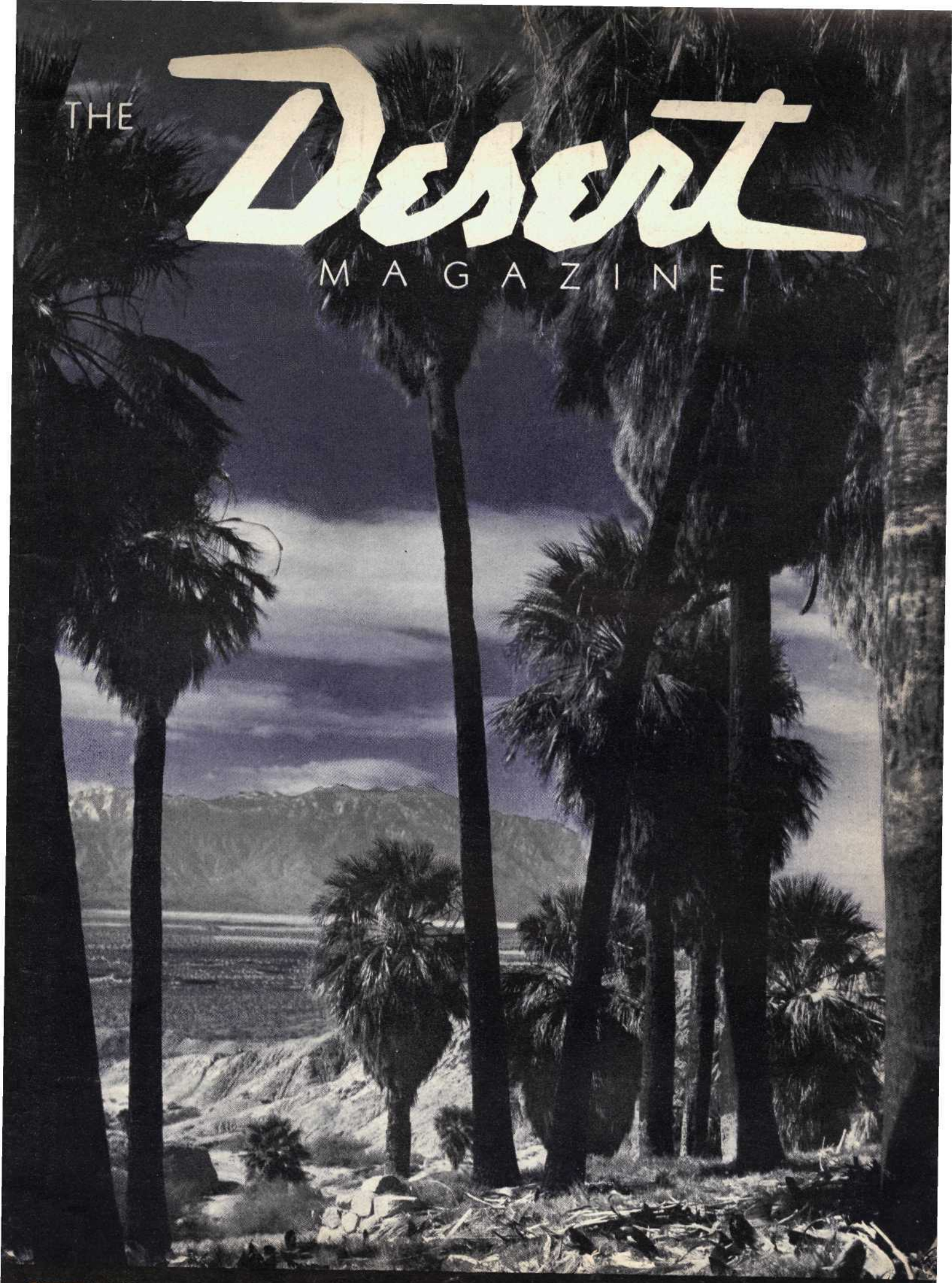
THE Desert MAGAZINE



SEPTEMBER, 1941

25 CENTS

LETTERS

"Read the Signs" . . .

Camp Sheldon
Winnemucca, Nevada

Dear Mr. Henderson:

In Edith McLeod's article about the Nevada opal field in July issue of your magazine I feel that she was very unfair to the game refuge officials here. I have never met a cleaner or more obliging and courteous personnel than the men at the Chas. Sheldon Game Refuge and CCC camp.

If visitors will observe certain rules, which are quite necessary in a public area of this kind, they will have no difficulty. I would suggest the following code for those who want to enjoy their stay in the Game Refuge:

1—Announce yourself at the technical service office in the CCC camp, stating whether or not you wish to camp in a cabin at Virgin ranch, Gooch camp, etc. This procedure is to make it inconvenient for criminals to come here to evade the law, and also protects you from such outlaws.

2—When you cross the wild fowl lake on the levee, and in Camp Sheldon, the speed limit is 10 miles an hour. Blow your horn when turning blind corners to protect yourself and some mother's son who is far from home.

3—Close all gates across roads in the Refuge.

4—Don't allow dogs and cats to run at large and destroy birds and small game.

5—Don't leave rubbish and garbage at the campsites.

8—Bring extra gasoline. Filling stations are 90 miles apart. Disposing of government property is a felony, so the personnel cannot give or sell gas even though they personally would be glad to do so.

9—Don't destroy the old ranch buildings for fuel, or for other reasons.

The Refuge and Camp personnel are courteous and obliging, and if you are in distress they will be quick to give you aid. First aid by the Camp physician is available for those in trouble.

The personnel and their families are secluded here, isolated from the outside world. I am sure they will appreciate meeting the collector who comes in with a smile on his face, and appreciates the facilities that have been provided here for him. Let's make all our collecting trips "goodwill trips," as many good rockhounds are doing, and not criticise public officials who are faithfully performing their duties.

MARK M. FOSTER

• • •

Information Wanted . . .

Santa Paula, California

Dear Editor:

Do any of your "rock hounds," travelers, geologists or explorers know the name of this little mining town in Old Mexico, its location, or something of its history? Richard Bell, an Englishman from London, England, owned and operated a silver mine there until he died in 1869 at the age of 85. He was noted for his philanthropic deeds, and his desire to better the Mexicans in the town by building schools and churches for them. I believe there are memorials in his honor . . . such as statues, drinking fountains, etc.

After his decease, the Catholic church operated the mine. This mine was one of the richest mines in Mexico, and during Bell's time there, hired most of the inhabitants of the town. This information we have was contained in a clipping sent to us in 1934, which was misplaced.

I hope one of your many readers will have some information for us about the town. Thank you very much for your interest and for publishing this letter.

AUDREY MURRAY

Score for the Double Circle Ranch . . .

Anaheim, California

Dear Sirs:

Congratulations on another very fine issue of The Desert Magazine. They are certainly improving and to me this August issue is one of the best. You must have a very hardworking personnel to keep getting out these numbers of the desert country so many of us love.

I would like to register a contradiction however, to your question number 19 of True or False department. I am sure the headwaters of the Salt river are in Arizona. I lived on the Double Circle cattle ranch from 1909 to 1917 which is 35 miles northwest of Clifton, Arizona. I have been in the White mountains and Black river heads just under Thomas peak (Baldy) and flows south and west therefrom to a junction with White river; from then on it is called Salt river. If either of these forks started in New Mexico they would either join the Little Colorado, the Blue river or the Gila White river heads north of Black river but I am sure it is in Arizona. I'm sure I am right on this but would like to know definitely.

Incidentally these White mountains and the Blue range (known on map as Prieto plateau) are a very beautiful country. The Coronado trail runs from Clifton to Springerville (about 135 miles) and it is a beautiful drive, well timbered, and much of it is about 10,000 feet.

With best wishes for continued success of The Desert Magazine, I am

HARRY K. WILSON

Thanks, Harry Wilson! You are right. The True or False editor's alibi is that he was thinking about the Gila river when he wrote Salt river. All True or False contestants who missed this one are entitled to mark themselves up another score.—R.H.

• • •

Worse'n Dishwater . . .

Santa Monica, California

Dear Mr. Henderson:

Was amused to read your diatribe against people who don't like the Colorado river water —because I have been yelping all month about how terrible it tasted . . .

But there's more to it than that. The reason it tastes so flat, at least here in Santa Monica, is that by the time the water reaches us it has undergone a double dose of chlorinating, once in L. A. and again at our own city supply on Franklin Hill. If you don't think the water tastes like "dish water"—you're right; it now tastes like a swimming pool. So maybe those of us who complain are a leetle beet justified?

JANE BLACKBURN

P. S.—Very much enjoy the magazine, particularly department you call Here and There on the Desert.

• • •

Cheers for Betty Woods . . .

Albuquerque, New Mexico

Dear Mr. Henderson:

I read Desert Magazine regularly and think it is one of the best western magazines that we have.

I especially liked "They Learned About Turquoise" in the July issue by Betty Woods. I certainly hope to read more articles like this.

GEORGE O. HILL

Rough Roads Cull 'em Out . . .

Pasadena, California

Dear Mr. Henderson:

You are to be congratulated on the completion of your efforts to establish the Anza State park. I hope, however, that your park will more successfully protect the beloved and historical landmarks in the desert than has the Death Valley national monument.

You undoubtedly have your favorite spot in the desert. Saratoga Springs was mine. There wasn't a year that I missed a pilgrimage there until last Labor day. We arrived at the crossing of the Amargosa bed, hot, tired out and eagerly anticipating that quiet cove with its ready pools and deliciously refreshing water (bathing, not drinking) and its ancient peace. We rounded the point and found cabin foundations going up, radios blaring, the little pools gone and a big muddy swimming pool dug. The old spring with its little cave was gone, a concrete house built over it and the flow increased for bottling purposes.

We were invited to stay and swim, but the shock was too much. Though it was late, we drove on to Shoshone, and I haven't been back since.

If there are any historical spots in Death Valley, certainly Saratoga Springs is one. Perhaps I should say was one. For hundreds of years Indians lived there, prospectors made it their resting place, desert-lovers came to find its peace. For all that time it was undisturbed, with even the mining companies working thereabout respecting its natural beauties. But under the supposed protection of a national monument it was commercialized.

It is a strange contrast to Tecopa Springs near Shoshone. Here, too, a man filed on the land, intending to commercialize it. But, although it was not a national monument or park, the far-sighted people of Tecopa and the surrounding territory protested so strongly that the government re-ran the man's lines leaving the spring on public property and Tecopa has seen to its protection since then.

Please don't misunderstand my complaint about Saratoga Springs. While I personally prefer solitude, there is room on the desert for everyone who loves it. A score of people can camp together on the desert and not disturb its peace. But if there is one carload in the group visiting the desert because it is the "smart" thing to do, or because tourists should see the desert along with the San Francisco bridge and the Los Angeles city hall, then there is no peace.

That's what I like about sandy rutted desert roads. They are hard on the car, but they act as a sorting machine and cull out the visitors according to their love of the country for which they are heading.

HAROLD WEIGHT

• • •

Prison of the Navajo . . .

Phoenix, Arizona

Dear Mr. Henderson:

In reading your July issue I came across a misstatement of Navajo history in the article on Hoskaninni by Mr. Kelly.

Mr. Kelly stated that the Navajo after being rounded up were herded to the great prison camp at Fort Sumner in Arizona. According to the history told by the old-timers as well as recorded Navajo histories Fort Sumner was in New Mexico. The fort which Mr. Kelly mentioned as being in Arizona is Fort Defiance where the Navajo captured on the reservation were put in a great stockade in preparation for the mass drive to Fort Sumner (Bosque Redondo) in middle eastern part of New Mexico. They were kept in prison camp for five years, until their release upon signing an agreement with the United States government.

Being a Navajo myself and familiar with its history, I am sure the mistake was not intentional, and my letter is merely to call attention to the facts.

ANDREW T. BEGAII

DESERT *Calendar*

SEPT. 1 229th annual fiesta ends at Santa Fe, New Mexico.

1 Nevada state fair closes at Fallon.

1 Last of 2-day San Pedro valley rodeo, Benson, Arizona.

1 Oldtime Labor Day celebration ends at Miami, Arizona. Hard-rock hand drilling, modern mining demonstration. Miners' parade and Muckers Shin-Dig.

1 Two-day Range Hands rodeo ends at El Paso, Texas.

1 Last day of weekend Dig-N-Dogie Days celebration, Kingman, Arizona. Annual roundup of mining and cattle sports.

2 Annual fiesta and dance, Acoma Indian pueblo, New Mexico.

9-11 Cache county fair and rodeo, Logan, Utah.

11-14 Nevada livestock show and Elko county fair, Elko, Nevada. C. A. Sewell, manager.

12-13 Livestock show, Cedar City, Utah. Sponsored by Southern Utah Livestock association.

12 Anza Desert Park program to feature meeting of Sierra club at Boos Bros., Los Angeles.

12-30 Third annual northern Arizona photographic exhibit, amateur and professional. Museum of Northern Arizona, Flagstaff.

18 Convention of Florists Telegraph Delivery association, Albuquerque, N. M.

18-20 Seventh annual Dixie Roundup, St. George, Utah. Opening night for rodeo amateurs; last two days, professional.

18-20 Tri-State convention, Brotherhood of Locomotive Firemen and Enginemen, and Auxiliary, Albuquerque, N. M.

19-20 Third annual Galena Days, Bingham, Utah. Dale Johnston, chairman. Marks anniversary of discovery of ore in Bingham canyon.

19-21 Fourth annual Navajo tribal fair, rodeo and ceremonials, Window Rock, Arizona.

20-27 Utah state fair, Salt Lake City. Ernest S. Holmes, manager.

21-26 New Mexico state fair, Albuquerque. Leon H. Harms, manager. Championship rodeo. Fiesta ball, Sept. 23.

21-28 New Mexico Veterinary Medical association convention, Albuquerque.

25-26 Intermountain Kennel club dog show, Salt Lake City, Utah. Melvin E. Pearson, president.

26-28 Navajo county fair, stock show and rodeo, Holbrook, Arizona. Art Whiting, chairman.

28-30 San Geronimo fiesta, Taos, New Mexico. (Indian Sundown Dance at the Pueblo, Sept. 29.)

September special display of Indian costumes, textiles, etc. from Latin-American countries, Southwest Museum, Los Angeles.

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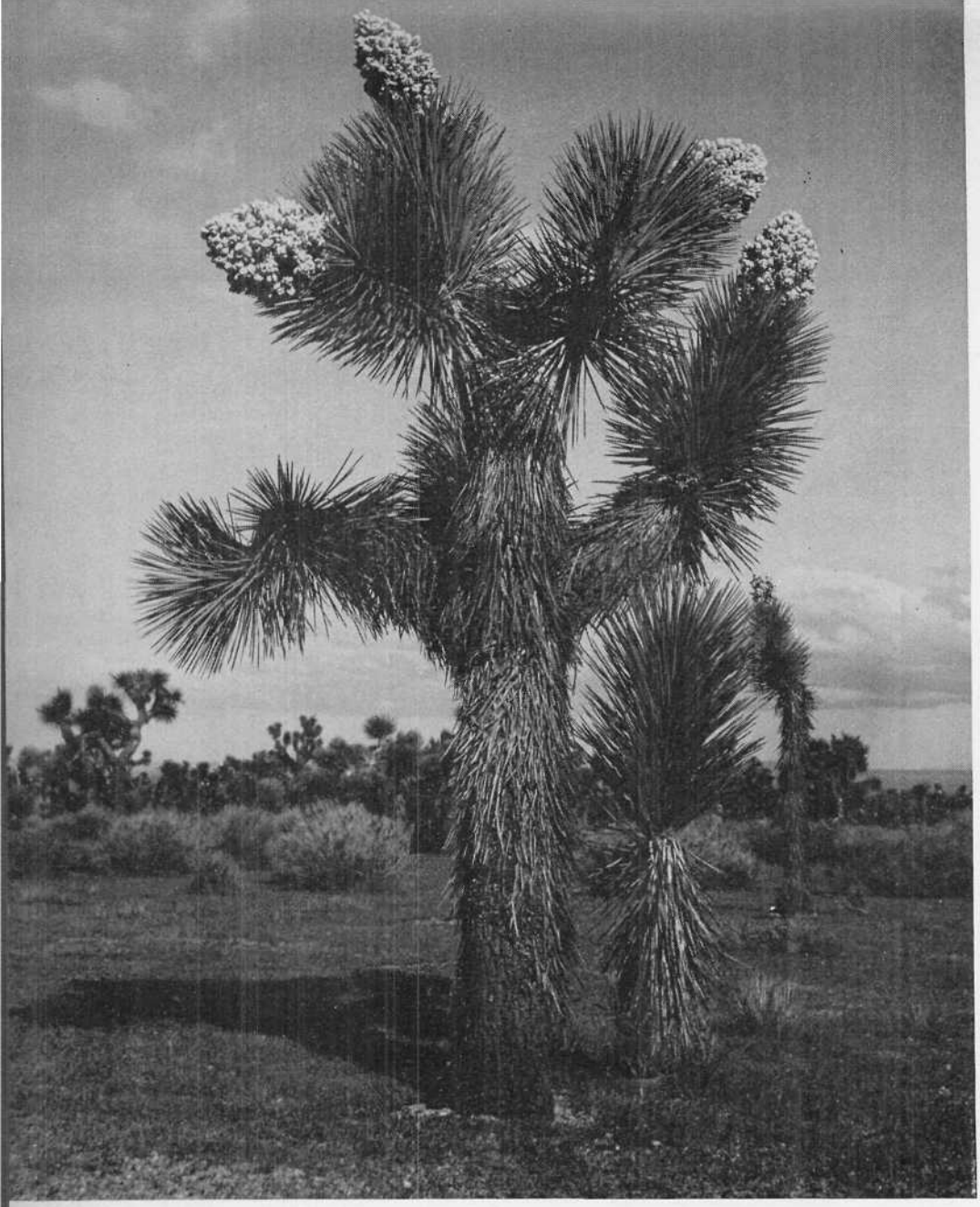


Joshua Tree

By ARIEL LANGSTON
Long Beach, California

Awarded first prize in the Desert Magazine's July contest, this photo was taken with an Ikoflex II, f3.5 Zeiss Tessar lens. 100 sec. at f:8, red filter, 2:30 p. m.

Special Merit

Selected by the judges as having unusual merit are the following:

"Nolina, Joshua Tree National Monument," Lucile Gauldin, Covina, California.

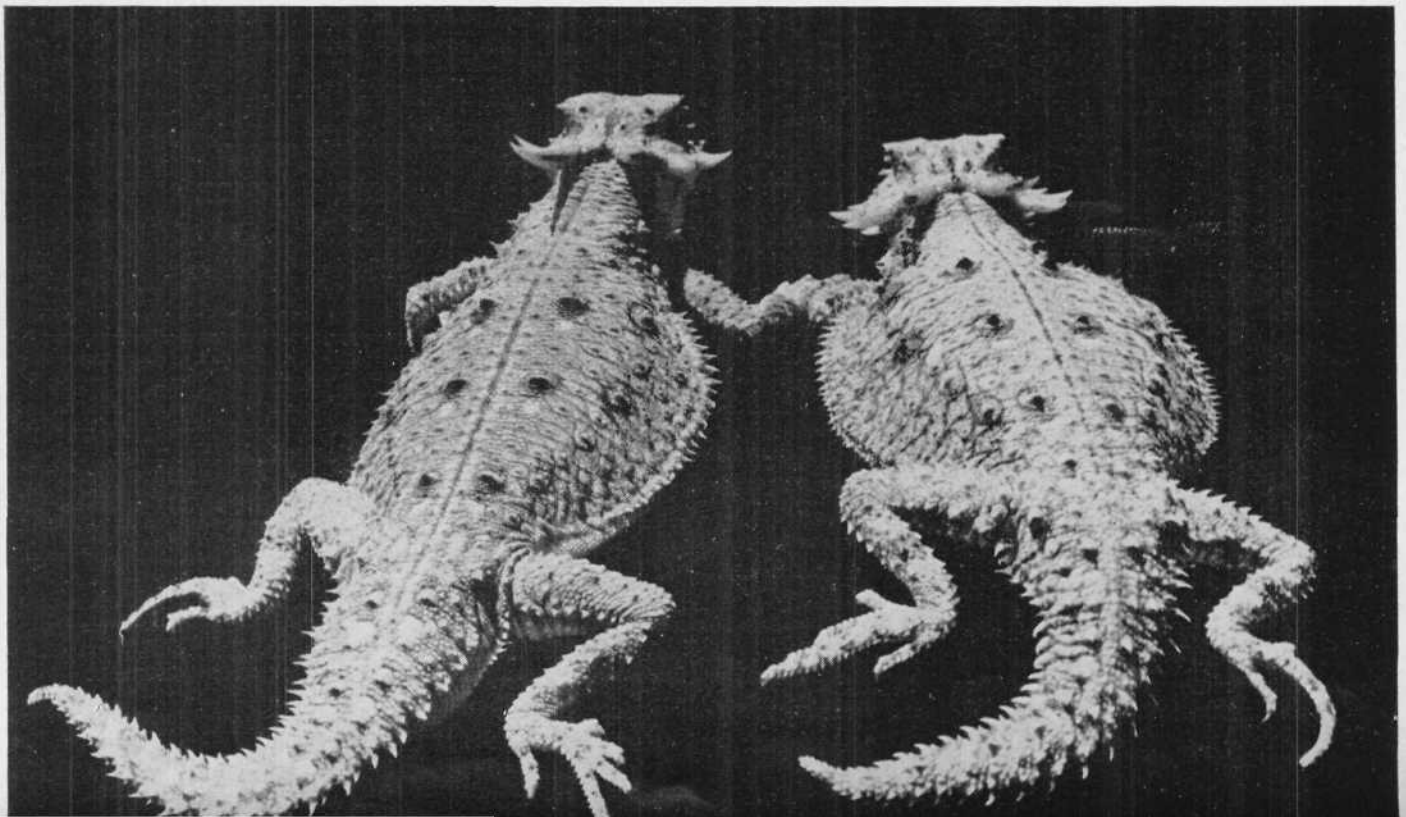
"End of the Rainbow (Rainbow Bridge)," Chas. S. Webber, San Leandro, California.

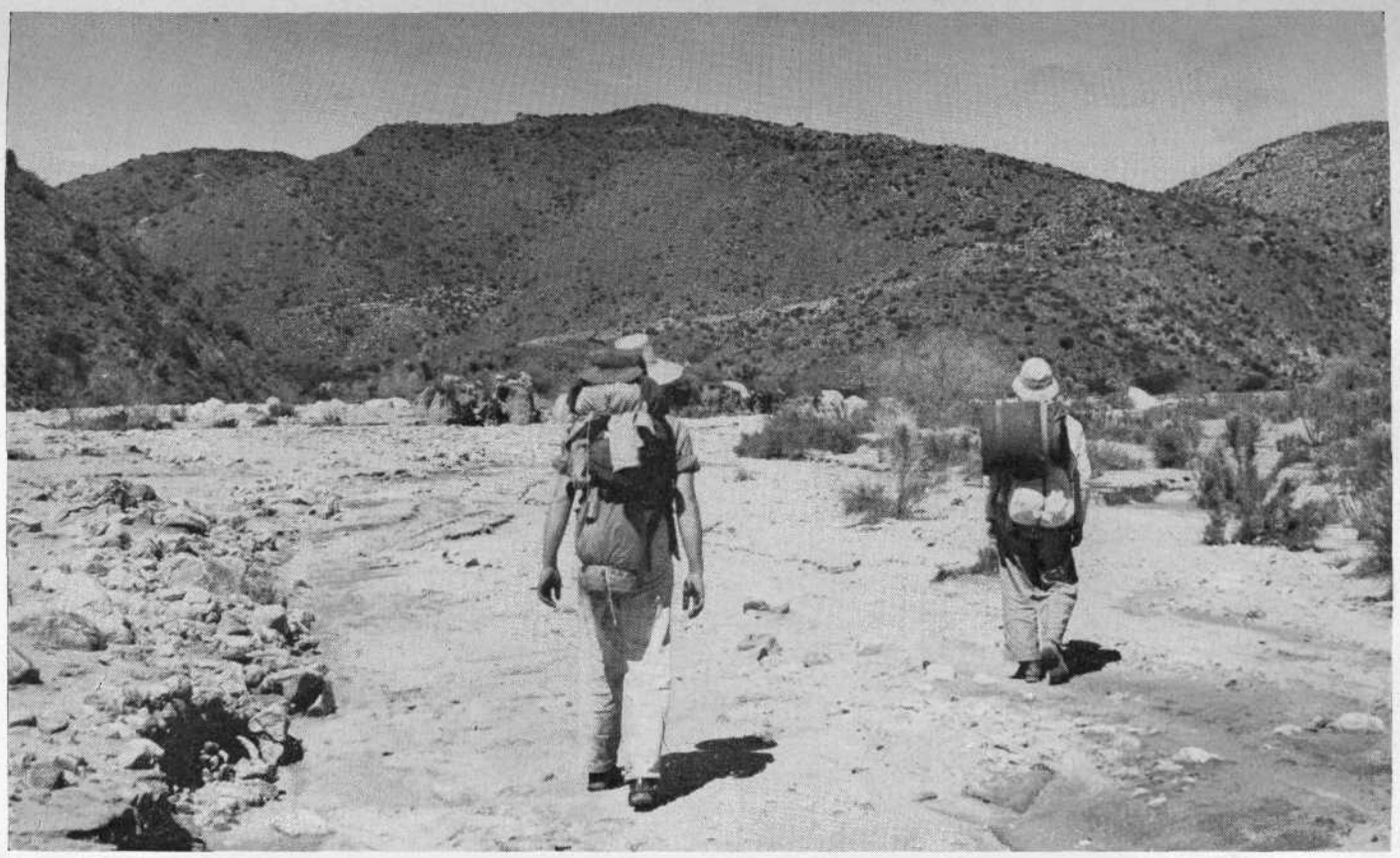
"Canyon Shadows (Palm Canyon)," Jack Bagnall, Walnut Park, California.

Mr. & Mrs. Horned Toad

By LEONARD RICHARDSON
Escondido, California

Winner of the second prize in the monthly photographic contest is this view of two desert lizards, taken with an Argus C-2 camera, 1/20 sec. at f:18 on panatomic X film. Yellow filter.





Charles Shelton and Hulbert Burroughs near the head of Coyote canyon approaching the "turkey tracks." Anza and his party are believed to have climbed out of the canyon on the ridge in the center of the photograph. Tule canyon is on the left, Nance canyon on the right, and Horse canyon is out of the picture, to the right.

Back-Packing on Anza's Trail

Text and photographs by
HULBERT BURROUGHS

In 1774 when Capt. Juan Bautista de Anza and his scouting party from Sonora followed the Coyote canyon route out of the Southern California desert, they met Indians who jumped about with such crazy gestures the Mexicans called them Los Danzantes. Hulbert Burroughs went over part of this same route recently—167 years after Anza came this way. The Indians are gone now, but they have left much evidence of their sojourn in this remote region. The canyon described by Burroughs is in Borrego desert state park, but due to its inaccessibility is comparatively unknown to park visitors.

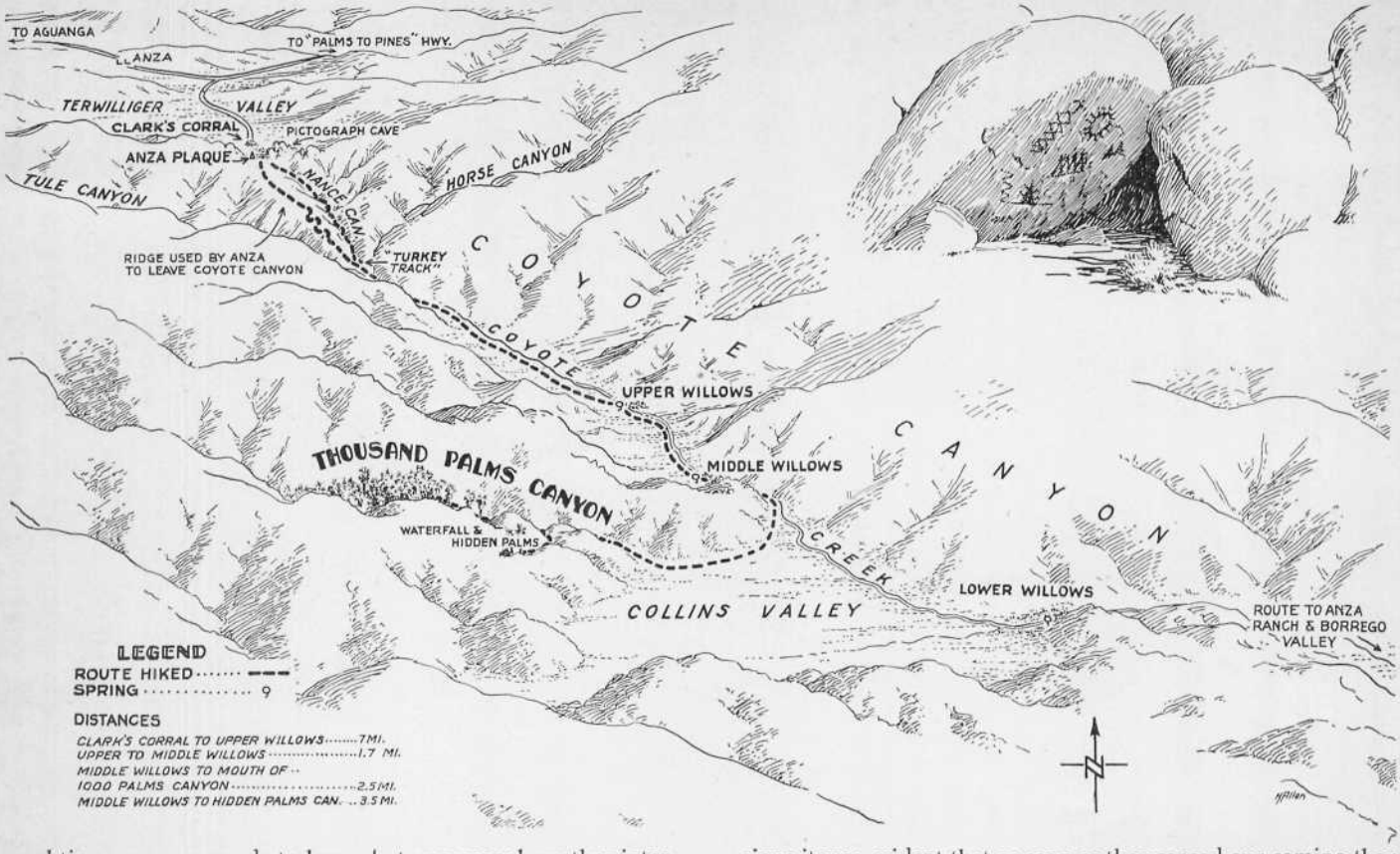
FOR many months Charles Shelton and I had been planning it, trying hopefully to sandwich into our seemingly busy lives the three extra days we needed to explore upper Coyote canyon. Reading the accounts of Juan Bautista de Anza's remarkable expeditions through the canyon in 1774 and again in 1775 we were eager to follow part of the old trail. I even found myself dreaming of the little band of colonizers with their horses and cattle as they plodded their painful way toward Monterey, California, from Sonora, Mexico.

I had read and re-read Father Pedro Font's superb diary of the second expedition, and I felt I knew that long-suffering padre personally. Charles and I both had marveled at the resourcefulness of the hard riding Captain Anza and the manner in which he led his brave band across a trackless desert in the first overland trek to California from Mexico. From northern Sonora he had set out to found a colony at the newly established mission at Monterey.

The purpose of the colonizing scheme had been to thwart the rumored encroachment of the Russians from the north. Anza's first trip was an exploratory one in 1774. Having established a trail he returned to Sonora and set out the following year with his group of colonists. His party consisted of 240 men, women and children, together with 695 horses and mules and 355 head of cattle.

The remarkable fact about the trek was that although many horses and cattle died of hunger, thirst, and exhaustion along the way, only one member of the expedition succumbed—a woman. To compensate for this, three children were born on the trail and arrived alive and healthy in Monterey. When one considers the tragedies of later expeditions of settlers who assailed the desert crossing in the gold rush days, Anza's success is even more significant.

And so Charles and I were eager to see for ourselves some of Anza's actual camping places and the trail he followed. Sev-



eral times we were ready to leave, but unseasonal weather interfered. Finally, rain or no rain, we set a date. And a dull morning it was when we started. Heavy clouds hung over the city and rain was falling intermittently.

We planned to reverse Anza's direction, and go down Coyote canyon. Our route would take us from Hemet over the shoulder of San Jacinto mountain and thence to the old Clark ranch near the Cahuilla Indian reservation.

Heavy rain was falling when we reached Hemet, but by the time we reached the Cahuilla valley it had stopped.

From our study of Father Font's diary and the topographic maps of the region it was not difficult to recognize the various landmarks. Cahuilla basin is actually divided into two parts. The main or western half is Cahuilla valley, while the eastern end is known as Terwilliger valley. There is a low rise between the two so that water from Cahuilla valley drains westward toward the Pacific, and that from Terwilliger eastward down into Coyote canyon toward the desert. De Anza had ascended from Coyote canyon and crossed the valley westward and thence out through Bautista canyon past Hemet and San Jacinto.

We followed a fair dirt road across Terwilliger valley to a point where it narrows to meet low rocky hills. We had with us a translation of Father Font's diary by Herbert E. Bolton of the University of California. It was Bolton who actually traversed the entire Anza trail from Mexico to San Francisco. Through his research many of Anza's original campsites have been located. It was he who determined the location of San Carlos pass where Anza and his followers finally climbed out of the desert that had been so unfriendly to them. Near the top of that pass there is now a plaque honoring Anza and his brave followers.

It was the narrowing of this eastern end of the valley where it funneled into Coyote canyon that Anza called Puerto de San Carlos. At the time Bolton explored the trail the site belonged to Fred Clark. Locally it was known simply as Fred Clark's corral. It was here we planned to leave the car and begin our hike down the canyon.

Thumbing through Font's diary we came to this entry: "In this flat we found an abandoned Indian village, and from the signs it was evident that as soon as they sensed our coming they left their huts or warrens and fled, judging from their fresh tracks. Being so savage and wild, when they saw the cattle which went ahead, God knows what they thought they were. And so we were not able to see a single Indian."

Climbing about in the rocks above the corral we saw many pieces of broken Indian pottery. And in one fair-sized cave we found pictographs—crude drawings of sombreroed men on horseback—which Bolton says probably represent the passing of Anza's own troupe. Naturally we were keenly excited to have found such graphic evidence of those long-gone days, days which now seemed very close.

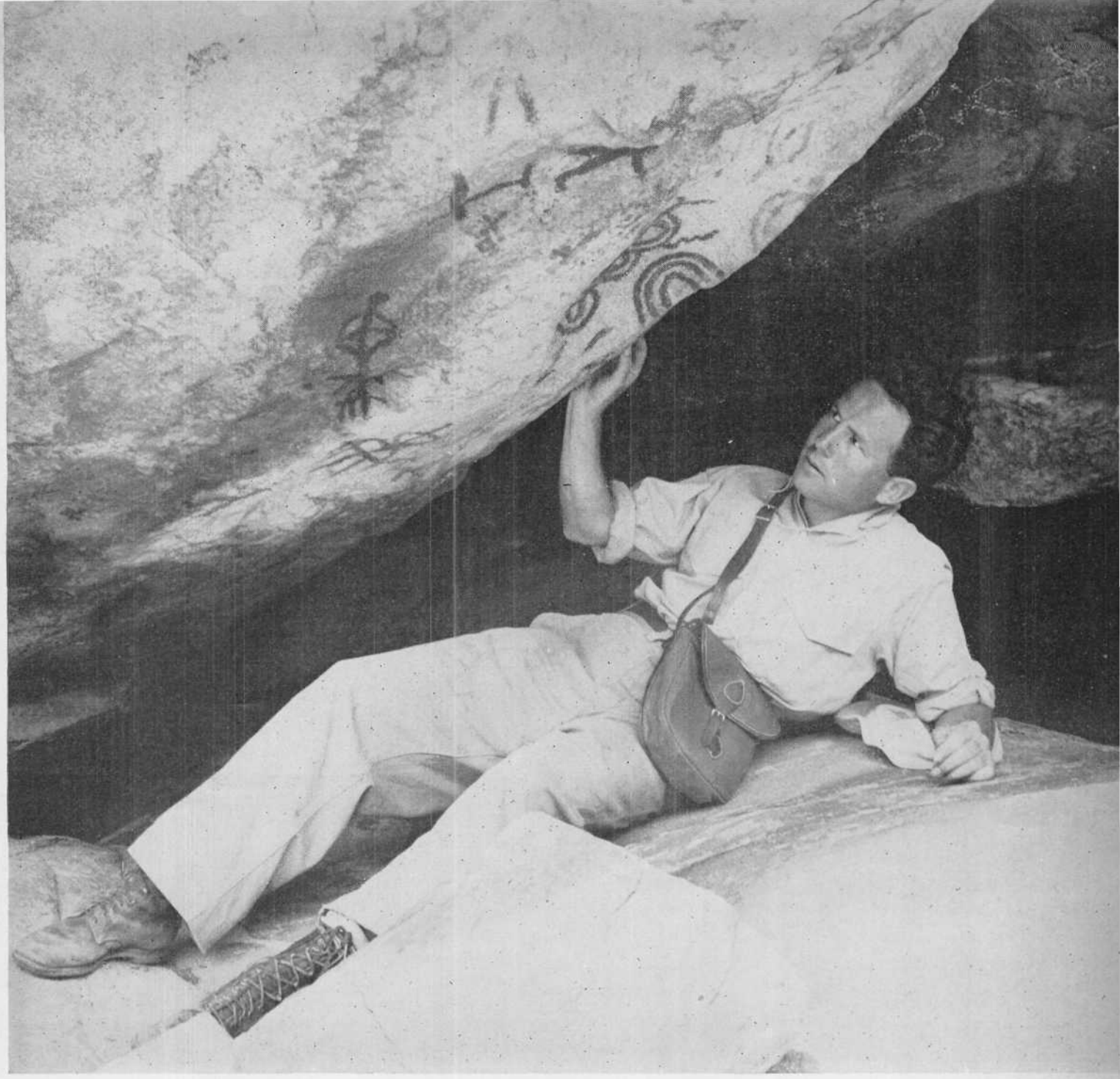
The clouds showed promise now of dispersing and as we swung into our packs we were in high spirits—eager to see what lay ahead. It was already two in the afternoon, and we had a long hike before us if we were to find a good camping place well down Coyote canyon.

From the topographic map we could see that Coyote canyon at its upper end divided into three main canyons, whose confluence is locally called the "turkey tracks" because of the supposed resemblance to a giant turkey foot. Looking downstream at this point Tule canyon is on the right, Horse canyon a little farther on the left, with Nance canyon between the two. Bolton determined that Anza had climbed the ridge between Nance and Tule canyons. That was the San Carlos pass trail.

In order to see as much country as possible in the three short days available, we decided to descend Nance canyon and later on the return trip come up over the San Carlos pass trail just as Anza had seen it.

Leaving Clark's corral we climbed over a low ridge and dropped down into the flat where Anza camped. The same fine springs are still there. We were now in the dry wash of Nance canyon. About two miles from our starting point the trail leaves Nance canyon and cuts over the hills to the right. This is the San Carlos pass trail. Or rather it used to be a trail. The CCC has cut a road through from Terwilliger valley.

We kept to the left and followed a cattle trail down Nance canyon. We had left the flat. The canyon grew narrower and steeper. A lively stream of clear water was rushing down over mossy rocks and between grassy banks. We were surprised at



Many well preserved pictographs were found in the caves at Puerto de San Carlos. Charles Shelton is shown here examining some of the ancient symbols.

the amount of vegetation. Lush grass and head-tall reeds rose sharply near the stream. The brush was dense on either side. We thanked the cattle for their trail making proclivities and pushed rapidly along.

At three miles the vegetation was showing a marked change. Here was a splendid example of the transition from typical Southern California mountain brush country to the mesquite and creosote bush, the yucca, agave and cactus of the desert. At about four miles and a quarter we suddenly came out into the open wash and found ourselves at the "turkey tracks"— the confluence of Nance, Horse and Tule canyons.

From now on Coyote canyon grew quite wide and the incline downstream was gradual. We swung along easily over the firm sands of the wash bed. The stream had dwindled to a mere trickle and was rapidly being soaked into the sandy canyon bed. Another half mile and the stream had disappeared completely. We had counted on the heavy winter rains to supply us with an ample flow of water for drinking. Consequently we had brought no canteens with us.

We had had experience before, however, with the vagaries of desert streams, and in a canyon as large as Coyote I felt certain the water would reappear after a brief hide and seek game in the sandy wash bed. Sure enough, by the time we reached a point seven miles from the car a fair-sized flow of water meandered along beside us.

The sun was setting. The next bend brought us into a small valley and at the lower end about a half mile ahead we could see a cluster of vegetation greener than the surrounding desert. Here was an unmistakeable sign of water—a cluster of willows.

There could be no doubt that this was the Upper Willows—Anza's last camping place before he climbed out of Coyote canyon. It was nearly dusk when we scrambled out of the wash and found a sheltered clearing under a dense thicket of willows tossing in the cold March wind.

The seven mile hike that afternoon had been our first of the season so we were glad to drop our packs and make ready for dinner and bed.

Around a tiny campfire flickering wildly in the cold wind we

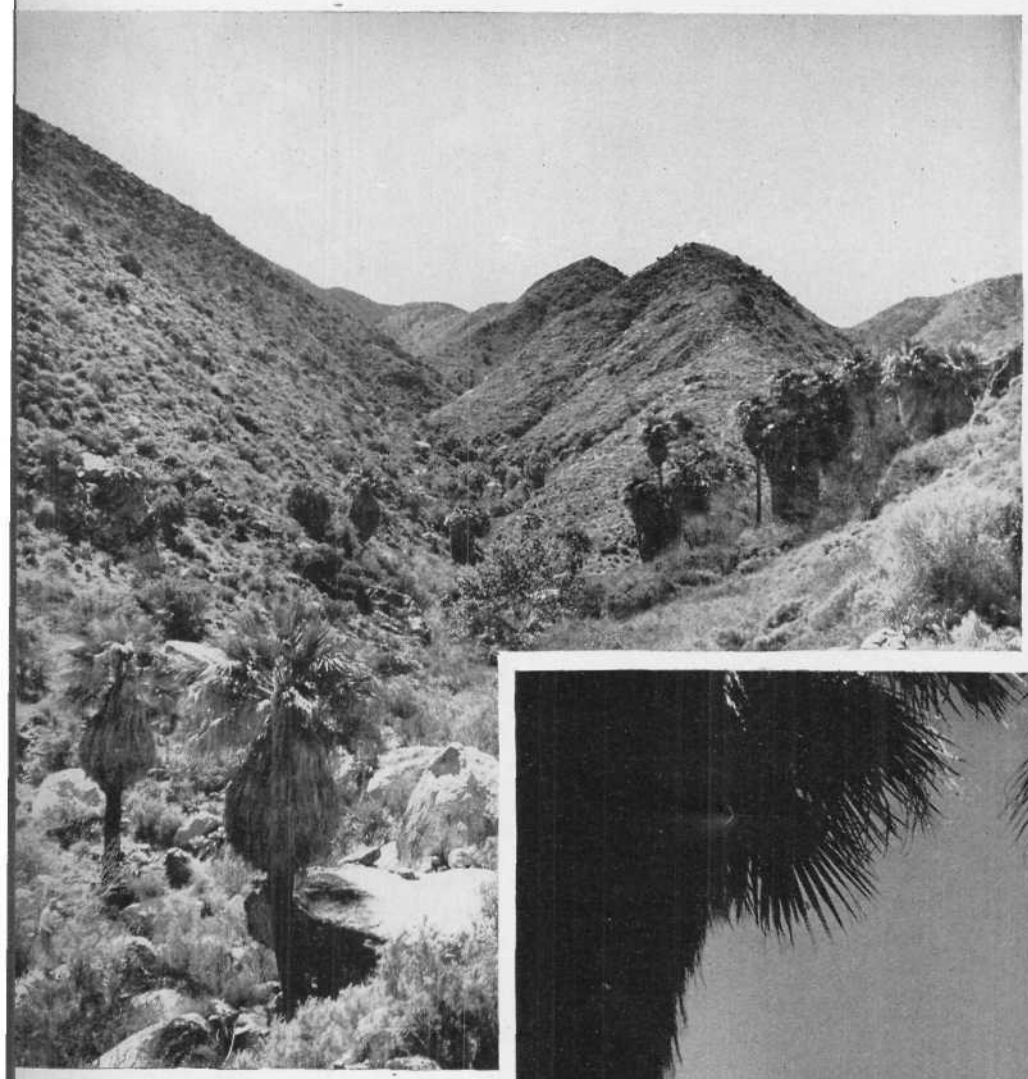
opened Pedro Font's diary. The time—December 24, 1775, a little more than 165 years ago. The place—Upper Willows, the very site where we now lay upon our sleeping bags.

The padre quoted the argument that had passed between him and the commander over the question of issuing liquor to the men at this camp. It had been snowing and the colonists were wet and cold, and Anza felt that Christmas eve was a fitting time to pass around a small store of liquor carried in the pack train. The good father told Anza bluntly, "it does not seem right to me that we should celebrate the birth of the Infant Jesus with drunkenness."

The commander carried out his plan, but issued a warning to the people that if they were found outside their tents they would be punished.

Father Font and Captain Anza were so opposed in temperament and views that often they went for days without speaking to each other. Font was a sickly man who suffered much throughout the entire expedition. His impressions of the desert country were colored by the torture of illness. To him the desert regions were "salty and worthless lands." Furthermore, being of the clergy he was serious minded and could not countenance the petty human weaknesses of the soldiers and colonists. Captain Anza, however, must have been more sympathetic and tolerant. Being a soldier he knew how the common man wanted to relax and forget his troubles—how any excuse for a celebration was welcomed.

We were up early the next morning for our schedule called for a long day of hiking. There was much to see and photograph. Our plan was to leave bedrolls and supplies here at the Upper Willows to which we would return that night. I had heard reports of an interesting canyon — 1000 Palm canyon — which branches into Coyote canyon farther down stream. I had wanted for many months



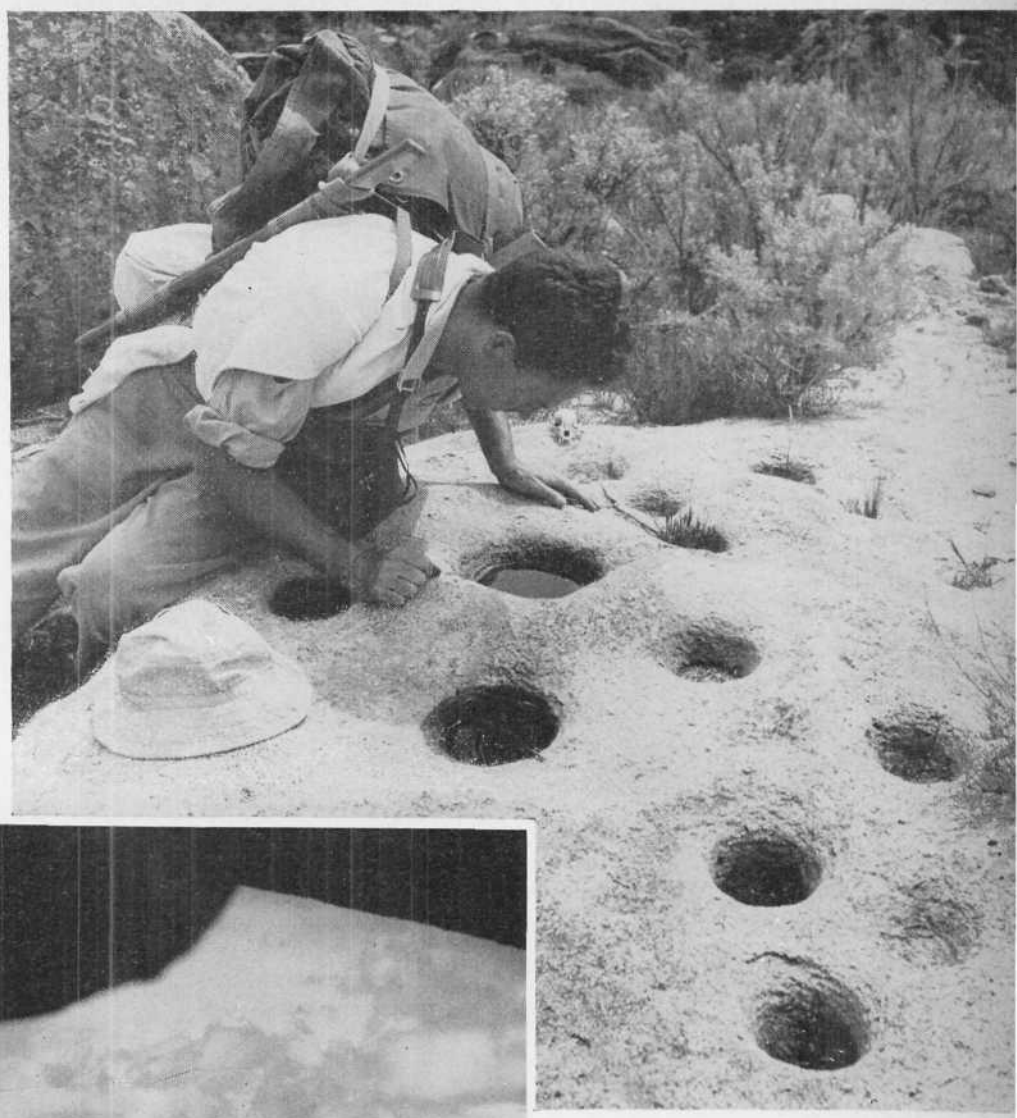
As far as we could see there were more and more palms extending up the canyon.

A veritable jungle of palms waved their glistening fronds as we worked our way slowly up 1000 *Palm canyon.*

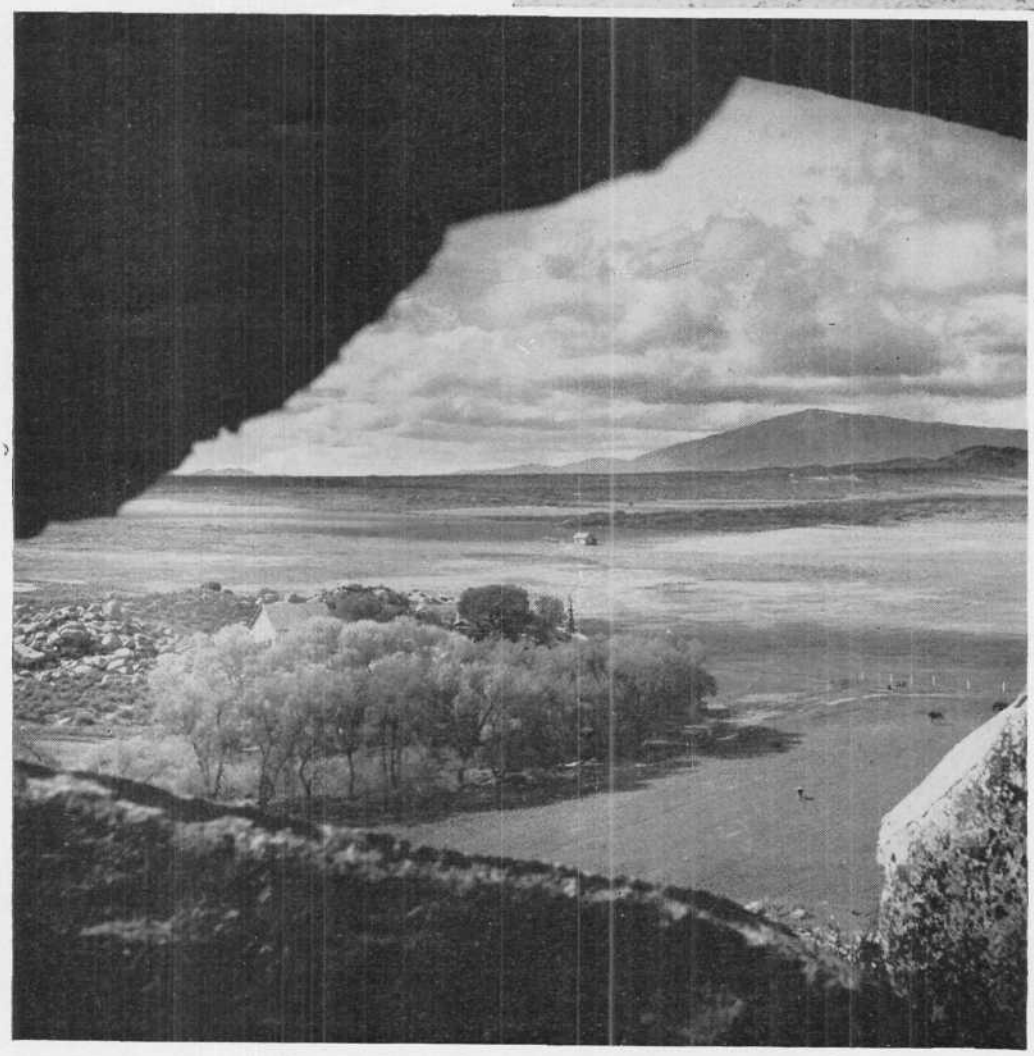
to visit it, so selected this as our goal for the day.

As we swung along the stream bed we recalled Font's description of his approach to the Upper Willows campsite: "Shortly before halting near the little spring of water we saw another village whose houses were some half subterranean grottoes formed among the rocks and partly covered with branches and earth, like rabbit warrens. The Indians came out of their grottoes as if they were angry, motioning to us with the hand that we must not go forward, talking in jargon with great rapidity, slapping their thighs, jumping like wild goats and with similar movements, for which reasons since the other expedition they have been called Los Danzantes (The Dancers). One especially, who must have been some little chief, as soon as he saw us began to talk with great rapidity, shouting and agitated as if angry, and as if he did not wish us to pass through his lands, and jerking himself to pieces with blows on his thighs, and with jumps, leaps, and gestures."

We searched for the caves of Los Danzantes, but could not find them. Bolton says that caves with smoke blackened walls and roofs are still seen in that locality. I don't doubt it. Some years ago I was with a friend hiking among the rocks in the lower end of Coyote canyon when he found just such a cave. In it was a splendid unbroken Indian olla.



"Near Fred Clark's corral we found these old morteros made by the Indian women of long ago. In wintertime they collect rain water and serve as tiny drinking reservoirs for birds and animals—and hikers."



Looking out across Cahuilla valley from one of the caves at Puerto de San Carlos.

Two miles below the Upper Willows is another group of willows about a spring. This is known as the Middle Willows and is also described by Font as the site of a village.

Throughout the morning the wet stream bed revealed innumerable tracks of wild animals. We saw the tell-tale prints of a coyote where he had crossed or come to drink. Twice we recognized the padded tracks of wildcats. Deer too were there and

several times we came upon unfamiliar cloven hoofs that must have been either mountain sheep or goats.

About three miles from the Upper Willows the canyon sprawls out into Collins valley. This valley abounds with a fine stand of ocotillo. One specimen was the largest I had ever seen, rising to at least 25 or 30 feet. The desert growth was quite varied and profuse. Grass was growing and a few head of cattle, wild and wary, started at our approach.

Entering Collins valley we followed a cattle trail around the shoulder of the rocky ridge on our right. It led us directly toward the mouth of 1000 Palm canyon which angles out of the very rough country to the west.

The surrounding hills were very rocky. Comprised of great granite boulders and outcrops they were very much like the lower reaches of Coyote canyon, which pile of boulders Font pessimistically describes as "the sweepings of the world." We were a trifle pessimistic ourselves when we finally reached the bed of 1000 Palm canyon and found it bone dry—without even a sign of the recent heavy rains. A single palm tree in a little side canyon waved beckoningly in the wind. A glistening sheen on the cliff above it suggested water. The position of the sun—and our stomachs—suggested lunch, so we decided to investigate.

I have found on innumerable occasions that these obscure side canyons often hide the most interesting and exciting beauty spots. And this one proved no exception. After a quarter mile climb up the boulder strewn wash we came upon a tiny stream which soon broadened out. In a narrow crevasse-like cleft in the rocky hills we climbed up through a tumbling stream of crystal clear water to a tiny palm oasis at the foot of a lovely waterfall.

The hour or so we spent in that hidden palm garden of the desert was compensation in itself for the entire trip. Had we not set our goal for 1000 Palm canyon I think we would have spent the rest of the day exploring the upper reaches of that small side canyon.

Back in the dry bed of the main canyon we continued our search for just one of the rumored thousand palms. The mouth of the canyon held little promise, but I should have known from previous experience that barrenness in one section of a desert canyon gives no clue as to what may be around the next bend.

The transformation here in 1000 Palm canyon was sudden. What had been a dry rock and sand wash a few yards below was now a running stream with limpid pools and grassy banks. Farther ahead were countless palms waving their glistening fronds as far up the canyon as we could see. From the condition of the stream bed and the amount of grass and reeds on either side I wondered if perhaps water might be present there all the year around.

For a mile or more we picked our way upstream. Sometimes we struggled through jungle-thick underbrush where catsclaw thorns clutched tenaciously at our clothing. Then again we jumped and clambered from rock to rock, in and across the stream.

From the topographic map I estimated we had come about six and three quarter miles from our camp. That would mean thirteen and a half by the time we reached our beds that night. The sun was dropping farther into the west. We could go no farther. The upper reaches of 1000 Palm canyon would have to wait.

And so once again I found myself forced to turn back before I had fully explored the goal I had set. Perhaps that is one of the intangible lures of these remote fastnesses—the feeling that with a little extra time there's always something more to be seen just around the next bend.

Coyotes howled that night as we lay in our warm sleeping bags. I thought of the many deer and rabbit tracks we had seen. I wondered what the wildcats were hunting and if those were really wild sheep or goat tracks in the soft sand at the water's edge. And with such thoughts in mind I fell asleep.

Well before noon the following day we were back once again at the "turkey tracks." This time instead of taking Nance canyon trail as before, we climbed the ridge of San Carlos pass as Anza had done. It must have been a stiff climb in those days for even now with the aid of a rough CCC road zig-zagging up the mountains we did a bit of puffing before we reached the top.

Once again back at the car we spent an hour climbing among the rocks above Fred Clark's corral. Again we saw the caves bearing the pictographs of Anza's horsemen. We found innumerable bits of broken Indian pottery and many mortar holes in the rocks where Indian women once ground their corn.

For many minutes we sat upon the floor of an ancient cave. Sprawling out before us Cahuilla valley melted into the mountains in the distance. A few cattle and horses grazed peacefully among the willows of the old Clark corral just beneath us. Somehow the past no longer seemed a remote and half forgotten memory. And as we finally left Cahuilla valley I felt a strange closeness to Anza and the Indians of Coyote canyon.

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Big Bend to Be Fifth Largest Park

One of the last great wilderness areas in the Southwest, the Big Bend country of Texas, was definitely assured as a national park recently when Gov. W. Lee O'Daniel of Texas signed a bill appropriating $1,500,000 for purchase of the necessary lands.

Big Bend national park is to be an international recreational area, with 788,682 acres on the American side of the Rio Grande river and 500,000 acres on the Mexican side. The boundaries of the adjoining park areas were established in 1936 by a joint commission of the two countries.

The Big Bend area is to be the fifth largest national park. The four largest, in order, are Yellowstone, Mount McKinley (Alaska), Glacier and Olympic.

In sheer, rough, wild beauty Big Bend stands alone. No railroad traverses its vastness, and its few roads are just trails that disappear into the rocky wilderness. The area is a semi-arid plain, verging on desert, through which thrust a group of mountain ranges, notably the rugged Chisos. These are the southernmost spur of the Rockies with a top altitude of 7,835 feet. It has been said of the Big Bend of Texas that it is a region which nature herself has dedicated as a perpetual wilderness.

It is a land of contrasts. The desert is interrupted by mountain masses, and its streams alternately meander over broad flood plains and plunge through narrow canyons. A dramatic feature is the Rio Grande itself. This stream of song and story cuts a tortuous course through three steep-walled canyons in the park area.

• • •

Five-Acre Tracts to Be Sold . . .

"Jackrabbit homesteaders" who leased five-acre homesites on public land under the Izac law, will be given the option of buying their land when plans now being drawn up in the department of interior are completed.

This announcement was made recently by Paul B. Witmer, register of the U. S. land office in Los Angeles. Witmer was one of the original sponsors of the new homestead law. Under the regulations originally drawn up, the five-acre tracts were available only under lease, but Mr. Witmer has urged the department to set up rules making possible the purchase of lands be lessees who really want to improve their properties. Revision of the regulations along this line are now underway.

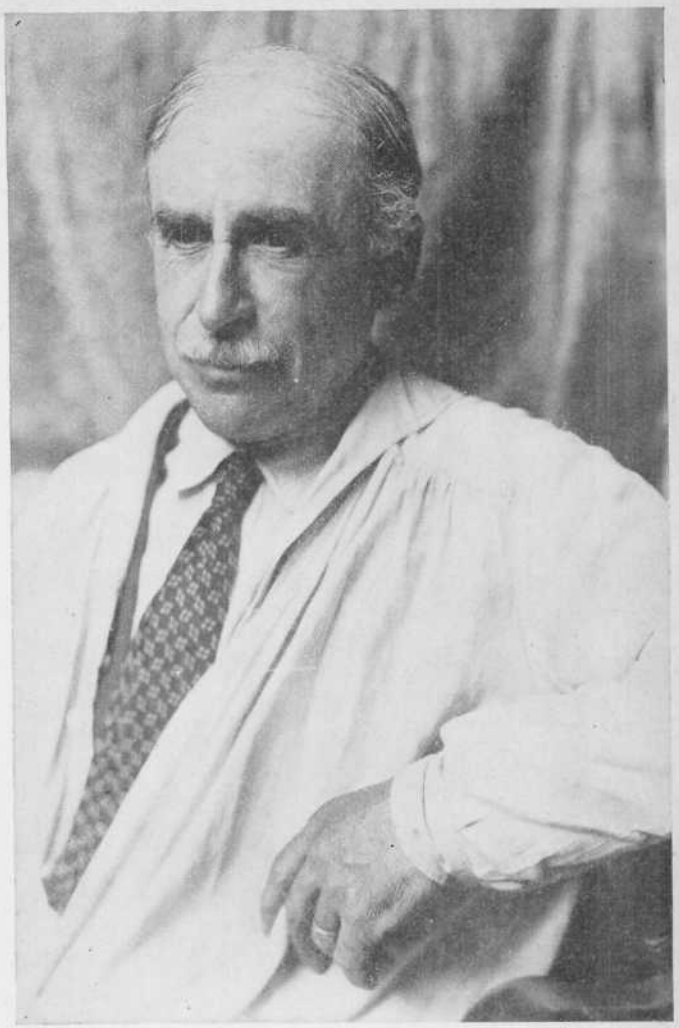
Before a lessee can become a full-fledged owner he will be required to improve the property to the extent of $300. Aid of the government in developing water also is under consideration.

More than 1,000 applications for leases, most of them in the Twentynine Palms area, have been received at the Los Angeles land office. A few were rejected but a majority of them have been or are in process of being granted.

In 1898, Bert Phillips, just home from art school in Paris, decided to go to Taos to paint Indians. He arrived at the New Mexico pueblo in a buckboard, after an eventful journey over the trail from Denver. He has been there ever since—43 years—and is still painting Indians. Here is the story of the man who, more than any other, blazed the trail for artists who now come to Taos from all over the world.

He Came to Taos in a Buckboard

By G. CARPENTER BARKER



Bert G. Phillips—he came to Taos in 1898 *to paint Indians.*

JUST outside historic Taos Indian pueblo, in the high desert country of New Mexico, is an old house which might easily be mistaken for an early Spanish fortress. Above the massive door is the only evidence of modernity—a small sign bearing the single word "Phillips." No other identification is needed, for almost everybody in Taos—Mexicans and whites as well as Indians—knows Bert G. Phillips, pioneer painter and one of the founders of the world-famous Taos art colony.

As a stranger in Taos one summer afternoon, I hardly expected to penetrate the stronghold of this quiet, serious artist, whose paintings of Indian life are known and admired from New York to California. But to my surprise, the painter himself, a short, grey-haired man with a rugged, kindly face, greeted me at the door and welcomed me into his studio. An hour sped by as he showed me some of his vivid canvases. Mirrored in them I saw the ceaseless struggle of the red men against the elements, their deeply religious attitude toward their growing crops, and the brilliant pageantry of their ceremonial life. And I found that Phillips valued the friendship of the Indians he painted because he had discovered that they too were keenly aware of the beauties of their sunlit mesas and mountains.

The artist's understanding of the Indian and his environment became increasingly apparent to me as I remained in the commodious old studio. Underneath a great north window and extending along one entire side of the room were glass cases containing many beautiful examples of Pueblo handicraft—beaded belts, stone tools, pottery, moccasins, ceremonial robes and objects of ritual—all evidence that Bert Phillips had a deep appreciation of Indian craftsmanship.

"How did you become interested in painting Indians," I asked. Phillips' serious features relaxed in a smile. "I guess it must have been James Fenimore Cooper," he said. "As a boy in New York state I read his Indian stories, and then I knew what I wanted to do."

As a young man, Phillips crossed the Atlantic to study art in Paris, but he never forgot his early interest. After he returned to New York, in 1897, he and a fellow artist, Ernest L. Blumenschein, had the opportunity to go west to the Indian country. The two artists did not know where they might encounter the most Indians, but they had heard there were some at Taos, somewhere south of Denver. As no available map showed Taos pueblo, they decided to go to Denver and inquire about the route from there.

The Indian quest which followed is one rivalling any gold-seeking saga of the forty-niners. Arriving in Denver in the summer of 1898, Phillips and Blumenschein purchased a light delivery wagon and two horses from a smooth-talking salesman and started on the wagon trail south. They had not gone far before they discovered the buggy was not made for pioneering. They had to stop often to make repairs. Their horses, too, gave them trouble. Camping one night on the high semi-desert plateau of southern Colorado, they awoke to find that one of their horses, seeking water, had become tangled in its own rope, fallen over the edge of a steep arroyo, and choked to death.

With their one remaining horse they struggled along until, a day's journey from Taos, the battered wagon broke a wheel. The two painters flipped a coin to see who would guard the buggy and who would go on to Taos for help. It fell to Blumenschein to go forward. When he returned with a new wheel two days later, he was enthusiastic about the beauty of the Taos region. As they drove toward the pueblo Phillips, too, was delighted by their discovery. It was September, harvest time, and everywhere the Indians and Mexicans were threshing grain with their primitive hand tools.

For a month or more the artists camped at the edge of the pueblo and painted the native life. Then, with winter approaching, "Blumy" decided that the time had come for him to return to civilization. Not so for Phillips. He elected to stay for the winter even though he knew it meant being

Phillips' painting, "The Corn Maidens of Taos."

marooned in this frontier outpost with only a score of Americans.

Little did he dream, however, that he and another American were to be the unwitting agents of a near-revolution. The trouble started on Guadalupe day, December 12, when Phillips and a photographer friend, Lester Meyers, failed to take off their hats while witnessing a Mexican street pageant. Challenged by the half-breed sheriff of the pueblo, Meyers, an ex-boxer, blacked the man's eye. The outraged sheriff, brandishing his .45, summoned five deputies who dragged Phillips and Meyers to the Taos jail. Here, in an iron cell-box, the two spent an uncomfortable night. Outside they could hear a mob singing and shouting threats against "los Americanos."

Meanwhile, flushed with whiskey, the sheriff precipitated a new crisis. Gun in hand, he rushed into an American saloon and in the ensuing melee was fatally wounded. Excitement in the pueblo now rose to fever pitch. Fearing that the officer's companions might storm the jail and lynch Phillips and Meyers, several Americans got possession of the keys and rescued the two prisoners.

For the next week the pueblo was filled with grim natives who had come from villages miles away to avenge the death of their compatriot. But the little band of Americans gave them no opportunity. Gathering all their women and children in one store, the men divided into two patrols and kept armed watch outside the building. Sticks of dynamite, placed in strategic locations around the store, also served to discourage its invasion. After a few tense days, United States marshals arrived from Santa Fe and the "revolution" was ended.

Many newcomers might have been disheartened by such a stormy introduction to Taos life, but not Phillips. Confident of the future of this desert outpost as a cultural center, he wrote letters to his artist friends in the East, and by his eloquent descriptions persuaded many of them to come to the pueblo. Welcoming each new arrival, he helped all to feel at home, and so laid the foundations of the celebrated Taos art colony, where a score of noted artists now make their permanent residence.

Today, forty-three years after his arrival in Taos, Phillips lives comfortably in his fortress-like house, but he is by no means retired. As I drove past his studio early in the morning after my visit with him, I saw him at his doorway, fully packed and ready to start on a sketching expedition. I recalled, then, something he had said about his philosophy of painting.

"I believe that a picture must be more than just paint on canvas," he had told me. "It must express something vital, living."

As he waved good-bye to me, I realized that this pioneer painter of the southwestern desert is a man who lives his philosophy.

Sunset on the Great Salt Lake.

Salt Lake--Where the Fish Swim on Their Backs

Many strange stories are told about the Great Salt Lake in Utah where the water has a salt content of 27 percent. Some of these tales have a basis of truth—others are pure myth. When Gladys Relyea moved to Salt Lake City, a tenderfoot from the east, she made it her hobby to learn the truth about this mysterious body of water "where no one ever drowned." And here is her story—it is informative as well as entertaining.

By GLADYS M. RELYEA

WHEN I was a very young New Englander, long before I ever dreamed that I would one day live in Salt Lake City, my uncle sent me a picture postcard from Utah. I carried it around with me for days and even now I remember it vividly. It showed a man in bathing suit floating contentedly in the water of Great Salt lake, smoking a big cigar and reading a newspaper while a tray bearing beverages floated within his reach. That was the beginning of my interest in the lake and as I grew older, I made a point of remembering whatever I read or heard about this curious dead sea "way out in the West."

Four years ago, I came to Salt Lake City, and one week I drove out to the lake. That was the end of one false preconception—Salt Lake City was *not* on the shores of the lake. Somehow I had pictured it as a sort of coast city like Providence or Boston. I drove 18 miles through what seemed to me then to be a barren and monotonous desert. I was surprised, so surprised in fact, that I wondered about some of the other items of information I had gathered—maybe they were wrong, too. Maybe there *was* life in the lake, perhaps it *could* freeze over, possibly people *had* drowned in it, and so on. Many strange stories are told about this lake—they have almost become legends. I decided to learn the truth—to separate the fact from the fiction.

And what fun I have had, especially since within the past two years I have combined a search for pictures of the lake with the search for the truth about it.

For instance, not long ago, I was wandering among some sanddunes trying to find the best possible angle from which to take a picture of Saltair, the amusement area on the shores of the lake. So absorbed was I that I didn't notice the approach of a man carrying a box. When he spoke, I jumped. "Do you know that you're almost on top of our explosives storehouse?" he asked.

I looked again at the box he held—DYNAMITE! We talked awhile and he explained about the factory some rods away, and I listened and kept one eye on the box at the same time. "Now that war supplies are so necessary," he said, "we're very busy mining sodium sulphate. Yes, we really mine it." He pointed to the edge of the lake where some tiny cars could be seen. "That's where I'm taking this dynamite. We loosen the ore which is in the form of $Na_2SO_4x10\ H_2O$, pile it in the cars, bring it here to be changed into a thin liquid, evaporate off the water, and then load the pure-white sodium sulphate crystals into freight cars." His foot slipped in the sand at this point and I nearly disgraced myself by screaming. He laughed, and started toward the railroad tracks. "Hope I make it," he said. I guess he did

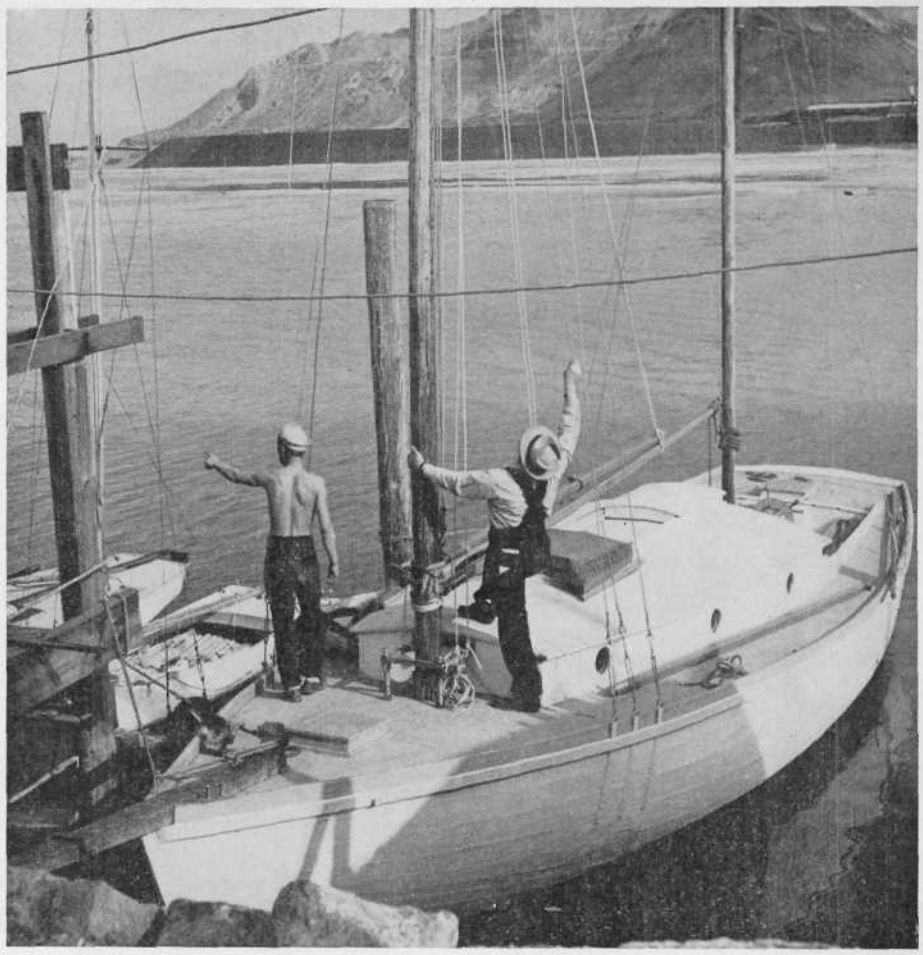
for I heard no explosion. I moved around those dunes more carefully after that.

There was another myth exploded—table salt (sodium chloride) is not the only commercial product of the lake.

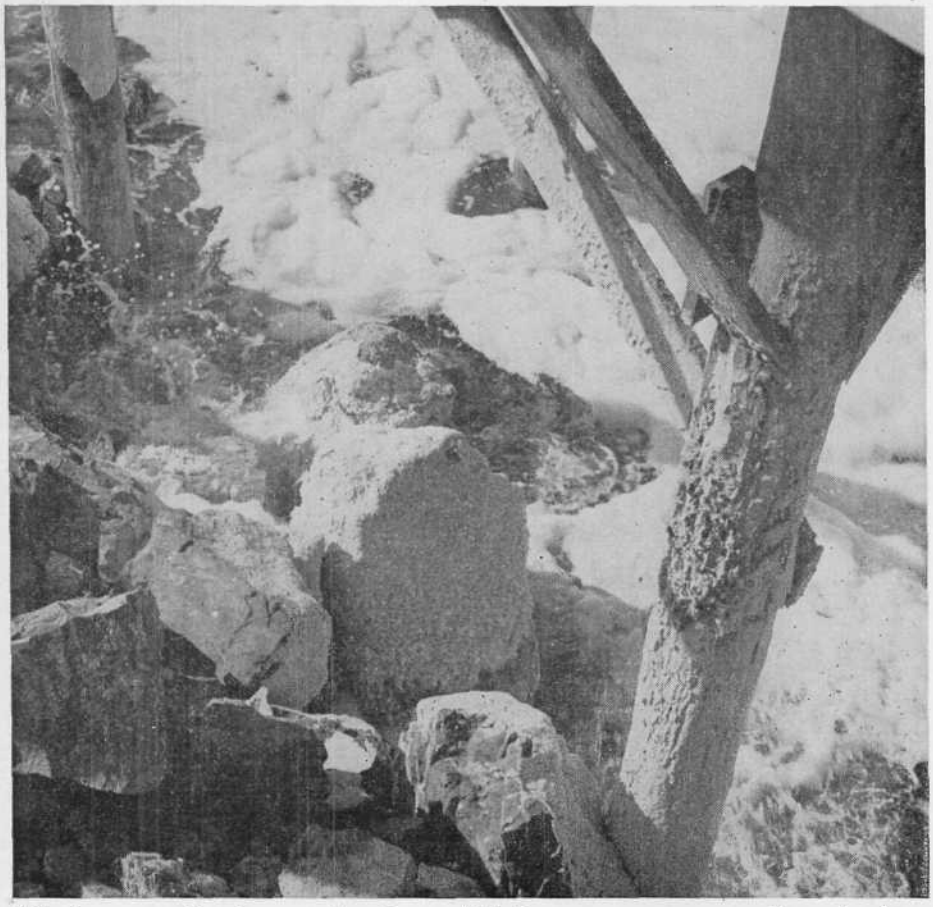
One legend I especially wanted to find out about was the one so frequently heard in Salt Lake City—"No, there are no living things in the lake—water is too salty, you know, 27 percent." So I did some research at the University of Utah and learned that at least 26 species of plants and 10 species of animals had been definitely identified by scientists. Of course, most of these plants and animals are of a very simple type, microscopic in size and of low organization. However, two of the animals were big enough to be easily collected—aha, collected!

The next sunny Sunday a friend and I drove out to Black Rock, a bathing beach with a pier, so called because of a huge dark rock mass which suddenly rears above the flat shore sand. Armed with bottles, we left our shoes and stockings on the pier and began paddling about looking for animals—*Artemia gracilis,* the brine shrimp, and *Ephydra gracilis,* the brine fly, so the books said. The water had a curiously soft thick feeling and when it dried it left a white coating of salt, very hard to get off, so we found later—we hadn't thought of towels.

"There's something swimming," my companion shouted. I rushed over as fast as I could in the heavy water. Yes, there they were, dozens of tiny orange animals with big black eyes peering at us, and strange to say, these animals evidently were lying on their backs and rowing with their five pairs of lacy-looking legs. So we captured many of them in our jars, put some sand on the bottom to make them feel at home, and felt like real biologists. The sand is queer, too. It is oolitic sand, every grain being spherical and smooth instead of jagged and irregular as ocean sand is. It was formed by lime gathering about tiny plants many thousands of years ago. We didn't find any brine flies, however, although they must be plentiful at certain times of the year. The wild ducks are said to eat so many of them their flesh has an unpleasant taste, and in the old days the Indians would gather the flies and use their dried bodies for food.

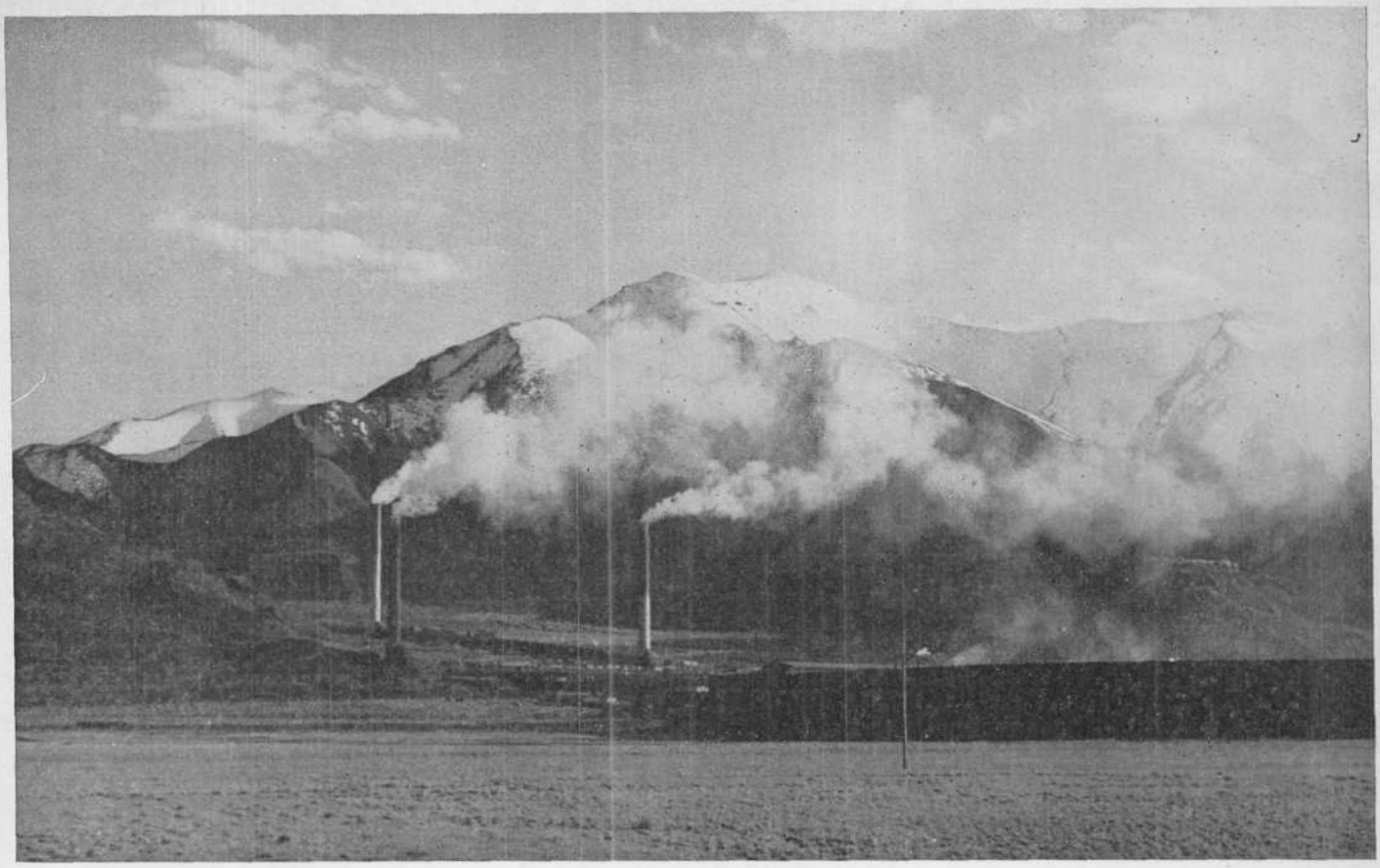


Members of the Salt Lake Yacht club prepare their boats for the summer season.



Wind storms whip the water into foam which forms strange patterns along the shore. Note the crystals formed on the rocks by the salty spray.

Another item of information I wanted to test for myself—"Great Salt lake water is so salty that it never freezes." I knew there was some basis of truth for this story because the saltier water is the lower temperature there must be to freeze it. No mere 32°F. would do it. So I waited until the thermometer was hovering around zero and bundling up, drove to the wharf of the Great Salt Lake Yacht club which is some distance from the actual shore and yet has a protected cove where



Belching chimneys on the Great American Desert. This is the Garfield smelter as seen from the shore of Salt Lake.

boats are moored. Another legend was exploded. Those boats were frozen fast and the ice was at least an inch or two thick. I tested it and took a picture to prove it. The main part of the lake was not frozen, however. I did not realize that I was doing anything dangerous, but as I returned over the narrow road, the caretaker stopped me and said, "I've been watching you all the time. Didn't know when I would have to rush out and pick you out of the water. Sometimes those boats are frozen in in such a way that any disturbance makes them roll almost completely over."

That made me think of something—here was a man who could tell me about drowning in the lake. "Yes, two men drowned in 1935," he said. "Knocked unconscious when their boat capsized in a storm—must have floated face down. They wouldn't sink, of course."

"Don't they have life preservers on boats here?" I asked.

"Yes, but ordinary life preservers don't keep your head out of water unless you are conscious. You really don't need them to keep you afloat in this water, you know. Have you heard about the experiments Dr. Adams of the University of Utah has been carrying on?"

"No, tell me," I said eagerly.

"Well, he and some Sea Scouts have been trying to determine the best kind of life preserver for this extra-salt water. And they found that a person weighing about 150 pounds will be held upright with head out of water even if unconscious, if he has a fifteen-pound weight attached to the lower part of his body."

By this time, we were both about to demonstrate that the human body will freeze if left out in the cold long enough, so I said goodbye and thanks for setting another myth aright.

Great Salt lake in a strong wind is a sight to remember. The waves never are more than five or six feet high, but the wind whips up a thick foam which makes beautiful patterns near the shore and in protected places, and also leaves crystals of salt on rocks and posts. I felt as though I were back on the Atlantic coast the day I spent taking pictures of a white-capped and much-like-the-ocean Great Salt lake. That was the day in October when many boat owners at the Yacht club (saltiest Yacht club in the world) were getting their boats ready for the winter, and this activity plus bright blue sky and blue and white water gave me many pictures and a chance to learn about boat travel on the lake.

"Yes, we use the same kind of boats here as on the ocean," a friendly yachtsman said. "We have learned one curious thing, that boats which are slow in fresh or ocean water are even slower on the lake, and fast boats in fresh or ocean water go even faster on the lake."

"Is that because speedboats don't sink very deep in the water?" I asked, and felt pretty proud of myself when he nodded yes.

Perhaps I haven't found the correct answers yet for all the Salt lake myths—for there is no other body of water on the entire continent just like this great inland sea—but at least I am no longer the tenderfoot who believes everything she hears about this mysterious lake. It is really a fascinating place for recreation and study in its own right, without needing help from the purveyors of fiction.

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CONTRACT LET FOR NAVAL BASE AT SALTON SEA

Contract was awarded by the U. S. navy late in July for the building of a 236-foot wharf on the south shore of Salton sea near Sandy beach. Fred Smith of El Centro was the successful bidder.

While naval officials have given out little information as to their plans it is understood that a coast guard unit is to be stationed at the sea and facilities provided both for training and for seaplane base operations.

Announcement also has been made of a huge air field to be built on the west side of Imperial valley as part of the national defense program. The field is to be built by the civil aeronautics administration at an estimated cost of $300,000 according to Regional Engineer Arthur Ayres of the CAA.

Storm on Salton Sea

By Gretchen Bronson
San Dimas, California

In soft and dreamy peace she loves to lie
At rest beneath the desert's blazing sun,
While small white clouds go drifting by
And silver sands through all her fingers run.

No happy homes stand on her barren beach.
No white-sailed ships upon her bosom lie.
No children skipping from her playful reach,
Nor sea-gulls circle screaming in the sky.

So still she lies in lazy deep content.
No strong tides ebb and flow, no breakers roar.
No storms to leave her weary, sad and spent,
But only ripples whispering on the shore.

Blow, desert winds! with loud and strident call
Awake her from her dream upon the sand.
Shake her until her angry tears shall fall
In gentle rain upon the thirsty land.

Blow! desert winds, across that desert sea!
Toss high the bitter spray upon the shore,
And shriek aloud in wild and fiendish glee
To hear the anger in her sullen roar.

Blow! desert winds, in merry, madcap mirth,
With boistrous laughter at her vain distress,
Until she storms and raves and beats the earth,
And in her rage reveals new loveliness.

• • •

DESERT MEMORIES

By Lillian M. Olivier
La Mesa, California

The scent on the wind is keen and sweet,
And it takes me far away;
Out to the distant desert hills,
Where the sage grows silvery grey.

Where the wavering smoke tree shadows
Make patterns like fairy lace;
And the flame-tipped ocotillo
Bends with reluctant grace.

Ever my heart is yearning,
To go back to that golden age,
When I was one with the desert,
The wind and the fragrant sage!

• • •

DESERT DAWN

By Evangeline Thompson
Tortilla Flat, Arizona

I walk the desert ways when all is still
As dawn rests in shining wonder on each hill;
Through canyons steeped in misty blue, and dim
Pale shadows dream beneath the mesa's rim.

I walk the desert ways when day is young
As each flower lifts its head, a flaming tongue;
Dawn's stillness is the stillness of wild things
And loneliness will speak with quivering wings.

I walk the desert ways when night grows old
For all beauty drowses in the noonday gold.
This reaching silence has no fears for me;
Christ walked the desert ways from Galilee.

• • •

PLANTERS OF GARDENS

By Lillian W. Struve
Pomona, California

Man plants with care in garden loam
For folks content to stay at home,
But gypsy feet urge me to go
Where God's enchanting gardens grow.
The lovely symbols of His grace
Make small demands in wider space.
Where sweet winds sing to desert sands
They glorify the desert lands.

COWBOY OF OLD

By Dora Belle Lee
Humboldt, Arizona

Keep a place in your heart for the Cowboy of Old
Who has vanished, no more to return;
While his spurs gather rust and his saddle hangs high
Let us cover the cow range and yearn.
When drift fences bound him and law irked him sorely
He galloped away to his glory;
But he left us the memory of dim, winding trails
And days that are golden with story.

He lived by a code that was based on his honor
And he died by the same in a pinch;
He never drew rein till the day's work was over;
If it trebled, he tightened the cinch.
He never laid down on the job he had tackled
Nor deserted his Boss in a tight;
But he rode with the herd to the end of the trail
And they called him a "cowman right."

He loved with a grace that bespoke him a knighthood
And he fought for the privilege as well;
His sweetheart was pure as an angel in heaven,
While the man to hint nay courted hell.
When this earth shall be purged of its mockery and dross
And its ramparts have fallen to mold;
And Gabe sounds the stampede for the Purified Range
He'll be flanked by The Cowboy of Old.

• • •

WHISPERING WIND

By June Houston
Cincinnati, Ohio

The wind seems to whisper
As stars light the sky
And the moon brightly shines
Where I stand,
"Drink deep of this beauty
And things that you'll miss
When you leave this desert land;
The sunsets, whose colors
An artist can paint,
But a poet cannot describe;
The mountains, whose treasures
Of gold men have found
And the secrets that some still hide;
The cacti in bloom
And the wild flowers too,
All these you'll long to see
When you're far away from
These western scenes,"
The wind seems to whisper to me.

BLUE DOORS

By Inez Honadel Strohm
Milwaukee, Wisconsin

This house of mine must have blue doors,
The brilliant magic blue, of course,
That keeps the evil spirits off
And pain and sorrow and remorse.

Adobe walls will lend their strength
To every kind of climbing rose,
And those blue doors must be embraced
By oleanders, I suppose.

When red and purple sunsets come,
Mud walls are rosy in the glow,
The desert sands turn lavender,
And those blue doors still brighter grow.

When scented wood-smoke drifts on high
And sends its perfume through the air,
Then I shall open those blue doors
And find that all I want is there.

• • •

ANCIENT INDIAN BATTLEGROUND

By Roberta Childers
Fallon, Nevada

Poor foolish ones! Today I found
A mortar-stone on this battleground
Where your tribes met in bitter strife.
Your bones are bleached, yet point to life
With symbols of your peaceful days.
What greed, what hate had changed your ways?
A pelvic-bone, pierced arrow-through,
A papoose basket, skull, I view.
They shatter dust though my touch is light.
Your shroud is laid by sad wind's breath.
The victor conquered all but death.

• • •

DESERT INCENSE

By Leonie Hunter
Pomona, California

A desert fragrance fills the vibrant air;
The mingled sun and wind waft spicy breath,
Like incense drifting heavenward with prayer
Of Life triumphant always over Death.

CREED OF THE DESERT

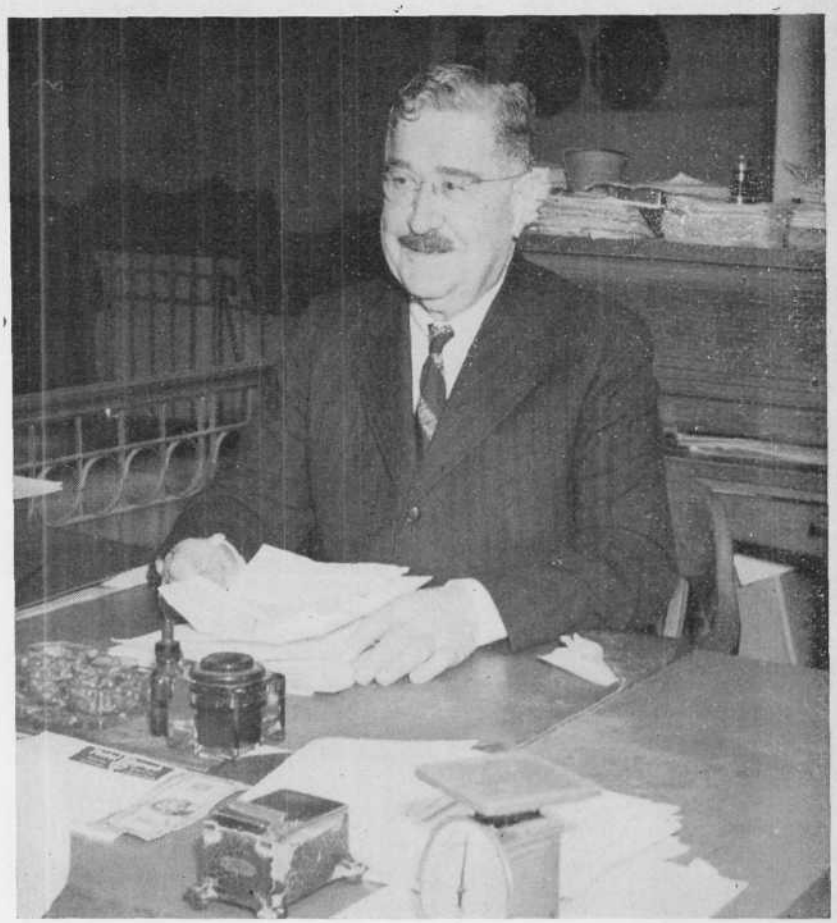
By June LeMert Paxton
Yucca Valley, California

There's a courage born with the morning;
There's a faith that grows through the day;
There's a peace that creeps in with the twilight,
Where the big heart of the desert holds sway.

While much of the glamor of the West has been built around two-gun sheriffs, burro prospectors and hard-riding cowboys, it required more than these to bring civilization to the desert country. Merchants and traders played a part no less important, and at times no less difficult and hazardous, than the more colorful figures on the frontier landscape. Here is the story of a pioneer merchant—a super-merchant who for more than a half century has played a leading role in scores of enterprises which have contributed to the development of agriculture and mining in a wide-spread area of the desert Southwest. Meet E. F. Sanguinetti, who at 74 is still the active head of a great business institution.

Sanguinetti of Yuma

By TAZE AND JESSIE LAMB



E. F. Sanguinetti came to Yuma in 1882 *when he was* 15. *Today at* 74 *he comes to his office every morning at* 7:30, *takes a three-hour siesta and works until* 8:30 *in the evening.*

WHEN a New Yorker addressed a letter to *E. F. SANGUINETTI, SANGUINETTI, ARIZONA,* Uncle Sam's postoffice department sent the letter through without delay. Sanguinetti spells Yuma, across the continent.

He supplied the people with everything from baby shoes to beans and blasting powder, throughout a great sweep of desert country producing nothing but gold.

His 400 mules, hitched to high-wheeled freight wagons, hauled these cargoes to maintain life and work in remote mining camps of southwestern Arizona and southeastern California.

He traded with trappers, grubstaked prospectors, bought gold, mined on a big scale, operated a dozen stores in a dozen towns and successfully organized dozens of other ventures ranging from a bakery to a bank.

And when he was convinced that the farmer's plow produces more wealth than the miner's pick, he turned his tremendous energy to irrigating and developing desert farmlands.

For nearly six decades he has pioneered in building a rich community on a frontier that holds a fascinating place in the history of the Southwest. He is Yuma's first citizen.

Near Yosemite, in Mariposa county, California, where E. F. Sanguinetti was born in 1867, a neighbor's "no account" son was mainly responsible for Sanguinetti's going to Yuma. The ne'er-do-well didn't amount to anything as long as he stayed at home. But he went to Washington territory. And after awhile reports began to trickle back to the neighborhood about the runaway's success in this and that. In a short time he was doing excellently well. In truth much better than his stay-at-home brothers.

Right then schoolboy Sanguinetti made up his mind that as soon as he was a little older he would go out into the world to make a place for himself. He was about 10 years old.

He didn't wait long. When he was 15, he set out from San Diego, where his father then was a well-to-do merchant.

Nobody liked his choice of location. Yuma, everybody told him, was "just hell." But the more they argued, the more determined the boy became.

It was 1882 when he crossed the Colorado river and left his native California for the first time, except for a trip to Europe with his father in 1880.

The Southern Pacific, itself a newcomer in the territory of Arizona, carried the young traveler to Yuma from Los Angeles, across the arid below-sea-level basin where the now prosperous Imperial Valley was only a barren waste.

Yuma was the trading capital for most of southern Arizona. Steamboating on the Colorado, started when the Indians first saw "The devil coming, blowing fire and smoke out of his nose and kicking the water back with his feet," had flourished in the 50s, 60s and 70s. Freights were carried by boat from San Francisco and San Diego around the peninsula of Baja California to the head of the Gulf. There transferred to paddle-wheel steamers drawing less than 18 inches of water, cargoes were taken up the river to the Yuma levees.

When the railroad reached Yuma in 1877, it killed the sea-borne and lower river traffic. Rail freight for the back-country was delivered by wagon, river boats plied to upstream landings as far as Ehrenberg, 125 miles north.

Placer mining had seen its ups and downs; up when the Gila fields yielded a man $125 a day and when nuggets were picked up on top of the ground at La Paz; down when the richest areas were worked out and disappointed gold seekers turned homeward.

Trappers along the Gila and the Colorado still brought to Yuma prized beaver

Fred Fredley freighted out of Yuma with this mule-team and high-wheeled wagon and trailer. He guided the mules with a jerk-line. The team was so sleek, Mexicans called it "the team that was ironed." The lead mule was named Jenny, after Mrs. Fredley. Once, when he was hauling ammunition from San Diego for U. S. troops at Tucson, Apaches swooped down on the wagons east of Yuma. Fredley's helper was shot 10 times. The courageous freighter dragged his wounded companion away from the trail, hid until the raiders left. The teamster had cut the mules loose, the animals made their way back to Yuma, except four mules killed and eaten by the Indians. Fredley saved his ammunition by concealing it under false bottoms in the big wagons. For his strategy, the government gave him a reward of $2,000. With teams and wagons like this E. F. Sanguinetti delivered supplies all over southwestern Arizona in the early days. This photograph by courtesy of Mr. Fredley's son. Copied by Schott Brothers of Yuma.

pelts, coyote, fox, badger, bobcat and deer skins and an occasional grey wolf.

The only "roads" through Yuma were the notorious Camino del Diablo and the old Butterfield stage trail.

This was the world in which young Sanguinetti launched his business career. His job was with John Gandolfo, in a big adobe store. His pay was $40 a month and board. He slept on an open porch, above a barber shop and meat market. "Folding money" was unknown. He drew his wages in gold and silver. Every three months he sent five $20 gold pieces to his father. For his own use he got along on less than $6.67 a month.

Five years after the boy clerk landed in Yuma, Gandolfo took a new partner. The firm became Gandolfo and Sanguinetti. Those $20 gold pieces sent to Sanguinetti's father helped to make up the sum put into the business by the junior partner.

The business, later to belong to Sanguinetti entirely, expanded rapidly. The firm added more mules to its corrals, until 400 long-ears were used by teamsters hauling beans and bacon, building materials and miners' supplies in their lumbering freight wagons to the outlying camps in the mountains.

From beneath the shadow of Castle Dome, whose summit stands boldly against the northern skyline, lead-silver ore came in steady flow down the river on barges, consigned to the smelter at San Francisco. Through all the fluctuations in placer mining, this was a district of steady production, until the Cleveland money laws in 1893 sent silver prices tumbling.

There was no end to the flow of gold across the Sanguinetti counters from the gulches and washes of the 32 mountain ranges in southern Yuma county, from the Cargo Muchachos and the Picacho country on the California side of the Colorado, from the rich Altar district in Sonora, across the border in Mexico.

Out of the buckskin bags of bearded prospectors this golden stream came to the firm's gold balances to be weighed and valued.

And when the yellow metal was found in quartz veins of the Gila, Kofa, Laguna, Castle Dome and other ranges, there was a new period of bustling activity for Yuma and its trade territory from 1895 to 1911. Then dwindling ore values reduced mining operations. They were revived again when the new deal raised gold to $35.

Among famous discoveries were La Fortuna, the King of Arizona and the North Star mines.

Forty-niners hurrying to the California gold fields along the thirst-tortured Camino del Diablo failed to see the fabulously rich outcrop where La Fortuna vein was found in 1895, in sight of their trail at the western flank of the Gila mountains. Between September, 1896, and December, 1904, when the vein ran into a fault and was lost, La Fortuna produced $2,587,-967. First four months of operation this mine netted more than a quarter million dollars from ore within 150 feet of the surface. One hundred men lived in the town that sprang up around the mine and mill. The Sanguinetti organization freighted a vast tonnage of supplies to this and other camps set up during the boom.

In the Kofa (S. H.) mountains, the King of Arizona was discovered in 1896 and worked until 1910. Epes Randolph, gentle Virginian, the only man who ever sold E. H. Harriman a railroad by telegraph "sight unseen," was one of the King's owners. From shafts here miners took $3,500,000. Near the surface the ore was worth $2,000 a ton, dwindling to less than $3 at a depth of 750 feet.

In 1906 an Irish prospector, Felix Mayhew, and his burros found the North Star vein less than two miles from the King of Arizona. Felix had a lot of fun spending the $350,000 he was paid for the property.

With a genius for organization, Sanguinetti anticipated and met the needs of all these thriving districts. In eleven branch stores and in his constantly widening interests he employed hundreds of men.

Meeting not only the people's needs in life, he took care of them after they died. It was Sanguinetti who set up the first undertaker's establishment for a community which until then had, as one old-timer puts it, "packed the dead in ice until burial." It was Sanguinetti who ordered text books on embalming and the professional technique of funeral directors. That passion for perfection in detail which has characterized his long life was applied to this subject, also.

One of the notable murder cases in Yuma history gives light on the problems of a Yuma undertaker of the early days. It was a tragedy of many dramatic angles.

"Murder on a Mountaintop" would be a good title for it. Peter Hodges was county treasurer. He had grubstaked a prospector named Marquez. Hodges didn't know it, but Marquez held a grudge against the treasurer. The prospector came in from a trip on the desert, exhibited to his grubstake partner rich gold ore.

"I found it in the Tinajas Altas," Marquez told Hodges. "I want you to go with me to locate the claims."

So Hodges and Marquez rode, with a third man, 90 miles out of Yuma to the lonely dry Tinajas Altas. Marquez climbed the mountain first. When he reached the top, he raised his rifle and fired once.

"Yo Mate un Borego," (I killed a sheep) he called to Hodges. "Come up."

When Hodges gained the summit and stood puffing on a flat rock, Marquez shot his partner through the body. After he was sure his victim was dead, the killer clambered along the ridge to a point from which he could see the third man of the party at the buckboard on lower ground.

From there he shouted the second time, "I have killed a sheep. Come and help us," and the third man started the climb up the mountainside.

By this time the killer probably was nervous. He didn't wait for the approaching victim to close in, fired at a distance of about 100 yards and the bullet plowed across the man's abdomen.

Badly wounded, he fled to the buckboard, unhitched the horses, crawled onto the back of one of them and set out as fast as he could for Yuma. The second horse followed.

Thus the news reached town, and this was the testimony given later at the miner's trial.

A member of the Sanguinetti organization from the undertaker's place was called, loaded the necessary supplies into a buckboard and drove to the scene of the killing. A posse of 40 horsemen spurred across the desert to track the murderer.

Hodges' body was embalmed on top of the rock where he was killed, the corpse was wrapped in canvas and lowered with ropes down the precipitous slopes, lashed across the back of a horse and carried to Wellton, 40 miles away, over a waterless, roadless desert. The undertaker left at the murder spot all the water he could spare for the possemen, scantily supplied. When he reached Wellton with the body, he hired a farmer to haul two barrels of water across the desert, back-tracking the death route, to succor the riders hunting fugitive Marquez.

This relief expedition met the straggling line of riders in hot mid-day, animals and men spent and thirst tortured. The horses were so thirsty they would not drink, many of the men had swollen tongues.

Later the slayer was caught in a hideout near town, was tried and convicted, went to the state penitentiary, escaped and was never heard of again.

A huge fortune in gold from southern Arizona and California has passed over these balances at the store of E. F. Sanguinetti in Yuma since the business was established in 1887. *At present about* $1,000 *worth of yellow metal is brought here every month, and Sanguinetti does much of the weighing himself.*

In his personal mining ventures, Sanguinetti reopened the Castle Dome silver-lead district in 1890 and made regular shipments for years thereafter, with a total output of more than a million pounds of lead and thousands of ounces of silver.

Across the Colorado in California, where the Cargo Muchacho range runs to within nine miles of Yuma, the camp known at different times as Gold Cap, Hedges and Tumco was turning out its share of gold. At its peak the town had between 2,000 and 3,000 residents. When it had produced several millions, Tumco went the way of so many mining towns and in 1904 Sanguinetti bought for $1,000 "everything above ground" in this once flourishing community.

During this and earlier periods, grubstaking prospectors was good schooling in character study, and a good investment, also, for the Yuman. Best bacon cost nine cents a pound. Flour and beans were cheap and Arbuckles coffee was popular. A prospector and his burros could stay in the mountains a long time on $15 or $20. The old-timers, as a rule, worked hard at their profession. "Most of their discoveries were made by accident," Sanguinetti declares.

In the meantime, final settlement of the Algodones grant had brought farmers into Yuma valley, and the first attempts had been made to build irrigation canals from the Colorado, opening the way to the present day foundation of Yuma's prosperity. In 1898 Sanguinetti brought to Yuma the first wheel plow ever seen in the county. His mules were called upon to level these new fields.

The uncontrolled Gila and Colorado, joining just above Yuma, with floods and droughts made farming a losing gamble. A controlled water supply was the only hope for the agricultural future. Fight for building Laguna dam above town in the Colorado was a long and often discouraging struggle. In this battle Sanguinetti fought with the brains and patience he had given to his personal business and persistence won. In 1912, Laguna dam was finished, first water came through a siphon under the river to Yuma farms That year Arizona won statehood.

Merchant and miner, banker and baker, Sanguinetti turned to farming in the only way he knows—all out. He built the first packing shed for shipment of farm pro-

duce from Yuma. Today he personally supervises the work on 1500 acres of his ranches. When he decided to go in for hog raising, he had 13,000 hogs at one time. He sent agents to New York and New Jersey, bought thoroughbred dairy stock, placed blue ribbon heifers on selected farms in the valley. He set up and operates a model dairy of 260 cows. He built the valley's first and only creamery.

He is an alfalfa grower, sending his own experts through the southern states to sell his alfalfa seed, helping southern farmers to introduce the legume on their cotton land.

He has disposed of his mining properties. "There are just as good mines in this region as ever were discovered," he believes. He holds no high opinion of today's prospectors. "They expect you to buy an automobile for them, to pay for their gasoline. They want baker's bread, not flour. They want bacon, sliced and packed in glass jars. And then they drive out on a paved highway about 30 miles and camp at a shady place and look at the mountains."

He keeps his old gold balances—those he has used more than half a century. They stand in a special room in the big Sanguinetti store at Second and Main. About $1,000 worth of dust and nuggets is weighed in them every month. And at a glance, Sanguinetti identifies the source of every lot of gold offered to him. He spreads the lot on a sheet of white paper, announces at once, "That's Picacho gold," or names whatever district may be its source. He never misses. There's no use trying to fool him.

The present store is the third building to house headquarters of the farflung Sanguinetti holdings. In February, 1891, the original structure was damaged by floods from the Gila which hurled themselves twice in four days against the little adobe community. Only 50 of 300 buildings were left standing in Yuma then.

The young merchant's resourcefulness stood the test of that flood, as it has many times since then stood the test of high and low water, depressions and booms.

When the adobe walls of his building melted like sugar in the swirling water, Sanguinetti rallied a crew. High shelves ran around the interior next to the walls and the top shelf was strong. He had a big supply of water kegs, used by teamsters and prospectors on their journeys into the desert. Under his orders these kegs were stacked on end under the top shelf, beneath the eaves of the hip roof. When the mud walls fell away, the roof settled snugly on its keg supports, the stock was saved.

A two-story building was erected then at the southeast corner of Second and Main. The present headquarters is diagonally across the street from this location, in a block owned by Sanguinetti in the heart of the business district of the city.

Yuma's first citizen is at his desk every day from 7:30 in the morning until 8:30 at night. Here he receives reports from his sub-managers, many of whom have worked for "the boss" 20 years, some 30 or even 40 years.

His civic activities are unending. After the 1891 flood, when the town's only school building—once used as a jail—was destroyed, it was Sanguinetti who led the movement to build the first Yuma school worthy of the name. He was clerk of the board.

He built a half-million-dollar ice plant, because he wanted his home town to be independent of an ice supply shipped in by express.

He shouldered the financial responsibility of bringing electricity to Yuma.

He organized and managed a bank, which he liquidated at 100 cents on the dollar, when other banking facilities became adequate.

He promoted first paving in the city and county.

He worked tirelessly for a highway bridge across the Colorado, replacing in 1915 the ferry which up to that time had been the only river crossing except the railroad bridge.

His charities are many, known only to the recipients. During dark days of financial depression, Sanguinetti checks have gone to the needy with the regularity of payrolls.

Memories revive for him the glamor of early mining days, of rich strikes and quick riches. But he lives in the future and the future of his country lies in agriculture, with a water supply guaranteed by Boulder dam, and electricity from Parker lower down the river, assured by congressional enactment.

"Dollars spent for reclamation are the best investment the United States has ever made." This is his emphatic declaration.

"Mines in our territory, in all their recorded history, produced about $20,000,000. We have produced nearly $100,000,000 worth of crops in the Yuma valley since Laguna dam was built in 1912."

One inflexible rule governs his daily routine. Three hours are given to a siesta, that fine old Spanish custom. For nobody, high or low, will he break this midafternoon period of rest and reflection. At any other time he gives courteous reception to all men. A baker who worked for him 20 years ago, is welcomed as an old friend.

When 16 organizations of Yuma county voted to give him the formal award for distinguished civic service, the Yuma Sun said:

"He has had more to do with the building up of the community than any dozen men. He has had a leading part in every advancement the community has made."

Sit with him as we did at the end of a day in January, when the department heads and the clerks in the big store have gone and only in the office of "the boss" are the lights bright. He is as fresh as the flower in his coat lapel, as solid as the mountains of the desert he loves. His wise and tolerant eyes apraise you coolly from under heavy brows. His hair is bushy, his head leonine. His complexion is a young man's.

He has three children, Francis, 25, who is employed in the store, Rose Marie, 20, whose hobby is photography, and Norman, 15.

"When I look back," he says, "a man's life seems a long time. So much has happened.

"One thing I have learned." He smiles but his voice is serious:

"Of all evils, work is the least."

Prizes to Amateur Photographers

Each month the Desert Magazine offers cash awards of $5.00 and $3.00 for first and second place winners in an amateur photographic contest. The staff also reserves the right to buy any non-winning pictures.

Pictures submitted in the contest are limited to desert subjects, but there is no restriction as to the residence of the photographer. Subjects may include Indian pictures, plant and animal life of the desert, rock formations—in fact everything that belongs essentially to the desert country.

Following are the rules governing the photographic contest:

1—Pictures submitted in the September contest must be received at the Desert Magazine office by September 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, 3¼x5½ or larger, and must be on glossy paper.

Pictures will be returned only when stamped envelopes or photo-mailers are enclosed.

For non-prize-winning pictures accepted for publication $1.00 will be paid for each print.

Winners of the September contest will be announced and the pictures published in the November number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.

Marshal South and seven-year-old Rider recently spent a day looking for a spring which according to Indian legend is to be found in one of the Ghost mountain canyons. A spring of water would add much to the security of life at Yaquitepec where the Souths are carrying on their experiment in primitive living. But the search was unsuccessful—and so the Souths must go through the summer with only the water that drained from their house roof into the cisterns during the last rainy season.

Desert Refuge

By MARSHAL SOUTH

THUNDERHEADS bank often upon the horizon these August days and the hard arch of the turquoise sky is a thirsty metallic backdrop for cruising cloud-mountains of dazzling white. There is something magnificent about these mighty, desert thunderclouds. It would be a warped soul indeed who could stand amidst the hush of the wasteland leagues and gaze at them unmoved. "Just clouds" would you say? "Simple aggregations of vapor. Drifting mist banks. Nothing more."

Well—perhaps. But as one stands in the hot, stretching silence of the endless desert and gazes upward these towering white sky mountains don't look like that. They don't look simple and commonplace or tagged with matter-of-fact scientific explanation. They look like something very different. They carry with them an ominous, disquieting sense of POWER. Of a living Power that is as far beyond science as the light of the sun is beyond the glimmer of a rushlight. A Power that moves in mighty silence; that is clothed in the swirling drive of stuff as unsubstantial as vapor. But a Power, nevertheless, before which the human soul shrinks in awe. Small wonder that the ancient dwellers of the desert sensed the might of the Great Spirit in these glittering pinnacles of cloud and conceived their dim, rumbling black caverns as being the haunt of the mysterious Thunderbird. Maybe we at Yaquitepec have gone back; mayhap the spirits of the old people have laid hold upon us. But science can keep its explanations—and its ideas.

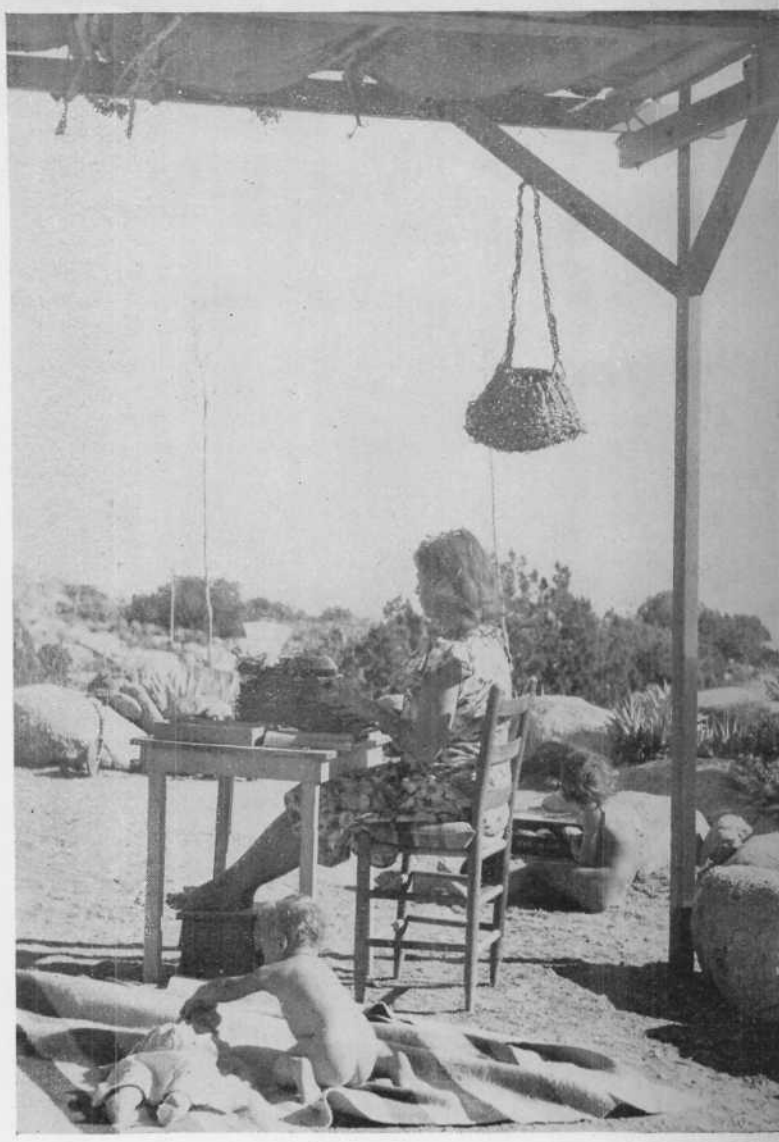
• • •

One of our cisterns is dry, and several days ago I washed it out to be ready for the first heavy shower. I left the hatch off so the dry air and sunshine would freshen the interior. And I forgot about it for a couple of days. When I remembered and went to close the opening there were a couple of little desert mice in the bottom of the cistern. Victims of false steps—or perhaps of venturesome curiosity—they were huddled now in a little furry ball in the coolest corner. The smooth cistern sides had proved too much for them to scale. Without movement, in a beady-eyed hopelessness, they sat and watched me while I maneuvered a long pole down into the depths of the dry tank.

Then, suddenly, as the butt came to rest a couple of inches from them, they understood. Hope electrified the huddled grey ball to action. With nimble, clinging feet they scooted one after the other up the steep inclined plane, leaped over the edge of the man-hole and scuttled to safety amidst the bushes. I had to climb down into the cistern to mop it out again before I replaced the lid. But I didn't mind. A cheap enough price to pay for the privilege of another sidelight on animal behavior.

• • •

We have about decided that the Ghost mountain "spring" is a myth. Oh, yes, there have been rumors of a hidden spring.



Tanya South is a busy person—she not only has the care of her three children, but she also conducts a daily school for the two oldest. For relaxation she brings the typewriter out under the ramada and writes. Her poems have appeared in many publications.

Vague, elusive tales, something like the lost mine stories of which the wastelands are full. In winter, when chill winds sweep over Ghost mountain and when everything that can hold water is full, we don't take much stock in the spring legend. But every summer, when the heat waves shimmer far out across the glinting badlands and our cisterns begin to drop their water level, we get out the spring story and dust it off—with all its vague, fascinating detail.

". . . There was an old Indian. And he told a prospector . . . It was on the *south* side of the canyon . . . The mountain sheep had quite a trail there . . . No, it's hidden by now, maybe . . . The Indians filled up a lot of those springs, so the white men wouldn't find them . . . Anyway that place used to be called hidden well . . ."

And so forth, and so on. Regular desert stuff. Just enough mystery—and maybe truth—in it to make it alluring. In summertime!

It was Rider who resurrected the legend this year. Sitting by the side of the hatch of the big cistern where he acted as doorkeeper against the thirsty wild bees—shutting down and opening the cloth cover as I drew the buckets of water—he said sud-

denly: "Daddy, let's go look for the spring tomorrow. You know that old man said . . ."

So the next morning when the dawn was drawing a faint pencil of red behind the phantom blue outlines of buttes and mountain ranges away off in Arizona, we set out. Hot, blinding sunlight was glaring on the barren ridges by the time we reached the brink of Mystery canyon. Over the cliff edge a gnarled dead juniper, age-blackened in the sun, reached fantastic arms. The swimming gulf below was silent with the breathless, ear-ringing hush of the desert. Already heat was pulsing from it. The white sand of the little wash, far down on the canyon floor, was a writhing blurr.

"It was on the south side of the canyon, about half way up," Rider said hopefully, quoting from the legends. He took off his sandals to secure safer foothold among the tumbled, wind-scoured boulders, and we began to go down.

And we went down—and down. And sideways, west and east. All through that forenoon and far into the afternoon we worked back and forth along that almost perpendicular wall of sun-seared rock. Beetling cliffs where the wild apricot trees, roots deep driven into fissures, waved siren green branches that hinted falsely of water. Hushed caves where the shallow shadows were carpeted thickly with drifted, dry desert leaves. Scorching gullies where, in the choking heat of an oven, we threaded our way perilously between teetering, giant boulders —many of them big as an office building—picking our footing along the brink of menacing chasms that yawned blackly amidst the jumbled rocks. Buzzards wheeled high in the hot silence. Ghostly little brown birds, voiceless as shadows, slipped away into the gloom of stirless junipers. Once a big hawk, silent and grey like some malignant spirit, launched himself startlingly from a black cleft and swept away down the canyon.

"It was on the south side," Rider kept saying gamely, "—about half way up the canyon wall. Maybe if we keep on . . ."

But his voice was slowly getting dryer and hoarser and his eager scramblings less and less nimble. The canteen was about empty. The beat of the sun in the open gullies was killing. "It . . . was . . . on the south side . . . Daddy. And . . . and maybe . . ."

But we quit, finally, after a stubborn argument, for Rider hates to abandon his purpose. "We'll come again then, maybe in the fall or winter," he said at last, grudgingly. "And then we'll look on the *north* side, too. If this spring is just a fairy story we've got to know for certain."

Hot and weary we clambered down into the bed of the canyon and headed on our roundabout course homeward, skirting the base of the mountain. The sand was hot and the catsclaw bushes, gloating at our aching muscles, slashed at us vindictively. Rider's feet were dragging. But he made no complaint. And, even as we tramped, he stooped every once in a while to pick up pottery sherds. The desert about Ghost mountain is littered with scraps of the shattered earthenware of the old people. How long? From whence—and to where?

Silence and heat and scattered chips of old jars upon the sand. It isn't so much what you can see on the desert; it's what you can *feel*.

It was a weary tramp. But there was no help for it. We were a long way from the trail that threads up Ghost mountain. But we knew well, from ample experience, that the longest way around was the easiest way home. We had made frontal attacks on the mountain before—to our undoing. A coyote got up presently out of a thin band of shade beneath a scorched butte and loped thirstily down the wash. He stopped, after a bit, and stared at us. Soon, as we paid no attention to him, we saw him trotting back.

It was a day for whip-tail lizards. They were out in extraordinary numbers, scampering their handsome forms across the hot sand. There is something of the stage villain's slink about the gait of a whip-tail. It is so exaggerated that it seems deliberately assumed. It is a play-acting pose that goes perfectly with the devil-may-care expression on their faces. Rider forgot his pottery collecting presently in the excitement of seeing one of them pick up and run on its hind legs. The whip-tails, in common with some other desert lizards, will do that once in a while. Folding in their forelegs against their breasts and balancing by their long tails they will scoot like the wind in queerly human two-legged fashion. It is then that one can glimpse the family connection between the lizards and the prosaic domestic chicken.

It was a day for bell spiders too. Their webs were everywhere. Weary, as we were, we blundered often into their low-strung nets and lines before we could turn aside. Bell spider is probably not the offficial name for these ingenious little desert dwellers. Without doubt they, unknowingly, shoulder some fearsome Latin appellation. But Rider calls them bell spiders because of the tiny fairy-like bell shaped house they build for themselves. This sun-and-rain tent, open only at the bottom, hangs like a bell in the midst of an artful arrangement of supporting cables. Usually about an inch and an eighth long and three eighths of an inch in diameter at the bottom, it is ingeniously woven of white silk and camouflaged on the outside by scraps of dry buckwheat flowers, bits of dead grass or tiny dry leaves. Beside it, or around it, the little tent dweller weaves a marvelously elaborate catching net, almost invisible and of a texture resembling fine white crepe.

The spider itself is a ghostly whitish color, sometimes faintly marked, and with slender, brownish legs. It resembles, somewhat, the black widow; another point of similarity being its extremely tough web. Until one peers closely and discovers the neat and beautifully woven net which this spider makes amidst its sprawling and untidy arrangement of cross cables, its web has a striking resemblance to that of the widow. Whether its bite is harmless however, or charged with poison similar to its sinister relative, we do not know.

It was late when we plodded up the last stretch of the home trail. Even Rider had had more than enough. Tanya, Rudyard and Victoria were at the door to welcome us. "Did you find the spring?" Tanya asked hopefully.

Headed for the water olla, Rider shook his head:

"We've got a better idea," he said huskily. "We're gonna get a lot more cement and just *build* a spring for ourselves."

Which is the way it is likely going to be. And, after all, there is a deal of comfort in the thought. Necessity is the goad which spurs to accomplishment. And a thing won by work has a value far in excess of anything that comes easily. Perhaps it is a good thing that there was no spring upon the summit of Ghost mountain when we settled here. If there had been there might perhaps have been, today, no Yaquitepec—and a lot of other things.

With a spring, and abundant water, we might have found life in the desert "just too hard"—and moved away.

• • •

Some ask to do some noble deed,
To rouse man's inmost, deepest core;
Or fill some very special need,
And thus enrich the worldly store.

But I have learned that helping one
Is helping all, though unaware.
And so, content from sun to sun,
I strive to do my humble share.

—Tanya South

BOOKS OF YESTERDAY AND TODAY

—a monthly review of the best literature of the desert Southwest, past and present.

DRAMA OF THE GOLD RUSH ON THE COLORADO RIVER

Early in the 'sixties when word went out that Mexican prospectors were finding great lumps of gold in the gravel along the Colorado river at La Paz, Arizona, there was a stampede of fortune-hunters across the desert to the new strike.

Hundreds started from Los Angeles, soldiers at Fort Yuma deserted, Mexicans poured in from Sonora. There were no roads to the new field and scores perished on the waterless expanse of desert that lay both east and west of the new placer diggings, but despite the obstacles, La Paz within three years grew to an adobe town of 5,000 persons.

Into this camp came big Bill Conover, ne'r-do-well prospector of San Francisco and points north. Bill is the hero of Lucile Selk Edgerton's historical novel PILLARS OF GOLD, published in July this year by Alfred A. Knopf, New York.

Conover had two reasons for coming to La Paz. He wanted gold—gold that he had dug from the earth with his own hands. And he wanted Julia MacDill, pampered daughter of San Francisco. She liked Bill and wanted to see him make good at something.

Luck plays an important role in a gold rush, and Conover's luck was all against him. And there were other obstacles to test the character of the San Franciscan—the enmity of guerilla rebels who were plotting to seize Arizona territory for the South, the vindictiveness of a big-money group that sought to squeeze the small miners out of this rich new field—and the wiles of a black-eyed Mexican girl who wanted Bill more than any man in camp.

The manner in which Conover met and surmounted most of these obstacles makes a story of thrilling interest, and the author has told it well. Historically it is sound, and equally important, it is true to the desert. Not since Harold Bell Wright's Winning of Barbara Worth has a novelist presented both the glamour and the grim reality of the desert region so accurately.

Mrs. Edgerton knows her desert. As a young writer just out of school she went to Blythe in the Palo Verde valley and lived for many years across the river from the old adobe ruins of La Paz. It was there she met and married the young city attorney, Dean Edgerton, to whom the book is dedicated. Dean did much of the historical research for his wife's story.

The Edgertons have given new life and interest to one of the most thrilling episodes in the history of the lower Colorado river, the period of steamboat transportation. This book is entitled to high rank among the historical novels of the Southwest. 403 pages. $2.50.

—Randall Henderson

• • •

INTERPRETS THE MOODS OF THE SOUTHWEST

Indian, Spaniard, Anglo-American, all have contributed to the culture of the Southwest, and it is in an effort to present clearly the contribution each has made that Haniel Long has written PIÑON COUNTRY, the second volume in the series of American Folkway books published by Duell, Sloan & Pearce of New York.

The nut of the piñon pine has always been an important food for desert Indians in the plateau region of northern Arizona, southern Utah and New Mexico, hence the selection of this title as symbolic of the region covered by the text.

While the book contains a great deal of history and factual material bearing on the emergence of Southwestern civilization from the haze of pre-history to the highly complex period of today, it is primarily an interpretative volume, written by a man who during long residence in the Southwest has sought to appraise the influence of individual leaders, and to understand the significance of environmental factors as they affected the lives of humans.

Coronado, Oñate, Kit Carson, Carlsbad caverns, marijuana, sand-paintings, maize, the Gallup riots— these are typical chapter headings, and they bring within the book a wide sweep of knowledge and comment designed to take the reader backstage and give him an understanding of that strange region where primitive and "civilized" men dwell together in a fairly amicable social order. 302 pages, epilogue, index. $3.00

• • •

HE FOUND STONES AND EARTH AND WEATHER

In a sweeping, panoramic novel of the turbulent years of the growth of California, Ruth Eleanor McKee tells the story of Christopher Strange, a young New England lawyer and his father, who come into the West armed chiefly with a great urge to escape the rigid bounds of eastern society. Christopher's participation in the stirring events of the half century that followed the gold rush, first as assistant to a lawyer whose ethics were somewhat below even boom-town standards and then in politics where he championed the cause of Free California and the transcontinental railroad, brought him little satisfaction. His greatest battle came after the Civil war when he led a spirited but futile resistance against the domination of California by the Big Four combination.

How Christopher overcame his growing sense of failure, and redeemed faith and hope in living by turning to the desert, seeking, finally, only the privilege of living there, working and giving all he had to an irrigation project that others might come to stay, is told with sincerity and a depth of understanding.

"I have come to appreciate reality," Christopher says in soliloquy. "It has been a costly lesson, but I think I have learned it well. Here I have real things to work with, elemental things —stones and earth and weather. It is nature I'm working with now, not human caprice."

From the desert had come the peace that goes with a sense of security and the feeling of real accomplishment. But as in real life, Christopher's work is unfinished, and he leaves it knowing that he has only opened the way for others to follow.

Miss McKee has told a story that has long needed telling. The historical details are accurate for the most part, and while these have been told and retold many times, the theme of her story is fresh and superbly presented. There is more real depth to the odyssey of Christopher Strange than is to be found in any regional novel to come out of the West for a long time.

In her acknowledgements, Miss McKee pays tribute to Pearl McCallum McManus, daughter of the actual founder of Palm Springs and the first white child to live there. While all characters are purely fictitious, the author drew heavily on the experiences of the McCallum family, a fact, no doubt, which helps to make her characters live and breathe through every one of the pages.

CHRISTOPHER STRANGE by Ruth Eleanor McKee, 706 pages, Doubleday Doran, Garden City, New York. $3.

—Marie Lomas

CALIFORNIA

NEEDLES . . .

• Surprises will reward you every mile of your trip when you travel via Needles. Whatever your vacation or recreational desires may be you will find it here. Explore canyons, caves and old Indian trails; hunt for gems and minerals in nearby gem fields; enjoy fine fishing, swimming and boating on beautiful Lake Havasu. If you would enjoy the thrills of discovery by all means come and visit Needles. The wonders of California's desert country are yours!

★

NEVADA

LAS VEGAS . . .

• Las Vegas, Nevada, (Pop. 11,000), is rapidly becoming the West's most famous play spot. Boulder Dam, Death Valley, Grand Canyon and the Southern Utah Parks are immediately adjacent, and combine with the liberal laws of Nevada to make the West's largest single tourist attraction today.

CALIENTE . . .

• Charming Caliente is a logical overnight stop as you travel the International Four States Highway. Be sure to see Cathedral Gorge State Park and Game Refuge . . . in the early morning light and the shadows of dusk. It will be a sight you will not soon forget. Arches and spires are everywhere and at dusk some of the formations resemble cathedrals and skyscrapers. Stop awhile and enjoy Kershaw Canyon-Ryan State Park—a favorite camping and picnicking spot.

PIOCHE . . .

• For years known as a "ghost town" Pioche is now called, " The camp that came back." Pioche is now the largest producer of lead, zinc and silver in Nevada. Of interest to all who travel along the International Four States Highway is Cathedral Gorge, just 8 miles from Pioche; BOOTHILL which boasts 49 graves; "$1,000,000" Courthouse built in 1870. Be sure to see them all when you travel U. S. Highway 93.

ELY . . .

• Visit the Hub of the Copper Empire on U. S. Highway 93—**ELY, NEVADA**—where man and nature join in presenting two wonders of the West, the Ruth Copper Pit and Lehman Caves. One, the largest hole in the world, created through the toil and genius of man to produce a metal vital to the country; the other a maze of underground caverns, delicately and tirelessly carved for ages by the artistic hand of nature.

NEVADA

WELLS . . .

• Like the hub of a wheel, Wells lies at the crossroads of four great national transportation systems. Here east-west Transcontinental Highways U. S. 40 and north-south International Highway U. S. 93 meet. Wells is served by Southern, Western and Union Pacific railroads. Also Greyhound and Burlington busses. Here the traveler, hot and weary from desert driving, may plan to rest, assured all during the summer of sleeping through cool mountain nights. Comfortable, modern conveniences—real western hospitality.

★

IDAHO

TWIN FALLS . . .

• Located in the heart of a vast geological paradise, Twin Falls affords tourists, sight-seers and sportsmen a wealth of enjoyment. Mighty Snake River with its towering canyon walls, tremendous spring-fed waterfalls, and other natural phenomena skirts the city a short distance to the north, and nearby are many other outstanding attractions such as the famous Thousand Springs, Sinking Canyon, Craters of the Moon, City of Rocks, Shoshone Falls, 50 feet higher than Niagara, and the Rim-to-Rim Bridge, 476 feet high and nearly a quarter of a mile long.

JEROME . . .

• Gateway to the famous Sawtooth Mountains Jerome is also the headquarters of the Canyon of Ten Thousands Springs Association. Located for miles up and down the Snake River Canyon are tens of thousands of springs coming out of the canyon walls on the north side of the river. Right at our door are some of the scenic wonders of the country. There are several beautiful falls: Shoshone Falls, 15 miles from Jerome are 50 ft. higher than Niagara. Many interesting lakes and rapids of various hues are found. Facilities for boating, fishing, bathing and other scenic and recreational attractions are good.

SHOSHONE . . .

• Headquarters of So. Central Idaho. Hard surfaced highways radiating in five directions. Gateway to U. S. 93 highway via Shoshone Ice Caves, Black Butte Crater, Magic Reservoir and Silver Creek fishing areas, Sun Valley resort and Sawtooth Forest wonderland. Gateway to U. S. 93 — A highway via Craters of Moon National Monument, Lost River fishing area and antelope range. Hub of productive farming area, with unexcelled irrigation supply and complete rural electrification. Farm lands open for settlement. Wool-growing center. Good hotels, cafes, garages, etc.

HAILEY . . .

• Today there remains in Idaho one last place where lovers of true out-of-doors recreation can enjoy a vacation at reasonable cost. Although not a national park, its scenic beauty equals and its fishing, hunting, mountain climbing, and winter sports excel many well-known areas. Vacationists, tourists, fishermen and hunters coming into the Sawtooth country will find Hailey, near famed Sun Valley, a suitable headquarters. Here fishing, be it trout or salmon, compares with the best. Deer, elk, antelope, goat and bear abound in this region.

FOR your next vacation trip drive the 1500 miles of broad highway that connects three nations and four states, with an ever-changing landscape that offers the motorist every variation from the forest clad slopes of the Canadian Rockies to the semi-tropical zone of the Southern California desert!

• This is the International Four States Highway, extending from Canada to Mexico, through Montana, Idaho, Nevada and Southern California.

• Famed as the United States is for her scenic roads it is doubtful if there can be found anywhere else on the American continent any other 1500 mile span of highway which offers so wide a range of natural scenic attractions as can be found along this newly created route.

• Intersected by all the main east and west roads the International Four States Highway is the natural route by which the motorist gains access to the beautiful Glacier National Park region of Montana; the entrancing primitive area of Idaho; the gorgeous mountain playgrounds of the Canadian Rockies; the scenic wonders of Nevada and the beautiful, ever-mysterious, ever-changing Southern California desert. Truly this is a route for those who find their greatest vacation happiness far away from the crowded roads.

★

ACCOMMODATIONS AND SERVICE . . .

• While the area covered by the International Four States Highway is uncrowded and unspoiled, the cities and towns along this route are in no sense primitive. Modern accommodations are available at frequent intervals at common sense prices and everywhere the true western hospitality prevails.

• Towns, service agencies and civic organizations along this route are striving to make the highway the most popular with all motorists. For this reason you will find that every effort has been made to furnish the tourist with the best possible service at most moderate prices.

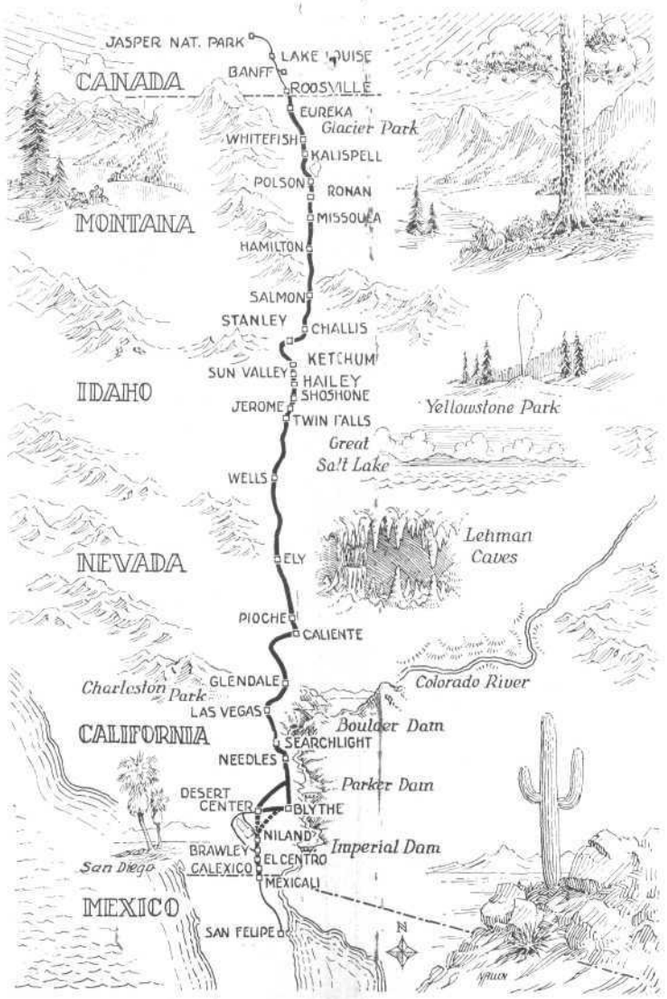
• This year make the most of your vacation dollar. On your trip to the scenic northwest go one way, come back another. Let the International Four States Highway be one of your routes. It's a trip you will not soon forget.

• For more detailed information, points of interest, accommodation or any other question, a note to the secretary of the Chamber of Commerce of any city listed on this page will bring you the desired information.

CANADA **INTERNATIONAL** MEXICO

FOUR STATES HIGHWAY

Built by Modern Engineers Landscaped by the Gods



U. S. 93 NORTH FROM LAS VEGAS

ROAD CONDITIONS

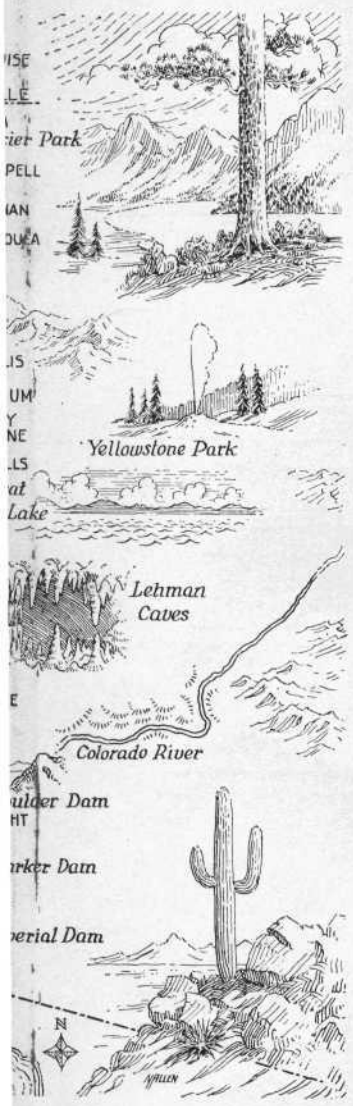
The International Four States Highway is paved with the exception of two short links, and construction work is now in progress that will provide a continuous ribbon of concrete and asphalt from the Canadian boundary to the Mexican border.

THE GREAT NEW ROAD OF T

TIONAL MEXICO

STATES WAY

rn Engineers y the Gods



3 NORTH FROM LAS VEGAS

DITIONS

Highway is paved with the d construction work is now continuous ribbon of con- Canadian boundary to the

Scenic Attractions accessible and along the International Four States Highway.

CALIFORNIA

- Mitchell Caverns
- Colorado River at Needles
- Parker Dam
- Los Angeles Aqueduct
- Joshua Tree Nat. Monument
- Salton Sea
- Mullet Island
- Boiling Mud Pots
- Dry Ice Plant
- All-American Canal
- Imperial Valley "Winter Garden of America"
- Imperial Dam

NEVADA

- Whipple Lime Caverns
- Cathedral Gorge Park
- Beaver Dam State Park
- Ryan State Park
- Lost City
- Valley of Fire
- Nevada's Gyp Cave
- Charleston Park Resort
- Lake Mead
- Boulder Dam
- Knob Hill
- El Dorado Canyon
- Old Searchlight
- McGill Smelter
- Ruth Copper Pit
- Lehman Caves Nat. Mon.

IDAHO

- Miniature Grand Canyon
- Stanley Basin
- Galena Summit
- Sun Valley
- Burning Cave
- City of Rocks
- Craters of the Moon
- Shoshone Ice Caves
- Shoshone Falls
- Twin Falls, Snake River
- Twin Falls' Bridges
- Thousand Springs
- Goose Creek Game Refuge
- Antelope Game Refuge

MONTANA

- Glacier National Park
- Whitefish Lake
- Flathead Lake
- National Bison Range
- Old Fort Stevensville
- Big Hole Battle Mon.
- Gibbon's Pass
- River of No Return
- Salmon River Gorge
- Bitterroot-Selway Area
- Chief Tendoy Monument

OAD OF THE WEST

IDAHO

SUN VALLEY . . .

• Do stop off at Sun Valley, famous year 'round resort tucked away in the foothills of Idaho's Sawtooth mountains. Here you will find your favorite sport, whether it be ice skating on the outdoor, artificial rink open the year 'round, swimming, tennis, golf, scenic ski lift rides to the top of surrounding mountains, riding, fishing, boating or skeet and trap shooting; and expert instructors are on hand to give you a brush-up if you so desire. Two hotels—comfortable, moderately-priced Challenger Inn and the luxurious Lodge afford all conveniences of modern civilization. For complete information, write W. P. Rogers, General Manager, Sun Valley, Idaho.

KETCHUM . . .

• Ketchum, located in the Sawtooth Mountains, has become the most popular tourist and vacation center in the Western United States. Fishing, hunting and other sports attract thousands of pleasure seekers yearly. One mile east of Ketchum is the nationally known Sun Valley where the Sun Valley Rodeo and National Ski Meet is held yearly. This beautiful back country is easy to reach either winter or summer. Paved highways which are kept open the year round, the U. P. Railroad and a daily stage line furnish a choice of transportation.

STANLEY . . .

• Welcome to Stanley! Once you become familiar with the unlimited wealth of recreational advantages of Southern Idaho, you will agree it's a paradise from every standpoint. You will find this natural fairyland the most enjoyable of all places to spend your vacation because it affords you everything the great out-of-doors has to offer. It's all here around Stanley —a scenic hunting and fishing paradise. TRUE western hospitality awaits you. You are always welcome!

SALMON . . .

• On the "River of No Return." Gateway to Idaho's Primitive Area. THE TOURIST PLAYGROUND, Lakes and streams teeming with trout. Big game hunting and bird shooting during fall months. Delightful mountain scenery. Write secretary Salmon Chamber of Commerce for illustrated map.

★

MONTANA

HAMILTON . . .

• Hamilton lies in the heart of the Bitter Root Valley. On the east is the Sapphire Range of the Rockies, low lying and heavily timbered, offering big game hunting. On the west lies the famous Clearwater country, considered one of the largest primitive areas in the United States. Organized, experienced packers are available at low cost to take parties through this vast wonderland, most of which has never been trod by the foot of man—where game of all kinds abounds and with scenery second to none. We extend to you a cordial invitation to visit us.

MONTANA

MISSOULA . . .

• Missoula is the center of the great recreational area of Western Montana. From Missoula you can drive your car into the heart of the mountain areas. You can climb up above the timber line and gaze over a vast panorama of fleece-tipped mountains. You can spend hot summer days in the cool shade of huge pines and sleep at night under blankets. For a cool, delightful vacation, visit Western Montana. Make Missoula your headquarters, for at Missoula you are near any type of recreation you desire.

RONAN . . .

• The Center City. Headquarters of the West's finest bird hunting—ducks, Chinese pheasants and geese. In the midst of colorful Indian Country. Ten minutes from gorgeous Mission Range and Alpine wonders. Twenty minutes from National Bison Range and Wildlife Refuge.

POLSON . . .

• Located foot of beautiful Flathead Lake. Fine fishing, boating, swimming. Best Chinese pheasant area in Montana. Plenty of elk, deer, buffalo and other game. Low cost cabins, camps and dude ranches. Heart of Kootenai and Salish reservations. Want information? Just write to POLSON CHAMBER OF COMMERCE.

KALISPELL . . .

• No other place in America offers recreational advantages, lakes, rivers, forests, mountains and scenery comparable to the Flathead in Northwest Montana. Tempered by many lakes, rushing trout streams and rivers, lofty forests and snow-capped mountains, the climate is ideal. Outstanding around Kalispell is Glacier National Park, its 1,534 square miles forming the most unique and magnificent of all our National Parks. Here too is Flathead Lake, and 87 other gem-like lakes, 2,186 miles of fishing streams, Dude Ranches, forests and primitive areas.

WHITEFISH . . .

• The vacationist who chooses Whitefish Lake for his summer outing will find himself in the heart of one of the finest recreational areas in the Northwest. He will find an abundance of modern cabins from which he may set forth each morning to a new adventure. Facilities for every known sport from golf on all grass, nine-hole course to swimming in Whitefish Lake, are literally at his finger tips. Fishing is unexcelled, and catches of Mackinaw trout from Whitefish Lake, average 20 pounds. Many visitors to Glacier National Park make Whitefish their headquarterrs. For this section boasts the lowest cost-of-living level in Montana.

Vacation-Land

WHERE TO STAY, RELAX, HAVE FUN

LAS VEGAS, NEVADA

Boulder Auto Court

Located only ½ mile south of city center of Las Vegas — on the main highway to Los Angeles (U. S. 91 and 466)

Thirty Miles to Boulder Dam

Thoroughly Modern Cabins

100% Air-Cooled Electric Heat

Mr. and Mrs. Nick Pahor, Owners

GLENDALE JUNCTION, NEVADA

As you tour along the International Four States Highway, stop in at . . .

Glendale Service

Located just ¼ mile from the intersection of U. S. 91 to Utah and U. S. 93 north.

Modern Cafe and Fountain.

One Stop Service for Your Motoring Needs.

Stop in, rest, relax and ask for information about road conditions.

STANLEY, IDAHO

Let the . . .

GATEWAY

. . . Entertain You

Pack Trips — Hunting — Fishing

Cafe — Dancing — Refreshments

Real rustic cabins with cooking facilities and fireplace. Keep right on U. S. 93—Just ½ mi. from Stanley Junction.

APACHE HOTEL

For many years the Apache Hotel has been the center of hospitality in Las Vegas, Nevada. The Apache Cafe is recognized as one of the finest in the West. The Casino is conducted in a dignified manner. Stay at the Apache — the center of social life in . . .

Las Vegas, Nevada

TWIN FALLS, IDAHO

The new . . .

Rogerson Hotel and Coffee Shop

120 rooms. Only hotel and coffee shop in Southern Idaho completely refrigerated and air conditioned.

Coffee Shop Noted for Fine Food.

KETCHUM, IDAHO

Bald Mountain Hot Springs Cabins

Modern cabins and natural hot water plunge. Rustic, comfortable, pleasant. Plain and deluxe. You see it as you enter Ketchum.

STANLEY, IDAHO

Resthaven Cabins

On the Salmon River in the Sawtooth Mountains

Fishing — True Western Atmosphere —Hunting—

Moderate rates—Lower Stanley, Ida.

WELLS, NEVADA

In every town there is one best place to have your car serviced, repaired or to get reliable touring information. In Wells that place is . . .

Supp Bros. Garage

Complete One Stop Service

STATE OF IDAHO

Much of the value of a vacation is found in the change it affords from the routine of the balance of the year. In Idaho, the broad, open plains of the Snake river plateau, the snow-capped Sawtooth mountains and the forest-clad ranges invite you to come and forget the rush and bustle of every-day activities.

The lakes of Idaho are gems set in mountings of granite crags. Wildlife is sufficiently abundant to satisfy, but game enough to challenge your skill. The people of Idaho extend a welcome to visitors that is as western as the odor of crisp bacon, wafted on the smoke of an open fire.

The Idaho State Chamber of Commerce invites you to come to Idaho this year and every year.

HAILEY, IDAHO

Hiawatha Hotel

An 82 room modern hotel with natural hot water swimming pool. Tourists and vacationists enjoy making their headquarters here while in the Sawtooth Mountains. Rates moderate.

Quiet, clean and comfortable.

HAMILTON, MONTANA

Hamilton Hotel

. . . Modern . . .

Mrs. Bethel Acuff, Proprietor

Hamilton, Montana

POLSON, MONTANA

Hotel Salish*

Popular hotel on beautiful Flathead Lake in the heart of Montana's scenic wonderland.

Fishing – Hunting – Boating – Bathing Hiking – Golfing

Dining room recommended by Duncan Hines

"Where Every Window Frames a Picture"

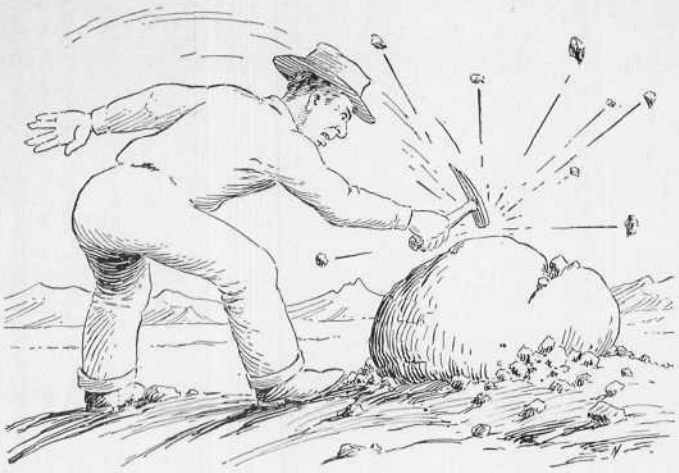
Polson — Montana

*Salish—Tribal name of the Flathead Indians whose reservation surrounds Polson.

HOTEL NEVADA

Largest and most modern hotel in Eastern Nevada, this 100-room establishment has made Ely a tourist center for a large area. With steam heat and metropolitan type service, "The Nevada" also includes a popular bar, a cafe and a drug store.

Ely, Nevada



Here is a story that all rock collectors should read. It is directed especially at those thoughtless or ignorant "hammerhounds" who go slashing and pounding their way through a mineral field leaving nothing but worthless rubble behind them. And also at the "cabochon hunters" who forget that many of their brothers in the rock fraternity are looking for large specimens from which to saw polished slabs or bookends or other useful articles. The proper use of a collector's hammer is to dislodge specimen material from its place, or to remove matrix or other waste material—never to break open a potentially good specimen to see what is inside. One good specimen, sawed and polished, is worth a thousand that have been smashed with a hammer.

By MORA M. BROWN

Have a Heart, Hammerhounds!

OUT in our back yard is the "rock" house in which my husband through his hobby has unfolded a new world. Rocks, that once meant little to us except stubbed toes, have changed to adventures in which the outcome is revealed only after long sessions with diamond saw, grinding wheels and polish. For we have learned that underneath their uninviting jackets rocks conceal more design and color than a desert scene in spring.

We were discussing this hobby of rocks one evening last winter. Appropriately we were in the "rock" house, and we shouted because my husband was at the saw cutting the first one of a pair of geometrical Howlite bookends. To add his bit to the noise my son was at a grinding wheel shaping his first cabochon.

This whole rock idea was new and fascinating to him, but already I detected in him the symptoms of that malady known as rock-fever.

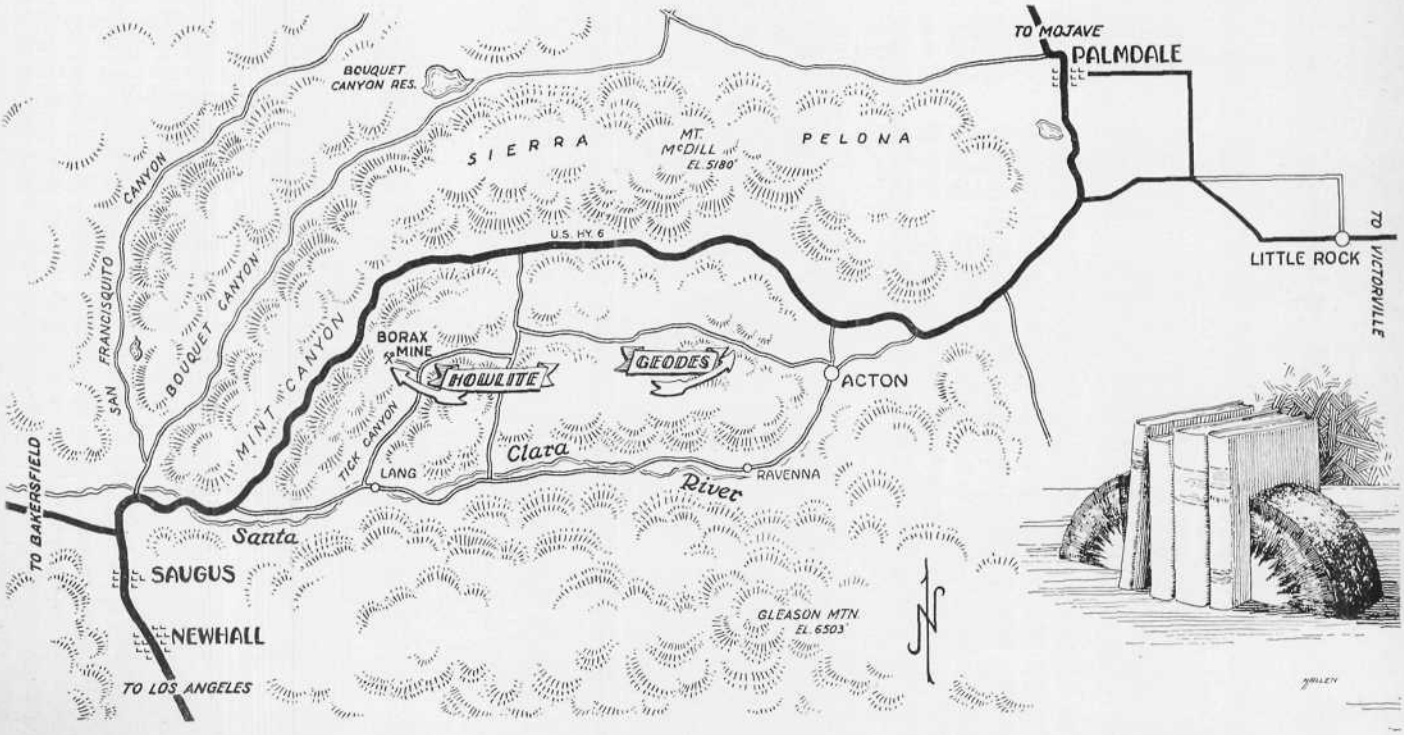
Now rock-fever has plenty of symptoms, but just one cure—and that one only temporary. It is a trip to the desert after rocks. So, on this night, when my husband maneuvered us into an examination of raw materials on hand, I knew what was coming. We had, he was appalled to find, absolutely no Howlite from which to cut the second bookend, and less than no material for making cabochons. We would have to go hunting.

"I do wish, though," he said, "there was one place left where hammer hounds haven't been working."

"What," son asked, "are hammer hounds?"

"They are people with good intentions and bad habits," husband stated flatly. "They go along with rockhounds for the trip and smash everything they can reach with hammers."

We went over Cajon pass and took the Palmdale road to Mint canyon. About four miles west of the intersection of the Acton road with the main highway we took a dirt road to the right and followed it until we reached a series of flat grey dumps left there from borax mining. The place is



These specimens show what the saw and polishing wheel will do with desert rocks—if the hammer hounds will only leave them intact. The right half of the set of Howlite bookends shown in upper center was made from the nodule discarded by the man in Tick canyon.

called Tick canyon, and when we arrived many other cars were there ahead of us.

We parked and walked up a narrow gully, climbed steeply to the right and came at last to the foot of a huge dump thickly dotted with rocks. There, as on previous trips, we saw many of the big knurled grey nodules known as Howlite. In the trough where the dump ended against a curve of hills were many more. But this morning, search as I would, I could not find a Howlite nodule, large or small, not marred by ugly white scars made with hammer blows.

"Hammer hounds," I thought, and watched the people climbing around that dump to see if some of them were doing the damage. But I was baffled. Everybody was hammering with vim, and those who seemed the most aware of what they wanted were hammering the hardest.

I decided to ask questions. I do not know the name of the man I found energetically whacking the knurls from a large and symmetrical specimen of Howlite, one which unbroken would have made an interesting pair of bookends.

"Why do you knock off the bumps?"

He paused long enough to glance at me from a mental height. "To tell whether it's any good."

"How do you tell?"

He sighed. "Because if the broken faces don't have any fine black lines or brown stains, it's useless for cutting and polishing."

His hammer had exposed several unmarked white faces. It was, he decided, a worthless chunk, and sent it rolling down the dump into the trough. I noted where it came to rest because it looked large enough to be the piece my husband wanted for that second bookend.

Next I approached some students. Their instructor was saying, "Just hammer off a face or two, and discard the ones that aren't marked with black lines." Watching others, I realized that this was the rule apparently followed by all.

One member of the party invited us to go with them that afternoon to hunt geodes in Mint canyon. So, with that rescued Howlite tucked with other pieces in the back of the car, we retraced our road a little more than half way to the highway, then we turned right on another dirt road into the rolling hills of Mint canyon. We stopped in a sort of saucer in the hills and scattered out from there. A few years ago this whole area was comfortably strewn with milky translucent little nodules which, when cut, polished, and the two halves laid side by side, looked like shining grey and white butterflies.

Everybody had a hammer. And here, once more, the hammers worked, but their activity did not compare with that of the morning; there was so much less to work on. It was quite an event even to find a first class geode. But over the ground where they had been were countless fragments with tiny crystals glittering in their hollows.

I saw an attractive woman eagerly place each small geode she discovered on a rock and deal it a blow. Sometimes the blow smashed the geode. Sometimes the geode did not break. I asked her the reason.

She answered me simply and honestly. Mint canyon geodes, she had been told, were good for polishing only when they

were solid. "It is only the hollow ones that break—the ones not any good." And yet, I know many people—and I am one—who especially favor those little hollow geodes because they love the miniature beauty of the tiny crystal caves. But the only way to preserve those crystals is to saw the geode—not smash it with a hammer.

The following week we went to Opal mountain seeking geodes and opal material suitable for cabochons. I had not seen this area for three years, and this day I did not recognize it when we reached it.

On our first visit we found the hills spotted here and there with the dull rust-colored nodules which, when cut, produce such striking sea-scapes. Also, there seemed to be white opal and jasper enough for everybody for years. But, three years later the surface geodes were gone, but there were geode fragments made by hammers. Hammers had found the opal and jasper, too, and had made an unbelievably wide swath of rubble along both sides of the road. In those three years the rock patterns it had taken nature a million years to create had been reduced to scraps.

This year even the scraps were gone. Bit by bit they had been gathered up by those who came too late. And nature, ashamed I guess, was doing her best with desert scrub to cover up the scars.

The man I questioned at Opal mountain was digging hard and long in his search for geodes. He was alone, and when he made a find he whacked a corner with his hammer. If he still was uncertain, he broke off more.

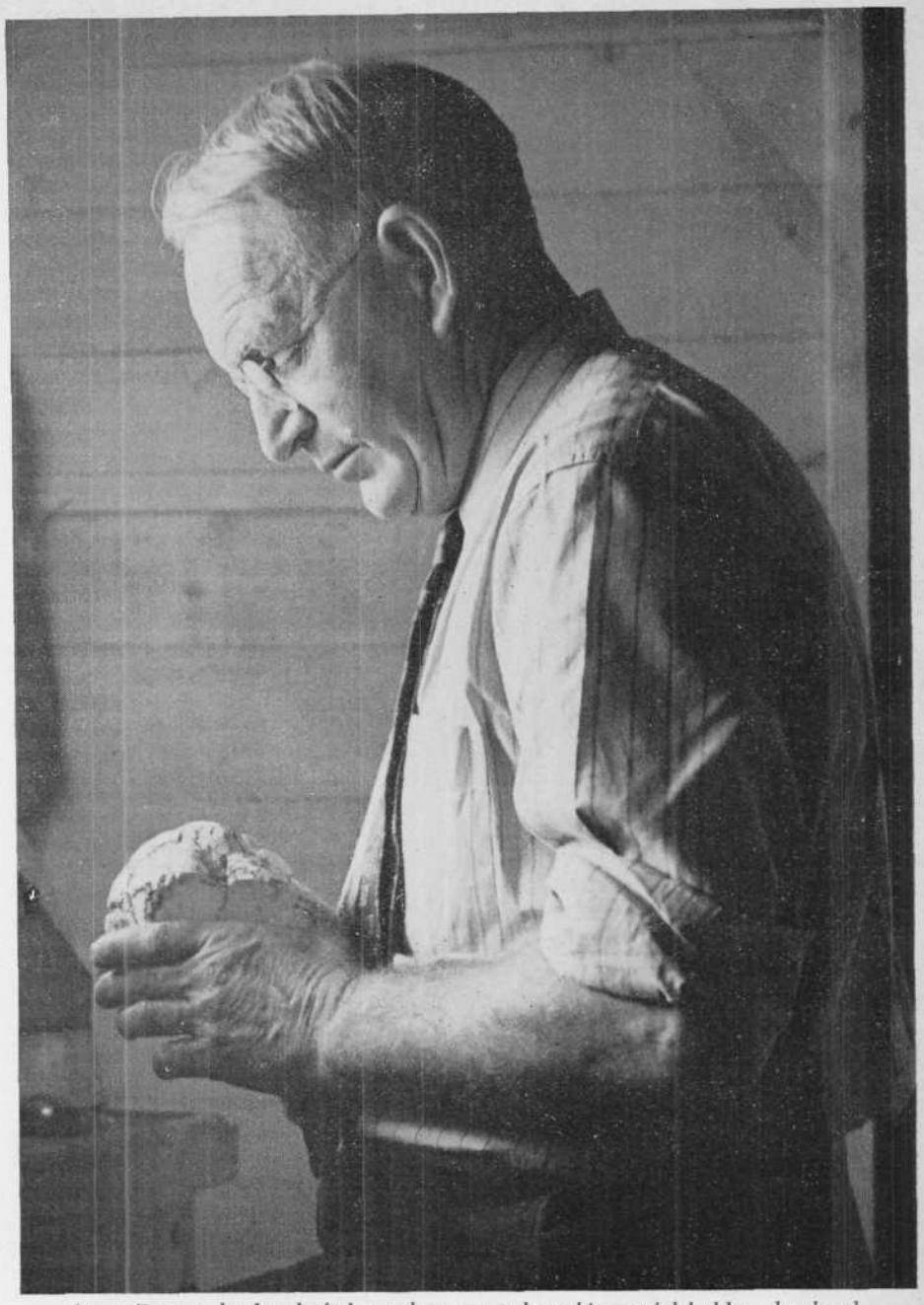
"You have to break 'em," he answered me, "to see whether they're worth the trouble to take home."

I ached to suggest to him that surely they were not worth the bother when a hammer was through with them. I was discovering that this hammer-hound business went deeper than I had thought.

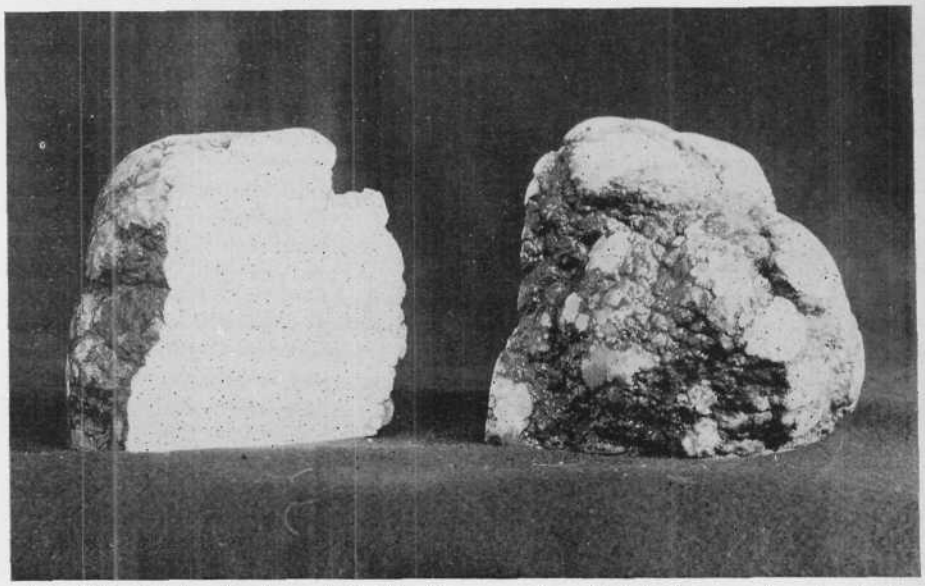
Now I am a rockhound, by marriage. In my role of mascot I have tagged all kinds of rockhounds over all kinds of desert, and I have yet to see a blessed member of the tribe who would deliberately ruin good rock specimens. And yet, my discoveries on these three hunts, and on other trips also, show that, while the go-alongs break more rock material than they should, we rockhounds are also doing a lot of damage without realizing it.

Why is it then, I wondered, that we who most sincerely prize the desert's offerings of minerals are the ones who most readily break them up? And, as nearly as I can learn, this seems to be the answer:

Every mineralogist who goes to the desert after rock has in mind the particular use he intends to make of what he finds. Every specimen is studied from that viewpoint. And there seem to be as many viewpoints as there are mineralogists. For instance, a man whose hobby is to make cabochons will hammer away a large part



Amon Brown, husband of the author, at work on his special hobby—bookends.



Set of Howlite bookends made by Mr. Brown, as described in the accompanying text.

of a stone, which another would use for polished slabs, in order to take home the small well-marked piece he wants to grind. The geode hunter who wants cabochon material will smash the hollow geodes—and leave nothing but broken pieces for the collector who comes later seeking the crystal-lined hollow specimens to take home and saw. For that is the only way that the beauty of a hollow geode can be preserved.

For a more specific example, let us go back again to that big Howlite nodule we salvaged at Tick canyon. I do not know the use the man who rejected it had in mind, but I do know that when it was cut and polished it was more beautifully lined with black and more effectively spotted with brown than any Howlite nodule my husband has ever cut. And he has made at least 20 pairs of Howlite bookends.

In this instance, because the bookends were sawed on all sides, the broken knurls had not ruined it for him; but there is a certain type of Howlite bookend impossible to make with broken knurls. For these he selects one symmetrical unbroken nodule. From the most suitable side he cuts the bases. Then, after due thought, he cuts the nodule in half to achieve the greatest symmetry. These are the bookends in the rough. Carefully then he grinds off the grey surfaces of the most prominent knurls to expose round white faces with their markings. By lapping, by sanding, by polishing, he makes these faces shine. Then he entrusts to me the careful work of brushing clear lacquer over the grey stone without infringing on the polish.

Nature suggested these bookends. She is, we have found, much better at designs than we are. She has individuality. And certainly she used skill and artistry enough in creating her amazing rock formations and patterns to be equal to suggestions for their use. Most of us realize this and turn to nature for ideas. What we do not seem to realize is that even in another million years nature cannot replace for our use the stone beauty which our hammers have destroyed.

I am reporting here only what I have seen. Other rockhounds tell me that hammers deal out tragedy wherever we rockhounds go. And so, if as it seems we are largely guilty, I wonder if we, our families and our friends can't get together, in thought at least, and make a resolution. This resolution:

As a lover of the desert, and as one who has the best interests of all desert lovers in my heart, I promise to think in terms of conservation and fair play. When I raise my hammer to break a rock, I promise to withhold the blow until I have considered, "If I break this specimen simply to find out if inside it is what I want, I am not only NOT getting the most out of it for myself, but I am ruining it for the use someone else might make of it."

If we should pause only long enough to think that, I wonder if we would ever let the hammer fall? Instead, I believe, we would take the doubtful specimen home; and then, if after due consideration we felt it did not meet our wants, we could trade with someone who had the rock we wanted.

That way, and only that way, can we have—and continue to have—not a self-created monument of rubble—but a brotherhood of happy and cooperative rockhounds.

DESERT QUIZ

The old desert rat who writes the Quiz questions for Desert Magazine must have been suffering from the summer heat when he compiled this month's list. Anyway, the questions are a little harder than usual. They cover a wide range of subjects—geography, history, mineralogy, botany, Indians, books and recreation. If you can answer 10 of them correctly you are a pretty fair student of desert lore. If you get 15 right you know more than most of the desert rats. Better than 15 qualifies you as one of those superior persons who observes carefully and remembers well. The answers are on page 38.

1—Hogan is a Navajo word meaning—
Village..... Dwelling house..... Medicine man..... Food.....

2—The berries on a juniper tree are—
Black..... Grey-blue..... Red..... Green.....

3—Bill Bradshaw is known to southwestern desert dwellers as the man who—
Discovered gold at La Paz..... Blazed the way for the Butterfield trail.....
Conquered the Yuma Indians..... Built a wagon trail from San Bernardino to the Colorado river.....

4—Pajarito plateau is in— New Mexico..... Western Utah.....
Mojave desert..... Southern Arizona.....

5—According to legend the Lost Breyfogle mine is located in—
San Diego county, California..... Death Valley region.....
Superstition mountains..... Southern Utah.....

6—A mescal pit was used by desert Indians for—
Storing grain..... Punishing wayward tribesmen.....
Ceremonial purposes..... Roasting food.....

7—The book, The Land of Poco Tiempo, was written by—
Harry Carr..... Bandelier..... Zane Grey..... Chas. F. Lummis.....

8—Western gecko is the name of a desert—
Bird..... Snake..... Lizard..... Moth.....

9—Brigham Young brought his Mormon settlers to the West primarily to—
Find more fertile farm lands..... Seek gold.....
Gain freedom to worship as they pleased.....
Acquire a federal land grant.....

10—Fish most often caught in Lake Mead are—
Bass..... Mountain trout..... Catfish..... Mullett.....

11—Coolidge dam impounds the waters of the—
Colorado river..... Salt river..... Bill Williams river..... Gila river.....

12—The Montezuma's Castle Indian ruins are protected by—
U. S. Park rangers..... Forestry service men.....
Arizona state park custodians..... Private guards.....

13—In the following list, the one mineral harder than quartz is—
Calcite..... Feldspar..... Topaz..... Fluorite.....

14—"Slip" is the name of a material used by the Indians in—
Making pottery..... Weaving blankets..... Preparing food.....
Making dance costumes.....

15—Lorenzo Hubbell is widely known through the Southwest as—
A veteran Indian scout..... An Indian trader.....
A Colorado river boatman..... A writer of western fiction.....

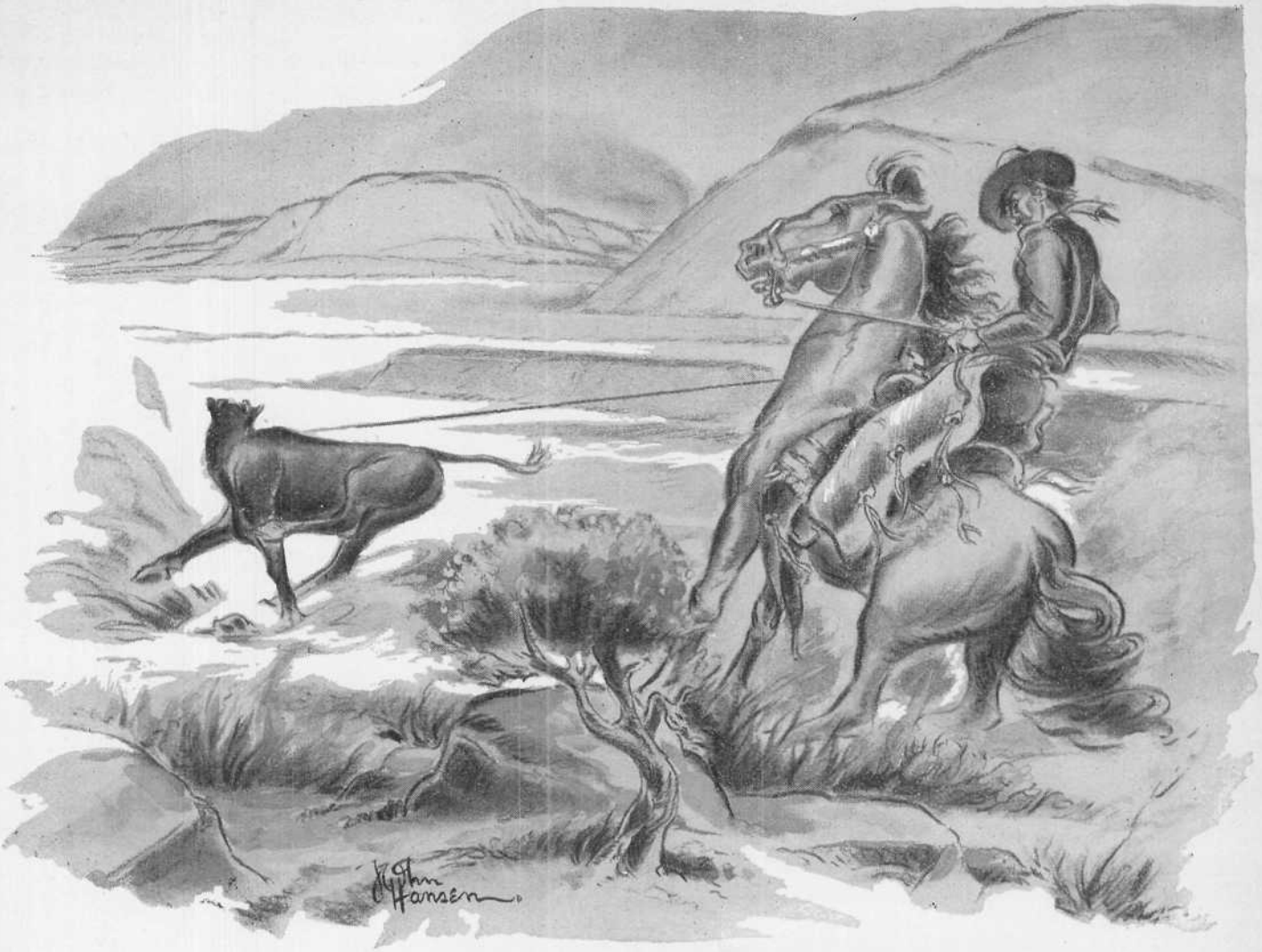
16—Houserock valley in northern Arizona is famed as—
The scene of a historic Indian battle..... A rich placer field in the gold rush days..... The place where Geronimo surrendered.....
An open range where buffalo may still be seen.....

17—Going east on Highway 80 Pacific time changes to Mountain time at—
El Centro..... Tucson..... Yuma..... Gila Bend.....

18—Most important crop raised by the Hopi Indians on their dry farms is—
Corn..... Wheat..... Cotton..... Tobacco.....

19—Billy the Kid was killed by—
Wyatt Earp..... Pat Garrett..... Apache Indians..... Accident.....

20—Nearest important town to White Sands National monument in New Mexico is— Carlsbad..... Roswell..... Socorro..... Alamogordo.....



In his struggles to regain his feet the maverick scoured the sand off of the richest specimen of gold ore the cowboy had ever seen.

Lost Black Maverick Mine

Here is the story of a mystery mine that produced at least one specimen of fabulously rich ore. There are people living today who knew the Yaqui cowboy who discovered the old mine, and who saw the specimen of gold from it. But Indian superstition is more powerful than gold—and the location of the mine remained a secret that was lost when the Yaqui died.

By JOHN D. MITCHELL

Illustration by John Hansen

BACK of most lost mine stories is a thread of truth. In telling and retelling, the mine usually becomes fabulously rich and new details are added until the historical facts are completely lost, or so distorted as to have little factual value.

An exception to this is the story of the Lost Maverick. There are many people living today who knew Yaqui Valentino, saw the rich specimen of ore he had, and heard the story of discovery from his own lips. Among those who knew him are Mr. and Mrs. Henry Hardt of Chandler, Arizona.

Many years ago an Indian cowboy locally known as "Yaqui Valentino" was riding the range in the Four Peaks country northeast of Phoenix. One day he was chasing a two-year-old black maverick bull through the manzanita and scrub oak that grow profusely on the lower reaches of the Four Peaks, when he suddenly came out into a clearing through which trickled a small stream of water. As they entered the little clearing the loop of Valentino's 60-foot riata spun through the air and landed gracefully around the neck of the racing bull. The trained horse sat back on his haunches and the maverick turned a flip-flop in the air and landed on his back in a small puddle of clear water. In his struggles to regain his feet he scoured the sand off of the richest specimen of gold ore the cowboy had ever seen.

When he had finished tying and marking the bull Valentino picked up the piece of ore and put it in his pocket. When he had released the maverick the cowboy saw that his horse was breaking through some rotten timbers into what seemed to be the workings of an old pit that had been covered over. As he led his horse away he saw the foundations of a cabin with a large tree growing up through the floor. Nearby the tree was a rusty pick such as was used by Spanish and Mexican miners hundreds of years ago. The pick had lain there so long there was little but the eye left. There was nothing to identify the former occupants of the abandoned camp.

After leaving the Four Peaks country Valentino rode for the

Bar-T-Bar outfit at Rye where many of the old time cowmen and miners saw the piece of rich ore and heard Valentino tell the story of how he found it. It is said that one old-timer, angered at his failure to get the Indian to show him the mine, suggested to the cowhands that they force him to take them to it and then shoot the Yaqui and throw him off of one of the high bluffs into the canyon. A Mexican cowboy happened to overhear the conversation and notified the Yaqui.

Two men came in one day and reported that they had found the remains of an old camp and believed it to be the same one the Indian described. The Yaqui was angry at first. But when he was told the location of the new find he threw his hat into the air and shouted that it could not be his mine as it was located many miles away from where he had found the old camp and the piece of rich ore.

Among the Yaqui's friends were Mr. and Mrs. Henry Hardt. He liked them very much and wanted them to share in his good fortune by helping him locate and develop the mine. After much talk it was decided that each should have a one-third interest in the mine and it would henceforth be known as the "Black Maverick."

The trip to the Four Peaks country had been all planned and excitement was running high when Valentino came into camp and told Mrs. Hardt that he had a very bad dream the night before in which he had seen a large number of Apache Indians shooting at him from the top of a hill near his mine. The Indian was badly disturbed as he had been taught during his childhood days in Sonora that to disclose the location of a lost mine to anyone outside of the tribe meant instant death at the hands of the gods who rule over the Yaqui people.

After Mrs. Hardt had explained that his fears were based on superstition and that he would not be harmed in any way, the party set forth from Payson for the Four Peaks country. The Indian seemed nervous and ill at ease. Two days later when they had reached a point on the western foothills directly opposite the four lofty peaks, the Yaqui became morose and refused to go any farther or disclose any information that would lead Hardt to the mine. Under the circumstances there seemed to be nothing else to do but abandon the search. The Indian set out for Tempe and Hardt returned to Payson.

Valentino died of a hemmorhage in Tempe one year later. The piece of rich ore he carried in the pocket of his leather chaps until it wore a hole in the leather, was ground in a mortar and panned out by Phil Fogle of Tempe who recovered a pill bottle almost full of coarse gold.

Henry Hardt, his good wife Rose, their three sons and daughter Gene are all going up to the Four Peaks country some day and have another look for the "Black Maverick" mine. They may not find the mine but they can look down from the heights upon beautiful lakes that dance in the noonday sun, and watch the crystal waters of the Salt and Verde rivers as they tumble down through the rocky gorges and then like silver threads in the sunlight flow gently through the fertile lands of the Valley of the Sun and on across the desert and out into the sunset's golden glow.

Sez . . .

Hard Rock Shorty

of Death Valley...

By LON GARRISON

"FIGHTIN?" asked Hard Rock Shorty. "Naw —don't do that no more. Not that I didn't used to be the best in this part o' the state, yuh unnerstand, but I give myself this here black eye this mornin' while I was lookin' in a new fangled mirror I got yesterday."

Having thus insured further listeners, Hard Rock felt his bruise tenderly before he relaxed in his chair and went on with his yarn.

"Yup—feller from Los Angeles was in here last night sellin' mirrors an' I bought one. Looked good, too, but I'd ought to o' knowed better. Mirror made any place else ain't no good here. Yuh see, it's colder in them other places an' when one o' them cold climate mirrors gets here in Death Valley it don't somehow act right.

"I asked a college perfesser about it oncet an' he explained that the hot weather here speeds things up so that yuh can't rightly trust what you see in the mirror. Like me this mornin'. I got up an' then started gettin' dressed in front o' this cold climate mirror. Well sir, the mirror got all het up an' it had me all confused. Mirror got three four moves ahead o' me. Didn't know if I was puttin' on my pants or lacin' my shoes.

"Wasn't too bad though 'til I tried to put on my shirt. Grabbed the shirt, looked in the mirror, an' there was my arms just comin' out o' the sleeves .Yes sir—I didn't know what to do. I gets the first arm in just as the mirror finished buttonin' up, and between reachin' for that other sleeve an' tuckin my shirt tail in first thing I knowed I'd belted myself one in the eye."

Desert Place Names

For the historical data contained in this department the Desert Magazine is indebted to the research work done by the late Will C. Barnes, author of "Arizona Place Names;" to Betty Toulouse of New Mexico, Hugh F. O'Neil of Utah, Marie Lomas of Nevada, and Charles Battye of California.

ARIZONA

ALMA — Maricopa county

First settled in 1880 and named in honor of the great prophet of the Book of Mormon.

PIMA — Graham county

Oldest of the Mormon settlements in the Gila valley. Named for the Pima Indians, who inhabit parts of Arizona and New Mexico.

EAGER — Apache county

Farming settlement founded by non-Mormons in 1871. Permanently settled in 1879 by Mormons, who in 1880 organized it as Round Valley Ward, divided it into Amity and Omer wards in 1882, amalgamated into Union Ward in 1886. Townsite surveyed in 1888, named for John T. Eager and his two brothers, early settlers of Round Valley.

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CALIFORNIA

WEST'S WELL — San Bernardino county

Located about five miles west of Chemehuevi valley (now Lake Havasu) on Colorado river. Not named, as many suppose, after former county supervisor J. H. West, but for an early day cattleman who long ago ran cattle in the vicinity. He moved away because of hostility of Indians.

COYOTE CANYON or VALLEY — San Diego county

Earlier name for Collins valley. It is related by John Davidson, curator Junipero Serra museum, San Diego, that many years ago a settler named John Collins came into this valley and established a home here. As he was living there when the government survey was made in 1901 his name was applied. In Spanish it is pronounced KOH-YOH-TAY, but almost universal usage renders it KY-YOH-TY or KY-YOHT.

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NEVADA

HAWTHORNE — Mineral county

Located on the old Carson and Colorado rr, and was made Esmeralda county seat by Act of March 1, 1883; lost county seat to Goldfield by Act of February 4, 1907, and became county seat of the new Mineral county February 10, 1911. Named for William Hawthorne, a cattleman and early justice and constable. Pop. 929.

LUCKY BOY — Mineral county

Mining district west of Hawthorne, in the foothills of Wassuk range. Discovered in 1906 by Guy E. Pritchard while repairing the stage road over Lucky Boy pass, according to Nevada State Writers' project.

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NEW MEXICO

FORT CUMMINGS — Luna county

Town named for Major Joseph Cummings of the 1st New Mexico cavalry, established October 2, 1863. Located on northeast side of Cook's mountain, was built to protect stage coaches coming through Cook's canyon because so many lives were lost there earlier in Apache Indian raids. As a fort it was abandoned in August, 1873, and the war department turned it over to the secretary of the interior in 1891. The site is now a small quiet town bearing the same name as the fort.

JICARILLA PEAK — Taos county

One of the highest peaks (Alt. 12,944) in northern New Mexico, and is one of the "sacred mountains" of the Picuris Pueblo Indians who have a shrine on its summit. Frequently certain clans visit the peak, climbing to the shrine in a body. Spanish: *Cerro Jicara* or *Jicarita* "mountain of the cup-shaped basket." Indian: "basket mountain."

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UTAH

EPHRAIM — Sanpete county

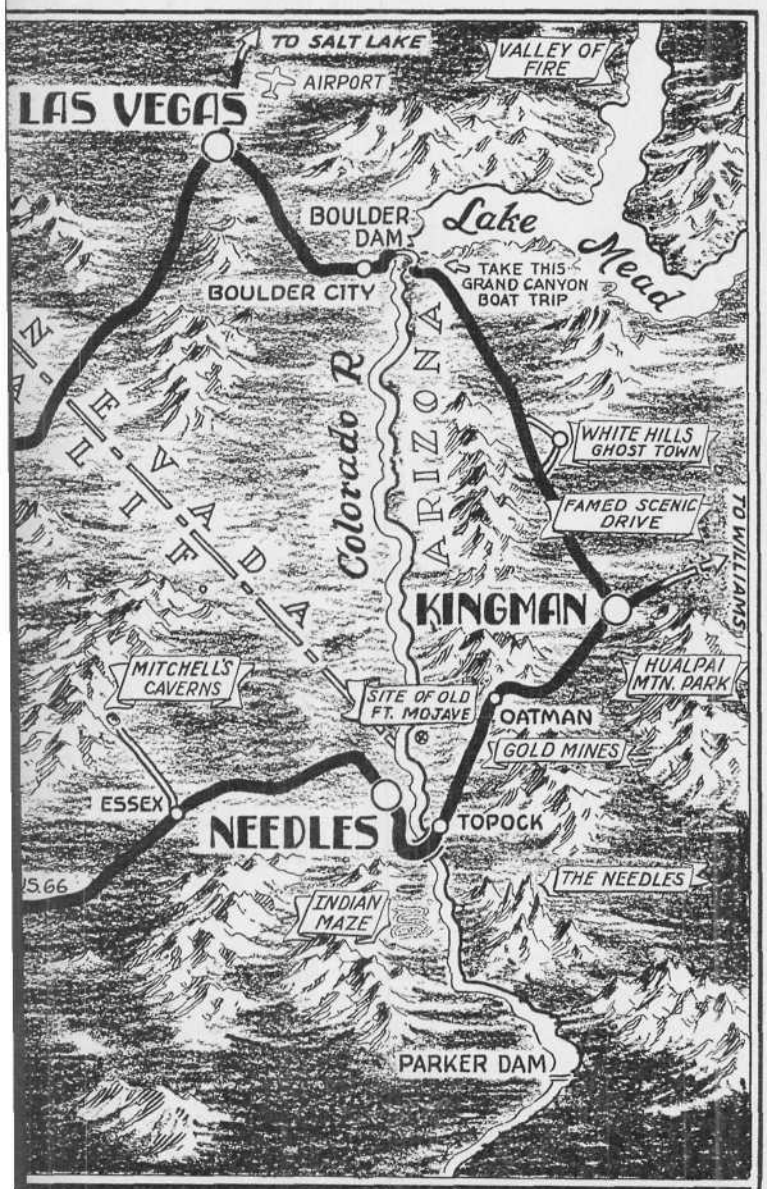
Town named for one of the tribes mentioned in Book of Mormon. First called Pine Creek in reference to the pines growing along the creek. Settled in 1852, deserted the next year because of Indian difficulties. Fortified, permanently resettled and named Fort Ephraim in 1854. Pop. 2,076.

DIVIDEND — Utah county

Named by E. J. Raddatz because of the dividends and profits derived from nearby mines. First settled, 1907; more effectually settled, 1918. Pop. 499.

DISAPPOINTMENT ISLAND — Salt Lake county

In Great Salt Lake. Named by John C. Fremont, who explored the island in 1843, when he made a government survey of this region. Fremont had anticipated finding the island a tangled wilderness teeming with game. As his food supply was low at the time, his disappointment was reflected in the name he gave the island. He was accompanied on this expedition by Kit Carson, Basil Lajeunesse, Charles Preuss and a Mr. Bernier.



WARNER'S RANCH

Arthur Woodward of Los Angeles is the winner of the July Landmarks contest sponsored by Desert Magazine. He identified the accompanying photograph as the old Warner's ranch house in San Diego country, California. The old adobe structure has an interesting history and Mr. Woodward has given the highlights of the story in the prize-winning manuscript which is published on this page.

By ARTHUR WOODWARD

UNDER the shade of a huge cottonwood tree alongside the famous "Poor Man's Route" into Southern California in northeastern San Diego county stands the remodeled adobe house that was once the residence of Juan Largo (Long John) Warner.

This famous old landmark is on the dirt road leading to San Felipe, less than a mile east of Highway 79 as it crosses Warner's ranch from north to south. The turn off to the house is 3.4 miles south of Warner's Hot Springs.

"Long John" Warner, a Connecticut Yankee, originally christened Jonathan Trumbull Warner in 1807, came to California with a trapping party in December, 1831. He settled in Los Angeles and became a naturalized citizen of Mexico in 1833, at which time he changed his name to "Juan Jose" and because of his height was promptly dubbed "Jose Largo" by his California friends. In 1837 he married Anita Gale. He applied for Rancho San Jose del Valle in what is now San Diego county in 1844 and in 1845 erected a two-roomed adobe with a thatched roof and made it his home. This original structure is the central portion of the house shown in the Desert Magazine, July, 1941. In later years three additional rooms were built on each side. The grass roof gave way to shakes and then to corrugated iron.

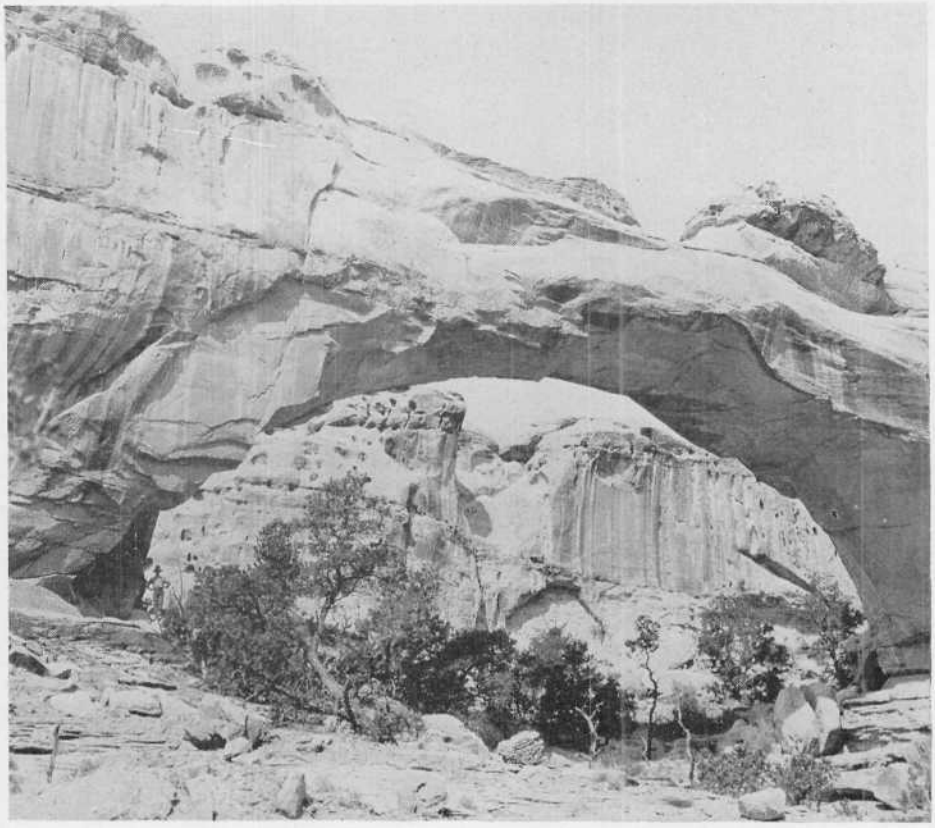
During the war with Mexico, 1846-47, Warner tried to remain neutral but he was arrested by the Americans at San Diego and was not at the ranch to meet General Stephen W. Kearney and his troops when they arrived early in December, 1846. However, Long John was released soon after and was at home to greet the first American wagon train ever to roll into Warner's ranch from the East when Captain Philip St. George Cooke and his Mormon battalion arrived at the ranch house on New Year's day, 1847.

Four years later the ranch house was attacked by a band of Cupeno Indians led by Antonio Garra. These raiders killed four white invalids at the hot springs just over the hills to the northwest, murdered Warner's servant and drove off a herd of cattle. Warner shot four of the marauders and then escaped to San Diego whither he previously had sent his family. With the execution of the ringleaders and the dispersal of the Indians in a skirmish at Los Coyotes, the last Indian uprising in Southern California was brought to an end.

In the days of '49 gold seekers poured along the southern road known as the "Poor Man's Route," and hundreds of them halted at Warner's ranch to rest themselves and their stock. In 1858 the Butterfield Overland Mail established a stage station a short distance north of the ranch house. During the Civil war long columns of federal troops and supply trains rolled past the ranch house door enroute to and from Ft. Yuma. In 1861 Warner relinquished the last of his interests in the ranch. Thenceforth he maintained his residence in Los Angeles, where he had actually lived since 1855. In recent years the ranch was purchased by the San Diego County Water company and the ranch house is the headquarters of a cattle company operated by George Sawday of Ballena.

Natural Bridge in Utah

Who can identify this picture?



Prize Contest Announcement

There are many places in the Southwest where Nature has carved out arches and bridges from the native rock. Some of these natural bridges are well known, and visited by large numbers of travelers. The arch shown in this photograph has not been as widely publicized as some of the others, but it is nevertheless one of the most symmetrical formations in Nature's strange outdoor museum of the Southwest.

In order to make Desert Magazine readers better acquainted with this landmark, a prize of $5.00 will be paid to the person who sends in the best story of not over 500 words. The manuscript should give the exact location, accessibility by trail or highway, and something of the geology, dimensions, etc., of this unusual formation.

Entries in this contest must reach Desert Magazine office not later than September 20, and the winning manuscript will be published in our November issue. There is no restriction as to the residence of contestants.

Weather

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for month	89.8
Normal for July	89.8
High on July 14	110.0
Low on July 1	67.0
Rain—	**Inches**
Total for month	1.39
Normal for July	1.07
Weather—	
Days clear	21
Days partly cloudy	7
Days cloudy	3

C. K. GREENING, Meteorologist

FROM YUMA BUREAU

Temperatures—	Degrees
Mean for month	91.9
Normal for July	90.8
High on July 5	115.0
Low on July 1	66.0
Rain—	**Inches**
Total for month	0.17
71-year-average for July	0.18
Weather—	
Days clear	27
Partly cloudy	2
Days cloudy	2

Sunshine 93 percent (406 hours out of possible 437).

Colorado river—Discharge for July at Grand Canyon was 1,665,000 acre feet. Release from Boulder dam was 960,000 acre feet. Estimated storage behind dam July 31, 31,000,000 acre feet, a gain of 773,000 acre feet since June 30. Release of extra water from the dam ended early in July.

JAMES H. GORDON, Meteorologist

DESERT QUIZ ANSWERS

Questions are on page 30.

1—Dwelling house.
2—Grey-blue.
3—Built a wagon trail from San Bernardino to the Colorado river.
4—New Mexico.
5—Death Valley region.
6—Roasting food.
7—Chas. F. Lummis.
8—Lizard.
9—Gain freedom to worship as they pleased.
10—Bass.
11—Gila river.
12—U. S. Park rangers.
13—Topaz.
14—Making pottery.
15—An Indian trader.
16—An open range where buffalo may still be seen.
17—Yuma. 18—Corn.
19—Pat Garrett. 20—Alamogordo.

Mines and Mining . .

Washington, D. C. . . .

Replying to a letter from Senator Pat McCarran of Nevada, Secretary Morgenthau of the treasury department said the administration is not planning any change in the present silver policy. Present price of domestic silver is 71.5 cents an ounce.

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Carson City, Nevada . . .

Under a new enactment of the Nevada legislature all mining claim locators must put their postoffice address on mining claim notices in the future. The certificate of location must be filed with the county recorder within 90 days.

• • •

Las Vegas, Nevada . . .

Two sections of land within six miles of this city have been selected as the site for a $16,000,000 magnesium reduction plant to be financed by federal money. Ore will come from 4,000 acres of magnesite property near Luning and 300 acres in Moapa valley. The project is to include three units and will have housing for between 3,500 and 4,000 workmen. Operators of the plant will be Basic Refractories, Incorporated.

• • •

Independence, California . . .

Located by Ernest Brushwood and an Indian, the newly discovered talc deposit in Oasis has been sold to the Pomona Tile company for $30,000 according to reports here. The talc is said to be equal to the best produced in United States.

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Cripple Creek, Colorado . . .

Completed two years ahead of schedule, the million dollar Carleton tunnel designed to drain the water from rich veins of gold ore in this Rocky mountain district was finished late in July. Veins bearing ore valued as high as $120 a ton already have been uncovered and completion of the tunnel may mean a comeback for many of the famous mines in this Rocky mountain field which has produced more than half a billion dollars in gold. The tunnel extends more than six miles straight into the side of Battle mountain and underneath the many shafts that honeycomb it.

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Fallon, Nevada . . .

Adopting a method developed at the Homestead mine in South Dakota, the Summit King Mines company is filling abandoned workings of its Dan Tucker mine with sand separated from mill tailings. The sand is pumped into old slopes and drifts, packed in by compressed air and soon hardens into a solid mass. The method eliminates the necessity of installing costly timbers, prevents cave-ins and is inexpensive. Summit King Mines is milling 75 tons of gold ore daily and is reported to be earning substantial profits.

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Washington, D. C. . . .

Aluminum, cork and copper, in the order named, are the scarcest materials in the defense program at present according to Robert E. McConnell, associate in the office of production management. McConnell listed the following ratios of civilian demand to supply: Aluminum 15 to 1, cork 10 to 1, copper 5 to 2, mica 3 to 1, nickel 2 to 1, alloy steels 2 to 1, tungsten 2 to 1, zinc 3 to 2, tin 3 to 2, chromite 3 to 2, manganese 3 to 2, plastics 3 to 2, nitrates 8 to 7, rubber 10 to 7, power 10 to 9 (except in the southeast, where the ratio is about 3 to 2), steel 10 to 9, and lead 1 to 1-plus.

Phoenix, Arizona . . .

Arizona tax commission dropped two mining properties from the state tax rolls this year and added five. Those dropped for lack of profitable production were Lynx Creek Placers near Prescott and the Montana mine at Ruby. Those added are: Phillips Asbestos mines and Ord Mercury mines, both in Gila county; Callahan Lead and Zinc Co. at Patagonia; East Vulture Mining Co., near Wickenburg; Winslow Gold Mines Co., Yarnell. Highest valuation placed on any of these is that of the Callahan interest, which built a 100-ton flotation plant at the old Duquesne mine. Its property is valued at $54,000. Phelps Dodge Corp. continues as the largest individual taxpayer in Arizona. Its mines and works at Jerome, Clarkdale, Ajo, Bisbee, Douglas and Morenci are valued at $63,893,429, up from $63,399,514 the previous year.

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Virginia City, Nevada . . .

Comstock lode helped finance the Civil war, and now it is making important contribution toward the defense program of today. Consolidated Chollar, Gould & Savage mining company is now putting 450 tons of $5 ore through its enlarged cyanide plant daily. Sierra Nevada company has stepped up its mill capacity from 225 tons to 800 tons daily. According to manager Blake Thomas at the Sierra Nevada property, overburden material is being milled at a cost of 50 cents a ton.

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Globe, Arizona . . .

If engineers' reports are favorable 3,000 tons of Arizona asbestos will be mined annually to fill a $5,000,000 government contract. The asbestos claims are owned by Roger Q. Kyle and include the Miami group, 45 miles north of Globe in the Sierra Ancha mountains; the Pueblo mine, 15 miles farther north on Central mountain mesa and the Sloan creek claims, eight miles east of Young. A small asbestos mill at Globe is included in the deal, but may have to be considerably enlarged.

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Ely, Nevada . . .

Dismissal of a grubstake suit involving the Current Creek mine 45 miles southeast of here gives George Bogdanovich and Steve Pappas, discoverers of the property three years ago, undisputed possession of the claims. The mine was optioned and leased in 1940 for a sum reported to be approximately $628,000, to Current Creek and Comstock Gold Point mining companies.

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Needles, California . . .

Barges will be used to transport manganese from inaccessible claims 16 miles north of Parker on the Arizona side of the river, according to Frank C. Mitchell, owner of the property. The mineral is not far from the shores of Lake Havasu, newly formed reservoir behind Parker dam. Mitchell recently moved a compressor and other equipment to his claims.

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Salt Lake City, Utah . . .

Utah led all the states in combined value of gold, silver, copper, lead and zinc in 1940. Total value in terms of recovered metal was $86,585,499 compared with a 1939 yield of $62,725,551. Gain was 38 percent. These figures quoted from the Utah chapter of the Minerals Yearbook. Much of the gain was due to increased operations by the Utah Copper company in the Bingham district.

Gems and Minerals

This department of the Desert Magazine is reserved as a clearing house for gem and mineral collectors and their societies. Members of the "rock-hound" fraternity are invited to send in news of their field trips, exhibits, rare finds, or other information which will be of interest to collectors.

—ARTHUR L. EATON, Editor—

MOJAVE COLLECTORS PLAN OCTOBER SHOW

Mojave Desert gem and mineral society at Barstow, California, has set October 11-12 as the dates for its 1941 show and committees have been named to handle the details. Last year more than 3,000 visitors attended the Mojave exhibition in Beacon Tavern.

Walter Lauterbach, chairman, announces the following executive committee: Walter Reinhardt, Bob Kinleside, Rav Langworthy, Harry Dobbs, Robert Iveson and Secretary-Treasurer Will Horsfall, all of Barstow; Bob Greer Jr., Mrs. Greer and Larry Coke of Yermo, and Frank Miratti Jr., of Santa Barbara.

Will Horsfall is in charge of reservations and information with headquarters at Beacon Tavern.

Committee on commercial exhibits — Nelson Whittemore of Santa Barbara, chairman, Earl Shaw and Clarence Dillon.

Non-commercial exhibits—Robert Greer, chairman, Henri Chenard Jr., George Wagner and George Fink.

Exhibit arrangements—Walter Reinhardt in charge, J. W. Bradley and Nelson Whittemore.

Ores and non-metallic exhibits—Robert Iveson, chairman, Vincent Morgan and Harry P. Gower.

Reception and entertainment—Ray Langworthy, chairman, Mrs. Harry Kelly, Arthur Doran, George Waterfall and Jim Lucas.

Publicity and promotion—Frank Miratti Jr., chairman, E. D. Miller, Judge Dix Van Dyke and F. V. Sampson.

Registration—Mrs. Robert Greer, chairman, Mrs. O. L. Walters, Mrs. Walter Lauterbach, Mrs. Ray Langworthy and Mrs. J. W. Bradley.

Harry Dobbs is chairman of finance and membership, Bob Kinleside and Herbert N. Brandon in charge of hotel and auto court arrangements.

Mr. and Mrs. Larry Coke have been named to arrange a visitors' trip to Calico mountains.

STRATEGIC MINERALS

MERCURY

CINNABAR — Chief ore of mercury. Color cochineal red, streak scarlet. Usually occurs mixed with sedimentary rocks, sometimes with opal or chalcedony, in form of red streaks on grey or whitish background. Specific gravity 8.2. Resembles hematite and cuprite, from which it can be told by heating, when the mercury sulphide disappears. Often found in slate, shale, limestone or sandstone as a primary mineral. Other sulphides commonly present. Test—heat carefully in an open tube, the mercury evaporates and condenses on the cold walls of the tube as metallic mercury.

NATIVE MERCURY—Sometimes found as tiny drops associated with cinnabar, or as fluid masses in the cavities of a rich cinnabar deposit. Rare.

MINERAL EXHIBITORS WILL SHOW AT COUNTY FAIR

Minerals will have a conspicuous place in the Los Angeles county fair at Pomona, California, September 12-28.

There are 13 separate classifications for exhibitors, covering a wide range of metallic and non-metallic rocks and mineralized specimens. Collectors and lapidarists will find much to interest them in this part of the exhibit hall.

The first five classes are given over to gold, and afford prizes for the best placer gold, the best lode gold specimens, the best gold bearing gravels, and the best mill products. Polished marble and polished granite have places with the dressed stones. Polished specimens of onyx, uncut gem materials mined in California, cut and polished gem materials and polished petrified woods complete the list.

This year petroleum and petroleum products have been added to the list of entries under the heading of California oil. The classification was made to meet a demand which has been growing from year to year.

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COLORADO COLLECTORS REPORT ON GYPSY TRIP

Grace and Frank Morse, formerly of the Colorado Gem company at Bayfield, Colorado, are spending the summer on a gypsy trip, collecting and trading with other rockhounds in the West.

A recent letter from them at Rochester, Minnesota, states that they have investigated all the gravel pits in that vicinity for Superior agates, and have come to the conclusion that it is cheaper and much more satisfactory to buy the agates from a dealer than to try to find them for themselves.

The Morses joined Joliet mineralogist club on a field trip. H. B. Wilson of Joliet had charge of the trip. Frank L. Fleener and Clarence R. Smith spoke on the geology of northern Illinois.

In the Tri-state district, the Morses saw some beautiful fluorite from Roseclaire, Illinois. The specimens weighed 100 pounds or more, with crystals having two-inch faces. This is a new find which is being rapidly exhausted.

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CELESTITE TO BE MINED IN FISH CREEK MOUNTAINS

Charles Nice, secretary-manager of Brawley, California, chamber of commerce, reports that Penn Chemical company of Pomona, California, is mining celestite in the vicinity of the gypsum mine near Borrego valley.

Celestite is native strontium sulphate ($Sr\ SO_4$), generally white, but sometimes a delicate blue. It is found massive, or in orthorhombic crystals. After being ground to a fine powder, celestite is used by airplanes and warships to create artificial fog or smoke screens.

The Penn Chemical company reports that its contract calls for delivery of an initial 500 tons of the mineral to be shipped to the Dupont factory in the East. This contract will be increased by thousands of additional tons if the celestite proves as successful as preliminary experiments have indicated.

AMONG THE ROCK HUNTERS

The Compton mineralogists, en masse, visited the Long Beach mineralogical society at one of its summer meetings.

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Many of the gem and mineral societies are recessed for the summer months. Hundreds of members of the various societies are using their summer vacations to travel, study and collect gem and mineral specimens in many parts of the country.

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O. C. Smith, author of "Mineral Identification Simplified," addressed Santa Monica gemological society on analysis and chemical testing of minerals at the July meeting. He gave demonstrations of both wet and dry methods of identification, using a miniature laboratory, with crucibles smaller than a finger tip.

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Long Beach mineralogical society held a potluck dinner July 11, at Silverado park. No field trip was scheduled for July. At the June meeting Jessie Hardman gave an interesting account of her honeymoon trip to Mexico. Mr. Hines provided a fluorescent exhibit. There was also a raffle of Tri-state minerals.

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George Waterman of Keller, Washington, has installed equipment on his property, and is turning out commercial grades of fluorite. It is interesting to note that this is one of the few producing fluorite mines in the entire west.

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The University of Washington is now publishing a bulletin index of northwest materials. This report comes out monthly and lists all new articles and publications concerning the economic conditions, industries and resources of the four northwest states. This service is being made to the public without charge, and should be quite valuable to all those who avail themselves of it.

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Recently, several fine pieces of asbestos ore have been found scattered on the surface of the Yuha basin, south of Dixieland and Seeley, in Imperial valley, California. Most of the specimens show a vein of one half inch or more. This asbestos is of the variety tremolite, and the threads are soft and fine. It is probable that all of these specimens have been washed down from the hills and may indicate a commercial supply somewhere.

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A business man recently asked a question which may lead to curious results: How much is the water in a stone worth? Fine chrysocolla contains as much as 20 percent water, and as the stone is often rated as much as $20 per pound, the three and one-fifth ounces of water in a pound of stone is worth at the same rate just four dollars, or, one dollar and twenty-five cents per ounce. Dana gives turquoise 19.47 percent water and opal up to 10 percent or even more. A great many other stones and minerals contain a percentage of water. Exactly how much does one pay for the fraction of water *content in a fine gem stone?*

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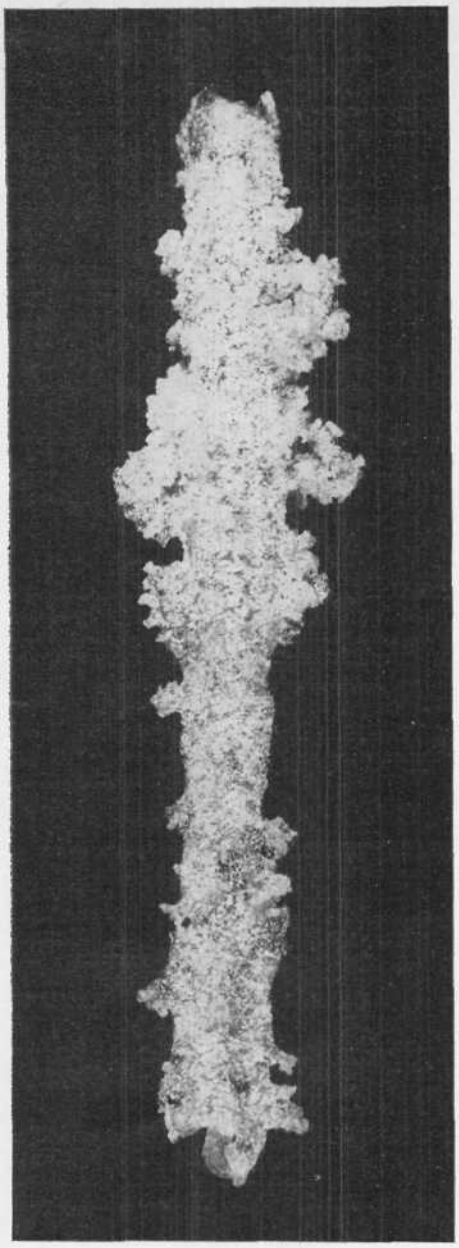
Arizona bureau of mines has issued a bulletin on quartz crystals as a strategic mineral. High prices paid recently may explain many of the inquiries received by them recently. Quartz crystals suitable for fusing purposes command a price of from 100 to 150 dollars per ton, while much higher prices are paid for prisms and for perfect pieces for electrical and optical uses. The price of imported crystals ranges from $6.60 to $6.70 per pound.



Lightning Tubes

By MARY S. SHAUB

"LIGHTNING Tubes" or Fulgurites as they are called by the geologists are irregular tubes of glass-like material found in desert or coastal areas where sand dunes are abundant.

They are formed by bolts of lightning striking sandy areas which are non-conducting. Instead of the electric current being conducted away from the point where it reaches the earth it continues down through the relatively loose material for a considerable depth fusing the grains and forming them into a very irregular hollow tube of molten sand. As the fused sand is cooled very quickly it forms a glass.

The water that may be present or associated with the sand becomes suddenly vaporized and expands by the intense heat, thus producing bulges in the walls of the fused material. The quick solidification of the fused sand prevents the surrounding sand or soil from pushing in to fill up the hole formed by the lightning.

The accompanying illustration, which is approximately natural size, illustrates such a lightning tube having a smooth glassy interior and rough exterior, with many irregular projections, which are common features of lightning tubes. The projections are hollow and are actually bulb-like enlargements of the tube at various points. Frequently these irregularities are more pronounced near the surface of the ground while the deep end of the tube is more regular and grows smaller until at the end it is closed. This is explained by the excess moisture near the surface when rains accompany the electrical storm.

Fulgurite tubes vary in physical characteristics. They may be only a few inches or as much as 45 feet in length and from one-half to two inches in diameter. They may be rather straight, as in the accompanying illustration, or spiral or even branching. The branching of lightning tubes is of the same general character as the branching of the lightning bolt itself in the atmosphere before penetrating the sands. Sometimes a small object such as a pebble may divert the course of the lightning bolt producing a branching fulgurite.

The tubes are usually a translucent white but they may be yellowish in color, pearl grey, reddish, green, brown or black, the black color resulting when the tube is formed in earth containing carbonaceous materials or where it is in contact with the root of a tree or vine. Sometimes the coloring is banded lengthwise. The external appearance of nearly all tubes is rough with adhering sand grains. Many tubes in addition to having bulbous and irregular projections have some longitudinal corrugations.

Fulgurites vary in hardness from 5.5 to 6.5 according to Mohs scale of hardness, and their specific gravity ranges from 1.9 to 2.6. The composition of fulgurites is essentially the same as that of the surrounding material. The mineralogical name of the glass of lightning tubes is lechatelierite, in honor of the famous French chemist, Le Chatelier.

Where may the collector find these tubes? A large number of them have come from Sumter, South Carolina. Several may occur close together in the sand where they have been formed as the result of repeated or multiple discharges striking within a small area. They may be found in any sandy area where intense thunder storms are of frequent and rather violent occurrence.

Cogitations . . .

Of a Rockhound

By LOUISE EATON

• Rockhouns is sorta like shooz. Aside from the fact that both has soles, (both gets sold sometimes, too) their wearin qualities is quite similar. Sum shooz an sum rockhouns wears well to the very end of their usefulness, but others don't do so good. Shooz sometimes rips at the seams, 'r develops holz where holz 're not wanted; likewise, wunce in a while a rockhoun may reveal unexpected weak spots in his make up. But that's not true about most of 'em: generally an specifically speakin, rockhouns is all dependable.

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• Rockhouns seems to have a instinc for locatin th person in their neighborhood who has the best information about rocks. Then they wears a trail to his door to exhibit specimens an to take new rocks for identification. This is mighty edifyin for the fella who already knows quite a bit, an convenient for the others.

INCREASING DEMAND SPURS NEVADA TURQUOISE MINES

According to the Las Vegas, Nevada, Review-Journal, the Austin region of Nevada is the most important area in the entire world for the mining of fine turquoise. The Review-Journal reports that George A. McGinness is working at his gem mine in Grass valley doing development work and taking out some very high quality material. Guy Grannis of Gallup, New Mexico and San Diego, and Eugene Burnham are working Grannis' Third Chance mine at Dry creek, producing very high grade. Many other properties are being put under production, thus adding to the world's slender supply of fine turquoise.

Much turquoise of inferior quality is found in many places, but the finer quality is found in only a few, among them the Austin region of Nevada. As the demand for material of the higher grades exceeds the supply, turquoise mining is rapidly becoming an important industry of the region.

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MANY SEMI-PRECIOUS GEMS ARE FOUND IN TEXAS

G. A. Parkinson, engineer, in a survey of Texas mineral regions by the bureau of economic geology of the University of Texas, reports a supply of semi-precious stones sufficient to support a thriving industry. This makes Texas a possible source of supply to replace the great quantities formerly imported from Europe for costume jewelry, class rings, etc.

He reports from central Texas the finding of fine moss agates, together with fire opals, amethysts and large garnets from the same county, with garnets and topaz from Burnet and Mason counties. Fresh water pearls are found in the Concho and Llano river mussels and elsewhere.

Dr. V. E. Barnes, also of the bureau of economic geology, reports the presence of amethyst, garnet, beryl, carnelian, opal, chalcedony, jasper, topaz, turquoise, agate, opalescent quartz, smoky quartz, epidote, and several other stones, such as tektites, of reported gem quality.

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Santa Monica gemological society has amended its constitution, thereby changing the date of its annual exhibition from spring to fall.

HERE AND THERE
. . . on the Desert

ARIZONA

Dons Elect Leader . . .

PHOENIX—Hillman E. Morris, a bank executive of Phoenix, was installed in July as president of The Dons for the next six months. Outlining his general program, Hillman stressed the various ways in which the club could be of assistance in national defense efforts. He also told of plans to continue, in the fall, a program of weekly "travelcades" to points of interest in the area around Phoenix. These trips are primarily for the benefit of the great number of winter visitors who flock to the Southwest.

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Bullshead Canyon Dam Named . . .

KINGMAN—Secretary of Interior Ickes announces that the large dam in Bullshead canyon on the Colorado will be named Davis dam after Arthur Powell Davis. It was Davis' report on the lower Colorado river in 1922 that laid the foundation for the plans that ultimately resulted in the construction of the Boulder dam and the All-American canal. The dam will be an earth-and-rock filled structure 338 feet high, located 67 miles below Boulder dam. Its waters will back up the 67 miles to the tail-race of the Boulder dam power plant. It is expected that power will be available in three years, though construction will be rushed as fast as possible to complete it before that time. Shortage of electrical power in the West makes time an important factor in the dam's construction.

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More Desert Reclaimed . . .

ROLL—Another chapter in the thrilling story of man's fight to conquer the desert will soon be started in Yuma county where work is to begin immediately on a canal system to bring water to the Roll-Mohawk area east of Yuma. Seventy-nine thousand acres of heretofore raw, unarable land will be made fruitful and productive by the magic of irrigation. The new area to be watered is 84,000 acres, but 5,000 acres of this has been under cultivation off and on for several years. Farmers have sunk wells at various times in the past, and have obtained enough water for a limited amount of cultivation, but the water table has been slowly dropping in the past few years, and the salt content has steadily increased. With the new canal water, the land will be seeded to alfalfa.

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Pioneer Passes On . . .

AJO—Captain Thomas H. Rynning led an exciting and interesting life. Born in 1866, he saw nearly eight decades of history made, most of it in the Southwest. He rode with Teddy Roosevelt in the Spanish-American war. Later, he became head of the famed Arizona Rangers, and then warden of Arizona state prison. Moving to San Diego, he continued in the service of law-and-order enforcement as deputy U. S. marshal. Fellow pioneers and friends of his residing here were advised of his death late in June.

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Duck Food Studied . . .

PARKER—At a meeting of California and Arizona fish and game commissions and interested organizations, open hunting areas on the Imperial and Havasu national wildlife refuges were designated. Geno A. Amundson, associate refuge manager of the U. S. fish and wildlife service for the Yuma district, stated that the Imperial refuge is not suitable for waterfowl now, as it lacks plant food. However, he is seeking to have aquatic plants placed in that area so the ducks will stay there instead of migrating south to Mexico in the winter. Luther Goldman, Amundson's assistant, is making a study of types of food plants in the Imperial refuge in an effort to determine what will be needed to keep the ducks here.

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Explorer's Daughter Visits West . . .

GRAND CANYON—Seventy years ago Major John Wesley Powell made the first successful boat trip down the perilous Colorado river. His voyage made history in the Southwest, and he is remembered as one of the outstanding adventurers and explorers of this desert region. During the second week in July, his daughter, Miss Mary Dean Powell, came out from Washington, D. C., to retrace some of the historic steps of her father. The park service conducted her on a tour which took her to some of the spots which her father discovered and brought to public attention seven decades ago.

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CALIFORNIA

Big Ditch in Full Operation . . .

CALEXICO—Announcement was made in July that the All-American canal is now in use its full length. At the time of the announcement 2,600 cubic feet per second of water were flowing through the canal. This greatest of all irrigation ditches is furnishing water for most of the 500,000 acres of land under cultivation in the Imperial Valley, and is capable of supplying water for twice that area. Besides furnishing water, the canal is now generating 30,000 kilowatts of power for the Imperial Irrigation District. Facilities will be added as needed until the capacity production of 87,400 kilowatts is reached.

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Towns to Be More Neighborly . . .

YERMO—When the Upside-down-river, the Mojave, is in flood local residents have to drive 14 miles to reach Daggett, four miles away. Part of the bridge between the two communities was carried away by cloudburst water several years ago. Plans have been announced for early construction of a new bridge.

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Civilization Finally Got 'im . . .

BRAWLEY—In the early days of the Imperial Valley when the land was being turned from desert into agricultural land, rattlesnakes were a common sight. Many of them lived in sand hummocks which dotted the valley before the land was first leveled and cleared. In recent years few of them have been seen. However, B. A. Schoneman found one emerging from a bank of a wash on his ranch near here recently. Killing it, he found it to be 4½ feet in length and 7 inches in circumference, a big rattler for any desert.

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Health Resort Opens . . .

GARNET—Official opening of the Colorado desert's latest real estate project, Desert Hot Springs, was held on July 12. This new resort is located on the desert just north of here, advertises year-round climate, natural health springs. Short talks by Riverside county officials and other notables featured an evening program during which refreshments, dancing and swimming were offered free. Item: No lots were on sale.

For Joshua Tree Campers . . .

TWENTYNINE PALMS — To draft plans for development of picnic and camp grounds in Joshua Tree national monument, Frances Lang, regional landscape architect of the national park service, spent the first two weeks of July here. Working with Superintendent James E. Cole of the monument, Lang made rough sketches which will later be made into a master plan, showing the layout for picnic grounds at Split Rock, camp ground and picnic facilities in Indian Cove, Willow Hole, Cottonwood Springs and other localities. The development is scheduled for a six-year program, work to be done as funds are available.

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Swimming on the Desert . . .

NEEDLES—Another sandy bathing beach in the heart of the desert will become a reality if the Needles park commission takes advantage of the special permit recently granted by the department of interior. The permit granted exclusive rights to a three-mile frontage on Lake Havasu for the purposes of building and maintaining a recreational park. This will be one of three such recreational areas to be developed around the lake. Two others on the Arizona side of the lake are being planned. One of these will be almost directly across from the Needles landing, and the other a short distance above Parker dam near the mouth of Bill Williams river.

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Fine — $120.00 . . .

INDIO—Two San Francisco florists were fined $120.00 for taking cuttings from Smoke trees along the highway near Palm Springs. They explained that they didn't know it was illegal to take the trees from the desert, and that they had no intention of taking them when they came south. However, it seemed strange to Judge Pinney of the resort town that the men had a station wagon with all the tools and ropes needed for the operation. Also, men who had been florists for many years should know something about the wild-plant laws in their own state.

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Old Freight Route Favored . . .

INDIO—Reporting on a route for a proposed Coachella valley—Twentynine Palms highway, Riverside County Surveyor A. C. Fulmor stated that he favored the freight route established before there was any thought of settling Coachella valley. This route lies up the east fork of Thousand Palms canyon and down a west tributary of Pushawalla canyon, thence up Blue Cut pass to the high mesa on which lies Joshua Tree national monument. Fulmor pointed out that if this route is followed the county would have to construct only about 2.5 miles of road, as the rest would lie within the boundary of the monument. An early meeting is scheduled between representatives of Coachella valley, Twentynine Palms, Riverside county road officials, and James E. Cole of the monument to discuss further the proposed highway.

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Paved Road to the Palms . . .

PALM SPRINGS—Cahuilla Indians of the Palm Springs area are going to improve conditions for visitors to world-famed Palm Canyon. The road from the resort to the canyon heretofore has been a typical desert dirt road, but work is now under way to pave the greater part of it which lies within the reservation. The road department of the Indian Service is furnishing the heavy equipment, while the labor and material are supplied by the Indians. The paving, consisting of desert oil mix, will be finished by fall.

NEVADA

Desert in Miniature . . .

BOULDER CITY—Visitors to Boulder dam will be able to see a replica of the entire Colorado river basin, showing the five dams now completed or in construction. This relief model is to be one of the features in the exhibit building nearly completed by the reclamation bureau. It is to be an operating model with water flowing in the miniature river as far as Imperial dam.

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Another Town Submerged . . .

OVERTON—Its waters rising to the highest level in its history, Lake Mead has flooded and covered another Moapa valley town—Kaolin. It was here that the postoffice of St. Thomas was moved three years ago when that town was abandoned to the rising waters of the lake. Kaolin was inhabited by only a few families, and part of its buildings were transplanted from St. Thomas. These have been left to the fate of the waters, and the residents mostly have moved to Overton. This latter town is precariously close to the water level, but if the river rises another 2.4 feet it will start running over the spillway gates at Boulder dam. Consequently, there is little fear that it will have to be abandoned.

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Historic Town Razed by Fire . . .

GENOA—Nevada's oldest town and first capital was struck by fire late in June, wiping out the entire business district—postoffice, Masonic temple, and saloon. Started in 1848 by Mormons enroute to California's gold fields, this little town silently witnessed some of the most stirring history of the West being made. Virginia City, Washoe, Gold Hill—all struggled into existence, boomed with the Comstock, and passed to obscurity since this town was started. It was made the state capital in 1859, later lost it to Carson City.

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Foltboat Runs Colorado . . .

BOULDER CITY—Praising the behavior of his rubber foltboat, Alexander Grant, cousin of President Roosevelt, arrived here after completing his journey down the dangerous Colorado river. Whitewater kayak champion of New York City, Grant started out to prove the hardiness and safety of the portable boat on a perilous river run. Grant's craft is 17½ feet long, 2½ feet wide and weighs 60 pounds. This light weight made it easy to portage around rapids that are too dangerous to be run. Twice in the run between Mexican Hat, Utah, and Bright Angel trail Grant was upset by whirlpools and swirling "holes," but both times he was rescued by Norman Nevills and his party of four who are following behind Grant in two regular cataract boats. Nevills said that he was impressed by the performance of the boat, and believes that there are real possibilities for extensive use of the craft on western waters.

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Seeing America First . . .

LAS VEGAS—Trips abroad being out of the question, American vacationists are looking more and more to their own country for scenic attractions and interesting places to go. Added evidence of this fact are figures recently released by the bureau of reclamation on the number of tourists to the Boulder dam. All records were shattered in the month of June on the number of persons visiting the powerhouses of the dam. The previous record was in 1939 when 45,833 persons descended into the working section of the great structure. This year the number was 46,233. This count is only on persons visiting the powerhouses, and represents less than half of the total number visiting the dam.

No Debts, Lower Taxes . . .

CARSON CITY — Nevada's treasurer, Don Franks, reports that his state not only is free of indebtedness, but has over a million dollars deposited in banks. This in spite of the fact that the state lowered taxes last year, another unheard of thing in these days. True, Nevada has nearly half a million dollars in outstanding bonds, but these are owned by various state divisions rather than private or outside interests. Outlook for the future is bright in that revenues from the Boulder dam are expected to further swell the state coffers next year.

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NEW MEXICO

This'll Be a "Declared War" . . .

GALLUP — Long-standing feud between certain Navajo Indians and the U. S. soil conservation department flared up in southern Utah recently when an Indian speaker, haranguing his fellow tribesmen shouted "the only way to save our sheep is to declare war on the United States." When he called for a showing of hands by those who were ready to join him in the sheep-war nearly 300 grinning Indians pledged their support. Government officials said the incident was nothing to be alarmed about, but admitted they have a problem in popularizing the sheep-reduction program.

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Historic Sites to Be Marked . . .

SANTA FE—The old Chisum cattle trail, Lincoln county courthouse, the site of the Indian massacre near Deming—these are just three of the historical sites to be memorialized with permanent monuments by the New Mexico tourist bureau according to Director Joe Bursey. Seventy-five markers will be added this year, mostly in the southern part of the state. Other sites to be marked include Jicarilla Apache Indian reservation, Cumbres pass, Rio Grande canyon, Abo state monument, Ranchos de Taos church, San Juan pueblo, Abiqui, Truchas peaks, Chamuscado expedition, Quarai state monument, Rio Grande gorge, Kit Carson highway, Apache canyon, Gran Quivira, Fort Stanton, Loving's Bend, Llano Estacado, Lincoln Town, Chisum ranch, Cabeza de Vaca, Old Lincoln courthouse, Gene Rhodes grave, Jemez state monument, Coronado state monument and Shiprock.

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Tourists Prefer Macaroni Beads . . .

SANTA FE—Tourists here this year are buying more beads and less pottery from the Indian craftsmen who assemble with their wares at the portal of the Palace of the Governors each Saturday market day. Customers pass up the beautiful bowls and textiles—and go for beads made of corn or melon seed or macaroni. While tourists have shown a marked change in their buying habits this season, the Indians also have made a noticeable change in their products. They are making fewer drums and decorative nicknacks, and more utilitarian utensils such as salt and pepper shakers, bookends, ash trays, fruit bowls, etc.

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Amarillo Gets Convention . . .

TUCUMCARI—Chet Relph of Los Angeles was named new president of U. S. Highway 66 association at the convention held here. He succeeds M. L. Woodard of Gallup. In the voting to determine location of next year's convention Amarillo, Texas, edged out Williams, Arizona, in close balloting. Governor John E. Miles, in a talk to the 300 delegates, stated that he had hopes of making a military highway of the route. Highlight of the one-day convention was the annual parade honoring Will Rogers, for whom the highway was named.

Yankee Thrift in Navajoland . . .

FIELDS—Asyhia Baca, Navajo, called at the local postoffice recently to buy two more $25 defense bonds. During the past 18 months he has purchased $400 in bonds out of his $51-a-month job in the Indian Service CCC. He plans to use the money eventually for the education of his children. In the meantime he isn't worried about the war because he believes United States will win no matter who is on the other side.

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UTAH

Shoots Rapids for Fun . . .

SALT LAKE CITY—Bert Loper spent his summer vacation this year shooting the rapids through Yampa canyon to the Green river—and a month later celebrated his 72nd birthday. For years Loper has been making at least one trip of exploration down some river, generally the Colorado or one of its tributaries. This year his trip took him down the Yampa river to the Green, and thence to Greenriver, Utah. On completing the trip, he stated that he has 10 to 15 years yet to enjoy exploration expeditions. Then, maybe, he'll get around to the reminiscing.

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Trek to Hole-in-the-Rock . . .

MONTICELLO—In 1879 a wagon caravan of Mormons, sent out by the church to colonize the San Juan country, braved terrific obstacles, finally lowered the wagons and horses with ropes through the "hole-in-the-rock" to the bed of the Colorado river where a crossing was made. Last year a few of the survivors of the historic trek, with many of their descendants made the same pilgrimage again. The outing was so popular it was voted to make it an annual affair and a committee here is now making plans for the 1941 pilgrimage in September.

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Prayer to the Sun God . . .

WHITEROCKS—For four days the hardy braves of the Uintah-Ouray Indian tribe danced and prayed to the gods. This was the annual sun dance held on the reservation July 13-17. According to tribal belief good health and blessings bestowed by the Great Father for the coming year depend on the endurance of the dancing warriors. Only pause in the ritual is at sunrise when the young dancers gather at the east entrance of their brush and pole ceremonial plaza and stand with outstretched arms as the sun comes over the horizon. Whites are permitted to witness the ceremony, but no pictures may be taken.

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Buffalo Far From Home . . .

HUNTINGTON — Ranchers of Buffalo bench, a prosperous farming area southeast of here, report that three of the buffalo stocked in the Robbers Roost country last year have drifted up to the bench which bears their name. The buffalo were turned out on the desert south of Greenriver by the Carbon-Emery fish and game association. Livestock men agreed to help look after them and observe how they become adjusted to their new homeland. Apparently "Buffalo bench" had a magnetic effect on them, for the three sighted recently have drifted 100 miles from the Robbers Roost country.

Badges for the Plucky 900 . . .

PROVO—Two thousand climbers started the 11-mile trek to the top of 12,000-foot Mt. Timpanogos in the Wasatch range north of here. Several hours later 900 of them stood on the summit, the others having dropped out along the foot trail. Many of the unsuccessful ones stopped at Emerald lake at the foot of the snow field where summer ski races are held. This was the annual community climb sponsored for the past 30 years by Brigham Young university. Summit badges were awarded those who reached the top.

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In Defense of Fossils . . .

VERNAL—Dr. John H. Clarke of the Carnegie museum told the Lions club the greatest dinosaur fossil show in the world is in Uintah basin. Dr. Clarke was speaking in defense of the excavations being made by his museum, which were being hindered by the restrictions imposed by the Uintah county commissioners. "You people," he stated, "do not realize the advertising value this project has been to this community." He went on to tell the members that in an area so filled with fossils the excavations made thus far would scarcely be noticed. Some local citizens fear that their country is being dug up and ruined.

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Sculptor Must Decide . . .

SALT LAKE CITY—Orson Pratt, one of the scouts sent out in 1847 by Brigham Young to locate new lands for the Mormons, is to be memorialized with a monument to be erected at the mouth of Emigration canyon. Pratt's companion was Erastus Snow, and they had one horse between them. Records are obscure as to who was riding the horse when they first saw the great valley of Salt Lake. Sculptor Mahroni M. Young, who has been commissioned to make the statue, is not sure yet whether to show the pioneer walking or riding.

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Power for Defense . . .

MOAB—Engineers are making preliminary surveys to determine the feasibility of a power dam at the mouth of Dark canyon, San Juan county. This is part of the general program for the development of more hydroelectric power for defense manufacturing plants. After the emergency is over, the power would be available for pumping irrigation water.

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New Offices Established . . .

SALT LAKE CITY—Establishment of three new field offices of the U. S. bureau of reclamation in Utah was announced late in July by E. G. Nielson, engineer in charge of the Salt Lake office of the bureau. These offices will be located in Logan, Vernal, and St. George, and will serve as headquarters for men working on projects and investigations in the three localities.

By RANDALL HENDERSON

SOON after this issue of Desert Magazine goes to press I will be on my way to the desert plateau country—northern Arizona and New Mexico—to spend a couple of weeks in the land of the Navajo, the Apache and the Pueblo Indians.

I have a wholesome respect for the desert Indians. Despite all the regimentation that has been imposed upon them by white invaders during the past 300 years, they have within their tribal organizations the most democratic government in America.

I believe the secret of their success in preserving this democratic way of life is due mainly to the rigorous self-discipline that is taught an Indian boy from the day of his birth. There is no coddling in the code of the tribesmen.

People who discipline themselves do not require fat books of laws and planned economies and dictators to rule them. It is only when humans begin worshipping the gods of ease and luxury and too-much-security that the moral fiber breaks down and democratic liberty gives way of necessity to regimentation.

* * *

This problem of building strong self-disciplined Americans is close to every one of us. Recently I was out on the desert trail with a father and his son. The way was rough and the day was hot, and the father clucked at the lad like a hen with a brood of chickens. "Do your shoes hurt you?" "Watch out for those thorns," "Are you too hot?" "Don't you want a drink?" "Don't get off the trail." Such questions and cautions—all day long.

He thought he was being fatherly. Actually, he is robbing that lad of the opportunity to become a rugged self-reliant citizen—the kind of citizen it takes to make a success of democratic government. He is one of those parents who have not learned the fine distinction between soft heartedness and soft headedness.

You will understand now why I say we can learn something from the desert Indians. Can you imagine an Indian father raising his papoose that way?

* * *

This month's cover picture of Biskra palm oasis near Indio is from the fine Frasher collection of desert photographs at Pomona, California. After I had selected it, Burton Frasher Jr. told me: "Biskra was a favorite of my mother's. She loved it there. Also, this photograph is indeed one of the few my mother thought to be near perfect. To her, none of her own photographic work ever satisfied her, and seldom that even of my father or myself approached her ideas of perfection."

And so, I want to dedicate the cover this month to Mrs. Frasher. For many years she trekked over the Southwest with her husband. She brought courage and understanding and a fine appreciation of the artistry of Nature—and she was loved by desert folks from the humblest hogan to the stone mansion on the hill.

* * *

Paul J. Linsley, who spends most of his time roaming over the desert, has written to ask where he can get some real sun-cured jerky. He doesn't care for the artificially cured product that is now widely sold as jerky.

Best jerky I have eaten was at Marshal South's 'dobe home on Ghost mountain. But Marshal makes his jerky to eat—not to sell, and unless we can induce him to "go commercial" there isn't much hope of getting any from that source. Next best suggestion to Paul Linsley is to take South's formula (Desert Magazine, April '40) and make his own jerky. On the long hard trail it is more sustaining food than most of the things you get in tin cans or cellophane packages.

* * *

Galen G. Custer operated a cement mixer until he met with an accident and was crippled, and now he and his wife run a little store at Lancaster on the Mojave desert. Recently Galen wrote: "I enjoy the quiz questions each month, but they make me feel so dumb it is pathetic."

Galen Custer may be as dumb as he says, but I happen to know that he has as much courage as any seven ordinary mortals. The story of his fight back to earning power after a devastating accident would make you proud to know him.

And anyway, they cannot put a man in jail for being dumb. According to the old philosophers a man has to realize how dumb he is before he begins to learn anything. It is the starting place of wisdom.

* * *

I am glad to note that more and more of the desert chambers of commerce are changing the tone of their advertising. Instead of the traditional ballyhoo telling the world they have the most lodges and schools and the finest churches and best water system—they are now glorifying the scenic and historical aspects of the areas outside the town.

In the long run the new program will be far more effective. The average tourist does not come to the desert to hang around town. He brings his family out to enjoy the great outdoors. He wants to explore the canyons and climb mountains and hunt gem stones and follow the old trails that lead to historic missions and watering places.

If the town is attractive, and its people are courteous and fair, he will do his shopping there and perhaps make that the headquarters for his side-trips. But all the printed literature on earth will not keep him there if the town is ugly and its people indifferent.

Recreational opportunities in the adjacent area are the things that will bring the motorist to your town—cleanliness, color and courtesy are the things that will keep him there.

If your chamber of commerce secretary still clings to that antiquated idea of publicising your town by photographing a semi-nude damsel beside the local champion jersey cow, or quoting long columns of figures about the bank clearings and the number of home-owners—it is time to get a new secretary.

Writers of the Desert . . .

JOHN HANSEN, who is illustrating John D. Mitchell's series of lost mine stories in Desert Magazine is a commercial artist in Salt Lake City. That is, he makes his living at commercial art. But like many other young men and women in the art world his heart is out on the open range where there are colorful landscapes and interesting people to be reproduced in water colors and oil.

"Among the other things I have learned in my 36 years," says John, "is that one's best work is done with familiar things, and the greatest happiness is found close to home. I love the West and I hope I'll find lots of people who will like the lots of pictures I am going to make of the West."

Hansen studied at the Art Institute in Chicago. He learned much about the technique of his profession there. Also he met the Indiana girl who became his wife. When he returned to his Salt Lake home she accompanied him. It was her introduction to the plains and mountains of the West. They have built a home in Salt Lake with an upstairs studio where together they write and draw and make photographs. The other members of their family are a 13-year-old son and a daughter, 10.

Vacation periods are spent in the open country, sketching and photographing the outdoors.

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GLADYS MILDRED RELYEA, whose Desert Magazine story this month de-bunks some of the popular myths regarding the Great Salt lake, is a member of the faculty at the University of Utah. Writing, photography and golf are her hobbies.

Until she came to Salt Lake City five years ago to teach, her home was in Connecticut, and she returns there every summer, motoring over a different route each trip and gathering photographs and materials for magazine and newspaper articles.

• • •

What does a writer do when he takes a two-months vacation in Mexico? JOHN HILTON has given the answer in a letter received by the Desert Magazine staff early in August.

John is at Alamos on the west coast of Mexico, and since the summer rains started has been entirely cut off from the outside world as far as automobile travel is concerned.

"We have been getting our Desert Magazines and other mail by native runner, who covers the last 28 miles on foot," writes Hilton.

"The rains have worked a miracle here in the hill country. What was a dry desert a few weeks ago is a green tropical forest, and the ground beneath the now foliated trees is a mass of many colored flowers. This morning I took a 10-mile horseback ride up toward the north end of the ranch and counted five kinds of lilies and two species of orchids in bloom. This in a country that hardly had a green leaf before the rains started.

"Folks in the desert who think they have seen Gila monsters should come down here. I am making a representative collection of the reptiles of this district for the American Museum of Natural History. Recently I collected a Gila monster that measured 28 inches. He had just robbed a nest of Douglas quail and when I cut him open there were 15 eggs in his stomach. My instructions are to note the contents of the stomach on each tag.

"The jumping beans are ripe now, and it is very interesting to see them grow. This is the capital of the jumping bean industry, and most of those jittery little beans sold the world over come from within 30 miles of this place. They grow three in a pod and when the beans are ripe the pod separates with a pop and the beans fly out. Every now and then there is a pod with a moth egg laid in it—and this is the jumping bean. The worm has lined his empty pod with a layer of silk so it won't explode and throw him out—and then he lays inside and kicks for six months until it is time to hatch.

"I have quite a collection of quartz crystals and some of the loveliest geodes I have ever found. The quartz crystals are full of phantoms and hollow spots the shape of model crystals or flattened crystals, and will make wonderful specimens. I have all the small boys here out hunting them for me.

"Am getting a lot of paintings done, but I am afraid no one will believe the brilliant sunset effects and tropical greens that I find here to paint. They are by far the most colorful canvasses I have ever done—and if no one wants to buy them I will keep them myself."

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ARTHUR WOODWARD, curator of history in Los Angeles museum, recently has written the story of the old Vallecitos stage station on the Butterfield trail, which is scheduled to appear in one of the fall numbers of Desert Magazine.

DESERT Power and Light Users . . . Prefer *Cooperative System*

During the first five months of this year 444 new customers installed meters of the community owned and operated Imperial Irrigation District power and light service.

This brings to 10,672 the total number of customers connected with District lines—10,672 loyal Imperial Valley families who pay their electrical bills every month knowing that every surplus penny will be applied toward the repayment of the cost of the All-American canal.

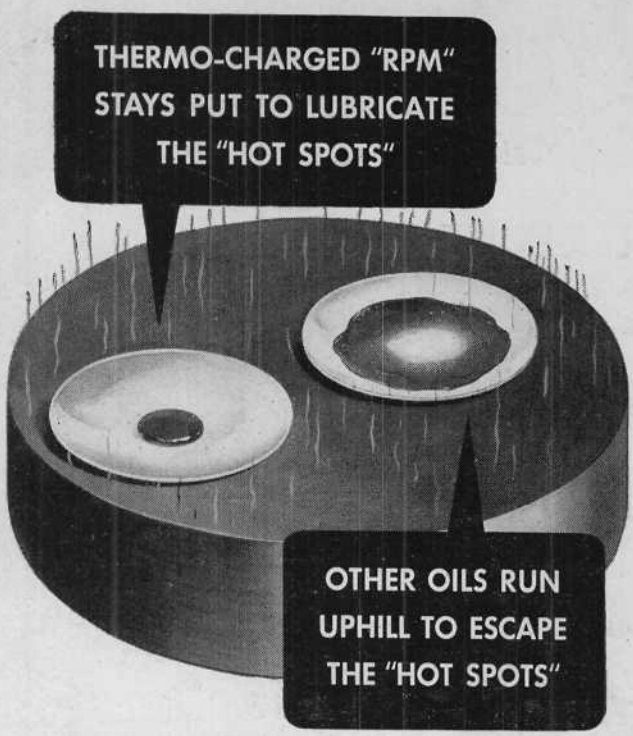
Water and power are the two great essentials in any agricultural and industrial community—and here in Imperial Valley the two are combined under one management that derives its authority direct from the consumers.

No private stockholder derives a profit from the operation of this great power and water system—every cent reverts to the benefit of the people served. And this is the reason why every month many new "cooperators" are added to the lines of this community-owned system.

Imperial Irrigation District

Use Your Own Power–Make it Pay for the All American Canal

YOU'VE NEVER SEEN ANYTHING LIKE THIS



LOOK at this authentic test by which we have compared Thermo-Charged "RPM" with other motor oils from the highest-priced on down.

Equal quantities of Thermo-Charged "RPM" and competitive oil are heated on a hot plate (see illustration). At temperatures that do not affect Thermo-Charged "RPM," competitive oil leaves the *hot spot* dry—and *runs uphill* to *get away* from scorching heat.

Here is a graphic demonstration of Thermo-Charged "RPM's" ability to *stay on the job at the hot spots in your engine.*

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