

THE

Desert

M A G A Z I N E



DECEMBER, 1941

25 CENTS

Ovens Full of Gold . . .

Chandler, Arizona

Dear Sir:

I enjoyed the story of the Lost Dutch Oven mine by Mr. Rexford Bellamy in the October issue of the Desert Magazine.

Since the Lost Dutch Oven story appeared in my book "Lost Mines and Buried Treasures of the Great Southwest," I have received more than a hundred letters from people throughout the United States and several foreign countries seeking additional information as to the location of this lost mine.

I am convinced that the mine now being worked by Clifford Gillespie is the "Lost Dutch Oven Mine," said to have been found years ago by Tom Scofield. The fact that the mine is located in the Old Woman mountains instead of the Clipper range only goes to show that in searching for these lost mines the seekers should take in more territory. Old-timers did not always know the exact locations of their finds and in the absence of a reliable map only gave the approximate location. They did not always know where one range ended and where the other started.

Then too the man who discovered these rich outcroppings, in telling the story often deliberately placed the mine in a nearby range or mountain as they sometimes had a sneaking idea that they might want to come back and look for it themselves. Moral—take in more territory. The author does not always know the exact location either. If he did the chances are that he would locate it himself.

Many an Anglo-Saxon is a prospector and treasure hunter at heart. To discover a lost mine or dig up a buried treasure is the dream of Eternal Youth. The wonderful thrill of such a discovery cannot, however, be experienced by all of us. Tales of hardships followed by the finding of a fortune in a lost mine or the digging up of a hidden treasure fascinate us even though we know they are only fiction. How much stronger then must be the appeal of true accounts of the finding of one of these long lost mines or treasures.

Here's hoping that Clifford Gillespie takes out many Dutch Ovensfull of gold from his lost mine out there in the Old Woman mountains.

JOHN D. MITCHELL

Change the Signboard . . .

Coachella, California

To the Desert Magazine:

Your October, 1940, issue carried a story by Hulbert Burroughs on "Forgotten Oasis in Eagle Mountains."

Regarding the canyon he refers to as Monsen or Jack Fork, here is some additional information that may be of interest: I have an old government map which lists this as Anshute canyon.

It was named for Charlie Anshute who dug a well in the rocks where the spring is seeping out, put in a gasoline engine and laid pipe lines to some of his claims. He built a ladder—it may be the same one shown in Mr. Burroughs' picture.

Old-timers knew this waterhole as Anshute well. He had a team, one black and one white horse. One morning they were missing. He followed them. They had been stolen by two men and a woman, Mexicans, and were headed for the border. Later Anshute's body was found where the thieves had killed him when he caught up with them.

A posse took the trail, but the trio escaped to Mexico. Later they returned, and as nearly as I can recall, one was hanged at San Quentin, and the others given long terms, to be deported when they had completed their time. I believe one of them died in prison.

As historian of the Coachella Pioneer society I am trying to have the sign changed to Anshute canyon.

JUNE A. M. McCARROLL

LETTERS

Stuck in the Sand . . .

San Bernardino, California

Dear Mr. Henderson:

Pardon me if I take exception to quiz question numbered 2 in your November issue.

I claim to be an expert on getting stuck in sand and while, when I first entered on my career at getting stuck, I was pretty "green," I have picked up quite a bit of valuable experience.

There is, of course, no doubt but that, at least in the ordinary case—I can think of exceptions at that—the choice lies between the jack and the shovel. You choose the shovel. I choose the jack.

There are two grounds for comparison of the two tools: (1) the relative importance of the operation performed by each; and (2) the comparative availability of a substitute tool. On both counts the jack wins.

On count (1), it is far more important to lift the car from its "dug-in" position wherein it will probably be resting on its rear housing than to shovel sand from in front of the wheels. Your greenhorn will shovel blisters onto his hands and cramps into his back with a net result of finding his car sink deeper and deeper into the sand. Your experienced desert driver will calmly set up his jack, lift the rear end of the car out of the hole, fill in a foundation of brush and rocks and roll out of his difficulty.

On count (2), the jack also wins. I have been caught without each tool. The shovel is easily replaceable as to function by a frying pan, a wash basin or any one of half a dozen other pieces of equipment likely to be with you. As to the jack it is another story. I was caught not long ago hopelessly stuck going up a sandy wash—and I had a shovel too. I remembered a fence two miles back which I had fortunately observed and I hiked back to it for a post to use as a lever. A hike in another direction produced a rock suitable for use as a fulcrum. With this improvised jack I raised the car out of its sandy grave and got away. I think you will agree with me that the finding of these substitute materials even under the difficulties indicated was an exceptional and unusual piece of luck.

It is not impossible to imagine a case without an undue stretch of the imagination in which a too wholehearted reliance on your answer might produce a situation with highly uncomfortable or even possible tragic results.

ROBERT MACK LIGHT

Dear Mr. Light:

Well, I rather expected to start an argument when I suggested that the shovel was the handiest tool when stuck in the sand. As a matter of fact our staff members did a lot of debating over the subject.

There is much merit in your side of the story. I can merely go back to the fact that in my own experience—that includes being mired in everything from earthquake crevices to cloudburst water, with numerous dunes thrown in—I've relied on my shovel ten times to every once that I dug out the jack.

We'll probably agree on one thing—not to put ropes or chains on the tires when in the sand. I walked 14 miles for a tow car the night I learned that lesson.

Thanks for your letter—and more power to your old jack.

—R.H.

Lost Dutch Oven . . .

Reno, Nevada

Dear Mr. Henderson:

I am a reader of the Desert Magazine, and noted your article in the October issue, concerning the Lost Dutch Oven Mine. For your information will state that I have taken over the Gillespie property, and my brother, Delbert B. Mills and myself, have added it to our holdings in the same canyon of the Old Woman mountains, and have formed a corporation under the name indicated on this letterhead, and are operating the property.

We believe the properties possess great merit, and when properly developed should make a good mine.

HOMER C. MILLS

Porcupine Eggs . . .

Pasadena, California

Dear Mr. Henderson:

On a recent trip into Utah I ran across the most curious mineral specimen you ever saw.

Up near Mt. Carmel on highway 89 some young children were selling petrified porcupine eggs at \$1.00 each. I was told that these specimens were very rare, and that the only way to find them is to hang around where porcupines are plentiful, and when you hear a porcupine cackle, it is a sure sign that said "porky" has laid an egg. Then all you have to do is to hunt around till you find one, which might take some three million years or more.

The specimens I saw were cockle burs, tied with a pink ribbon.

I didn't bring any home as I thought I might find good specimens in Imperial Valley.

ROY CARSON

Living Specimens Wanted . . .

Southwest Museum

Dear Mr. Henderson:

We have had inquiry here from the authorities at La Purisima Mission, near Lompoc, as to where they can obtain a few cattle of the rather small, black, rangy Colonial Spanish breed with which the old California ranchos were stocked in early days.

It is hoped to make La Purisima a "living museum" of early California and for this reason a small herd of the typical cattle are needed.

We know where to find the right sheep, for the breed formerly raised by the Navajo Indians are still to be found in remote portions of the reservation, and these are direct descendants of the sheep brought in by the Spanish colonists.

Perhaps some of your readers can tell us where to find the cattle.

Wishing continued success to the magazine, I remain,

M. R. HARRINGTON

No Mystery in the Maze . . .

Los Angeles, California

Editor, Desert Magazine:

In your October issue you have a letter from Fredrick C. Butler regarding the mystery maze near Needles.

The January, 1933, number of Touring Topics, Page 32, has an article stating that the ridges of rock is the work of the contractor who built the Santa Fe bridge at that point. He used a scraper to line up the rocks so they could be shoveled into the wagons. He claims to have saved almost \$1 per cubic yard by getting his material in this manner. He started to get his rock from a quarry.

The Touring Topics also quotes a paragraph written in 1891 for "Transactions of the American Society of Civil Engineers," pages 692 and 693.

The above may help you take the mystery out of the maze.

CHARLES PUCK

DESERT Calendar

- NOV. 28-30 Fifth annual Papago Indian fair and rodeo, Sells, Arizona. Richard Hendricks, chairman.
- DEC. 2 Annual Papago fiesta of San Xavier del Bac, 9 miles south of Tucson, Arizona.
- 4-6 Border Days celebration at Calxico, California.
- 6-7 Sierra Club of Southern California to weekend in Little San Bernardino. Camp in Box Canyon, hike to Hidden Springs and Grotto canyon. Steve Ragsdale of Desert Center, leader.
- 7 All Breed Dog show, Desert Inn mashie course, Palm Springs, California.
- 7-JAN. 3 Annual Christmas Illumination pageant, Madrid, New Mexico.
- 10-13 Four performances of Romberg's light opera, *The New Moon*, by Salt Lake City Opera association, at South high school, Salt Lake City, Utah.
- 11-12 Annual fiesta of Tortugas Indians, featuring Los Matachines Dance, Tortugas Indian village, New Mexico.
- 12 Fiesta of Nuestra Señora de Guadalupe, Taos and Santa Fe, New Mexico.
- 13-15 Santa Fe Trail days, Santa Fe, New Mexico.
- 20-21 Eagle Canyon, branching from Palm Canyon back of Palm Springs, will attract Sierra club members. Fluorescent minerals will be shown at Saturday night campfire program. Paul Kegley, 133 S. Kenmore, Los Angeles, leader.
- 28 Presentation of Handel's *The Messiah* by Salt Lake Oratorio society, direction of Dr. Adam S. Bennion, Salt Lake City.
- 29-JAN. 1 Southwestern Sun Carnival, El Paso, Texas. Dr. C. M. Hendricks, Mills Bldg., director.
- Fortnight before and after Christmas—Presentation of old Miracle Plays: *Los Pastores*, *L'Aparicion de Nuestra Señora de Guadalupe*, etc., in Santa Fe and many Spanish-American villages of New Mexico.
- Early in December—Shalako Dances and New House ceremonials, Zuñi Indian Pueblo, New Mexico.
- No fixed dates—Ye-be-chai and Fire Dances, Navajo Indian reservation in New Mexico.

FOR CHRISTMAS . . .

What finer compliment can you pay your friend than the gift of a quality magazine—the *Desert Magazine*.



Volume 5

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Number 2

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Navajo

By ROLF TIETGENS
Albuquerque, New Mexico

First prize in the October photographic contest went to this portrait of a Navajo Indian. Taken with a Rolleiflex 2¼x2¼ camera, Panatomic X film, no filter. F:5.6, 1/50 sec.

Special Merit

The following photos were adjudged to have unusual merit:

"Thistle Sage Blossom," by Howard A. Bell, Trona, California.

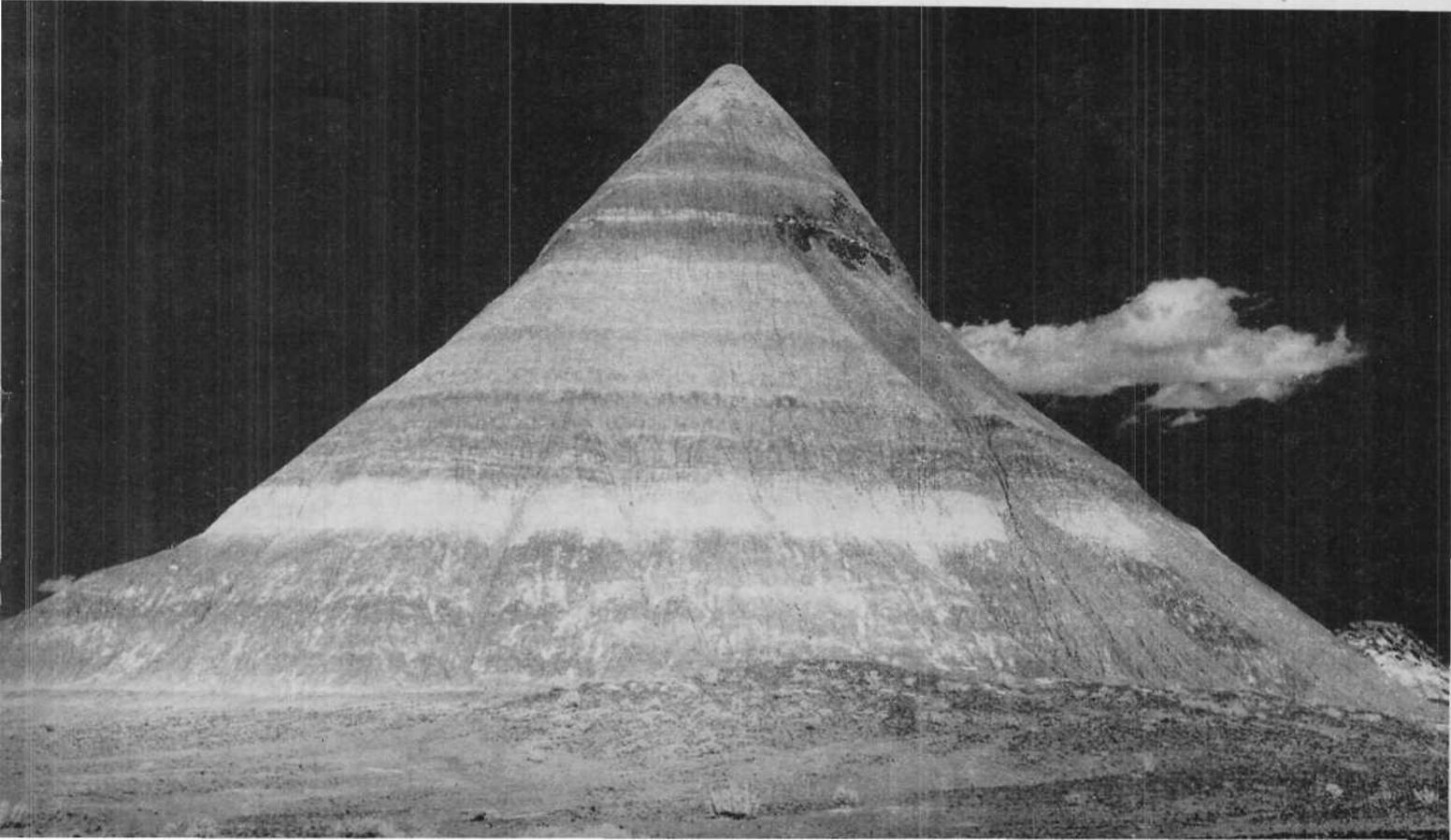
"Rider and Horses," by Gladys M. Relyea, Salt Lake City, Utah.

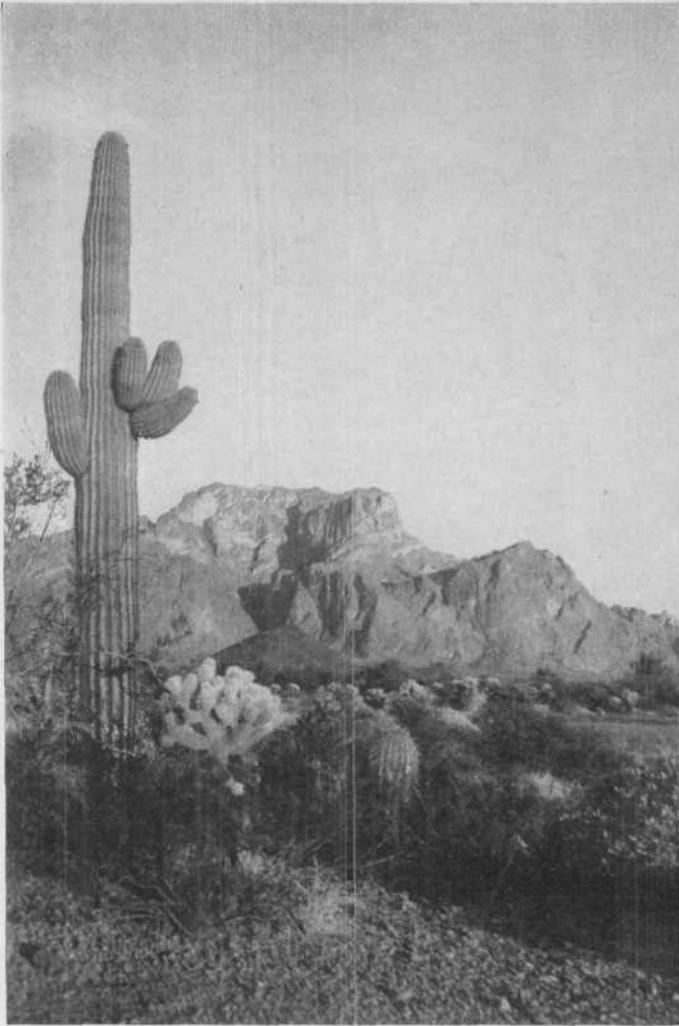
"Gopher Snake," by Arles Adams, El Centro, California.

The Tepee

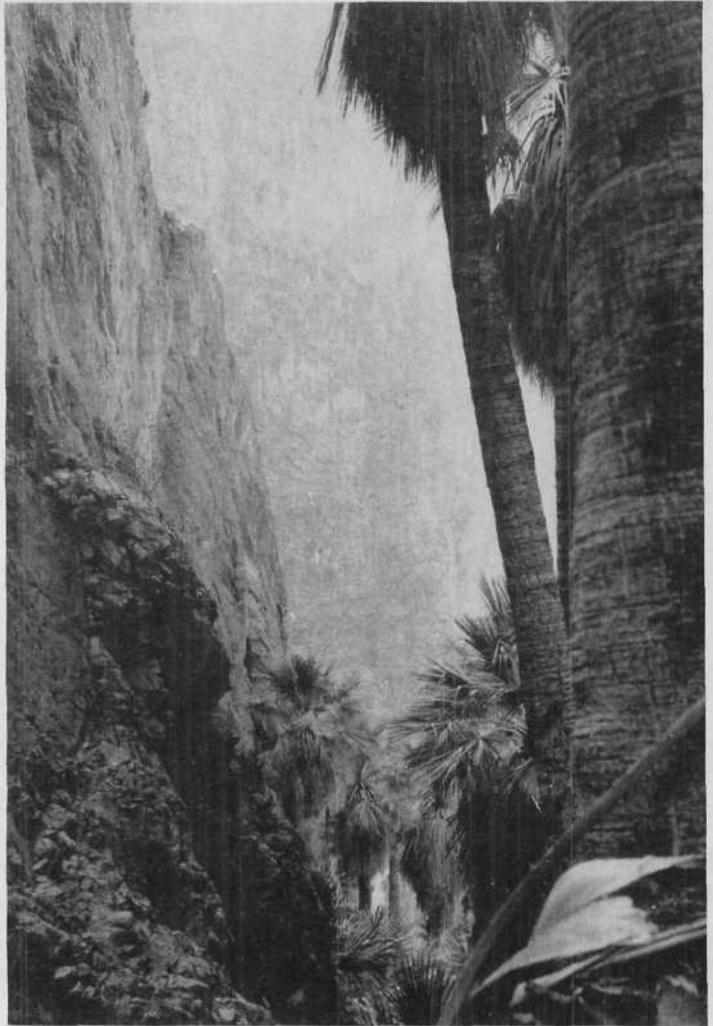
By ROBERT J. SCHULZ
Los Angeles, California

Winner of the second prize in this month's contest is the photo of one of the color-banded conical formations in Petrified Forest national monument, Arizona. Taken with a Kodak 620 Monitor, infra-red film. "F" filter, 1 sec. at F:22. D-76 developer, 9 min. Kodabromide paper No. 3.





Kofa massif viewed from the west. Entrance to Cliff canyon is in the shadow at the left center of the picture. Cars generally are parked to the left of the low black hill in the foreground.



Looking down Kofa Palm canyon. The gorge is so narrow the sun reaches the bottom of it only a few hours each day. Although palms must have plenty of moisture, no water reaches the surface here. Photo by Emil Eger.

You wouldn't go to desert sand dunes looking for orchids—nor would you normally go to the rugged Kofa mountain in northern Yuma county, Arizona, looking for wild palm trees. But the palms are there nevertheless—growing in a steep narrow slot of a canyon in the heart of a great massif of volcanic rock. Here is a story about one of the botanical rarities of the Southwest—in an area every desert traveler will want to visit sooner or later.

ONE of the myths often quoted by writers not too familiar with their Southwest is that Saguaro cactus in its native habitat never grows west of the Colorado river, nor the Washingtonia palm east of the river.

Since rainfall, elevation and time are the only factors which normally limit the spread of botanical species, it would seem odd if the meandering Colorado were an impassable barrier between two of the

Mountain Climbers of the Palm Family

By RANDALL HENDERSON

most conspicuous plant forms on the American desert.

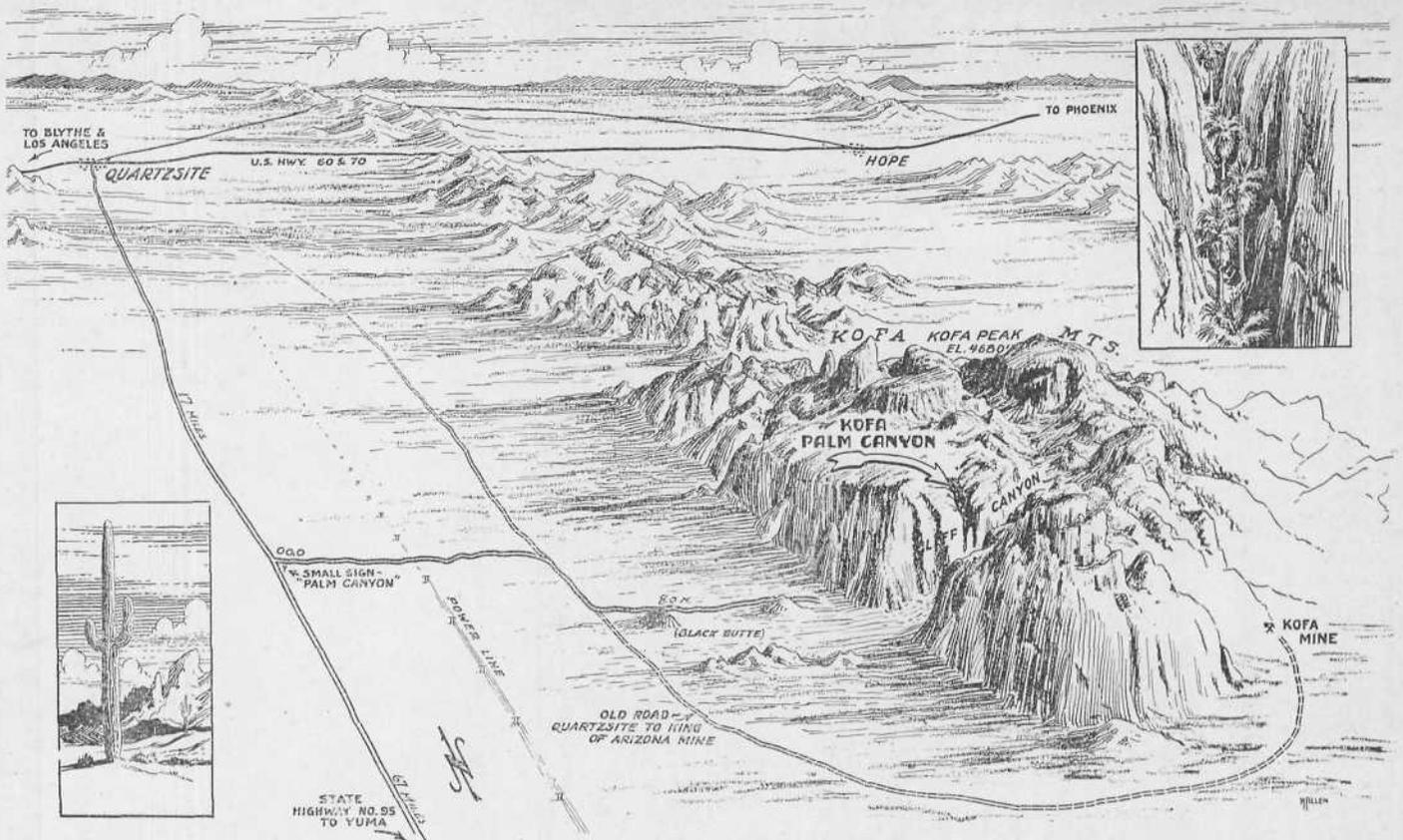
But it isn't true!

Many years ago on a trip to Laguna dam above Yuma I saw fine specimens of the Saguaro on the west side of the river. These cacti are now well known to desert travelers. They are identical with the species that grow across the stream in Arizona.

And there are native palms in Arizona

in the Kofa range in northern Yuma county. There may be other palm oases in Arizona—I am not sure. But Nature placed the Kofa palms in a setting so unusual as to give them a distinctive place among the botanical rarities of the Southwest.

You might go to Kofa range hunting gold or mountain sheep, or the exhilaration of a hazardous adventure in mountain climbing—but never in quest of palm trees.



Palms generally are associated with the lowlands—with tropical shores and desert dunes. They must have water—springs or running streams always at their roots.

But not so these *Washingtonias* that grow in the Kofas. Their ancestors must have lived in the Alps. They are mountain climbers—growing in a narrow slit of canyon so precipitous that visitors often use ropes as a safety precaution in reaching them.

And as for water—you'll need a pick and drill and a case of dynamite if you want to refresh yourself from the moisture that keeps them green and vigorous. Undoubtedly the water is there—palms will not survive without it. But Nature intended this water only for things with roots—roots that would grow in narrow crevices and around and under huge boulders.

I first heard of Kofa palms many years ago—but the location was vague and the story so improbable in view of the sheer vertical lines of the Kofa massif that I gave little heed to the information.

Then in 1935 I learned that Bert Stitt of the U. S. reclamation service, stationed temporarily in my home town of Calexico, knew all about the palms and had seen them.

Stitt was willing to serve as guide on a weekend trip to the canyon, and we arranged the trip, with my engineer friend Herbert Rouse as the third member of the party.

We took the well graded road north from Yuma—state route 95. It is an inter-

MOTOR LOG

Yuma over state route 95 to Palm canyon turn-off	67 m.
Quartzsite to Palm canyon turn-off	17 m.
Leaving state route 95 at Palm canyon sign with the speedometer at 0.0 the log is as follows:	
Sign	0.0
Cross power line	1.0
Enter old Quartzsite-Kofa mine road	4.3
Pass sign indicating left turn-off to Queen of Arizona mine	4.5
Turn left off old Quartzsite-Kofa mine road	5.5
Pass Black Butte	7.3
End of road at second butte	8.4
Much of the Kofa area is now in a federal game and wildlife refuge, assuring protection for both the palms and mountain sheep found here.	

esting trip, even without a rare group of palms as a special incentive.

We crossed the suspension bridge over the Gila river. Just beyond the bridge a sign warns the motorist: "No water, no gas, no oil for 72 miles." The sign-maker might have added "No bridges." This is unimportant in dry weather—but there are literally hundreds of arroyos to be crossed between that point and the next service station at Quartzsite, and on those rare occasions when rain is falling in the desert these dips run full of water. Any one of them is an impassable barrier.

The road soon climbs out of the Gila river bottom and for 70 miles extends along a level plain at the western base of

the Castle Dome and Kofa mountains. It is a clean desert—with not even a billboard to obscure the landscape of saguaro, ironwood, palo verde, ocotillo, cholla, jojoba and the other vegetation of the upper Sonora zone. The first 26 miles out of Yuma is oiled road—after that well-graded gravel.

Twenty miles to the west is the Colorado river, parallel to our road but never visible. On the east the steep spires and knobs of the Castle Dome mountains form a jagged skyline on which the imaginative traveler will see a thousand human profiles. There is an easy detour across a hard level desert floor to the ghost mining camp of Castle Dome, nestling at the foot of the range.

Sixty-seven miles from Yuma a small crudely-painted sign on the right side of the road marks the turn-off toward the Kofa range. It is marked "Palm Canyon." Recently another little sign, newly painted, has been erected two miles down the highway, with the inscription "Palm Canyon, Queen of Arizona Mine." I have not had an opportunity yet to follow out this road, and it is therefore not included on the accompanying map. The turn-off to Palm canyon is 17 miles south of Quartzsite.

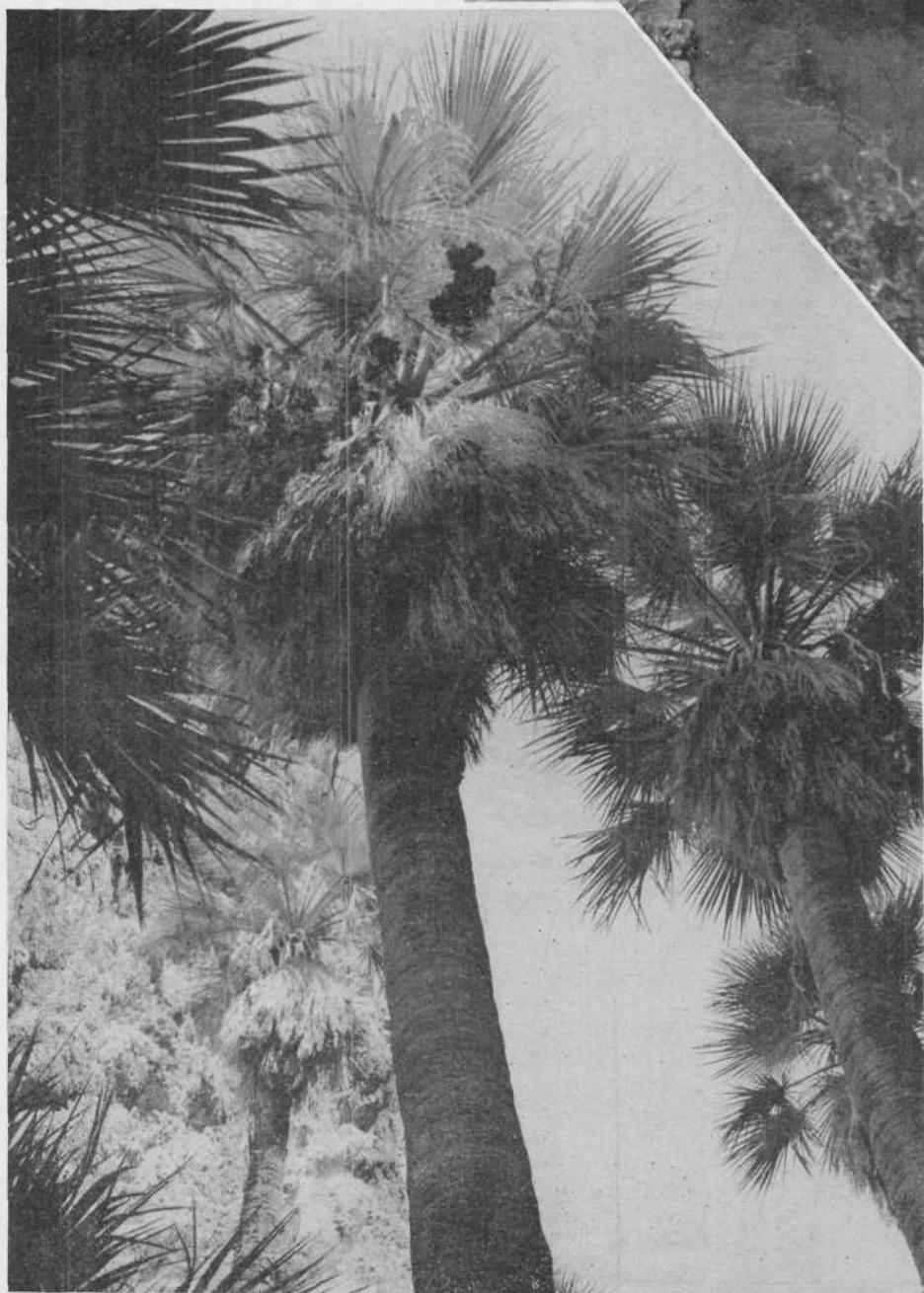
No road grader has ever touched the trail from route 95 to the foot of Kofa range, but the careful driver will find no difficulties along the route. The way became rockier as we neared the mountain. The first seven miles to a black butte that stands alone on the floor of the desert is

easily passable. Many of the visitors to Kofa palm canyon park their cars at this point. However, those who do not mind the rocks can go another mile and a half.

Our party camped near the second butte, 8.4 miles from route 95. The hike from this point to Kofa palm canyon we estimated at 1½ miles.

It was a dry camp, but dead ironwood is plentiful in this area and as we sat around the campfire that night, Bert Stitt told us of the interesting experiments he and his associates had made years ago for the department of agriculture when he was stationed at the Bard experimental farm near Yuma. One of their assignments was to convert the juices of certain desert shrubs to rubber—and they had considerable success in a small way. The project has never

Kofa canyon palms in fruit.
Photo by Emil Eger.



There are many natural tanks in the Kofa range which hold water for a few days or weeks following rain storms. Arthur Johnson (left) and Rand Henderson stopped for lunch beside this tinaja during a recent ascent of the peak.

been considered commercially feasible, however.

It was an October night, just cool enough for a sleeping bag to be comfortable without extra blankets. We were up before sunrise next morning with flapjacks for breakfast and lunches in our packs.

Kofa massif loomed ahead like a gigantic fortress, vertical walls rising hundreds of feet from the floor of the desert, sharp-angled points silhouetted at the top like sentry towers.

The closer we approached the mountain the more I wondered how members of the

palm clan—a family of tropical and semi-tropical dwellers—could have wandered off into this wild rugged region. As the sun rose higher a deep cleft became visible in the dark-stone wall ahead of us. "The entrance to Cliff canyon," our guide said, and that was our immediate objective.

We had to pick our way carefully over the lava boulders strewn over the desert. We gained altitude rapidly. By keeping well to the left the hiker may encounter an old sheep trail that enters the mouth of the gorge—but it eventually leads to a terrain that is too steep for humans, and then it is necessary to scramble down to the floor of the arroyo again.

I was so busy climbing over and around the boulders at the mouth of Cliff can-

yon I did not realize what progress we were making until suddenly I passed from sunshine into shadow. I looked up and saw that the massive walls of the canyon portal had closed in on both sides of me. In such a spot it is easy to understand the awe which the primitive races of men held not only for the invisible forces of Nature, but also for the stupendous things in their physical environment. Between the walls of that great gorge a human being is a very insignificant thing indeed. Boulders as big as barns had tumbled from the sidewalls, or had been carried by the tremendous power of water from high up in the range at the headwaters of the streambed.

Kofa is a strange mountain. It is virtu-

ally without running water. During many trips into and over and around the range since that first excursion I have never found a spring big enough to fill a canteen. True there are many natural tanks which carry water for a few days or weeks after a rainfall. But during the long desert droughts, Kofa, on the surface, is as dry as the Sahara. The Indians evidently learned this long ago for I have never found a potsherd or glyph or ancient campsite in or around the range.

Yet despite this apparent lack of surface water, every tiny ledge and crevice in the great bulk of Kofa has green vegetation the year 'round. Evidently the huge block of volcanic rock which comprises Kofa mountain proper is shattered and porous, and stores great quantities of moisture within its mass.

When you go looking for Kofa palms this vegetation will interest you because it is easy for an untrained eye to mistake some of the very luxurious yuccas which grow high up on the rock walls for palm trees.

Ascending Cliff canyon, the narrow gorge in which the palms are located is the third tributary on the left. These little tributaries are not entitled to be called canyons. They are little more than enlarged crevices in the cliff.

"It is easy to pass the Kofa palms without seeing them," Stitt cautioned us. "Only the tops of the trees are visible from the floor of Cliff canyon, and they soon pass from view."

However, the entrance to the slot in which the *Washingtonias* grow has two landmarks. Nature's marker is a pinnacle of rock which nearly closes the entrance to the narrow gorge. Man's landmark is a cairn of rocks stacked on a boulder. A cloudburst might readily sweep away the cairn, but the tepee-like pinnacle will survive many storms.

On that first trip to Kofa palms we climbed around the left side of the pinnacle, and a steep, tough climb it was. There are two almost vertical pitches each about 20 feet high which call for careful finger and toe progress. However, some one had leaned the trunk of a dead palm tree against the wall of the lower fall and by shinnying up that trunk like a South Sea island native gathering coconuts it was easy to get over that obstacle. Since then, the wear and tear of the elements plus the clawing of visitors have worn the old palm tree to a mere shred, and it is no longer any help.

The easier way to the palms now is to take the route up the chimney on the right side of the pinnacle. It is steep but there are good foot and hand holds all the way. Any healthy person will make the ascent without difficulty.

In case you do not wish to go all the way to the upper palms, I've counted them twice. There are 52—all healthy members of the genus *Washingtonia*, species *filifera*.

Sez Hard Rock Shorty of Death Valley . . .



By LON GARRISON

"The way cars go whizzin' by here," commented Hard Rock Shorty, "I can't help thinkin' o' the time Pisgah Bill brung the first one in here to Inferno."

Hard Rock leaned back in his chair and turned the leaves of memory back to the time of the first automobile. He was a little astounded at how far back it really was but went on with his yarn.

"Yes sir—I was settin' right here when Bill drove 'er up, steamin' like a hunnerd gallon teakettle. Say—our eyes stuck out like they was parts of a telescope. An' was Bill proud! Just like he had a pet pig! But he didn't give us time to look—wanted to get on home and show it to the family an' it was about dark then.

"Early next mornin' I walked out to get a better look. Bill'd jacked up one back wheel an' was changin' a tire—first time I ever seen it done an' I jumped in to help. 'Bout that time the sun come up an' started shinin' on the front o' the car an' purty soon I hear a kind o' rumblin' noise an' the wheel starts to turn around.

"Bill hollers like he'd stepped barefoot in a cholla. The sun was boilin' the water in the front o' the thing, an' I seen she was a steam car.

"Bill was jumpin' around like a kangaroo. It'll boil all the water out, he yells, an' the windmill ain't workin' an' I ain't got no more water."

'Shucks—that's easy,' I tells 'im, 'Just hook that hind wheel on the windmill an' she'll pump.'

"So we gets a hunk o' belt an' hooks the automobile on the windmill an' it starts pumpin' like they was a 40-mile gale. Wasn't long 'til they was water enough to run the car, water the stock, an' irrigate the garden too. Then I notices that them wind fans on the windmill is whizzin' around an' kickin' up a awful dust over by the house. So I clumb up, swung the head around so it aimed at the house an' like to blowed Mrs. Bill off the porch. It did blow the wash line down an' a mile an' a half out across the brush afore I c'd get it aimed different.

"But that give Bill a idea an' he used that breeze to air condition the house, cool down 'is barn, an' even to try some diffrent garden crops. But, when he forgot to turn it off one night an' it run long enough to freeze the corn he quit that.

"Would be workin' yet but for that sand storm that come up one day while Bill had 'er all hooked up. The sandstorm was blowin' sand at the windmill and the windmill was blowin' it right back. Result was that sand drifts started formin' right there in the air and after while they got so heavy the old law of gravity took a hand and all the sand piled up on the car and windmill and covered 'em both up. They're still there if somebody wants to take the trouble to dig 'em out.

Information as to the discovery and scientific classification of these Arizona palms is contained in a monograph published by Dr. L. H. Bailey of Cornell university in 1936. Dr. Bailey wrote:

"The information that led to the discovery of an indigenous palm in Arizona was secured by Peter T. Robertson of Yuma from William Hoy of Quartzsite. Mr. Robertson was convinced that genuine palms, not merely yuccas, had been seen in the vicinity of the North Star mine, and published this information in the Yuma Sun August 1, 1923. Local representatives of the department of agriculture, Harry A. Gunning and H. G. McKeever were interested to verify this report and a visit to the North Star district was made in August, but was not successful in locating the palms. More definite information was secured later from A. J. Eddy, which led to another attempt being made in October, when Messrs. Ginning and McKeever were accompanied by R. D. Martin of Sacaton. True palms were found October 24, growing in narrow steep canyons of a mountain between Quartzsite and Castle Dome."

Later the same year O. F. Cook of the U. S. department of agriculture visited the palms to identify them botanically. It was reported in the newspaper account of the trip that "Mr. Cook intends to describe it as a new species to be called *Washingtonia arizonica*." This name, I believe, however, was never officially published according to the rules of botanical classification.

Dr. Bailey in his monograph on *Washingtonia* states, "I visited the Arizona canyon in the fantastic Kofa mountains in 1934 and obtained specimens and photographs. I regard the tree as *W. filifera*."

There are minor differences between these trees and the filifera that grows on the Southern California desert, but Dr. Bailey is of the opinion that these differences are only the normal variations due to a different environment. I believe a majority of the botanists have accepted Dr. Bailey's classification.

The Kofa palms are not confined entirely to this one canyon. I saw green fronds poking their ragged tips above the boulders in three other crevices high up on the rocky wall. Charles T. Vorhies of the Arizona experiment station estimated there are 65 trees in the area. I am sure some of them could be reached only by roping down from the cliffs above.

"My altimeter showed an elevation of 1825 feet at the base of the mountain where we camped, 2250 at the entrance to Kofa palm canyon, and nearly 3000 at the topmost palm in the narrow gorge.

Since that first trip to Kofa palm canyon in 1935 I have returned there many times, including three trips to the 4680-foot summit of Kofa peak. The easiest ascent is from the northeast wing of the mountain.

The name Kofa is a derivative from



Here's a picture to puzzle over. Poor light and limited space makes photography difficult in Kofa Palm canyon. This photographer finally became disgusted, turned his lens straight up toward the sky and snapped the shutter. This is what he got.

King of Arizona mine which lies near the southern base of the mountain. The old prospectors have another name for it—one that could hardly be repeated in polite society. They call it S. H. mountain, and it appears that way on some of the maps. When you drive along the Yuma-Quartzsite road with the mountain outlined against the eastern sky you will see the silhouette that prompted the highly descriptive term used by the old-timers.

"Fantastic mountain," Dr. Bailey called it—and that is an excellent word for this strange massif of volcanic rock.

My most enjoyable trips into this massive jumble of rock were following rain storms when the natural tanks were filled with water. But Kofa is always interesting. Whether you are botanist, geologist, artist, rock-climber, or merely a member of that great fraternity of outdoor enthusiasts who love to explore the odd places—just for the fun and adventure of exploring—you'll return from Kofa with a desire to go back there again and again and to delve deeper into the cracks and crevices and recesses of this mysterious mountain.

How was it possible for ancient Indians, without hard metal tools to make arrow and spearheads from flint rock? It is a question that puzzles many people. And yet it is a simple process—when you know the right answer. *Desert Magazine* asked M. R. Harrington, curator of archaeology in Southwestern Museum, Los Angeles, who is quite an expert in the prehistoric method of fashioning tools from rock, to explain the method—and here is his story.

There's No Mystery About Arrowheads

By M. R. HARRINGTON

AN EXCITED voice came to me over the telephone. "I've found out how they did it, and I thought you'd like to know."

"You have found out how who did what?" I queried.

"How the Indians made their arrowheads. Why, even the Smithsonian doesn't know how they did it."

I groaned inwardly, but a museum curator mustn't hurt people's feelings.

"All right," I said. "Go ahead. Tell me how they did it."

"Well, they heated the flint real hot, and then they dropped water on it—"

The old fable again! It surely dies hard.

"Have you ever made them that way?" I asked suavely.

"Well, no; but a fella told me—"

"You just invite your friend to come down here to the Museum and I'll give him ten dollars apiece for every arrowhead he makes that way in my presence. As for the Smithsonian, it *does* know how the Indians made arrowheads and has published the details a number of times. Just take this reference—" I gave him one—"Now look it up for yourself." Then I hung up with a clear conscience.

When anyone asks me directly, I like to tell them the story of an incident that happened when I was on an archaeological trip in eastern Oklahoma many years ago.

I was working alone in a rock shelter one day—my partner had gone to town for groceries—and had found a number of arrowheads, bits of broken pottery, animal bones, chunks and chips of flint, all buried in the ashes of an ancient camp beneath an overhanging limestone ledge. I had spread these all out on a piece of newspaper and was digging away with my trowel when I heard hoofbeats. I looked around. An old Ozark mountaineer was approaching, mounted on a bony white mule. He pulled up in front of the shelter.

"What ye reckon ye're doin' thar, stranger?" he demanded.

"Why, I'm hunting for Indian relics," I replied.

"Hev ye found any yit?"

I pointed to my treasures spread out on the paper.

"What makes ye think them things is Injun relics? That busted crockery looks like Spanish crucibles to me."



Pabute Indian in Owens valley making an arrowhead.

"I know they're Indian because I found these Indian arrowheads with them," I answered, not wishing to get into a long discussion.

He chuckled in a patronizing way that made me yearn to swat him.

"Don't ye know, son, the Injuns never made them arrer spikes? They didn't have no iron or steel to cut hard rock with, and that flint rock's the hardest thing we got in these here hills."

"How do you account for them then?"

"I allus figgered God Almighty created them things for use of the Injuns."

It was several seconds before I could think of a comeback.

"I think He gave them good brains. Anyhow I can prove that the Indians *could* make arrowheads with nothing more than the tools they had at hand."

"Ye gotta show me," he said. "I'm from Missoura."

From the pile of flint that had been collected by some prehistoric arrow-maker I selected a chunk that seemed fairly straight grained and free from flaws. Picking up a round tough pebble for a hammer I struck it smartly against the edge of the flint—"bop!"

"Zingg!" off flew a large flat flake.

Then I repeated until I had a number of large flakes and the original flint chunk was too small to yield any more.

The old man got down from his mule and fingered the flakes.

"Ye don't call these arrer-spikes do ye?" he asked.

"Not yet," I reassured him. "This is just the beginning."

I took a piece of deer-bone that had been buried in the ashes and was still strong, almost greasy, cracked it with my hammer-stone and selected a blunt splinter. Then I selected a fairly thin, smooth flake of flint from the pile I had just made.

Holding the flake tightly in my left hand I pressed the bone against its edge at a certain angle—and pushed. Flick! Off sprang a little flake like a fish scale. Then I pressed off another and another, removing a little more flint here, a little less there. Then I turned the flake over and worked from the other side. In 10 minutes I had a little leaf-shaped arrowhead.

My friend was fascinated.

"That's fine, as far as it goes," he admitted. "But don't ye reckon the darn thing needs a neck on it?"

"Just watch me." I picked up a thinner splinter of bone and ground the tip on a bit of sandstone until it suited me. Then taking my arrowhead I started in to press off still finer flakes, first on one side of the base, then the other. In a few minutes I had made a stem; the completed product differing not at all from the ancient arrowheads spread out on my paper. I presented it to my visitor.

The old man studied it as it lay in the palm of his hand. Finally he turned to me.

"A feller can't git too old to larn something new!" he chuckled. "How about lettin' me have that hammer-rock and that bone o' yourn, also a hunk o' that flint-rock? I aim to show my folks somethin'!"

After he had left I took out my pocket knife and picked a lot of tiny flint flakes out of my left hand, then I had to look for the iodine bottle. When I have time to prepare, I always protect my hand with a bit of buckskin and put a wooden handle on my bone flaking-tool—things which the Indian flint-worker usually did.

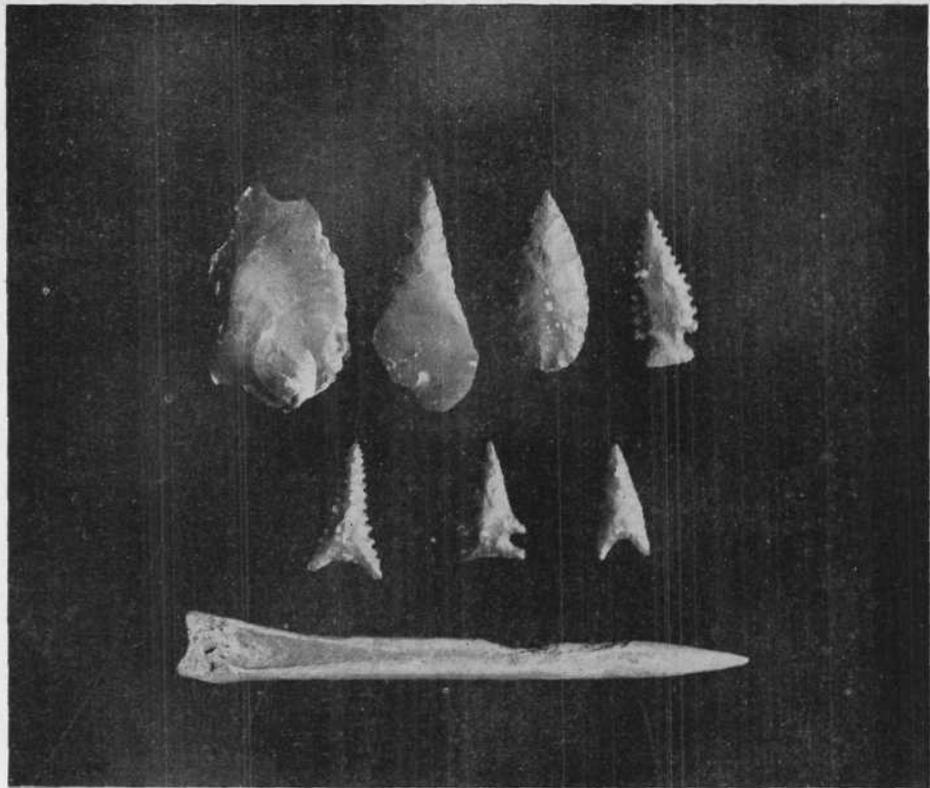
Of course there were variations in detail; but those two main processes, which the archaeologist calls "percussion," or the use of the hammer; and "pressure," or the use of the flaking tool, were about the same from the Eskimo of Alaska to the Ona Indians near the south tip of South America.

Every Indian I have seen making arrowheads—and there are still some who know the art—employ the same methods; although today they may use a rusty nail instead of a bone-flaking tool. Written accounts of eye-witnesses, beginning with Captain John Smith of Virginia, tell the identical story.

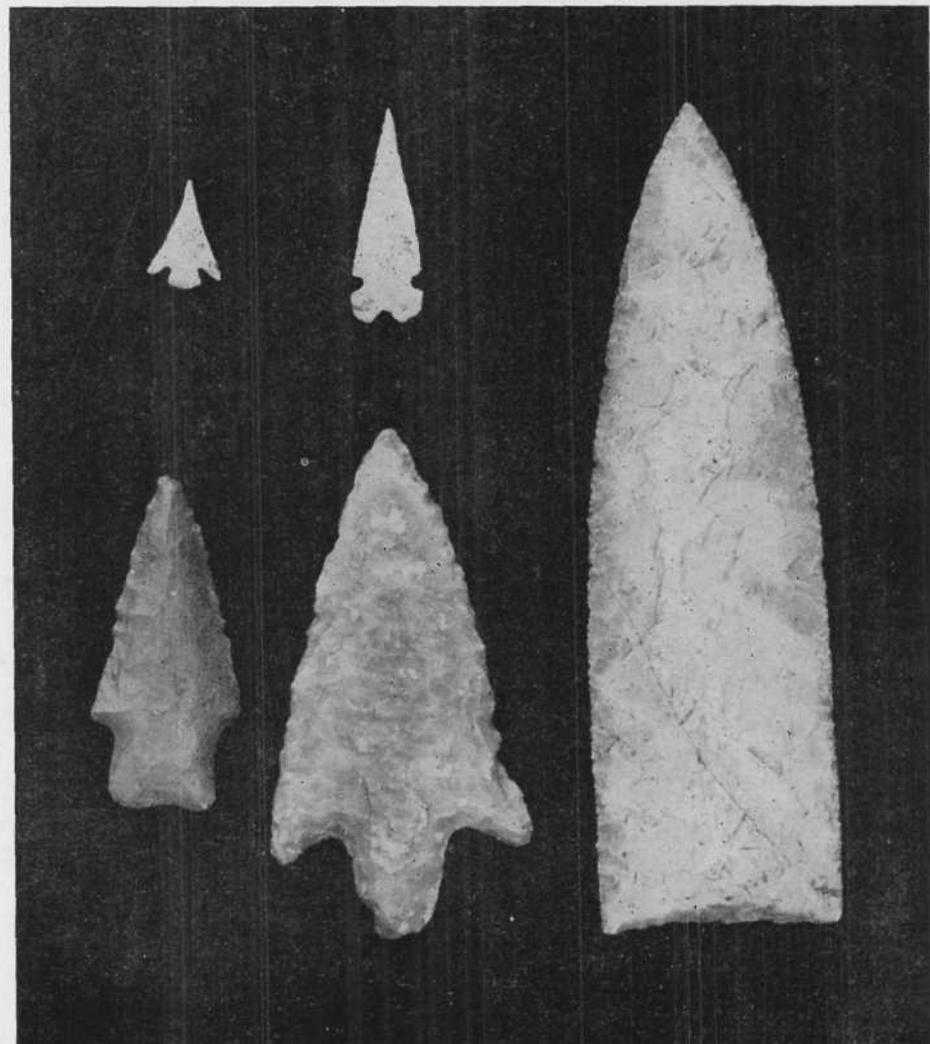
Smith wrote: "His arrow head he quickly maketh with a little bone, which he ever weareth at his bracer, of any splint of stone, or glasse in the forme of a hart; and these they glew to the end of their arrowes." This was in the year 1609!

Even white men who have learned flint working—and a few can rival the Indian—use the processes I have described; although sometimes with different tools and the use of a vise to hold large pieces.

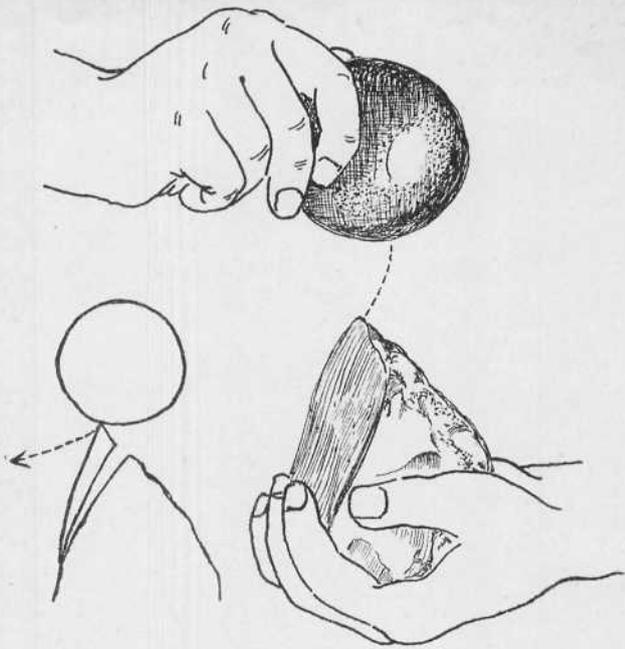
These large pieces offered problems to the ancient flint-worker as well. In the first place flakes or chunks large enough for a good sized knife-blade or spear head are too thick to be worked by simple pressure



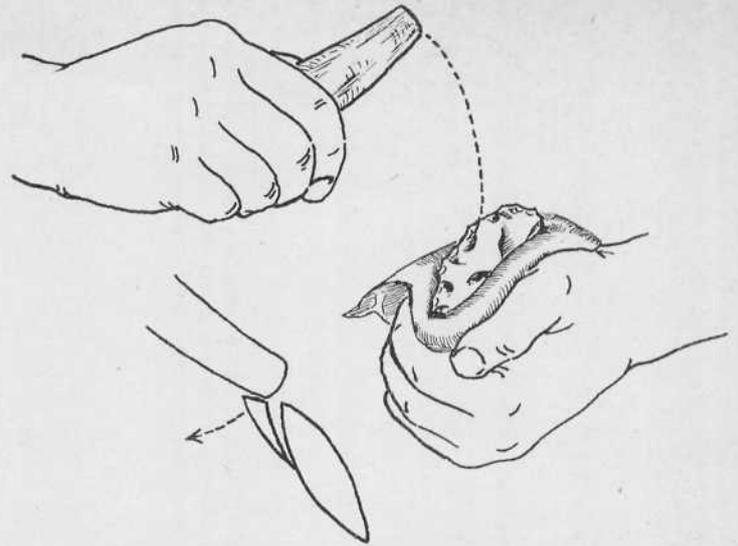
First line—four stages in the making of an arrowhead.
Second line—Three common types of point.
Bone awl used as a slaker in the making of points.



Flint implements in Southwest Museum. Top, left to right—bird point; an ordinary arrowhead. Lower row, left to right—Atlatl dart point; spearhead; knife blade.



A—Percussion. Knocking off flakes for arrowhead making. Hammerstone used.



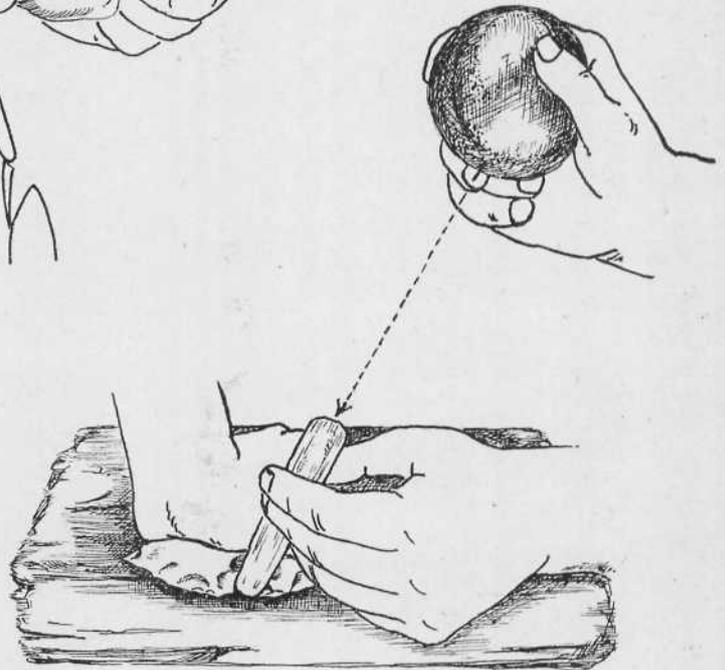
B—Percussion. Ronging out a blade. Deer-antler mallet used.



C—Pressure. Use of the flaking-tool.



D—Pressure. Use of a bone point to shape the stem of an arrowhead.



E—A three-handed job. Use of the hammerstone and deer-antler "pitching-tool."

These five sketches by Myrtle C. McIntyre illustrate the essential processes in the making of Indian tools from flinty rock.

such as I have described. So the Indian had to rough it into shape by percussion with his hammerstone or with a deer-antler mallet, knocking off large chips. Or, he tied his bone flaker to a stout long handle that would give him more leverage and power to press off longer and larger flakes. Another method was a combination of percussion and pressure, for which the services of a helper were needed. He held the flint against a block of wood while the workman set an antler cylinder or "pitching-tool" against the edge at the point where he wished to remove the flake, and struck the tool sharply with his hammerstone. Of course, as in all flint-work, the tool must touch the flint at just the proper angle, which can only be determined by experience.

Just what is an arrowhead? Most people regard any chipped stone point or blade up to six or eight inches long as an "arrowhead"—but they are mistaken. True arrowheads are generally light and small—under two inches in length although I have seen undoubted arrowheads exceedingly well made and thin that were over three inches. The only original Indian stone-pointed arrows that have survived to our time, whether in ancient dry caves, in old collections or in the hands of the Indians themselves, invariably have small thin arrowheads.

"Bird points"—tiny arrowheads—are the special joy of some collectors, but unfortunately there is no evidence that they were made especially to kill birds. For this purpose most tribes preferred a blunt arrow, sometimes with a knob of wood for a point. This stunned the victim but did not injure its feathers.

I suspect that the tiniest "bird points" when genuine, were made as a stunt, like the almost microscopic baskets some Indians weave today. Most so-called bird-points were probably mounted, to give them weight, on a hardwood foreshaft set in a light wood or cane arrowshaft, and were used for general hunting and war purposes.

Next in size to true arrow-points come dart-points, used on the darts or light spears hurled with the *atlatl* or spear-thrower widely used in America before the introduction of the bow and arrow and even up to modern times in the Arctic and in some parts of Mexico. These are thicker, chubbier points, seldom less than two or more than three inches in length. In cases where darts with points still in place have been found in dry caves they have been generally of this larger, thicker variety. In some cases, however, you cannot be sure whether a given point was used with an arrow or a dart.

Points or blades more than three inches long were mainly knife blades or spear-points, a statement easy to prove in the first instance because many stone knives still equipped with their original wooden handles have been found in dry caves and

elsewhere. But strange to say I have never seen an ancient spear-head, larger than atlatl-dart size, on its original shaft, outside of relatively modern Eskimo specimens.

Now about materials. By "flint" I do not imply the pure mineral such as is found in the chalk-cliffs of England, but the flint-like stones commonly seen in America—whether we call them quartz, chert, jasper, chalcedony or agate. Included too are unrelated materials that break with a similar fracture—called "conchoidal" or shell-like by archaeologists—such as obsidian, or volcanic glass, which was one of the most popular materials for arrowheads in the West. Also metamorphosed shale, which was pretty good, and more obdurate stones like rhyolite.

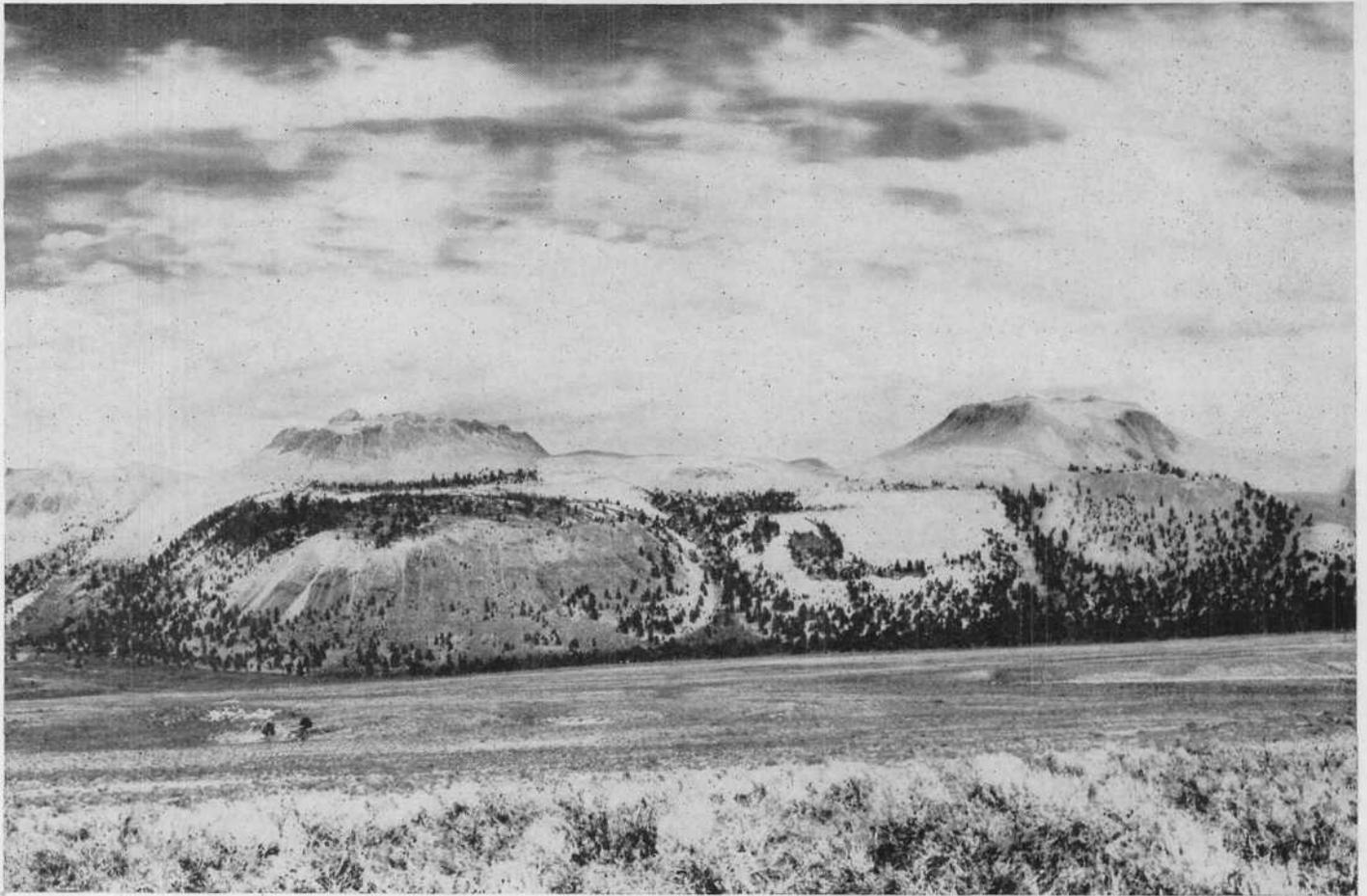
When the Indian wanted material for arrowheads he might look in certain washes where he remembered seeing float or stray pieces of chert or obsidian; or he might know a ledge where erosion had exposed thin layers of jasper all ready to work. He preferred, however, to dig his material out of the ground, because he knew it would chip easier than pieces exposed for a long time on the surface. I have seen ancient quarries covering acres where the very ground under your feet is composed largely of chips and implements broken in the making.

But the old "heat-and-water" myth still persists. And it is a more plausible theory at that, than the belief of people in certain countries that prehistoric arrowheads are "fairly arrows" or "elf-darts."

TRUE OR FALSE

Here's another lesson for Desert Magazine's monthly class in desertology. You may not know all the answers—most people know less than half of them—but a study of these questions will help you acquire a fine fund of knowledge covering the subjects of geography, history, nature lore, Indians, botany, mineralogy and literature. If you get 10 correct answers you are above the average. Fifteen is a fine score, even for a desert rat. More than 15 entitles you to membership in that exclusive fraternity of Sand Dune Sages. Answers are on page 30.

- 1—Desert tortoises are hatched from eggs. True..... False.....
- 2—Joshua Tree national monument is located in southern Arizona. True..... False.....
- 3—The Supai Indians live in the bottom of Grand Canyon. True..... False.....
- 4—The roots of certain species of yucca are used by the Indians for soap. True..... False.....
- 5—Cactus wrens often build their nests in Beavertail cacti. True..... False.....
- 6—The old Bradshaw trail extended along the south base of Chuckawalla mountains. True..... False.....
- 7—Indian tribesmen in the Rio Grande valley were growing corn before Coronado entered New Mexico. True..... False.....
- 8—Tourmaline crystals often occur in lepidolite. True..... False.....
- 9—Camelback mountain may be seen from Phoenix. True..... False.....
- 10—Lieut. Ives was the first man to navigate the Colorado river above Yuma. True..... False.....
- 11—El Tovar hotel is located on the North Rim of Grand Canyon. True..... False.....
- 12—Scientifically, a horned toad does not belong to the toad family. True..... False.....
- 13—One entrance to the Petrified Forest national monument is on U. S. Highway 80. True..... False.....
- 14—Desert holly sheds its leaves when the winter frosts come. True..... False.....
- 15—Boulder dam was built by the U. S. reclamation bureau. True..... False.....
- 16—Kit Carson was a member of the Mormon battalion on its march to California. True..... False.....
- 17—The book, *The Winning of Barbara Worth*, was written by Zane Grey. True..... False.....
- 18—Nogales, Arizona, is located in the territory acquired under the Gadsden purchase. True..... False.....
- 19—The Little Colorado tributary enters the main stream of the Colorado below Lee's Ferry. True..... False.....
- 20—If you wanted to visit the Dinosaur national monument you would go to the state of Nevada. True..... False.....



Mono craters. Highly filtered picture by Frashers, Inc.

We Went to Mono Craters for Obsidian

There are many places in the desert Southwest where obsidian may be found, but the location described by Mora Brown in this month's field trip for Desert Magazine readers is probably the daddy of them all. Mono craters not only offer a fine assortment of volcanic glass for the rock collector, but they provide an excellent opportunity to study the formation of this mineral at its source. Here is the story of one of the most interesting geological areas in California.

By MORA M. BROWN

A FEW hundred years ago—which, geologically speaking is only yesterday—Nature staged a wild jamboree in what is now the Mono basin of east central California.

From deep beneath the crust of the earth steam and gas and molten rock were belching forth from at least 20 major vents and numberless smaller ones. If aborigines were roaming the desert in those days it must have been a terrifying experience to come upon this scene of violence.

But today those craters are silent. Their long pipes, driven deep in the earth, are clogged with obsidian. But in the soft

grey landscape which they dominate in spite of the nearness of the high Sierras, they seem to wait only the opportunity to blast forth again on another wild rampage of eruption.

I confess to my shame that until last September, I knew nothing about the Mono craters. Husband and I were planning a vacation trip for Inyo-Mono recreational area. Mrs. Ray Gabbert of Riverside, knowing we were a couple of rock-hounds, told us about the tons of obsidian to be found in the easily accessible crater nearest Mono lake. She told us we would find the whole group of craters worthy of inspection.

Our car loaded with sleeping bags, tent, water containers and supplies for any place or weather, we went in search of rocks and scenery with no fixed goal in mind. From Riverside we took Highway 395 over Cajon grade, past the tungsten mine at Atolia, and up into Owens valley. Up there it was cold. Snow was falling on the peaks.

We stopped at Independence for a visit with the Paul Ritch family. Paul is resident engineer for the Metropolitan water district, and in the early reclamation days of Idaho, he and my husband worked together.

We spent the three following days in

the lovely cabin which the Ritches built themselves at Whitney Portal. With Mt. Whitney towering at the head of the canyon, with overwhelming cliffs around us, with spots of snow and ice and sunshine, it was much more than beautiful.

At Bishop we made the acquaintance of one of the valley's best known and best loved citizens—W. A. Chalfant. It was in 1885 that his father P. A. Chalfant established the Bishop Register and made his son a partner. Since 1887, the son has been its only editor and publisher. For many men, that would be a full time job, but in those years Mr. Chalfant had been active in valley affairs and has found time to write three authentic histories of his corner of the world: "Outposts of Civilization," "Death Valley: The Facts," and "The Story of Inyo." He is now working on a book about the Mono country.

North of Bishop we climbed Sherwin grade, stopped to see the geyser at Casa Diablo, and came at last to an upgrade where the big desert valley yielded to evergreens. Soon the ground under the evergreens began to change, until the earth was replaced by a deep carpet of what looked like grey pebbles. But they were not ordinary pebbles; they were the volcanic material thrown far and wide when the craters were in action.

We reached Deadman's pass. There the trees had thinned considerably, and the grey color possessed everything. On the left we saw a symmetrical mound; on the right were others, one so low it looked more like a lake bed. We didn't know it, but we were crossing the southern end of Mono craters.

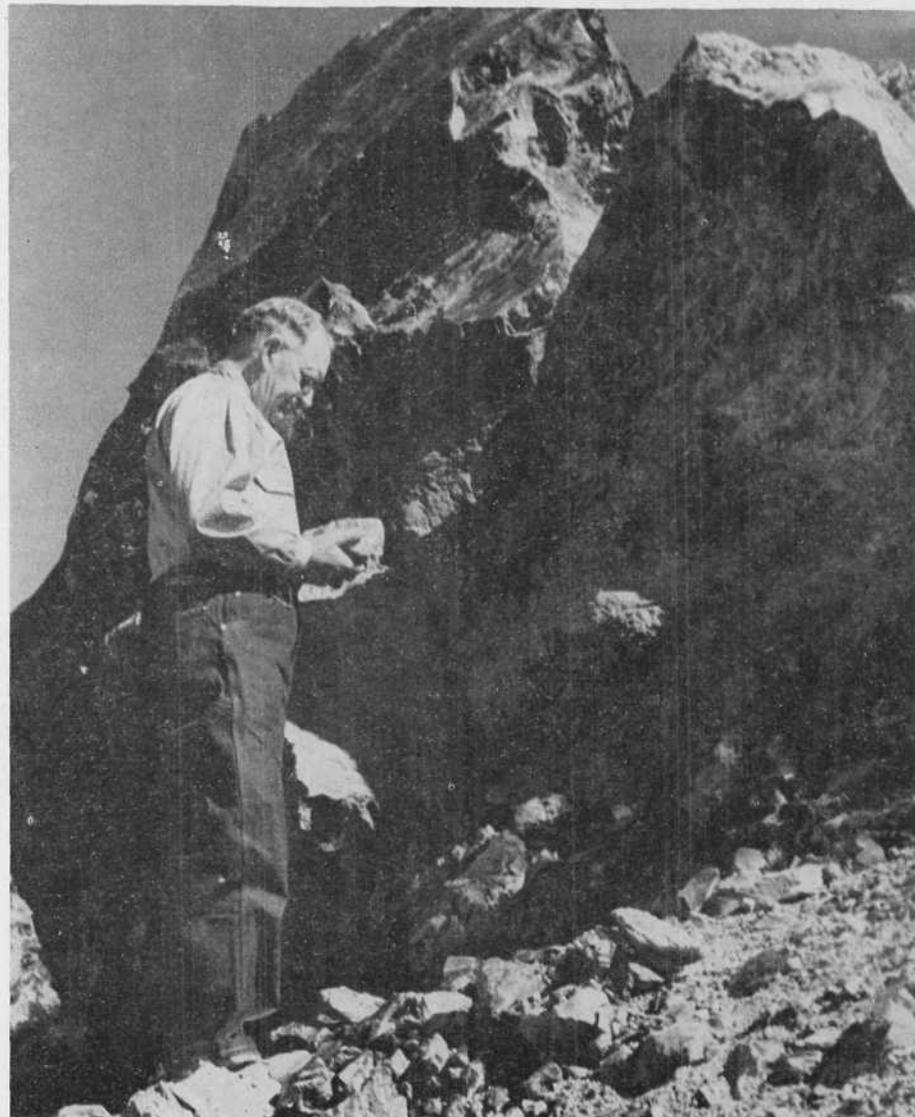
Soft, pleasing grey. Even the day seemed to absorb the color, so that, under a bright sun, it had the weird tone we associate with an eclipse. Then the craters lay behind us. But at June Lake Junction the highway again swung north, and we paralleled them all their 10-mile length.

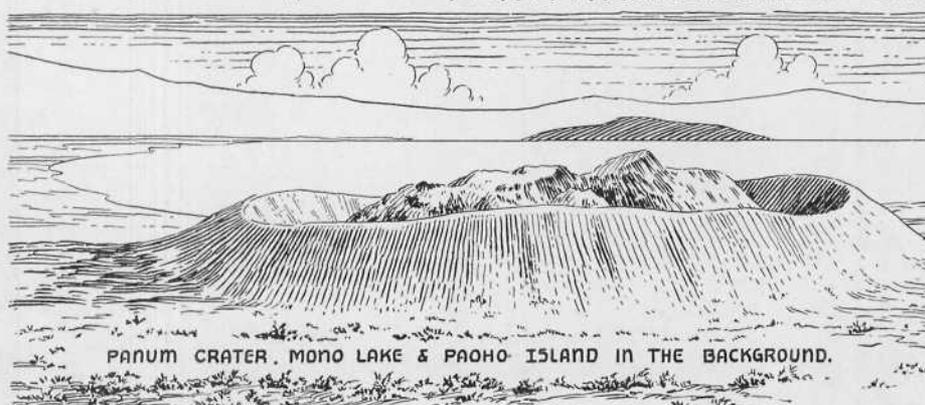
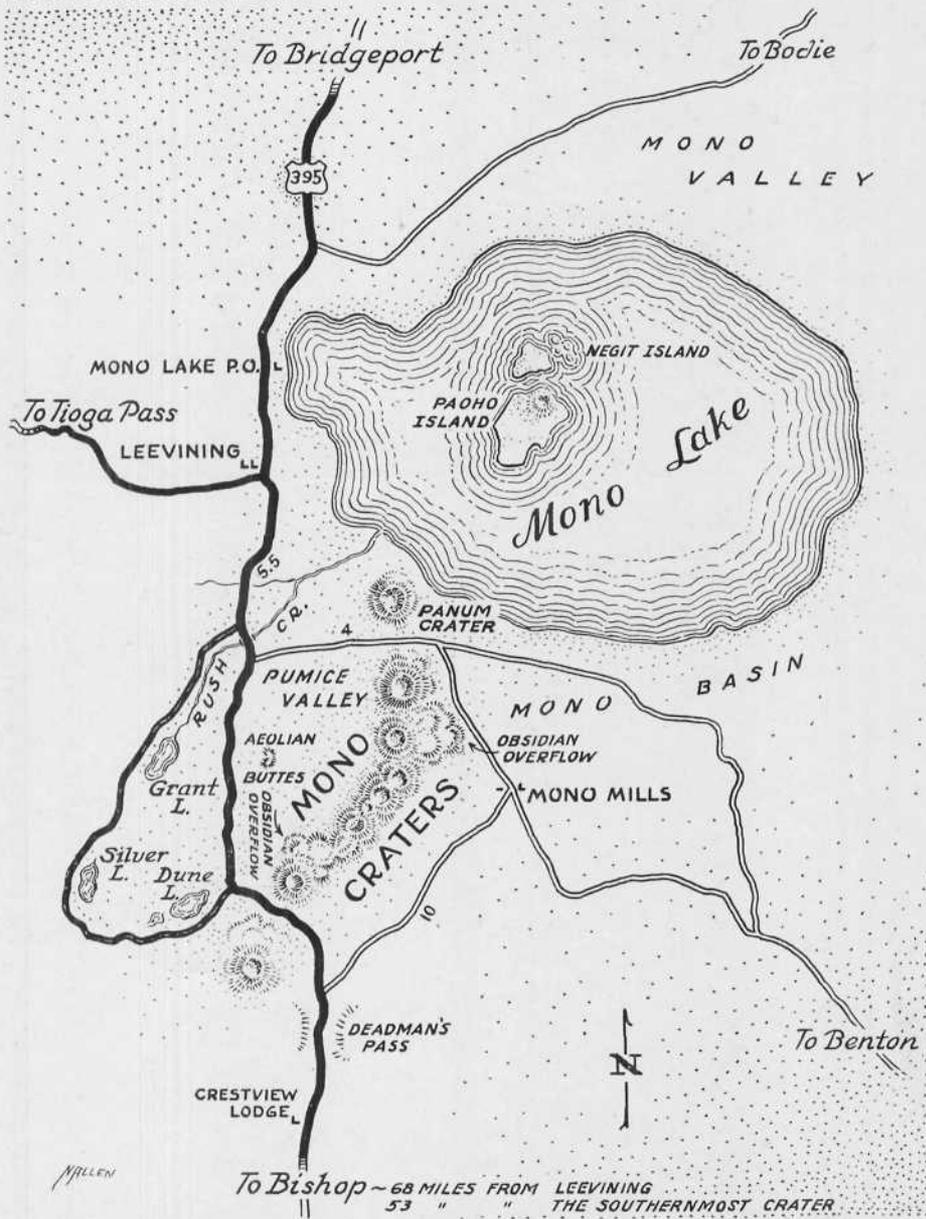
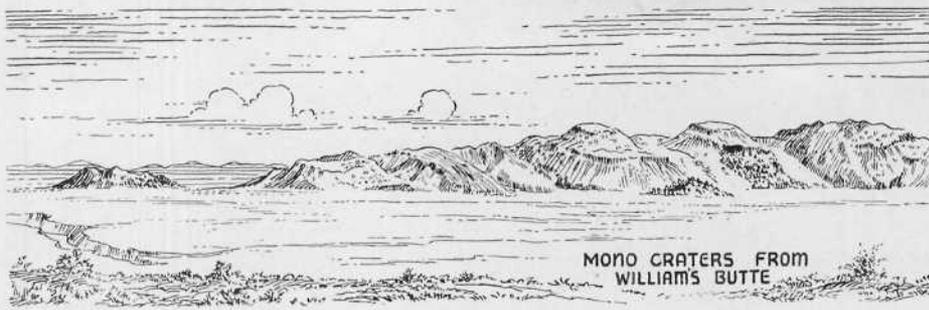
Symmetrical and beautiful, bold in the contrasts made by trees and black obsidian against the delicate grey, they are like nothing we had ever seen. "They are like nothing," said Isaac Russell who studied them for the U. S. geological survey, "in the United States or anywhere else to my knowledge."

They made me think of sloping round steps set at haphazard levels. The highest

Above—Looking from the obsidian heart of Panum crater toward the lapilli slopes of the craters to the south.

Below—Amon Brown examines the coloring in a piece of Mono crater obsidian. The two huge boulders in the background are solid masses of volcanic glass.





one occupies center place and wears an obsidian crown. Several cones are topped with obsidian. Others are flat and composed entirely of the pebbles. In two places the molten obsidian pushed through the cinder cone and down the slopes to end in high black cliffs.

From the main highway a number of dirt roads led toward the craters, but the only surfaced one is six miles south of Leeving, opposite the loop road around Silver lake. It is marked to Benton, and passes between the two most northern cones. We followed this road for about three and one-half miles, then took a dirt road to the crater near the lake. A road of sorts leads up the slope of the cone but we would not advise attempting it. Neither would we advise turning around in the deep loose material there.

That crater seems to be the only one with a name. It is Panum. Really it is two craters encircled by one steep ring of lapelli, which is the name given by geologists to the pebbly, porous material which is thrown out with the first eruption. Lapelli is light in weight, angular, small, and it likes the inside of your shoes.

We climbed through it, sliding backward sometimes, to the rim, then down to where it stopped against a rearing madhouse of angular rock both grey and black. We clawed our way up this and found it to be a vast plug of pure obsidian, upended, fractured, jumbled, and sparkling in the sun. We had to move with care, and we wore gloves because the volcanic glass was sharp.

Both black rock and grey are obsidian. It was the presence of steam bubbles at the time when the mass was cooling that determined consistency and color.

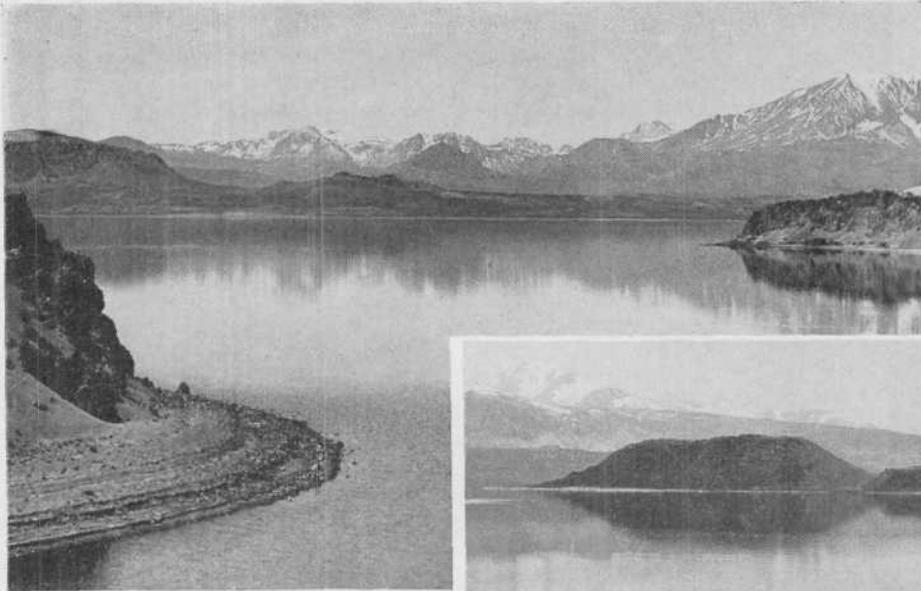
From the jagged north side we looked down on Mono lake, a blue gem in a desert setting, dotted with two volcanic islands. From the west side we looked upon the high Sierras, their rugged grey coats brightened by the golds and reds of autumn. Leeving lays between the lake and mountains, and the Tioga pass road disappears between the hills. To the south was the long chain of craters.

The geological story, as revealed by the men who understand the formative processes of this earth, is interesting. I am passing it along to you as it has been told to me.

Three stages of eruption are represented in Mono craters. The first blast belched out the lapelli, the fine particles of which were carried away by winds, the coarser particles falling in the neighborhood and dropping in rings around the vents. In part of the craters this is the extent of the activity. They are the flat topped craters and are composed wholly of lapelli.

In the second phase molten obsidian

*High Sierras, as seen from the "hot rocks" on Paoha island in Mono lake.
Fraser photograph.*



was forced through the vent. In some craters it was forced up to a higher elevation than the ring of lapelli around it. The inner force, however, was not great enough to expel it farther, and there activity ceased. Panum belongs to this group.

The third phase is represented by the two overflows which I mentioned before. Here the eruptive force was great enough to force the hot obsidian over the top, through the encircling cone, and down the slopes. But this hot mass was not like most of the lava overflow with which we are familiar. Most often the lava is extremely hot, and liquid, and flows rapidly and far, ending in low humps. But here it was not extremely hot, only semi-liquid, and it pushed along in a thick sticky mass, cooling so rapidly that it fractured even as it moved. It stopped abruptly in cliffs from 200 to 300 feet high. That is the story.

From where we stood on Panum we noticed that one portion of the crater range contained an outcropping of black rock. That rock, we have since learned, is the oldest exposed rock in the group. It is the remnant of an ancient volcano; it is hornblende andesite, and differs from all the other outcropping in the range.

Much farther south, and set westward from the craters, we noticed two small hills. Isaac Russell named them the Aeolian buttes. They are composed of pink rhyolite.

From Panum we took specimens of the various types of obsidian, then returned to the Benton road to see the overflow on the east side of the craters. Russell calls these overflow coulees. I believe I'd call them Hell's back yard. A huge jumble of obsidian all around us, a high fractured cliff of obsidian in front of us, pandemonium congealed.

Here we could see how pressure, not



*Negit Island, also called the "black island." This is the smaller of the two islands in Mono lake. Paoha island, the larger, is considered the "youngest" crater in the Mono basin group and "hot rocks" are still found there.
Fraser photograph.*

gravity, had forced its progress, how it had oozed and folded and fractured as it went. Angular blocks of it had broken free and fallen into the softer mass. Splintered particles of it had hardened into conglomerate. There were layers of lapelli in the black, caused by the showering of lapelli while the mass still moved and coiled.

We found banded obsidian here. We had seen chips of it in Nevada two days before. Now we knew where the hunting Piutes found it. The bands are narrow, semi-transparent, and are formed of layers of microscopic crystals of hornblende, feldspar and biotite. The curves of these bands, both in small specimens and in huge rocks, showed the direction of the flow.

Here we found, too, the froth of the volcano, obsidian which was so filled with minute steam bubbles that it formed pumice light enough to float. Indeed, before the pumice had completely cooled the

bubbles were lengthened by movement. This pumice is found on the surface of the flows. What we found had fallen down.

Such are the rocks of Mono craters. Young rock. The obsidian has a fresh, unweathered look, and it is plentiful. And there it waits in its unique setting for your exploration, be you rockhound, geologist, or mountaineer.

Should you climb the center crater, the highest, you would be 2750 feet above the lake, 9480 feet above the sea. Vesuvius volcano rises only 4000 feet above the sea, and it is famous. Stromboli rises

a little more than 3000 feet, and it is famous. Mono craters average better than 9000 feet, and they are scarcely known. Why?

Is it quantity? Is it because there is one Vesuvius, and one Stromboli? Does a single family of 20 volcanoes dwarf the imagination?

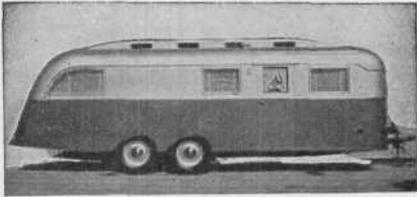
Or is it that tourists, filled with expectations of the high Sierras, do not look to the east? Or, if they do, perhaps they do not appreciate what they see because they have been given nothing to expect. Of this I am sure: If Mono craters were in a place where there were no 13,000 foot peaks to dwarf them, they would need only themselves to make them famous.

Are they extinct? Could they repeat what they have done?

Possibly, say geologists. Their location, and the line they follow, indicate that they were formed along a fissure, probably a branch of the Sierra Nevada fault. Certainly they exist on top of volcanoes of the ancient past. If, geologists tell us, there were great earthquake activity again, if the old fault line should be disturbed enough to allow the escape of hot underground substances, they could blast their song again.

If they should, I'd like to be on hand . . . but not in the front row.

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Desert Place Names

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, and Marie Lomas for Nevada.

ARIZONA

● **SAINT JOHNS**, Apache county. According to federal guide, founded in 1874 by Sol Barth who had just won several thousand head of sheep and a few thousand dollars from some Mexicans in a card game. He named his town in honor of the first woman resident, Señora Maria San Juan de Padilla de Baca. In 1880, continues the same source, its population was augmented by Mormons brought here by Jesse N. Smith and D. K. Udall. Located on the Little Colorado river. Pop. 1300.

● **SNOWFLAKE**, Navajo county. Dates back to autumn of 1878, when 12 families from the southern states arrived after 13 hard months on the road. Named in honor of the founder, William J. Flake and his friend, Erastus Snow, the latter being actually the first Mormon settler in that part of Arizona. Situated on Silver creek, a tributary of Little Colorado. Pop. 659.

CALIFORNIA

● **NILAND**, Imperial county. Town, located at junction of Southern Pacific main line and branch line to Imperial Valley, originally known as Old Beach from its proximity to the old beach line along the eastern side of the valley formed at a prehistoric time by a lake much larger than the present Salton sea, and later changed to Imperial Junction. Niland, an abbreviation of Nile Land, was finally selected by the Imperial Valley Farm Lands association because of the resemblance of this region to the Valley of the Nile.

UTAH

● **LEVAN**, Juab county. Settled in 1868, pop. 611. Two versions of name: As it was originally located on frontier of civilization, it was suggested it be named from the French Levan, meaning frontier. Brigham Young was present when the name was suggested and approved it. Second version says it is derived from the Latin Levant, designating the point where the sun rises, the east.

● **BACCHUS**, Salt Lake county. Named for T. W. Bacchus, manager of the Hercules Powder company. Prior to 1915 it was called Coonville, for a family of early residents.

● **BICKNELL**, Wayne county. Formerly known as Thurber, settled in 1879. Named for Thomas W. Bicknell, who in 1914 offered a library to any town in Utah that would take his name. Two towns accepted his offer—Thurber and Grayson

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, and Marie Lomas for Nevada.

(San Juan county). A compromise was effected: Thurber was changed to Bicknell and Grayson to Blanding, taking the maiden name of Bicknell's wife.

● **FOUNTAIN GREEN**, Sanpete county. Named for the green meadows and a large spring on the town site. Originally called Uintah Springs. Alt. 5995; Pop. 982; Settled 1859.

NEVADA

● **RAWHIDE**, Mineral county. Named in 1903 by C. V. Holman, a Wyoming rancher and prospector, who nailed a cow's tail to a post and tin box and over it put a sign, "Drop mail for Rawhide here." Later had a brief boom period, colored by spectacular promotion ballyhoo. From the federal guide: The hysteria of Goldfield had passed its zenith and the mines had settled down to rich production; but everyone who had missed out at Goldfield and Tonopah was sure there were better fields yet. Tex Rickard had just begun to learn the tricks of showmanship; Riley Grannan, the racetrack plunger and gambler was ready for fresh excitement; Nat Goodwin, the most popular comedian of the day, who with his wife had been brought to Goldfield to inaugurate the elegant new theater, had caught the gold fever. There had been a strike in the Rawhide district in 1906 which had brought a few prospectors; later strikes proved even richer. A 1908 newspaper reported Rickard paid \$10,000 for the Rawhide lot on which he was building a duplicate of his Goldfield Northern saloon. Grannan and Goodwin both followed him to the new field. It is estimated between 4,000 and 10,000 people rushed in during a four months period. Within another three months, the trampled sagebrush was covering over the land again, but the camp did continue, producing some \$1,500,000 in gold, silver, copper and lead during 15 years.

NEW MEXICO

● **FORT UNION**, Mora county. Established by Union troops in August, 1851, five years after Gen. Stephen Kearney took possession of that section of N. M., and was one of the earliest posts to be occupied by troops in New Mexico. The military reservation consisted of 51½ square miles and included the army post, ordnance depot and arsenal. It served as an army outpost for the protection of settlers as well as a stop on the Old Santa Fe Trail. During the Civil war it was a Union post and played an important part. Now in ruins. Recent proposal would include it in national monuments.

On one of their tramps over the desert near Ghost mountain Marshal and Rider South came upon an old mine—a shaft that had been abandoned so long it was overgrown with shrubbery. A gold mine perhaps—but the discovery that interested them was a rusty pick which would fill a long-felt need at Yaquitepec. Here is another interesting chapter in the story of a family that for nine years has been engaged in a glorious experiment in the art of primitive living on a remote desert mountaintop.

Desert Refuge

By MARSHAL SOUTH

REAL winter draws closer to Ghost mountain. But these present fall days are full of a charm that is all their own. On the ridges the yellow flowers of the *ramarillos* are still in evidence and invite the attentions of methodical bees. The sun has lost its fierce fire. But the rocks glow warm at noonday and the wandering breezes that come to whisper around the walls of Yaquitepec still have tales to tell of drowsy solitudes and the clean fragrance of yucca-studded, sun-glinted washes where the hours, marked only by the slow-moving shadows of greasewood and of ocotillo, drift by in silence that is marred by no tick of clock or pulse of progress.

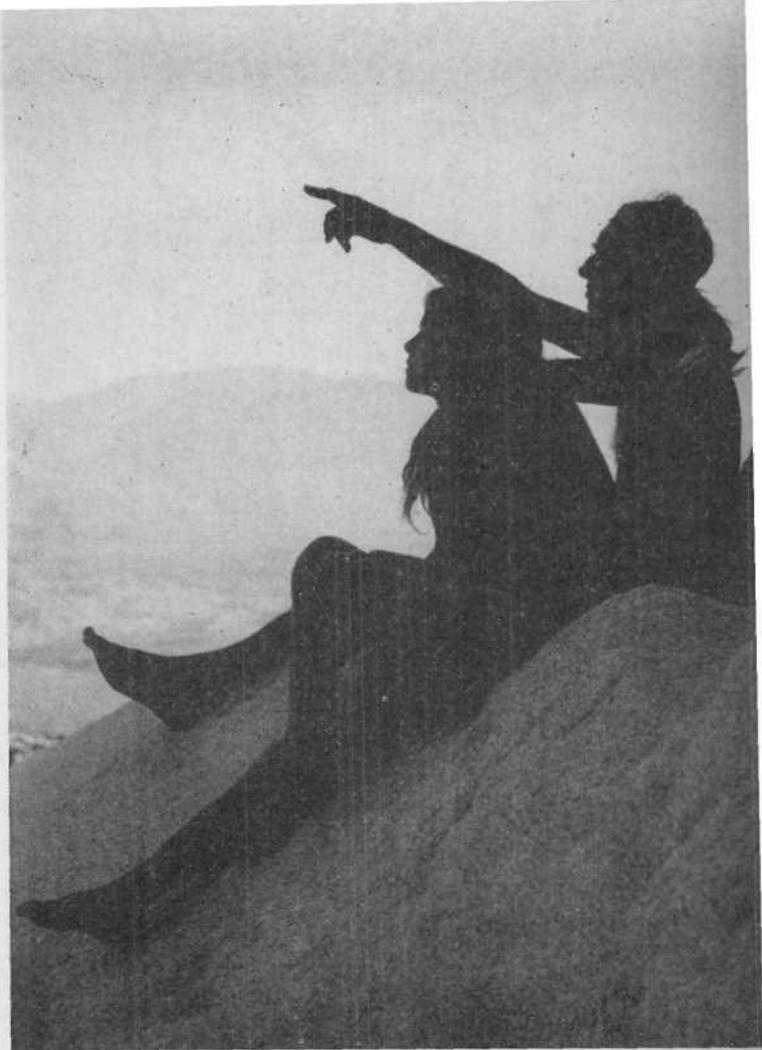
Except when it storms. But that is another story. Storms are another mood; the charm of the desert lies in its ever changing moods. Fierce. Tempestuous. Vibrant with life and passion. Like a primitive woman, blending fierce love and savage fury. There lies the fascination of the desert. Do you seek for something calm and ordered; methodic, dependable—and listlessly “dead”? Then turn your search elsewhere; you will not find it here. Civilized man seeks stability for security—and its accompanying stagnation and ultimate decay and ruin. But nature is wiser. Not along flower scented paths does real development, either of soul or body, lie.

Turn back the pages of recorded history. There you will find that it was always the barbarian—he who knew heat and cold and bitter privation—who came forth, time and again, from his bleak wildernesses and overthrew the pampered dwellers in the cities of ease . . . himself, in turn, to succumb to luxury and in time be overthrown by his hard-muscled barbarian successor. Wave upon wave from the north and from the wastelands. Hard ice melting in the tropic sun. But that is nature's way. Flow and ebb. Storm and sun. Thus does she preserve the balance. Do not look for advancement in “mass.” It is not done. It is done by the *atom*—by the *individual*.

These are the evenings of fires, and the primitive thrill and family bond that the leaping flames of the hearth can awaken as can nothing else.

We are building a new fireplace at Yaquitepec. Sometimes we think that if we are not careful we shall find ourselves dwelling in a fireplace instead of a house—that the fireplaces, by sheer weight of numbers, will swallow the rest of the building. There are four of them now—existent—incomplete—and just commenced. Of one the foundation only has been started. That will be the big one. Another has its side walls half up—that is to be a double one that will warm two rooms. The third is the old standby, whose fire-blackened maw, yawning beneath our big adobe stove, has flung cheer already over a range of desert winters.

The fourth is an addition that rises now, with mud and granite rocks, beside the “old faithful.” Perhaps we should call it the Wild Geese Fireplace. For the wild geese started its building by their high, lone honking one night against the desert stars. Going south. And *early*. We took counsel together.



Marshal and Rider South frequently make exploring excursions into the desert area surrounding Ghost mountain. Here, as they pause in the shade at the brink of a dry waterfall, Marshal points to a crevice in the opposite canyon wall where he and Tanya once found a well preserved Indian olla.

This was another “sign” in a string of signs that spoke of the possibility of a hard, cold winter. “We cannot finish the new room and its big fireplace in time,” we said. “And we may need, this year, more warmth than the old stove can give. The quickest way is to build a brand new fireplace.”

So, in the course of time—things move slowly at Yaquitepec, not because of indolence but because there are many other things to do—the workmen assembled as for the building of the pyramids. And the seven-year-old lugged rocks. And the three-year-old fetched mud—in an old can. And the one-year-old sat in her high chair and yelped encouragement. And Pharaoh—himself—got him his trowel and hefted him his hammer and began the fireplace. A good fireplace. And now it is all but finished. Adjoining the old stove, and with an arrangement of smoke flues that would be an architect's nightmare, its yawning mouth will swallow with ease the very largest mescal butt that grows upon Ghost mountain. Or log of juniper. “Blow, blow, ye bitter winter winds!” The flames will roar and the sparks crackle. A successful fireplace! Victoria approves it. “Bee Hay!” she remarks solemnly every time she looks at it. Victoria has academic leanings. She confers B. A. degrees upon everything that strikes her fancy. She has 12 teeth now and is walking and starting to talk.

A week ago Rider and I voted ourselves a day's vacation and went on a long tramp. Rider looks forward eagerly to these excursions which constitute a rare holiday in the regular routine of school lessons. Already he is a veteran “prospector.” But his prospecting is for strange plants and bits of pottery and bugs, for which he totes along a little sack and a small paper

box or two. This time we abandoned our mountain and struck out across the lower desert, among the barren rocky buttes and the creosote-studded slopes and washes. The day was perfect; one of those glowing days of desert fall when the sun-warmth is just right for comfort and one can tramp for miles and miles without fatigue. Far off the distant mountains stabbed a sky that was a dazzling blue. The nearer ridges glowed above us in a mosaic of tumbled boulders and shadow-etched clefts. Through the crystalline air the gnarled junipers that clung along their escarpments seemed close enough to touch. A sleepy breeze drifted from the hills, carrying with it the winey, aromatic tang of greasewood and ramarillo and yucca and the odor of clean space. Underfoot the gravelly earth, weatherings of ages from the gaunt, surrounding mountains, crunched beneath our hide sandals. The grit of it and the soft, occasional rustle of a creosote branch, springing back from the crowding of our bodies, were the only sounds that broke the hush of a vast bowl of desert silence.

And so, through a wilderness of blessed silence—for which years of familiarity have only whetted our appetite—we moved on. We had no plan save to tramp and explore. Chaparral cocks slipped away through the creosotes; an occasional jackrabbit flicked vanishing ears through the cactus.

Under an aged silver cholla near the rocky toe of a ridge we came upon a big mortar hole worn in a flat granite slab. The blunted stone fragment once used for a pestle still lay beside it. The ancients had been here before us. But earth now filled

this forgotten grinding bowl. And the brown hands that had held the old pestle have long since returned to earth too. An inquisitive little antelope squirrel perched upon a nearby boulder and watched us with bright, beady eyes; then with a saucy flirt of his tail disappeared merrily—a symbolic atom of bubbling life.

And so, in the glow of midday, amidst a wild clutter of rocks on a lonely ridge, we came to a mine. We came upon it suddenly. And stopped, startled. A mine—or rather an abandoned shaft, such as this was—was about the last thing we would have imagined. We stood staring into it. The shallow shaft was partly filled. In the debris that formed its bottom lusty bushes grew. On the weathered mound by the opening lay a miner's drill, rust-eaten. On a rock beside it an old knife from which the years had stripped the wooden handle. The gently swaying branches of a big creosote bush wove a moving tapestry of light and shadow over the ancient prospect. In the hushed stillness one listened instinctively for footsteps. And heard none.

"I guess," said Rider presently, "this is 'The Lost Pick' mine."

He pointed into the deeper shadows at the base of the creosote bush. And there lay the pick. Old and rusty as the drill, and with its handle weathered into crumbling grey rottenness. I stepped softly across and picked it up.

The Lost Pick mine! Was this abandoned shaft really the one to which a desert wanderer had referred more than two years ago? Perhaps. We had almost forgotten. There had been several nebulous lost mines in the rambling reminiscences of the old man. The "Lost Pick." The "Lost Blanket Roll." The "Lost Canteen." Rambling, disconnected stories—yarns which the narrator himself hardly troubled to believe. Fabric of dreams and desert shadows; the dancing mirage of gold—which it is more blessed to pursue than to find. A fairy tale. Yet here was the old pick—and the old shaft. We stared curiously into the shallow digging and poked speculatively at the sides with the old pickhead. Rider even clambered into the hole—and promptly forgot gold in the excitement of finding a perfectly magnificent specimen of a dead and dried beetle.

No, there wasn't any gold there. At least not the foolish kind of yellow stuff that humanity sells its soul for. There was gold of the sun and the silence and the whisper of the wind. And—for us—treasure in the shape of the old pickhead which despite its years of weathering was in excellent order. For a long time we dwellers on Ghost mountain, had needed a pick. And had been forced to do without one.

So we took our prize and went away as softly as we had come. We had found the "Lost Pick Mine"—and we lost it again, leaving it to its memories and its silence. There is no trail and we shall not tell. Someone—sometime—dug there in hopes. Let the peace of the desert hold safe its memories.

But the old pickhead, on a new handle, is now part of the Yaquitepec tool equipment. Despite the fact that we share the Indian belief that it is not lucky to meddle with old relics, the pick was something else again. It was "meant." And we took it in gratitude. There is a feel to such things which you will not find in the textbooks. Maybe we are superstitious. Well, the desert Indians were superstitious too.

TIME

*Day follows day in quick succession,
In swift and swifter moving flow,
As with fanatical obsession,
The years in rapid cadence go.*

*And yesterdays—todays—tomorrows—
All merge as one mirage sublime,
And all our joys and all our sorrows,
Become receding specks in Time.*

—Tanya South

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PALM SPRINGS, California
THREE HOURS FROM LOS ANGELES

An Indian's Reverie

By EVANELLE MITCHELL
St. George, Utah

By his campfire he sits, in the evening,
Huddled there, lost and alone,
He hears the far wail of a coyote,
Through canyons that, once, were his own.

The smoke from his campfire is pungent,
And he sees in the flickering flame,
The faces of all of his tribesmen;
He greets them, and calls them by name.

In his memory, nothing is different,
As it used to be, still it appears,
Then, as he stirs from his dreaming,
They fade down the long trail of years.
Each day that passes, he lives it,
Wandering, dreaming, alone;
Like a phantom, his form haunts the forests,
And canyons, that once were his own.

And so it shall be, 'til the sunset
Of life finds the Indian Brave,
His forests and canyons will linger,
When his spirit finds rest in the grave.

MY DESERT FASTNESS

By E. A. BRININSTOOL
Hollywood, California

I'm in my desert fastness—the silent painted
land,
Where sunrise glories thrill me, and where,
across the sand,
Gleam splendors which no painter but God
Himself can show,
In changing lights and shadows, spilled by the
sunset's glow.

Across the wide arroyos the broken buttes
rise high,
And far beyond, the mountains, whose white
crests pierce the sky.
The wine-like air brings to me the desert smells
I love—
The scent of sage and greasewood from mesa
lands above.

I'm in my desert fastness—a barren solitude—
No clanging city noises outside my cabin rude.
Only the gentle breezes across the sagebrush
floor,
In low-crooned, soothing whispers, drift idly
past my door.

Oh, glorious desert country, your magic spell
I know!
Your lure is strong, resistless, when from your
charm I go!
Your wild wastes call and beckon, in accents
glad and true,
And your calm stretches soothe me when I
return to you!

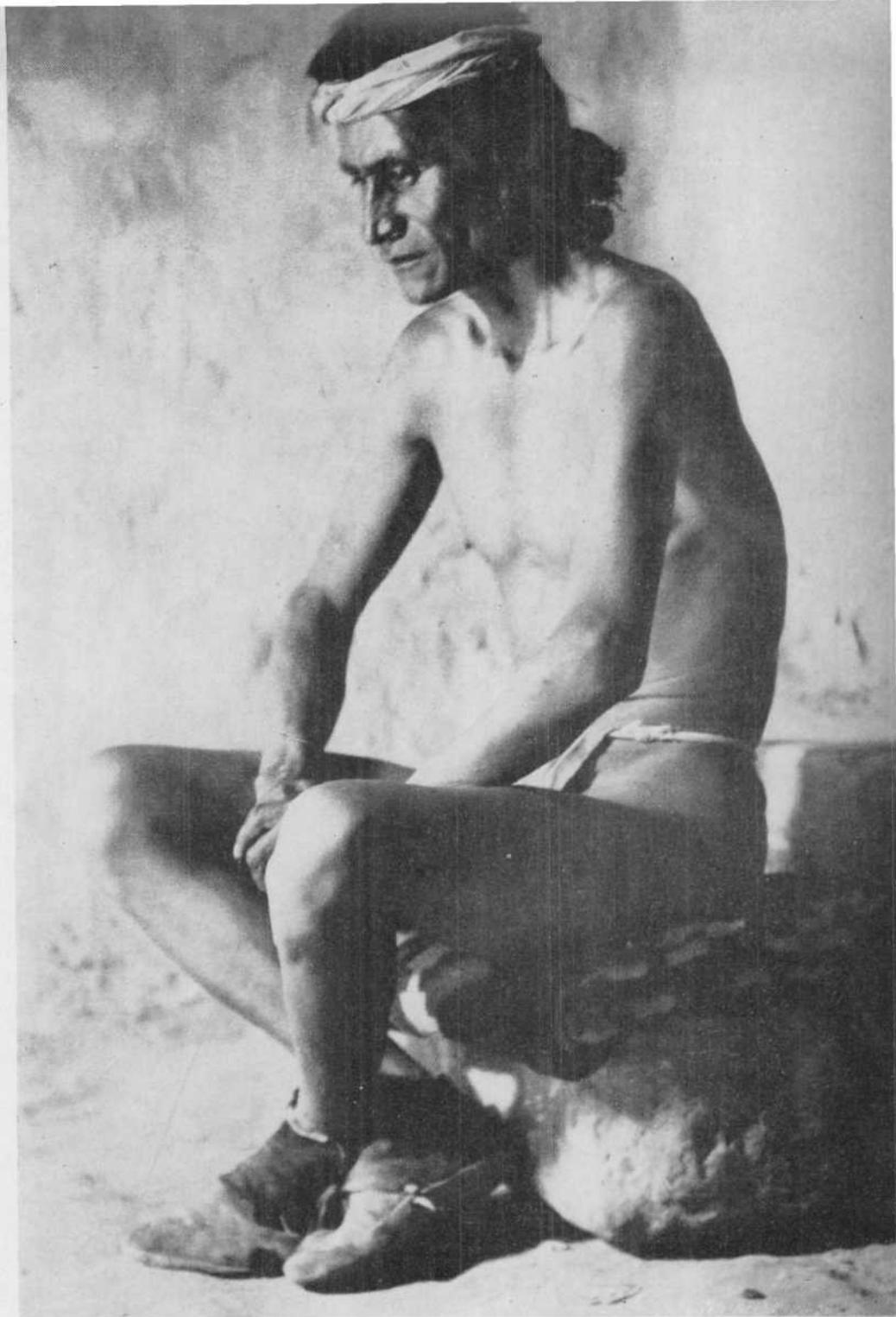
WHERE SILENCE LIES

By LELA M. WILLHITE
Montebello, California

Within my heart is stored the dream
It caught and held, from deserts bare;
And coastland fog has no voice or scheme
To lure me from a trail so fair.

I will hie me to some desert place,
Though memory stirs to warn me
That here winds blow in ceaseless race
And dust and heat dance in mad glee!

I'll watch each evening's sun set clear
And count the stars in the desert skies;
Hold in my heart a picture of the drear
And moonlit waste, where silence lies!



Chief of ancient Walpi. Photo by Putnam Studios.

GREYBEARDS WHITHER?

By BERTHA EYL
San Leandro, California

Do you wonder, as I do, who they are?
These greybeards who wander on, by the road
Wrapped in mystery they come—one by one;
Pack on back and downward glance—
Desert rat or from the hills, now perchance.
None can tell me who they are, though I've
asked;
They are neither tramp nor hobo I am sure
As they file along our highways on their errant
hegira.

Are they miners far too old to dig for gold
Were they drivers of the teams of borax mules
Have they panned the yellow metal from the
sand
Were they hewers of the red wood for the mill
Were they herders of the sheep upon the hill
Did they lead them by the waters that are still?
Out of mists that shroud the lowlands in the
morn

Into the heat of the burning noon-day sun
Along the highways still they come
Vagrant tumbleweeds of fate rolling on.

So my story has no ending save the one
Imagination's pencil paints in the mind,
'Til some ancient mariner of the road drifts
along
With a willingness to stop and I'll learn the
reason why
These venerable greybeards wander by.

CREED OF THE DESERT

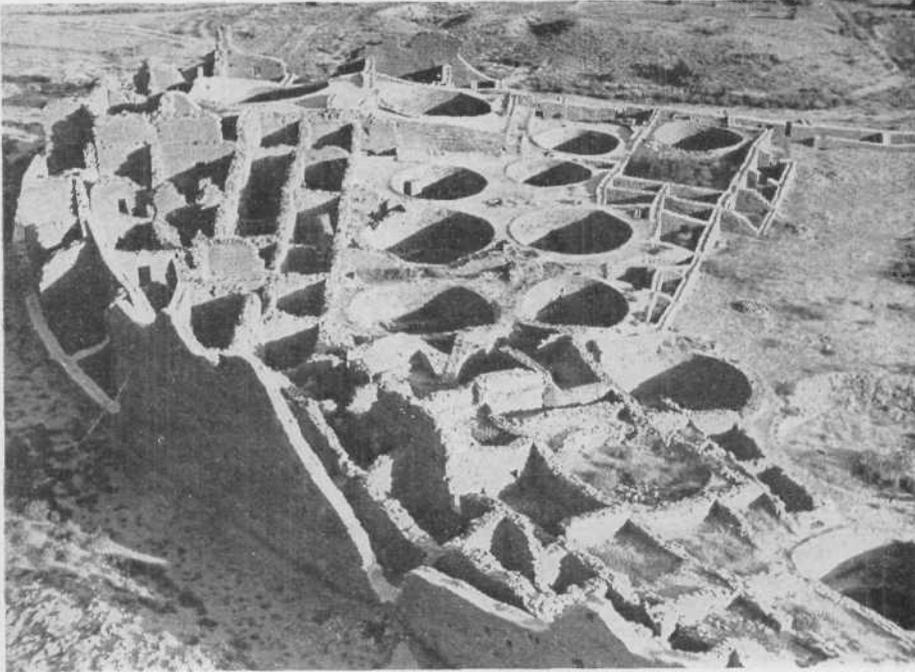
By JUNE LE MERT PAXTON
Yucca Valley, California

The mountain slope is bleak with naked
rocks;
While racing o'er their worn and
shining face,
A waterfall comes tumbling down
and mocks
The listless sand that idles at its
base.

PUEBLO BONITO

Mrs. J. M. Warner of Gallup, New Mexico, is the winner of the prize offered by Desert Magazine in October for the most

informative story about the ancient ruins in the accompanying photograph. Mrs. Warner identified this place as Pueblo Bonito in Chaco canyon national monument in New Mexico. Scores of well-written manuscripts were entered in the October contest and the judges agreed that selection of the winner was one of the most difficult tasks they have undertaken since the Landmark feature was started by Desert Magazine four years ago.



By MRS. J. M. WARNER

THE ancient ruins pictured in your October, 1941, issue of Desert Magazine is the Pueblo Bonito in Chaco canyon in northeastern New Mexico.

Chaco canyon national monument is reached by leaving U. S. Highway 66 at Thoreau and traveling north 65 miles over state highway 164. The motorist from the north may come in from Aztec and the Aztec national monument over state highway 55, a distance of 40 miles, then over state highway 56 a distance of 24 miles.

Good tourist accommodations may be found at Gallup on the south and at Aztec and Farmington on the north.

Eighteen major prehistoric ruins are found in Chaco monument. These ruins represent the zenith of pueblo civilization in prehistoric times. No other archaeological area in the United States is said to exhibit a higher degree of development than is shown by the cultural materials recovered here.

Pueblo Bonito (translated "pretty village") is the largest of the ruins in Chaco monument. It covers more than three acres, and restoration work has revealed approximately 800 rooms and 32 kivas or

ceremonial chambers. It is believed to have housed about 1200 people.

Construction is believed to have been started about 880 A. D. Tree-ring dating shows definitely that building was in progress in 919. Major building operations appear to have been in the 1060s with lesser activity 20 years later. The building period probably ended about 1130. These determinations were made during the exploration work done by the Hyde expedition, 1896-99, and the National Geographic society, 1922-26.

All the villages are of sandstone blocks. The larger stones were cleverly fitted together and the cracks chinked with smaller stones. No mud or mortar was used in many of the walls. The masonry is regarded as the finest in prehistoric times in the Southwest.

Little is known as to the origin of these Indians or why they left or where they went. They were farmers, wove cotton cloth, made beautiful pottery and beads and were a peaceful tribe. Chaco river, flowing through the canyon is believed to have supplied their water. Now it is merely a dry arroyo except in rainy periods. Willow and aspen timbers used in the buildings indicate there may have been much moisture in the canyon then.

These Indians used implements of

stone, bone and wood. Corn, beans and squash were the main agricultural products. Game was fairly plentiful, and cacti and wild berries furnished additional food.

Exodus from the canyon appears to have been sudden rather than gradual, as the doors were sealed as if they intended to return later.

On January 22, 1941, a section of Chaco canyon wall known as Threatening rock fell to the ground and did some damage to a few of the rooms. Such a disaster evidently had been feared by the Indians in ancient times as masonry had been installed at the base of the rock either as support or to prevent further erosion.

Park rangers are on duty at Chaco to protect the ruins and guide visitors.

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Come down from your sleet-frozen countryside to bask and bronze in the warm, cheerful glow of a friendly Arizona sun. Here, you can relax and sun-laze to your heart's content, for this is the Land of Mañana. Or, if you find rest in recreation, there's literally every outdoor sport under the sun to revive your drooping spirits. Escape, now, from dull, drab, dreary weather to this romantic, colorful Valley of the Sun where winter is taboo. Phoenix and the surrounding towns offer all types of modern accommodations—hotels, apartments, bungalows, dude ranches and desert inns.

Winter Rates now in effect on Transcontinental Lines.

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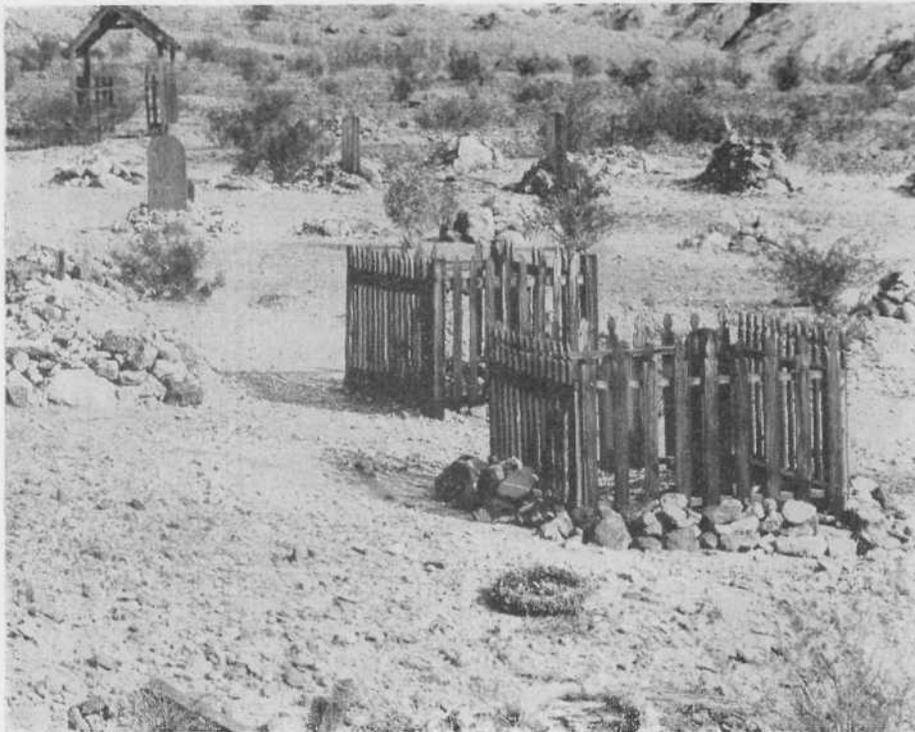
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Landmark of the Old West

Who can identify this picture?



PRIZE CONTEST ANNOUNCEMENT

Here in the above picture is the last resting place of rugged men who lived and died during that period when gold and silver were the main lures that brought human beings to the uncivilized desert region.

There were good men and bad in those days, the same as now, and some of both kinds died with their boots on and were buried here.

Many desert travelers will recognize this old cemetery—and others will want to know where it was located, why it has been abandoned, and perhaps some of the history of the town or camp that made a graveyard necessary in this location.

For the most informative story of not over 500 words Desert Magazine will pay a cash award of \$5.00. The manuscript should identify the place and give something of its history and its present status.

Entries in this contest must reach Desert Magazine office not later than December 20, 1941. The winning story will be published in the February number of this magazine. Address letters to Landmark Contest, Desert Magazine, El Centro, California.

SECRETARY ICKES PUTS BAN ON BILLBOARDS

In a sweeping new regulation issued during October Secretary Ickes of the interior department prohibited the unauthorized use of public lands for advertising billboards. Exceptions will be made within rigid limitations to municipalities and certain other specified agencies. Permits must be secured, however, before any signs are erected.

DESERT JIM'S MINE

40 miles across the desert from, what is now Baker, California, Desert Jim spent 20 years driving a tunnel 700 feet through solid rock, following a tiny vein hoping that it would widen and bring the riches of which he dreamed.

The crude home-made wheelbarrow, tiny dump cart and remaining tools have just been moved to Knott's Ghost Town Village, two miles from Buena Park on highway number 39. An old-fashioned arasta has been built and visitors may see a replica of this desert mine along with scores of other ghost town exhibits. No admission charge!

Knott's Berry Place, famous the country over for the chicken dinners and boysenberry pies which 40,000 people enjoy monthly, published the "Ghost Town News" a 32 page illustrated magazine, mailed for ten cents, upon request to Knott's Berry Place, Buena Park, California.

in other words

by JOHN CLINTON



Do you remember the first auto your folks had? Maybe it was a sedate old Rambler or a spunky Flanders, with brass radiator, carbide lights and a bulb-squeeze horn like a duck with a sore throat. Those were the days of tall autos. On a clear day you could see Catalina from the driver's seat.

* * *

Those were the days, too, when you bought "any old oil." Sure, it left carbon in your motor, but clearances in those halcyon days were never critical, and neither was your be-goggled dad.

* * *

But auto engines have changed. Today the bug-aboo of high-compression engines is the carbon that cooks out of unstable motor oil and actually changes the compression ratio of your motor—wastes gas, power and raises the dickens generally.

* * *

That's why you should ask for Triton Motor Oil. For Triton, thanks to Union Oil Company's patented Propane Solvent Process, forms very little carbon. Besides it's 100% pure paraffin base—the finest type of lubricant you can buy with money.

* * *

So if you have any desire to make your present family car outlast this war-born scarcity of new autos, then I suggest you put your bus on a diet of Triton. It's been largely responsible for the spry performance of my famous Hispano-Plymouth, and so I'm telling you what I know.

* * *



for yourself.

Get Triton from the Union Minute Men wherever you see the sign of the big orange and blue 76. Try it and just see



Seven times we were forced to swim narrow fingers of the lake to avoid climbing far up canyon. Shoes, hat, and the writer are approaching shore. The pile of clothes on the rock at the lower right is the spot from which the rattlesnake struck a few minutes later. The reptile was undoubtedly beneath the rocks when this picture was taken.

Adventure on Fortification Hill

According to Viljarmar Stefansson, the Arctic explorer, adventures are the result of unpreparedness and incompetence. Hulbert Burroughs admits frankly that the harrowing events related in this story of his adventure on the top of Fortification Hill are just what the Arctic explorer said—the penalty for dumbness. But they make an interesting tale nevertheless—and if you have never suffered from heat prostration here is a tip that will help you avoid that unpleasant experience.

By HULBERT BURROUGHS
Photographs by the author.

HAD we been innocent tenderfeet unschooled in the ways of the desert, our adventure on Fortification Hill might have been expected. But for years we had known the great deserts of the Southwest.

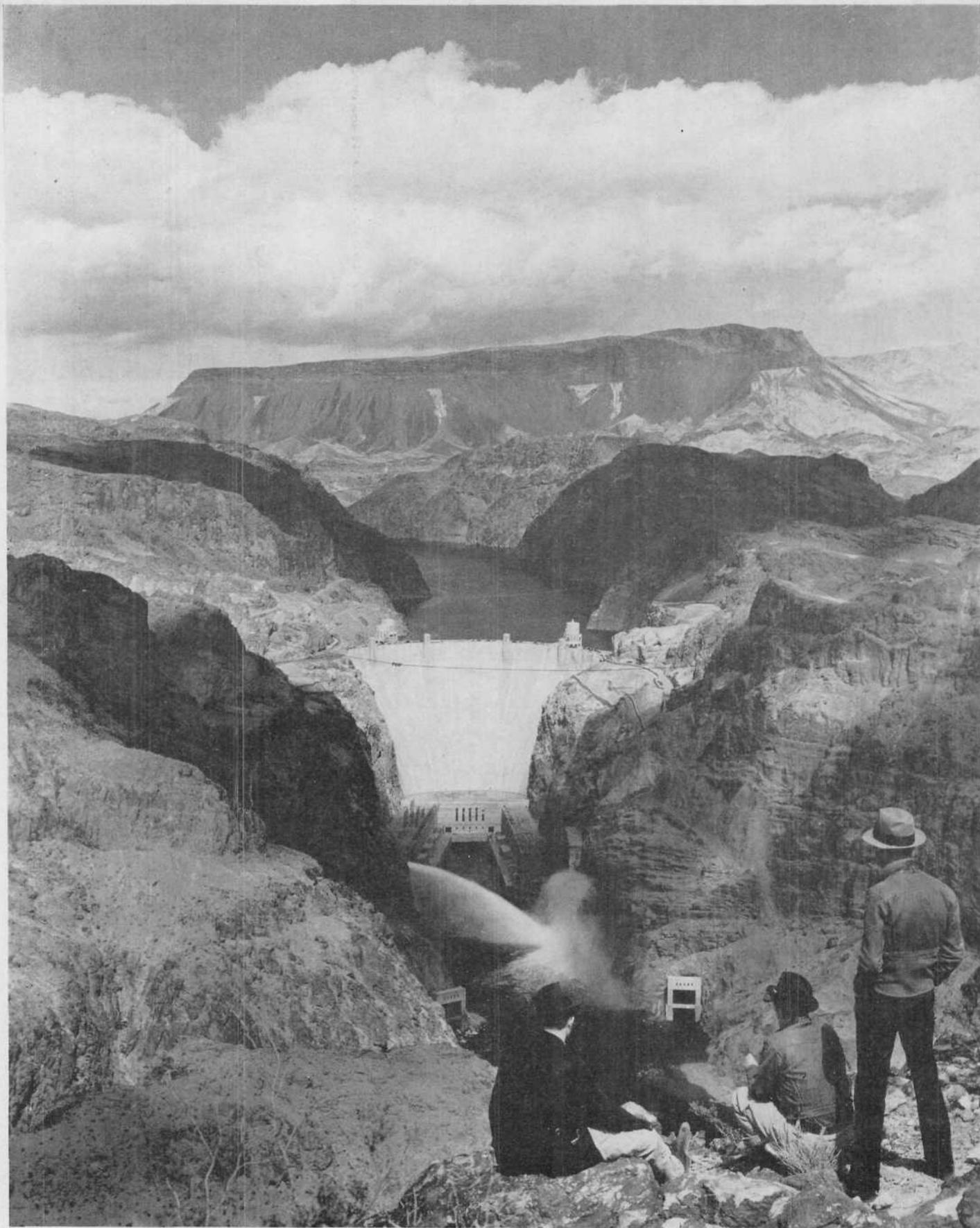
We had tramped many a mile over the barren hills of California's Salton sea region. We knew Borrego desert well. We had packed to the Rainbow Bridge in southern Utah; had completely circled and then climbed to the top of Navajo

mountain on the very edge of the least known area in the United States. We had explored the full length of the Lower California peninsula, than which there are few more desolate regions on the North American continent. In short, we held the dangerous conviction that we had mastered the desert—thought we knew her so well that we could ignore her hazards.

In an airline, Fortification Hill is about three miles from Boulder dam—a scant few miles from where thousands of tourists come from all parts of the world to gaze at man's great engineering feat. Yet it was there on Fortification Hill within plain sight of millions of acre feet of Lake Mead's sparkling waters that Don Pierotti and I had our closest brush with the twin devils of the desert—heat and thirst.

The story of our experience—although laughable now—is told with the thought that others may learn from our folly.

Late one June afternoon we were swimming in the refreshing waters of Lake Mead at Hemenway beach—a playground created by the national park service in Boulder dam recreational area. To the east Fortification Hill dominated the landscape. The setting sun mantled the rugged



Boulder dam and Lake Mead with Fortification Hill dominating the horizon. Burroughs and Pierotti scaled the black mesa at the highest point at the right, and descended to the northwest beyond the lowest point of the mesa visible at the left. Bureau of Reclamation photograph.

black mesa with an orange-red glow making a fascinating picture.

One of us—I do not recall which—suggested it would be an interesting summit to explore. From the top of the mesa there would be a superb view of the lake and Boulder dam. The more we discussed the possibility the more eager we became to undertake the trip. Tomorrow we would climb to the top.

Early the next morning we drove across the dam. Two miles to the east on the Arizona side a sign points to "Painted Desert." After five miles of winding gravel road the trail ended abruptly in the lake as so many of the small roads of that area now do—engulfed by the rising waters of the tamed Colorado. To come to the end of a road like that leaves one with a peculiar unfinished feeling.

We were in the very shadow of Fortification Hill. About us were low clay hills richly colored in many shades of red, brown, orange, and yellow.

As we pulled off the road to park—not that anyone would have cared to pass beyond us—a big mountain sheep and her husky youngster bounded up the rocky hillside. It was the first time I had ever seen one of these wary animals—outside of Indian pictographic drawings—and I was surprised. I had no idea there were any within the boundaries of the Boulder dam wild life refuge.

At six a. m. we swung into our knapsacks and left the car. We carried two canteens of water, a can of tomato juice, a small box of raisins, some dried beef, a camera and films. The last two items are not generally included in a well planned lunch for hikers. But in the light of what happened later when our water and tomato juice were gone, a camera and films

were just about as edible as our dried beef and raisins. But more of that later.

We paused for a moment to study the steep cliff walls of the mesa above the long talus slopes. We knew we'd have a stiff climb and might even have difficulty finding a route to the top.

We followed sheep and wild burro trails most of the way to the foot of the talus slopes. The going was easy and we gained the foot of the cliffs without much effort. The day was hot but we took our time. We stopped often to take pictures and admire the panorama of lake and desert terrain.

When we started up the face of the cliffs the hand and footholds were plentiful at first, but as we gained altitude the ascent became more difficult. The rocks were badly eroded. It is not altogether a reassuring experience to reach for what appears to be a substantial handhold—and feel the rock crumble as you put your weight on it.

It was near mid-day when we made the summit. We agreed it would be a difficult route for the descent without ropes. But we were sure a little exploring would disclose an easier way to the bottom when we were ready to return.

In the meantime we would have a leisurely lunch hour sitting on the rim and looking down on the irregular patch of blue water, marked here and there with the white V of a speeding boat.

The sun was pouring down. Reflected from the black lava rocks on the mesa it was uncomfortably hot, with no shade except that offered by a few scraggly greasewood and cacti. A hot wind, super-heated on its dreary way across the barren rocks, smote us like a blast from a furnace.

The first intimation of trouble was a throbbing dizziness in my head. My breath became labored. I started to gasp for air. To Don I probably looked like a big-mouthed bass fresh out of Lake Mead. My first thought was shade—someplace to escape that awful sun. We started across the mesa toward some rocks. When my fingers commenced feeling strangely numb and cold, I was irritated. Here I was, a seasoned traveler, caught by heat prostration that I could have avoided by the mere eating of some salt that morning.

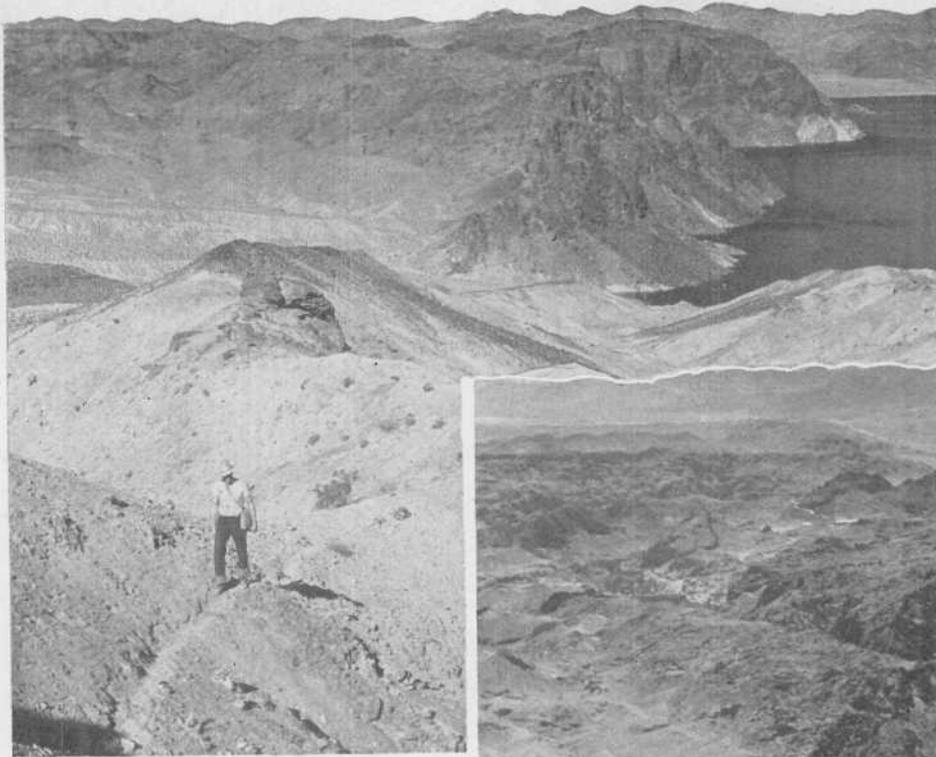
I had had a mild heat prostration many years ago. I had learned then the necessity of replenishing the salt content of the body lost through excessive perspiration. But now there was neither shade nor salt. I sat down on the hot lava rocks—rocks that felt as if they had just been belched from a volcano. While I sat there fuming and thinking of all the reasons why I was an ass, Don went on ahead in quest of shade.

Into the crevices between a jumble of rocks we crawled out of the blistering rays of the sun. What a respite, even though the wind was still hot! My spirits rose slightly. We looked seriously at each other. In a moment we were laughing. And the situation really was laughable, too. There the two of us sat—both with a lot of good practical outdoor experience to our credit—slowly frying in a hot summer sun, little or no water left, and no definite way back to our car. To make certain that we should have no liquids left to worry about conserving, we hurriedly drank the can of tomato juice for lunch, and munched a few raisins.

The next problem was how to get off the top of Fortification Hill with the least



Where the climbers finally reached water the night they descended Fortification Hill.



Following a wild burro trail up out of the Painted Desert on the way to Fortification Hill.

amount of effort. The route of our ascent was ruled out—too steep without ropes. That bit of reasoning was enough for one day. Having come this far unencumbered by even a grain of normal intelligence, there was no reason to start thinking now. And we didn't in planning our descent.

Our unanimous decision to head due west down the general slope of the mesa was motivated by a purely animal instinct—Lake Mead's shining waters lay clearly visible in that direction. Had we known as we stood there mapping our course and mopping our brows that an easy trail off the mesa lay only 50 yards in the opposite direction, this object lesson might never have been written.

To top it off, had we believed in omens we might have paid some heed to the big rattler that suddenly made his presence known in our little rock hideout. As it was he only served to hasten us onward in the wrong direction.

Before starting down, however, we walked to the edge of the mesa. Having come so far there wasn't much sense in leaving without at least one picture of that gorgeous panorama of Lake Mead and the surrounding territory. Far below us, barely visible between the great walls of Black canyon was Boulder dam. Despite its gigantic proportions by man-made standards, it seemed a very insignificant feature among Nature's massive rocky structures stretching out around us. Fifteen miles to the southwest a thin strand of road reached out to Boulder City. A good

vine, clambering over boulders, plowing through loose sand. Don had been little affected by the heat and was still in good shape. But the heat stroke, mild though it was, had left me somewhat wobbly. It was exhausting even walking down hill. It was hard to resist the temptation to lie down and rest every few yards.

At last we rounded a bend in the tiny canyon. Far ahead we caught a glimpse of



View from the top of Fortification Hill looking southwest. Boulder dam is discernible half way down the deep canyon (Black canyon) extending from the lake to the left. The light colored hills in the left foreground are the Painted Desert. When this picture was taken the author and his companion were only about a mile and a half in an air-line from the car and water. Yet they had to hike nearly 17 miles before they reached them.

50 miles to the west we could see a hazy spot of green vegetation on the vast desert floor—Las Vegas. Another 20 or 30 miles beyond rose Charleston peak with tiny clouds forming and dispersing over its summit.

The air was so clear, the waters of the lake below us so shimmering and blue, that we momentarily forgot the sun beating down upon our heads—the hot blast of wind whipping across the lava rocks, burning our faces and drying our throats with each breath. It would take a couple of hours to reach the lake for a good swim and then back to the car before dark. At least so we thought, then.

The general slope of the mesa was down toward the lake. We believed our best chance was to follow a small ravine which cut through the top of the mesa and ran its full length.

For an hour we moved down that ra-

the lake. Our hopes rose. I forgot my cotton-dry throat. At last we'd be able to leave the top of that hellish mesa.

Another hundred feet and we came to an abrupt halt. Before us was a sheer drop of 200 feet!

This time I didn't resist the lying down urge. I staggered into the shade of the rocks and flopped to the ground. A glance at Don's face reflected the vague fears I had harbored ever since we started down that ravine. We were trapped.

For the first time the seriousness of our predicament made itself clear. Our water was gone. We were seemingly trapped on top of the mesa. It was well past mid-afternoon. We could not possibly reach water that night even if by some fantastic stroke of luck we should get off the top of Fortification Hill. I looked at Don.

"Another day up here won't be any fun," I mumbled. He didn't answer but I knew what he thought. If one day in the

sun had done this to me, another would—well—. Don interrupted my unpleasant thoughts.

"You stay here in the shade. I'll take a look beyond that point over there."

Sleep is a wonderful thing. At least it was wonderful for a few brief minutes that afternoon until Don's loud shout from the rocky pinnacles to the northwest suddenly startled me into consciousness. He was waving to me. He'd found a way down!

The sun was setting beyond Lake Mead as we inched our way down the steep rocky walls of Fortification Hill. When we finally reached the foot of the long talus slope there was little light left in the sky. We were still several miles from the lake.

For seemingly endless hours we staggered downhill with but one objective in mind—water. Our mouths had long since become completely dry. We had tried to eat some dried beef. It was like trying to chew a fistful of old leather. My lips were burned; my tongue seemed too big for my mouth. Don was near exhaustion, too, after having helped me over the rocks.

About nine o'clock that night we slipped and rolled down a steep hogback into the bed of a dry sandy wash. The little canyon twisted and turned. We knew it would eventually lead us to the lake. So we staggered on and on, our almost uncontrollable legs seeming to swing along disjointedly.

The walls of the canyon grew narrower and more precipitous. They seemed to be closing in upon us. A half moon had risen but the steep walls kept out most of the light. The defile was now only a few feet wide. It was like following the twisting path of a giant mud crack. In the semi-darkness our footing was uncertain. Time after time we literally fell to the ground for rest. Once we went to sleep. When we awoke our sense of direction was confused. The winding canyon was a greyish-black maze. One way looked no different from another. We could see only a few feet ahead to where the walls turned in a new direction. Agonizing moments passed before we were confident we were going down canyon and not back up again.

How long we staggered through that awful maze I cannot say. We had no watch with us. The moon had passed well into the western sky when the canyon suddenly widened out. Ahead of us glistened a tiny patch of moonlight shimmering on a finger of the lake!

Perhaps we were not as thirsty as we had thought. Maybe that is why we did not blindly hurl ourselves into the water. We'd read of men dying of thirst who suddenly found water only to go crazy and

bloat themselves with too much. Strangely enough we found ourselves entirely rational—at least as rational as could be expected of two dopes who had been careless enough to get themselves into such a predicament. We methodically took off our clothes. I remember how ridiculously careful I was in untying my frayed shoelaces so they wouldn't break.

We soaked in the water for several minutes before taking a drink. I remember my only desire was to rinse my mouth, to rid it of that awful dry, swollen feeling.

The rest of the night we slept fitfully on the sand. Once a herd of wild burros woke us with their energetic stamping and snorting. We were lying squarely across their trail to water.

The next day was not a pleasant one either. Our route down from the mesa had brought us to water surely enough, but it left us at least 10 or 12 miles along the lake shore north of our car. It meant another long hot day before we could possibly reach the road again. But at least we were close to the lake. With water it wouldn't be so bad. Hunger was no concern.

From the top of a narrow ridge we surveyed the ground we'd have to cover. It was very broken—a series of alternate ridges and canyons running down to the lake from the mesa on our left. It meant we'd spend the day climbing first one ridge and then another. I was still somewhat weak. Water and sleep had helped some, but the prospects of all that climbing were not encouraging.

At first we discussed the idea of leaving our clothes and camera where we were, and swimming the 12 miles along shore. Once back to the car we could rent a boat and pick up our things later. At least it would be cool and there'd be no climbing. We decided against it, though, because it would have taken too long—another extra day in the sun.

We started hiking at sunrise. Up and down ridges, across steep canyons. The June sun was hot—hotter even than yesterday. A searing wind blasted our faces, seemed to push us back. But today we had water. We doused ourselves at every opportunity. I remember how little I perspired that day, so dehydrated I had become. Hours upon hours we plodded onward. We thanked the wild burros for the innumerable little trails they had made for us. Those poor little beasts, I thought; living all summer in that hell-hole of blistering rocks, sand and heat.

Late in the afternoon the canyons became steeper. Narrow fingers of the lake, like miniature fjords, ran far up each rugged chasm. To have skirted the water far up each of these canyons would have

consumed endless time and effort. There was nothing to do but swim across them. Seven times we undressed, bundled up our clothes, shoes, and camera, and swam the deepest gorges. It was not particularly easy—holding our duffle above our heads as we swam. But the buoyancy of our empty canteens strapped around our waists helped considerably. It was fun, too, because it took us out of the enervating sun and heat.

I experienced an interesting psychological reaction based on a purely physiological stimulus when I slipped into the water and swam the first little gorge. The shores of Lake Mead up to that time had seemed an unfriendly hell-hole of tortuous rocks and hot winds—a place to shun and hate. But now as the cold waters surged soothingly over my naked body my impulses changed. I found the little fjords interesting—exciting to explore. We dallied to swim into mouths of gloomy caves and under overhanging ledges. I felt exhilarated and alert once more.

Perhaps it was this feeling of acute awareness engendered by the cool waters that saved me from danger on the last crossing we made. It was a rather long one. We each made three trips, piling our belongings on a large rock on the far side of the gorge. Don had made his last crossing. I was bringing over my camera. I reached the rocks and had placed my camera among my clothes. I was standing in the shallow water. Suddenly without warning a grey streak whipped out from under the rock beneath our clothing. With a quickness that surprised me I leaped to one side and fell back in the water as a huge rattler recoiled among the rocks.

At 9:30 that night we reached the car. We had been gone two days on a hike that should have taken but a few hours. We had done practically everything that seasoned desert men would not have done. In the first place we had tempted fate by ignoring the terrible might of the desert sun. We had forgotten to take our morning salt. We failed to establish *beforehand* a feasible descent off the mesa. But we had learned much from our experience; gained more fully than ever before the respect we should have had for the desert; realized the importance of a man never venturing far into the mountains or desert alone—for had I been alone on that trip a heat prostration might have been really serious.

"You came down the northwest side of Fortification Hill?" exclaimed a park service ranger the next day. "Why say, if you'd come down the east side you'd have seen my wheel tracks. I drove almost to the foot of the cliffs not long ago. You could have been down in three hours!"

A few thousand feet below the summit Calistro paused and with outstretched hand pointed to some large grassy mounds. "Allí hay mucha plata. Búscala." (There lies much silver. Look for it.)



Legend of the Lost San Pedro mine dates back to the period when Spaniards in their eager search for treasure were extending their explorations north from Mexico into the area that is now New Mexico and Arizona and California. This is one of the most persistent of the many stories of buried silver and gold which have come down through the generations. Perhaps some of them are true. Quién sabe! Who knows!

Lost San Pedro Mine

By JOHN D. MITCHELL

MANY old Spanish documents mention the fabulously rich San Pedro silver mine. The yellowed manuscript before me, said upon good authority to have been copied from the Spanish archives reads, in part:

"The mine called San Pedro belonged to Tumacacori. It measured one and one half leagues from the side of the mission to the west and when the sun rose over the lofty Santa Ritas it struck in the portal of the tunnel. At the San Pedro mine the rocks are rolled to the canyon. In the mine there will be found planchas de plata (bars of silver) weighing from 25 to 250 pounds

each, also deposits containing native silver. From the San Pedro the trail descends to the Guadalupe mine and then follows by a canyon to the south and reaches the spring of San Roman. On the west side of the mountain there is a long tunnel with a strong wooden door. Below this tunnel at the foot of the mountain in a canyon running from east to west will be found un vaso (adobe smelter) and piles of slag."

So unfolds the legend of the lost San Pedro mine.

It was many years ago and siesta time at the old Tumacacori mission. Calistro, ancient Opata Indian and self-appointed

custodian of the ruins, was sound asleep in the noonday sun. Far across the valley to the east a fleecy cloud hung like a bridal veil from the summit of Old Baldy perched high atop the Santa Rita range. To the west the Tumacacori mountains loomed dark against the western sky.

It was springtime in the green valley of the Santa Cruz and the south wind was redolent with the perfume of blossoms in the nearby orchards and the scent of new-mown hay. Bees droned and great butterflies floated overhead in the warm sunshine. The nearby Santa Cruz river sang a pleasant song as it gurgled among boulders in its rocky bed.

"Yes," replied Calistro, in answer to my question, "I have often passed near the San Pedro mine and many times have I seen strange lights flickering on the high ridge to the west and I have heard that much treasure is buried there."

For a small consideration this old Indian agreed to guide me to the workings. The trail led out across the flats toward the base of the Tumacacori range and de-

spite his 108 years this remarkable old man kept abreast of my saddle mule up hill and down.

After passing the Otero cattle ranch about half way up the mountain the trail swerved to the southwest. Here the formation changed from old andesite to rhyolite and small stringers of grey quartz began to appear.

On the summit we stopped to rest and to add a stone to a large mound that marked the site of an ancient grave. It is the custom of the Hispano-Arizonans when passing by a grave to add another

stone to the pile. As this is the old trail from Arivaca and Cerro Colorado to the Tumacacori mission, many travelers had passed this way and consequently the mound had grown to an immense size. From here the trail wound down to the foothills and out across the plains of Arivaca and beyond which stands the magnificent Baboquivari peak which resembles a great eagle with outstretched wings, head and beak projecting into the sky.

A few thousand feet below the summit Calistro paused and with outstretched

hand pointed to some large grassy mounds. "Alli hay mucha plata. Búscala." (There lies much silver. Look for it.) With these words the old Indian sat down on a rock and refused to budge. So while Calistro rolled and smoked innumerable cornshuck cigarettes I went on to examine the lost San Pedro mine.

Several outcroppings of grey quartz veins from 18 inches to three feet in width showed considerable copper and silver. There were several grassy mounds that contained lowgrade silver and copper ore that showed evidence of having lain there for several hundred years. The old stopes had caved in and were overgrown with grass and brush to such an extent that it was impossible to make an examination of them. However, several pieces of high-grade were picked up from the surface. Most of the mines in the district are noted for their rich deposits of silver ore. Calistro might have been right when he said "Alli hay mucha plata."

That night long ago as we dined on delicious tortillas, carne asada, frijolites and drank café negro, this fine old Opatá Indian gave me his poor house and garden, the San Pedro mine and all the treasure that it contained. I pass it on to you.

Calistro is dead now and sleeps the long sleep beneath the spreading cottonwoods that he loved so well and the Santa Cruz still sings its pleasant song as it eddies and gurgles among the boulders down in the Green valley of the Santa Cruz.

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ANSWERS TO TRUE OR FALSE

Questions on page 13.

- 1—True.
- 2—False. Joshua Tree national monument is in Southern California.
- 3—False. Supai Indians live in Havasupai canyon, a tributary of Grand Canyon.
- 4—True.
- 5—False. Beavertail grows too close to the ground for the cactus wren.
- 6—True. 7—True. 8—True. 9—True.
- 10—False. Boats were navigating the Colorado before the famous Ives expedition.
- 11—False. El Tovar is on the south rim.
- 12—True. Horned toad is a lizard.
- 13—False. Petrified Forest may be entered from either Highway 66 or Highway 260.
- 14—False. Like true hollies, the desert species has a full quota of leaves at Christmas time.
- 15—True.
- 16—False. Kit Carson was a guide for General Kearney on the western trek.
- 17—False. The Winning of Barbara Worth was written by Harold Bell Wright.
- 18—True.
- 19—False. The Little Colorado junction with the main stream is above Lee's Ferry.
- 20—False. Dinosaur national monument is in Utah.

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SCENIC AND HISTORIC TRIPS — LAKE MEAD, BOULDER DAM, MOUNTAINS — LIBERAL LAWS

Indio wrote--

Indio Chamber of Commerce

Indio, California Oct. 27, 1941

Mr. Randall Henderson, Editor,
The Desert Magazine,
El Centro, California.

Dear Mr. Henderson:

Congratulations on the 4th Anniversary of The Desert Magazine! It took faith and courage to found a magazine with such high ideals. You have done your job well. Continued success to you!

Indio and the entire Coachella Valley are proud to have been the locale for many of your articles, both scenic and historic. Near here are found many places that one must visit to truly appreciate the grandeur and beauty and the mystery in which they are shrouded. There's Painted Canyon, a trip that reminds one of a mammoth art gallery adorned with fantastic. The views along the Palms to Pines Highway are striking; the road between Palm Springs and Indio offers a variety of scenery with stately date gardens, grapefruit groves and the virgin desert, all of interest to you. Camping, hiking, exploring and adventure, all are found here. For swimming and boating there is the Salton Sea, the fastest body of water in the world; for rock collectors there is no finer hunting ground than the desert around Indio.

Then comes Springtime; the desert blooms like a rose garden. Each year thousands travel great distances to behold a sight that artists have vainly tried to capture on canvas. On February 19th to February 22nd inclusive, will be held an event that many look forward to. The Riverside County Fair and Date Festival. No ordinary fair is this; it's a real desert fair for real desert people.

Which brings me to the purpose of this letter.

Among the thousands that read the Desert Magazine are many that are always searching for new places to visit. To them we want to extend a hearty welcome always. Last year we attempted to do so through the advertising pages of the Desert Magazine. The response was gratifying, being, in fact, the most satisfactory media we have ever used.

This year we intend to continue our efforts. We seek your help; can you suggest the type of copy that we should use that would best put over to your readers what we here have to offer?

Coachella Valley is a desert, and yet not a desert. A paradox. true, but understandable when you come to know it and love it even as we who live here.

Sincerely yours,

C. Washburn President.

... THE DATE GROWING CENTER OF THE WESTERN HEMISPHERE

Desert Magazine answered--

To those who come to the Desert with friendliness, it gives friendship; to those who come with courage it gives new strength of character. Those seeking relaxation find release from the world of man-made troubles; for those seeking beauty, the Desert offers nature's rarest artistry. This is the Desert that men and women learn to love.
—From the Desert Magazine

THE **Desert** MAGAZINE
Published monthly at
EL CENTRO, CALIFORNIA



Palm Oasis

C. A. Washburn, President
Chamber of Commerce
Indio, California

Dear Mr. Washburn:

Thanks for your letter and the kind words you had to say about the Desert Magazine and its staff. We've been trying to build this magazine of the desert on merit rather than ballyhoo, and the progress we have made has been most gratifying.

Indio and the Coachella Valley area are indeed rich in desert resources. In addition to the scenic assets mentioned in your letter I might mention many others:

The Hidden Springs palm oasis in my opinion is one of the most fascinating spots in the entire Southwest. I am planning to tell readers of Desert Magazine more about this oasis as soon as the road up the canyon is re-opened.

In your Santa Rosa mountains you have many gorgeous canyons which are still comparatively unknown to the traveling public. You will learn more about them in future numbers of Desert because that is one of my favorite tramping areas.

Those highly eroded mud hills on the north side of your valley are not nearly as drab as they appear from the highway and deserve more attention than they have been given. There are more native palm trees in the canyons and on the slopes of those hills than in any other equal area in Southern California.

I hope you will soon have your road north into the Joshua Tree national monument opened for travel. That is one of your most interesting scenic areas. In fact, a visitor could spend a month at Indio with a delightful sidetrip to a new area every day, and not begin to exhaust the possibilities for sight-seeing and recreation there.

As to your advertising program, may I make a suggestion? In reading your letter I could not help but feel that the letter itself contains valuable information for those who are planning trips into the desert this season. Why not publish the letter?

Thanks to the fine spirit of Indio people, your community has made great improvements in recent years, and I hope the beautification of your town will continue to be one of your major projects. Am looking forward to spending some time at your Fair and Date festival in February.

Cordially,

Russell Hunsaker
Editor.

BOOKS OF YESTERDAY AND TODAY

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

WAY OF LIFE THAT BRINGS CONTENTMENT

Shake hands with Old-Timer! You will find this lovable old character sitting on a stump at the crossroads in GHOST TOWN thinking of "the days and times that used to be." In the original vernacular he recreates the tall tales, the bedrock philosophy, the humorous and embarrassing pranks, and interprets and embellishes local history of the ghost town of Columbia on California's Mother Lode.

From the point of view of this composite narrator, G. Ezra Dane and Beatrice J. Dane, present some of the most fascinating and "genuine" episodes of the excitements and turmoils of Life in the days when gold was free. We learn why life in the Diggings produced just such remarkable characters as Old-Timer and we meet some of his cronies, Nervi the Hieroglyphographer, Matt Brady, George Foster, J. B. Harmon, the Water-Walker, and the Black Cat. Old-Timer explains, too, the ingenious contrivances for getting gold from gravel. There is the 33-pound Gambler's Great Chipsa nugget and the astounding tale of Pitch-Pine Billy's Golden Frog and How It Grew. The ringing of a bell reminds this prince of story-tellers of the Two Unfortunate Frenchmen and How They Were Rescued by the Vali-

ant Washer-Lady. There are many more such tales to bring both laughter and tears until the final chapter wherein Old-Timer tells us in plain language What Is Wrong With the World—"The trouble with folks these days," he says, "is they won't let good enough alone. They always want to improve on nature, and they forget that all any man can do in this world is just live and eat and sleep and neighbor around a bit with his fellow creatures and watch while the earth takes a few turns amongst the stars . . ."

In something of the mood of a closing benediction Old-Timer leaves us with the thought, "If a man will look on life and live it as the simple thing it is, instead of forever trying to make it complicated; if he will take a little lesson from the Me-wuks and go along with nature instead of fighting against it all the time—why, he'll find that life can be a real pleasant experience, and nature will be gentler towards him than he ever would have thought."

Alfred A. Knopf, New York, 1941. 311 pp. Illustrated. Appendix. Bibliography. \$3.50.

—Marie Lomas

STRIPS THE GLAMOUR FROM BILLY THE KID

The virtues and sins of Billy the Kid have been debated for 50 years. Partisans range him from cold-blooded murderer to a Robin Hood-like victim of unfortunate circumstances. Only one thing is certain—William Bonney, alias the Kid, succeeded in carving a score of notches on his gun, and with them a place in western history rivalled by few other gunmen.

In PISTOLS FOR HIRE, Nelson C. Nye has written a novel of Lincoln county, New Mexico, during the period that the Kid was rustling cattle for John Chisum, cattle baron of that country. Flick Farsom, hero, is a paid gunman working for the Murphy-Dolan faction of the famed Lincoln county feud. It was their herds which were being stolen by Billy, and Flick's job was to protect the cattle and kill the Kid, no mean task.

In PISTOLS FOR HIRE the author has presented the Murphy-Dolan side of the war. Through his hero, Flick, who speaks in the first person, he paints a picture of the Kid as a ruthless, hot-tempered sneak-thief, glorified in modern times because of his youth and his support among Mexican women, who were undeniably charmed by his smooth talk and devil-may-care attitude.

Seldom has a western novel come off the presses so devoid of the familiar our-hero-cando-no-wrong myth. Nye makes no attempt to glamorize the characters he depicts. Both their language and manners are true to what life must have been in those rough and ready days.

Published in 1941 by Macmillan Co. Price \$2.00, 196 pages.

—Rand Henderson

Spanish On a Bookmark

Hy. W. Jones of Twentynine Palms, California, has published in the form of an attractive folded card, a simplified, streamlined, but very complete outline of the distinctive features of Spanish grammar.

It is expected to be of real help to students who are anxious to make progress in a limited time.

NEW EDITION OF JAEGER'S DESERT FLOWER BOOK

Edmund C. Jaeger's DESERT WILD FLOWERS was first reviewed on this page in the May, 1940, issue of Desert Magazine. It was a special pleasure then to introduce this valuable guidebook to our readers. And now we are glad to note the October publication of a Revised Edition.

Two welcome additions are the glossary and key. The glossary is unusual in that botanical terms are not only defined but references are made to various flowers in the text which illustrate the point.

Most valuable, however, is the 16-page key, the use of which is explained by Ruth Cooper, botanist at Riverside junior college. It is especially designed for quick identification of plants by the layman. All species in the book have been assembled into groups based on simple but distinctive non-technical characteristics, such as habit of growth, anatomical features, arrangement of leaves, color, etc.

This is the most complete work yet published on flora of the far Southwest desert. Complete guide to flowers, trees, shrubs of Death Valley national monument, Joshua Tree national monument and Borrego Desert state park. Description of 764 desert plants, all illustrated in photographs or drawings. Published by Stanford University Press. \$3.50.

—Lucile Harris

TRAIL OF THE GOLDSEEKERS THROUGH DEATH VALLEY

Dr. Margaret Long first visited Death Valley in October, 1921, and found the area and its history so intriguing that she has returned there again and again to retrace the old trails of the Jayhawkers and search for long forgotten waterholes.

Out of this experience and an exhaustive research of old documents, she has written THE SHADOW OF THE ARROW, published recently by The Caxton Printers of Caldwell, Idaho.

Dr. Long has made it her special study to go beyond the well known facts about William Lewis Manly and the Jayhawkers and resurrect fascinating bits of history and human interest which have not previously appeared in public print.

For instance, she has devoted many pages to the Briers—the Rev. James who lived in a spiritual realm so lofty he would preach a sermon to his starved companions during the bitterest moments of privation and hazard—and to his wife, Julia Wells Brier, the gritty little mother about whom Manly wrote: "She was the one who put the packs on the oxen in the morning. She it was who took them off at night, built the fires, cooked the food, helped the children, and did all sorts of work when the father was too tired, which was most of the time."

The author went to Independence rock on the old Oregon trail in Wyoming, and spent weeks tracing the route of the Death Valley caravan across Utah and Nevada and eventually to the Pacific coast. With the help of local settlers she located many of springs and waterholes where the various units of the original Jayhawker party camped after they separated.

The appendix contains much pertinent information, including a list of the Jayhawkers, living and dead, in 1897. There are also maps, a bibliography, index and a number of half-tone engravings of geological landmarks along the route. 306 pp. \$3.50

—R.H.



the whole "wild" world on a New, Hilarious Luncheon Cloth

Here's a luncheon set designed for today's favorite sport of arguing the war. Created by Reg Manning, internationally famous cartoonist, the Table-Top "Argu-Map" of the World is reproduced in choice of three colors on white sailcloth (52" square).

Oceans and rivers . . . continents and countries . . . latitudes and longitudes . . . the whole tempestuous war-time globe — peeled, flattened out, decorated with side-splitting sketches of the world's prominent figures and studded with staggering, but accurate facts.

Packed in Miniature Barracks Bag—Ideal Gift

Complete set, including cloth, 4 matching, timely-illustrated napkins and instructions on "How To Start Warguments", \$3.50. Specify choice of brown, blue or wine-red. Send check or money order (no cash, please) or order C.O.D. We'll enclose gift cards for you.



GOLDWATERS

Dept. M5 Phoenix, Arizona

The Desert TRADING POST

Classified advertising in this section costs five cents a word, \$1.00 minimum per issue—actually about 1½ cents per thousand readers.

PHOTO FINISHING

14c DEVELOPS and prints 8 exposure roll on Velox paper. Satisfaction guaranteed. RANCHO PHOTO, Dept. 400, Ontario, Calif.

BUSINESS OPPORTUNITIES

MAKE ARTIFICIAL MARBLE, Glazed cement, Flooring, Pottery, Novelties. Samples 3c; expect surprise. Payne, 945 Grande Vista (Room 699), Los Angeles, Calif.

LIVESTOCK

KARAKULS producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further information write Addis Kelley, 4637 E. 52 Place, Maywood, California.

KARAKUL SHEEP have proven profitable. This fact increases demand. Write for Bulletin No. 10 on their care and habits. James Yoakam, California Karakul Sheep Co., 1128 North Hill Ave., Pasadena, California.

MISCELLANEOUS

FREE—Copy America's largest trapping magazine. Writers: Butcher, Grigg, Dailey—100 others! Send stamp. North American Trapper, Dept. DM, Charleston, West Virginia.

INDIAN RELICS. Beadwork. Coins. Minerals. Books. Dolls. Old Glass. Old West photos. Miniatures. Weapons. Catalogue 5c. Vernon Lemley, Osborne, Kansas.

KODACHROME 2X2 SLIDES, "Springtime in the Desert." 40 slides with descriptive manual \$20. C.O.D. on approval. Write for folder. C. Edward Graves, Arcata, California.

SPANISH on a Bookmark! Graphic outline of Spanish grammar. 10c. Hy. W. Jones, Twentynine Palms, Calif.

12 BEAUTIFUL perfect prehistoric Indian Arrowheads, postpaid for a dollar bill. Catalog listing thousands of other relics free. Caddo Trading Post, Glenwood, Arkansas.

REAL ESTATE

NEW MEXICO Cattle and Sheep Ranches, Farms, Mines, Acreage, Timber, Hunting and Fishing Resorts, Residence and Business property anywhere in the state. Write us for descriptive, illustrated literature. Parkway Realty Company, Silver City, New Mexico.

WIDOW—Cook, Maid. Buy cabin or cottage and ground anywhere for home. Exchange service or oil land. McDaniel, 845 Benton Way, Los Angeles.

FOR RENT, New two room cottage at Ocotillo—Highway 78. Solar hot water, shower, tank gas for heat and cooking. ½ acre fenced. Furnished. \$10.00 per week, \$30.00 per month. Blethen, 909 So. Atlantic, Los Angeles.

For Imperial Valley Farms —
W. E. HANCOCK
"The Farm Land Man"
Since 1914
EL CENTRO — — — CALIFORNIA

STORY OF THE MEN WHO CONQUERED THE COLORADO

"Two years ago," said David O. Woodbury, "I set out to write the story of Boulder dam as an engineering achievement—the simple account of men mastering a river. I had scarcely begun the research for this when it became apparent that the smooth white curve of Boulder dam was no more than the final flourish drawn beneath a far greater story . . . I saw that my task was not to build a dam but to explain the origin of the deed, to record the long magnificent struggle of pioneers to bring water to the desert. The Colorado Conquest—that must be my story, not told in words of stone and steel but built of the very blood and sinew of people."

Woodbury's COLORADO CONQUEST came from the press of Dodd, Mead company this fall—and it is exactly what the author said it should be—the human side of the struggle to tame the Colorado river.

The author starts his story with the geological history of the Colorado, and carries it down through the period of Indian occupation, its discovery and exploration by the Spaniards and Mountain men, and finally its colonization by American pioneers.

It is a book of highly dramatized fact, with the reclamation of the Imperial Valley of California as the secondary theme.

Early settlers in the Imperial desert are symbolized by fictitious names but the characters who played the leading roles in the engineering, promotion and financing of the Imperial project appear in person—Dr. Wozencraft, Charles R. Rockwood, Dr. W. T. Heffernan, W. F. Holt, Charley Perry, Phil Swing, Herbert Hoover, George Chaffey, Mark Rose and many of the others.

During two years of research Woodbury has brought together an amazing array of information as to the Imperial project. Old-timers and veterans of the desert will dispute the accuracy of many minor details in the story, and friends of Charles R. Rockwood will feel perhaps that he has not been given just credit for his work, but the story as a whole follows close to the pattern of history as it was enacted.

The author is a Yankee engineer who finds stirring drama in the work of engineers and scientists, and in the compilation of this book he has completed a herculean task. Pen sketches by author. 361 pp, index, maps. \$3.00.

—R.H.

HANDBOOK FOR GEM AND METAL HOBBYISTS

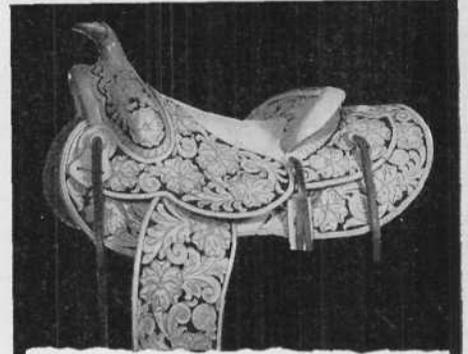
Designed as a handbook for those interested in craft work involving metals and gem stones, W. T. Baxter's JEWELRY, GEM CUTTING AND METALCRAFT is recognized as outstanding in its field.

Mr. Baxter, who is the author of many magazine articles, is instructor in art metal and jewelry at the Woodrow Wilson school in Washington, D. C.

His book is written primarily for the student and home craftsman and includes work in copper, brass, silver, pewter, etching, annealing, polishing, coloring, and in fact the whole field of metal handiwork. Instructions are given for the making of practical utensils as well as jewelry.

Section devoted to minerals includes instruction in the art of cutting, and also detailed information for the identification of the precious and semi-precious gem stones.

The book is illustrated with both line drawings and photographic engravings, and lists dealers from whom materials may be obtained. McGraw-Hill Book company, publishers, 1938. 212 pp. \$2.50.



An Inspired Western Gift

SADDLE - CRAFTED BELTS

Made entirely by hand from the finest top-grain cowhide, by Porter saddle-craftsmen in Phoenix! "Flower-stamped" with the same exquisite foliage designs that ornament the famous Porter western saddles. Coveted by cowboys since Fronter days, Porter belts have become the fashion among increasing numbers of well-dressed sportsmen, business men and women. Be the first to own one in your locale, and please eastern friends with these as gifts! Use convenient coupon below. Mail orders promptly filled.

½" wide

\$1



¾" wide

natural saddle
antique brown
burgundy wine

\$1.50

Limited dealerships available: Write Dept. F 3, Porter's.

Belts also sold in Porter's Tucson, Arizona store.



PORTER'S, Dept. F 3, Phoenix, Arizona
Gentlemen: please send me the following:

quantity..... colors.....

waist measure..... width.....

NAME.....

ADDRESS.....

Check..... Charge..... Money Order.....

**We must have weather
— whether or no**



Human nature is stranger than almost anybody.

People look askance at other people, and other people look it right back at them.

One group is sure that the other group's point of view is blurred by a bad case of astigmatism.

One outstanding instance of contra-conduct may be found on the western shores of America.

Out here, warm currents skirt the coast with the result that summer comes in the winter when we really need it.

So when the climate gets 3 to 4 feet deep back yonder, Easterners flock west to welfare themselves in sand and sun.

By the same talkin', those who live in the mild west get all bound round with a woolen thing and set out for the mountain heights. Whether it's ice or whether it's snow, they must have weather whether or no.

Because of this cross purpose condition, 6,000 Touring Bureaus have been established on the Pacific Slope.

These Bureaus are manned by Shell Service Station Dealers. The Men in White can show the summer seeker the way to get hot — they can also tell the winter sportsman just where the mountain stage is set for skate and ski.

Which ever way migratory motorists are bound they need only stop at the Sign of the Shell. Shell Sellers will guide them on their respective ways with neatness and dispatch.

— By **BUD LANDIS**

Mines and Mining . .

McDermitt, Nevada . . .

Nevada's newest quicksilver producer, the Cordero mine, is treating an average of 75 tons of ore daily and expects to step its operation up to 125 tons as soon as the new \$125,000 plant is in perfect running order. D. Ford McCormick is superintendent at the Cordero, which is a subsidiary of the Horse Heaven company.

Tucson, Arizona . . .

Arizona bureau of mines at the state university here has released a bulletin entitled, "Tungsten Deposits in Arizona," by Eldred D. Wilson. The text not only gives detailed information as to the known tungsten deposits in the state, but describes the many tungsten ores. It is designed as an aid to prospectors in the field.

Hawthorne, Nevada . . .

Contract has been let to the MacDonald Engineering company for the construction of a \$3,000,000 calcining plant in Gabbs valley 30 miles north of Luning. The plant will ship magnesium oxide in concentrated form to the new Las Vegas plant for actual manufacture of magnesium metal.

Bishop, California . . .

The 1,000-ton plant of the U. S. Vanadium corporation near here has replaced the Nevada-Massachusetts mill 34 miles west of Winnemucca, Nevada, as the largest tungsten producer in United States, it was announced recently. The California mill is said to have a reserve supply of scheelite to keep the thousand ton plant in operation for 30 years.

Elko, Nevada . . .

California capital has been made available for the development of beryl deposits found in the Nevada mica property 60 miles from this city, according to W. E. Culver, manager and one of the owners. Culver said he had a contract for all the beryl he can deliver. This mineral occurs in pockets in the mica deposit, and the tonnage available is still problematical.

Goldfield, Nevada . . .

Los Angeles men, including George Pepperdine, are reported to have taken a lease on 220 acres of alum and potash ground in the Lone Mountain field. The property is owned by Nevada Potash and Chemical company. A 250-ton refining plant is planned at the deposits.

Virginia City, Nevada . . .

Sierra Nevada, Ltd., operators of the Cedar hill property on the old Comstock lode have increased the capacity of their plant to 1000 tons daily. The enlarged plant, when finally completed, will be the largest operating on the Comstock. Overburden assays from 75 cents to \$2.00 a ton and instead of being removed is to be mixed with the mine ore and put through the mill.

Winnemucca, Nevada . . .

Milling operations at the 400-ton ore plant of Consolidated Goldacres mining company 30 miles south of Beowawe was scheduled to be ready for operation by the first of December. The company is said to have 500,000 tons of \$6.00 ore in sight.

Phoenix, Arizona . . .

Charles F. Willis, secretary of Arizona small mine operators association, reports that the Metal Reserve company, a subsidiary of R. F. C. has about completed arrangements for establishment of a manganese buying station at Phoenix. Only ore of 40 percent or more content will be accepted at the purchasing stations, and in lots of 100 tons or more. The 100 tons may be delivered in smaller lots, payments made when total is reached. This method saves brokerage charges. There are manganese deposits in Arizona where ore of 40 percent or better can be mined with little or no cobbing.

Las Vegas, Nevada . . .

A large deposit of Pearlite, used as insulating material, has been located by Thomas Schofield north of this city. Pearlite is a form of volcanic obsidian which gets its name from its color. At approximately 1800 degrees temperature it explodes and changes color to white. Extensive tests are being made of the local material.

Provo, Utah . . .

Defense Plant corporation, a federal agency, has agreed to advance \$35,000,000 for the construction of a two-furnace pig iron plant here with capacity of 750,000 tons annually, according to officials of the Columbia Steel company, subsidiary of U. S. Steel.

Winnemucca, Nevada . . .

Getchel mine, Nevada's largest gold producer, recently shipped five tons of arsenic to an eastern destination. Arsenic formerly was a waste product, but through the installation of a Cotrell precipitating plant it is now being recovered and may become an important by-product of the mine. One of the uses of arsenic is in the manufacture of poison gas.

Douglas, Arizona . . .

Expansion of the Phelps Dodge Morenci copper mining operations which would increase the annual output from 75,000 to 135,000 tons, is under consideration here. The federal Defense Plant corporation would provide \$28,000,000 of the \$63,000,000 needed to boost the output.

Vernal, Utah . . .

Uncle Sam's ace-in-the-hole, if other sources of fuel oil should be obstructed, is an area of 26,000 square miles of oil shale in Utah, Colorado and Wyoming capable of producing a barrel of oil from the average ton of shale, according to findings of the Utah school of mines and engineering. Utah has 8,000 square miles, Colorado 6,000 and Wyoming 12,000. Federal and state funds amounting to \$400,000 were expended over a period of 18 years in determining the extent of these shale deposits.

Sacramento, California . . .

Setting the highest record in gold production since 1856, California produced \$50,234,000 of yellow metal in 1940 according to the report of State Mineralogist Walter Bradley. Quicksilver production jumped from 11,201 flasks worth \$1,102,563 in 1939 to 18,907 flasks worth \$3,209,754 in 1940. Increased production was reported for practically all minerals in the state.

HERE AND THERE

... on the Desert

ARIZONA

"I Left the Big Ones There" . . .

KINGMAN—The Colorado river below Boulder dam is one of the worst places to fish in the world. It's always too hot, the river is dangerous, it's hard to get to, and it is necessary to fish from a boat. "And so the fish have to be whoppers to attract me," says Ed Williams, local Isaac Walton. Evidence of the strong attraction which the river holds for him were 19 trout, 14 to 20 inches in length, which he recently brought back from a trip to Willow Beach on the river.

Ruins Get New Keeper . . .

PHOENIX—Another civic activity was taken over by the Dons Club on November 16 when, at an assembly of governors, mayors, visitors and tourists on the spot, they took over active supervision of Pueblo Grande ruins in Valley of the Sun. Thanks to reconstruction work on the ruins done by Odd S. Halseth, archaeologist, Pueblo Grande has become a mecca for students, writers, artists, scientists, tourists from over the nation, and the task of managing and keeping up the site has become monumental. Consequently, the Dons club, the same who annually sponsor a trek to Superstition mountain, have volunteered to assume charge. Pueblo Grande is unique in that it is the only archaeological monument in the Southwest to be municipally sponsored and managed.

It Wasn't His Idea . . .

NOGALES—What's in a name? Well, Antonio Chamas Papatheodorokoumountourgiankopolous has just about everything in his, and he's making it pay dividends. Until recently, Mr. Papa . . . ran a modest confectionery store, and as a side line boasted the longest name in the country. Since being introduced to the nation via Associated Press, he has enlarged his business into a soda fountain and restaurant. People come from far and near just to hear him pronounce his name.

From Out the Past . . .

TUCSON—Hollywood came to town, dug up its past, recreated it, and left it a skeleton. Now that it's been taken out of the closet of history, local townspeople have been aroused, and want the world to see their city as it was "back when." Consequently, Pima county has purchased the site where Columbia built a replica of Old Tucson for the filming of "Arizona," and are making a leading tourist attraction out of it.

White Man Comes First . . .

WINDOW ROCK—Step by step redmen have been forced to give way to the white man, and now one more stride has been proposed. A plan to divert some of the San Juan river water into the Rio Grande has been advanced, in order to help farmers in the upper reaches of the river valley. Navajo leaders are protesting that the water belongs to them, and that they will suffer if any is taken away. However, with the characteristic arrogance of his race, the white man who proposes the irrigation project has suggested that the Navajo simply be moved to a reservation near Parker, thus settling everything.

Loan the Navy Some Spurs . . .

TUCSON — Off-hand, conflict between sailors and cowboys seems a remote possibility, but the national emergency has brought about strange occurrences. Local merchants are running out of hemp for lariats, and in reply to their requests for more, manufacturers say that the navy has priority. Local ranchers contend that "the army eats beef and wears shoes, and if we can't get ropes to round up the steers what will the infantry do?" Meanwhile, Fred Porter, Sr. and Jr., leading Phoenix and Tucson dealers respectively are burning up the wires to William Knudsen, OPM chief, vainly, so far.

Prospectors: Attention! . . .

AJO—Bill permitting mining within the boundaries of Organ Pipe Cactus national monument was signed by President Roosevelt late in October. No mines are being operated in the monument now, but the area was prospected in the Spanish era, and is believed to contain valuable deposits of gold.

Slow But Sure . . .

NOGALES—Two and a half miles of the proposed paved highway to Guaymas, Mexico, has been carved out of the mountainous terrain south of here, and work is being delayed only by the arrival of American-made machinery. This new route eliminates the twisting course followed by the present road which leads to the fisherman's paradise on the Gulf of Lower California. Work all along the route is progressing according to spokesmen for the Ramon Pereyra company, constructors.



"Life in the sun"

"The West at its Best"

EL MIRADOR HOTEL AND BUNGALOWS

Palm Springs
CALIFORNIA

Enjoy a healthful, fun-filled vacation at El Mirador . . .

RIDING GOLF
SWIMMING
TENNIS SKEET
POLO

THE CORAL ROOM
for Dining and Dancing

WARREN B. PINNEY
Managing Owner
EL MIRADOR, PALM SPRINGS
CALIFORNIA



Politics . . .

PHOENIX—Fight to prevent returning 2,000,000 acres of northern Arizona land to Indians took State Attorney General Joe Conway to Washington, D. C., in October. Federal government is suing Santa Fe railroad to recover the land to return to the Indians. Some of this land has the status of school lands, which is taxable, and the state is fighting to prevent loss of this revenue, which goes into the permanent state school fund.

CALIFORNIA

Fighting Again . . .

NEEDLES—Frank Gilman, chamber of commerce president, recently won unanimous support from San Bernardino chamber in this community's fight to obtain rerouting of state highway 195 to touch the Colorado at the site of proposed Davis dam. Local merchants are backing this fight in an effort to block attempts of Arizona to reroute U. S. 66 from Kingman to cross the Colorado at Davis dam, which move would swing the flow of inter-state travel around Needles. A road from here to the site of the dam would probably result in Needles being selected as a rail-head for construction materials which will be shipped to the dam through here or Kingman.

Loan Verdict Reached . . .

EL CENTRO—Anxiously awaited decision of the Federal Land Bank regarding loans to Imperial Valley farmers was received here late in October. In a statement devoted mostly to listing the risks involved in making loans to valley farmers, Land Bank's vice-president, Walter C. Dean, stated that on farms where drainage problems are not acute and soil tests are favorable, loans would be made. When more complete surveys regarding water table levels, drainage facilities, and salt content of soils have been completed, loans will be more liberally made.

Patriotism . . .

INDIO—"Food for Freedom," slogans the government, and Coachella valley is co-operating with a 25 to 35 percent increase in vegetable planting. Onions, peas, beans, carrots will be the items subject to greatest boost.

Trek of the Vaqueros . . .

PALM SPRINGS—Los Vaqueros del Desierto, 100 strong, held their annual 4-day trek across the desert of the Coachella valley during the last week of October. The jaunt is an annual affair with the Vaqueros, when business men join with politicians and movie stars for a bit of "roughing it" on horseback. Leader of the party this year was Cliff Meade, president.

New Desert Town . . .

BANNING—Boasting natural attractions surpassing those of other widely publicized areas, Desert Hot Springs resort is showing amazing growth and development. Started two years ago under the promotionship of L. W. Coffee, this project has transformed 132 acres of barren desert land into a resort complete with living quarters, badminton courts, swimming pool, bowling alleys, shuffleboard court. Big asset are natural hot springs which assertedly have healing minerals.

Desert Club's Field Day . . .

SPLIT MOUNTAIN CANYON—Led by President Floyd Richardson, an 18-car caravan brought members of the Escondido Desert club to this area for a field day outing October 26. Club membership includes botanists, ornithologists, mineral collectors and other varieties of Nature students—and all of them found something of interest in the rugged terrain of Split Mountain canyon and the Carrizo badlands.

Ranch of Sun and Sand . . .

MORONGO VALLEY—Former owners were unable to make a go of the place as a night club—and now the court has leased colorful old Morongo lodge to Jean Fridley and Raymond A. Havard. New operators tore out the old bar, have completely renovated the lodge and cabins and will operate it as a moderately priced retreat for city folks who come to the desert for rest and sunshine. It is located halfway between Palm Springs and Twentynine Palms. Name has been changed to Rancho Sol Arena—sun and sand.

NEVADA

Get Some Banshees . . .

RENO—Warnings to persons who might have occasion to enter a million-acre area in southeastern Nye county have been posted on all roads leading into the vicinity—warnings that this section will soon become a no man's land resounding to bombs, machine gun fire, anti-aircraft batteries. U. S. army

has acquired title to this land to use as a gunnery range for army air force students stationed at Riverside, California and Las Vegas. Air surveys are under way to pick up any wanderers in the danger area.

The "Other Half" Acts . . .

RENO—Cultural Reno had its day in October when Governor E. P. Carville and Mayor Frohlich officiated at groundbreaking ceremonies of a botanical garden which is to eventually include all flowers, shrubs and trees native to Nevada and the Sierra-Nevada region. Gardens are being sponsored by the combined Garden Gate clubs of the town.

Wild Life on Increase . . .

RENO—Figures released here in October show an encouraging increase in numbers of deer, antelope, mountain sheep, elk in the state. Estimates show 27,700 deer and 15,000 antelope ranging the lands under jurisdiction of the federal grazing service. Approximately 1000 wild horses are roaming the southern and eastern parts of the state.

Death Knell Sounded . . .

RAWHIDE—Stagecoach drivers enroute to the boom camps of Tonopah and Goldfield in the days of 1907 sometimes stopped momentarily at a canyon below Hooligan Hill to deposit mail in a tobacco can nailed to a post above a cow's tail. "Drop mail here for Rawhide," said a sign. Six months later Rawhide was itself a booming camp of 10,000 gold-fevered prospectors, receiving heaping sacks of mail daily. Recently officials in Washington, D. C., decreed that Rawhide no longer has enough activity to merit mail delivery, but remaining local residents believe that near-by tungsten deposits will create a new boom soon.

Tourist Appeal . . .

TONOPAH—"Bonanza Road," that section of the state highway system extending from Las Vegas to Reno, via the old gold mining districts of Goldfield, Tonopah, and those around Virginia City, was officially recognized as a name of the association comprised of communities along the route. Expected controversy over whether the route should go through Yerington or Fallon was automatically settled when no representative from the latter community appeared at the meeting. Purpose of the organization is to promote tourist travel over the road, and persuade visitors to stay in the state longer, rather than taking the shortest way through it, going east or west.

29

PALMS INN

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FOR RATES AND RESERVATIONS, WRITE
DESERT LODGE—RANCHO BORREGO
Borrego, California
Noel and Ruth B. Crickmer, Managing Owners

Lions Pay More

LAS VEGAS—Clark county commissioners have placed a bounty of 50 cents on every skunk trapped, shot, poisoned or otherwise disposed of within the county limits. Some observers believe that the sum offered will be no incentive to pioneer spirits, hardly enough to pay for the clothes cleaning which must inevitably follow the demise of one of the pretty, striped pole-cats. However, skunks have been killing game birds, and must be disposed of.

The View is Nice Too

LAS VEGAS—Featuring a panoramic view of Lake Mead from every window, Hualpai lodge recently has been completed and opened to the public by Grand Canyon-Boulder Dam Tours, Inc., promoters. This represents an expenditure of \$90,000 on the part of the financiers, and is only part of a planned development of the Boulder dam recreational park.

NEW MEXICO

Mirage? No!

ALAMOGORDO—White Sands national monument, resembling the barren Sahara closer than any other part of the American desert, is boasting guide-conducted tours to a lake situated in the middle of the bleak, rolling dunes of gypsum. Recent rains and floods have caused this lake to form in a natural drainage basin in the midst of the dunes.

No Vitamin Pills?

LAS VEGAS—Rugged terrain of near-by Santa Fe national forest was selected by army officials as a trial ground for testing an emergency diet for stranded fliers. Fourteen men, clad in standard flier's uniforms, carried 25-pound packs 100 miles. Medical officers have developed a special diet of pemmican, crackers, powdered coffee, veal which contains 3500 calories, weighs only two pounds for a day's supply. The test was highly successful, and the rations will be supplied men on duty in Alaska, Panama, and the desert Southwest.

Artistry in Motor Plates

SANTA FE—Indian red and yellow license plates of New Mexico won praise from the Purdue Motor club of New York state for being "the most harmonious" of all states. The Purdue club annually judges the nation's license plates according to various classifications. Wyoming's cowboy plate was doubly honored as "most distinctive," and "best advertising."

Indian Affairs

GALLUP—Perplexed Indian traders are pondering the question of whether or not the sale of Indian jewelry to Indians constitutes a retail transaction. If so, it is subject to new revenue tax on jewelry, but traders point out that Indians buy the jewelry only to use as bartering items, and regard it as a form of capital, a medium of exchange, consequently not subject to the retail tax law.

She Championed "The Kid"

SANTA ROSA—Staunch defender of Billy the Kid, and friend of Sheriff Pat Garrett who killed the Kid, Mrs. Ann Jennings died here early in October. The 73-year-old New Mexico pioneer knew Billy during the years she spent in Roswell, and has long maintained that he would not have been a bad boy if it had not been for the law.

DISCOVERY!



COLORFUL TRAIL TO BURIED CITY

. . . against the beautiful background of the Calico Mountains is the trail that leads to Buried City! Where once English capitalists spent hundreds of thousands of dollars, now forgotten.

Timbers washed down the side canyons give the first indication of what is to follow. Many of the buildings that once existed now peer from under the soft shale. The mine hoist, quantities of air pipe, tramway car and rails are still much in evidence. Shafts penetrate earthward for several hundred feet. It is a trip that will not soon be forgotten.

Paradise for Rockhounds

Nearby are the Purple Hills with plentiful dark red jasper, agate, opal and other rocks. Geodes, while not plentiful can be found.

Free Travelogues

A note to the Chamber of Commerce, Barstow, California, will bring free a mapped, illustrated travelogue of this trip. Ask for Trip No. 12.

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BARSTOW

. . . California

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Craft Work Honored . . .

SAN JUAN PUEBLO—Craftsmanship of Mrs. Crucita T. Cruz, local Indian woman, in moulding and decorating a plate was recognized by judges of the Fine Arts 10th national ceramics exposition at Syracuse, New York, and earned her \$50 cash prize. Her plate was one of 42 pieces of pottery sent to the exposition by Pueblo Indian Arts and Crafts Market, a cooperative Indian-owned and sponsored organization.

UTAH

There's Several of Them . . .

MONTICELLO—"The Most Interesting Road in America," is the claim made by members of the Navajo Trails association after their recent meeting at Mesa Verde national park. This scenic route extends from Greeneriver, Utah, to La Junta, Colorado, following U. S. Highway 160 for the greater part. Travel during the past tourist season inspired the grandiose claim of the association.

More Power for Defense . . .

MOAB—Virtual assurance has been given three Salt Lake City promoters that a \$30,000,000 dam will be financed and constructed by the government on the Colorado river 30 miles north of here to furnish cheap power for development of huge magnesium deposits near Crescent City. If further tests of the deposits of magnesium prove up to the claims of the promoters, the bureau of reclamation will begin work on the dam immediately.

State "All Wet" . . .

SALT LAKE CITY—Wettest year on record for the state was completed September 20, 18.74 inches being the average. Greatest precipitation was at Timpanogos where 44.52 inches fell.

Democracy Works . . .

GRANTSVILLE—Amicable, and thrifty, settlement of election differences between Republicans and Democrats was reached in this town at a joint session of representatives from both parties when it was decided to dispense with a city vote on new officials this year. Both parties are equally represented in the city government, consequently both are well-satisfied.

Despite High Taxes and Hitler . . .

VERNAL—Undaunted by the recent proclamation of President Roosevelt restricting non-defense building, one Dr. F. G. Eskelson has purchased Green Lakes resort north of here and plans to engage in a \$100,000 building program designed to make the spot one of the outstanding attractions of this section of the West. Most of the construction will be of logs obtainable in surrounding forests, not in conflict with the chief executive's mandate regarding conservation of building supplies.

Weather

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for month	68.2
Normal for October	70.6
High on October 10	96.0
Low on October 30	44.0
Rain—	Inches
Total for month	0.50
Normal for October	0.47
Weather—	
Days clear	15
Days partly cloudy	10
Days cloudy	6

E. L. FELTON, in charge

FROM YUMA BUREAU

Temperatures—	Degrees
Mean for month	71.2
Normal for October	73.3
High on October 1	102.0
Low on October 21	47.0
Rain—	Inches
Total for month	0.36
70-year-average for October	0.26
Weather—	
Days clear	23
Days partly cloudy	7
Days cloudy	1
Sunshine 88 percent (311 hours of sunshine out of possible 352).	
Colorado river—Discharge at Grand Canyon for October estimated 1,940,000 acre feet, much above normal flow. Release from Lake Mead averaged more than 25,000 sec. feet. Storage during month increased about 300,000 acre feet.	

JAMES H. GORDON, Meteorologist

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 Decem-

ber contest must be received at the Desert Magazine office by December 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, 3 1/4 x 5 1/2 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 December contest will be announced and the pictures published in the February number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.

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—

BARSTOW MINERAL SHOW SURPASSES PREVIOUS EVENT

Second annual Mojave desert mineral show at Beacon tavern in Barstow outclassed, if possible, last year's successful exhibit. Entries were more varied and more spectacularly displayed. Competition was keen, and the judges, C. D. Woodhouse, Dr. M. J. Groesbeck and Paul Van der Eike, had many difficult decisions to make in awarding the ribbons.

Appreciation award was given Charles E. Williams of Barstow. The focal point of this most attractive display was a gorgeous spot-lighted mass of carborundum crystals on a revolving pedestal.

Jessie Hirsch of Hollywood and Charlotte M. Reed of Los Angeles received honorable mention.

Many dealers journeyed to Barstow with displays and specimens for sale. Their varied minerals and, in many cases, colorful personal get-ups, added much to the interest of the exhibition.

An intangible spirit of friendliness and co-operation marked the attitude of hosts and guests alike, and Beacon tavern was a veritable wonder-house of beautiful color and design.

Prize awards were as follows:

Class No. 1 included material from Randsburg, Searles lake and Trona districts and other north and west points within 70 miles of Barstow. Winners were:

First prize—Searles Lake Gem and Mineral society.

Second prize—Vincent Morgan of Los Angeles.

Third prize—Howard Kegley of Los Angeles.

Class No. 2 included exhibits from Bicycle lake, Calico, and Baker districts and other points within 70 miles north and east of Barstow. Winners were:

First prize—Walter Lauterbach of Barstow.
Second prize—James Lucas of Daggett, California.

Third prize—Vernon Cable of Barstow.
Honorable mention—M. P. Pearson, Jr., of Ontario, California.

Class No. 3 included material from Lavic, Ludlow, Victorville and Chuckawalla and points within 70 miles east, west and south of Barstow. Winner was:

First prize—R. Dunham of Victorville, California.

Class No. 4 included special material from all districts in the foregoing. Winners were:

First prize—E. Shaw of Yermo, California.
Second prize—Leo D. Berner of Glendora, California.

Third prize—L. C. Sands of Barstow.

Class No. 5 included material from all districts with entries limited to exhibitors under 18 years as of October 1, 1941. Winners were:

First prize—Don R. Ivers, 1400 Hacienda boulevard, La Habra, California.

Second prize—Geo. Metcalf of Los Angeles.

Class No. 6 for any interesting or instructive desert material from the entire Mojave desert area. Winner was:

Honorable mention — Princess Thompson, Dunlap, California.

Class No. 7, free for all. Winners were:

First prize—E. F. Montgomery, Santa Monica, California.

Second prize—Edward J. Naifeh of Los Angeles.

Third prize—Leland Chapman of Hayward, California.

• • •

Are They Really Palm Wood?

Recent collectors have gathered specimens of petrified wood and plants in Imperial county, California. These are grouped together promiscuously as "petrified palm wood or petrified palm roots," although they show wide divergence of form and character. Opportunity is presenting itself for someone who is properly trained and equipped to make a detailed study of these specimens for purposes of definite identification and classification.

Cogitations . . .

Of a Rockhound

By LOUISE EATON

• Another thing whot rockhouns needs powerfully is sum sorta instrument to look inside uv rocks with, soz not to hafto turn into hammerhouns to see if a rock is good or not. Think uv the time that could be saved with a rock-x-rayer, to say nuthin uv smashed fingers or crax in good specimens an' ruined chrystals.

• • •

• "Birds uv a feather," sez sumboddy, "flox together." That shure is true about rockhouns.

• • •

• Rockhouns 'n their wives, even tho the wives is sorta rockhouns too, don't always see eye to eye on the subjec uv house interior dekeratin. Fr instance, the wives fixes up the mantle with kandlesticks an' flowerz soz it has a nice balanced effect. Then in cums papa rockhoun with slabs or other specimens an' sez, "Now don't thoz look pritty right by that vase!" AN generally they stays there.

Our New . . .

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is now ready for distribution. This catalog is 6x9 in. in size and has 44 pages devoted to the following topics . . .

4 pages on ROUGH GEM MATERIALS AND SLABS
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3 pages on "PREFORM" CABOCHON BLANKS
6 pages on MINERAL SPECIMENS

8 pages on LAPIDARY EQUIPMENT
5 pages on LAPIDARY SUPPLIES
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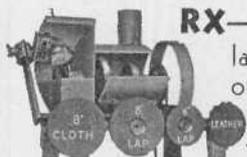
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AMONG THE ROCK HUNTERS

San Fernando Valley gem and mineral society held its first annual mineral exhibit at the North Hollywood recreation park gymnasium November 8 and 9. The San Fernando club now has 62 members according to President W. D. Taylor.

Western Nevada rock and mineral club is the youngest society to come into the California federation of mineral societies. Frank Garaventa of Carson City is president and Helen Griffing is secretary.

Los Angeles mineralogical society at its October meeting elected the following officers for the coming year: President Jas. C. Arnold; first vice-president, Wm. R. Harriman and second vice-president, Gertrude C. Logan; secretary, Mrs. Frank C. Davis; treasurer, Reuben D. Morris; field trips, Albert Ostrom; federation director, O. C. Smith; business manager, Rose Parks and editor of the Pacific Mineralogist, Blanche L. Anderson.

The lively little town of Inyokern in the Owens valley area held a mineral show November 8 and 9. Much interesting material gathered from the local area was exhibited. The show was sponsored by Indian Wells chamber of commerce and according to Howard C. Coppock was designed to get the miners and prospectors to bring in their specimens to let the public know what is going on in a mining way.

Sequoia mineral society journeyed to Strathmore November 9 to collect fossil leaf prints on calcite.

Kingsburg, Parlier and Selma high schools offer night school classes in lapidary work; Reedley J. C. gives a course in geology.

Sequoia mineral society exhibited at the Fresno county fair and received a plaque award.

Imperial valley gem and mineral society suggests that various groups trade boxes of "grabs." This offers a way of securing specimens from other localities and incidentally of bringing a bit of cash to treasuries.

Chester Teague, San Dimas, California, has an eight by ten Brazilian agate geode that contains nearly a pint of water. Before cutting the stone, Teague did not realize that it was an enhydros geode, and it was by pure luck that he missed sawing into the cavity; only a thin translucent layer of silica protects the captive water.

B. N. Porter, member, talked on faceted stones at November 6th meeting of East Bay mineral society. He displayed finished and semi-finished work, giving impetus to those interested in learning to facet. The group is acquainting itself with strategic minerals so that it will be able to recognize them in the field. The society placed a display in one of the windows of Sears Roebuck company, Oakland, starting November 10th, to show the public the work of society members.

A batch of Scheelite ore brought to the ball mill on Mt. Laguna, San Diego county, California, was so hard that instead of being crushed, it wore out the iron balls.

Thomas S. Warren explained and demonstrated fluorescent minerals at the October meeting of Los Angeles mineralogical society. Shark Tooth Hill, seven miles northeast of Bakerville, was the locale of the October trip.

Long Beach mineral news is like a whiff of refreshing ocean air. Beryl Schlagenhauff achieves a witty monthly report. October 17 meeting was held at Long Beach Polytechnic high. Roy Wagoner, president, resigned. Karl Von der Ahe will complete his term.

Dr. Harry L. Bauer entertained Santa Monica gemological society in October with an illustrated lecture on flora of California. C. D. Heaton concluded his lectures for beginners with a talk on the formation of calcareous deposits and calcite. October field trip included the Barstow exhibit.

Imperial Valley gem and mineral society elected the following officers for next year: Lloyd E. Richardson, president; Ross Tilton, first vice-president; Leo De Celles, second vice-president; Rose Perry, secretary-treasurer; Arthur L. Eaton, advisor; Phil Griffin, director. The first field trip of the season was held October 26 in the district north of Ogilby. A picnic luncheon and barbecue added much to the pleasure of the day. The trip yielded excellent specimens of petrified palm and other woods, jaspers and agates.

MINERALIGHT Black Light Quartz Ultra-Violet Lamp

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Art Campbell, Mgr.

Harvey Eastman of Searles Lake gem and mineral society took colored movies of the outstanding exhibits at the Barstow show.

There are fashions in gems or in rocks, just as there are modes in dress. At one period everyone wanted geodes; then it was agate nodules or thunder eggs; petrified palm wood became popular; later, tiger eye and Brazilian agate; now rhodocrosite and chrysocolla. The popularity of opals persists.

W. C. Eyles has discovered and is showing a relative of myrickite which he calls "calbenite" because it comes from San Benito county, California.

Mrs. Sarah Emerson of Hodge, California, displayed a unique picture at the Barstow show. It was a large framed piece of white rhyolitic sandstone containing dendrites simulating an enchanting forest scene.

Western Nevada mineral club was represented at the Barstow show by Helen Griffing and Mrs. Dave Gardella.

Rhodocrosite (sometimes called Inca rose) is one of the most attractive of the softer stones. It is a deep rose pink, opaque to translucent, and capable of taking a high polish. Chemically it is proto-carbonate of manganese. It comes from Argentina. Inferior quality rhodocrosite has been found in San Diego county, California.

Two expressions most often overheard at the Barstow show: "Oh, isn't that beautiful!" and "Have you seen my husband?"

A water filled mucilage bottle of the grip-spreader type makes a good "licker" for stones.

NEWS FROM THE HOME OF 'PECOS DIAMONDS'

Gem Editor, Desert Magazine:

I have been absorbing the November Desert Magazine. You mention the Pecos diamonds and the "few you have been able to examine." Are you interested?

There are some fine beds of Pecos diamonds east of both Artesia and Lake Arthur, New Mexico. They are amazing in the range of color from white to black, and in the assortment of sizes from almost microscopic to singles as big as one's thumb.

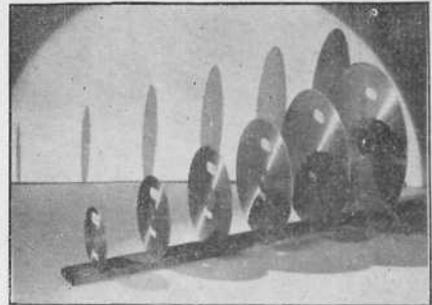
The Pecos river is a most devastating excavator, as it claws and tears and digs and gouges the bank, and I am in mortal terror at what this last fit of anger has done to a paradise. You understand that the parent rock is a sort of gyp or salty material and quite soft, and oh how that ugly water gurgles and moans as it tears great chunks out of the banks, and carries away a veritable cargo of beautiful crystals, crystals that dazzle the eyes as they go down the river.

East of Artesia, on a hilltop a mile or two from the river, are clear quartz pillows, made up of very tiny crystals. The pillows are between the size of a dime and a quarter, and fairly put out one's eyes when the sun strikes them. There is one place that has fragments of rose or pink quartz—and I mean only one place as far as I know. This is far finer and smoother and of higher luster than even Pecos diamonds. I hope to locate some larger pieces or a colony, so to speak.

Respectfully,
R. T. HESTER
Carlsbad, New Mexico

P. S.—We are 100% for this here Desert Magazine—too bad it isn't out twice a month—it's too long between issues to suit us.

VRECO DIAMOND SAWS



Where can you find a more practical and welcome gift to give the Gem Cutter? . . .

PLACE YOUR ORDER NOW FOR DELIVERY AT CHRISTMAS TIME

6-in.....	\$3.45	12-in.....	\$ 6.90
8-in.....	4.60	14-in.....	9.15
10-in.....	5.75	16-in.....	11.50

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Be Sure to Specify Arbor Hole Size.

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"TRADE WINDS"

A unique publication dedicated to the fun of collecting.

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PAUL & BESSIE WALKER

Calimesa, California

STRATEGIC MINERALS

MICA

Almost every American recognizes mica in some of its forms, but few realize the value of this heat resisting substance, which is commonly used in all kinds of electric and heat appliances and machines, even in the humble toaster. Several types of mica are listed here in the approximate order of their importance. There are other varieties of mica, but most of them are rare.

Muscovite — Occurs in masses and "books," which cleave easily into thin scales or sheets. The sheets are translucent, usually colorless, and highly resistant to both heat and electricity.

Biotite—occurs in large green to black scales and books. Biotite frequently contains both iron and manganese, and is often found in masses of serpentine, feldspar, etc.

Lepidolite—lithia mica, is often found in large lavender, pink, yellow or grey masses. The mica scales are usually small, sometimes even granular, and therefore difficult to identify at first glance. The commonest color in San Diego county is lavender to lilac, and contains up to five percent lithia. In the same localities it is found with tourmaline and rubellite.

LEARN TO POLISH GEMS

Send for our Free Price List of lapidary supplies, diamond saws, rough gem cutting material, blank mountings for rings, brooches, etc. Cut gems for art students. Send in your stones to be mounted. We have a complete manufacturing department.

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BLACK LIGHT — DISCOVERS ULTRA-VIOLET FLUORESCENCE HIDDEN VALUES

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Exclusive Outstanding Features . . .

- Laboratory and field tested to insure its efficiency.
- Meets the requirements of the prospector and geologist in the field, small, compact, light weight.
- A powerful generator of invisible Ultra-Violet energy. Pure Fused Quartz burner, and special U. V. filter.

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MOJAVE SHOW ATTRACTS INTEREST OF THOUSANDS

As part of its annual Gold Rush program October 18-19, Mojave, California, sponsored a mineral show which brought together a fine collection of minerals, not only from the Mojave desert but from other fields.

Mr. and Mrs. J. W. Bradley of the Golden Queen Mining company, who are among the foremost collectors in the Southwest, were directly in charge of the exhibit, which was held in the county forestry building.

More than 4000 guests registered at the mineral exhibit and exclaimed at the beauty of the specimens. The Bradleys had 800 of their own rare specimens in the hall, and the entire exhibit was made especially instructive by the lighting and labels shown with the specimens.

UNUSUAL CRYSTALS FROM LAKE ARTHUR, NEW MEXICO

W. F. White, of Roswell, New Mexico, recently sent in several fine octahedrons of dolomite, and several "Pecos diamonds" with tiny dolomite crystals attached. Dolomite is calcium magnesium carbonate, which frequently occurs either massive or as curved rhombohedrons, as in the tri-state area, but rarely as octahedrons.

White states: "Inclosed are several small quartz crystals with dolomite crystals attached. This is a very unusual occurrence, I believe. I also inclose some loose dolomite crystals, because it is very unusual for dolomite to occur in this crystal form (octahedrons). They came from Lake Arthur, New Mexico, and, as far as I know, that is the only locality in the United States."

Rockhound

By T. J. WORTHINGTON

He originates nothing.
He produces nothing new.
But in the talus and debris
Of the desert hills he finds a shapeless stone.

Then, with the hands of an artist
And the soul of a poet, he uses
The magic of the wheel to bring
Forth from the ugly mass a gem of beauty.

And thus as the poet unlocks from
The crude language of his day
Gems that enrich the thoughts of Men;
So the Rockhound brings to light
A thing of beauty, conceived by
Nature, and hidden where none but
A dreamer could find its priceless worth.

GEM MART

Adv. rate, 5c a word—Minimum \$1.00

RUSSIAN EMERALDS—Cabochon 50c per kt, Ceylon Zircons, different colors 50c per kt, Persia, Turquoise \$1.20 and \$3.00 per doz., all kinds of Scarabs 50c and up ea., finest Tigereyes, grade "A" 75c ea., fresh water Pearls 50c ea, all round pearls, Chrysoberyl, Cats-Eyes \$2.00 per kt., Chrysoberyl, Alexandrite \$20 per kt. (Russian), Chrysoberyl, plain 5 cut stones for \$1 only, Star-Sapphires, clear star \$1 per kt., Fire Opals, Mexican \$1 per kt., Sapphires, many colors 50c per kt., Green Garnets, Australia \$3 per kt. Ask for my approval selection. Ernest Meier, Church St. Annex, P. O. Box 302, New York, N. Y.

CUT STONES, CAMEOS, CABOCHONS and INTAGLIOS. Fine stock at low prices. Approval selection on request. Dr. Ralph E. Mueller, 600 Professional Bldg., Kansas City, Mo.

WE SPECIALIZE IN rough and cut Montana sapphires and spinels. Industrial sapphires and collectors' specimens. Robert D. Steinmetz, 415 Mercantile Bldg., Denver, Colo.

AGATES, Jaspers, Opalized and Agatized woods, Thunder eggs, polka dot and other specimens. Three pound assortment \$1.25 postpaid. Glass floats, price list on request. Jay Ransom, Aberdeen, Wash.

15 BEAUTIFUL, different colored, no two alike, Ozarks quartz variety cherts, \$1.50 postpaid. Satisfaction guaranteed. John Jennings, Eureka Springs, Ark.

ALEXANDRITES, (Syn.). From 3 carats up \$1.25 a carat. Zircons, genuine diamond cut 3 for \$1.75. 12 genuine Opals, Mexican and Australian \$1.50. B. Lowe, Box 525, Chicago, Ill.

LEARN CHEMICAL formula reading and writing. Brochure containing names of elements, symbols, valences. Tables of electrochemical positions with instructions. 26 cents postpaid. Dr. Cecil Corwin, 451 Maple Court, Hayward, Calif.

AN INVITATION: Want to know where to hunt rock? Want a rock sawed in half? Want rock identified? Want to see a world-wide collection of rock? Want to sell rock? Want to buy rock? Want to talk rock? Want information or equipment for cutting and polishing rock at home? Then drop in on me. I rock folks to sleep. "ROCKY" MOORE, 401 Broadway Arcade Bldg., 542 South Broadway, Los Angeles. Any day but Saturday or Sunday—Monday and Fridays until 8 p.m.

GOLD NUGGETS OF THE WORLD—Gold nuggets in gorgeous colors. Gold strikes, gold enrichments. Illustrated book for PROSPECTORS, MINERS, GEMOLOGISTS. As a Christmas Gift, or a Birthday Gift, this is a GIFT-BOOK SUPREME. John Gaarden, Author. 817 W. 23rd St., Los Angeles, Calif. PRICE \$1.00.

HAND FABRICATED MOUNTINGS—Sterling blanks 50c to \$2.00. Ear rings, \$1.50 pr., Rings, Brooches, Pins, Tie Chains, etc. Your cabochons mounted 75c to \$3.25. Descriptive price list. O. P. Avery, 1843 N. Alvarado, Los Angeles, Calif.

100 GOOD GRADE Prehistoric Indian Arrowheads \$3.00. Mixed shapes and material. Ages old. List free. Lear Howell, Glenwood, Arkansas.

SCOTT ROSE QUARTZ CO.—Black Hills Rose Quartz; for cabinets, rock gardens, etc. Send stamp for price list. Box 516, Custer, South Dakota.

MODEL SOCIETY IS BOTH HOBBY AND STUDY GROUP

Since only a small percentage of the gem and mineral hobbyists in the United States are members of organized groups, members of the collecting fraternity will be interested in the program of activities of East Bay mineral society of Oakland, California, which generally is regarded as a model organization.

The Oakland society maintains a public exhibit, and visitors are given the following information in the form of a bulletin:

"The East Bay mineral society, at whose exhibit you have been looking is a study-hobby organization. Its objective is the promotion of study of the earth sciences such as mineralogy, geology, palaeontology and related subjects.

"Breaking down the three subjects above mentioned the following may be stated:

"Minerals. Precious and semi-precious stones. Occurance.

"Identification of minerals through

The thousands of you who viewed our

De-Luxe Model "Streamliner"

Diamond Saw Machine at Barstow accepted it in every instance. Hundreds of your accomplished cutters stated it was the finest machine ever produced for the purpose.

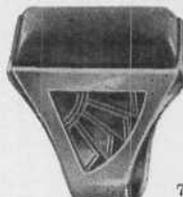
Owing to our limited production facilities being taxed to the utmost capacity, producing heavy duty Diamond Saws for the United States Gov't, and large industries, such as the Western Electric Company at Kearny, New Jersey, we find it necessary to curtail production on the machine for the time being.

At this time, we wish to announce that when normalcy is regained, one of the nation's leading machine tool manufacturers will assume production of this machine. It will be mass produced with all metal frame, etc. The price reduced to half its present slow production cost.

We control the patents covering all phases of its construction. For the time being we have to confine our efforts to producing America's finest Saw, and these at no increase of price. 8-in.—\$5.50 10-in.—\$6.50 12-in.—\$7.50 14-in.—\$9.00 Postpaid

Wilfred C. Eyles

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Rings, Brooches, Tie Clips, Earrings, etc.

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QUITTING BUSINESS

Owing to ill health—need of some desert air—we will close our store Jan. 1. We are selling everything except mineral sets at a discount. This includes books, ultraviolet lights, minerals and cutting materials. SPECIAL CUT IN FLUORESCENT MINERAL PRICES. Our mineral sets at usual prices. We hope to continue issuing them after Jan. 1. Pacific Mineral Mart, 637 Redondo Ave., Long Beach, Cal.

various methods, viz: Rough hand or field tests such as hardness, cleavage, streak or color, blowpipe and chemical analysis and the use of the microscope.

"Lapidary art: The cutting and polishing of semi-precious stones such as agate, jasper, lapis lazuli, rhodonite, jade or jadeite.

"Jewelry craft: The art of setting the precious and semi-precious stones through the construction of suitable mountings.

"Geology: Instruction in the rudiments of geology such as the action of wind and water, pressure or mountain making movements, volcanic action and material; related materials resulting from metamorphic action; instruction in topographic features seen as one walks or drives about, the objective being to enable the observer to interpret and understand that which he sees. To enable him, in short, to intelligently read 'The Story of the Book of Rocks.'

"Palaeontology: Fossils, their identification and relation to geologic ages.

"In pursuit of the objective lectures are given once each month by outstanding speakers trained in their subjects. The presentation is in the main non-technical, or if technical terms are necessarily employed they are immediately followed by non-technical explanation. The second stated meeting each month is devoted to round table discussion and getting acquainted with fellow enthusiasts.

"Field trips are held as arranged.

"Dues are nominal, being the sum of \$1.00 per year.

"Meeting place: Auditorium, Lincoln school, 11th and Jackson, Oakland, 8:00 P. M., 1st and 3rd Thursdays of each month.

"If interested please sign the register and monthly bulletins giving the current program will be mailed to you."

• • •

UTAH COLLECTORS SEEK TO PUT LIMIT ON "LOOT"

One of the most informative gem and mineral society bulletins received at Desert Magazine office during the summer was from the Mineralogical Society of Utah at Salt Lake City. President of the club is Junius J. Hayes and secretary is Augustus Reeves.

The Utah society has been especially active during the past year attempting to secure legislation to protect Utah mineral fields against wholesale destruction of certain areas by dealers who operate for purely commercial purposes.

Text of the law, which was presented to the legislature as an amendment to an existing statute for the protection of archaeological specimens, is as follows:

"Any person who takes from, removes or carries off from public land, or any land not his own, without permission of the owner thereof, any relics, consisting of baskets, jars, cups, urns, utensils, bones, bodies or mummies or any other relic known as cliff dwelling relics, or relics of any ancient race of people, or any geological, mineralogical or archaeological specimens, or who destroys or effaces any hieroglyphics, is guilty of a misdemeanor; provided that a resident of the State of Utah may carry away or remove on any one trip geological or mineralogical specimens not to exceed 50 pounds weight without obtaining permission; provided further that the county commissioners may grant permission, on application being made to them, specifying additional quantities that may be taken from the public lands of their county by accredited organizations and institutions of learning."

The proposed measure passed the House without opposition but did not come up for a vote in the Senate.

GIFTS FOR THE ROCKHOUNDS

Make the rockhounds in your home happier this Xmas with a good textbook to help identify specimens and add to the pleasure of collecting.

Here is a selected list of books for both the amateur and advanced student.

GETTING ACQUAINTED WITH MINERALS, G. L. English. Fine introduction to mineralogy. 258 illustrations, 324 pages \$2.50

LEGENDS OF GEMS, H. L. Thomson. Elementary principles of gems and gemcutting. 136 pages \$1.15

HANDBOOK FOR THE AMATEUR LAPIDARY, J. H. Howard. One of the best guides for the beginner gemcutter. 140 pages. Good illustration \$2.00

QUARTZ FAMILY MINERALS, Dake, etc. New and authoritative handbook for the mineral collector. Illustrated. 304 pages \$2.50

MINERAL IDENTIFICATION SIMPLIFIED, O. C. Smith. Complete table of all known minerals with simple methods of testing for identification. Gives specific gravity, hardness, color, streak, luster, cleavage and composition. Index. 271 pages \$3.50

DESCRIPTIVE LIST of the New Minerals 1892 to 1938, by G. L. English. For advanced collectors. 258 pages \$2.50

FIELD BOOK OF COMMON ROCKS AND MINERALS, by Frederic Brewster Loomis. Fine handbook for collectors. Beautifully illustrated. Includes 67 colored plates for identifying gem crystals. \$3.50

HANDBOOK FOR PROSPECTORS, M. W. Bernowitz. Complete guide covering mining law, methods, occurrence and identification of minerals. Illustrated. 362 pages and index \$3.00

JEWELRY, GEM CUTTING AND METALCRAFT, William T. Baxter. A handbook for the craftsman, designed for the amateur in jewelry-making, metalcraft and gem-stone cutting. Illustrates and describes methods and tools \$2.50

FLUORESCENT LIGHT AND ITS APPLICATION, H. C. Dake and Jack De Ment. New, complete book on history, theories and applications of the spectacular phenomenon of fluorescence. For both the professional and layman. Extensive bibliography. \$3.00

NEW WONDER SET . . .

Of gems and minerals includes jasper, obsidian, turquoise, gypsum, silver galena, asbestos, blue calcite, graphite, opal, copper ore, tourmaline, actinolite, marcasite, iron pyrite, fluorite, onyx, petrified wood and gold ore.

Set contains streak testing block, bottle of mounting glue, small hand lens, 25 printed mounting cards, and instruction manual for gathering and classifying your gem collection \$1.50
Same set without glue, lens or cards \$1.00

Plus 3% sales tax in California
We Pay Postage on all Items.

Desert Crafts Shop
El Centro, California



Just Between You and Me

By RANDALL HENDERSON

FROM an old issue of the San Francisco Call comes this story of the first Christmas on the Death Valley desert.

It is the story told by Julia Wells Brier, member of the ill-fated Jayhawker party which crossed the Valley in 1849-50. Relating the experience 50 years later, she said:

"I don't know how to tell you about our struggle through Death Valley in 1849-50 and the Christmas we spent amid its horrors. I never expected to say anything about it for a newspaper. I was the only woman in the party—Mr. Brier, and our three boys, Columbus, John and Kirke, the oldest being nine years, and the two young men, St. John and Patrick, made up our 'mess' as we called it.

"We reached the top of the divide between Death and Ash valleys, and oh, what a desolate country we looked down into. The next morning we started down. The men said they could see what looked like springs in the valley. Mr. Brier was always ahead to explore and find water, so I was left with our three boys to help bring up the cattle. They expected to reach the springs in a few hours and the men pushed ahead. I was sick and weary and the hope of finding a good camping place was all that kept me up.

"Poor little Kirke gave out and I carried him on my back, barely seeing where I was going, until he would say, 'Mother I can walk now.' Poor little fellow! He would stumble on a little way over the salty marsh and sink down crying, 'I can't go on any farther.' Then I would carry him again and sooth him as best I could.

"Many times I felt I should faint, and as my strength departed I would sink on my knees. The boys would ask for water but there was not a drop. Thus we staggered on over the salty wastes, trying to keep the company in view and hoping at every step to come to the springs. Oh, such a day! If we had stopped I knew the men would come back at night for us. But I didn't want to be thought a drag or a hindrance.

"Night came on and we lost all track of those ahead. I would get down on my knees and look in the star-light for the ox tracks and then we would stumble on. There was not a sound and I did not know whether we would ever reach camp or not.

"About midnight we came around a big rock and there was my husband at a small fire.

"Is this the camp?" I asked.

"No, it's six miles farther," he said.

"I was ready to drop and Kirke was almost unconscious, moaning for a drink. Mr. Brier took him on his back and hastened to camp to save his life. It was three o'clock Christmas morning when we reached the springs. I only wanted to sleep but my husband said I must eat and drink or I would never wake up. Oh! such a horrible day and night.

"We found hot and cold springs there and washed and scrubbed and rested. That was a Christmas none could ever forget.

"Music or singing? My, no! We were too far gone for that. Nobody spoke very much, but I knew we were all thinking of home back east and all the cheer and good things there. The men would sit looking into the fire or stand gazing away silently upon the mountains, and it was easy to read their thoughts. Poor fellows! Having no other woman there, I felt lonesome at times, but I was glad too that no other was there to suffer.

"The men killed an ox and we had a Christmas dinner of fresh meat, black coffee, and a little bread. I had one small biscuit. You see we were on short rations, and didn't know how long we would have to make our provisions last. We didn't know we were in California. Nobody knew what untold misery the morrow might bring. So there was no occasion for cheer.

"So ended, I believe, the first Christmas ever celebrated in Death Valley."

* * *

It is pleasant to record that despite the fearful hardship of that mid-winter trek across Death Valley more than 90 years ago, Mrs. Brier was described by the San Francisco reporter who interviewed her as a "bright, modest, wee old lady" living with her son and grandchildren on the edge of Lodi, California. She died in her 99th year.

* * *

I am sure that all students of Death Valley history will appreciate the fine tribute paid Mrs. Brier by Dr. Margaret Long in her recent book "The Shadow of the Arrow."

The heroic parts played by William Lewis Manly and John Rogers in that tragic march of the '49ers across Death Valley is well known, but Mrs. Brier remained in comparative obscurity until the end of her days.

Dr. Long said of her: "Not alone husband and helpless children did 'the little woman of the Brier mess' hearten across those endless, desolate leagues: to the whole Jayhawker party she was a living inspiration. When one fell beside the weary trail, who but she with gently urgent word encouraged him to further effort? When one lay sick or dying, who but she proffered a cup of coffee or other means of comfort such as her own desperate plight afforded? She was their ever-present help in time of trouble. With strength and courage for them all, resourcefulness for every emergency, hardness in every trial, her invincible spirit preserved them all, as it did her little family. Fragile and delicate seeming, modest, very small, by no rigor of Death Valley could the iron of her vital essence be bent, nor her will of tempered, true-steel be shattered."

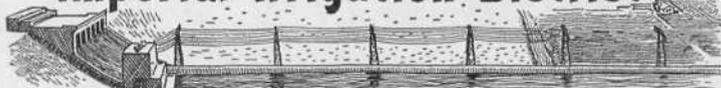
* * *

Among those pioneers of the old West who blazed the way for later generations, none left a finer legacy of courage and nobility of character than Julia Wells Brier.

TO IMPERIAL VALLEY PEOPLE AND NON-RESIDENT VISITORS . . .

- YOU ARE INVITED to be the Guest of the Imperial Irrigation District on a personally conducted trip over the water and power system any Sunday during the fall and winter season. Each trip is under the guidance of a member of the District organization.
- Cars leave Brawley diesel plant at 9:00 a. m., Imperial city hall at 9:20, El Centro court house at 9:30 and Calexico postoffice at 10:00 o'clock.
- Tour includes the mammoth double-barreled syphon over New river near Calexico, Power Drop Nos. 1, 3 and 4 along the canal east of Imperial Valley, the Coachella Valley turnout, Pilot Knob, and the Imperial dam and desilting works where the official trip ends at 3:00 p. m.
- You may join the weekly caravan in your own car, or if arrangements are made in advance the District will furnish transportation.
- Visitors on this tour will have access to parts of the water and power system which, due to the national emergency, are closed to strangers except with special permits.
- Imperial Valley's cooperatively owned project serves 60,000 people with domestic and irrigation water, and 11,000 customers with electrical energy. This is a field trip you will long remember—and the personnel of the Imperial Irrigation District will enjoy having you as Guest for the day.

Imperial Irrigation District



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

FOR AN *Effortless* WINTER!



GLIDE UP to your favorite snow center this winter with the same ease your skis take you down over freshly-packed slopes! (Standard Gasoline Unsurpassed gives your driving that effortless sensation—of velvet-smooth going—with plenty of power in reserve. You'll enjoy quick starting, too, no matter how snappy the weather. (So to get the biggest kick out of your winter motoring jaunts—switch to and stick to Standard Unsurpassed!

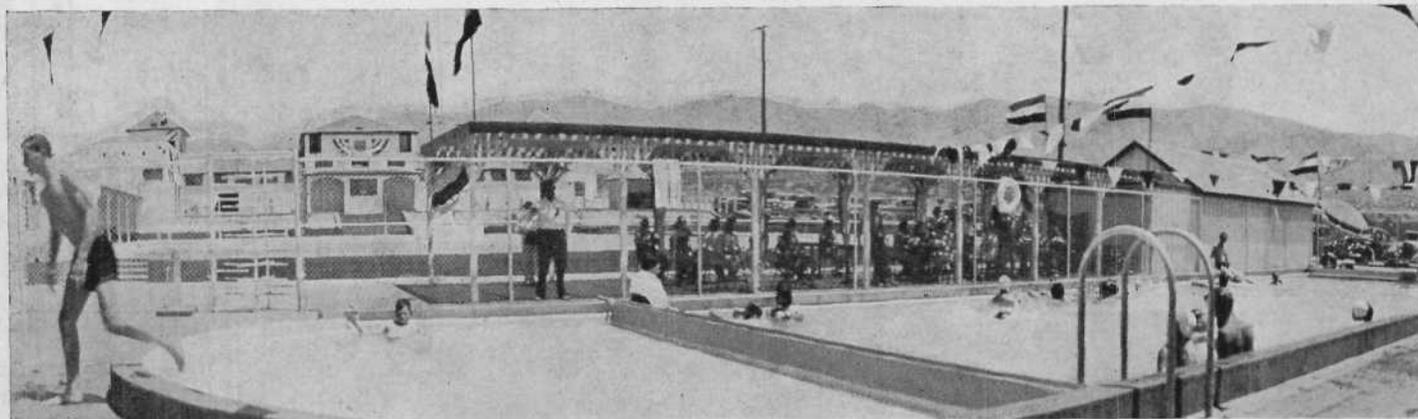
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(Desert Hot Springs Private Swimming Pool)

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A Part of the Commercial Bath House is Shown in the Upper Left Hand Corner

DESERT HOT SPRINGS CABIN SITES TRACT . . .

differs from any subdivision heretofore laid out anywhere in the West. In principle, this is not merely a subdivision. This property carries with it features for the benefit of mankind, and it is almost impossible to describe the numerous advantages that it possesses.

FIRST, this particular location is blessed with an abundance of a very high standard of Hot Curative Mineral Water—both for drinking and bathing.

SECOND, it has a perfect elevation of 1332 feet, which protects you from extreme desert heat and assures you of cool, delightful nights. Its elevation and close proximity to the foothills of the San Bernardino Mountains, protects you against extreme desert winds. The violet rays from the sun are extremely beneficial. Fog and dust are unknown.

THIRD, Desert Hot Springs Cabin Sites, located on the gentle southwest slope of the San Bernardino Mountains, affords one of the most spectacular views of the floor of the desert and the snow-capped mountain peaks of San Jacinto and San Geronimo, which carry a blanket of snow far into the summer—sometimes as late as the latter part of July.

The so-called Desert Cabin Sites are in reality residential lots, 50x130 feet each. Water mains are installed throughout the entire Tract. The water is furnished by the Desert Hot Springs Mutual Water Co., a California Corporation.

Electrical energy is installed throughout the Tract and furnished by the California Electric Power Co. The service is just as complete as in any Metropolitan area.

YOU SHOULD INVESTIGATE this thriving community, far from the hustle and bustle of the city throngs, where, by the aid of Nature's natural gifts, you can relieve your pains, worries, trials and tribulations.

Where you can buy a lot, build a cabin to your own taste, for a little more than it would cost for an annual vacation. Where you have all modern conveniences—domestic water, electricity, two cafes, stores, lumber yard, weekly newspaper (The Desert Sentinel). (Motels and Trailer Courts in the making.)

SEE DESERT HOT SPRINGS! Judge for yourself. You owe this trip to yourself and your family.

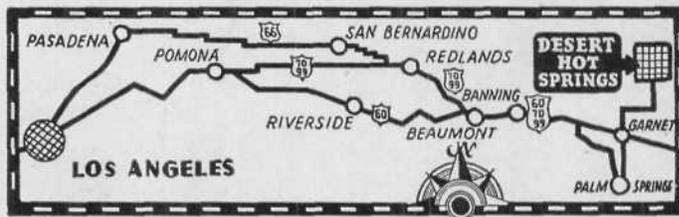
When you come, bring your bathing suits!

Write for further information, maps and descriptive literature on Desert Hot Springs. Also Guest Cards!

ACREAGE . . .

Have any amount of acreage with an abundance of highly mineralized water, ranging from 120°F. to as high as 180°F., suitable for Hotels, Rest Homes or Health Establishments of various kinds.

Something That Cannot Be Had Elsewhere



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