gunpowder Spring," the Water bubbling up clear-tasting like Gunpowder & smelling like rotten Eggs." They also found "a Copperas Spring," which turned the soil red.

The evening brought another surprise. "Just before our encampment," Orson Pratt wrote, "as I was wandering alone upon one of the hills exam[in]ing the various geological formations, I discovered a smoke some two miles from our encampment which I expected arose from some small Indian encampment. I informed some of our men & they immediately went to discover who they were; they found them to be a small party from the bay of St. Francisca on their way home to the States They were accompani[e]d by Mr. Miles Goodyear, a moun-

taineer." Goodyear had established a fort and garden on the Weber River where the city of Ogden, Utah, would later be situated. After earlier mountaineers had cast doubt on raising crops in the Salt Lake Valley because of the short growing season, the Saints found Goodyear's report of conditions encouraging.

The company awoke on July 11 to find ice in the water buckets. Resting on the Sabbath, the camp members explored the surrounding area and made several fascinating discoveries. They found a sulfur spring with a distasteful smell. Clayton observed, "The surface of the water covered with flour of sulphur and where it oozes from the rock perfectly black." The next discovery was an oil spring, which proved beneficial. The oil had the appearance of tar, and the travelers used it to grease their shoes and gun stocks and to refill their tar buckets for greasing wagon wheels. Bullock observed that "it burned bright like oil." Pleasantly surprised by these discoveries, Bullock recorded, "Here are Pure Water Springs, a creek, a Sulphur Spring, & a Pitchy or Greasy Spring within 12 miles of Camp it appears as if Nature herself had separated her different productions for the especial use of the Persecuted Saints on their journey." The company also found that "the country grows better as we proceed west," though some were disappointed when they remembered and compared it to the rich, green land they left behind.

Two branches of the trail led to the head of Echo Canyon. The camp continued forward on Monday, July 12, choosing by camp vote to take the northern branch recommended by Goodyear. They stopped around noon near the conglomerate rock formations later travelers called the Needles. Woodruff wrote, "Its spires were reaching up like the pyramids of Egypt." The evening before, Brigham Young had shown symptoms of mountain fever. His condition grew worse during the morning's travel, and he and several others remained encamped near the Needles overnight. The rest of the company moved forward across the future Utah-Wyoming border and through beautiful valleys with many springs and antelope but little timber. The company decided to camp near what today is called Cache Cave. The cave, an eroded hollow in sandstone, housed several birds' nests and was infested with bugs. Many of the men carved their names into the soft rock. Erastus Snow record-



*Cache Cave*

ed that around their camp area they also "saw Bones & ancient signs of Buffaloo But we are told by Mountaineers that there have been none of these Animals west of the Pass for some years."

The next morning, Brigham Young remained sick and unable to join the advancing main company. With their president incapacitated, other Mormon leaders held a council and decided to send many of the men and wagons ahead under the direction of Orson Pratt to scout and improve the trail. The pioneer company thus divided into three groups an advance company, a main company, and a sick detachment.

The following day, July 14, the advance company proceeded down Echo Canyon to the Weber River. On July 15, Wilford Woodruff, who had been with the main company, took his carriage back to the sick detachment so Brigham Young and another sick man could ride more comfortably. Soon the rear wagons caught up with the main company, and the group proceeded into Echo Canyon. The roads were rough "with perpendicular Rocks on one side & steep Bluffs on the other." In places the trail grew narrow and Bullock wrote that the pass, at times, appeared "blocked up by the Rocks, some places could not see two Wagons ahead." The harsh trails took their toll on the wagons and the sick, and by the morning of July 17, Young was so ill that the company had to stop. They spent the afternoon resting and praying for the sick.

Sunday, July 18, the main company held two Sabbath meetings in a bowery built for that purpose. In their morning meeting, they united in prayer in behalf of Brigham Young and the other sick pioneers.



According to William Clayton, Kimball “proposed to the brethren that all the camp, except prest Young’s and 8 or 10 other wagons with brethren enough to take care of him ... proceed on tomorrow and go through, find a good place, begin to plant potatoes, &c, as we have little time to spare. The proposition was acceded to by unanimous vote.” In the afternoon meeting, Kimball and others spoke, and the bishops administered the sacrament of the Lord’s supper to their congregants. Erastus Snow observed, “In the afternoon The President who had been nigh unto Death; was very sensibly Better and the effects of the Prayers of the Brethren were visable throughout the camp.”

From that point until they reached the Salt Lake Valley, the Mormon pioneers continued in three basic



*LDS Emigrants near Coalville, Utah*

groups, communicating by means of messengers. Onward each company went, up Main Canyon, through Dixie Hollow, along East Canyon, up and down Big and Little Mountains, and down Emigration Canyon, as these places would come to be called. As the pioneers pushed ahead, they met and overcome obstacles and improved the trail for those that followed. William Clayton called the “rough mountain road” from the Weber River to the Salt Lake Valley “decidedly the worst piece of road on the whole journey.”

On July 20, apostles Willard Richards and George A. Smith, who were both in the main company, found a letter left by Orson Pratt, leader of the advance company. After reading the letter, Richards and Smith gave an assignment to Erastus Snow. Snow wrote that the two apostles “determined on Sending me in the morn-

ing with a letter to overtake Elder Pratt & accompany him to the valley & assist in exploreing & searching out a suitable place for putting in our seeds.”

The next day, July 21, Pratt and Snow scaled a steep hill, later called Donner Hill, which the Donner-Reed party had climbed the previous year to avoid traveling through the canyon undergrowth. When Pratt and Snow reached the top, they saw “a broad open valley ... at the N. end of which the broad waters of the great Salt Lake glistened in the sunbeams, containing high mountainous Islands.” Pratt wrote, “After issuing from the mountains, among which we had been shut up for many days & beholding in a moment such an extensive scenery open before us we could not refrain from a shout of joy which almost involuntarily escaped from our lips the moment this grand & lovely scenery was within our view.” Pratt and Snow emerged from Emigration Canyon to become the first members of the pioneer company to enter the Salt Lake Valley. They explored the valley for several miles, and then returned to the canyon to join the others.

Consistent with Brigham Young’s instructions, on July 22, Orson Pratt, George A. Smith, and a few others went on an exploratory mission to locate a suitable place to plant seeds, leaving the rest of the camp to work on the road through the canyon. The exploratory group traveled northwest toward the lake and discovered several streams with clear, clean water, surrounded by vegetation. Away from the streams, however, “the grass had nearly dried up for want of moisture,” though “the soil was good.” In these dry areas, the explorers found “large crickets about the size of a man’s thumb.” Overall, the men seemed pleased, finding good soil, lands for grazing, and water sources. Norton Jacob wrote, “We have here a mild summer weather, a serene atmosphere, a most beautiful clear sky, with an excessive dry climate & arid soil; if it could receive timely rains, it would be one of the most beautiful fertile regions on the face of the earth.” William Clayton recorded, “I am happily disappointed in the appearance of the valley.”

As the exploratory group approached the lake, they found “boiling hot Sulphur & Salt Springs.” They came to a salt marsh fed by the springs, where they traveled through “cane Brake, Bull Rushes, & a kind of large three cornered grass” that reached their



“shoulders on horseback.” They then passed through “a dry Salt Plane,” arriving at a small lake, on the borders of which was “the largest and warmest Spring” they had seen. Snow recorded, “We had no instrument to determine the degr[ee] of Temperature but suffice it to say that it was about right for scalding hogs.” He continued to surmise that these springs “are the greatest facilities for a Steam Doctor I ever saw and a stone in the center of the stream ... seemed to say this is the seat for the Patient.” Snow tried out the stone seat, but quickly gave up, finding the water “impregnated with Salt & Sulphur.”

On this same day, the members of the advance and main companies completed the road and entered the valley, camping a few miles west of the mouth of Emigration Canyon. With similar emotions as the two scouts, the company’s members were ecstatic to reach their destination. Bullock wrote that on his first sight of the valley he shouted, “Hurra, hurra, hurra, heres my home at last.” In the evening, a council was held at Willard Richards’s wagon, where it was decided to move the next day to a choice spot located by the explorers. Richards dictated a lengthy report to Young.

On Friday, July 23, the pioneers moved to the general area that would develop into the heart of Salt Lake City. There, in behalf of the whole group, Pratt offered a prayer of thanks and dedication, after which the pioneers went to work plowing, building a

dam for irrigation, and otherwise preparing to plant their crops. According to Norton Jacob, during the dedicatory session that day, Pratt stated “that we had been two years striving to get to this place which was had in contemplation before we left the Temple at Nauvoo as the place of our location somewhere in this great valley.” In the meantime, the last detachment of wagons was still making its way through the canyon. The sick were slowly recovering, though the road was difficult, and Egan recorded, “This day has been the hottest day we have experienced since we left winter quarters and the hardest days travel upon our Horses there was not a breath of air in the ravine and the dust was almost suffocating.”

Finally, on Saturday, July 24, 1847, Brigham Young and those who were part of the rear detachment emerged from Emigration Canyon. By means of messengers shuttling between the companies, he had provided direction to those ahead and been kept abreast of their progress. Wilford Woodruff, in whose carriage Young rode, wrote, “President Young expressed his full Satisfaction in the Appearance of the valley as A resting place for the Saints.” Years later, Woodruff gave a more elaborate description of Young’s reaction. “While gazing upon the scene before us, he was enwrapped in vision for several minutes. He had seen the valley before in vision, and upon this occasion he saw the future glory of Zion

and of Israel, as they would be, planted in the valleys of these mountains. When the vision had passed, he said, ‘It is enough. This is the right place. Drive on.’ So I drove to the encampment already formed by those who had come along in advance of us.” The following day was the Sabbath, and on Monday, Young went on an exploring circuit with several others, during which, according to William Clayton, he signified “a wish to ascend a high peak, to the north of us.” Still weak from the



*The Pioneers' First View of Salt Lake Valley by Utah artist Lewis A. Ramsey depicts Brigham Young's party on the south side of Emigration Canyon on July 24, 1847*

effects of his illness, Young labored to the top of what would be called Ensign Peak, for according to Woodruff, they considered it "a good place to raise An Ensign." On his way to the peak, Young designated a spot on which to build a temple, a decision that the view from the peak only seemed to confirm. On that spot over succeeding decades, the Salt Lake Temple would rise.

With the temple as the physical and spiritual center point of their new home, the Latter-day Saints laid out a city from which additional pioneer companies set forth over succeeding decades, establishing hundreds of settlements in the west to serve as gathering

places for the Saints. The trail designated by Young and the first 1847 company, together with its variants, became the path over which more than 60,000 other Latter-day Saint pioneers traveled until the completion of the transcontinental railroad in 1869 brought an end to the era of pioneer overland travel to Utah.

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## Echo Canyon

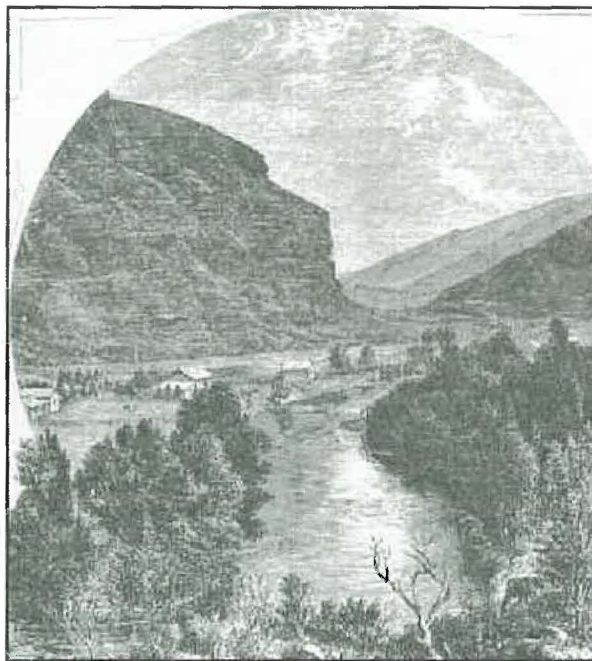
David L. Bigler  
Former OCTA President

Approaching Salt Lake Valley from Fort Bridger, Richard Burton said,

the eye runs down the long bright red line of Echo Canyon, and rests with astonishment upon its novel and curious features, the sublimity of its broken and jagged peaks, divided by dark abysses and based upon huge piles of disjointed and scattered rock.

For the renowned English explorer, who saw it in 1861, the only fault of this geological wonder was that "its sublimity will make all similar features look tame."

How others viewed Echo Canyon over the years depended on their point of view. To less imaginative fur trappers it was just "Red Fork." Equally unimpressed in 1846 was James Frazier Reed of the Donner Party who called it "Red Run valley." It was more than just a fork or valley to some forty-three thousand Mormon pioneers, who traveled to Salt Lake Valley from 1847 to 1860. To them, the inspiring rock defile was the "Gateway to Zion." And for even greater numbers during that time, who poured through the winding twenty-two-mile corridor through the Wasatch Mountains, Echo Canyon was a



*Mouth of Echo Canyon - 1879 Sketch*

portal to three major routes that led to gold in California or land in Oregon.

Echo Canyon owes its unique role in the western migration to two geographical forms that govern



overland travel across the Great Basin by any mode of transportation, wagon, automobile, rail, or foot. The first is the Wasatch Range that runs from southern Utah north to the Snake River Plain. The main natural passages in this imposing barrier are at Soda Springs on the Oregon-California Trail, where the Bear River breaks through the range, and turns sharply south to Great Salt Lake, and Echo Canyon, formed by ages of erosion by the watercourse that winds through it, Echo Creek, or Red Fork, a tributary of the Weber River.

The other geological feature that shapes travel west from Salt Lake Valley is the Great Salt Lake, a briny body some seventy miles long and fifty miles wide, which forces travelers in any age or mode of transportation to go around it either on the north or south. To circle the lake on the north promised firmer ground, but more miles to cover to reach the Humboldt River headwaters. The south side of the lake offered a more direct passage, but confronted wagon travelers with the perilous mud flats, known as the Great Salt Lake Desert, that stretched as far south in places as forty miles or more.

For pioneers, forty niners, railroad engineers and highway builders alike, the question has always been: Which way to go? And the obvious answer, the shortest way, made Echo Canyon a vital artery in western migration and development. In this winding mountain corridor, one can discover the tracks of the 1846 Harlan-Young Party, the first wagon train to pass through it, the Donner Party, Pony Express, Overland Stage, Pacific Telegraph, transcontinental railroad, the Lincoln Highway and today's modern Interstate Highway System. Since the first wagons rolled through, the number who have marveled at the massive red-walled echo chamber is beyond counting.

A distinctive landmark in the canyon is Cache Cave, located about twenty miles from today's Echo, Utah, described by 1847 Mormon pioneer William Clayton as "a cave in the rock about thirty feet long, fifteen feet wide and from four to six feet high." Known as a "register of the desert," the walls of the cave carry the names or inscriptions of those who cached furs or found shelter there over the years, Native Americans, fur trappers and emigrants. This historic site is just a short distance off the highway, but located on private property and inaccessible to visitors.

While Echo Canyon was an entry to the promised land for Mormon pioneers, it was also a magnificent channel to the three important segments of the California-Oregon trails, which give OCTA's Utah Chapter the name, Crossroads.

The earliest, and shortest-lived route for wagons, was the Hastings Cutoff that doomed the Donner Party, but became in later years the final line of the Lincoln Highway and I-80. Opened in 1846 by promoter Lansford Hastings, this so-called short cut to the south of Great Salt Lake took wagon travelers on an eighty-mile waterless jornada across the salt flats to Donner Spring at the foot of 10,715 ft. Pilot Peak on today's Utah-Nevada border. Souvenir hunters and archaeologists have been recovering salt-encrusted remains of abandoned wagons ever since. By the early 1850s travelers largely avoided the route.

Before then, Kentuckian Samuel J. Hensley in 1848 got stuck on its mud flats and found a better way back to northern California. Seeking firmer ground, he led his ten-man pack party north from Salt Lake Valley around the lake's north shore to bypass Fort Hall and join the California Trail in the Silent City of Rocks. On the Humboldt, Hensley met a party of Mormon Battalion veterans, including gold discovery diarists Azariah Smith and Henry W. Bigler, who took the first wagons over his tracks to Salt Lake Valley. Over the next twenty years, a stream of emigrants in summer months followed the route, known as Hensley's Salt Lake Cutoff, from Echo Canyon to California and Oregon.

Hastings and Hensley fathered the cutoffs that ran west and north, respectively, but no one sired the route south, which has gone nameless to this day. Even so, the trail south after passing through the Wasatch Range was especially popular in late fall because it led to an existing all-season trade route to southern California. From Salt Lake Valley the no-name trail threaded a string of settlements in central Utah, known as the Mormon Corridor, to meet the older Spanish Trail to Los Angeles, near present Cedar City. Near the joining of these routes in southwest Utah is Mountain Meadows, where the emigrants rested their animals and braced themselves for the desert crossing. Here too a handsome monument preserves the memory of 120 California-bound emi-



grants from Arkansas who were massacred there on their way west in September 1857.

If Echo Canyon was a portal to three major routes, it was also a funnel in travel that could be plugged to strangle east-west communications across the Great Basin. At the approach of a U.S. military expedition in 1857 to escort a new governor and impose federal authority in a defiant territory, then governor Brigham Young declared martial law, ordered the militia, known as the Nauvoo Legion, to repel the imagined invasion, and shut down travel across the territory without a permit. To make these measures effective, Mormon soldiers fortified the narrow entry to the Mormon stronghold. Echo Canyon, in effect, made it possible for a territorial governor to control a nearly 200,000 square-mile section of the American west that ran from the Wasatch Mountains to the Sierra Nevada.

On inspecting Mormon defenses in 1858, U.S. 10th Infantry Capt. Jesse A. Gove reported "the canyon along its entire course presents extraordinary advantages to a bold, active, determined people for the successful prosecution of guerrilla warfare." For many miles the officer observed "rocks and stones

piled up on the ridge at the north side of the canyon or to our right as we came in. These stones were intended, in some places, to serve as a breastwork, from behind which the Saints could discharge their powder and lead at the advancing troops." Some of these crude fortifications still frown down on the highway from strategic points along the canyon rim as reminders of the so-called Utah War of 1857.

Happily Echo Canyon was reopened in 1858 to give travelers an uninterrupted passageway through the Wasatch Mountains ever since. Echo Canyon was the route of the Pony Express and its successor, the telegraph. Builders of the Transcontinental Railroad in the late 1860s found that a route through Echo Canyon to be the only logical choice. Paralleling the railroad came roads and highways, the latest being Interstate 80. Over the years, the historic red rock corridor has served every form of travel and communications across the central part of the western United States. From Salt Lake Valley modern highways today fan out and parallel early wagon routes to California and the Northwest. The great red gorge still fills a vital and growing role in the story of America's continuing move west.



*Echo Canyon Cliffs*

# Into the Salt Lake Valley, 1847

Randy Dixon

It is ironic that the stretch of Mormon Trail which is closest to Salt Lake City—the portion from the mouth of Emigration Canyon to the trail's end on City Creek in what is now downtown Salt Lake City is the least well-defined segment of the trail.

The settlement of the Salt Lake Valley obliterated most of the evidence of the trails and campsites, so when interest in historic sites was kindled in later years, differences of opinion as to where events had transpired led to controversy and the misplacement of historical markers.

The study of records left by members of the Mormon Pioneer Company, coupled with an understanding of the original geography of the valley, makes it possible, even at this late date, to understand reasonably well the location of the trails and campsites of the founding year.

## Trail of July 22, 1847

In descending Emigration Canyon the Pioneer Company followed the "road" made by the Donner-Reed Party the year before. Finding the mouth of the canyon blocked by trees and rock outcroppings, the ill-fated emigrants chose to avoid these obstacles by climbing a steep hill, since known as Donner Hill, to the south of the canyon. Instead of following their example, Mormon pioneers chose to take the time to clear a road through the dense growth along the creek rather than risk the steep incline of the hill.

This obstacle overcome, William Clayton described the entry into the valley, "... the brethren succeeded in cutting a pretty good road along the creek and the wagons proceeded on, taking near a southwest course. We found the last descent even but very rapid all the way." Their route followed Emigration Creek, which runs in a southwesterly course down to the valley floor in a deep ravine. Albert Carrington's account of the descent mentioned the creek: "... as we proceed down [the] run [Emigration Creek] towards the lake, timber & brush give out ... [we] passed on down run & camped."

Historians studying this part of the trail have come to similar conclusions about its direction. In the Pioneer Centennial year of 1947, Preston Nibley wrote of the pioneers "... they then followed down Emigration Creek until they came to the banks of another stream, after having traveled five and one half miles in a southwesterly direction."

Leland H. Creer, writing the same year, said that they

"... entered the Valley of the Great Salt Lake not over the route identified today as the Emigrant Road (west north-westward along Fifth South Street) but over a route which turned southwestward over the bench, crossing Thirteenth East Street probably near the vicinity of the present Westminster College on Seventeenth South and extending westward until encampment was made near Fifth East, on the north bank of Parleys Creek."

In 1951 Dale L. Morgan gave the most detailed account:

The Mormon wagons, in short, kept down the gulch of Emigration to a point immediately above the present Hogle Gardens Zoo, then to avoid a marsh in the bottoms, pulled up on the benchland to the south, roughly paralleling the present Wasatch Boulevard but a few yards below it to arrive at the bench at the intersection of Wasatch Boulevard and Michigan Avenue, the northeast extremity of the present Bonneville Golf Course. From this point they wound down the sloping plateau to camp on Parleys Creek, in the vicinity of present 5th East and 17th South streets.

It is probable that, upon reaching the benchland, the pioneers rejoined the Donner-Reed Trail that they had been following until their detour around Donner Hill. David E. Miller made that conclusion in 1957 when he wrote:

"... A careful reading of the various accounts leads me to the belief that, after cutting a new road through the mouth of Emigration Canyon, the expedition turned to the southwest near the present location of Hogle Zoo and followed the Donner tracks all the way to ... where they camped on the evening of July 22."



To sum up, the pioneers departed Emigration Canyon to the south of the creek, then followed its southwestern course into the valley to the vicinity of what is now Fifth East below Seventeenth South where the creek turned north. From that point the company continued west to the banks of what we know as Parley's Creek where they made camp.

Thomas Bullock described the campsite in his journal:

"... after wading thro thick grass for some distance, we found a place bare enough for a camping ground, the grass being only knee deep, but very thick; we camped on the banks of a beautiful little stream which was surrounded by very tall grass."

The location of this campsite was pinpointed in later years by one of the pioneer company, Charles A. Harper, who was interviewed by a Salt Lake Tribune reporter for the Utah Pioneer Jubilee in 1897:

"He says there seems to be some difference of opinion as to where the pioneers camped in the valley. According to his statement, the company he was in arrived on July 22nd, and camp was made on the bed of Parley's Creek, near the site of President Woodruff's villa."

Harper was even more precise when he added a note to his original 1847 diary that the campsite was "nearly opposite Woodruff's home." Wilford Woodruff's "villa" was located on his farm on the west side of Fifth East north of Seventeenth South. Parley's Creek ran a short distance to the east.

### Trail of July 23, 1847

On the morning of July 23 the company set out for its final destination, which had been selected by Orson

Pratt's exploring group the previous day. Before moving north, however, "a backtrack about a mile" was made according to Thomas Bullock. No mention was made of the reason for the backtrack, but it likely was done to avoid the marshes and tall grass where the waters of Parley's, Emigration, and Red Butte creeks converged, creating an obstacle between the campground and their intended destination on what became known as City Creek. They backtracked probably to the vicinity of what is now Eleventh East below Seventeenth South, at the foot of the bench.

From that point, Bullock records that the company took "a strait road to a small Grove of Cotton Wood Trees on the banks of a beautiful stream." The route probably passed through today's Liberty Park ending at approximately Third South and State streets.

### Campsite of July 23, 1847

In 1880, at the Pioneer Day celebration in the Salt Lake Tabernacle, Erastus Snow discussed the July 23 campsite, putting it into the context of the city that had grown up around it.

"... on the 23rd we made our camp on City Creek, below Emigration Street [Third South] ... on the old channel of the creek; the creek divided just below this Temple Block, one branch running west and the other south. It was on the south branch of the creek we formed our camp. ..."

The south branch of City Creek, which Snow referred to, crossed Third South mid-block between Main and State streets. From this we can deduce that the campground was located on the eastern part of the city block bounded by Third and Fourth South

and Main and State streets. While camped at this site the pioneers' first efforts at settlement began.

When Salt Lake City was surveyed the campsite was divided into lots and distributed to settlers. City Creek's south branch disappeared when its waters were united





with the west branch in a channel down North Temple. With the disappearance of recognizable landmarks, the location of the campsite shifted in public memory to the nearby Eighth Ward or Washington Square which, beginning in 1860, was the campground for incoming immigrant companies. When a monument commemorating the 1847 campground was erected for the Pioneer Centennial in 1947 it was placed there.

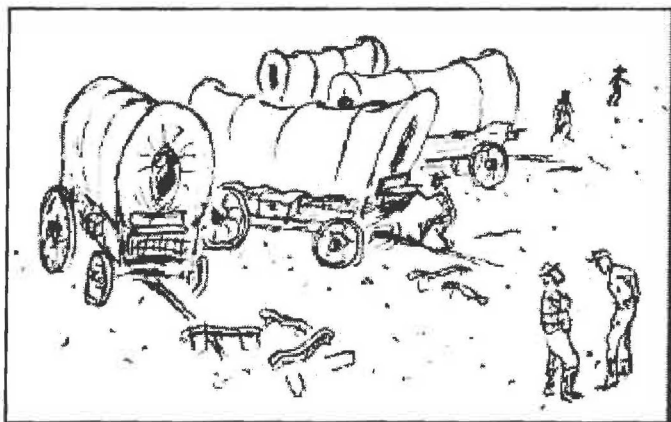
## Route of Brigham Young, July 24, 1847

On July 24 Brigham Young with the last of the Pioneer Company arrived in the valley. On leaving Emigration Canyon he stopped for a view of the valley below and uttered the immortal words, "This is the right place, drive on," to Wilford Woodruff. It appears that Young's group followed the trail of those who preceded them two days before. One member of the group, Howard Egan, gave a brief description of the route in his diary: "We then left the ravine [Emigration Canyon] and turned to the right and ascended a very steep pitch, where we beheld the great valley of the Salt Lake spreading out before us." Egan was describing leaving the canyon where it makes a sharp turn to the right, then making the steep climb to the bench on the south.

The diary of another member of the group, Heber C. Kimball, also described the entrance into the valley:

"A little further we ascended a steep pitch, from whence we beheld the Great Valley of the Salt Lake spreading before us. ... We found the balance of the road good and rapidly descending for several miles."

Both accounts mention ascending a steep pitch on leaving the canyon. This would fit the description of



the "hogback" that extends along the south side of the creek. The mention of a "road" suggests that an established route was being followed. It also seems unlikely that Wilford Woodruff, with the ailing Young in his carriage, would have blazed a new trail.

Confirming this conclusion is an account by James A. Little based on the reminiscences of his uncle, Lorenzo Dow Young. Young had accompanied his brother Brigham Young into the valley on July 24. Little wrote:

"A short distance below the mouth of Emigration Canyon is a slight elevation of the table land, generally designated, in the early days of Salt Lake City, as 'The Hog Back,' which hides the valley from the traveler until the top of it is reached. From this point the Pioneers had their first good view of the object of their tedious journey across the plains—the valley of the Great Salt Lake. President Young followed the wagon tracks of those who had preceded him a day or two before into the valley."

Little's account was supported in later years by historians Creer and Morgan. Wrote Creer: "... it is clear that President Young followed the original Pioneer road into the valley, which turned to the south, not the north at the mouth of Emigration Canyon. ..." Morgan, after describing the July 22 trail running to the southwest added: "This, it should be noted, was also the route of Brigham Young two days later."

The conclusion reached by these historians is not, however, the prevailing view today.

In July 1921, the Mutual Improvement Association of the LDS Church erected a concrete marker bearing the legend "This is the place" at a site north of the creek near the mouth of the canyon. According to the Deseret News, the marker and accompanying pageant "settled a long argument as to just where President Brigham Young first designated the stopping place for the pioneer band."

"This is the Place" marker erected by the MIA in July 1921 is still standing, hidden by brush from easy viewing, east of the elaborate 1947 monument.

The site, called "Pioneer View," was located for the MIA by William W. Riter, a prominent Utah businessman who, at age nine, arrived in the valley a few weeks after Brigham Young. Of Riter, the Deseret News stated: "No one living was better acquainted

with the history of the early settlement of Salt Lake valley than he and no one could be more confidently re-lie upon to establish the exact location of the spot from which Brigham Young first looked out over the valley on July 24, 1847.”

In his speech at the marker's dedication, Riter defended the choice against those who argued for its location to the south of the creek:

“... a good many have claimed that they went over what is called the Hogback—this ridge right below here. If you will go down there and note how the hogback was originally, you will see that was absolutely impossible; but I am inclined to think that even if they could, no view of the valley could be had from that point. That passageway was cut through there, at various times from year to year; but originally it was absolutely impassable.”

The erection of the “Pioneer View” marker seemed to settle the matter. When the present monument was erected for the Utah Pioneer Centennial in 1947 it was located not far from the 1921 marker.

Those who disagreed about the site accepted the monument as symbolic. Dale L. Morgan, for example, commented, “The ‘This is the Place Monument’ north of the gulch of Emigration serves to commemorate imposingly the historic circumstances of the Mormon arrival in Salt Lake Valley, but is not to be taken as marking the site where Brigham Young got his first sweeping view of the future home of the Saints.”

## Trails after July 24, 1847

On July 27 Amasa M. Lyman, Sam Brannan, Rodney Badger, and Roswell Stevens rode into the valley, the first arrivals since Brigham Young's July 24 group. It is not known what route they took, but since they were on horseback they probably broke their own trail, taking a more direct route to the City Creek camp.



First “This is the Place” Monument

July 29 brought a large body of members of the Mormon Battalion and Mississippi Saints into the valley. It is clear that they did create a new trail. They crossed to the north side of the Red Butte Creek at the canyon's mouth then headed west, again crossing the creek and leaving the bench near present Ninth South and Thirteenth East streets. From there the trail turned northwest to the camp on City Creek. It is likely that this same trail was taken by those returning to Winter Quarters, which William Clayton mentioned in his journal on August 17: “Started out at 8:10 and found the distance to the mouth of the canyon five miles, the difference arising from making a road across instead of following the first one.”

This would also have been the route followed by the large pioneer companies that began arriving in September 1847. Most of the newcomers probably assumed that their trail was that which had been followed by their predecessors on July 22 and July 24. This may explain some of the later confusion on the matter of trails. Among those arriving in October 1847 was William W. Riter.

For the 1848 emigration, the route changed again. In order to avoid interference with the laying out of streets and lots, the road was moved to the north, descending from the bench at the head of Third South, therefore to be known for many years as Emigration Street.

Artist Alfred Lambourne, who arrived in Utah in 1866, published his “first view” of the Salt Lake Valley in his book *The Pioneer Trail* (1913).

As we remember Utah's founders, it is important that their story be told accurately, determining (as much as possible) their objectives, their problems, and the routes actually traveled, while avoiding the myths and legends that have developed over time.



# Crickets Attack the Crops – Salt Lake Telegram, Oct. 31, 1934

By J. Cecil Alter

The cricket episode of 1848 was referred to by some of the diarists at the time, but none of them seem to have assigned to it any greater importance than frost, for instance, in depleting the crops that spring. But pioneers who suffered these losses and participated in the desperate cricket offensive, wrote of the occurrence in reminiscent vein many years later, giving the event its present place in history.

Diaries are scarce from that time, but John Steele says "Sunday, June 4, (1848), there is great excitement in camp. There has come a frost which took beans, corn and wheat, and nearly everything; and to help make the disaster complete, the crickets came by the thousands of tons, and the cry is now raised: 'We cannot live here; away to California,' and the faith of many was shaken, but the Lord holds the balance of power."

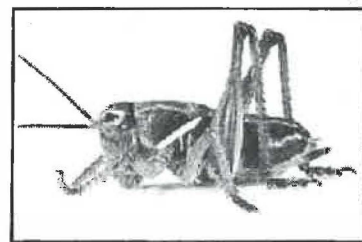
The general epistle of April 6, 1849, the first issued after the visitation of the crickets, reads "Most of their early crops [of 1848] were destroyed, in the month of May, by crickets and frost, which continued occasionally until June;" Neither this epistle nor Steele's journal mentions seagulls.

"The Rocky mountain cricket as now remembered, when full grown," wrote Anson Call, "is about one and one-half inches in length, heavy and clumsy in its movements, with no better power of locomotion than hopping a foot or two at a time. It has an eagle-eyed, staring appearance, and suggests the idea that it may be the habitation of a vindictive little demon."

"I am sure that the wheat was in head and that it averaged two or three crickets on every head, bending them down. One could not step without crushing underfoot as many as a foot could cover," wrote Mrs. Clara Decker Young. "Word was sent back that probably no crops could be raised that year, and advising that no further emigration should come on that season. John Young wished to send an express to his brother, the president, advising him not to bring any more people into the valley, as there was danger of starvation."

"A messenger met our company at the mouth of Echo canyon," said Elizabeth Dilworth, "and apprised us of the scourge of crickets. We were told to be as sparing of our food as possible as famine was facing the people during the coming winter." In the general epistle of April, 1849, is this further

statement: "The month of March and April to 4th (1849) was very mild and pleasant, and many small crickets have made their appearance, but large flocks of plover have already come among them and are making heavy inroads in their ranks."



*Mormon Cricket*

"In the spring and early summer of 1848," wrote John Hess, "the crickets made their appearance in countless numbers and attacked our grain crops. We fought them until we found that we were about overpowered when very providentially the seagulls came and completely devoured the crickets, so that the balance of our crops matured and our pending starvation was averted."

"The crickets came from Arsenal hill (the flat below Ensign peak) in great numbers," John Nebeker told Bancroft's researchers in 1884. Channels were dug and filled with water to prevent their travel, but they would throw themselves across; it was impossible to fight them back. His attention was called to a dark cloud, which proved to be a flock of gulls. They made a line for the crickets and remained half an hour until they cleaned them out. The crickets covered all the land from Warm Springs to Big Cottonwood. They were most destructive in spots.

"Every means was used for their destruction. They devastated hundreds of acres; and as they would rise and fly high in the air, the air would be darkened with them. They seemed to be massed together and to take but one direction, flying no more than eight or ten miles perhaps, and then settling upon another field of action. They only exterminator seems to be the seagulls. They gorge themselves on this rich diet. They suddenly appear in the wake of the grasshoppers, and will swallow them, throw them up and swallow them again. ...There was one place on the Weber, the first settlement there, where the crops were destroyed five years in succession."

It was said that the Indians got fat on crickets. They would gather them in baskets, then put them in willows and set fire to the willows; by the time the willows were burned the crickets would be cooked.

# Forty-Niners in the Salt Lake Valley

Becky Bartholomew

In the winter of 1848 word spread through the eastern states that gold had been discovered in California's Sierra Nevada. The following spring over 25,000 fortune hunters headed west. This number increased the next summer to 50,000. In 1851, it fell to 5,000 when more realistic reports stated that 19 out of 20 miners were lucky to cover expenses much less strike it rich.

As the forty-niners crossed the Rockies, one-third of them, after reaching Fort Bridger in southwestern Wyoming, which detoured from the main trail through southern Idaho and across northern Nevada, and instead they took the Mormon Trail southwest to Great Salt Lake City. Those who chose this route usually had a compelling reason—illness, dwindling supplies, exhausted livestock—and looked upon the Mormon capital as an oasis.

Meanwhile, the city had troubles of its own. It was only two years old, and its 6,000-plus residents had suffered two disastrous harvests in a row because of drought, frost, and cricket infestation. With no buffer between themselves and starvation, they needed all the wheat they could grow for their own families and immigrant converts expected that fall from Europe. As a result, Mormon leaders were not eager for a horde of gold-seekers to invade their kingdom. And why should they? Most losses that the Forty-Niners suffered on the trail came not through poverty and persecution but greed and poor planning.

Thus what happened between Mormons and gold-rushers during the summers of 1849 and 1850 is a credit to both groups. Far from being turned away, "the emigrants," as the Mormons called them, and their animals were welcomed, fed, housed, nursed if they had cholera or mountain fever, preached to, and—some of them—converted. And most of the

journals that eventually found their way into historical archives reveal that, for their part, the gold-rushers appreciated this hospitality and revised their previous prejudices against the sect.

What led to this happy obfuscation of the maxim, "What can go wrong, will go wrong"? Probably several factors.

First, many forty-niners had already encountered Mormons at ferry and trading stations on the Platte and Green rivers and had found them to be fair and helpful. No doubt these were the emigrants who tended to discount rumors of Mormon hostility in selecting the Salt Lake City route.

Second, both groups needed each other. The emigrants had to recruit or trade their animals for fresh mules and oxen. Some replaced heavy wagons and goods with lighter pack outfits. A fair number of travelers showed early symptoms of





scurvy and hungered for greens and other produce—items the crickets had left alone.

Mormons needed iron to repair their own wagons and farm implements and were desperate for some consumer goods, especially fabric, coffee, and tea. As Utahn Joseph Hovey wrote,

“Truly do I rejoice in my God for his goodness for just as we are all most out of bread they [emigrants] have come and oblige to sell there flower...and a little of all their provisions and clothing it is in the right time for we as a people are very destitute. ...”

Third, the impromptu trading between local and gold-rusher proved amicable, further defusing mistrust between the two groups. Although accounts of Mormons gouging miners and soldiers persist even today, the journals indicate that an overwhelming majority of Forty-Niners were satisfied with their treatment by the Mormons.

Even most “winter Mormons” recorded positive impressions of their experience. These were gold-

rushers who did not go on to California the season they arrived but wintered in Salt Lake. They numbered several hundred in 1849, a thousand in 1850.

However, three of the most negative accounts, which were later published and helped to solidify national opinion against Mormonism, originated from this group. It seems the longer an outsider remained in Mormon country, the greater his risk of running afoul of the unfamiliar legal system, sometimes inflammatory rhetoric, and strange family customs. Yet most were like house guests overstaying their welcome—eventually they left to good feeling on both sides.

What were the long-term fruits of this encounter between cultures? It established future travel patterns to the Pacific; when the transcontinental railroad was laid out, engineers chose the Salt Lake route. It fixed national attention on the Mormon kingdom, for good or bad. And it made Salt Lake City a base for later mercantile and exploration efforts.

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## Which Side of the Street Did Pioneers Drive On?

Darrell Jones

If you've ever looked at old (1860s and 1870s) photographs of downtown Salt Lake City, you'll note that wagons seem to be driving on which ever side of the street was convenient. As nearly as can be determined, during that period of time there were no formal rules or laws in existence which specified right or left-hand driving. Instead, custom and the type of animals drawing the wagons or carts determined whether one drove on the right or left side of the street.

An authoritative reference on the subject is a book entitled *The Rule of the Road: An International Guide to History and Practice* by Peter Kincaid. Kincaid believes that the fact that most people in the world are right-handed has been the dominant factor in determining which side of the road to drive on, not just because they are right-handed, but because of the means of transportation they used. For instance, in very early

times, men carried a sword in a scabbard. A right-handed swordsman would have the scabbard on his left side, so that he could draw the sword with his right hand. While walking along a path or road, he would want to meet an approaching swordsman on his right side in order to be able to quickly draw the sword and fight if necessary. Therefore, he walked on the left side. The same rationale applied if he were riding a horse.

As carts pulled by horses became more common, the custom changed to using the right-hand side of the road. The universal practice appears to have been that people lead horses using the right hand while walking on the left side of the horse. This enabled the person to better judge distance between passing carts, it helped conversation between people meeting, and it probably felt more comfortable for the person walking to be in the center of the road rather than

the side. This practice was also used for people driving wagons pulled by oxen.

As carts and wagons became larger, the manner of driving the animal teams changed. Two different methods of controlling the teams developed. In one method, known as "postilion" control, the driver rode one of the horses. Because the driver was usually right-handed, he rode the left-rear horse so that he could more effectively use his whip for control. From his position on the left side horse, it was logical to drive on the right side of the road, the same as the person leading the horses while walking on the left side.

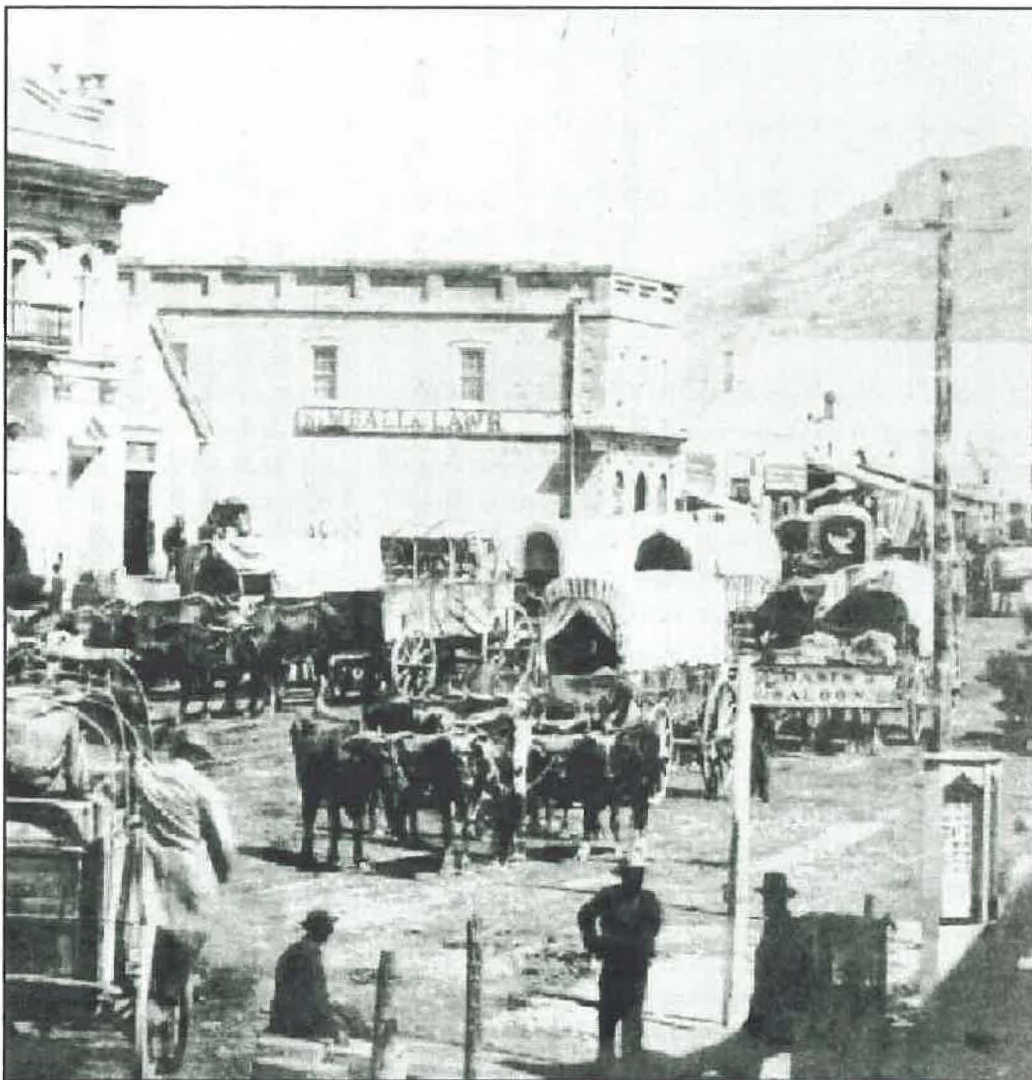
The second method of driving a wagon was from a seat on the wagon. The right-handed driver, while using his whip to control the teams, sat to the right of the wagon, so that the whip would not hit the wagon or other people riding thereon. In order to better judge passing clearances, the left side of the road was used.

According to Kincaid, there is a little evidence that colonists in some parts of early America drove on the left side of the road, as many of them came from England (which still drives on the "wrong" side of the road). Others came from parts of Europe where driving was on the right side of the road. When and why did the United States settle on right-hand driving? Good question. Kincaid has no good answer. The most common vehicle in the 1600 and 1700s in America was a wagon or cart led by a person walking on the left side of the animals, or riding in the postilion method, hence traveling on the right side of the road probably appeared to be the most logical choice.

Likewise in early Utah, the most common vehicles were wagons directed by a person walking on the left side of the animals, which would dictate right-hand traffic. The relative scarcity of traffic (and particularly wagons driven by a rider) on the wide Salt Lake City streets created no great need to regulate which side of the road was used. Although neither the State Department of Transportation nor Salt Lake City engineers can pinpoint the adoption of any laws regulating the right-hand drive rule, it apparently occurred about the beginning of the twentieth-century as automobiles brought increased numbers of vehicles (with increased speed) to the streets and roads.

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# The First Pioneer Thanksgiving

Darrell Jones

When we hear the word “Thanksgiving,” we think of November, a long weekend starting on Thursday, turkey, cranberry sauce, and pumpkin pie. With the exception of Thursday, none of these items were connected to the first Thanksgiving held by the settlers in the Salt Lake Valley.

The winter of 1847-48 had been a bleak one for the Saints. Food supplies were nearly exhausted and many were forced to eat thistle and sego lily bulbs to survive. In the spring, between 4,000 and 5,000 acres were planted in wheat, corn and other vegetables. Things were going well (by early May, some pioneers had enjoyed the first radishes and lettuce) and it appeared that there would be a bounteous harvest, then disaster struck. Late frost took its toll and the invasion of crickets wiped out almost the entire crop that had been growing so well. It seemed that nothing could stop the crickets. John Steele reported that “the crickets came by the thousands of tons.” Fire, water in the ditches, brooms, and any other device the settlers could think of were to no avail. For every cricket that was killed, it seemed that two more took its place. When things looked the worst, the “miracle of the gulls” began. Thousands of seagulls appeared and devoured the crickets. Within a few days the cricket invasion was over, and the crops again began to mature.

The harvest, though not great by later standards, was sufficient to cause rejoicing among the Saints. On August 9, Mormon church authorities wrote, “We are all agreed that the wheat crop has done wonderfully well, considering all the circumstances, and that we can raise more and better wheat in this valley, than in any place any of us ever saw; and the same with all other grains, vegetables, etc., that we have tried... green peas have been so plentiful for a long time that we are becoming tired of them; cucumbers, squashes, beets, carrots, parsnips, and greens are upon our tables, as harbingers of abundance in their respective departments.”

The authorities were so excited about the harvest that Thursday, August 10, was declared a day to thank God for his blessings. Some of the Saints had undoubtedly participated in similar harvest feasts, a New England

custom since the first such celebration by the Plymouth Colony in 1621.

Patty Sessions recorded in her journal that on August 9, she “made preparation for a feast,” obviously the dinner was to be a “pot-luck” affair. The event began in the usual manner with cannon firing, a band concert, and the raising of a liberty pole with a white flag, the traditional American symbol of freedom. Wheat, barley, oats, and a single ear of green corn decorated the flagpole. A bowery was erected and log tables and benches set up for the community dinner. Parley P. Pratt summarized the menu: “We partook freely of a rich variety of bread, beef, butter, cheese, cakes, pastry, green corn, melons, and almost every variety of vegetables.” The vegetables included lettuce, radishes, beets, onions, peas, carrots, cucumbers, parsnips, squash, and beans.

After the tables and benches were cleared away, a dance was held. Pratt summarized the day, “there was prayer and thanksgiving, congratulations, songs, speeches, music, dancing, smiling faces and merry hearts. In short, it was a great day with the people of these valleys, and long to be remembered by those who had suffered and waited anxiously for the results of a first effort to redeem the interior deserts of America, and to make her hitherto unknown solitudes ‘blossom as the rose’.” Patty Sessions wrote of that day, “went to the bowry 9 AM saw the liberty pole raised heard the cannon fired then between 12 and 2 feasted after 2 danced heard the music and prayers and preaching.”

This celebration did not establish an annual tradition of a harvest or thanksgiving day for the pioneers, although Brigham Young did designate January 1, 1852, a “Day of Praise and Thanksgiving.” He encouraged church members to “spend the day as families joyfully, thankfully, prayerfully, sharing their hearts with one another and with God, and sharing their substance with the poor.”

Thanksgiving Day was designated an official national holiday in 1863, to be celebrated on the last Thursday of November. In 1941, the holiday was changed to the fourth Thursday of November.

# The Remarkable Cattail

## Food And Shelter For Prehistoric Man—Possible Energy Source For Tomorrow By Thomas J. Zeidler

It is known as flag, reed mace, and *Typha latifolia*, but its common name is cattail. It can be found in marshes and by shallow lakes and streambeds throughout Utah. Most people, if they think about cattails at all, consider them as something to hide in or wade through while duck hunting. American Indians, however, have recognized cattails as an important food plant for centuries.

This is not as odd as it seems if we remember that both corn and potatoes were strange and exotic plants to the first Europeans who came to this hemisphere. Yet, today both are common fare on dinner tables.

In the spring young cattail shoots can be cut from the rootstocks and, after pulling off outer leaves, can be eaten raw or in salads. If the shoots are longer than one or one and a half feet, they can be boiled for about a half hour and eaten with butter and salt.

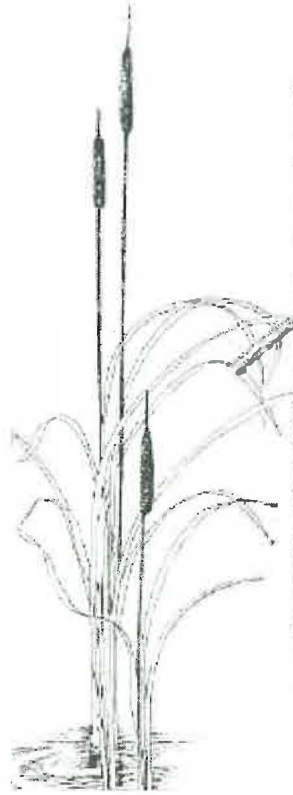
When the flower stalks appear later in the season, they can be removed from their sheaths and boiled. They can then be eaten like ears of corn.

When more ripened, the pollen-producing flowers can be removed by hand to make muffins, cookies, and pancakes.

The Paiute Indians gathered baskets of pollen in the summer to make a bread-like food they cooked in a "cattail dutch oven." They first laid green cattail leaves on a bed of hot coals. Then they made cakes by mixing the cattail pollen with water and put the cakes on the leaves. More green leaves went on the cakes, and these leaves were covered with hot coals.

Fall is the best time for harvesting the rootstock of the cattail. After the outer peel is removed, the core can be baked or boiled. If the cores are dried, they

can be ground with a mano and a metate to make flour. One scientist has figured that one acre of cattails could produce two and a half tons of flour!



Cattail

Rodents, especially muskrats, thrive on cattails and were often trapped and eaten by Indians. In fact, the Gosiute word for cattails; *To imp* means "rodent plant." The Gosiutes gathered the ripe spikes of the cattail and burned off the bristles, thus freeing and roasting the seed-like fruits.

Archaeologists found that the cattail was an important food source for ancient Indians as well. The excavation of Backhoe Village near Richfield, Utah, has shown that the gathering of wild plants, especially cattails, was more important than hunting or agriculture as a food source for the Sevier Indians who lived there more than one thousand years ago.

The cattail was also used for purposes other than food. The cattail "down" could be taken off the spikes and used for padding in blankets and pillows. The Paiute Indians used twisted cattail leaves to make rope for building small boats

and duck decoys. They also used cattails for matting to cover their willow-frame houses. Cattail leaves were especially favored because their flat surface sheds water like shingles.

Today, scientists at the University of Minnesota are studying cattails as a possible source of energy. A team of botanists and mechanical engineers found that processed cattails produced a solid charred substance, a liquid like heavy oil, and a gas. It is hoped that these can be harnessed and converted into energy. It is even possible that someday in the future we may be heating our houses with the same plant that the Paiutes used to cover theirs.

# American Indians and the Settlement of Utah

Lee Kreutzer

Westbound emigrants who entered northern Utah in the early 1840s found a vast land that they thought to be mostly barren and largely uninhabited. They were wrong on both counts.

Northern Utah is the homeland of Shoshoni Indian people, and the west Utah desert is home to the Gosiutes (Goshutes). Lands further south are the traditional territory of Southern Paiutes; and the Utes, for whom Utah is named, ranged across most of the state, from the Provo Valley south and eastward into Colorado. Those four peoples, who speak closely related languages, have occupied Utah for at least a thousand years. The Diné (Navajos), relative newcomers to Utah, spread from Arizona into southeastern Utah about 600 years ago – still, arriving nearly five centuries ahead of the settlers.

Utes, Gosiutes, Southern Paiutes, and Shoshonis traditionally were hunter-gatherers, though some groups supplemented their diets by tending kitchen gardens of corn, beans, and squash. They gathered in small villages, lived in temporary shelters, and moved seasonally to hunt game, to fish, and to collect plant foods. Once they acquired the horse from the Spanish at around A.D. 1650, the Utes and Shoshones adopted Plains culture traits, began living in teepees, traveling long distances on horseback, and sometimes raiding other villages. All of the hunter-gatherer groups ranged widely over vast areas. Each

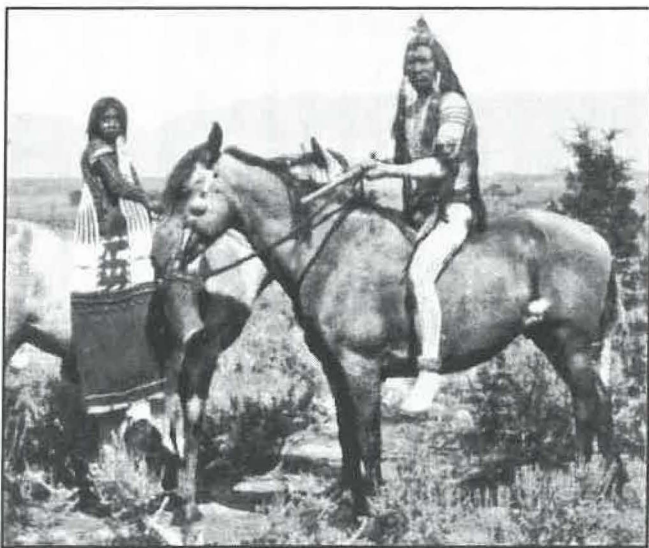
tribe knew from long experience where its territory ended and others' began.

The emigrants did not know, though. The absence of fenced pastures, plowed fields, large, permanent houses, well-defined roads, and other marks of land ownership encouraged EuroAmericans to assume the land was not occupied. They began claiming the “empty” land, settling permanently in the best-watered spots and ranging out for livestock pasture, lumber, and minerals.

Brigham Young, leader of The Church of Jesus Christ of Latter-day Saints (Mormons), often is praised for treating native Utahns humanely. “Better to feed ‘em than to fight ‘em,” he is said to have declared. He negotiated with tribal leaders for land, sent out missionaries to educate and convert the Indians, established “Indian farms” to teach them to plow, and instructed his people to share provisions with native families. He also sought tribes’ military alliance against the United States, which Young and the Indians regarded as a mutual enemy.

But some historians have noted that even if Young was charitable toward the Indians, Mormon settlement still disrupted Indian cultures and destroyed their traditional ways of life. Settlers drew water from fishing streams and lakes to irrigate their fields, and claimed exclusive ownership of springs and ponds. They took up the best agricultural lands, and they hunted scarce wild game. They cut the pinyon nut groves, an important native food source, for firewood and charcoal, and their livestock ate the wild plants once harvested by native people. Most probably, the settlers never understood the true impact of their activities on the Utes, Paiutes, Shoshonis, and Gosiutes. They were convinced that they were showing the Indians a better, more stable way of life.

Native people, increasingly shut out from their most productive lands, did not see it that way. Gosiutes, left starving when their most important resources were taken up by settlers, military posts, and stage stations, began helping themselves to livestock and





harassing the stage lines and Pony Express. Their war of attrition continued through the 1850s and 1860s, sometimes provoking violent punitive raids. The Utes, led by Chief Wakara or “Walker,” launched an armed conflict against Utah settlers in 1853. In the late 1850s and early 1860s, Northern Shoshoni and Bannock fighters struck a series of attacks against emigrants on the Oregon and California Trails in southern Idaho, and the Northwestern Band of Shoshoni hit settlers in the disputed Cache Valley of northern Utah. Violence on both sides exploded.

In late January 1863, a detachment of soldiers from Fort Douglas (in Salt Lake City) marched northward to discipline the Shoshoni. The soldiers found a winter encampment of some 400 Shoshonis beside the Bear River, just across the Utah-Idaho border. When the army attacked, the defenders fought them to a standstill, but ultimately, the soldiers destroyed the village, killing more than 250 Shoshoni men, women, and children.

A few months later, the Ute leader Antonga, called “Black Hawk” by settlers, led a force of Ute, Paiute, and Diné (Navajo) fighters in series of violent raids against Mormon settlements and isolated ranches across Utah. Antonga’s forces gained more Navajos in 1864, as the Diné fled the U.S. Army’s systematic round-up of Navajos in Arizona. (The Navajos, though they had given up hunting and gathering for a settled, agricultural lifestyle, were still in the way of miners and others who wanted their lands.) The ensuing cycle of raiding and revenge known as Utah’s Black Hawk War continued for nearly 10 years.



*Newspaper Rock  
San Juan County, Utah*

Despite their determined resistance, by the late 1800s the Utes, Southern Paiutes, Shoshonis, Gosiutes, and Diné had lost most of their original territories to encroaching settlement. Utah’s first peoples, though, survived and remained in their homeland.

The Ute Tribe is settled on the Uintah and Ouray Reservation (nearly 1 million acres) in northeastern Utah, where over 3,000 members reside. The White Mesa Utes reside near Blanding, Utah, but are politically affiliated with the Ute Mountain Utes of Towaoc, Colorado.

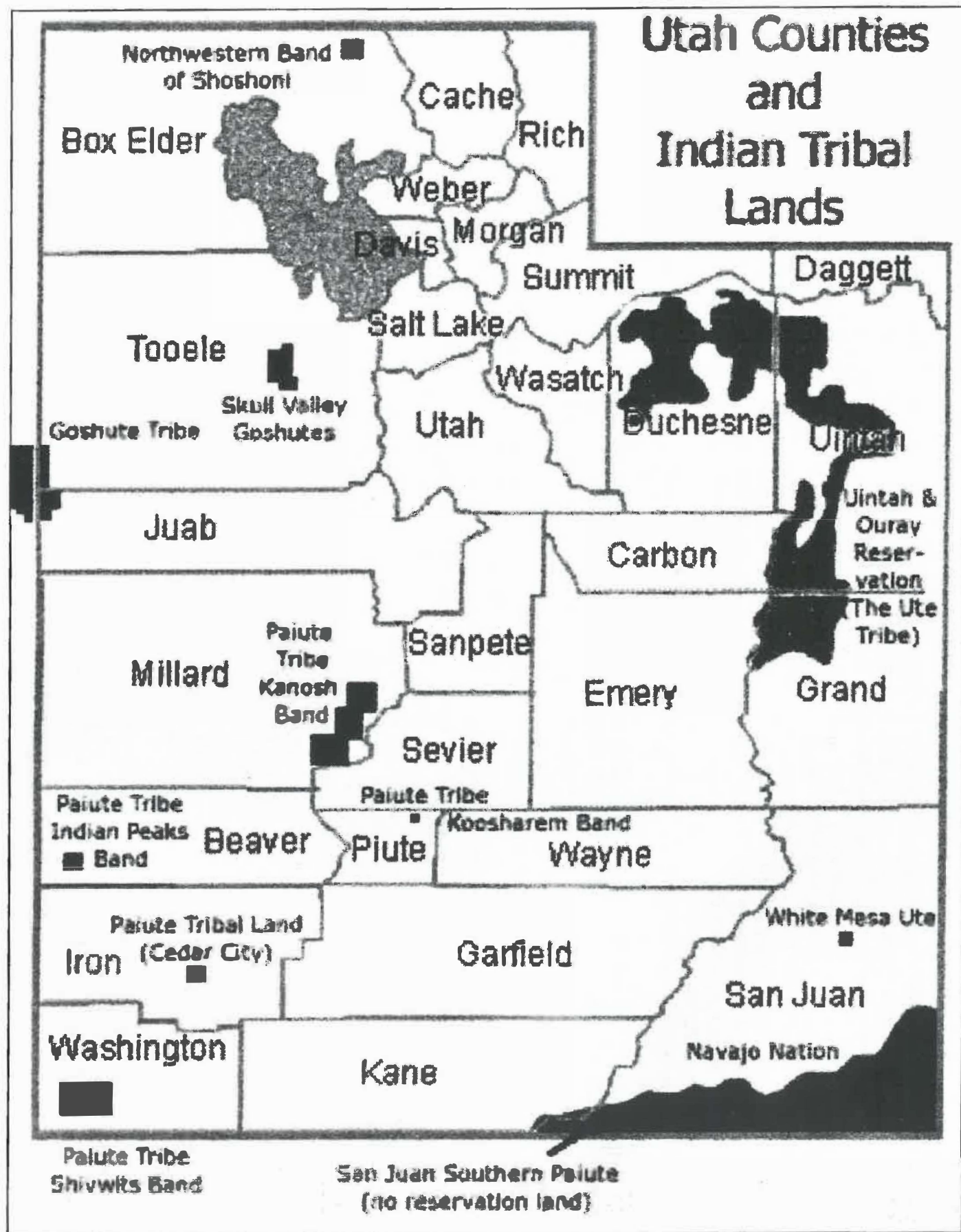
The Northwestern Band of the Shoshoni Nation, with 440 members, resides on 187 acres that were given to the tribe by The Church of Jesus Christ of Latter-day Saints in 1989. The Bear River Massacre Site was designated as a National Historic Landmark in 1990, and was turned over to the Northwestern Band by the Trust for Public Land and the American West Heritage Center in 2003.

The Confederated Tribes of the Goshute Reservation share a reservation of about 122,000 acres on both sides of the Utah-Nevada border. The Confederated Tribes have over 400 members. The Skull Valley Band of Goshute Indians is a separate tribe with about 120 members and a reservation of 18,000 acres in their west desert homeland in Tooele County, Utah.

The Paiute Indian Tribe of Utah consists of five bands, which together have a tribal enrollment of approximately 730 members and share 40,000 acres of trust lands in scattered locations across southern Utah.

The Diné (Navajo Nation) were allowed to return to their homeland in northern Arizona, southeastern Utah, and north-western New Mexico following the disastrous “round-up” and incarceration of 1864. Now the largest American Indian nation in the United States, Navajo Nation has an enrollment of about 270,000 members. Navajo Nation controls a reservation of 17 million acres in the three states.

The five nations are federally recognized, self-governing Indian tribes, and are an integral part of Utah history and society.



*Indian Tribal Lands (Courtesy of the Utah Division of Indian Affairs)*



# Lot Layout in Early Salt Lake City

Darrell Jones

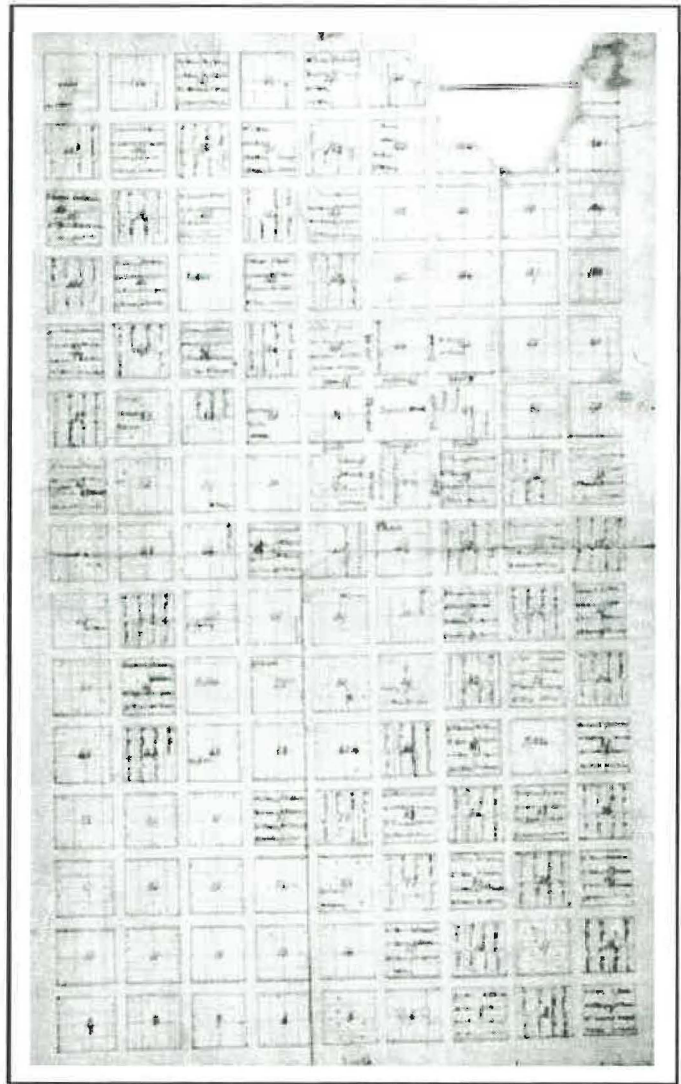
After a lottery in the fall of 1848 for choice of lots, LDS “Saints” (members) were allowed to begin construction of a house and other structures, plant a garden, and fence the lot, not necessarily in that order. For instance, Hosea Stout received his lot assignment on September 30, 1848. Throughout the winter, weather permitting, Hosea recorded many trips into the canyons for wood (some of this may have been firewood, and some timber for his house). He began to build a fence around his lot on April 2, 1849, and began plowing and planting his garden the following week. Construction of his house did not begin until June 1, but it was complete enough for his family to move in just ten days later, although he notes that he did more work on the house during the next two weeks. Most of these first houses were made of adobe bricks. Log houses, such as Hosea Stout’s, were less common.

Buildings were the centerpiece of the lot, with the house the main feature. The house was located approximately twenty feet from the front property line, with the broad side usually facing the street. Second in importance was probably the privy or out-house. It was placed behind the house, far enough away that smell was not a problem, but not so far that a visit on a winter day was a major concern. Sheds, poultry coops, and granaries were located further to the rear, and a barn and corral, if built, were located at the extreme rear of the lot.

Each lot had to be surrounded with a wall or fence. Walls were built with adobes or cobble stones, although most lot owners opted for a post and pole fence. The most attractive and well-built portion of the fence was usually placed on the street front.

Shade trees, bushes, flowers, and clover were normally planted between the front fence and the dwelling. Predominant plants were hollyhocks, asters, dahlias, lilacs, sunflowers, roses, and a variety of vines. Lawns were almost non-existent in the early years.

The reason that lots were so large (at least by modern standards), was to provide the owner with



enough space to grow a major portion of his own food. Fruit trees were planted in rows on the sides and rear of the lot. Apples, pears, cherries, peaches, and plums were the common varieties. Currant, gooseberry, raspberry bushes, and grape vines were also planted. The vegetable garden was a large area between the trees, planted in rows preferably running east and west, to receive the maximum benefit of the sun. Potatoes were planted in the lots located in the “Big Field,” which was located to the south of the residential lots, but some potatoes were also grown on the home lot. Corn, carrots, squash, beans, and peas, were the most common vegetables grown. As new families arrived in the valley, they usually brought seeds and cuttings of plants. It became a common practice to trade varieties of plants to be planted on home lots.

An open area was left in the yard behind the house for hanging the wash, drying fruit, candle and soap

making, or any other uses which required open space, and also benefited from abundant sunshine.

Lots were governed at first by order of the High Council and later by ordinances, which dictated a certain look. Shade trees along the frontage of lots were encouraged, and made mandatory by city ordinance in 1851. Each lot was to have nine trees, with corner lots to have twenty-seven. Suggested species were black locust, cottonwood, and poplar. Irrigation ditches were built along each side of all streets, the water diverted through a series of ditches from City Creek. A secondary ditch was dug from the front ditch to each lot.

By 1855, the early settlers were making Salt Lake City a beautiful and orderly community. The homes were becoming more substantial, gardens were flourishing, trees and shrubs were plentiful, and the sight which greeted new-comers' eyes was often quite astonishing, considering the isolation and newness of the city. Perhaps the observations of Captain Albert Tracy, who entered Salt Lake Valley with Johnston's Army in 1858, and Sir Richard Burton, who arrived in 1860, are typical of the reaction of a first time visitor. Tracy wrote:

"We are surprised and refreshed with its general appearance of neatness and order. The buildings were almost entirely of adobe, giving them the appearance of grey cut stone. They were set well

apart, nearly each by itself, and within the enclosures about them one saw that which one so longs to see from long familiarity with these deserts—perfectly bright green and luxuriant trees and shrubbery.

Burton was more eloquent when he described what he saw:

"The houses are almost all of one pattern—a barn shape, with wings and lean-tos, generally facing, sometimes turned endways to the street, which gives a suburban look to the settlement; and the diminutive casements show that window-glass is not yet made in the Valley. In the best abodes the adobe rests upon a few courses of sandstone, which prevent undermining by water or ground-damp, and it must always be protected by a coping from the rain and snow. The poorer are small, low, and hut-like; others are long single-storied buildings, somewhat like stables, with many entrances. The best house resemble East Indian bungalows, with flat roofs, and low, shady verandas, well trellised, and supported by posts or pillars. All are provided with chimneys, and substantial doors to keep out the piercing cold. The offices [privies] are always placed, for hygienic reasons, outside; and some have a story and a half—the latter intended for lumber and other stores. Upon the whole, the Mormon settlement was a vast improvement upon its contemporaries in the valleys of the Mississippi and the Missouri."

## UTAH TRIVIA

~ 1860 ~

Phineas T. Barnum made a point of passing through Salt Lake City. Mark Twain also visited and described Salt Lake City as a "fairyland...a land of enchantment, and goblins and awful mystery...we desired to have a good satisfying look at a Mormon family in all its comprehensive ampleness..." Twain left Salt Lake "a good deal confused as to what state of things existed there."





# Pioneer Roads

## Darrell Jones

It is quite obvious when you look at the early Salt Lake City model the streets were not paved. Paving of city streets did not begin until very late in the 19th century. Travel during the first few years in the Salt Lake Valley and between settlements was therefore difficult at best, and nearly impossible at times.

After the pioneers arrived in the valley in 1847, one of the first items of business was to build roads into the surrounding canyons in order to obtain timber for building construction. These roads and a few simple bridges were built by labor assigned to a specific group of individuals, while others were involved in tasks such as plowing and planting, and construction of the fort and cabins. In the following years, the bishops were often given specific road or bridge construction projects in areas surrounding their wards.

The 132-foot-wide streets laid out in the central portion of Salt Lake City in 1847, were prescribed by Joseph Smith's Plat of the City of Zion. The common use of the measurement of rods (one rod equals sixteen-and-one-half feet) in the early 1800s accounts for the unusual 132-foot-width (eight rods). Other roads were built as two rods (thirty-three feet) and four rods (sixty-six feet) width. A common folk story attributes the plan for 132-foot-wide streets to Brigham Young, as that was the diameter of a circle in which a team of oxen could turn a wagon. However, Young was simply following the pattern already prescribed by Joseph Smith.

An interesting aspect of streets and roads in pioneer times was that no specific rule existed that prescribed which side of the road to use. Legislation requiring right-hand driving did not come into being until automobiles came on the scene early in the 20th century.

One of the first acts of the provisional legislature of the State of Deseret, enacted on January 15, 1850, created the office of Road Commissioner. Construction of roads and bridges was funded from territorial and local taxes, but this source proved insufficient, leading to establishment of some toll roads. A good example of a toll road was the one constructed, in what is now known as Parley's Canyon. The second issue of the *Deseret News*, dated June 29, 1850, headlined the opening of "The

Golden Pass!" The benefit of this road was that it was an easier route from the mouth of Echo Canyon to the Salt Lake Valley than the original trail through East Canyon, over Big and Little Mountains, and down Emigration Canyon. The toll for a conveyance drawn by two animals was 75 cents, with 10 cents required for each additional draft, pack, or saddle animal. The announcement of this new road stated, "If a road worked by the most persevering industry, an open country, good feed and fuel, beautifully romantic and sublime scenery, are any inducement, take the new road, and thus encourage public improvement." Pratt later in 1850 reported that he realized over \$1,500 in tolls the first year. The bulk of this revenue likely came from gold rush emigrants, while Saints emigrating to the Valley continued to use the toll-free old route until the 1860s.

In March 1852, the legislature enacted a provision for a territorial road tax, in which every able-bodied male over eighteen was required to pay a tax of one day's labor on the roads. If preferred, a citizen could pay \$1.50 cash in lieu of ten hours of labor. Individual counties were authorized to levy a road tax in 1852, and cities were empowered in 1853 to levy a street tax.

An English traveler who spent some time in the Utah Territory in 1855-56, described the roads:

"The people are alive to the need of better communication, but with so much else to do little of this has been yet done. Across the rivers and larger streams substantial wooden bridges have been constructed: undoubtedly the first requisite; but proper roads are wanted in place of the present mere tracks. Those in the richest and most settled parts of the valley become, in wet weather or thaws, downright sloughs of mire; wasting hours, and wearing out the team with a double draught; and in the frost, if not impassable, very dangerous for traveling over beyond a foot's pace."

The first federal funds for road work in the Utah Territory were appropriated by Congress in July 1854, when \$25,000 was authorized for improvement of the existing route from the Salt Lake Valley, through Provo, and Fillmore, and then west to the east boundary of California.

# Economic Impact of the California Gold Rush on the Salt Lake Valley

Darrell Jones

While the California gold rush provided gold for minting coins, its greatest impact was the effect of the gold seekers themselves as they passed through the Salt Lake Valley on their way to California. Of the total of approximately 25,000 men (and a few women) who traveled across the country to California in 1849, and the 50,000 in 1850, it is estimated that as many as 10,000 and 15,000 passed through the Salt Lake Valley in those two years.

The first to benefit from the gold seekers were the Mormons operating the ferry at the upper crossing of the Platte River, near the present town of Casper, Wyoming. By 12 June 1849, there were 120 teams waiting their turn on the ferry. The average cost to ferry a wagon was \$3.00. Most emigrants willingly paid the fee, although a few of them recorded comments such as, "I think this is better than gold digging," and "They have as good a gold mine as California." John D. Lee visited the ferry in July 1849, and estimated that the operation had made about \$10,000. Appleton Harmon, one of the boatmen, reported however, that the take for the summer amounted to \$6,465, which included the efforts of the blacksmith shop. The blacksmith shop was engaged in repairing tires on wagons, shoeing animals (four dollars for a horse and six to eight dollars for an ox), and cutting up wagon boxes to reduce loads. The blacksmiths usually requested payment in food or clothing, but accepted cash if the emigrants were short on rations.

Another ferry at the Green River was equally as successful as the one on the Platte River. The profit from this operation was estimated to be about \$6,000. This ferry was close enough to the Salt Lake Valley that some Mormons traveled there to buy excess provisions from the emigrants.

The further the gold seekers traveled across Nebraska, Wyoming, and into Utah, the greater their desire for haste became. They began to wear their animals out from the heavy items they packed in their wagons and the rapid pace they tried to maintain. The result was vast amounts of goods discard-

ed along the way. An excellent picture of the situation was recorded by Captain Howard Stansbury who was on his way to make a survey of the Great Salt Lake and surrounding region when on July 27, 1849, he wrote in his journal:

"Before halting to noon, we passed no less than eleven wagons that had been broken up, the spokes taken to make pack saddles, & the rest burnt & destroyed. The road is literally strewn with articles that have been thrown away. Bar iron crowbars, drills, augurs, chisels, axes, lead, trunks, boxes, spades, ploughs, grind stones, bake ovens, stoves without number, Cooking utensils of every kind, kegs barrels harness, clothing, beans & bacon many of which must have been very costly at home. ... The carcasses of 8 oxen which we passed this morning explains a part of the trouble ... one of the men found a good rifle that had been thrown into the river. In the course of the day we saw 17 wagons which had been destroyed & counted 27 carcasses of oxen that had died on the road."

It seems strange in hindsight that these men who were headed for the gold camps, would abandon such items as crowbars, drills, and other items that would be necessary if they were to be successful in finding gold once they reached California.

John D. Lee lead an expedition eastward along the trail which he called a "Picking up Expedition." By August 8, 1849, he was about thirty miles east of Devil's Gate, when he "commenced loading up with Powder, lead, cooking utensils, Tobacco, Nails, Sacks, Tools, Bacon, coffee, sugar, clothing & small Irons, some Trunks, Boot legs, axes, Harness, etc."

Another Mormon scavenging party found over 100 head of oxen wandering over the prairie and, after checking ownership with a nearby military outfit, added them to their teams.

The Mormons in the Salt Lake Valley benefited doubly by the great influx of travelers headed for the gold fields, in that they were able to buy many items at a fraction of their original cost and sell other items at substantial profit. Many of those headed for California were in such a hurry that they sold their



wagons for \$15 to \$25, compared to the normal price of \$50 to \$125, then bought fresh horses and mules for \$200, which were normally worth \$25 to \$30. Almon W. Babbitt reported that "almost every article, except sugar and coffee, is selling on an average, fifty per cent below wholesale prices in eastern cities." Hosea Stout recorded on June 24, 1849, that "They are trading off their waggon, Harness & surplus clothings &c cheaper than State prices taking in exchange Horses mules saddles pack saddles &c at very high prices." The price the Saints realized for their fresh produce varied during the traveling season. It was reported that in 1850, flour sold early in the season for \$1.50 per pound, but when the harvest came in, the price dropped to \$6.00 per hundred pounds.

In addition to being able to buy goods low and sell high, servicing and re-outfitting the emigrants provided employment to blacksmiths, wagon smiths, teamsters, laundresses, and millers. In 1849, the food supply in the Valley was short, so overland parties were discouraged from staying over the winter. In the winter of 1850-51, however, an estimated 1,000 emigrants remained in the Salt Lake Valley. In return for food and shelter, these emigrants assisted with farm work, paid taxes for public improvements, and purchased goods and supplies for the continuation of their journey in the spring.

## The Newspaper in Early Utah

Darrell Jones

The Mormon church has had a rich history of publishing newspapers for the benefit of the Saints. The first publication was the *Evening and Morning Star*, which began in Independence, Missouri, in June 1832. Other newspapers followed, such as the *Nauvoo Neighbor* from 1839 to 1846, and the *Frontier Guardian* in Kanesville from 1848 to 1851.

The genesis of the *Deseret News* can be traced to 1847. That year, William W. Phelps (who was the publisher of a newspaper in Missouri) was sent to Boston to solicit contributions for the purchase of a press, type, ink, and paper. Phelps understood that the press would be taken west with the pioneers in order to publish a newspaper in the Mountain West. A small Ramage press was acquired and shipped to Winter Quarters, Nebraska. It arrived too late to be carried with the 1847 companies, so the press and associated items remained in their crates throughout the rest of 1847 and into 1848. This is not the press used in printing the *Frontier Guardian*. A different press had already been purchased for that purpose.

When Brigham Young was assembling the companies for the exodus to the Salt Lake Valley in 1848, he

decided that provisions and other supplies were more essential, so there was no room in the wagons for the press. Another year went by with the press in storage. Finally, in May 1849, three wagons were loaded with the press, type, ink, glue, stationery, a carding machine, and 872 bundles of paper, and headed for the Salt Lake Valley. After arrival, the equipment again sat idle until January 1850, when it was moved into a small adobe building about where the entrance to the Joseph Smith Memorial Building parking garage is located.

The first edition of the *Deseret News* was published on June 15, 1850, with Willard Richards as editor, and consisted of eight pages of three columns each. The pages measured 7½ by 10 inches. The purpose of the newspaper was to be a "weekly sheet ... designed to record the passing events of our State, and in connexion, refer to the arts and sciences, embracing general education, medicine, law, divinity, domestic and political economy, and everything that may fall under our observation, which may tend to promote the best interest, welfare, pleasure and amusement of our fellow citizens." The cost for a single copy was 15 cents, \$2.50 in advance for six

months, and was available at the print shop/post office. Home delivery was later offered for 50 cents for six months. The paper was first published on Saturday, then changed in 1853 to Thursday, and in 1855 to Wednesday. The *Deseret News* was the first newspaper published between the Missouri River and the West Coast.

The majority of the news items were taken from other newspapers brought into the valley. The first issue also contained two advertisements; one for a blacksmith and one for a dentist; a poem from an anonymous contributor; an almanac for the month; a list of emigrants who had recently passed through the city; and a few articles of local interest.

Issues of the newspaper were occasionally missed when the supply of paper ran out. When Thomas Howard, an experienced paper maker, joined the Church in England in 1850, he was immediately rushed to the Sale Lake Valley and appointed by Brigham Young to supervise construction of a paper mill as part of the public works program. People were urged to collect rags for use in the mill. "Rag

dances" were held with admission a specified amount of rags. Rags could also be turned in to the tithing office for credit toward an individual's tithing. Unfortunately, the paper mill was not very satisfactory, which resulted in paper that was coarse in texture and of a dull gray color. In 1853, a paper machine was imported to the valley at a cost of \$8,500. In addition, some of the machinery imported for the failed attempt to produce sugar from beets was also used in paper manufacturing.

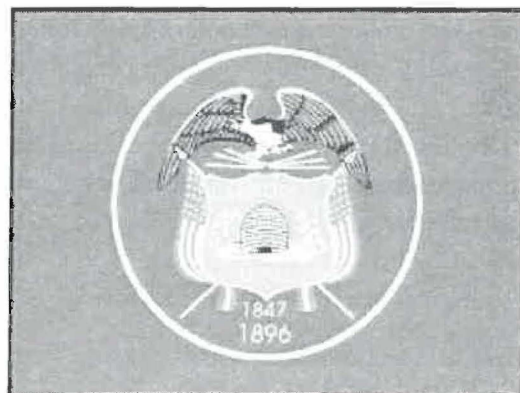
In 1852, the printing office was moved to the Tithing Office (on the northeast corner of Main and South Temple Streets), and in 1856 it was moved to the Council House on the southwest corner of the same intersection.

The *Deseret News* was the only paper published in the Territory of Utah until 1858, when the *Valley Tan* appeared, with the intent to serve the non-Mormon population, especially the soldiers at Camp Floyd. Other newspapers followed, including *The Union Vedette*, *Salt Lake Tribune*, and *Salt Lake Herald*.

## State Flag

*The original Utah State Flag consisted of a solid white state seal on a light blue background which was adopted by the State Legislature in 1896 and revised in 1913. The Utah State Flag, as we know it today, was originally designed for the battleship Utah in 1912. It was later made the official flag of Utah when Governor William Spry signed House Joint Resolution 1 in 1913.*

- American Eagle with wings outspread, grasping six arrows in its talons, symbolizes protection in peace and war.
- Bee Hive is the symbol of industry.
- Sego Lily is a symbol of peace.
- Draped American Flag is the symbol of our support to the nation.
- "1847" is the year the Mormon Pioneer entered the Salt Lake Valley.
- "1896" is the year Utah was admitted as the 45th state (January 4, 1896).



# Bonneville Namesake Never Actually Saw Salt Lake or Valley

Jerry Dunton

Bonneville, Bonneville, Bonneville - what's in a name?

There is hardly a person in Utah who has not run into something named Bonneville. Schools, streets, LDS wards are named Bonneville. The White Pages of the Salt Lake area telephone directory have more than a column of listings all beginning with Bonneville. A prehistoric lake that once covered much of Utah is called Lake Bonneville. Also, part of the salt beds from the ancient lake are known as Bonneville Salt Flats. The list goes on.

It all started with a man who never saw the Salt Lake Valley and never tested the waters of the Great Salt Lake.

The Bonneville story rests with three men. The first is Benjamin Louis Eulalie de Bonneville, a captain in the U. S. Army. Second is Washington Irving, a 19th century writer. Remember Rip Van Winkle and The Legend of Sleepy Hollow? Third is a 19th-century geologist Grove Karl Gilbert who followed up on the work of Irving.

In 1831, Capt. Bonneville – an 1815 graduate of the U.S. military academy - was granted a two-year leave from the U.S. Army to pursue his quest for fame and wealth in the Western fur trade. Or perhaps that was the cover for a spying mission. The British were well entrenched in the Northwest fur trade and had political ambitions in the West. Bonneville's letters to his commanding officers at the time discuss the western military situation with regard to the British in addition to the intrigue and lure of California.

Whether financial backing for Bonneville's expedition was by the U.S. government remains a mystery. But it is known that Alfred Seton, who had been involved in western trade 20 years earlier with John Jacob Astor, was one of Bonneville's money men.

On May 1, 1832, Bonneville's wagon train left Fort Osage, Mo., for the West. His caravan consisted of more than a hundred men and nearly two dozen wagons.

In July, Bonneville's expedition was the first to bring wagons across South Pass – a low point in the Rockies accommodating wagon traffic.

Building a fort was the next order of business. Fort Bonneville was built near the confluence of Horse Creek and the Green River near what is today Daniels, Wyoming. Some mountain men referred to it as "Fort Nonsense" because of the area's severe winters. But as Fred Gowans said in *Rocky Mountain Rendezvous*, "The fort proved to be a strategic location since six rendezvous would be held in that area during the next eight years." What better place for surveillance?

A rendezvous was an annual gathering with mountain men trading furs for next year's supplies, as well as consuming large amounts of liquor and enjoying the company of women.

During the next several years, Bonneville sent his trappers out to find the valuable beaver. Since the early 1800s, beaver skin was the first choice in fashion for men's hats. Bonneville joined in several of these expeditions going north into what is now Idaho, Oregon, Washington, and Wyoming. Bear Lake was the closest Bonneville traveled to the Great Salt Lake and the Salt Lake Valley.

In 1833, Joseph Reddeford Walker, a skillful and able mountain man and Bonneville's chief lieutenant, led what was announced to be a fur-gathering trip to the Great Salt Lake and the area further west. But California was the destination. The difficult trip to the West Coast and the return were the beginnings of what in a few years would be the California Trail. What few pelts that were trapped were used in trade with the Californians for horses and food.

Once again, a Bonneville-sponsored trek was not a financial success. Dale Morgan writes in *The Great Salt Lake*, "All of Bonneville's activities in the mountains are attended by a certain ambiguity, so that in everything it is impossible to know to what degree he was actuated by the monetary or by military motives.



But Walker and his men were the first to see the Yosemite Valley. They crossed and recrossed the Sierra Nevada. Today on the Nevada and California border, there is a pass bearing his name that was used on his return trek. Also a lake in western Nevada bears his name.

Bernard DeVoto in *Across the Wide Missouri* suggests that the U.S. secretary of state may have ordered Walker's trip to California.

Bonneville overstayed his leave by several years and was dismissed from the army. Through appeals, he was reinstated with final approval given by President Andrew Jackson, perhaps another indication of Bonneville's real purpose in going west.

Once back east, Bonneville wrote his memoirs but was unable to find a publisher. He sold his journals and memoirs to Washington Irving for \$1,000. In 1837, Irving published *The Rocky Mountains*, later titled *The Adventures of Captain Bonneville, U.S.A.* Several of the maps printed in Irving's book – the work mostly of Bonneville and perhaps Walker – label the Great Salt Lake as Lake Bonneville but the name never caught on.

By the time the Mormons arrived in the Salt Lake Valley in 1847, Irving's popular book had been around for 10 years.

Now, Grove Karl Gilbert enters the story. In 1872, Gilbert, a geologist, was part of a government survey of the Great Basin under George Wheeler. Gilbert was one of the first scientists to notice the various bench levels along the Wasatch Mountains, as well as

other locations in the Great Basin, indicating the shoreline at different times of a long-vanished lake.

Actually, the first mention of the bench levels was in 1849 by James Blake, a physician and geologist with the Howard Stansbury survey. When the report from the Wheeler survey was published in 1875, Gilbert named the ancient lake after Bonneville. So, between the efforts of Irving and Gilbert, Bonneville's name became a 19th-century household word.

There were many mountain men in this area long before Bonneville, and perhaps they deserved the honor more. Men such as Etienne Provost may have seen the Great Salt Lake in 1824. Jim Bridger did see the lake in 1824.

Perhaps it should have been the Bible-toting Methodist Jedediah Smith who was the first white man to blaze trails across Utah, Nevada, California, and Oregon. Perhaps Smith the first man to traverse what is today Utah from north to south and then later from west to east deserves the honor. However, his name would only create confusion.

The one thing Bonneville had that the others did not was a great press agent.

Bonneville served in the army until 1865 when he retired after 50 years of service. He died on his farm near Fort Smith, Ark., in 1878 at age 82 – the oldest officer on the army's retired list.

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*This article appeared in the Salt Lake Tribune on February 12, 1995*

## UTAH TRIVIA

~ 1869 ~

On May 10, 1869 the Golden spike was driven, signifying the completion of the transcontinental railroad. To let the rest of the country know what was happening, the golden spike and the hammer were wired to the telegraph. When California Governor Leland Stanford struck the first blow, he missed the spike completely, but an alert telegraph operator struck his key to simulate the blow.



# The Pacific Railroad from Trail to Rail

John Eldredge

The concept of a railroad linking the Atlantic coast to the Pacific Coast is nearly as old as the first American railroad. Colonel John Stevens built America's first experimental railway and locomotive on his Hoboken estate in 1825. Just five years later Daniel Webster argued for a transcontinental railroad before Congress. The argument continued for thirty years. Finally President Abraham Lincoln ended the debate by signing the Pacific Railroad Act of 1862 on July 1st of that year. The act passed the House of Representatives 79 to 49 on May 8, 1862, and then passed in the Senate on June 20, 1862, by 35 to five.

Congress decreed that a railroad be built from the 100th Meridian (Omaha area) to Sacramento, California. Construction was to begin from both the east and west ends. The Central Pacific Railroad Co. was to construct from Sacramento, California, to the east as far as it could progress and the Union Pacific Railroad and Telegraph Co. was organized to build from the 100th Meridian to the west. The 100th Meridian is 247 miles west of present-day Omaha, Nebraska. Each company was given a 400-foot right-of-way along the most direct, central, and practicable route that could be determined. Each company could use earth, stone, timber, and other construction

materials that were available along its path. As a mile of track was laid, the railroad company was granted ten square miles of public lands within 20 miles of the line. Each company was granted thirty-year loans in government bonds at an interest of six percent to be paid by the U.S. Treasury until the bonds matured. These financial subsidies were paid at \$16,000 for each mile of track laid on flat lands, \$32,000 per mile in the foothills and \$48,000 per mile for mountain crossings. By 1864, both land grants and bond amounts were doubled and Union Pacific was allowed to begin at Omaha, Nebraska, rather than the initial 100th meridian marker.

The Central Pacific Railroad Company was faced with the awesome task of building from sea level to just over 7,000 feet in the first 100 mile stretch—and through solid granite rock. This required building thirteen tunnels through rugged mountain terrain. The granite was so hard in places that the construction crews could only tunnel at a rate of eight painstaking inches a day. The Union Pacific Railroad, on the other hand, was to build across the plains going from 996 feet elevation to about 8,300 feet in 550 miles. Congress felt that the Union Pacific would arrive at the California border before the Central Pacific could cross over the Sierra Nevada mountains.

Most of the construction of the transcontinental railroad was delayed until the end of the Civil War. Iron products, black powder, and manpower were scarce. Mining was considered a more lucrative trade in California than that of construction. All materials were shipped via the lengthy shipping route around Cape Horn to San Francisco. Central Pacific's shipments had to sneak around the confederate shipping blockades of the Southern states. The Central Pacific Railroad Company had been given two years to construct the first 50 miles and the Union Pacific Railroad Company had one year to do the same. Due to the effects of the Civil War, neither company met the its deadline

Corruption, bribery, chicanery, and outright fraud were rampant in the management ranks of both rail-



*Laying Track - 1869*



road companies, all in the efforts to obtain more congressional appropriations and favorable advantages. Yet, in spite of their almost outright thievery of the government purse, the railroad was actually built, primarily due, not to the management, but to the dedication of the outdoor men—surveyors, graders, and track layers and supervisors of both companies.

At the west end, the Central Pacific solved its shortage of labor by hiring thousands of previously unemployed Chinese, who had been driven out of the California mines. Although many doubted that the slightly built Chinese could manage the hard labor required, the decision to hire them was serendipitous: the Chinese turned out to be some of the most dedicated, sober, and hard-working men on the entire line. The Union Pacific found its workforce among the Irish emigrants, a tough, strong (and often hard-drinking) bunch of men.

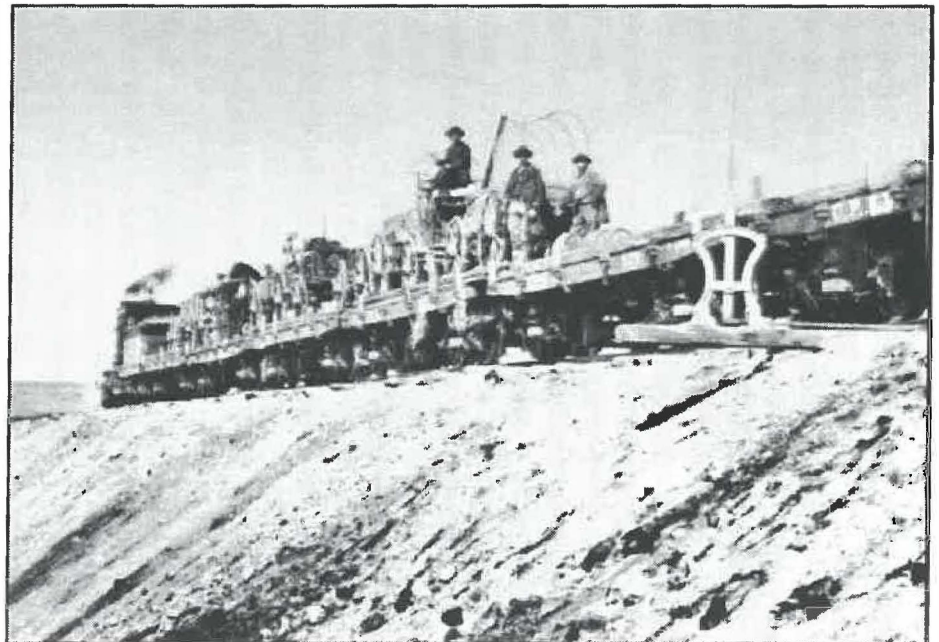
By the spring of 1868, the Central Pacific was laying a mile of track per day well beyond the California border. The great race was under way. Union Pacific had surveyed west to Wells, Nevada, and Central Pacific had surveyed to Fort Bridger, Wyoming. Congress had not yet set the point where the two should meet. By the end of 1868, Union Pacific was grading near Wells and Central Pacific was beginning to grade up Echo Canyon, Utah. At Promontory Summit, the two companies were grading side by side in opposite directions.

Finally in 1869, Congress decided that the two companies' rails would meet at Promontory Summit, Utah. Senator Jacob Howard, chairman of the Pacific Railroad Committee, resolved before Congress on April 9, 1869, "that common terminal of the Union Pacific and Central Pacific Railroads shall be at or near Ogden; and the Union Pacific Railroad Company shall build, and Central Pacific Railroad Company shall pay for and own, the railroad from the terminus as foresaid to Promontory Summit, at which point the rails shall meet and connect and form one continuous line" (*Congressional Globe*, April 9,

1869). The final tie was laid and the final spike driven at Promontory on May 10, 1869.

As they approached and actually passed each other in 1869, in their haste they often neglected proper construction procedures. In Echo Canyon, the Union Pacific actually skipped grading and laid rails on the uneven bare ground. Therefore, after the Golden Spike ceremony, some of the line had to be, and was, reconstructed.

With the completion of the Pacific Railroad, the time required to emigrate from the east to the west was cut dramatically. A trip that required several months travel by wagon now only took a few days by rail. Emigrant passage was \$65.00 from New York to San Francisco, California, and \$55.50 from St. Louis to San Francisco. Children under five years of age traveled free and under twelve years were half-fare. Interestingly, as the railhead moved west so did the wagon trailheads. Emigrants, along with their supplies, traveled to the railhead by train where they would continue the trek westward by wagon. The completion of the Transcontinental Railroad brought to an end the large scale wagon migrations to the west. Those who emigrated after 1869 were called Pullman Pioneers, after George M. Pullman's Palace Sleeping Cars.



*Railroad workers are transported to construction sites – 1868*



# The Lincoln Highway in Utah

Jesse Petersen

America's Lincoln Highway came into existence in 1913 as an effort to establish an automobile route across the United States. It was conceived and developed by private individuals and businessmen associated with the growing automobile industry. East end was at Times Square in New York City, while its western terminus was at Lincoln Park in San Francisco, overlooking the Pacific Ocean.

The Lincoln Highway was not a new road and was not an interstate construction project. When it was first established it was laid out along already existing roads and trails that would take the traveler in the generally desired direction. After the route had been established, and had begun to be used by an increasing number of cross-country travelers, the highway's supporters began a campaign to get the road improved. This improvement would include grading and paving and as time went on, the construction of shortcuts at appropriate locations.

In the western states, and particularly in the state of Utah, most of the route of the Lincoln Highway was on, or very near, tracks and trails that had been traveled by fur trappers and traders, emigrant wagon

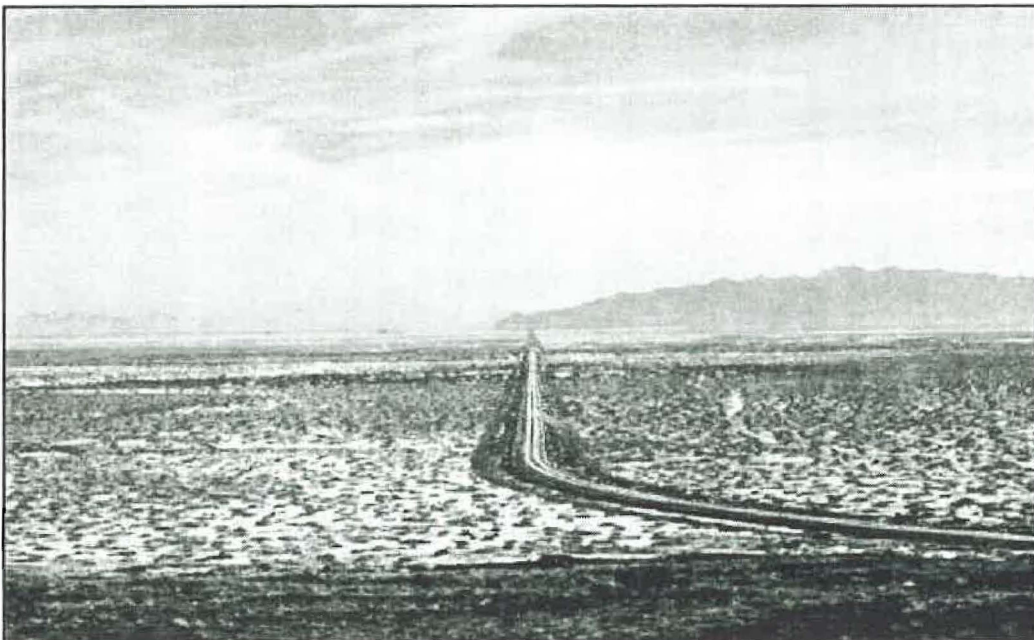
trains, and government sponsored explorers. The purpose of this article is to describe the routes of the Lincoln Highway in Utah and talk about some of the individuals and groups who had used them in earlier years. And routes, the plural, is the appropriate term because during its existence the Lincoln Highway followed several different routes to get across the state.

The Lincoln Highway crossed the Utah-Wyoming border about five miles west of Evanston. At this point the historic road was north of Interstate 80 and the railroad tracks. There is sort of a natural transportation corridor through this area although it had not been used by the early wagon roads, which had been established farther to the south. It is almost certain that fur trappers had used this northern route, but perhaps the first to document it was James Clyman. In June of 1846, Clyman traveled eastward from California with Lansford Hastings. Hastings was on his way to meet up with a group of emigrants who he hoped to lead back to California on his ill-conceived desert route. In *Journal of a Mountain Man*, Linda Hasselstrom concludes that Clyman and Hastings crossed Yellow Creek at about this location.

With Hasselstrom's editorial insertions, Clyman's journal entry reads as follows:

"[June] 4th... after crossing [the Weber river] we took a deep cut ravin coming direct from the N.E [Echo Canyon] the Bluffs of this ravin are formed of red rock made of smoothe water washed pebbles and the North side in particular are verry high and perpendicular and in many places hanging over ...

5th N.E. Up the Brook on which we encamped [near Castle Rock] in a



*Lincoln Highway*

few miles it parted into several smaller Brooks and we continued up the most central notwithstanding the frosty morning [along present U.S. route 30 (now 1-80) to Evanston]... in a few hours ride we arrived at the summit of the ridge that divides the waters of Weabers River from those of Bear River ... Continued down the East side of the ridge and crossed over a small muddy stream [Yellow Creek] running N. into Bear River."

Following the route used by Clyman and Hastings, the Lincoln parallels present day I-80 for the next five and a half miles, then at the top of Echo Canyon, it merges with the freeway. Farther down Echo Canyon, about ten miles from the state line, the Hastings Road and the Mormon Trail come in from the hills to the east. In 1927, at about this spot, a stone monument was erected to commemorate this historic junction. The July 14, 1927, edition of *The Wyoming Times* carried the following story:

"Yesterday afternoon, July 13, 1927, at the intersection of the old pioneer trail and the Lincoln highway, one-fourth of a mile above the old Moore ranch home in Echo canyon where the old road yet visible enters the newly constructed section of the Lincoln highway, a large granite monument was unveiled and dedicated marking the spot where the Mormon pioneers 80 years ago that day, passed the spot under the leadership of Brigham Young."

Local lore has it that only a few years later an out of control automobile knocked the monument off its base. Sometime after that, someone had the good sense to haul the big chunk of granite down the canyon to Henefer where it can be seen today in front of the Daughters of Utah Pioneers museum.

From this intersection to the mouth of Echo Canyon, the Lincoln Highway and the Mormon Trail were the same or within a few yards of each other. When the Lincoln Highway was first established in 1913, it continued to follow the Mormon Trail to where it and the earlier Donner-Reed trail turned south at Henefer.

The Lincoln continued along the Weber River, following the route that Lansford Hastings had used when he was leading the Harlan-Young party.

There is little doubt that the Harlan-Young group took the first wheeled vehicles down the lower Weber River Canyon, but they were not the first non-

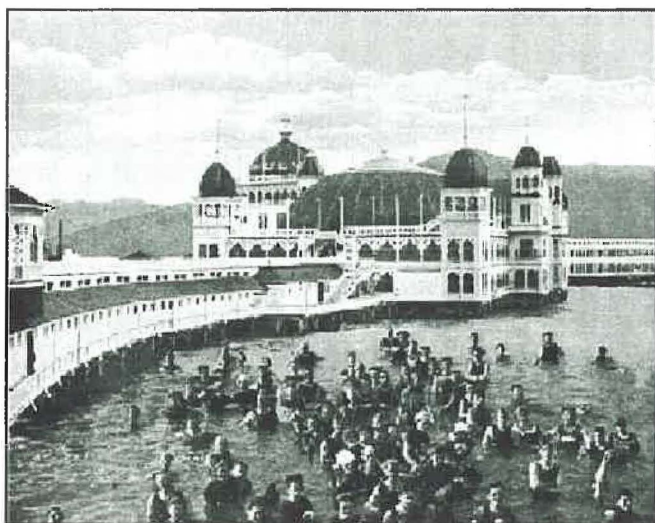
Native Americans to travel this canyon. John Weber, who was one of William Ashley's group leaders, spent the winter of 1824-25 in Cache Valley. In the spring of 1825, he and his small group of trappers traveled south until they reached the mouth of Weber Canyon and then worked their way up the river, leaving it at the present site of Coalville and heading east up Chalk Creek. Somewhat later that year Etienne Provost struck the Weber River a little north of Kamas and worked his way downstream until he came to the camp of Peter Skene Ogden, which was located near the present community of Mountain Green.

Back to the Harlan-Young party. In July of 1846 Lansford Hastings had met this group in Wyoming and had talked them into letting him lead them to California on his new cutoff. They took their wagons down the lower Weber Canyon but the trail proved to be so difficult that Hastings went back up the canyon as far as Henefer, where he posted a warning for others not to follow this route. This was the note that sent the Donner-Reed party south from Henefer.

But the Lincoln Highway followed this section of the Hastings Trail for only a couple years. It is important to remember that the Lincoln Highway was sponsored and promoted by a private organization. It was managed by a board of directors who attempted to convince local and state governments to improve the highway to boost tourism. In March of 1915, that board of directors approved a plan to re-route a section of the highway. They eliminated the section that went to Ogden and then south to Salt Lake City, and added a route that turned south at the mouth of Echo Canyon, and went through Coalville, Wanship, Silver Creek Canyon, and Parleys Canyon.

In this area the Lincoln was mostly following what had previously been known as the Golden Pass Road. In 1848, the year after the first group of Mormon emigrants reached Salt Lake Valley, Parley P. Pratt was assigned by the leadership of the church to explore Parleys Canyon with a view toward building a road that would not be as steep as the road the Donner-Reed party had opened through East Canyon, over Big Mountain, and down Emigration Canyon. Pratt became convinced that a good road could be built between Salt Lake City and Echo and when the leaders of the church failed to act on it, he





*Saltair Resort on the shore of Great Salt Lake near the Lincoln Highway. Photo taken about 1921*

decided to open it up himself and operate it as a toll road. He began working on it in July of 1849. It was opened for traffic a year later and Pratt collected about \$1,500 in tolls that year. Pratt sold his rights to the road in 1851 and in 1860 the territorial government canceled its status as a toll road and took it over as a territorial road.

Although the Lincoln Highway went through Silver Creek Canyon, this section was not a part of the Golden Pass Road. This canyon had proven too difficult for the early road builders so they bypassed it by using a more favorable canyon farther to the south.

After leaving Parleys Canyon the Lincoln Highway went almost straight across the Salt Lake Valley, merging with the Hastings Road and the Donner-Reed trail somewhere just north and west of the town of Magna. About three miles west of Magna, travelers on the Lincoln Highway sometimes camped overnight in what is sometimes known as Deadman's Cave. Heinrich Lienhard, who in 1846 was traveling with a small group of emigrants who were behind Lansford Hastings and the Harlan-Young party, and in front of the Donner-Reed party, mentioned this cave:

...we arrived at the foot of the mountain, where a large, crystalline spring, somewhat warm and a little brackish, welled out of the ground. ...In the vicinity of this spring stood an immense, isolated, rounded rock under which was a cave, and those going into it found a human skeleton.

The road through here has been rerouted south and then west of Lienhard's immense rock, and the cave is on property now owned and controlled by Kennecott Utah. It is securely fenced and can be accessed only by prior arrangement.

A few miles west of the cave, the highway reached a spot where the northern end of the Oquirrh Mountains squeezes in against the southeast shore of the Great Salt Lake and forces all travel into another natural corridor. Within this narrow strip the Lincoln Highway was following a route that had been used by Jedediah Smith in 1827, John Charles Fremont and Kit Carson in 1845, the Hastings Road in 1846, Howard Stansbury in 1849, and Captain E. G. Beckwith of the Army's Topographical Corps in 1854. The trails used by all of these early travelers were probably within rock-throwing distance of each other as they went through the town of Grantsville, around the north end of the Stansbury Mountains, and down Skull Valley as far south as the abandoned Hawaiian community of Iosepa, which was known as Hope Wells by the members of the Donner-Reed party. At Iosepa, the Hastings Road and its travelers turned to the northwest, Beckwith took off in a southwest direction, and Jedediah Smith's trail and the Lincoln Highway continued south.

Orr's Ranch is found near the south end of Skull Valley. It was established by an intrepid family in the 1890s and was one of the most famous and important stopping places along the Lincoln Highway. The nearby springs probably saved the lives of Jedediah Smith and his two companions after they had made a waterless crossing of the southern end of the Great Salt Lake Desert.

About five miles south of Orr's Ranch, the Lincoln Highway turns to the west and enters the area that is now the US Army's Dugway Proving Ground. This military reservation was established as a research and testing area after the advent of WWII. Near the center of Dugway, in about 1890 or so, the Tooele County government dug a well. Known briefly as Dyke's Well, but more commonly as County Well, its purpose was to supply water for freight wagons hauling ore from a few mines that were located in the desert. It was never a very good source of water, and by the time that the Lincoln Highway had made its appearances it was described as being either dry or not fit to drink.



Several guide books warned that when there was water it should be used "for radiators only."

From Orr's Ranch to County Well, the Lincoln had been following the route used by Jedediah Smith, but when it turned to the southwest at County Well, the Lincoln Highway left Smith's trail. For several miles now it would be on its own, making its way through an area that had not been used by any of the prominent early travelers and explorers. Taking a route that went between the north end of Dugway Mountain and Granite Peak, it then turned more toward the south for a few miles and then ran into the Pony Express Trail and the Overland Stage road at Black Rock. Turning west again the Lincoln Highway would stay with the Pony Express Trail as it went through Fish Springs, Boyds Station, Callao, and Ibapah. Somewhere between Fish Springs and Callao, the Lincoln would have cut across Jedediah Smith's trail one more time. About five miles west of Ibapah it came to the state line and crossed into Nevada.

Mark Twain traveled this road in a stagecoach 1861 and when he wrote *Roughing It*, he included a detailed description of the conditions he had experienced:

"And now we entered upon one of that species of deserts whose concentrated hideousness shames the diffused and diluted horrors of Sahara: an "alkali" desert. ... Imagine a vast, waveless ocean stricken dead and turned to ashes; imagine this solemn waste tufted with ash-dusted sagebrushes; imagine the lifeless silence and solitude that belong to such a place; imagine a coach, creeping like a bug through the midst of this shoreless level, and sending up tumbled volumes of dust as if it were a bug that went by steam; imagine this aching monotony of toiling and plowing kept up hour after hour, and the shore still as far way as ever, ... The mules would make at stated intervals a "spurt," and drag the coach a hundred or maybe two hundred yards, stirring up a billowy cloud of dust that rolled back, enveloping the vehicle to the wheel tops or higher, and making it seem afloat in a fog. Then a rest followed, with the usual sneezing and bit-champing. Then another "spurt" of a hundred yards and another rest at the end of it. All day long we kept this up, without water for the mules and without ever changing the team."

Now we need to consider the changes that were made to the route of the Lincoln Highway in 1919 and

1927. In 1918, working with the Utah State Highway Commission, the Lincoln Highway Association initiated two construction projects that were intended to shorten and improve the highway through the western part of the state. The first was a project that would take the highway through Tooele City and over Johnsons Pass. The first documented crossing of Johnsons Pass by wheeled vehicles was accomplished by Captain James H. Simpson in October of 1858. Simpson and a small group of soldiers managed to get six army wagons through the narrow canyon at the lower end of the Stansbury Mountains. The Lincoln Highway would follow Simpson's route from Clover, on the east side of the mountain, to Terra at the mouth of the canyon on the west side. From this spot Simpson continued in a southwest direction while the Lincoln turned due west to Orr's Ranch, where it joined the original route of the Lincoln coming south through Skull Valley.

Carl Fisher, who had originally developed the concept of the Lincoln Highway, contributed \$25,000 in 1918 to help in the construction of the road through Johnsons Pass. In recognition of this, the state of Utah agreed to change the name to Fisher Pass. The new name didn't catch on, and the name Fisher was soon forgotten.

The second Lincoln Highway project that got started in 1918 would be known as the Goodyear Cutoff, named for the Goodyear Tire and Rubber Company which contributed \$100,000 for its construction. This project was an eighteen-mile causeway that cut across the mud flats of the lower end of the Great Salt Lake Desert between Granite Peak and Black Point. This section of the Lincoln Highway is on or quite close to the route followed by Captain E. G. Beckwith in May of 1854. Beckwith, of the US Army's Topographical Corps, had been assigned to explore the area between Salt Lake City and California for possible railroad routes. He had followed the Hastings Road from Salt Lake City to Iosepa, but had then cut across Skull Valley in a southwest direction and crossed the Cedar Mountains at a spot identified by writer/historian Charles Kelly as Beckwith Pass (known locally as Wide Hollow). Continuing southwest to Granite Peak Beckwith found a spring that was later used by Lincoln Highway travelers following the Goodyear

Cutoff. When he encountered the mud flats to the west of Granite Peak, Beckwith entered the following description in his journal:

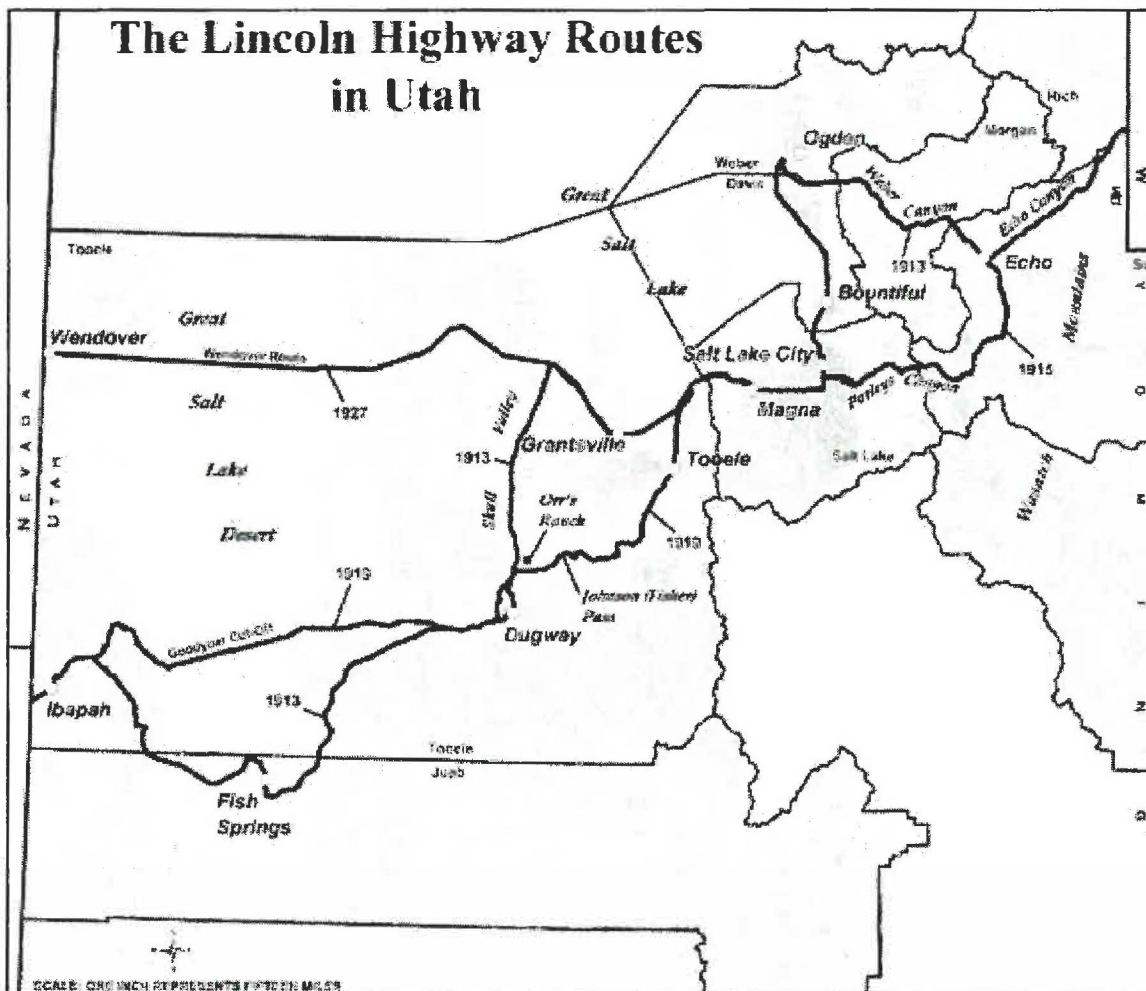
Five miles from Granite Mountain we left the dry soil ... and passing over a narrow ridge of sand, entered upon a desert of stiff mud, as level as a sheet of water, which we found great difficulty in crossing with our wagons, for 17.66 miles. For this entire distance there is not a sign of green vegetation, and only here and there a dry stalk of artemisia, where it has been transported by the wind. The lightest sheet of effloresced salt covered the moist earth at intervals, and the track of a single antelope or wolf could be seen crossing the desert for miles, by the line of dark mud thrown up by its feet, so level, soft, and white was the plain; and the whole scene was as barren, desolate, and dreary as can be imagined.

After reaching the western side of the mud flats, Beckwith turned slightly to the southwest and used

Overland Canyon to get to Ibapah. The planners of the Goodyear Cutoff had proposed to use this route, but the Road Commission decided to take the route that went around the northern end of the Clifton Hills to Gold Hill, where they had access to the railroad. But the Goodyear Cutoff was never totally finished. After about a year of work, the Utah State Road Commission halted its efforts, stopped work, and called a halt to the unfinished project.

There was one more change to the route of the Lincoln Highway in Utah. During the years between 1915 and 1924, the Utah State Road Commission had been attempting to build a road to Wendover. After several failed attempts, this route, which would cross the mud flats and salt beds about forty miles north of the Lincoln Highway, was finally finished in 1924. By then, it had become a part of a new cross-country route known as the Victory Highway. The Lincoln Highway was invited to give up its unfinished

route to the south. For three years the leaders of the Lincoln Highway Association resisted, but near the end of 1927, it gave in and made one last change to the official route. The Lincoln Highway would now go to Wendover, then enter Nevada and turn south toward Ely.



*Lincoln Highway in Utah*





# Utah State Symbols

## Emblem and Motto

The Beehive and word "industry" became the official motto and emblem for Utah on March 4, 1959. Industry is associated with the symbol of the beehive. The early pioneers had few material resources at their disposal and therefore had to rely on their own "industry" to survive. The beehive was chosen as the emblem for the provisional State of Deseret in 1848 and was maintained along with the word "industry" on the seal and flag when Utah became a state in 1896.

## Bird

Abundant nesting colonies of the California gull (*Larus californicus* Lawrence) have been reported as early as the 1850's in Utah. These gulls are assumed to be the species that saved the crops of the early Mormon settlers from crickets in 1848-1849. These birds now nest in large colonies in the islands and dikes of the Great Salt Lake and Utah Lake.

## Flower

The sego lily (*Calochortus nuttallii*) was made the official state flower in 1911 after a census was taken of the state's school children as to their preference for a state flower. The sego lily grows six to eight inches high on open grass and sage rangelands in the Great Basin during the summer months. The plant is important to Utah because the bulbs were eaten by the early Mormon settlers during their first winter in the valley when food was scarce.

## Tree

The blue spruce (*Picea pungens*) was chosen by the Utah State Legislature in 1933 to be the state tree. The tree is found in the Wasatch and Uinta mountains at elevations between 6,000 to 11,000 feet. It can be transplanted successfully and is widely used as an ornamental tree. Its foliage is generally silvery blue in color and has the ability to withstand temperature extremes.



