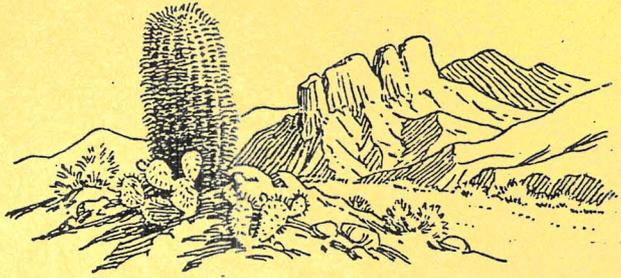


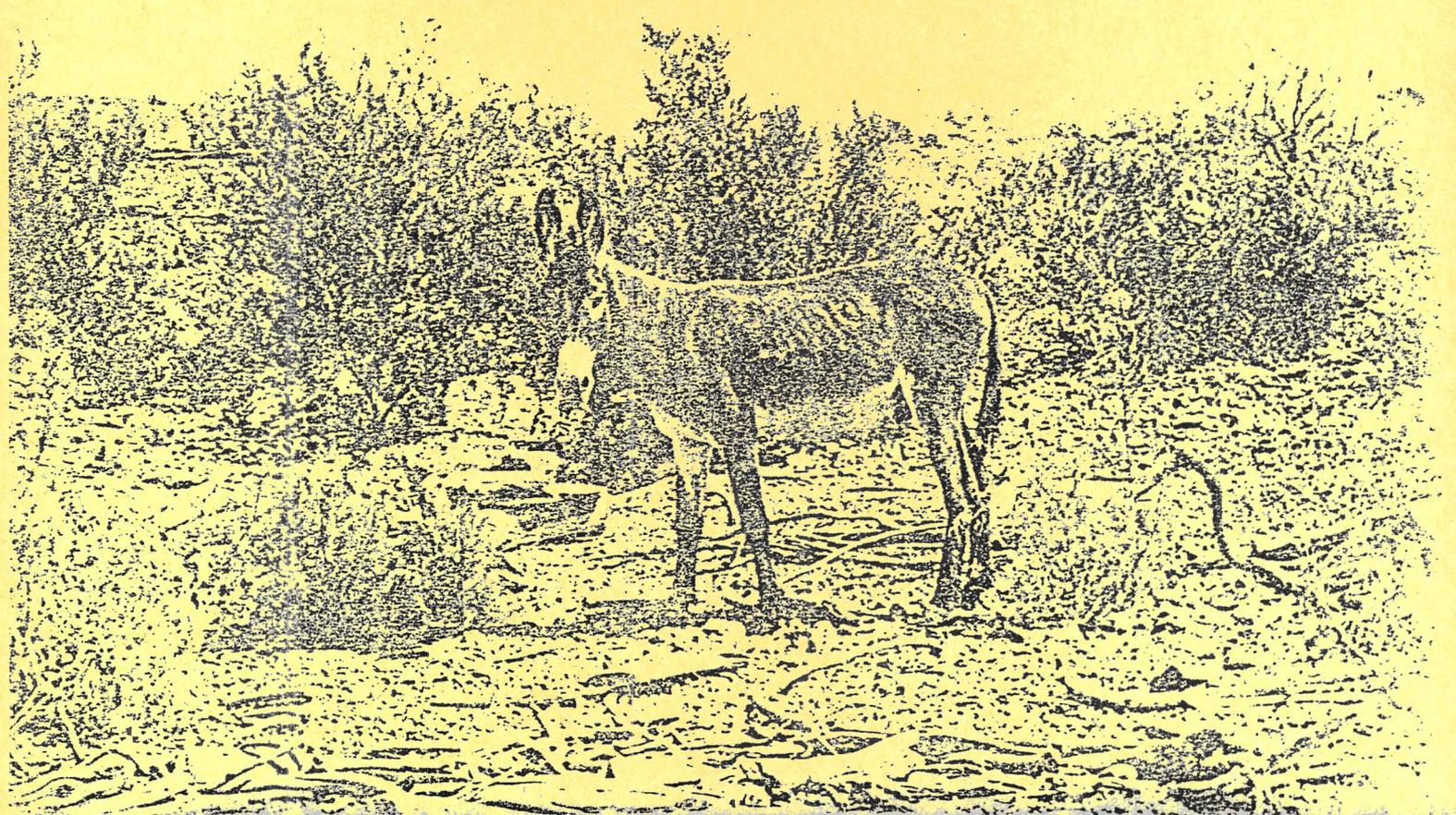
# Desert

OCTOBER 1983

MAGAZINE



THE TONOPAH AND TIDEWATER RAILROAD  
FORT CHURCHILL, NEVADA  
STEAMBOAT CAP'T ON THE COLORADO RIVER  
THE SAGA OF JOHN SEARLES  
THE DESERT QUIZ



# DESERT MAGAZINE BOOK SHOP

## Snake River Country

Bill Gulick

Photography by Earl Roberge

"Born in incredible beauty, flowing through incredible desolation, nourishing incredible fertility..."

So begins Bill Gulick's story of the Snake, perhaps the last important wild river left in the Pacific Northwest, a river that has, in earlier times, played a monumental role in exploration, in empire and in settlement. Now, because the wide expanse of country through which it flows is sparsely settled and capable of great development in the years to come, the present and future of the Snake should be as vitally interesting to the reader as its colorful past. 195 pages, 11 1/4 x 14 1/2, 100 full-color illustrations by Earl Roberge.

Cloth, boxed \$35.00 ISBN 0-87004-215-7

## Owyhee Trails:

The West's Forgotten Corner

Mike Hanley with Ellis Lucia

The Owyhees, as they rise impressively from the high desert of Oregon and Idaho, have been the site of mining booms and Indian battles, holdups and range wars. Precious metals abounded on their slopes, and their valleys held another sort of riches in the form of water and feed for cattle and sheep. Rancher-author Mike Hanley, who lives in Jordan Valley, Oregon, under the shadow of the Owyhee Mountains, and his collaborator, the well-known writer, Ellis Lucia, recount the boisterous past and intriguing present of this still wild corner of the West. 6x9, 225 pages, 102 photos.

Paper \$9.95 ISBN 0-87001-281-5

## The Complete Sourdough Cookbook

Don and Myrtle Holm

One of the near-lost culinary arts that is only now being rediscovered is that of sourdough cookery. Here, the Holms offer one of the most significant collections of recipes to herald this revival. From the right "starter" to delicious sourdough breads, cakes, waffles, and even pizzas, all the items have

been tested again and again in the modern kitchen. Many have been adapted for the hunter and camper, to be cooked as they once were, in the camp stove or over the campfire.

Paper \$6.95 ISBN 0-87004-223-8

## Don Holm's Book of Food Drying, Pickling and Smoke Curing

Don and Myrtle Holm

"... there is a revolution in eating and the preparation and preservation of the available foods in a shrinking world. Shortages and continued rising prices for supermarket goods, will make it imperative that home makers learn how and routinely practice the old-time arts of preserving foods."

"You can have fun at the same time you are becoming self-taught and proficient in the ancient and wonderful ways of Drying, Pickling, and Smoke Curing."

Paper \$5.95 ISBN 0-87004-250-5

## Old-Fashioned Dutch Oven Cookbook

Don Holm

The first of its kind in print, this is primarily an outdoor cookbook specializing in old-fashioned Dutch oven cookery and in sourdough recipes. There are numerous tempting recipes for hungry fishermen and hunters, including pot roasts, muligan stews, and dishes made from bear meat, buffalo, woodchuck. It has a special section on sourdough cooking, and favorite recipes of several outdoor writers of the Northwest.

Cover plate by Charles Conkling, Sketches by Jack Ostergren.

Paper \$5.95 ISBN 0-87001-123-9

## Ferryboats in Idaho

James L. Huntley

Here is the first lengthy account of the water transportation system, such as it was, that served Idaho from the time of Lewis and Clark until the present. Even before the coming of the white man, the native peoples of the Gem State knew the many great rivers in their land and how to cross them. This is the story of the Idaho ferryboats and the important part they played in the settlement and development of our beautiful state. 6x9 inches, 278 pages, 127 photographs, 27 maps.

Paper \$7.95 ISBN 0-87001-263-7

## Twenty Miles From a Match: Homesteading in Western Nevada

by Sarah E. Olds

In 1908, Sarah Olds packed up her brood and went homesteading in the desert 35 miles north of Reno. With her invalid husband, she and her family made a home out of a rude cabin, planted fruit trees and a garden, drilled for water, hunted sage hens for sale in Reno, and built a schoolhouse. This story is for anyone who has ever dreamed of pioneering. It is a true account, told simply and honestly, with a delightful sense of humor. "A book to warm the cockles of your heart and make you proud of the human race." —*Pacific Historian*, ISBN 052-4, 182 pgs., illus., \$5.50

## Western Carpetbagger: The Extraordinary Memoirs of "Senator" Thomas Fitch

by Eric N. Moody

Thomas Fitch tried his hand at everything from law to mining to politics. But his true fame was earned as the premier carpetbagger of them all. "The most corrupt man that ever followed politics on the coast." But this reputation may have been undeserved. The memoirs from the pen of Thomas Fitch reveal a fascinating individual who was humorous, scandalous, and sensitive. This entertaining view of the frontier west is heightened by little-known glimpses of Mark Twain, John Fremont, Wyatt Earp, Brigham Young, and Virginia City mining magnates. "Those who love the humor, adventure and audacity of the Old West will prize *Western Carpetbagger*." —*Nevada State Journal*, ISBN 050-8, 284 pgs., \$5.25

## History of Nevada, 1540-1838

by Hubert Howe Bancroft

Bancroft's *History of Nevada* was first published in 1890 as part of a thirty-nine volume history of states and countries stretching from Alaska to Panama. The book appeared just after the mining decline, enabling Bancroft to describe the events with a sense of immediacy. The history begins in 1540 with a description of exploration in the earliest days. It continues with a discussion of emigrants, early settlers, and the Comstock Lode and closes with a review of state politics and development of the state's resources through 1893. Includes a new foreword by James Hulse. "Finest work ever done on the history of the western United States." —*Las Vegas Review Journal*, ISBN 069-0, 347 pgs., maps, \$8.00

## Story of the Mine

by Charles Shinn

When it was first printed in New York City in 1896, *The Story of the Mine* received instant national acclaim and went through ten printings. It is a remarkably revealing history of one of the West's richest mining strikes, the Comstock Lode of Nevada. "The story of the Comstock is all there in Shinn's articulate language: the rise and fall of the silver kings, the chicanery, and hard work, the stock dealings and the impact upon national politics and economics." —*Billings Gazette*, ISBN 039-1, 277 pgs., illus., \$8.50

## TRIGGEROMETRY

Eugene Cunningham

A gallery of gunfighters—Wild Bill, Billy the Kid, Ben Thompson, Captain Jim Gillet, Ranger Bill MacDonald, General Lee Christmas, wolfish Bass Outlaw, grim John Slaughter, Curly Bill, and a host of others—who stood behind the star and some whom they faced across drawn pistols spring alive in the pages of *Triggerometry*.

As a veteran novelist, Mr. Cunningham has been as much interested in the gunfighter's mind as in his flashing hands. Not merely what a Wes Hardin did, but what quirk of mentality and interplay of circumstances forced him to do it, is shadowed in the portrait, making *Triggerometry* brilliant biography as well as history.

\$12.95 ISBN 0-87004-032-4

## Southern Idaho Ghost Towns

Wayne Spurling

Southern Idaho has many ghost towns scattered among its mountains and deserts. In this book, Wayne Spurling provides an excellent guide to eighty-four of them, describing the history of each and its current state of preservation. Many photographs show highlights of the sites, and maps pinpoint the locations. It will be welcomed by the wilderness explorer and the armchair traveler alike. 6x9 1/2 pages.

Paper \$5.95 ISBN 0-87001-229-7

## Martha and the Doctor: A Frontier Family in Central Nevada

by Marvin Lewis

Caught up by gold and silver fever, Martha and James Gally left their secure home in Ohio and headed for Austin, Nevada, in 1864. For ten years their lives took a downward path of despair until their luck finally changed. Their remarkable story was pieced together using the diary entries of Martha and the journalistic writings of her doctor-husband James. What emerged was a fascinating study of two opposing views of frontier life. While her husband saw only the adventure and excitement of their new life, Martha focused on the poverty, fear, and misery of the frontier. "A rich addition to the very few family chronicles of early statehood Nevada." —*Western Historical Quarterly*, ISBN 049-4, 247 pgs., \$5.00

## Hardscrabble: A Narrative of the California Hill Country

by Anita Kunkler

Told through the eyes of a growing girl, these personal reminiscences are the story of a family and an area which long continued to mirror early frontier practices. It reflects the heroic geography of Northern California and reveals the crude isolation and harsh physical conditions of life in a difficult time. "Related with such candor that we are left with a convincing portrait of a rustic way of life which remains a part of our cultural heritage." —*Library Journal*, ISBN 044-3, 298 pgs., illus., \$5.00

## Eureka and its Resources

by Lambert Molinelli

In the late 1800s, the town of Eureka, Nevada, was seeking new residents to help stimulate its booming mining economy. To encourage growth, real estate agent Lambert Molinelli wrote this promotional book to lure new citizens. He touted the virtues of the town, including its prosperous mines, advanced transportation and communication facilities (stage and telegraph), and handsome new buildings. To further embellish Eureka, Molinelli included advertisements from local purveyors and businessmen. This reprint preserves the original contents and features a new foreword. "A charming account of mining in boom times." —*Pacific Historian*, ISBN 069-9, 137 pgs., illus., \$5.00

## Early Nevada: Period of Exploration, 1776-1848

by Fred Nathaniel Fletcher

This reprint edition, originally published in 1929, focuses on an exciting period of history filled with explorers, fur trappers, and traders. Using first-hand accounts, Fletcher brings to life the adventures of explorers who often found themselves traveling across the harsh desert without food, water, wood, or grass for their livestock. "Fletcher focuses upon the early explorers, and the tale he tells of their adventures is an exciting one to have back in print." —*Books of the Southwest*, ISBN 061-3, 195 pgs., map, \$5.25

## Water and Power

The Conflict over Los Angeles' Water Supply in the Owens Valley

WILLIAM L. KAHLI

"This is the definitive account of how Los Angeles secured its water supply from the Owens Valley. Well written and researched, the book abounds with colorful personalities and dramatic events. Unlike earlier histories, it carries the Owens Valley story up to the present, adding many new elements to a familiar story... a solid, thoughtful and provocative study."

—*Pacific Historian*

"Here, in engaging amplitude and in comprehensive and rich detail, is the most inclusive, impartial account yet published."

—*Los Angeles Times*

"A brilliant book, by far the best I have ever read about the key element in the development of the American Southwest, water. 'Water and Power' is not only the most detailed book on the subject but the first one to attempt to be balanced and fair, and, more important, to succeed."

—*New York Times*

"Provides an essential perspective on today's resource promises and conflicts."

—*American Scientist*

William L. Kahli is the award-winning editor and project director of the widely acclaimed *California Water Atlas*.

Cloth ISBN 0-87004-066-1

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DW GRANTHAM  
Editor

# Desert

Magazine • Since 1937

M. BANDINI, Photo Editor  
P. RICHARDS, Circulation

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I can almost hear someone out there remarking "Oh No, not another editor". There is some truth to that comment. I seem to be the 4th editor of DESERT MAGAZINE in the past 2 years. One must think that it is a dangerous job.

I do not look at it that way. The "new" DESERT MAGAZINE is really the "old" DESERT MAGAZINE to me. It is the one I used to wait for the postman to deliver. My job as editor is a rewarding one as I get to read the magazine from cover to cover, review potential articles, and meet many of our subscribers. I really enjoy that. Along the way, I even find time to write an article or two.

It seems a shame to refer to writing an article for DESERT as work. I spent quite a bit of time researching, hiking, driving, and exploring for the article on the Tonopah and Tidewater railroad. But the experience was most enjoyable. I love the desert and history. My job combines both.

DESERT will be developing over the coming months. We have new typesetting equipment on order. When delivered and installed, DESERT will look better and sharper, with more type styles.

Color on our pages is now basic black. Multi-color presentations will return in the Spring as we have not yet developed our "shop" for that yet.

Lastly, advertising will be minimized. We encourage advertising, but only on desert related products.

I hope you enjoy this copy of DESERT MAGAZINE. There is a variety of articles not seen in recent years. Since DESERT is returning to its older concept of more travel, history, ghost towns and trails, mining, Indians, etc., everyone can expect to see and read much more. HAPPY READING.

*Ronald Grantham*

# Fort Churchill Nevada

BY  
DONALD W. GRANTHAM

Piautes, Shoshones, Washos--- The names struck fear into the settlers and travellers in Nevada during the 1850's. Occasional skirmishes between the Indians and the ever increasing flow of settlers, miners, and businessmen happened, but, due to the tendency of news to be exaggerated, these events were reported as major wars or battles.

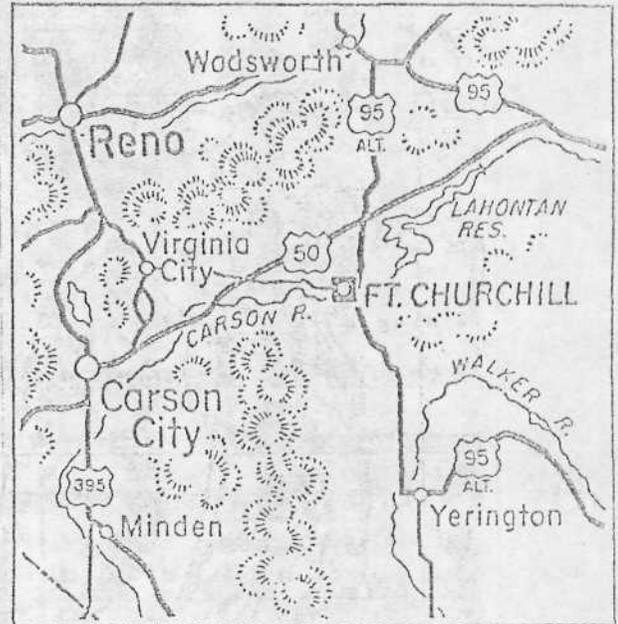
The tribes saw the settlers as invaders who trespassed on their lands, killed or scattered their game, destroyed their pine nut trees, and angered the great spirit. Then, in June 1859, gold was discovered in Gold Canyon, between what was to become Virginia City and Dayton. A new gold rush to "Washoe" as the strike was initially referred to, ensued. Soon Utah Territory's Carson County had an estimated 5000 residents. This only served to put more pressure on the Indian populace to strike back.

Surprisingly, only 2 major events are noted--the murder of a Willow Creek Valley rancher and an attack on a trading post along the Carson River known as Williams Station. It was the Williams incident that would lead to the building of Fort Churchill.

On May 7, 1860 two of the Williams brothers and an employee were killed by what was assumed to be Indians. History is not clear on the true identity of the attackers.

The surviving brother (he was absent during the attack), James Williams, rode to the nearby Pony Express Station at Bucklands Station and sounded the alarm. Reacting emotionally, some residents of the Comstock formed a posse and, under the leadership of Major William Ormsby, left Virginia City on May 9 to extract a swift revenge on the Indians. Upon reaching Bucklands Station, some of the posse returned home, leaving Ormsby in charge of a 105 man posse.

North they marched toward Pyramid Lake. Near the lake, they attempted to engage the Piautes and were soundly defeated. Of the 105 men in the



posse, 76 were killed, including Major Ormsby. The rest of the force retreated and asked for federal troops. Some federal troops under Captain Joseph Stewart were sent to fight the Piautes. For over a month they chased the Indians and engaged them as they found them. The troops were eventually to kill 40 to 50 Indians. Stewart's force was then recalled.

On July 18, 1860, Stewart, acting on orders to establish an army post on the Carson River selected a site near Bucklands.

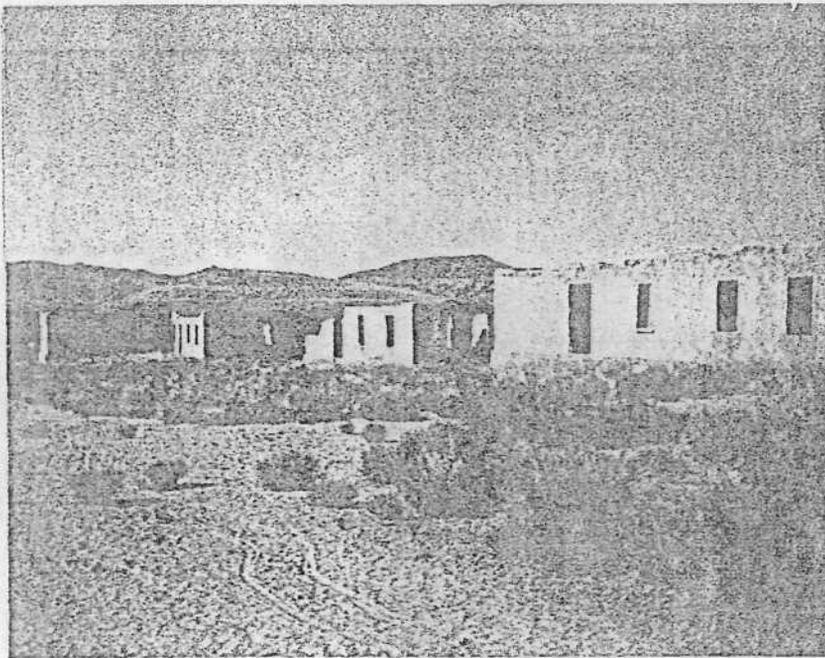


This map shows the area around Fort Churchill and the path taken by Major Ormsby's posse. The battle took place near the present day Wadsworth.

Stewart suggested the new post be named after General Sylvester Churchill, and his request was promptly approved.

Construction immediately started, using adobe bricks as they could be manufactured locally. The cost of construction was much more than the army had estimated, but this was due to the remote location of the post and the demand for goods and services created by the silver rush currently going on along the Comstock. A total of 21 buildings were constructed.

A mail route to Virginia City was established and the Placerville and Salt Lake Telegraph Company extended their line to the fort. Here, important messages from the Eastern United States carried by the Pony Express were opened and then telegraphed to California to insure a quicker delivery. Eventually, this telegraph line connected to a cross-country line at Salt Lake City, Utah and put the Pony Express out of business.



This is a recent photograph of the adobe buildings.

Life at the fort was very routine. Reveille at daybreak, stable and water call followed, then breakfast, and later fatigue call. At 9:00 AM, the daily guard was mounted. There was a 15 minute break at noon, followed by a 30 minute meal break and then duties until 6:00 PM. Thereafter, the men were on their own time unless assigned a special task such as sentry duty or perimeter patrol. The fort had no embankment or protective fence; it was open and thus required a 24 hour patrol.

Retreat was at sunset, tattoo at 8:30 PM and Taps 15 minutes later. And for this, an enlisted man could expect to earn \$13.00 per month.

During its existence, Fort Churchill troops fought no major battles with the Indians. There were some small encounters and chases, but on the overall, most Indians in the area remained friendly.

With the coming of the Civil War, the importance of the Fort increased. This was due to the government's concern that Southern Sympathizers might try to get control of Nevada's silver wealth by taking over the state. Numerous Southern sympathizers were arrested and jailed at the fort, usually they were released after swearing allegiance to the North.

The troops also aided the civil authorities. The governor of Nevada, James Nye, requested their help on numerous occasions. During this period, Nevada was separated from Utah Territory and became a state.

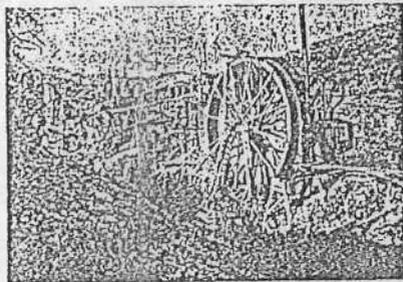
After the Civil War, the fort was basically unneeded. Indians had stopped attacking. Therefore, the Army Department ordered the fort decommissioned. All of the buildings were auctioned off to Sam Buckland in 1870. He paid \$750 for the fort's buildings. They were torn down and moved to his ranch.

In 1935, there was some restoration work done to the fort. Finally, in 1957, the site became a State Park. Today, the site may be visited and explored with the aid of signs that tell the visitor what each building was. There is a picnic area, Ranger station, and a campground. The visitors center has exhibits on the history of the fort. It is an interesting place to visit.

## Water Supply For The Comstock

By Hugh A. Shamberger

Early History • Development • Water Supply

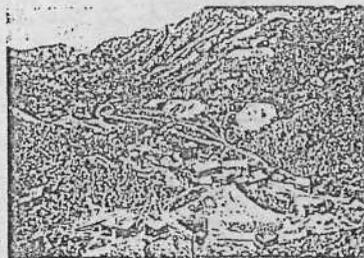


Prepared in cooperation with  
NEVADA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
and  
U.S. GEOLOGICAL SURVEY  
1947

## SEVEN TROUGHS

By Hugh A. Shamberger

Early History • Development • Water Supply



U.S. Geological Survey and Nevada Department of Conservation and Natural Resources, Sparks

Candelaria  
and Its NeighborsColumbus, Metallic City, Belleville, Marietta,  
Sodaville and Coolidge

Early History • Development • Water Supply



Prepared in cooperation with  
U. S. Geological Survey, Nevada Department of Conservation and Natural Resources, and  
Victor Goodale

## BOOK REVIEWS

Occasionally, along comes a book that is both a pleasure to read and a storehouse of valuable knowledge. It has been my good luck to discover not one, but a whole series of books on Nevada history that are really good.

The author of this series is Hugh A. Shamberger, a resident of Nevada's Washoe Valley. Mr. Shamberger formerly served as State Engineer and Director of the Department of Conservation and Natural Resources. His works reflect a personal interest in water resources and systems but they go very far beyond that in their scope. Each volume borders on being the most complete history on each town I have ever seen written.

Each volume contains many pictures, some of them very rare, numerous maps, charts, etc. Related areas are also covered. Each major mine is detailed as well as the water supply, the townsite, businesses, post offices, newspapers, major events, mills, railroads, and important residents.

I was very impressed with his writings and in particular with the depth of Mr. Shamberger's research. These books are an absolute necessity for the historian or ghost town buff.

To date, ten of these histories have been published. They are:

- |       |   |                                |
|-------|---|--------------------------------|
| No. 1 | The Story of the Water Supply for the Comstock. |                                |
| No. 2 | The Story of Rawhide                            | No. 7 The Story of Weepah      |
| No. 3 | The Story of Seven Troughs                      | No. 8 The Story of Silver Peak |
| No. 4 | The Story of Rochester                          | No. 9 The Story of Candelaria  |
| No. 5 | The Story of Fairview                           | No. 10 The Story of Goldfield  |
| No. 6 | The Story of Wonder                             |                                |

My favorite is Candelaria. I have spent many days and nights camped in the area, wandering, prospecting and just enjoying a Nevada Ghost Town. The DESERT BOOKSTORE has No. 9, Candelaria, at \$10.00 and No. 10, Goldfield, at \$18.00 available by mail. Order blanks are on the rear inside cover. Other volumes may be available by telephone order.

*Taking a last look around to make sure no Indians were in the vicinity, they headed their horses down the steep mountainside toward the west—and out into the cactus covered desert below.*

The Apaches disclosed the secret of this rich gold ledge to but one white man—and when he violated their confidence he met with a mysterious death.



# Lost Yuma Ledge

By JOHN D. MITCHELL  
Illustration by Frank Adams

A BADLY rusted Colt revolver such as was used by army and frontiersmen in the early days on the border was recently found in the Arivaipa country near old Fort Grant and is believed by many of those who have seen it to be a clue to the lost Yuma gold ledge said to have been discovered by Apache Indians long before old Geronimo and his band of braves were rounded up and placed on a reservation.

The outcropping of rich gold ore was once shown to a graduate of West Point whose real name seems to have been lost somewhere in the mystic reaches of the past. He is remembered only as "Yuma"

on account of having at one time been acting-quartermaster at the post at Fort Yuma on the Colorado river. Because of irregularities in his accounts the officer was courtmartialled and discharged from the army.

Feeling his disgrace keenly he shunned his former companions and hid himself among the Yuma Indians under Chief Pascual. Yuma was well liked by the Indians and spent his time trading among them. Eventually he married a buxom Yuma woman and became a member of the tribe.

As a trader he made frequent trips with his wife into the Apache country and

while trading among the Arivaipa Apaches he heard rumors of a rich gold ledge where the Apaches obtained rich ore to trade for supplies. Yuma was eager to learn the secret of the rich ledge and after considerable persuasion induced the chief to show it to him. In return he promised a rifle, some ammunition, and a few trinkets.

Soon after the agreement was reached Yuma, accompanied by the Apache chief, set out from the Apache camp in a northerly direction across the hills. After traveling about nine miles they reached a ridge between the San Pedro river on the east and a deep rocky canyon which terminated a short distance to the west of where they were then standing.

Before them in a crater-like depression was an outcropping of rose quartz rich in coarse gold. With his hunting knife Yuma broke off a handful of the brittle ore that gleamed yellow in the morning sunlight. After securing samples the outcrop was carefully covered with dirt and rocks until no sign of the ore remained on the surface. Yuma was not a miner but realized that the quartz was very rich.

Also, he knew it was guarded by Indians who would kill him on sight if they ever found him there again.

After remaining in the Arivaipa country a few days Yuma went to Tucson where he showed the ore to a man by the name of Crittenden whom he had known as a freighter when he was in the army post at Yuma. Yuma and Crittenden decided to return to the Arivaipa country and explore the mine and sample it more thoroughly. Accordingly they set out from the old pueblo of Tucson late one afternoon and after riding all night they arrived early the next morning at Fort Grant.

They refreshed themselves, fed and watered the horses and that afternoon rode north down the San Pedro river. After traveling about 10 miles they made camp in the brush along the river and waited for morning. When the first rays of light appeared in the east they started to climb the steep mountainside toward the west. The terrain was rough and they were forced to lead their mounts most of the way. They soon came to the long ridge overlooking the river and the deep box canyon.

They found the quartz ledge and with a pick dug out 25 or 30 pounds of the rich ore. Putting the ore in a sack they covered the ledge again and hid the pick. Taking a last look around to make sure no Indians were in the vicinity they headed their horses down the steep rocky trail toward the west and out into the cactus-covered desert below. They rode all that night and arrived in Tucson early the next morning without having seen any of the Apaches.

The sack of ore that they brought out was crushed in a mortar and produced \$1,200 worth of gold. Knowing the Apaches were on the warpath and that it would be extremely dangerous to undertake any development work at that time, Yuma resumed his trading and Crittenden continued his freighting operations between the mines and the post at Yuma on the Colorado.

Yuma loaded his pack mules with supplies and with his Indian wife set out across the desert toward the Papago country. That was the last ever seen of them by their friends. There is a story among the Papago Indians at Ajo that Yuma and his wife were killed by a band of renegade Apache Indians whom they met in the Growler pass north of Quitobafuita. They were buried by the Papagos and the piles of rocks marking the graves may still be seen just a few hundred feet west of the old road that leads through the Growler pass and on down to Cipriano wells near the border.

When Yuma and his wife failed to return to Tucson after several months, Crittenden, believing them to have met with foul play, decided to return to the mine alone. Mounted on a fine horse he left Tucson early one morning and after rid-

ing all that day and far into the night he arrived at Fort Grant where he rested for a few days. He revealed his plans to the officers at the fort and as the Indians were in a hostile mood they advised him against making any effort to work the mine. Disregarding their warnings Crittenden departed for the mine. He was armed with a repeating rifle and a Colt revolver.

When several days had passed and he had not returned to the fort, soldiers were sent out and found the horse and saddle about 10 miles down the San Pedro. The horse was tied and was almost dead from thirst. There was no trace of Crittenden. Whether he reached the mine and was

killed by the Apaches, or the victim of an accident, was never known. The fact that an old rusty rifle was found many years ago on the edge of the desert below the mountain where the mine is said to be located, and the finding of a rusty Colt revolver just recently in that vicinity, would seem to indicate that Crittenden either lost his way while looking for the mine or met with an accident and died from the twin demons of the desert, heat and thirst.

The Apaches never revealed their secret to another white man, and it is doubtful if any living Indian today knows the location of the lost Yuma gold ledge.

## TRUE OR FALSE

This quiz is a yardstick by which you may determine how much progress you have made in your acquaintance with one of the

most interesting regions in the world—the Great American Desert. The questions touch the fields of geography, history, mineralogy, botany and the general lore of the desert. This feature in Desert Magazine each month actually is a school of instruction for those who would broaden their knowledge. Twelve to 15 is a good score. Sixteen to 18 is superior. Perfect scores are very rare. Answers are on page 37.

- 1—The road-runner never leaves the ground in flight. True..... False.....
- 2—Free gold is often found in quartz. True..... False.....
- 3—Sunset crater in Arizona is believed to have been formed by the falling of a large meteorite. True..... False.....
- 4—Ultraviolet rays of the sun are believed to have caused the fossilization of the wood in the Petrified Forest national monument. True..... False.....
- 5—Bill Williams was a famous steamboat captain on the Colorado river. True..... False.....
- 6—The capital of Nevada is Reno. True..... False.....
- 7—Certain species of desert birds build their nests in cholla cactus. True..... False.....
- 8—The Lost Breyfogle mine is believed to have been located in the Death Valley region of California. True..... False.....
- 9—Blossom of the Palo Verde tree is blue. True..... False.....
- 10—Deglet Noor is the name of one of the species of dates grown in Coachella valley of California. True..... False.....
- 11—Prehistoric desert Indians used the foliage of the tamarisk tree for weaving baskets. True..... False.....
- 12—Largest river flowing through New Mexico is the San Juan. True..... False.....
- 13—Azurite is a copper ore. True..... False.....
- 14—Kit Carson was a troop commander in New Mexico's "Lincoln County War." True..... False.....
- 15—Rainbow Natural bridge in southern Utah may be reached only by a foot trail. True..... False.....
- 16—Cathedral Gorge state park is in Nevada. True..... False.....
- 17—Hassayampa is the name of an Indian tribe in Arizona. True..... False.....
- 18—Bright Angel creek comes into Grand canyon from the North Rim. True..... False.....
- 19—Hopi Indian reservation is entirely surrounded by the Navajo reservation. True..... False.....
- 20—Pauline Weaver was a famous woman stage driver. True..... False.....

# TONOPAH & TIDEWATER RAILROAD

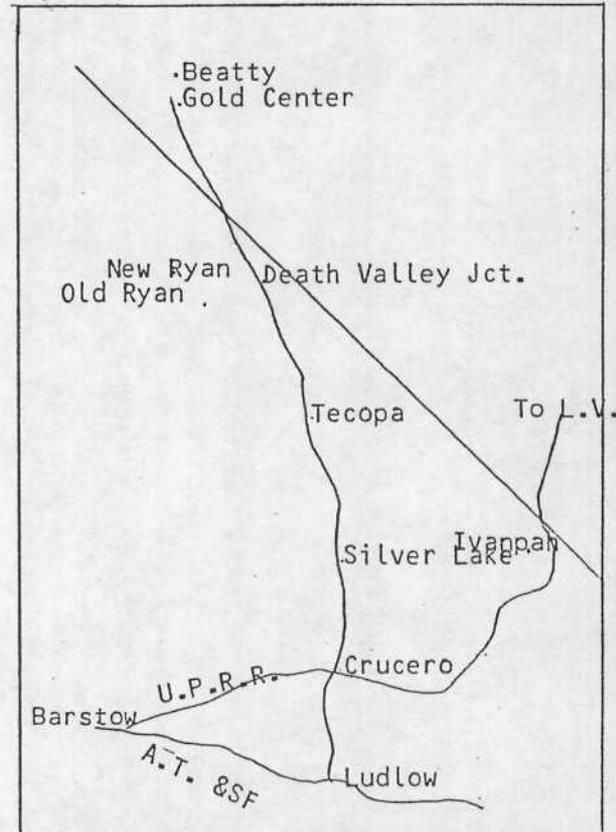
By Donald W. Grantham

I always wondered where the name Tonopah and Tidewater Railroad originated as I knew the road did not serve Tonopah, Nevada nor did it go to the Tidewater, a somewhat rare term on the West Coast. But the more I learned about the railroad, I found nothing was typical except the unusual.

During 1872, borax was discovered at Teel's Marsh (near Candelaria) Nevada by Francis Marion Smith, who was later to acquire the nickname "Borax Smith". He successfully operated his mining venture and became rich. Then in 1888, one of his competitors, William T. Coleman, suffered financial difficulties and Smith was able to purchase Coleman's properties, including the Lila C Minesite in Death Valley and a borax mine at Borate, Cal., near Calico.

Smith was both a smart operator and good businessman. He realized that one of the key elements to a successful mine was good, cheap transportation. Because the mine at Teel's Marsh was playing out, operations were transferred to the mine at Borate. This operation had the advantage of access to a major railroad just a few miles away. In September 1890, all of Smith's properties were merged into a new company, the Pacific Coast Borax Company. For the next 9 years, his crews mined the Borate site. Then the minerals began to play out. The next move was to open the Lila C mine in Death Valley.

This presented tremendous difficulties and costs because there was no mill or railroad nearby. Not even a town. It was almost 100 miles to the nearest railroad at Ivanpah, Cal. To transport the borax there, his crews constructed a wagon road from the Lila C to Ivanpah. But instead of using wagon trains or the now famous 20 mule team outfits, Smith planned to use steam powered traction engines. His first load made a total of 14 miles before it broke down. Nothing could make the steam engines work as



Map 1: Route of the Tonopah & Tidewater Railroad

planned. Death Valley had again defeated man. Or had she?? At this time, Smith realized that rail transportation was his only choice.

Unable to interest any railroad company in building a line to serve his mine, Smith formed his own railroad. The Tonopah and Tidewater Railroad Co. was incorporated on July 19, 1904.

Original plans called for the line to be built north from Las Vegas, Nev. but other factors forced a change of plans. He decided to then link up with the Atchison, Topeka & Santa Fe Railroad at Ludlow, California.

In September of 1905, construction began from Ludlow, heading north to Gold Center, 167 miles away. Plans were to build this portion first; then extend the line to Tonopah and later to the Tidewater (San Diego).

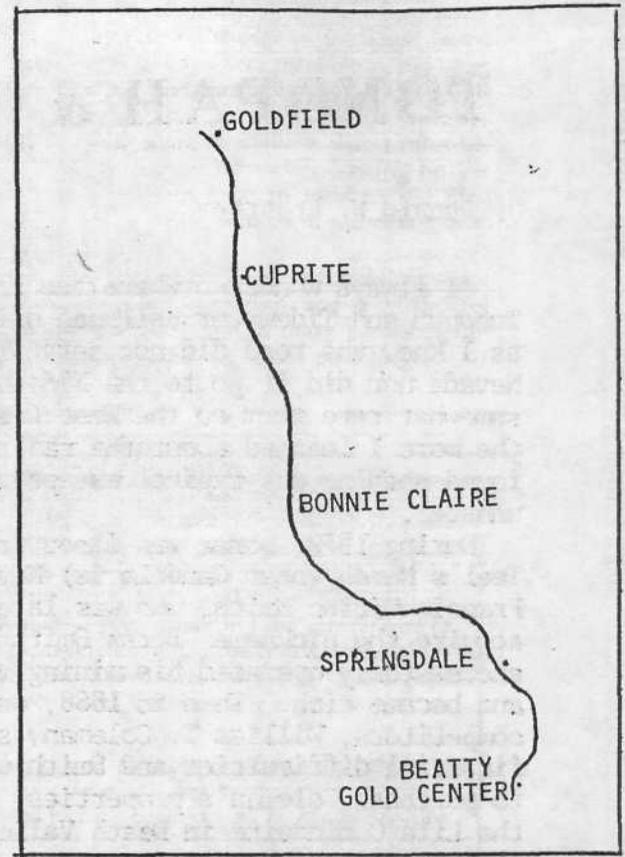
The first section of track was laid on November 19, 1905. Construction crews reached Silver Lake, north of the present day Baker, in March of 1906 and on to Dumont in May.

The railroad then suffered a slowdown due to difficult construction and labor trouble. The delay cost the line one year and caused it to abandon plans to extend the line to Tonopah. It was 12 difficult and expensive miles through the Amargosa River Canyon. Large cuts were required along with numerous long fills and three major trestles. The line finally reached Tecopa in May of 1907. The next month Zabriskie was reached and the line became 91 miles long. Zabriskie was, for a while, a busy place, serving as the railhead for construction crews and the terminus of trains.

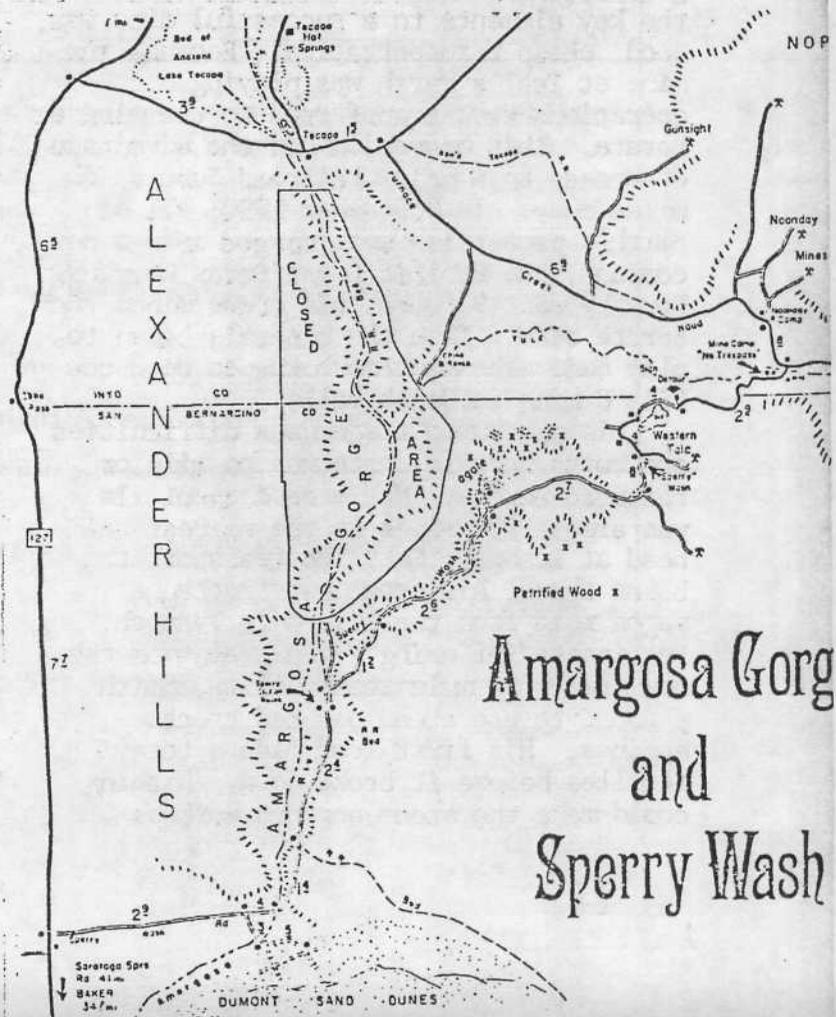
The T & T finally reached Gold Center on October 30, 1907. At approximately 3:00 PM that afternoon, the last spike was hammered in. There was no celebration, however, as the country was reeling from the effects of the Panic of 1907. Banks were closed, mines were shutting down, and business in general was bad.

The T & T quickly settled into its daily routine. The Lila C mine was activated and all equipment from the Borate mine was shipped to Death Valley. A mill was constructed and the ore, colemanite, was both crushed and roasted at the mill. The remaining borax crystals were then shipped out on the T & T to the Pacific Coast Borax Co's refinery at Alameda, Cal. or to New Jersey.

A new town, Ryan, was founded to serve the mine. This was to be the first of 2 geographically different Ryans to serve the company's Death Valley operations.



Map 2: Route of the Bullfrog-Goldfield Railroad operated by the T & T



In June of 1908, the T & T expanded its operations all the way to the town of Goldfield, Nevada, by assuming operation of another line, the Bullfrog-Goldfield Railroad, which was in financial difficulties, something the T & T always had, although minimized by its parent company, the Pacific Coast Borax Co. Thus a saying arose, "T & T all the way", meaning all the way from Ludlow to Goldfield.

The new stations operated by the T & T are shown on Map 2. At Goldfield, passengers for Tonopah were required to transfer to trains of another line, the Tonopah and Goldfield railroad.

The year of 1914 was an interesting one for the T & T. It lost its Goldfield route due to a merger of the Bullfrog-Goldfield Railroad and the Las Vegas and Tonopah Railroad. The ores at the Lila C mine began to give out. However, a new mine was opened up 12 miles northwest of the Lila C minesite and named the Bidly McCarty. A new narrow gauge extension of the Death Valley Railroad was built to the site and the entire town of Ryan was moved to the new site near the Bidly McCarty. Thus Ryan at the Lila C mine is known as "old" Ryan and "new" Ryan is near the Bidly McCarty mine.

During January of 1916, flooding was responsible for closing a portion of the tracks from Crucero past Silver Lake and the founding of a new townsite. The tracks at normally dry Silver Lake were so flooded as to be unusable. A temporary 7½ mile detour around the flooded Silver Lake was constructed. Shortly thereafter, the depot and warehouse at Silver Lake were destroyed due to the effects of the water and the entire town was moved to the drier East shore and the temporary line became permanent.

The ensuing years were to be difficult ones for the T & T. Its sources of business were usually short-lived and unreliable. In 1919, the Acme mine closed down due to a cave in that killed several miners.

A new borax mine opened Northeast of Gerstley Station, but closed 5 years later. In 1927, a spur line was built to Carrara to haul marble, but that was temporary. And in 1931, the Bidly McCarty mine closed and the Death Valley Railroad was torn out.

The T & T found itself in quite a difficult situation. It served an area of few people and even fewer businesses in the middle of the Great American Depression. Instead of running full trains, it tried a self-propelled railcar, pictured to the right.

Continued on pg.32

Below is the self-propelled train operated by the T & T. (Courtesy of Union Pacific RR)



Looking across through the shimmering heat waves that rise from the barren salt-encrusted surface of Searles lake on a summer day, you would conclude that it was not a very imposing landmark to bear the name of so worthy a pioneer as John Searles. But if you will go to the great chemical plant that stands like a mirage on the floor of the lake bed, and listen to the engineers telling about the wealth of chemicals extracted from the brine that lies beneath the crust of salt, you will realize that it is no mean honor to have one's name attached to such a storehouse of wealth as lies beneath the uninviting surface of this desert playa. John Searles passed away 45 years ago, but the mineral wealth he discovered is playing a tremendous role in industry and war in this year of 1942, as you will learn from Ora Lee Oberteuffer.

## The Saga of John Searles

By ORA LEE OBERTEUFFER

HIGH up in the mountains which overlook Searles lake, at the head of a tortuous, rocky trail, lie the ruins of the old homestead of John Wemple Searles. In the march of time over 75 years have passed since that home was built, but in the still of the desert the deep canyon seems to echo the chant of Chinese coolies as they picked and shoveled away at the rocky hillside to build terraces and walls and develop a water supply.

Time and cloudbursts have almost obliterated the trail, and the buildings have crumbled away, but the mammoth fig trees and grape vines, still flourishing and bearing fruit, are living memorials to the courage and faith of one of the most colorful characters of early desert history.

John Searles was among those intrepid pioneers who endured hardship and pri-



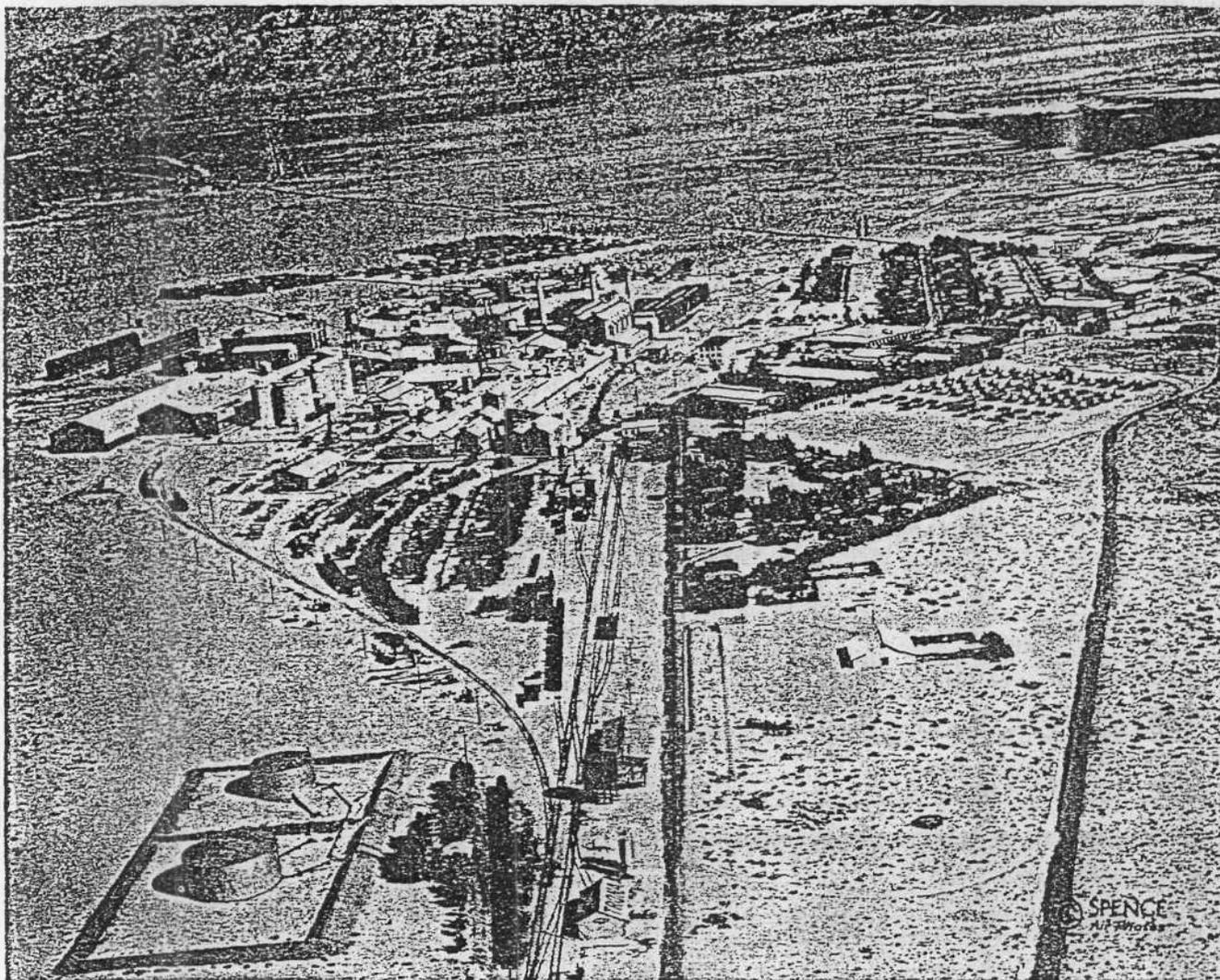
*John W. Searles—he came to California to hunt gold, and made a fortune out of borax.*

vation to reach the California gold fields by way of the wagon train in 1849. Descending from ancestors who won renown with the American army in the Revolutionary war, the courage and fearlessness which he had inherited were his only possessions when he joined his brother Dennis at Indian creek, Shasta county, California. The two brothers cast about for a few years in farming and mining but eventually disposed of their holdings, and in 1862 acquired and began operating mining claims in the Slate range, just east of the present Searles lake in central California. Their camp looked out on a vast dry lake of what was thought at that time to be salt and carbonate of soda.

One day Searles, confiding in no one, gathered samples of crystals from the bed

of the lake and took them to San Francisco for analysis. At first he was told they contained borax. But after more trips to San Francisco and more analyses had been made, he was told that they contained not a single trace of borax. Disappointed, he returned to the desert where he devoted the next few years to working his mine and developing his homestead in the mountains.

One day in 1873 a man drifted into the Searles mining camp with some samples from a new borax discovery in Nevada. Realizing that they were the same type of crystals as the samples he had previously taken to San Francisco, Searles' interest in his own discovery was aroused once more. With a pack outfit he went to the south end of the lake and located 640 acres.



*The highly chemicalized brine from beneath the dry surface of Searles lake has created a town of 2500 people at Trona.*

Later this acreage was increased to over 2,000.

Then he made another trip to San Francisco with samples. When he was told again that his crystals contain no borax he became suspicious. When he left San Francisco for Los Angeles he was followed, but while in Los Angeles he formed a partnership with Charles Grassard, Eben M. Skillings and his brother Dennis. While the other three gathered simple equipment for starting operations, Searles went in an opposite direction, camping and prospecting, still being followed. When he was able finally to elude his followers he joined his partners at the claims.

When word reached the outside world that there was borax in Searles lake, hordes of men came to stake out claims. Claim jumping and murder knew no law on that frontier but in time most of the claimants starved out and the claims were abandoned. One or two small organizations attempted to produce the borax as a paying industry but for one reason or another faded out of the picture.

With crude equipment Searles' little band collected borax in cowhide baskets

and carried it to a large boiling pan where it was boiled for 36 hours. The solution was then run into vats so that the crystals could form on the sides. After drying it was put into 70-pound bags, loaded into 20-mule-team wagons and hauled to San Pedro, California, where it was transported by water to San Francisco. Thus the borax industry on the now famous Searles lake was born. Those wagons, built and operated for Searles by Oso Viejo, who, at the time of this writing is still living in Los Angeles, were the first 20-mule-team borax wagons ever put in operation. It was one of the Searles wagons that Salty Bill Parkinson, Searles' foreman, later drove across country for exhibition at the St. Louis exposition in 1904.

On January 1, 1873, Searles married Mary Covington in Los Angeles, California. On February 27, 1874, a son, Dennis, was born to them. But those were difficult years for the city-bred girl. Never inured to the rigors of desert pioneering, her mind wandered in the maze of primitive

hardships and lost its way. Though deprived of her help and companionship he continued, with the aid of a faithful old Chinese cook, to keep his small son with him and carry on his enterprises.

In the operation of his borax works Searles had accumulated considerable real and personal property—land, buildings, wagons, mules, horses and other equipment. On one occasion he had gone with the mule team shipment to San Pedro, leaving Dennis, then four years old, in the care of the Chinese cook. A few days after the wagon train had left camp there suddenly appeared in the distance, like a plague of locusts, a band of hostile Indians. Sensing the danger the old Chinaman quickly gathered some food and fled with Dennis into a nearby canyon in the mountains. The Indians closed in on the camp, burned everything that would burn, and drove the stock over the Slate range into the Panamint valley.

Sand storms in all their deadly fury are as nothing compared with the anger of

John Searles when he returned and beheld the ruins of all that he possessed. As soon as the Chinaman and Dennis reappeared he assembled the team, took the same drivers, and started back for San Pedro, stopping enroute to leave his two passengers in friendly hands in San Bernardino. At San Pedro they bought mules, old army saddles and repeating rifles, hired a small band of longshoremen from the docks, and returned to the desert to track down the Indians.

Searles caught up with them in the foothills of the Panamint mountains where a bloody battle ensued. The Indians were fighting with bows and arrows, and, as one of the survivors told later, they did not fear the white men, thinking that the arrows would mow them down while rifles were being reloaded. Many Indians were killed and wounded and the remainder fled in panic, leaving the livestock behind. Searles and his men drove the stock back into Searles lake basin where he began the heart-breaking task of rebuilding the borax works.

In later years the faithful Chinese servant enjoyed an annuity which had been established by Searles. He died in San Francisco's Chinatown 10 years after Searles

had passed on to his own reward. The son Dennis later attended Stanford university where he graduated in its first class with Herbert Hoover. He died in San Francisco November 25, 1916.

In the rebuilding of the borax plant a corporation was formed under the name of the San Bernardino Borax Mining company. About 60 men were employed. The borax was still hauled out by 20-mule-team wagons to Mojave, the then nearest railway station, where it was shipped by rail to San Francisco. With each load worth \$4,000, and a load going out every four days, the business produced a tremendous revenue, but rival concerns paid Searles and his associates such a handsome sum of money to discontinue operation that they closed down their plant in 1895.

At the time of the operation of Searles' plant geologists considered the surface deposit to be the largest supply of natural borax in the world. None of them, not even John Searles himself, dreamed that under the hard white surface of the lake was a subterranean brine and a vast stratum of crystals containing thousands of times more borax than was exposed on the surface, as well as many other salts and chemicals which were later to take their

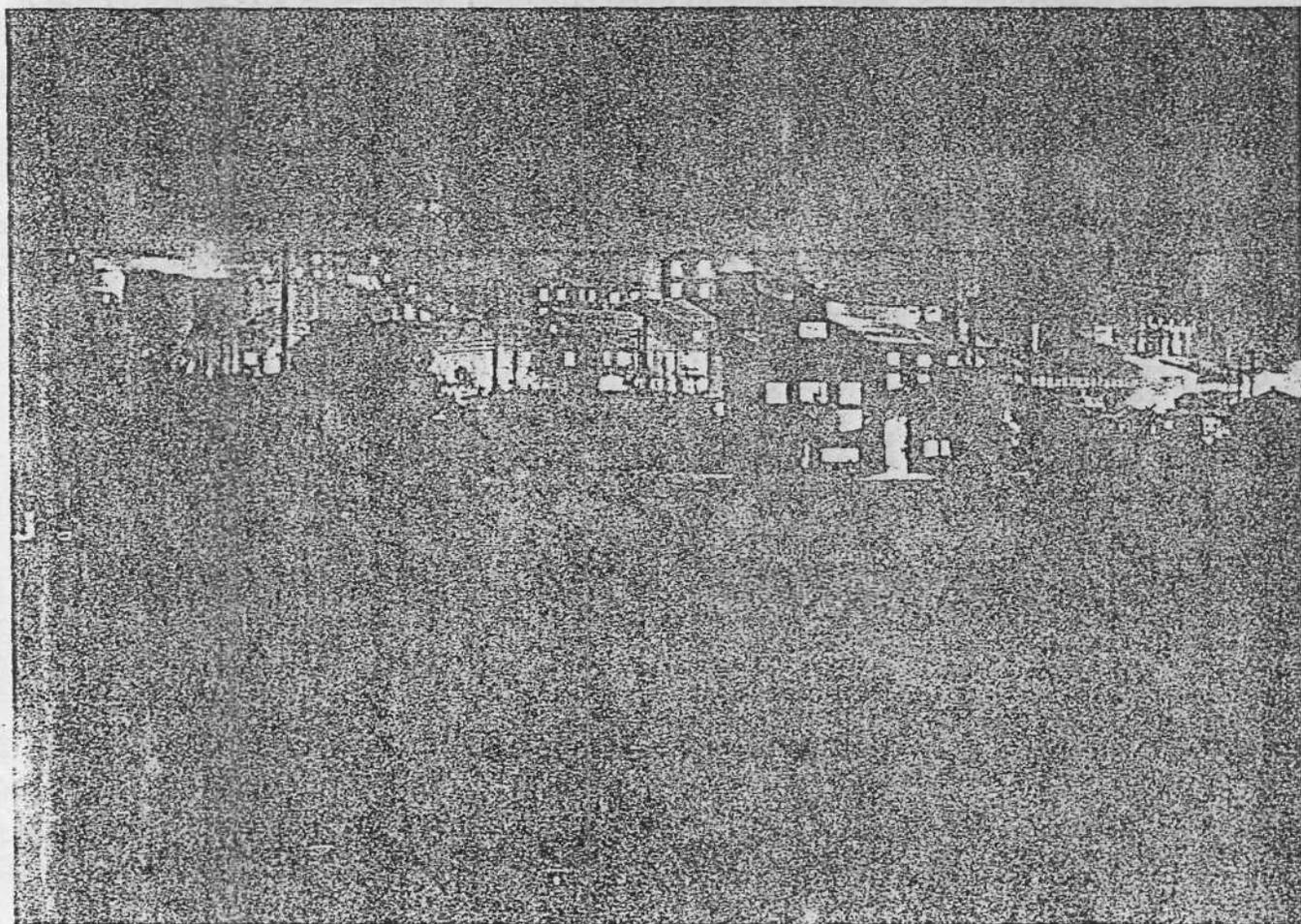
place in the world of science, industry, agriculture and national defense.

When it was discovered that the underground lake also carried a vast potash content, the President of the United States, by a proclamation, withdrew Searles lake into a potash reserve. Congress shortly thereafter passed a leasing bill authorizing the department of the interior to lease the deposits of potash and other minerals in the lake, preventing private parties thenceforth from procuring it outright. This bill, however, did not disturb those claims which already had been patented, including the holdings of the San Bernardino Borax Mining company as well as those of the California Trona company, a subsidiary of Goldfields, Ltd.

In 1908 the California Trona company undertook to manufacture chemicals from the brine, but, for various reasons, found the going too tough and went into the hands of a receiver. The company lay practically dormant until 1913, when it again made the same attempt under the name American Trona corporation.

Between 1913 and 1916 various experimental processes were developed, tests were made, plants were built at enormous expense and promptly abandoned.

*Night pictures of the American Potash and Chemical plant at Trona, California.*



History does not record whether those trying years proved to be a death struggle for the processes previously used or labor pains of the new Trona which was about to be born, but finally, in 1916, a plant to produce potash and borax by what was known as the Grimwood process was completed and placed in operation.

Ten wells, about 85 feet deep, were drilled through the salt crust and into the brine. A pumping plant was installed and a pipeline constructed to carry the liquid to the plant where the chemicals were extracted by means of evaporation. This plant was the real beginning of the present Trona. Production of salts from the brine by the American Trona company, and its successor, the American Potash and Chemical corporation, has been continuous since that time.

The variety of the uses for Trona products seems to be as unlimited as the universe. The coarse grade of potash is used chiefly in fertilizers. The finer grade is used in the manufacture of soaps, textiles, matches, medicines, dyes, glass, photographic preparations, and many other things.

One grade of borax finds its way into heat-resisting glasses, ordinary bottle glass, and vitreous or porcelain enamels, glazes for ceramic ware, leather, paper, adhesives and textiles. It is used as a solvent for casein, as a flux in the brazing and welding of metals, to retard the decay of citrus fruits, and to prevent the growth of certain fungi which cause sap stain in numerous types of lumber.

Boric acid (technical) is used in the manufacture of vitreous enamels, heat-resisting glass and glazes for ceramic ware. It is also used in electro-plating and the manufacture of electrolytic condensers. More highly refined boric acid goes into various pharmaceuticals and cosmetics.

Soda ash is probably the most versatile of all the products obtained from the Searles lake brine. It becomes baking soda, drugs, dye-stuffs, caustic soda, and other salts containing sodium as the base. It softens water, helps in the refining of lubricating oils, is an ingredient in wood preservatives and is a useful element in the manufacture of paper.

Salt cake (sodium sulphate) is largely used in the manufacture of kraft paper, plate and window glass, dyes, chemicals, tanning, cattle dopes and pharmaceutical products.

The youngest brain-children of the research department are the recovery of lithium from the process foams and slimes which formerly were wasted and the recovery of bromine and alkali bromides from the potash. Heretofore lithium has been obtained by mine production of minerals. As prepared at Trona it constitutes the highest grade lithium ore yet known.

In addition to a great many medicinal uses lithium chloride is used in air-conditioning units for de-humidifying, in metallurgy for copper refining, in the red fire of fireworks, and for many chemical experiments. Bromine and the bromides are largely used in modern industrial arts. It is a vital constituent of Ethyl gasoline as well as a fumigant for preventing weevils and damage to stored supplies of grain. The bromides are used also in the photographic industry. In a national emergency the photographer and his supplies as well as the Ethyl gasoline used in aeroplanes become of utmost importance.

And the end is not yet! The axiom in the old riddle "the more you take, the more you leave" must have been said of the brine in Searles lake, for, in spite of the enormous amount pumped out each day, scientists claim that it constantly is being replaced and that there is no indication that the supply will be diminished for at least 100 years. And so, judging the future by the past, who can say what additional wonders for the benefit of all mankind are still lurking in that brine?

The village of Trona resembles, to some extent, an army post. Where once there was a pitiful little handful of rude cabins on the edge of the salt beds there are now hundreds of modern comfortable homes on well-laid-out streets. There is a fully-equipped grade and high school, a public library, a modern up-to-the-minute hospital with two doctors, a corps of nurses and a dentist; a moving picture theater, an 18-hole golf course, and a completely-equipped trapshooting ground. It also boasts an airport with hangars for a number of privately owned planes, as well as one of the finest open-air swimming pools in the West.

A large and commodious retail store carries food, dry goods and drugs. In the early mining days of John Searles it was necessary for him to drive his mule team over 100 miles to Tehachapi for his supplies and feed for his stock. Later he ran a small store of his own for the benefit of the employes in his borax works. The ruins of that little store building are still standing on the shore of the lake.

In contrast to the 20-mule-team wagons which groaned and creaked their way across the desert in the early days of John Searles, the American Potash and Chemical corporation now owns and operates its own railroad between Trona and Searles station, a distance of 31 miles, where it connects with the Southern Pacific railway. Two huge engines, piloting an average of 35 cars, now puff out of Trona every day starting about 1,300 tons of products on their way to every corner of the globe.

There are now 19 wells operating on the lake and an average of 2,700,000 gal-

lons of brine flow through pipelines into the plant every 24 hours. From this brine approximately 1,260 tons of chemicals are extracted. To carry on this herculean chore, with loading and shipping, requires about 1,250 employes, who, with their families, constitute the entire population of Trona, numbering about 2,500.

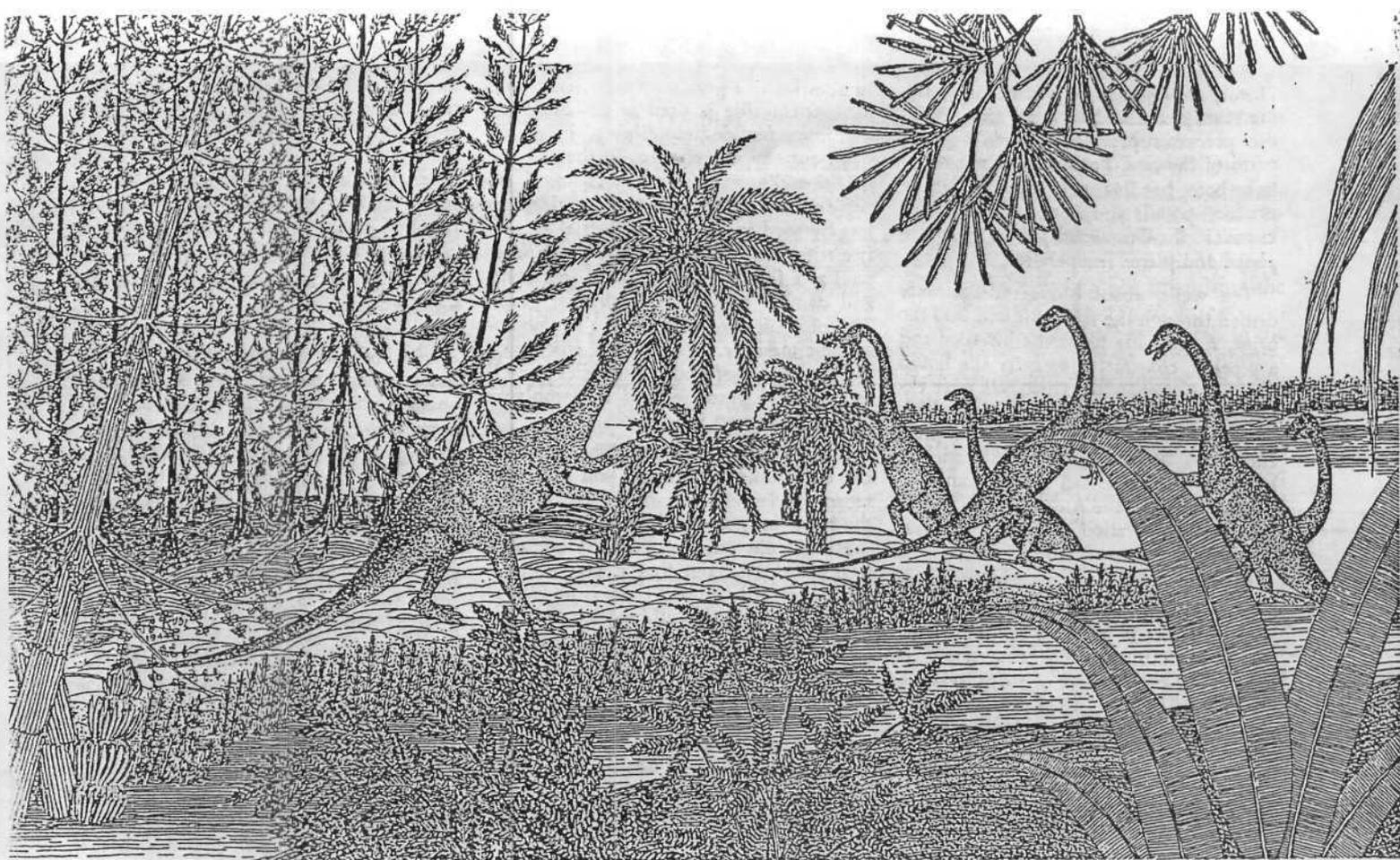
With Trona products taking such an important place in the scientific and industrial world, it is not surprising that the interesting little city has gathered unto her bosom a most unusual class of people. It boasts some of the finest chemical and engineering brains in the country.

Houses, administration buildings, store buildings and dormitories for single men and women are all air-cooled—almost sinfully comfortable in the hottest summer weather. It's a far cry back to those pioneering days when there was no relief from the dancing, baking heat waves of the lake basin.

John Wemple Searles, son of George and Helen Wemple Searles, was born at Tribes Hill, Montgomery county, New York, on November 16, 1828. Though the glittering, shimmering borax crystals in the bed of the lake which now bears his name were not the yellow gold which he expected to find at the end of the covered wagon trail, they made him a rich man and left a legacy of benefits and blessings to be enjoyed by the whole world for generations to come.

History records that in his early pioneering days, while on a deer-hunting expedition into the mountains of Kern county, Searles had a gruelling, breath-taking fight with a huge grizzly bear which left his shoulder and one side of his face permanently mangled. Companions on the hunt managed to get him to Los Angeles where surgeons miraculously saved his life. Grim reminders of the incident today are a bottle containing 21 pieces of broken bone and teeth and an old Spencer rifle with many bear-teeth dents in it. Perhaps only the kind of pluck and courage which saw him through that encounter could have fought off claim jumpers and marauding Indians in his early borax days and establish for posterity one of the most important industries in America today.

John Searles died on October 7, 1897, and his body lies in the purple shadows of the little cemetery at St. Helena, California. But to watch the sun sink behind the hills at Trona and the short twilight fade into night, with the silhouette of the huge industrial giant outlined in black against the desert sky—then suddenly a million electric lights rivaling the long jagged points of the stars—one feels that his spirit has come back that the desert may claim its own; that here indeed death has been swallowed up in victory.



Probable scene near Kanab, Utah, about 60 million years ago when dinosaurs were a common feature of the landscape. Plants shown in drawings reconstructed from "The Upper Triassic Flora of Arizona," by Lyman H. Daugherty.

## The Giants of Kanab

When Ray Alf went hunting in southwestern Utah, he did not have to wait for open season. He was on the trail of giants that roamed the land 60 million years ago. And when he came back to Claremont he brought only the footprints of the giants—but from these footprints, scientists have been able to reconstruct the probable appearance and habits of these dragon like monsters who disappeared from the earth about 25 million years ago. Here are some facts, theories and myths about dinosaurs, who left their tracks in the red mud of Utah and Arizona before the Southwest became a desert land.

By JERRY LAUDERMILK  
Drawings by the author

**T**HIS is a story about giants that stalked across the Utah mud-flats at least 60 million years ago when the waves of the Pacific still beat against the shores of Arizona. California was buried deep beneath the sea. The Rockies had not yet been upheaved. And where the Colorado river has since cut the terrific gorge of Grand Canyon, quietly meandering streams flowed through a level floodplain.

It was a spring morning four years ago when Ray Alf, geologist of Claremont and instructor at the Webb School for Boys, was on a geological excursion near Kanab,

Utah. The day had started all wrong. In the first place, he had left without hammer and knapsack. In the second place, he had only a general idea as to what he might expect to find and where to find it. This combination generally means that you will wind up in good collecting territory without means of removing or transporting your choice specimens.

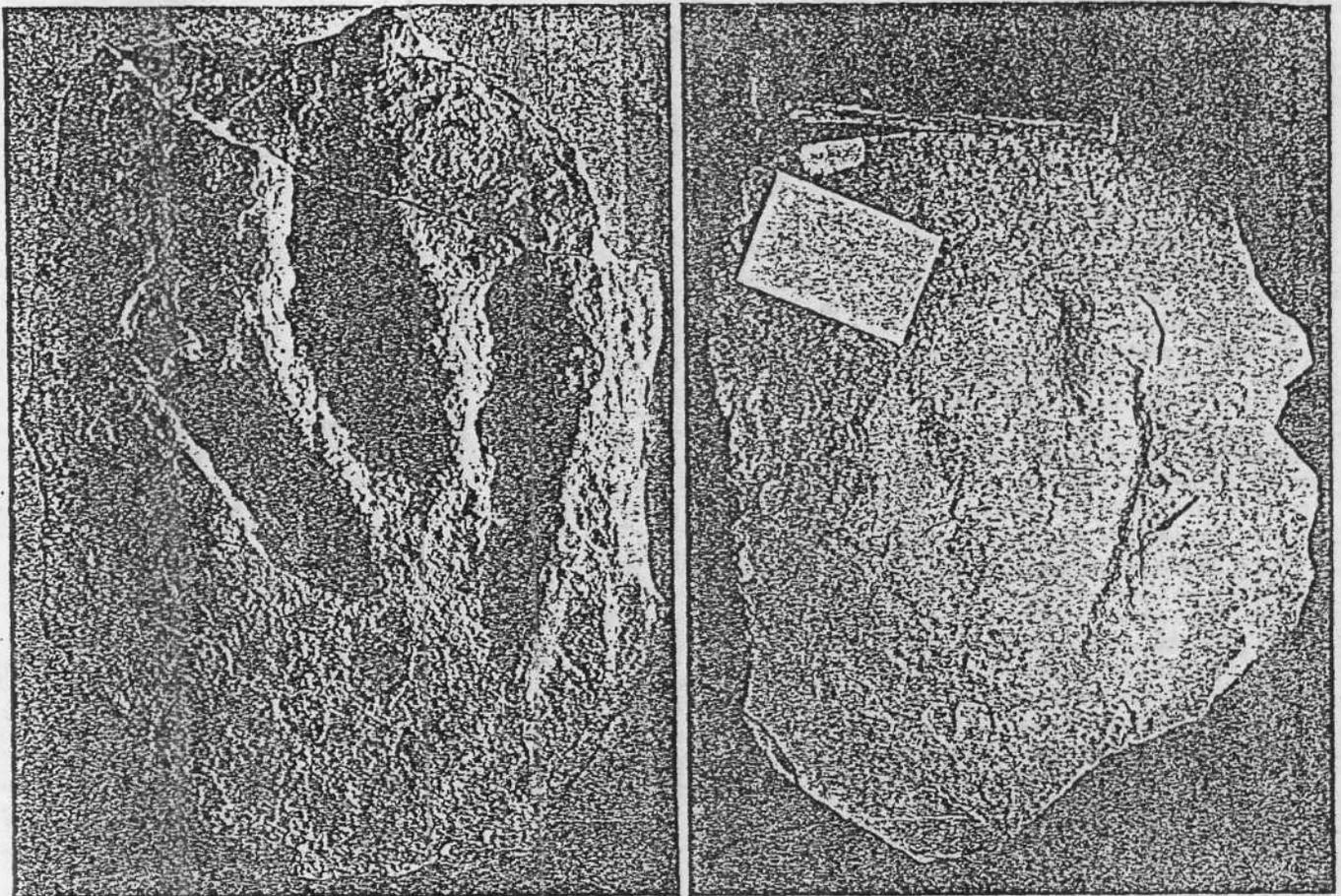
This was famous dinosaur country, or rather, dinosaur track country. At Kanab, the garage man had reported plentiful tracks of all sizes in the sandstone strata of the nearby canyons and furnished directions to find them. A hammer and chisel

were donated by a cooperative stone cutter of Kanab.

Now well equipped, Ray soon arrived on a ledge 150 feet up the canyon wall. There he gazed fascinated at the three-toed tracks of a giant whose birdlike foot had a total length of 16 inches and whose stride was more than eight feet. Ray finally succeeded in chopping out a 75-pound slab with its footprint intact from the red, calcareous sandstone of the canyon. After several narrow escapes from loss and breakage including near-engulfment in the quicksand of the wash, the slab with several others finally came to a safe harbor in the Webb School museum where they stand, silent witnesses to events that took place in Arizona and Utah long ago.

The red track-bearing sandstone with shale, conglomerate and other rocks makes up the strata of the Chinle formation, sedimentary deposits of the Triassic age which underlie a vast area in Arizona, Utah and part of New Mexico. The formation takes its name from the Chinle valley of northeastern Arizona where the deposit is 1182 feet thick. Chinle itself (pronounced Chin-Lee) is a Navajo word meaning "at the mouth of the canyon."

To date, a few bones from Kaiparowits peak and some scraps from New Mexico are the only instances of actual dinosaur remains which have been recovered from the Chinle. Aside from these two cases the



Left—Three-toed dinosaur footprint from Triassic formation, Utah. Total length of track, 16 inches. Right—Another dinosaur track from Triassic of Utah. This apparently is track of smaller animal of different species. Photos by Ray Alf, Claremont, Calif.

sole record of the dense dinosaur population that once lived in and around Kanab is preserved in these ancient footprints left in the old muds and sand bars now hardened into rock.

This dinosaur track locality at Kanab is not the only place where a vast concourse of reptilian giants had left their footprints. There was something like it in the celebrated dinosaur localities of the Connecticut valley, another formation which, like the Chinle, was a deposit of the Triassic age. Here again the scarcity of bones caused species after species (98 in all) to be known only by the tracks the animals left in the mud of swamps and on the sandy banks of Triassic rivers. Fortunately an expert sometimes can tell a great deal about an animal from its tracks alone.

Since paleontologists know in much detail the general anatomy and proportions of the many species of dinosaurs, examination of a set of footprints furnishes an indication as to the size of the beast that

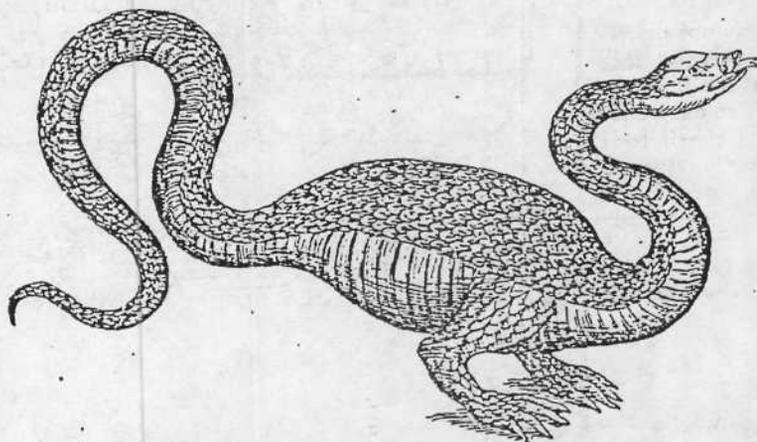
made them. In the case of the tracks that Ray Alf found we can say that the animal was large, probably 20 feet high, and that it walked like a man. When it made the tracks it was in no hurry for the tracks are sharp and show that he set his feet down and lifted them up without splashing the mud which was a trifle too wet for ideal casting and would have splattered if he had been in a rush.

The Kanab tracks are those of many

different species of dinosaurs and very closely resemble the footprints from Connecticut valley where the track of one giant named *Eubrontes divaricatus* is almost a duplicate of the 16-inch track from Kanab. All the evidence indicates that these dinosaurs were related species and ranged generally throughout North America and lived in the same type of climate and surroundings.

The Triassic was one of the most interesting intervals in the earth's history. It was a time of reorganization after the great depression of the Permian period when for at least 15,000,000 years, hard times were general throughout the whole earth. Ancient and outmoded animals and plants were passing out of the picture to give place to newer but still fantastic types in a state of evolution. Some aspects of the late Triassic of Arizona and Utah require considerable effort of the imagination to visualize.

For instance, one sec-



In 1657 folks thought one type of dragon looked like this. Dr. John Johnson, in his "Historia Animalium" says this specimen was captured in the fields of Bologna, and calls it a wingless, two-legged dragon.

tion of the Pacific coast line of the ancient North American land-mass extended north and south for a distance of 250 miles or more almost in exactly the same meridian as the western Utah border and was about equally divided between the two states. Beginning here and extending eastward, the part of the land in which we are most interested, stretched away for a thousand miles in the shape of a sock with the bottom of the heel just at the coast line. The foot extended to the north with the toe in central Wyoming, while the leg reached all the way to central Texas.

For decades geologists have been of the opinion that this region was either desert or semi-desert because typical red sediments, generally supposed to indicate excessive aridity, occur everywhere. The sand and silt of these red rocks are soil transported by streams from the erosion of the ancestral Rockies and the mountains of Cascadia, an obliterated land-mass in the west. Much clay from the weathering of ash from either local or remote volcanoes is another typical feature of the region. Some of the particles in these old rocks are aeolian sand and the accepted theory was that these materials had accumulated on the bottom of a shallow sea of immense extent and surrounded by parched and arid shores. Recent discoveries, however, made it necessary for geologists to modify some of their views.

In 1941, the paleobotanist, Lyman H. Daugherty, who then was making extensive investigations of the Triassic deposits of northern Arizona as part of the program being carried out by the Carnegie institution of Washington, D. C., identified 38 species of plants some of which were of types that precluded the possibility of a permanently desert habitat. Although Daugherty's researches were on material from the Petrified Forest national monument about 20 miles east of Holbrook, Arizona, and all of 220 miles southeast of Kanab, much of the petrified wood is from the same species of trees in the two localities. So it is reasonable to suppose that the flora was the same in the intervening territory.

That the Kanab locality was not desert is shown conclusively not only by the abundance of fossil plants but by the great size of some of the petrified trees, one from Utah being twelve and a half feet in diameter and 185 feet long. It is generally accepted that much of the region was only slightly above sea-level and

spread out in vast flood-plains traversed by slow streams carrying much driftwood. The battered condition of many of the petrified logs shows that they have come from afar. Reeds and rushes grew in thick brakes in marshy places.

Even swamps were a common feature of the landscape. This is shown by the presence of fossil trees with their trunks swollen at the base like those of the bald cypress of Louisiana. On slightly higher ground curious cycad-like trees and plants with broad, strap-like leaves—*Yuccites* (no relation to our yuccas), grew frond to branch with conifers and the forerunners of our modern hardwood trees. One of the most abundant conifers was a close relative of our star-pine frequently seen in parks.

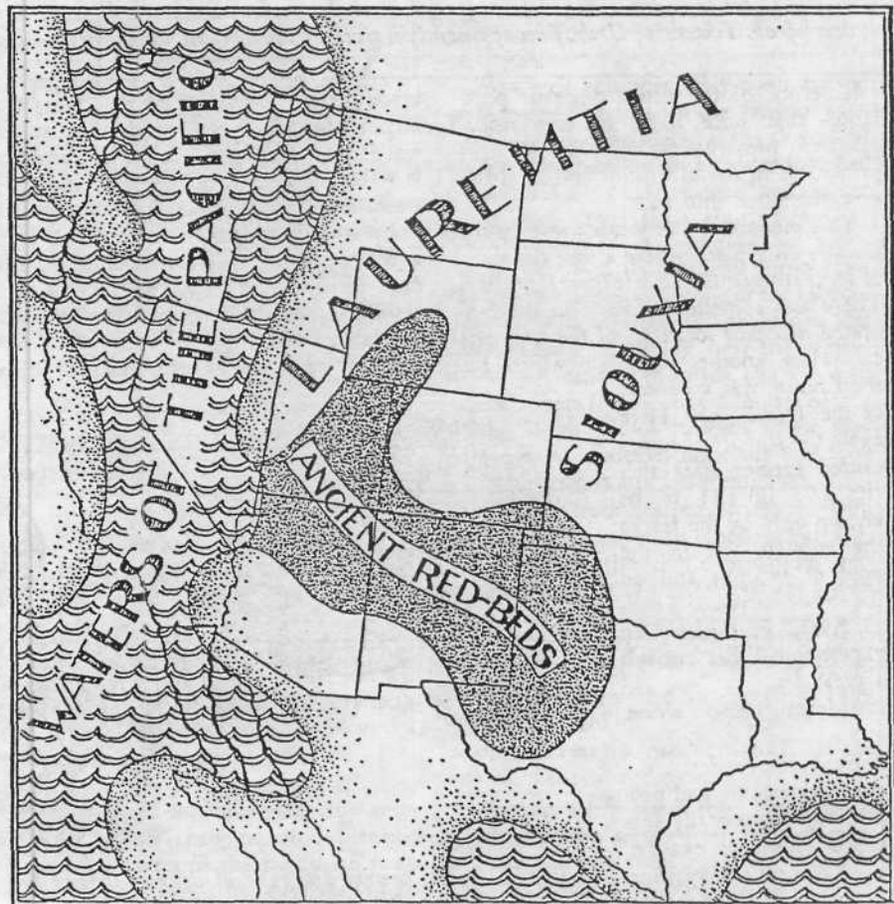
The wonder of trees and logs changed to stone naturally has left a deep impression on the legends of the Indians who saw them scattered over the waste and felt that there must be some supernatural explanation. To the Navajo they are *yeitsobitsin* or the bones of Yeitso, a monster slain by the Sun in a great battle. The scattered and broken bones of Yeitso and his congealed blood—the lava-flows—are all that remain to tell the tale of the titanic struggle. The Pahutes explain the logs as being the broken weapons of the Great Wolf god, *Shinarav*.

The triassic climate throughout the

region typified by the Chinle was evidently one of sharply divided rainy and dry seasons. For months the rainfall would be very great, then would come a season of absolute drought and it is believed probable that it was during the long, hot, dry spells that the desert aspect originated. The temperature was mild, possibly tropical.

This Triassic world, which ushered in the Mesozoic or Middle Ages of the earth's history, supported an animal population stranger than any that lived before or since. It was the Reptile Age just beginning, the reign of the dinosaurs (terrible lizards). The creation of these fantastic beasts was not, as is sometimes supposed, one of Nature's experimental failures. Actually, the dinosaurs were a great success. For 55,000,000 years these almost brainless, moronic animal thugs dominated the entire earth as Lords of Creation.

Knowledge of the different species of dinosaur and their anatomy is rather new and is being constantly enlarged by new finds and continual research. As recently as 1802 some of the tracks in the Connecticut valley were explained by the local inhabitants as the tracks of Noah's raven. They looked like gigantic bird tracks and were so accepted. Our grandfathers had not the slightest inkling that such animals as dinosaurs ever existed. The dragon myth appears to have had nothing whatever to



Western half of United States during Late Triassic Period when waves of the Pacific beat against shores of Arizona, and the red Chinle geological formation was dominant in Utah, northern Arizona and New Mexico. Map adapted from Pierson and Schuchert, "Textbook of Geology."

do with finds of the bones of these actual dragons because these myths developed in parts of the earth where dinosaur remains rarely are found. Where such a foundation might be expected, as in China, the dragon was no ordinary animal but a supernatural being connected with earth, air, fire or water. Despite the fact that the ancients had no data to go by and apparently created their dragons from thin air, they sometimes did a fairly decent job in unknowingly inventing an imaginary dinosaur. The reproduction shown is from an old "History of Animals" published in 1657 and except for the fact that it needs another pair of legs and that the neck and tail are a trifle "arty" it almost could qualify as a picture of *Anchisaurus*, one of the smaller carnivorous dinosaurs.

It was not until 1824 that any attempt was made to explain in a scientific way

the meaning of fossil dinosaur bones. This was from an account of a find in the Jurassic deposits of southern England. The question remained indefinite however until 1841 when Richard Owen, the anatomist, pointed to the fact that the bones were those of a lizard-like animal and he named the thing a "dinosaur."

It is easy to acquire the wrong impression of dinosaurs. We are likely to think of them as being simply magnified lizards, but some were little fellows less than a foot long from nose to the tip of the tail. Their bones show that they were allied to three other groups—the birds, the crocodiles and a curious clan, the *Rhynchocephalia*, a group which now has but a single living representative, the *Sphenodon*, or tua-tara of New Zealand. This low-grade, lizard-like reptile has a pee-wee brain. In specimens 20 inches long the

brain is smaller than a pea. This animal also has a third eye on top of its head, the pineal eye, which is a very primitive characteristic also shown by some lizards including the common horned toad. But in the horned toad's case the eye is marked by a tiny opaque scale while in tua-tara the pineal eye is well developed and said to be sensitive to temperature changes. Some dinosaurs, the *Plateosaurs*, show evidence of having had a pineal eye on top of the head. Like tua-tara the dinosauran mental equipment was slight. The *Brontosaur* was sometimes 65 feet long and weighed close to 40 tons yet the brain responsible for the action of this great mass of lizard flesh tipped the scales at two pounds!

From the study of the teeth and jaws, anatomists know that there were both herbivorous and carnivorous types of dinosaurs. Some with spoon-shaped snouts ate the vegetation of the ancient swamps. Others had batteries of teeth with serrated edges set edgewise in the jaw to shear like the blades of scissors. These were the typical flesh eaters, living engines of destruction like *Tyrannosaurus rex* (King of the Tyrant lizards). Many species laid eggs like those found in Mongolia with the unhatched baby dinosaur inside. We also know something about the skin that covered these dumb reptiles. Casts of the hide have been recovered in a number of finds. This was thin like most snake skin but not covered with scales. Instead, it had a mosaic of tubercles like the skin of the gila monster.

What wiped out the dinosaurs? Nobody knows for certain but there are some attractive theories. The facts are that for a period three times the length of the mammalian domination of the earth, the reptiles flourished exceedingly, and then suddenly at the close of the Mesozoic, about 25,000,000 years ago, the last dinosaur died. Possibly this extinction was due to changing of the earth's climate from warm to cool and actually cold. Reptiles, with their cold blood and lack of any protective covering such as hair or feathers to cut down heat lost through radiation could not stand the rigors of even a moderate winter. With the onset of cold a torpor would settle down on the entire dinosaur race. This coupled with a slow mind challenged by the problems of changing environment would have been too much. They couldn't think fast enough to carry on. However, on the warm day of the Triassic when the unhurried giant left his track in the sandy mud at Kanab, such misfortunes were still a long way in the dim future.

#### RED MOUNTAIN UPDATE

The 130 or so residents of Red Mountain, Cal., a former silver mining town on the Mojave Desert about 2 miles south of Johannesburg on Highway 395 may be landless.

According to the BIM, they are squatters, living in houses they own, but on federally owned land due to a tangle of red tape regarding the ruins of the Kelly Mine. Somewhere along the way, township papers were not filed which means the federal government still owns the land they live on.

Upon trying to purchase their land from the government, which some residents claim they were told they could do, prospective purchasers were informed that the land could not be sold because of a possible conflict over the ownership of the old mining claims. If the claims were bought and proven to be valuable, then under the (mining) law, the claimholders get title to the land, both underground and the surface, where the residents homes are built.

Similar situations have occurred, such as one in Angels Camp on the Mother Lode and they have been satisfactorily resolved. The townspeople of Red Mountain are trying to remedy their problem with a resolve typical of the residents of this area.



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# Chronicle

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Milestones, Magic, Myths, and Miscellaneous of the Great American Desert

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## GOLD NUGGET FOUND

The Amazon Jungle, Brazil. A gold nugget weighing 80 pounds was found in a gold field in the Naked Mountains. This discovery followed a 72.6 pound nugget discovered in the same area on March 4, 1983. Officials estimated its value at \$385,000.00.

## NEW GOLD & SILVER MINE

Yerington, Nevada - Pacific Silver Corporation announced plans to construct a 300 Ton per day flotation and leaching facility at its newly developed Buckskin mine. A 1500 foot long inclined shaft will be sunk to help transport the ore to the surface. The company estimates there is 40,000,000 of ore at the site.

## PAIUTE INDIANS LOSE A RIVER

Washington DC - the US Supreme Court ruled that farmers in the Newlands Reclamation Project are entitled to water from the Carson River. This decision settles a 58 year old dispute in which the Indians claimed that their rights were prior and superior to those of the ranchers. The water flows to Pyramid Lake and provides a spawning grounds for the Lahontan cutthroat trout and the cui-ui. The Federal Government represented the Indians, despite the tribes' wishes to represent itself.

## GOLD MINE ROBBED

Cerrillos, New Mexico - Three hooded bandits broke into the Gold Fields Mine property near here on June 30, 1983. They reportedly stole what could turn out to be \$500,000 of gold. It was not all that simple, however, the gold is treated with Cyanide, contact with which can cause death.

## MARICOPA RESERVATION PROJECT TO START

Secretary of the Interior James Watt has announced that \$1,000,000 has been allocated to initiate construction on the AK-Chin Indian Community Project. The project is located on the Maricopa AK-Chin Reservation in Pinal County, about 30 miles south of Phoenix, Ariz. The project will repair irrigation facilities for 5000 acres and new facilities for over 3200 acres. Completion of this project will take 3 years and enable the AK-Chin Indian Community to use part of the 85000 acre feet of water guaranteed it annually by a 1978 act. That act was passed to stabilize the agricultural economy of the AK-Chin community, threatened by the depletion of ground water on which it depended, by providing a permanent water source for the reservation.

## SUTRO TUNNEL MAY REOPEN

DAYTON, Nevada - The historic Sutro Tunnel which runs from near here to Virginia City may be back in use if a Canadian Company's plans materialize. The company, Rea Gold Corporation of Vancouver British Columbia, announced that it has signed a letter of intent to purchase 400 acres of mineral rights from the Constock Tunnel and Drainage Company of Carson City, owner of the Sutro Tunnel. When originally constructed, the Sutro tunnel was granted mineral rights to 2000 feet on either side of the tunnel by the mining companies on the Constock Lode. This area has not been mined and rumor has it that there are several vein extensions on tunnel property. Not all is easy, however. Access to the tunnel is blocked by several cave-ins and these must be cleared and the tunnel inspected before use can begin. In an upcoming issue of DESERT, we will feature a story on the history of the tunnel & its construction.

# Calendar of Western Events

OCTOBER 22 & 23, LODI GEM & MINERAL SHOW  
Hale Park Building,  
209 Locust Street,  
Lodi, Calif. Hours 10:00 AM - 5:00 PM.

OCTOBER 26-NOVEMBER 6, ARIZONA STATE FAIR  
McDowell Road & 19th Avenue,  
Phoenix, Arizona,  
Features prize winning livestock,  
agricultural exhibits, minerals, Midway  
and rides, Entertainment.  
Admission charged.

OCTOBER 31-NOVEMBER 2, WESTERN STATES  
MINING EXPOSITION,  
MGM Grand Hotel,  
Reno, Nevada

NOVEMBER 5 & 6, GEM & EARTH SCIENCE SHOW  
Santa Barbara County Fair Grounds,  
Stowell & Thornberg Streets,  
Santa Maria, Calif.,  
Mineral displays, demonstrations,  
Chicken Barbeque, dealers.  
Admission Free.

NOVEMBER 12 - SAN DIEGO FEAST DAY  
Jemez and Tesuque Pueblos,  
Albuquerque, New Mexico,  
Ceremonial dances, Trade Fair.

NOVEMBER 12 & 13 CATTLE CALL RODEO  
Cattle Call Arena,  
Brawley, Calif.,  
Western Parade Saturday 10:00 AM  
(Downtown), Rodeo both days, Pit  
Beef Barbeque, Western dances  
Saturday night, Rodeo features, steer  
wrestling, calf roping, bareback  
riding, saddle bronc riding, bull  
riding, women's barrel race, amateur  
contests and wild horse race.  
Tickets - (619) 344-5206, Admission  
\$5.00 and \$7.00.

NOVEMBER 18 - 20 GEM AND MINERAL SHOW  
Mineralogical Society of Arizona,  
Youth Center Building, Arizona  
State Fairgrounds, 19th Avenue and  
McDowell, Phoenix, Arizona,  
Hours 10:00 AM till 6:00 PM, dealers,  
special exhibits, demonstrations,  
lectures and swapping.

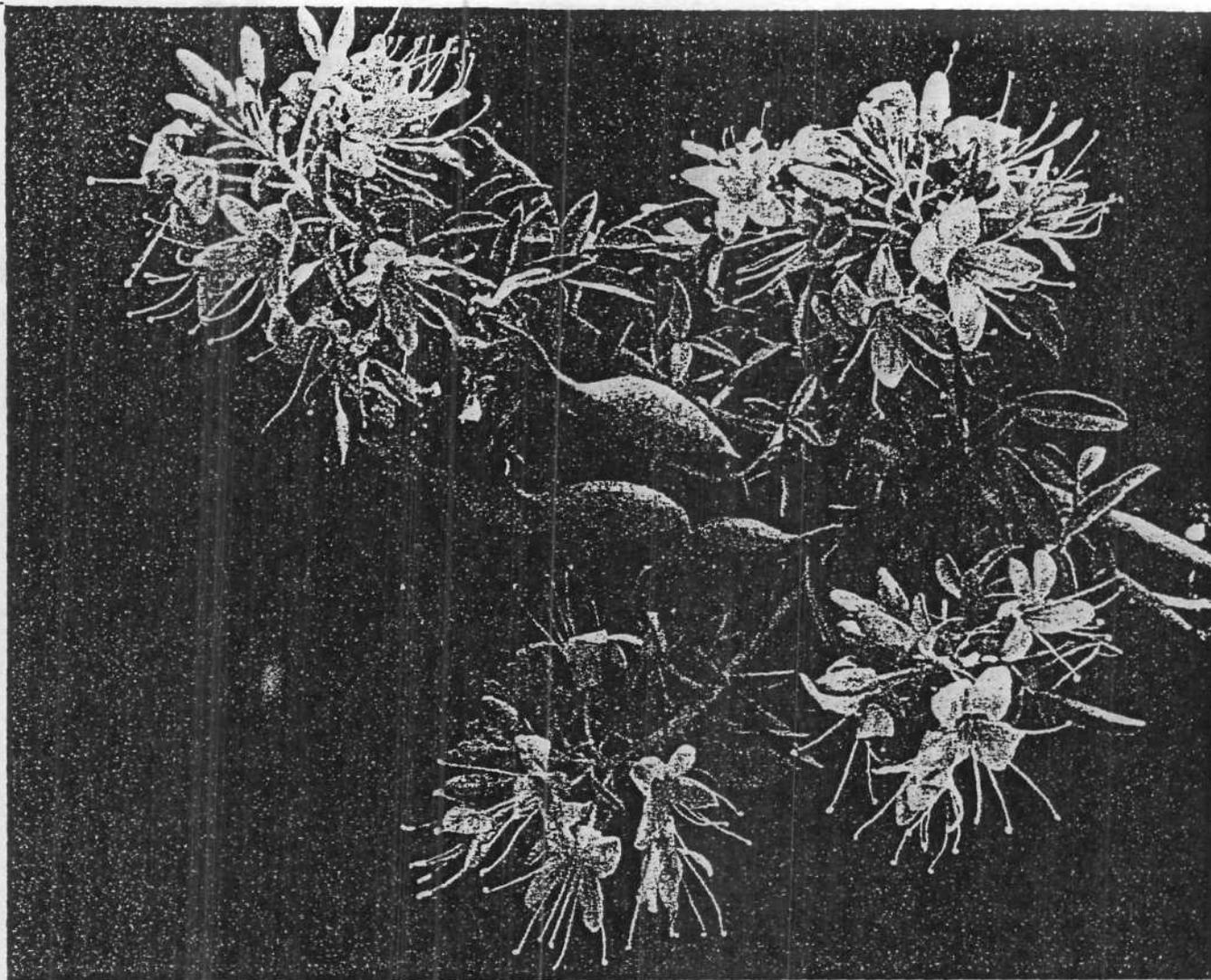
JANUARY 14 - 15, 1984 "GEMBOREE 84"  
Tule Gem and Mineral Society,  
Veterans Memorial Building, 324 North  
Kaweak Street, Exeter, Calif.,  
Exhibits, dealers, demonstrations,  
Admission Free.

FEBRUARY 9 - 12 GEM AND MINERAL SHOW  
Tucson Community Center, 260 South  
Church, Tucson, Arizona, Hours 10:00  
AM - 8:00 PM, Sunday to 5:00 PM,  
Exhibits, programs, Annual meeting of  
clubs, dealers. Large Show.  
Admission \$1.50.

FEBRUARY 16 - 18 SCOTTSDALE GEM AND  
MINERAL SHOW, Camelview Plaza,  
Camelback Road and 70th Street,  
Scottsdale, Arizona,  
Exhibits, dealers.

MARCH 3 - 4 GEMS AND MINERAL SHOW  
Monrovia Rockhounds, Masonic Temple,  
204 West Foothill Boulevard,  
Monrovia, Calif.,  
Displays, lectures, dealers,  
Free Admission.

MARCH 17 - 18 RIVER GEMBOREE, Silvery  
Colorado River Rock Club, Junior High  
School Building, Hancock Road at  
Lakeside, Bullhead City, Arizona,  
Dealers, demonstrations, displays,  
Free Admission.



## Bladder Bush

The desert region has had more rainfall than normal during the fall and winter, and while other factors such as freezing temperatures or blistering winds may interfere, there is the promise of a colorful horizon when the wildflower season comes in February and March and April. In order that readers may extend their acquaintance with the flowering shrubs of the arid region, Desert Magazine this month resumes the series of stories written by Mary Beal about the more common botanical species.

By MARY BEAL

**I**N WIDELY scattered areas of the Mojave and Colorado deserts the traveler frequently is attracted by a greyish blue-green bush alive with clusters of bright yellow blossoms, quite unlike the members of the sunflower family everywhere in evidence. It is a woody, rounded shrub a few feet or more high.

If you stop for a closer acquaintance you'll find it to be one of the heavy-scented Caper family. Botanists have named it *Isomeris arborea* but it is commonly known as Bladder Bush, Bladder-pod or Burro Fat.

Some of its relatives are called Stinkweed and Skunkweed and our shrub could well be given such a nickname. Its herbage is truly as mal-odorous as the scent of a skunk. You wonder how the handsome golden flowers can spring so buoyantly from such an ill-smelling source.

Usually it is 2 to 4 feet high but sometimes in favorable spots it attains a height of 6 or 8 feet. It thrives best in shallow washes

and dry gullies, which catch the run-off of rain water from the hills and often produce an array of lusty six-footers. These washes make a delightful display of gay color whenever ample moisture inspires the Bladder Bush to put forth blossoms. It needs little encouragement, having the pleasing habit of bursting into bloom at any season of the year the rain gods see fit to send generous showers.

The new branches of the season are green but stiff, lightly veiled with a close covering of very fine white hairs. The smooth leathery leaves are palmately divided into 3 narrow, bristle-tipped leaflets an inch or more long, inclined to fold inward.

The showy flowers are nearly an inch across, growing in dense bracted racemes at the end of the branchlets. The broad calyx has 4 pointed lobes, the corolla 4 golden petals, and the 6 yellow stamens are long out-stretched. The ovary protrudes conspicuously, borne at the end of a long stalk, so that it is strikingly prominent even in the newly opened flower, forming a sizeable pod before the corolla withers, a leathery, ballooning pod resembling a very obese pea-pod, 1½ to 2½ inches long.

A hungry human might be attracted to the fruiting Bladder Bush as a source of nourishment but one nibble would be enough to turn thumbs down on the very bitter little peas in their edible-appearing fat pods. The offensive odor and taste of the good-looking foliage would be likewise repellent. Browsing burros are less sensitive and may indeed relish and wax fat upon the herbage and pods of the *Isomeris*, at least sufficiently to account for the common name Burro Fat.

*Isomeris arborea* has a variety, *globosa*, with pods almost spherical, which dips into the western Mojave desert from the coast ranges. Another variety, *angustata*, favors the Western Colorado desert, extending north through the Mojave desert to the Tehachapi mountains. Its pods are only slightly inflated, tapering at both ends.

# Prologue

For centuries the Pima Indians have lived in the valleys of the Salt river and the Gila. They were living there at the first coming of the Spaniards, always at war with marauding Apaches; always fighting with the elements for a livelihood and always at peace with the white race that crowded into their country. The Pima domain is surrounded by towering mountains rising abruptly from the Arizona desert and fencing the Indians into their lowland where saguaros stand sentinel and cholla cactus glistens in the burning sun which beats down on the land.

But throughout the centuries the Pimas have wrested their food and clothing from their desert home, asking nothing of red or white neighbor except to be left unmolested. Pima women weave beautiful baskets of the desert shrubs, and of the clays underlying desert sand they fashion shimmering smooth red pottery. The men cultivate their crops, defend their homes against all comers, and today their reed and clay habitations nestle in peace beneath the feathery mesquite and willows.

It was not always thus. Only a few years ago the women were afraid to venture into the low hills where their basket material grew, and the men never cultivated their fields without a watch for Apache enemies. The chronicle of those years has been kept by notches and symbols cut in willow sticks, and from the reading of these Pima Calendar Sticks we have learned the story of the Pimas.

## Time Marches on in Pimeria

By MRS. WHITE MOUNTAIN SMITH

A MESQUITE tree hung against the desert sky like wisps of smoke, and in its shade Frank Pinkley and I sought refuge from the midday heat of Southern Arizona, Juan Samuel, grand-

father of the Pima boy beside us, sat on a woven mat in the white sunlight and fingered the precious stick carved with the history of his people. One could see that he was not entirely happy, even though he knew and loved Frank Pinkley, a friend of 30 years.

"My son, I do not like to talk to women. I do not trust this white woman you have brought. She will listen to the talk and then put on the paper what she wishes." He spoke in Pima. The grandson tried to soften the old man's words as he interpreted.

"Say to your grandfather that only the words he says will reach the paper. You shall see what is written and explain to him before it goes out for the white race to read!" And with this assurance the history lesson started, Juan Samuel speaking in his full toned voice and the young Pima changing his speech into English.

"For untold time the Pima people have had this land. Our fathers brought water to the fields by small canals and always we have raised beans and corn and pumpkins. A-kee-mull (the Gila river) has been good to us. It brings the rich soil to the fields and then the moisture that will make the crops." Here he thoughtfully passed his hands along the length of the stick as a musician touches his violin.



Juan Samuel—Keeper of the Calendar stick. Photograph by Frank Pinkley in 1929. Courtesy National Park service.

-  Man sitting under tree dead. Was searching for horse.
-  Year mark.
-  Mare had twin colts.
-  Rattlesnake killed Pima.
-  Measles killed many Indians.
-  Pima killed in fall from train.
-  First wagons used.
-  Wife of head chief died.
-  Pimas invited to white feast at Tempe.
-  Government issued barbed wire.
-  Mexican killed a Pima Indian.
-  Year mark.
-  Woman killed by lightning.
-  Cow gored a woman to death.
-  Railroad built.
-  Horse race.

Sketches copied from the Calendar stick as Juan Samuel told his story to the author.

This Calendar stick was a willow wand perhaps four feet in length and an inch in thickness. Each side was slightly flattened and both sides were closely crowded with dots and notches, dashes and grotesque carvings. The history proceeded down one side, around the end and back up the other side to the beginning and covered a period of about 70 years of Pima annals. Sticks older than that had been lost or destroyed by fire, and events dating from the time this particular stick covered had been kept by the use of pencil and paper. Only this Calendar was to be found among the Pimas. Others had been collected and placed in museums in the East, and the one Juan Samuel had agreed to read for Mr. Pinkley and me was destined to join its companions. As far as we know only the Kiowa and the Sioux Indians have kept carved records of the years similar to those of the Pimas and they discontinued the custom many years ago.

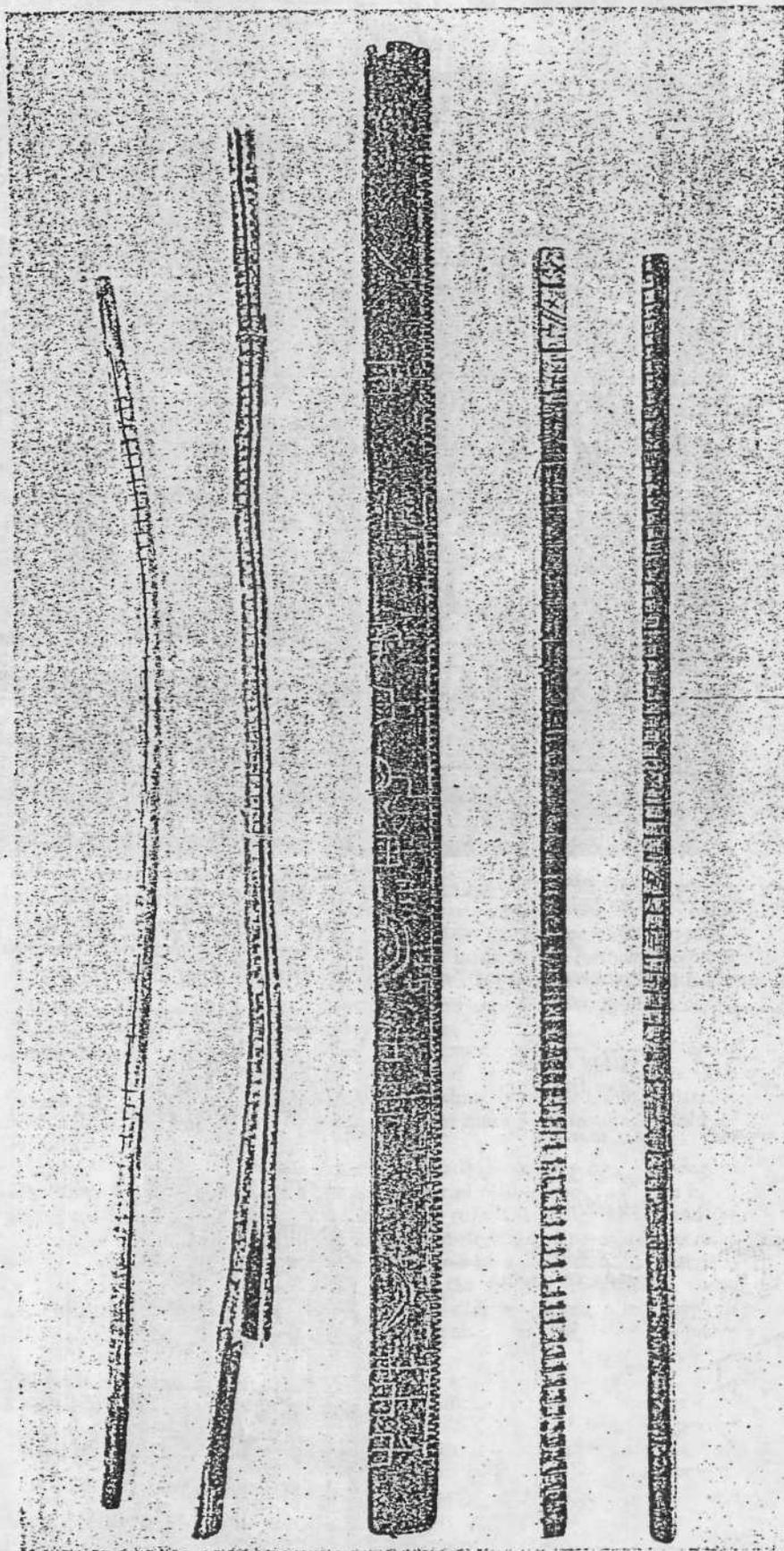
It was with great reluctance the historian permitted me to take his wooden calendar into my own hands and examine it. Since he was almost entirely blind he turned his head this way and that like a listening bird while I pleaded with him. At last appearing to be satisfied he surrendered the stick. To me it seemed to be covered with small dots and little straight notches. Now and then comical human figures showed up and they looked like a child's first efforts at art. I noticed when the frail sensitive old fingers touched one of these figures he narrated a tragedy of some sort. Perhaps a rattlesnake bit a woman gathering mesquite beans, or the Apaches came and killed a Pima or carried away a woman. Once, fingering a human figure he stopped and went back along a few notches in front of it. "This is when the fire came out of a cloud and burned two men working in the fields."

"How do you know they were men the lightning killed?"

"They have legs!" Looking over his shoulder I saw a crude human figure. The women were mere exclamation points without detail.

All of the history was not drab danger and hardship. For instance a certain type of design recalled a happy experience to the old man living completely in the past. Agave or saguaro liquor was brewed until it was about 200 percent proof and what a brawl ensued. "Two men were killed because they liked the same woman!" A discreet cough recalled our *raconteur* from his grinning memories.

"This was the moon when the Yumas crept up on the Maricopa village and stole lots of women. They had arrows and clubs with which to fight and they started back across the *A-lee-mull* with the women but the Pima warriors arrived and fought with the Yumas. The captured women hid in the chaparral and ran back to their homes. Few of the Yumas escaped alive . . . Then



Left to right: (1) Pima calendar stick. (2) Turkish *tayy* stick from Asia Minor. (3) Calendar stick from Norway. (4) and (5) Pima calendar sticks, Southern Arizona. These relics in U. S. National museum. Photograph courtesy Smithsonian Institution.

the stars fell. (This doubtless refers to the meteoric showers of 1833-34.) And the river was angry with the Pimas and great waters covered the land. That was to punish some of our people who displeased the medicine men. But next year (distinguished by the longer notch across the stick) came the bountiful crops of corn and wheat and squash and watermelons which grew in the rich soil the angry river carried to the fields. The witch was killed that year also."

The old man pressed his thumb into a deeper carving, then retraced the last few engravings to be sure he was right. "Our people were so thankful to the gods they danced and feasted and drank so much tiswin made from the cactus fruit juice, they were too drunk to have their senses and the Apaches came and killed a woman. When the Pimas were sober again they followed and five Apaches were slain. That was when we learned the Apaches wore rawhide jackets which made the Pima arrows bounce harmlessly away . . . A year passed and no Apaches came. We tilled the fields and filled big baskets with food which our women hid in the ground and covered with cactus thorns so the little animals would not dig it up."

The story went on and on, mostly recording tales of Apache warfare and return engagements. One sign something like a skull and cross bones recorded a plague which swept all the Gila river villages leaving sorrow and death in its wake. "Four medicine men were the cause and they were stoned until they died, then the sickness went away!" Grandfather droned on with the record and the brisk young voice of the young schoolboy translated while staring with amazement at the shorthand symbols I put down in my notebook. I expect he wondered what was the use of merely changing funny looking marks.

A plump young matron had joined us in the shade and engaged Mr. Pinkley in conversation. She told him she used to visit his trading post when she was very small and that he always gave her candy. She was busy getting materials ready to weave a basket which she said, with a giggle, she expected to sell to me. It is unusual for a Pima woman to work on basketry except in the winter and she definitely was making the basket for me. It hangs above my desk today.

She had a bundle of willow twigs moist with sap and she peeled and split these with her strong teeth. She had been soaking seed pods of *mastynia* or Devil's Claw over night and now she tore the black outer covering off with her teeth. This black material is used to form the figures and designs in the basket. I noticed she took only one strip from the center of each claw and then threw the pod away although two or maybe three strips could have been secured. Her answer, when I asked why she did this, was very charac-

teristic. "My mother and my grandmother only used one strip!"

Grandfather was impatient with all this woman talk and he shuffled his moccasin shod feet to let me know I was wasting his time. He had nothing else to do with time, but no female was going to impose on him. "Now here, Apaches were beating beans out of dry mesquite pods when the Pimas shot arrows into the camp. A blind Apache was killed." I looked very carefully at the symbol and the Apache *may* have been blind. I could see nothing pertaining to his eyesight. "The one armed white trader sold his store and for some reason not known to the Pimas threw away his grain which our people gathered up and saved."

Many of the events related may seem trivial to the white race so terribly busy with its inventions, its wars and its stock market ups and downs, but we must realize that the relative importance of events differs in the minds of white people and Indians. As I looked over the things he had recorded on the stick I found they covered, according to importance given them by the historian—battles, floods, earthquakes, falling stars and droughts; years of plenty and tiswin celebrations; sickness; accidents such as lightning, drownings and rattlesnake bites; and later events connected with the establishment of schools, missions, railroads and telegraph lines.

"Two medicine men, father and son, were killed because they betrayed the Pima people." And here was an event, indeed—"Firearms were given the Pimas by the big white soldier." General Carleton issued firearms to the Pimas to defend themselves against the Apaches. "Children were piling up gourds in a heap when Apaches crept up and killed them." The small round dots were the gourds. "The telegraph line was run through from east to west."

"How do you know it was built from east to west?" I asked.

"The carving is sloped toward the last end of the Calendar."

"A Pima was killed by his horse because he caught it by the tail and it dragged him to death . . . while a party was gathering tiswin material a mare had a colt . . . a white man went hunting his horse and he died from being tired. He was found sitting against a tree. The roaring machine came on a steel road on the edge of the Pima country." The Southern Pacific railroad built its line through there in 1876. "A Pima robbed and killed a white man and was hanged at Florence. Measles killed many children. A drunk Pima fell off a freight train and was

killed. The first wagons were issued by the government to the Pimas. A white man was shot and killed by a Pima. White settlers at Tempe invited the Pimas to a feast. The wife of the head chief died."

As the story went along signs of civilization crept into the pages. "During a tiswin feast a man put poison into the drink of his love rival who died in great agony! A Mexican killed a Pima but the Pimas were good enough not to want to kill the Mexican." And during the next few years a mission was built, a schoolboy committed suicide; there was a heavy fall of snow which could be rolled into balls and which frightened the Pimas. One year no crop at all grew and the Indians were all hungry. Barbed wire was issued by the agency; lightning struck a stagecoach and killed a Pima riding on it. The Indian department established a school and the children soon thought they were much smarter than their old folks. (Flaming youth knows no creed nor color.) A Pima youth employed to carry mail became insane and shot a white man he met on the road. The last entry on this stick was made in 1900. "The President came to Phoenix."

That ended the story and we left the old historian gently touching a notch here and there and dreaming of the glory that was past.

### TRUE OR FALSE ANSWERS

Questions are on page 10

- 1—False. The road-runner while not equipped for sustained flight does leave the ground for short distances.
- 2—True.
- 3—False. Sunset crater is of volcanic origin.
- 4—False. Fossilization of wood is believed to have taken place through the crystallization of minerals in solution.
- 5—False. Bill Williams was a trapper and mountain man.
- 6—False. Capital of Nevada is Carson City.
- 7—True. 8—True.
- 9—False. Blossom of the Palo Verde is yellow.
- 10—True.
- 11—False. Tamarisk was brought to the United States during the present century.
- 12—True. The San Juan's annual discharge of 2½ million acre feet is nearly double that of the Rio Grande.
- 13—True.
- 14—False. Kit Carson died in 1867. The Lincoln County war was from 1877 to 1881.
- 15—True. 16—True.
- 17—False. Hassayampa is the name of a river in Arizona.
- 18—True. 19—True.
- 20—False. Pauline Weaver was a guide and mountain man.

Before railroads came to the Southwest the Colorado river was a main artery of transportation for mining and military operations in the desert region of Southern California and Arizona. Always a treacherous stream for boatmen, the piloting of the old paddle-wheelers used for passenger and freighting purposes called for skill, courage and ingenuity—and Captain Isaac Polhamus had a generous share of all these qualities. Here is the story of one of the best known and loved of all the old river captains.

# Steamboat Captain on the Colorado

By FRANK C. LOCKWOOD

*GRAND EXCURSION  
up the Colorado River  
to the Head of Navigation  
Between the first and middle of June, 1894.—  
Through the Wonderful Black Canyon and Devil's  
Gate Canyon.  
On the Steamer Mohave  
Polhamus and Mellon, Owners  
I. Polhamus, Master.*

This announcement appeared in a little folder distributed through the Southwest from Yuma to San Francisco in the spring of 1894. I have a copy of the folder on my desk, sent to me recently by Mrs. James Fleetwood Fulton, granddaughter of Captain Isaac Polhamus.

An excursion up the Colorado was an adventure in those days. And Capt. Polhamus was one of the most resourceful among the skippers who had learned to pilot the shallow-draught paddle-wheel boats which navigated the shoals and rapids of the fickle stream.

Even as early as 1894 the press agents were ballyhooing the resources and scenic beauty of the Colorado. Here is a paragraph taken from an excursion boat announcement:

"The foremost object of this excursion is to show the possibilities of mining and agriculture of the country through which it will extend. But it will have other attractions as well. With none of the hazardous hardships and privations of roughing it, in saddle or on foot, the trip will be through the heart of the most weird and awesome scenery on earth, nowhere else to be seen except in the abysmal chasms and gorges of the Colorado river . . . The trip is full of thrilling interest. At times the view will be unobstructed on either side for miles . . . Again the gritty little craft will be puffing and wheezing through narrow gorges with walls so high and abrupt as to almost obscure the light of day . . . In four places along the route the rapids are so heavy and fierce that, but for the aid of a sturdy shore line, they would be quite impassable. Ringbolts have



*Captain Isaac Polhamus at home in Yuma with his granddaughter. Photograph courtesy Mrs. James Fleetwood Fulton.*

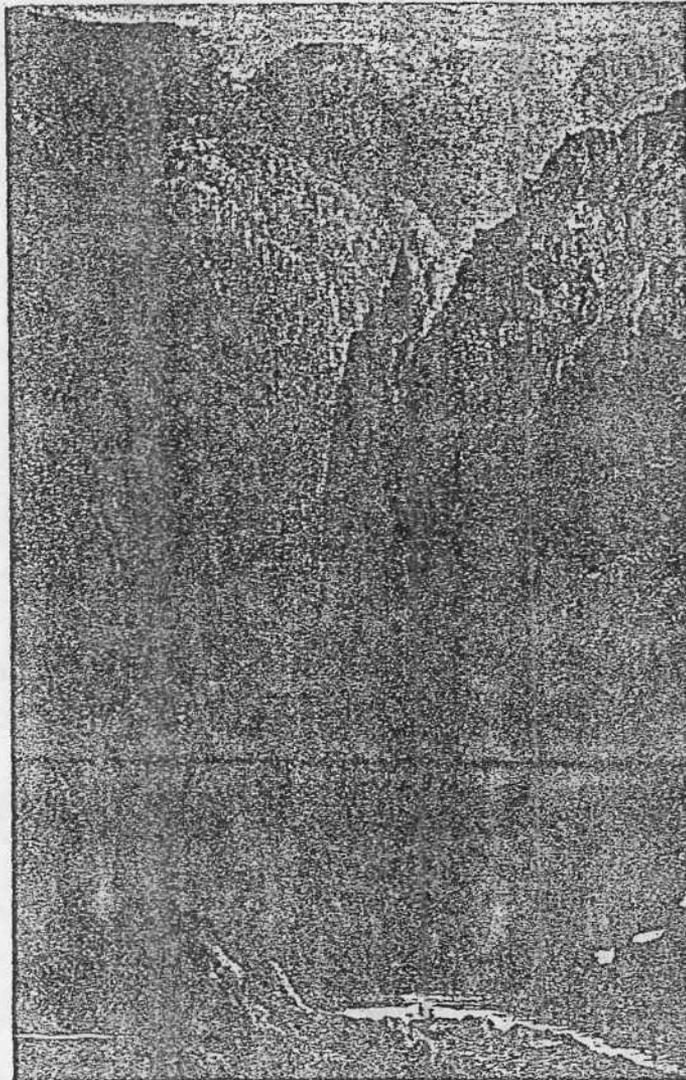
been securely fastened into the walls of the canyon, and a cable suspended therefrom to a steam capstan in the bow of the boat is the tedious but certain means of locomotion." The round trip fare, as announced in the circular including meals and berth, was \$62.25 from San Francisco, and \$57.75 from San Diego.

Robust, erect, vigorous, and forthright, Captain Polhamus was one framed to command. He was of florid complexion, and always wore full whiskers—black in early life, white as his grandchildren first remembered him. On the deck of his steamboat he wore the usual garb and insignia of his station—duck trousers, white shirt, open at the throat, and white cap with the customary braid indicative of his rank as captain.

He was firm and decisive in all his ways; sometimes rough no doubt, but not unkindly—dominating rather than domineering.

Isaac Polhamus first dropped anchor in Arizona in 1856. His occupation as entered on the membership roll of the Pioneers' Historical society was that of master mariner. For 66 years he lived in Yuma, and it was from Yuma at the age of 94 that he passed to his eternal haven.

He was born in New York city in 1828. The date of his



*Grand Canyon at the mouth of Diamond creek. Reproduced from Lieut. Joseph C. Ives' "Report Upon the Colorado River of the West."*

death was January 16, 1922. As a boy he worked for his father on a Hudson river steamboat.

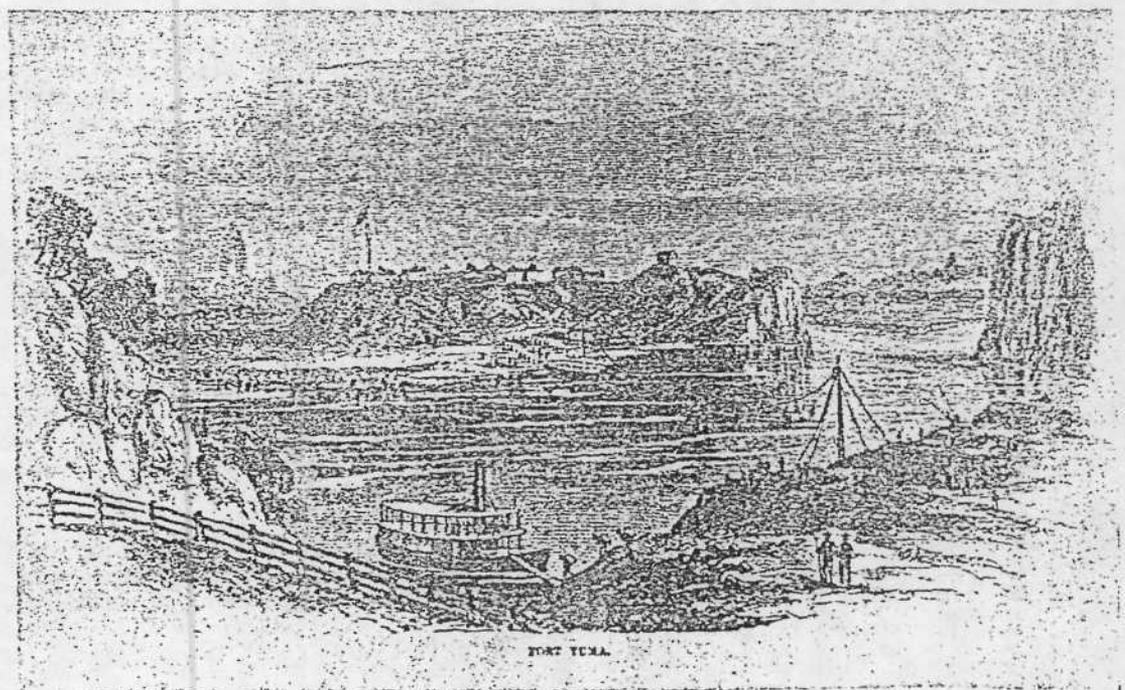
In 1846, with a crew of other adventurous spirits, Polhamus set sail for San Francisco in quest of gold. The voyage was by way of Cape Horn, and required 327 days. After reaching California he worked on the American river a few months at placer mining. When a flood carried away all the grub he and his party had brought with them, he returned to a river life, steamboating on the Sacramento. In the early 1850s sailing vessels began making regular trips between San Francisco and Port Isabel at the mouth of the Colorado river, touching at Cape San Lucas at the southern tip of the peninsula. At Port Isabel river steamers met the ships, and after an exchange of freight steamed up the river to Yuma, La Paz, and points still farther north. From Yuma, goods were distributed by pack trains or wagons to all parts of the Gadsden Purchase. Cargo landed at La Paz was hauled by wagon trains to Wickenburg, Prescott, and the mines and army camps near these towns.

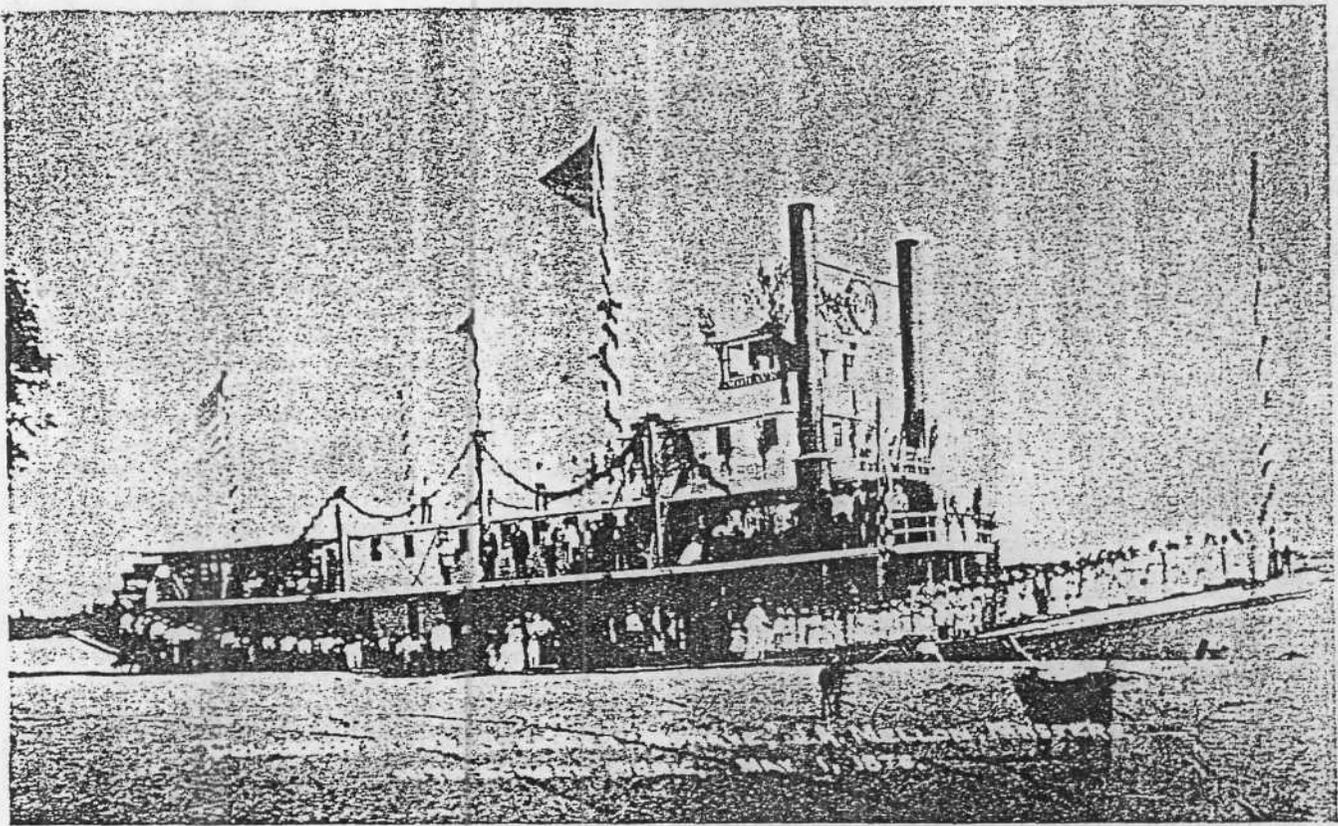
Yuma was only a landing place when Polhamus went there in the employ of the Colorado Steam Navigation company. An adobe building 100 feet long and 25 feet deep divided into four rooms of equal size was the only house in the settlement. Two of the rooms were occupied by the navigation company as office and storeroom and the other two by George H. Hooper and company, Arizona's first merchant princes. The building was located where the Gondolfo hotel later stood. The chief engineer of the steamboat line for a number of years was David Neahr. Like Polhamus, he was a native of New York. About 1860, these two friends decided to visit the scenes of their boyhood along the Hudson. The journey was made by stage. At Pantano, Arizona, the travelers were held up by Apaches, and in Texas progress was delayed by a herd of buffalo. It took 15 days to reach St. Louis.

Many were the stirring stories told by Captain Polhamus about the experiences of himself and his river comrades—the forceful and picturesque men of the '50s, '60s and '70s. Indeed, he was more than a good story-teller. He was a reliable historian of the important events of his era in the Southwest.

The deck hands on the steamers at first were all Indians. Their pay was 50 cents a day. Not being able to count money, each native kept tally of the number of days he worked by tying knots in a string he wore around his neck. Each knot recorded a day's work. An Indian demanded as many half dollars as he had knots on his string. Only thus could he figure up

*Fort Yuma in the early '60s. Reproduced from an etching in J. Ross Browne's "Adventures in the Apache Country."*





Photograph taken May 1, 1876, when the Yuma schools observed May Day with a picnic voyage up the Colorado in the "Mohave" with Capt. Polhamus at the helm.

the amount due him, and he demanded that a separate 50 cent piece be handed out for each knot, so Polhamus had to import that coin in large quantities.

Sometimes one of his deck hands would become unruly. It was not easy to find a way to punish unruly hands. He tried various methods without much success, and finally he found he could make a good Indian out of a bad one by picking him up and pitching him overboard and then pulling him back up on deck.

Father Paul Figueroa, Yuma's historian, asserts that Polhamus was the most experienced navigator on the Colorado. Among the captain's notable exploits was the running of the steamer *Gila* from Yuma to Needles and back, a distance of 250 miles, in 10 days, counting out time spent at Needles in unloading. He told how in one treacherous canyon below Fort Mohave he had to "let the steamer in stern foremost and that she went down it half way when she turned bow down and finally came out as she had entered," wrong end foremost.

His favorite steamer was the *Mohave*; and, on account of its good accommodations, passengers also preferred this vessel to any other.

Polhamus was easily able to make the run downstream from Fort Mohave to Yuma in one day. It was another matter when it came to going up stream. On one trip, in 1859, so swift was the current and so difficult the navigation, it took him 28 days to force this same steamer from Yuma to Fort Mohave. The fare on the *Mohave* from Yuma to Ehrenberg was \$30.00, including meals and berth. When the water was very low it required three days to make the trip up the river to Ehrenberg and five to Mohave. Polhamus said that on one voyage in very early days he ran into ice at Blythe, and that sometimes along the banks of the river he saw camels, lean, lonely survivors of the herd Beale had brought into Arizona in the 1850s.

La Paz was at one time the chief point on the river, but this distinction later passed to Ehrenberg, and finally to Yuma.

La Paz was situated on a flat three miles from Ehrenberg, and it was with great difficulty that a steamer could be landed there. It was the first capital of Yuma county. Ehrenberg being on a bluff, steamer-landing there was easy. By act of legislature the county seat was removed to Arizona City (now Yuma) in 1870. Upon Sheriff O. F. Townsend fell the duty of making the transfer, and he engaged Captain Polhamus to transport all the county officials, records, and documents in his steamer *Nina Tilden*. When the job was done, there was a celebration for the captain in Arizona City, and he was honored in many ways by his fellow citizens.

When the Southern Pacific railroad reached the Colorado in 1877, the navigation company went out of business. Not so Polhamus. Until 1904, at which time river traffic was brought to an end by the building of the government reclamation dam, he continued to run a line of steamers. Citizens of Yuma remember how for almost a generation after the coming of the railroad Polhamus carried merry May day picnic parties up the river on his boat as far as Picacho. His steamer was the last one to come down the river before the dam was built.

In 1865, Isaac Polhamus married Señorita Sacramento Sembrano, a daughter of the great Ferra family of California. Her people owned an extensive cattle ranch on the Colorado near La Paz. The captain found it almost as difficult to court this maid as he did to sail the uncertain Colorado river; for he knew no Spanish, and his sweetheart, "daughter of the Dons," could speak no English. So what they had to say to each other had to be spoken through an interpreter.

Even after vows were plighted, there were difficulties in the way. There was no priest or minister in the region. In order to secure a Father to solemnize the marriage rites, Captain Polhamus had to bring him across the desert from San Diego, and this required not only time but the hiring of a special stagecoach and the outlay of \$500.00 in cash.

Many children were born to them and nearly all their sons.

and daughters survived them. Among the children are Mrs. S.F. Oswald and Thomas M. Polhamus, citizens of California; A. A. Polhamus, traveling passenger agent for the Canadian Pacific railroad; Mrs. Agnes Hodges, Mrs. T. T. Cull, James M., Jennie, Charles H., and Isaac Polhamus—all of Yuma, Arizona.

High honors were paid to Captain Polhamus in Yuma on his 88th birthday, April 27, 1916. At that time he was not only the oldest man belonging to an Elks lodge in the state of Arizona, but was also one of the very few survivors of preterritorial days in Arizona. That morning he rose early, breakfasted heartily, without the aid of glasses wrote a letter to a relative, and then with vigorous step, he walked to the Elks' clubhouse there to receive greetings throughout the day from friends who came to congratulate him upon his good health and the leading part he had played in the building up of Yuma and the surrounding region during a period of 60 years.

More notable, were the evidences of respect and affection accorded this grand old pioneer at the time of his death in January, 1922. The Elks held a special memorial service for their veteran member the Tuesday evening following his death. The Indians gave even more touching evidence of devotion and sense of loss. Long had they looked up to him and trusted him; and now, to be near their friend and pay him their last respects, they filled the yard of his home, lined the retaining wall, and even overflowed into a neighboring lot across the street. A big bonfire was lighted on this vacant lot to keep them warm. Some of these Indian mourners remained there the two nights and the day that intervened — relatives bringing them their food. Their grief and sense of loss was genuine. At times they gave voice to soft, almost inaudible chanting. A requiem mass was sung in the Church of the Immaculate Conception, and then the body was carried to the Yuma cemetery for its final rest.

Captain Polhamus was proud of his family and he loved his home. His wife, children, and grandchildren all idolized him. The appraisal of him given to me by one of his grandchildren seems to me as correct as it is tender and considerate.

"Grandfather was rigid in character, firm, and his voice was deep, resounding. When he had something to say, it was said briefly, it was well worded and to the point, and always carried weight. He had the respect of all. Despite the outward appearance of being very stern, and he was stern when the need of it arose, I found him one of the kindest, most lovable and understanding hearts I have ever known, and I considered him the best companion a child could have."

Almost 40 years ago, DESERT MAGAZINE was proud to announce that the Kaiser Steel Corporation had decided to obtain iron ore for their Fontana, Cal steel mill from a site at Eagle Mountain. This would mean that extensive development work would be required along with the construction of a complete city to house and service mine workers.

This was due to the remote location of the Eagle Mountain mine, 12 miles north of Desert Center, which is between Indio and Blythe. A railroad would also be constructed with the tracks joining those of the Southern Pacific Railroad at a point near the Eastern shore of the Salton Sea.

That announcement set in motion the construction of what was to be one of the few modern company owned townsites in California.

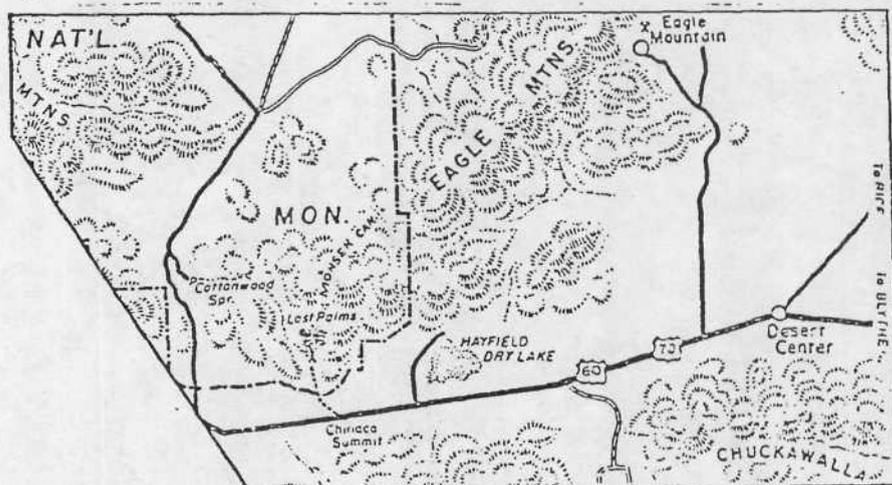
Now, we must announce the death and progressive abandonment of Eagle Mountain, the mine and town.

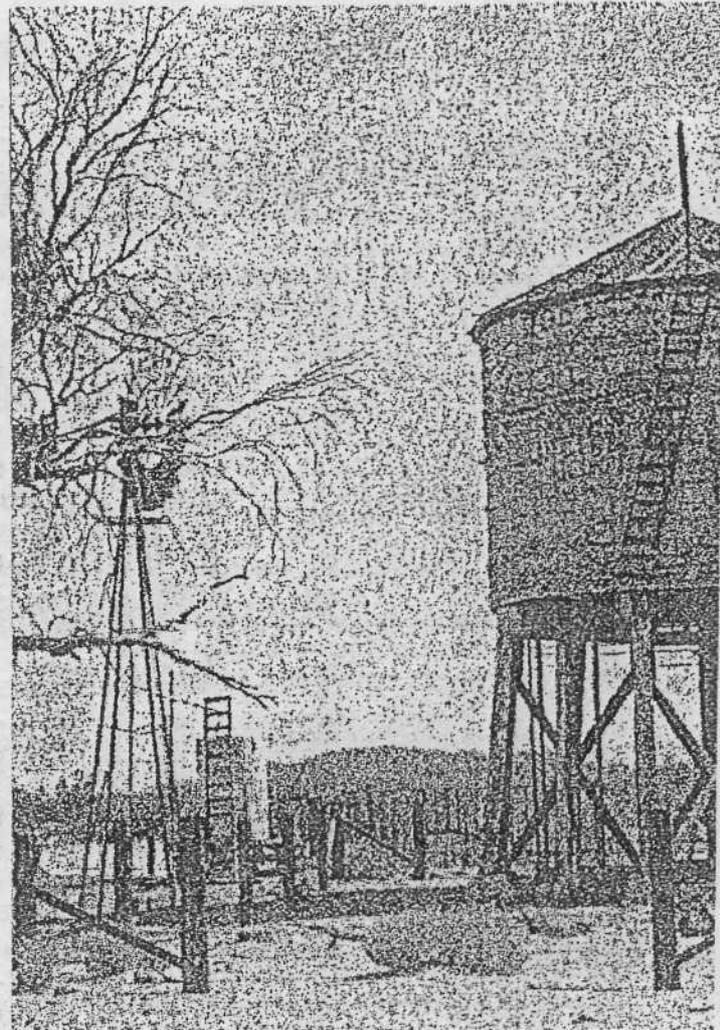
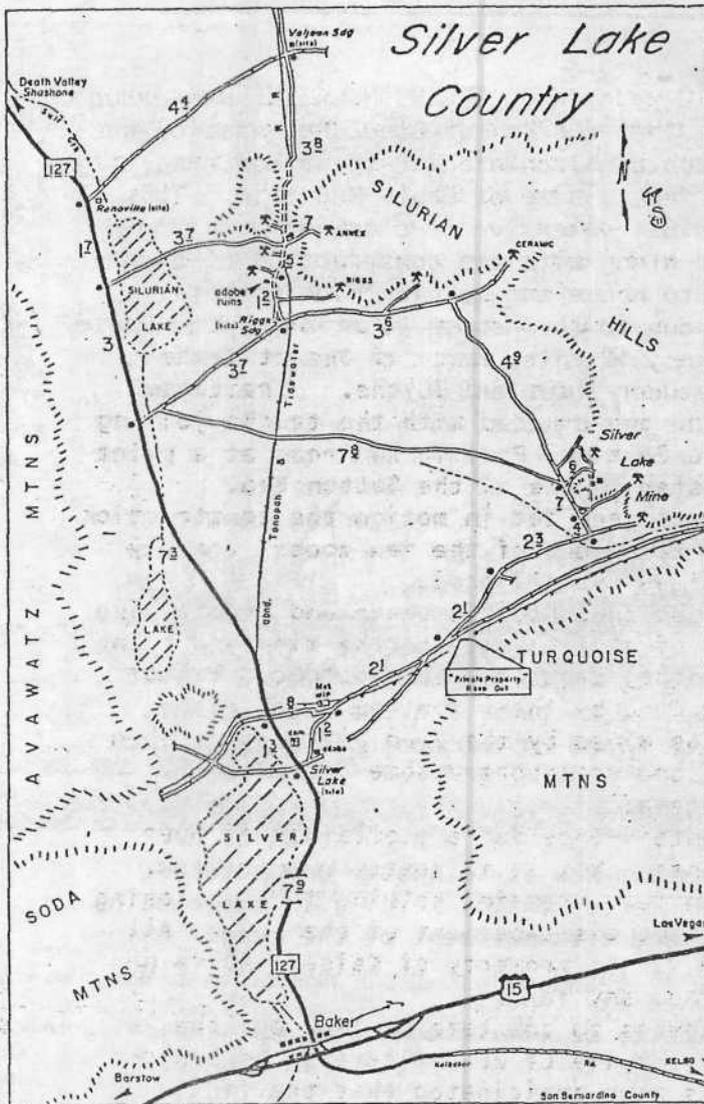
At its height, Eagle Mountain produced 99% of the ore required by their Fontana steel plant.

The ore was mined by the open pit method, then pelletized, and transported some 160 miles by rail to Fontana.

Eagle Mountain once had a population of over 3000 residents. Now it is mostly unpopulated. Only a token force remain, helping in the closing of the mine and dismemberment of the town. All of the land is the property of Kaiser, hence no-resident owned any land.

Kaiser expects to complete hauling out the remaining stockpile of ore pellets in December 1983. It is then anticipated that the final abandonment of Eagle Mountain will take place and the railroad dismantled. The Fontana steel plant is also closing.





The Water tank at Rasor Station

Continued from page 13 T & T Railroad

This helped slow the amount of losses, but they were still present. Finally, on October 8, 1933, the shops and offices at Ludlow were moved to Death Valley Junction and the portion of the line from Ludlow to Crucero was shut down.

Economics did not improve and after suffering more flood damage in March 1938, the T & T filed for permission to cease operations. Their request was granted and trains ceased operating on June 14, 1940. However, the tracks were left in place and the equipment stored, awaiting future operation. All equipment and track was to be kept in operating order. However, the fatal blow came when the War Department requisitioned the line for scrap metal and on July 18, 1942, scrappers started tearing up the rails from Beatty, Nevada. The extent of remaining ties, spikes, etc. is due to the fact that the scrapper was in a hurry and wanted only the rail.

Today, the area is still relatively unpopulated and open. The abandoned roadbed is easy to locate and very obvious in places. Parts of it are littered with ties and spikes. The foundations of stations and buildings along the former right of way remain. The area is rich in minerals and rockhounds can spend many days exploring. Sharp eyes may still find a relic or two of days past.

I personally found an unused box car band and seal from the T & T dated 1917, and in mint condition, while walking the old right of way north of Valjean Station. And later that same day, I found a beautiful old raised

glass whiskey bottle at the side of the railroad dike. The country formerly served by the T & T is largely remote and unspoiled. Visitors to the area should attempt to keep it that way.

Some good exploring can be done in the area of the old stations and sidings. The following points and routes are shown on the small maps on the previous pages. One of my favorite routes is to take Highway 127 North from Baker to approximately 16.5 miles from town. There, a dirt road leads off to the east and the site of Riggs Station.

Forty years of occupancy make these old stations and sidings of special interest as they usually yield some good finds of artifacts. Head north from Riggs Station toward a pass in the Silurian Hills. Four wheel drive is necessary for safety. Remember that you are far from town and not on a paved or frequently used road.

As you enter the pass, some ruins are visible on the left. There is not too much left of what was a good sized building. The type of construction is similar to the ruins at Sperry Siding in the Amagosa Canyon so it is assumed that it was a railroad property. Bits of purple glass and soldered cans date the site as pre 1915.

Continuing north, the road joins the T & T railbed and is almost covered in places with blowing sand. The desert has a way of reclaiming mans invasions. A short distance beyond, an east-west road crosses the right of way and leads to the Annex Silver Mine. Continuing north for about four miles, I drove on and off the old roadbed, through gulches and ravines, and observed where the large trestles were built. Then I arrived at Valjean Station. I did a lot of walking and looking in this area.

Further north at the Amagosa Gorge, site of the most difficult and expensive construction on the T & T, I found another area that invites exploration. Locals tell me that agate and petrified wood can be found in the area. For sure, railroad ruins abound. Again, this is strictly four wheel drive country. North of the gorge at Tecopa Hot Springs is a good place to stop and enjoy the mineral waters.

It is a shame the federal government requisitioned the T & T for scrap. If it hadn't, the road might still exist today (?). Although remote and known for its summer temperatures, the area holds many attractions for the camper, rockhound, naturalist and historian. For those interested in details, I have listed the stations, their distance from Ludlow, and other comments on the next page. Happy exploring.

Please note that the milages shown on the chart are in railroad miles, not highway miles, and measured along the right of way, including curves. Sometimes, one can travel ten or twelve miles just to trace a mile or two of railbed, considering detours and such.

## **A**PPROXIMATELY 250 freeway

and highway miles northeast of Los Angeles in the arid heart of what was once considered one of the most grimly forbidding parts of the world lies

Death Valley

## STATIONS AND SIDINGS OF THE TONOPAH AND TIDEWATER RAILROAD

Name of Station	Miles to Ludlow	Remarks
Ludlow	0	Connections with AT & SF RR, Ludlow Southern RR site of original offices and shops
Broadwell	12.53	Dry lake. Station well still there.
Mesquite	21.08	Named for the desert tree
Crucero	25.68	Connection with the UP RR. Spanish for cross- ing.
Rasor	29.40	Named for Clarence Rasor, T & T engineer
Soda	33.34	A normally dry lake
Baker	41.82	Named for Richard C. Baker, a Borax Co. official
Silver Lake	50.03	Site is east of original townsite
Riggs	59.47	Named for Frank Riggs, owner of a silver mine two miles east of the station
Valjean	65.11	Named for Eugene Valjean, T & T construction engineer
Dumont	74.40	Proposed site for connection with Amargosa Valley RR--never built
Sperry	78.84	Named for Grace Sperry, a friend of Mrs. F. M. Smith
Acme	82.97	Site of branch line to a gypsum deposit
Tecopa	87.67	Connection with Tecopa RR, named for an Indian Chief, old Tecopa
Zabriskie	91.74	Named for Christian Zabriskie, Vice-pres of Borax Co. and former Candelaria, Nev. banker
Shoshone	96.95	Named for the indian tribe. Station had a daytime only telegraph
Gerstley	101.26	Connection with Pac. Coast Borax RR to small borax operation (narrow gauge)
Evelyn	109.62	Named for Borax Smith's wife, Evelyn Smith
Death Valley Jct.	122.23	Connection with Death Valley RR (narrow gauge) Later site of T & T offices and shops
Bradford Siding	128.01	site of clay deposits
Scranton	133.96	Named for the Penna. town whose investors financed water for town of Greenwater
Jenifer	139.44	
Leeland	144.51	Named after the Lee Brothers, local residents
Ashton	154.98	Named for the ash trees growing in the area
Carrara	160.55	Branch line to a marble mine
Gold Center(Beatty)	169.07	Connection with the Las Vegas & Tonopah RR, Bullfrog-Goldfield RR.



General view of the Largo canyon region. The tower is located on the mesa. Photo by Malcolm Farmer.



Tower of the Standing God, used by ancient Navajo to watch for the approach of their enemies.

## Trail to the Tower of the Standing God

By RICHARD VAN VALKENBURGH

MY FIRST inkling of the Tower of the Standing God came in 1937 while I was making an archeological reconnaissance in the vicinity of Jim and Ann Counselor's trading post in the wild and remote mesa country bordering the Canyon Largo in northwestern New Mexico.

As was my custom I was loafing away the late winter afternoon in the post watching and listening to the Navajo who came to trade and warm themselves by the pot-bellied stove. That afternoon the main attraction was the treating of the sore eyes of Old Lady Sam, the matriarch of the Rainy Mountain region.

When Juli Chiquito, one of the best informed Navajo in the vicinity came in I called him to my side. After we had lighted our smokes I started to feel him out regarding a series of ancient hogan sites I

had discovered that morning on the nearby Tukohokadi mesa.

I was not aware that Jim was listening until his deep voice boomed out, "Some years ago while Ann and I were running sheep on the old Sam Lybrook place down in the Rincon Largo we ran across a number of old hogans. And near them were a number of stone towers. Maybe they're Navajo?"

Then turning to Old Lady Sam who had escaped Ann's eye dropper and had wrapped herself up in her blanket he questioned, "Grandmother—what do you know about those old towers down in the Rincon Largo?"

Not to be rushed by anything less than a flash of lightning it was some moments before the old lady answered, "Of course they're Navajo! Everything around here that amounts to anything was made or built by the Navajo or their gods. These

Slowly but surely the archeologists are unravelling the mystery which surrounds the origin and prehistoric life of the Navajo nation. In this story, Richard Van Valkenburgh has contributed a bit of new lore—thanks to the clue given him by Old Lady Sam in a remote Indian trading post.

towers were built a long time ago by the Old People for protection against the wild animals, the Utes, and the Mexicans.

"My grandfather said that there were once 12 towers. But with my own eyes I have only seen eight. One stands on the tip of Hanging Pot mesa to the west. There are two more down in the Canyon Largo near Trubey's ranch. Two guard the entrance of *Tsékoo*, Lesser Box Canyon, which is the real name of the Rincon Largo. And the seventh is up-canyon on the mesa above Mud Lake Rincon.

"But most important of all is the eighth. That lies on the main mesa between Mud Lake Rincon and the Canyon Arviso. For it is here, hidden in the deep pine forest, that still stands the Tower of the Standing God which was once the home of Sabildon, the great chief."

That name had a familiar ring. And a few moments later I remembered that this

was the Navajo who was the chief whom the Spaniards called Antonio. And it was he who had received from Captain Juan Bautista de Anza in Santa Fe in 1785 "a cane with silver points and a medal" as a reward for aid against the Gila Apache.

Sensing that now was the time to probe for further information I asked, "Grandmother, should one go to search for the Tower of the Standing God how would they know they had found it? Is it larger than the others? Has it a different shape? Or is there a mark on it?"

There was another long period of silence before she answered, "Why do you think they called it the Tower of the Standing God? While I have never seen this with my own eyes—my old grandfather told that somewhere on its walls there is a picture of a *Ye'ii* or Navajo god."

Soon after the sunrise of the next day Julian, my interpreter and a local Navajo from Kinbito, had us packed and ready to start toward the Rincon Largo. After giving us last minute directions Jim suggested that we climb a nearby crag and get a bird's-eye view of the country we were to explore.

Beyond, and across the Largo, we could see the gentle stepping up of the mesas to the pine forests of the Jicarilla Apache—and then on to the dim line against the sky that was the backbone of America—the Continental Divide, which at this point is called Cejita Blanca ridge.

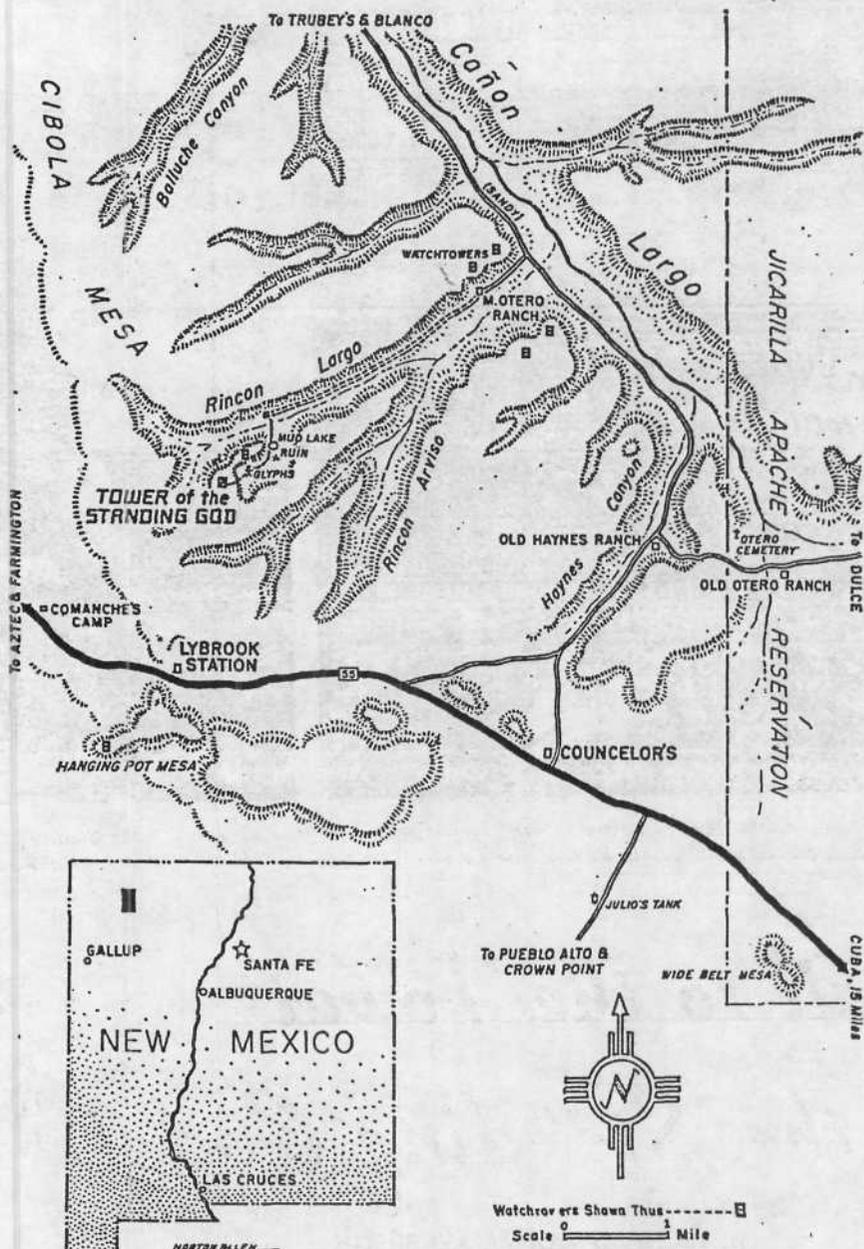
A thin snow was sprinkling our windshield when we returned to our pickup. We soon picked up the trail that wandered away from Jim's lambing corrals. Traveling northeast we bounced down across a flat two miles before entering the low pinyon-fringed walls of Haynes canyon.

Following the curvature of the east wall for three miles we soon rounded a low point and pulled up in a small cove where lay the ruins of the old Haynes ranch and trading post. Following Jim's directions we left the pickup and climbed to the nearby rim to see a small spring-cave in which Indian relics had been found some years before.

After scratching around in the fill for a few moments we were lucky enough to collect a few sherds of a grey pottery which we later learned was typical of Navajo handicraft during the 18th century. Disregarding Julian's grumblings about "getting caught in a big-snow" I hustled him back to the pickup.

With our wiper sweeping off the sticky snow-flakes we went on down canyon. After a time we could see the walls were expanding. Then as we broke through its low jaws and came out on a wide expanse of sand that faded away in the pewter-colored snow-fog, Julian said:

"Tis *Abidazgaii*, Where the Wide Canyons Meet. The east fork rises in the Sierra Nacimiento above Cuba while the south one flows down from the crags of the sacred mountain of Sisnateel above Po-



trero. Here really starts the grandfather of all canyons—the Canyon Largo!"

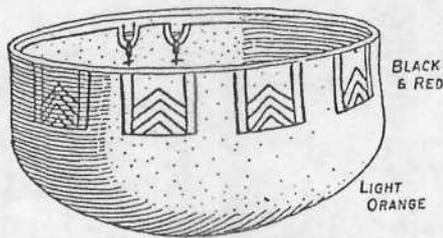
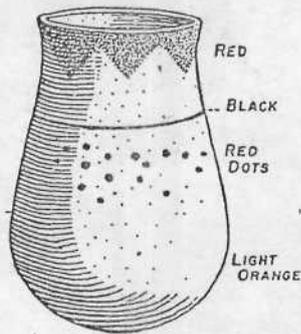
Rounding a point which nosed down into the bed of the Largo, which at this place is one-half mile wide, we crept through the snow covered ruts until we reached the mouth of a wide canyon.

Motioning for me to stop Julian said, "Hastin, here is *Tséko*. Look closely on the points and you will see the towers of which Old Lady Sam spoke. I can tell by the look in your eyes that you would like to climb up there right now. But let us go on—for the trail up the canyon to Mud Lake Rincon may be long and hard."

Reluctantly agreeing to Julian's suggestion I took one last look at the towers and started up the Rincon Largo. Skirting the talus slide of the north rim Julian said as we passed a small ranch house, "This is the old Sam Lybrook place. It was here that Jim and Ann lived when they discovered the towers."

Beyond the ranch house our trail was all of our own making. For some three or four miles we dodged gullies and dense stands of gaunt looking chamiso. When we came to a small cove Julian said, "Here it is—Mud Lake Rincon! We must leave the pickup here." And then I spotted a low knoll in the center of the cove that looked interesting. Actually the knoll was nothing more than an accumulation of debris that had settled around the walls of a prehistoric structure. Made of slabs of the local sandstone the main feature was a kiva-like structure some 30 feet in diameter. And adjoining it to the east were two 6 by 8 foot square ante-chambers.

After making a rough field sketch we found a few pottery sherds. They told us this site was definitely not of Navajo origin. Their characteristics were similar to 10th century sites which had been reported some miles eastward near Gallina, New Mexico.



Reconstruction of 18th century Navajo vessels from sherds collected in Rincon Largo. Very few whole specimens of this unusual pottery are in existence.

From this site we spotted a small but sheer ravine that slashed up to the main mesa. Heading that way we were soon fighting our way up through thick underbrush and rocks. And just before making the last sharp ascent Julian veered off and disappeared in a litter of large boulders.

Then his voice came echoing back and forth across the ravine, "Come here Hastin. I have located the old trail. And beside it there are some fine Indian writings!"

Scrambling through the rocks I joined my interpreter. Not too badly weathered, the glyphs, which had been incised and not painted on the rock, were of animal tracks, crude human hands, snake-like figures, forked lightning, a deer, and most interesting of all—a man on horseback!

The man on horseback, similar to those I have seen many times on the walls of the Canyon de Chelly, could not have been over 200 years old. And as the predominant archeology in the vicinity later proved to be Navajo it was reasonable to assume that all of these rock pictures were their handiwork.

The old trail, worn deep in the rock, led up through a thin crevice toward the top. Finally we boosted ourselves up over the last sheer stretch of rim to reach the saddle and break into the open. There perched above up on the mesa rim was a well preserved watchtower!

There was only a series of low benches between us and the tower. And soon we were at its base breathless and curious. Climbing to the top room by means of an ancient ladder, which had been made by

deeply notching a pinyon log, we began to reconstruct the story of the tower.

Located on the summit of a large rock-outcropping the tower had been erected of flat slabs of sandstone. The roof, part of which was still in place, was constructed of pinyon logs held in place by large flagstones. While no evidence remained we assumed that the whole had been weather-sealed with earth and bear grass.

Below the tower and clustered around the rock were small dwelling rooms. Their roof construction and walls were the same as that of the tower room. And from the dates we later obtained from their timbers we found they had been felled with fire and then trimmed with stone axes between 1770 and 1785.

Climbing down from the tower I began to prowling the forest. It was hard to spot anything small owing to the fallen snow. But after a half-hour's search I had located within a half-mile of the tower the sagging tripods and ceremonial door-stones of 14 of the ancient *alchindes'ai*, or forked stick hogans.

Had it not been for Julian's sharp eyes I would have missed one of the main clues to the story of the towers. Just after locating the burned rocks and depressed ring of a *iache*, or sweathouse he called down to me from his perch high in the tower.

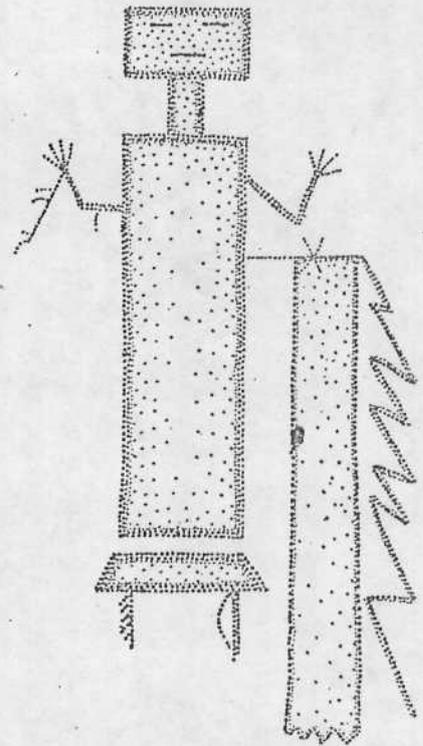
"Come up here and look, Hastin. What Old Lady Sam told me was right. From this point one can see every tower in *Tsé-koó*. She further told me that around each of the towers there dwelt an extended family or clan, and that in times of trouble all of the towers stood together against the enemy.

"Can you see the picture of 200 years ago? High in those towers we passed at the mouth of the canyon the watchers spy the Mexicans coming from the east. Smoke signals float into the sky. And when the Mexicans come the women and children are all in the towers and the warriors are ready to fight."

This reminded me that we had not yet found the glyph of the Standing God which would identify this tower as that of Sabildon. The location was right—but possibly the story was only a tradition which had been elaborated upon as it passed around the campfires of the People from generation to generation?

First we combed the whole surface of the outcropping. All we found was a trash mound on the west side where it had sluffed off the rim. Here we collected a fine assortment of sherds which later were to play an important part in working out an early Navajo pottery sequence.

Finally, giving up the search I climbed back up into the tower. I started to remove the log ladder, not as archeological loot, but for the tree rings that might give us a date. And while I was wrestling with the heavy timber the heavy overcast opened



The Standing God of Sabildon's watchtower. Norton Allen made this sketch from the author's field notes.

and a shaft of thin sunlight came down to light up the rock below.

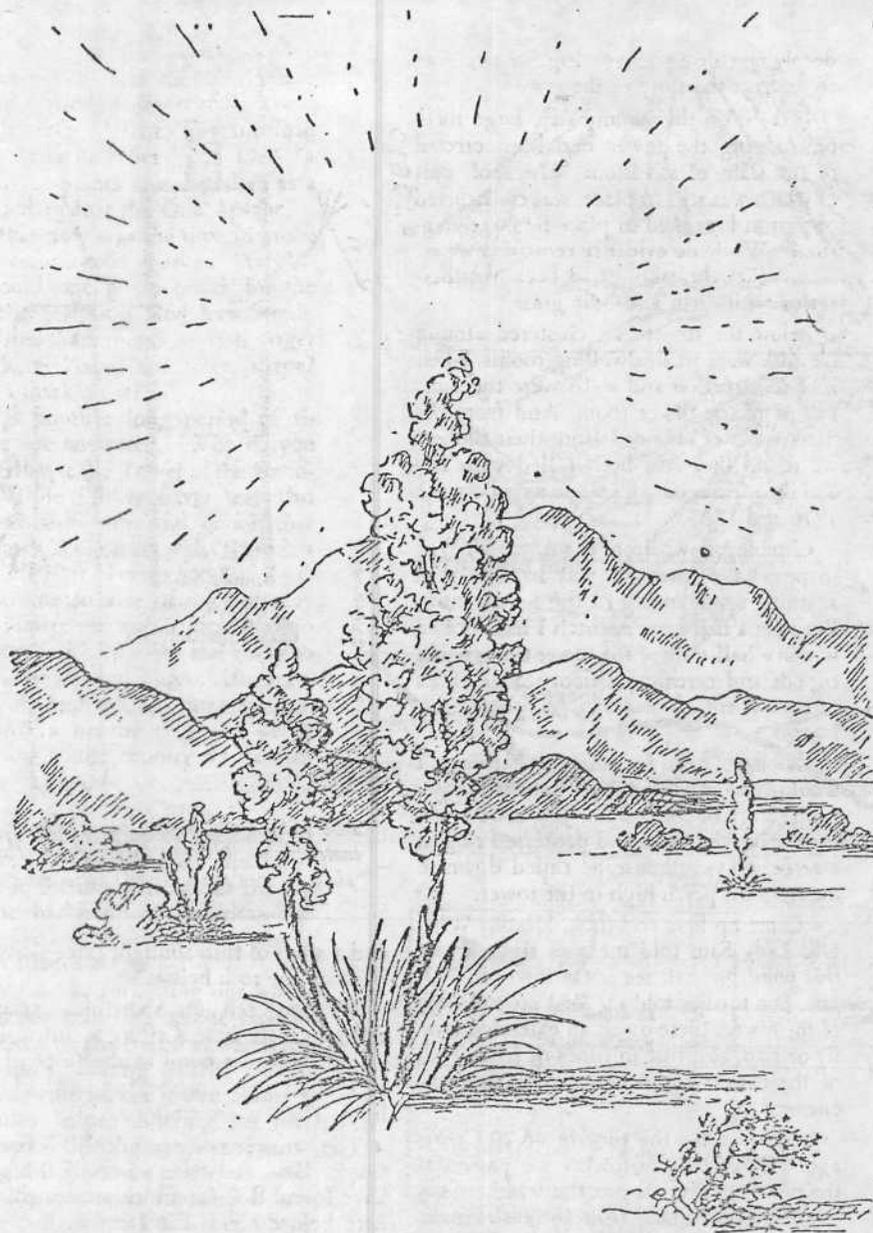
My eyes fell on something peculiar down near the base. Calling to Julian I directed, "Move around to the front of the rock. Find a place where is a patch of sunlight. There is something . . ."

The answer came quickly, "Hastin! Come down and take a look. I think we have found that for which we search. For here before me is the faint outline of a *Ye'ii* I have never seen before. This must be the Tower of the Standing God!"

After looking over the badly weathered glyph I took out my notebook and began to make a sketch. With its rectangular head, elongated body terminated by a short flared skirt, the technique was unquestionably similar to that used by Navajo medicine men when they make sand pictures.

Later upon showing the sketch to Navajo medicine men at Fort Defiance they agreed that it was of Navajo origin. But they could not agree as to its place in the Navajo pantheon. It was placed in the minor deity class and was associated with rain and lightning.

Thus, thanks to the guiding shaft of sunlight given up by *Jobind'ai*, the Sun-bearer we not only discovered something never before seen by white men, but were able also to substantiate the Navajo tradition that deep in the wilds of the Rincon Largo in northwestern New Mexico there once dwelt the wild *Diné* under their chief Sabildon, the guardian of the Tower of the Standing God.



### THE OLD PROSPECTOR

By KAY PETTYGROVE  
Orange, California

A hill of sand, a painted rock,  
A breeze to pass me by,  
A mesa and the mountain haze,  
An eagle in the sky.

The hard worn trail beneath my feet,  
A burro at my side,  
The lizards that will whisk away,  
To find a place to hide.

The desert songs I hear at night,  
The old owl's mournful call,  
The starlit heavens seem so large,  
And I down here so small.

I love this land, the land I've trod,  
Until I'm old and lame,  
And though I've never found much gold,  
I'm happy just the same.

### GRAND CANYON

By ALWILDA S. DRAPER  
Glendale, California

Nature was angry in fashioning thee,  
Frowning dark in thy majesty  
Flung across the trackless void,  
Thy awesome beauty unalloyed.  
Spurning wisdom of all the gods,

Defying nature's every mood,  
Flowed the mighty Colorado,  
Cleft thy heart with maddening power,  
Thy peaks like iron helmets crowned,  
And chasms narrow, sullen frown.  
Flood crests of thy troubled waters  
Fight their way through old nevasas,  
Thy strength and power, born to bless  
Earth's teeming millions in distress.  
Thy angry waters rushing through  
Man's conquering hand, their will subdue  
Thy towering peaks and chasms dark  
And mighty river's pulsing heart.  
Thy majesty, O Grand Canyon!

### ENCHANTMENT

By SYBIL J. LAKE  
Dumas, Texas

Silence deep and calm and soothing  
Cloaks the wondrous desert night.  
Stars, that glittering, seem to tinkle,  
Casting iridescent light.

'Gainst the cliff, a moon-beam glancing  
Shatters like a crystal spar.  
Yet the silence is unbroken.  
Naught can ere that stillness mar

Coyotes wailing in the distance  
Fade and blend as though a thought.  
All the magic round about us  
Whispers—See what God hath wrought.

## To the Saguaro

By ROBERT J. RICHARDSON  
Santa Cruz, California

Stern sentry with a gallant heart,  
A match for all your foes,  
Unmoved by Summer's flaming dart,  
You keep your stoic pose.

But when young April, gayly dressed,  
Spreads beauty all about,  
You wear a flower for a crest,  
Conquistador of drought!

### SELDOM-SEEN-SLIM

By JAMES GRATTAN  
Pasadena, California

His shirt is black with age and dirt;  
His hat is torn and tattered;  
The trousers he wears are frayed with the  
years—  
And his shoes are scuffed and battered.

He is Seldom-Seen-Slim from over the rim,  
Of the simmering Panamint Valley.  
Happy is he with his burros three—  
Nan and Mamie and Sally.

Seldom-Seen-Slim is withered and thin,  
Forty years he has hunted for gold,  
Scorning the tastes of city men,  
He is cast from a special mold.

Two score years now notch his trail,  
Since first he came this way  
But his step is spry, for under the sky,  
He wins a princely pay.

I envy Slim his carefree life,  
As he journeys o'er Panamint Valley.  
A mariner is he on a desert sea,  
With Nan and Mamie and Sally.

### A DESERT FANCY

By EMILY CAREY ALLEMAN  
Santa Ana, California

OH! the blustery whirlwinds  
On the desert's plateaus,  
Are truant boys  
With bare brown toes;  
Who kick up their heels  
And scuff the dust—  
Ever growing more robust.

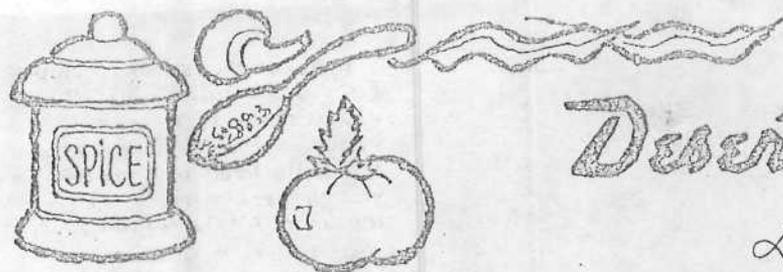
And the little whirlwinds  
Are maidens gay!  
Who in their dances  
Bend and sway;  
Who whirl and twirl,  
Then roundabout—  
Twisting and turning,  
They bow themselves out.

## Forward

By TANYA SOUTH

With purpose let us march! The heat  
Of sun—the chill of storms that beat  
About us, shall not hold us back!  
Nor shall the lack  
Of strength deter by night or day.  
For God is all the Light and Way.

Go forward, glad that you can go!—  
Your heart with Truth and Love  
aglow.  
Right Purpose is the highest role  
For any soul.



# Desert COOKERY

*Lucille Iredale Carlson*

## FUDGE FINGERS

- 2/3 cup (1 small can) undiluted evaporated milk.
- 1-2/3 cup sugar
- 1/2 teaspoon salt

Mix and boil in sauce pan over low heat, stirring constantly. Bring to boil and cook 5 minutes. Remove from heat and add 1 1/2 cups diced marshmallows, 1 1/2 cups semi-sweet chocolate chips, 1 teaspoon vanilla and 1/2 cup chopped, blanched almonds. Stir 1 or 2 minutes or until marshmallows melt. Pour into buttered square 9-inch pan and cool. Cut into bars 1/2 by 1 1/2 inches long and roll in 1 cup flaked coconut.

## DATE NUT CANDY

- 4 cups sugar
- 1 can condensed milk
- 3 tablespoons corn syrup
- 1 cup chopped dates
- 1 tablespoon vanilla
- 1 tablespoon butter
- 2 cups chopped nuts

Cook sugar, milk and syrup to very soft ball stage on low heat. Add chopped dates and cook until firm ball stage is reached, stirring occasionally. Take off stove and add butter. When almost cool, add vanilla and beat until creamy. Add nuts and make into long rolls. Wrap rolls in damp cloth until set, then roll in chopped nuts and store in aluminum foil.

## WALNUT ROLL

- 1 cup brown sugar
- 1 cup granulated sugar
- 1 tablespoon cocoa
- 1/4 cup corn syrup
- 3/4 cup rich milk
- 1/4 teaspoon salt
- 2/3 cup chopped nut meats
- 1 teaspoon vanilla

In a medium size saucepan combine sugars, cocoa, corn syrup, milk and salt. Cover pan and bring to a boil quickly. Uncover, and cook until a small amount dropped into cold water forms a soft ball. (220 degrees). Remove from heat and cool to room temperature. Add nuts and vanilla. Beat until thick and creamy. Turn out onto buttered surface and knead well. Form into a roll. Wrap in waxed paper. Chill. Cut into slices. The kneading makes it very creamy.

In making candy, test your thermometer by placing it in boiling water. 212 is the normal boiling point. If not accurate, subtract or add required degrees.

## MINTED WALNUTS

- 3 cups walnut halves
- 1/4 cup light corn syrup
- 1/2 cup water
- 1 cup sugar
- 1 teaspoon peppermint essence
- 10 marshmallows

Place syrup, water and sugar in sauce pan and cook over medium heat stirring constantly. Cook until soft ball stage. Remove from heat, add peppermint essence and marshmallows and stir quickly until marshmallows have dissolved. Add walnuts and stir to coat them. Pour onto waxed paper and separate nuts with a fork.

## PEANUT BRITTLE

- 2 cups sugar
- 1 cup white Karo
- 3/4 cup water
- Butter the size of a walnut
- 1 lb. raw peanuts

Cook all ingredients until a faint blue haze rises, and the mixture is a medium brown. Cook slowly so that it doesn't burn and stir constantly in the final stage. Remove from fire. Quickly stir in 1 heaping teaspoon soda and 1 teaspoon vanilla. Pour immediately into shallow buttered pans.

## NEW ORLEANS PRALINES

- 2 cups pure maple syrup
- 2 cups brown sugar
- 2 cups whole pecans
- 1/2 cup butter
- 1/4 cup water

Stir sugar, water, syrup and butter together over slow heat until sugar is thoroughly dissolved. Add the pecans and boil until the mixture forms a hard ball when tested in cold water. Have ready a large slab, well buttered. Drop mixture like pancakes, allowing them to spread about 1/3" thick and 5" in diameter. Work quickly so candy will not get hard before patties are made.

## PRALINES

- 1 1/2 cups brown sugar
- 1 cup granulated sugar
- 1/2 lb. pecans
- 1/4 teaspoon salt

Boil all ingredients to soft ball stage (236 degrees), stirring constantly. Cool slightly and beat until mixture begins to stiffen. Drop rapidly from a spoon onto a buttered pan in patties about 2 in. in diameter. If candy becomes too stiff at the last to make smooth patties, add a little hot water. Makes 12 patties.

## CARAMELS

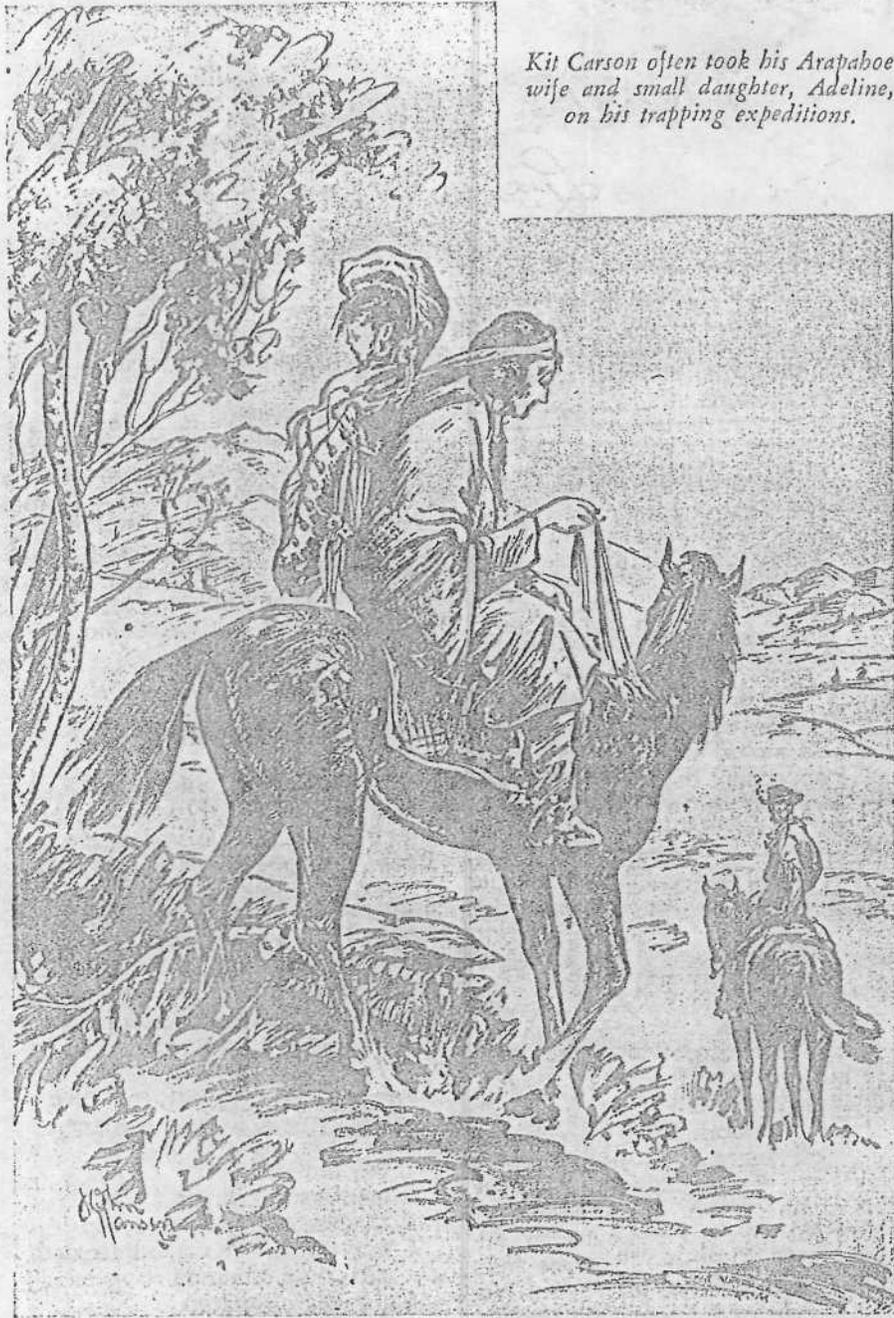
- 2 cups sugar
- 1 square butter (cut up)
- 1 pt. white Karo syrup

Mix and let come to boil at medium heat. Then pour in slowly 1 pt. whipping cream. Cook to semi-hard ball stage. Pour into greased pan. When firm, cut into thin rectangles and wrap individually in wax paper. Twist paper ends. For chocolate caramels, add 2 square chocolate.

## TOASTED ALMOND CRUNCH

- 1/2 cup butter (1 cube)
- 2/3 cup sugar
- 1 1/2 tablespoons water
- 2 teaspoons light corn syrup
- 1/2 cup coarsely chopped, toasted, blanched almonds
- 1/2 lb. milk chocolate
- 1/4 cup finely chopped toasted, blanched almonds

Melt butter in heavy pan. Stir in sugar, corn syrup, water and coarsely chopped almonds. Cook until hard crack stage is reached (290 degrees) stirring only slightly to keep from burning. The mixture will turn a golden color. Turn candy into a warm 8-inch square pan. When cold, turn from pan onto wax paper. Melt chocolate slowly over lukewarm water. Remove from heat and stir until cool, but still soft. Spread a thin layer over one side of candy and sprinkle lightly with half of the finely chopped nuts. Lay a piece of wax paper on top and turn the candy over. Coat the other side with remaining chocolate and sprinkle with nuts. When chocolate is hard, break into pieces.



*Kit Carson often took his Arapahoe wife and small daughter, Adeline, on his trapping expeditions.*

Louie Simonds was a companion of Jim Bridger and son-in-law of Kit Carson. He rode into Uintah basin in 1831 with the fur brigade. He lived in Taos when it was the rendezvous of the mountain men. All that seems ancient western history, but men in Uintah basin today still remember old Uncle Louie, who lived alone in the mountains. From their memories and other sources Charles Kelly has pieced together the story of a western pioneer

the old man would sit by the fireplace and spin tall yarns of Indian fights, bear fights and big sprees with other early day mountain men in Santa Fe. Uncle Louie, as he was known to everyone in Uintah county, was a relic of the old fur brigade. He claimed having come to the Uintah basin as a boy of 14 with the first group of white trappers. He spoke of Jim Bridger and Kit Carson with familiarity.

The Hall boys hardly knew what to believe in his tales, but Louie Simonds was a trapper and he was Kit Carson's son-in-law. Kit Carson, most famous of all the mountain men was married to a young Arapahoe woman Waa-nibe, or Singing Grass. She died at Bent's fort about 1838, leaving a daughter two years old. Like other early trappers, Carson had taken his wife and child with him on many trapping expeditions. Singing Grass pitched his tepee, did his cooking and looked after his horses, carrying the child on a cradleboard on her back. When his wife died Carson could not care for the baby, and left her with some of her Indian relatives.

In 1840 he married again, a Cheyenne girl called Making Out Road, to have someone to look after his baby daughter. But the high spirited Cheyenne girl tired of playing stepmother and left him within a year.

By this time Kit Carson was famous; a man of some substance with a house in Santa Fe. He thought of settling down and didn't want another Indian wife if he was to become a permanent citizen of Santa Fe. He had a young Spanish girl in mind but knew she would object to being stepmother to his halfbreed daughter.

With his young daughter Kit Carson went back to St. Louis in 1842. Returning to his old home in Howard county, Missouri, he left Adeline with his sister, Elizabeth. After making provision for her care and education, he returned to Santa Fe and in 1843 married Maria Josefa Jamarillo, then 14 years old.

Adeline Carson remained in Missouri until she was 13, attending school at Fayette. In 1851 Carson went to Missouri to bring his daughter back to Santa Fe. She was, he thought, nearly old enough to be

## Utah Mountain Man

By CHARLES KELLY  
Illustration by John Hansen

**I**N DRY Fork canyon at the foot of the Uintah mountains, Uintah county, Utah, the Hall family had a small ranch and kept what was called a road house or stopping place for travelers. The trail over the mountains was not often used in 1890 and guests at the Hall roadhouse were few.

One evening near sundown, a lone rider came down the trail. He was an old man,

tall and bony, riding a decrepit old horse, followed by two rangy greyhounds. His cap was made of beaver fur and his clothes of buckskin, worn and greasy. On his feet were a pair of well worn moccasins and cradled in one arm was a long-barreled Kentucky rifle.

That was Uncle Louis Simonds as Henry Hall remembers him. The boy enjoyed these occasional visits. After a good supper

married and had already acquired a much better education than her father. Accompanied by a small party, Kit started back over the Santa Fe trail. In the vicinity of the Cimarron, his party was attacked by Cheyennes, and only Kit's quick thinking saved them from being massacred.

In Santa Fe Adeline lived with her father in his new home. But his Spanish wife, Josefa, herself only 22 years old, may not have been too happy over this arrangement, particularly since the girl was half Indian. At any rate Adeline was married the next year, 1852, to Louie Simonds, at Taos. The couple left immediately for California.

Louie Simonds was 35 years old when he married Adeline Carson—eight years younger than her father. He was a well known trapper in Santa Fe and Taos. He was born somewhere in Kentucky in 1817 and his full name was Luther W. Simonds. He had joined the old fur brigade as a boy of 14 and in 1831 accompanied a group of older trappers into the Uintah basin where he met and traded with Antoine Robidoux. That was the year of Robidoux's first expedition to the Uintah country and he had not yet built his trading post.

That is about all we know of Simonds' activities until 1846, when he was found in Santa Fe and Taos by Lewis H. Garrard, author of *Wab-to-Yab and the Taos Trail*. By that time Simonds was known as one of the best trappers in the Rocky mountains, a wild, brave, carefree mountain man, full of tall yarns and never hesitant in telling of his own exploits.

Presumably, Kit approved of Adeline's marriage to Simonds. No doubt Adeline was physically well developed at 14, full of spirit and half wild in spite of her schooling. Kit had married Josefa when she was 14 and probably believed it would be well to have his young daughter married to a man who could support her.

After 1840 the business of trapping had declined until by 1852 it was no longer profitable. But gold had been discovered in California in 1848, and thousands were still rushing to the golden state. Louie Simonds decided to try his luck in California.

Like many other trappers, Simonds could neither read nor write, but Adeline had a good common school education. For a while she kept in touch with her father and her aunt in Missouri. Then the letters ceased coming and Kit lost track of her movements.

Conditions in gold-crazy California were radically different from those in sleepy old Santa Fe. Louie Simonds seems to have found himself out of place in that dizzy whirl. All his life he had hunted and trapped. Mining gold did not appeal to him. Adeline, however, seems to have enjoyed her new surroundings. We can easily guess what happened. Her husband was 36 years old, and the bright lights of California's mushroom cities did not appeal to

him. She was 15, at an age when she wanted to be on the go every minute. She soon met a man with younger ideas and ran away with him.

Thousands of miners were rushing across California from one reported strike to another, seldom staying long in one place. In that wild melee it might seem an impossible task to trace the movements of any one or two persons. But Louie Simonds had tracked many a grizzly bear and many a Blackfoot Indian. The trail was hard to follow, but he followed it persistently, year after year. At last he found Adeline and her sweetheart in Mono Diggings where in 1859 she was known as Prairie Flower, Kit Carson's daughter. Without making his presence known he carefully studied the situation, then laid in wait. When the time was ripe, he gently pressed the hair trigger of his Kentucky rifle. They buried the man next day, but no one ever knew who had killed him.

With this matter off his mind Louie Simonds was ready to return to the mountains. But where? If he went back to Taos Kit Carson might ask embarrassing questions. Some of his old trapper friends had settled in various parts of the west. Jim Bridger had a fort on the emigrant trail, but Louie didn't want to be near a traveled road. He finally decided on the Uintah mountains, where he had first come as a young boy with the old fur brigade. It was one of the wildest spots in the west, far from the usual routes of travel. Robidoux's post had been burned and no white men were left in Uintah basin.

So Louie Simonds went back to the Uintahs and hid himself in Brown's Hole, used by Indians and a handful of half-breeds left in the wake of the fur brigade as a winter camp. He had a horse, a pair of greyhounds, a few traps and his Kentucky rifle. He knew how to live off the country. That was in the fall of 1859.

For 20 years Louie Simonds lived in the mountains more like an Indian than a white man. His old cronies supposed he was dead. Then, when he came out of the mountains in the spring of 1879, he discovered white settlers had moved into Uintah basin in their covered wagons to farm the flat valley along Uintah river. A troop of soldiers had formed an encampment at what they called Fort Duchesne, to protect the settlers from marauding Utes, who had just massacred the Meeker family in Colorado. His splendid isolation was at an end.

Uncle Louie was no longer worried about the dead man at Mono Diggings, but he had lived alone so long he had no desire to adjust himself to new conditions. He continued to live in a rude cabin in the mountains, eating nothing but wild meat, trapping a little and trading his pelts at Fort Bridger for powder, lead, and sometimes a little coffee and sugar.

As years passed he became a familiar figure in the Uintah basin. He sometimes made a winter camp near a ranch and on

his infrequent trips through the valley was always welcomed by the settlers. He told them only so much of his past as he cared to. Only trusted friends, like Pete Dillman and Finn Britt, ever learned why he lived alone in the mountains.

As he grew older he was afflicted with palsy but he shot his rifle with a "double wobble" as Bill Williams said, and brought down plenty of game. At bars in the frontier town of Vernal he had to sip whiskey from a glass sitting on the bar because his hands were too unsteady to carry the glass to his lips. No one knew his age but they guessed he must be nearly a hundred. He seemed to be as much a part of the country as the mountains.

In the winter of 1893, Uncle Louie lived in a little log shack in a canyon above White Rocks Ute Indian agency. He would ride down to the trading post occasionally for supplies or to spin yarns. Then a heavy snow fell and he was not seen for several weeks. In the spring soldiers hunting a strayed horse passed his cabin and found the old man helpless in his bed, nearly starved to death and suffering from frostbite. They took him to the military hospital at Fort Duchesne where he remained several weeks. But his long sickness had affected his mind and he was sent to the Utah state mental hospital at Provo.

The duty of conveying him fell to George Searle, then sheriff of Uintah county. Searle loaded him into a light wagon and in March, 1894, hauled the old man to Provo. He was entered as a patient on March 8, 1894, said to be suffering from senile dementia. But Uncle Louie wasn't quite finished.

On October 1, 1894 he was discharged from the hospital as cured. There is no record of where he went or when he died. Old-timers in the basin declare he never returned to his old haunts. On his way to the Provo hospital he gave Sheriff Searle a bundle of papers and letters for safe-keeping. He never returned to claim them. Searle, who still lives in the basin, kept the papers for many years, but they finally were lost. Perhaps they contained letters from Adeline Carson, the Prairie Flower. She died in 1860 and was buried on the shore of Mono lake. Her friends planned to erect a monument over her grave, but it was never done and the spot has been forgotten.

In his book *Wab-to-Yab*, Lewis H. Garrard tells many yarns about Louie Simonds who, with his friend Hatcher, another mountain man, guided Garrard in his travels around Santa Fe and Taos. Louie was 29 years old then, a seasoned mountaineer and trapper.

That seems long, long ago—ancient history in western America. Yet in the Uintah basin many old-timers like George Searle and the Hall brothers clearly remember Uncle Louie Simonds, son-in-law of Kit Carson.

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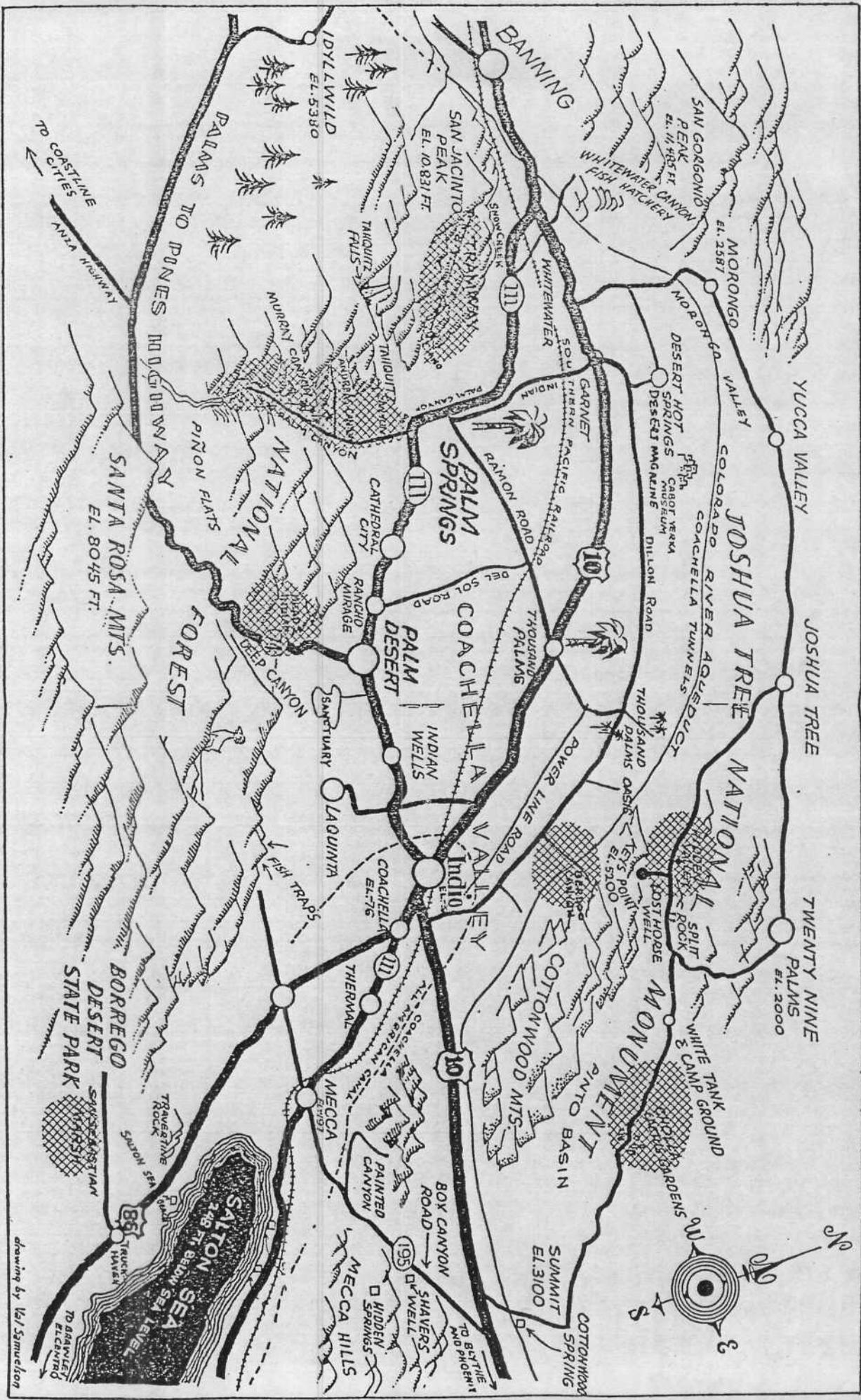
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