

THE

Desert

M A G A Z I N E



JULY, 1948

25 CENTS

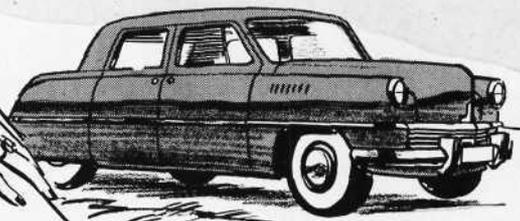
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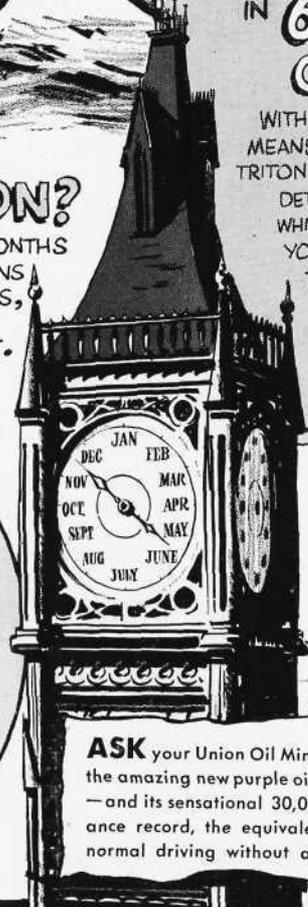
BY GIVING YOU A SAFETY MARGIN OF 6 MONTHS INSTEAD OF ONLY 1,000 MILES. THIS MEANS THAT UNDER THE SAME DRIVING CONDITIONS, TRITON GIVES YOU GREATER RESERVE PROTECTION THAN OILS USED TO PROVIDE.

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PICTURES of the MONTH

Fairyland . . .

First place winner in the May Desert photo contest was this picture, above, made by Gladys Diesing, Long Beach, California, in Bryce national park, Utah. It was taken with a No. 33 Recomar, 1/10 sec. at f.22, Super XX film, K2 filter.

Walking Man . . .

Second place was taken by Clyde Dawson, Anaheim, California. The picture, left, was made with an Eastman 616 camera, 1/50 at f.16, Verichrome film, K2 filter, on the Mojave.

SPECIAL MERIT . . .

"Sidewinder Sleeping," Hubert Hagens, Long Beach, California; "Devil's Garden," Art Center, San Diego, California; "Desert Portrait," Neil W. Sauer, Hawthorne, California.





From the eternal waters of the "Green Well" man has quenched his thirst from the ancient days of the Hohokam. Photo by Ray Edwards.

On Kino's Trail to Pozo Verde

Pozo Verde—the ancient Well of the Green Water—was inhabited long centuries before Father Eusebio Kino came that way in 1699. From the potsherds of the Hohokam which lie near the surface of the stone well masonry of the modern Papago, one can read the story of the peoples who have used this well and followed its receding water table into the earth. Pozo Verde lies in Sonora, south and west of the Arizona border-village of San Fernando, also known as Sasabe. And when Richard Van Valkenburgh visited the friendly Papago there, he found that the land and its legends are little changed since the first white man recorded them.

By RICHARD VAN VALKENBURGH

WHILE Tomas, my Papago friend, and I were visiting under the ramada of his house in the Indian rancheria which lies along the bottoms of the Santa Cruz river near Tucson, Arizona, I told him the Navajo story of the killing

of Enemy Monsters by Twin War Gods. I hoped to start the old Indian on some Papago legends, for my knowledge of these desert folk is still vague after three years of association.

And when I finished the story by telling

him that even today one can find the bones of these monsters all through Navajoland he answered:

"That's like our story of *Hau'kauks*, the Cruel Old Woman, who once dwelt near the rancheria of *Cheotak'vavia* which the

Mexicans call Pozo Verde, the Green Well. This is my home village in Sonora, just across the border from San Fernando, Arizona.

"The story goes like this: Once a long time ago there lived a monster named *Hau'kauks*. At first she lived around Baboquivari Mountain. But after a time she began to search for her father, who *Etoi*, the Elder Brother, told her was Mirage.

"And looking for Mirage she came to Pozo Verde. They tell that she was taller than a saguaro, had a long snout like a pig, and talons like an eagle for fingernails. For clothing she wore a dress decked with mountain-lion's teeth and the claws of other wild animals.

"Making her home in a cave near Pozo Verde she soon became a terror to the People. For when she could not get meat from wild game she ate human flesh. And everyone at the rancheria had to hunt for wild game to satisfy her hunger. But soon the game got scarce and the People began to worry for fear they all might be devoured.

"So they called to the Elder Brother for help . . ."

With this Tomas became silent. He said, "That is all for now. Go down to Pozo Verde. When you come back tell me what you have seen. And then maybe I will finish this story of the Cruel Old Woman."

Puzzled but intrigued by this odd challenge I made plans to visit Pozo Verde. I soon discovered this most historic of all Papago rancheria was seldom reached by Americans owing to its remote location.

Baiting my prospector-partner, Gene Thorn, with some leads regarding some lost gold-quartz veins reputed to be in the

region, I had no trouble persuading him to make the trip. Whether it's hunting pottery sherds or wulfenite, Gene makes good company wherever desert trails may lead.

Wind-devils were twisting up from the Santa Cruz valley as we traveled west from Tucson, on Highway 84, towards the Papago country. After passing through Robles Pass, which cuts through the Tucson mountains, we started down the long slope that leads to the historic Robles ranch and Three Points in the upper Altar valley.

Turning left and south on the graded Sasabe road we soon passed Joe King's Anvil ranch. From there by the Rancho Palo Verde the climb was noticeable and by the time we were due east of the towering cliffs of Baboquivari, the sacred peak of the Papago, we had left the drabness of the lower desert and were approaching the lush grasslands of Prescimide pass.

Just below the tiny border village of San Fernando (also called Sasabe) and the side-road to the famed La Osa ranch, we stopped at the U. S. immigration-customs service station for checking. We were courteously advised that if we carried any foreign-made cameras, or other equipment, we had better register them if we expected to bring such back duty-free.

Crossing into Sonora we traveled about a mile before reaching the Mexican checking station on the outskirts of the village of Mesquite. Here everything was simple with the proviso that we did not go below the 20-kilometer zone without a permit, and carried no rifles or ammunition.

The whitewashed 'dobe village of Mesquite is the outgrowth of Sasabe Viejo, an

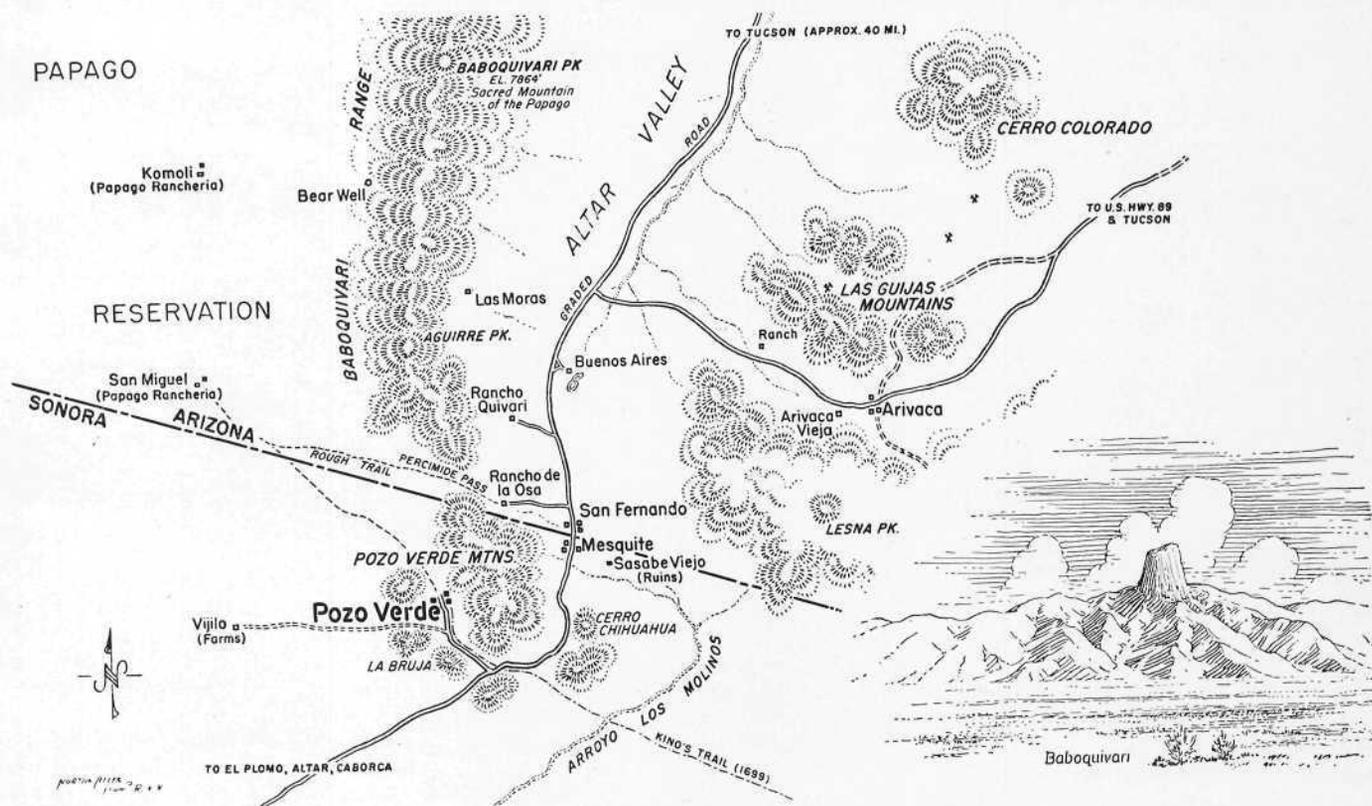
old town which was located about one mile east of the present settlement. Seventy years ago Sasabe Viejo was an important station on Don Pedro Aguirre's main stage route between Tucson and Sonora points. We learned later at Pozo Verde that the name comes from the old Papago rancheria of *Zazab*, "where the water makes a gushing noise."

Rain clouds were gathering in the southwest as we pulled out of Mesquite traveling south over the Altar mail road. After passing through a gap between the rugged Cerro Chihuahua and the Pozo Verde mountains, which are actually a southern extension of the Baboquivari range, the road swings westerly to skirt the southern slopes of the mountains.

After bumping along for 2.8 miles we reached a fallen and rusted sign marking the road to Pozo Verde. Checking my historical maps I found that somewhere on this route we had joined with the trail made by Father Eusebio Kino, when he traveled westward with Captain Juan Mangle toward the Colorado river in 1699.

Later we learned that owing to the seasonal shift of the Pozo Verde people to their summer homes at Vijilo or *Kau'otlak'*, Many Dog Place, the trail to the main rancheria was little used during the summer. We found it to be nothing but a series of shallow arroyos and deep-cut gullies. After crossing a series of mesquite-covered fans we reached a narrow deep wash that was running bank to bank.

We waded across to check its depth and bottom. Then getting back into the car we splashed in—swerved a little as we spun up the further bank, and bounced





*Located at the base of a rocky hill just east of the Papago rancharia of Pozo Verde in Sonora, Mexico, this precious water supply has been carefully preserved against destruction by generation after generation of Indian and Mexican occupants of the area. Father Kino sponsored ranching activities in the area and probably drank from this well many times.
Photo by Ray Edwards.*

right into the middle of the rancharia of Pozo Verde.

No pack of dogs greeted us with barking as we looked around. And when we walked toward the earth-colored 'dobe houses surrounded with their ocotillo fences, scattered over 10 acres of a grassy fan, there was no evidence of human activity.

Our prowling through the rancharia was done with the utmost discretion. We did not want to be suspected of pilfering or getting into places where white men are unwelcome. The impression created by a first visit to an Indian settlement is usually the one that endures—good or bad.

Between the dwellings we found rectangular and circular outlines of houses long since washed back to dust. The round type proved this was a very old settlement. They were survivors of the old Papago brush *ki*

or jocal which is rare if not extinct among the Papago of today.

One fine reddish-colored olla hung from the beams of a mesquite framed ramada, or shelter. These porous pottery vessels, which are the forerunners of modern evaporative-cooling, are made today by the Papago women for domestic use as well as for trade.

Near the same ramada we spotted the grand-daddy of all *metates* or troughed grinding slabs. As Gene and I were measuring its 19x32-inch rectangular size, a white-clad woman, two small girls, and a friendly pup came out of the mesquite. The woman smiled as we shook hands and greeted each other in Spanish.

We learned that Maria Bustamente, for that was her Mexican name, and her husband, Francisco, who is now *gobernador* of the rancharia, lived at Pozo Verde the year around. In times past Pozo Verde was

the residence of the general of all the Papago in Sonora, this title being a relic of the early Spanish system of Indian administration.

It was evident that the Mexican government's administration of her Indian rancharias is a "let live on their own sufficiency" policy. And while in the past the Mexican Papago have been ground between various political factions, their present relations with the Mexican authorities seem peaceful.

As evidence of the Papago's casual observance of the white man's political boundaries, I learned that occasionally representatives of Pozo Verde sit with the Papago tribal council at Sells, Arizona. This is easy to understand when one is aware of the close kinship between the American and Mexican Papago. According to Father Bonaventure Oblasser OFM, the eminent Papago scholar, all of the present Papago



Water from the well is kept cool in these earthen ollas, fore-runner of modern evaporative cooling. Photo by Chuck Abbott.

rancherias are offspring from parent pueblos. With the exception of Pozo Verde, they came into existence after the Apache menace had passed. These new settlements are recognized as units of the parent village, all holding their grazing land and other properties in common.

From Maria I learned, and later verified with Tomas, that the parent pueblo of Pozo Verde is Tecolote, located 15 miles southwest of Sells, Arizona. Other offspring in this group known as *Ch'ukutokam ki'kam*, Owl's Cry Inhabitants, are the rancherias of San Miguel, Vamuri, Rocky Point, and Cowlic, all in the United States.

The principal income of Pozo Verde comes from cattle ranching, and large stone corrals and cleverly fitted wooden ones lie along the base of the rocky hills to the east of the rancheria. In the

summer, melons and other produce are grown on the farms at Vijilo, 15 miles westward.

Long ago I learned that the greatest mistake made by most folks who work with Indians is the attempt to interpret their religious life before learning anything about their everyday existence and language.

In addition to the curing ceremonies conducted by the *maki* or medicine men, the Pozo Verde people hold their Rain ceremonies and Rain dance early in July. Later, in the early autumn, they hold their Deer dance, which is for purification of the crops and the first deer of the season to make them safe for eating.

Reminding myself that the main objective of the trip was to see the great well around which the whole history and existence of Pozo Verde revolved, I cut short my observations of the rancheria in gen-

eral. Following Maria's directions, Gene and I picked our way through the maze of corrals towards the *pozo*. Located at the base of the rocky hills which rise to the east of the rancheria, we found the olive-green waters of the well at the bottom of a crumbly earth crater, 20 feet deep and 30 feet in diameter. Running from the main supply, a small stream feeds a series of pools that extend westward to water the entire length of the corrals.

Recognizing the great value of their water supply, the Pozo Verde people have done much work for its protection. Above the well, in the crumbly earth, pillars of coursed stone have been cleverly wedged into the crevices. And around the well itself is a neat masonry curb laid in 1939.

Gene called my attention to the black strata which encircled the crater walls, marking receding water levels. Looking closer I discovered they were filled with pottery sherds which would aid in reconstructing the unwritten history of Pozo Verde. Owing to the earth-disturbance caused by the lowering water table and resultant erosion, archeology is inverted at Pozo Verde. The older levels of occupation are found near the surface rather than in the depths. Prehistoric Hohokam red and brown sherds are found near the rim while Papago Redware turns up in the depths!

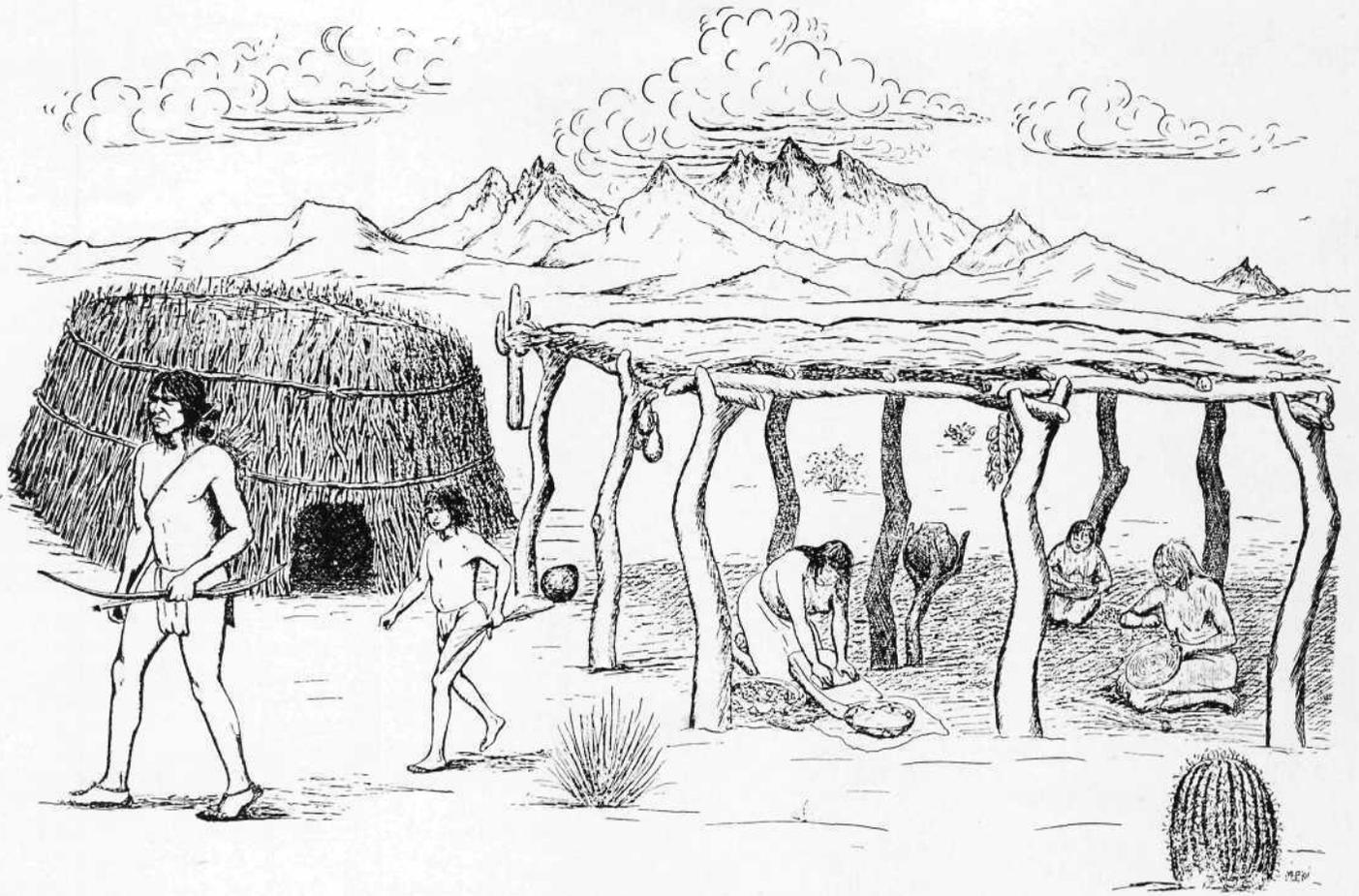
According to the sherds the original owners of Pozo Verde were the Hohokam or "All Gone Folk," who may have been the ancestors of the Papago. Our conclusion is that at the time of the Hohokam occupancy, 700 years ago, the well was a spring that formed its pool near the present ground surface.

Resting upon the Hohokam site, now only sherd littered debris, we located an interesting enclosure made of coursed stone. Not until later did we learn from Tomas the Papago version of the history of this ancient corral.

In 1693 Captain Mange made his first visit to the well and mentioned that some 60 Indians lived in the corral. Later, Father Kino established a cattle ranch at Pozo Verde. Probably the first American report of Pozo Verde was written by Lieut. Michler of the Boundary Commission in 1856: "Permanent water is found here, and although a large number of animals soon exhaust it, still it fills up in a few hours. This is the site of an old rancheria of the Papago."

After making our pictures and learning what we could about the well from occasional Papago cowboys who drifted in to water their horses, we went to a nearby cave. Father Oblasser had mentioned in a letter that Mange had visited a cave in the vicinity and we were anxious to see what part it might play in the story of the rancheria.

On our way up the rock littered slope we saw some piles of stones. Recognizing



Papago camp scene, perhaps 100 years ago. Today the earth rings of these circular houses may be seen near Pozo Verde. Art sketch by Velino Herrera (Ma-pe-wi).

them as old Papago graves, and fearing the Indians might object to anyone being in their vicinity, we detoured the burial ground. I wondered as we passed by if one of the graves might not be that of which Lieutenant Michler wrote in 1856: "The grave of one of their chiefs, who had been killed by the Apaches, was near the camp. A thousand arrows were buried with him as a token that his death would be avenged by the tribe. The Papago respect these graves, and the deadly threats they contain, and will not remove an arrow."

When we reached the entrance of the cave I hesitated. It was my first visit to the Pozo Verde people and as I did not want to profane what might be a sacred place I decided not to enter. Later, upon my return to Tucson, I found that I had used good judgment.

With the rain clouds beginning to gather and lightning streaking across leaden skies, we hurried down from the cave to return to Pozo Verde. Seeing the water begin to slick-off the rocky hillsides, we knew that if we did not leave at once there was every possibility of spending a wet night out on the flats.

Hastily bidding Maria and her children adios, with the promise we would return with pictures we had made, we left for Mesquite.

Returning to Tucson, I waited until my pictures were processed before visiting Tomas. When I laid the prints down before him and told of the green well, the ancient stone corral, and the cave we feared to enter, the old Papago smiled as he said, "Now I will finish my story of *Hau'kauks*, the Cruel Old Woman.

"Hearing the cries of the People, *Etoi*, the Elder Brother, came down from his home on the sacred mountain of Baboquivari. They told him of how they had suffered at the hands of *Hau'kauks*. And feeling sorry for them he began to make plans for the destruction of the monster.

"First he had the People build a stone corral. And then he had them invite *Hau'kauks* to a great feast and dance. When she came they invited her inside the corral where there were great piles of food and many ollas of pitahaya, the fermented juice of the saguaro fruit.

"And for four days the People danced while *Hau'kauks* ate and drank herself into a stupor. Upon seeing this *Etoi* picked her up on his shoulders and carried her to the cave wherein she dwelt. And then the People carried firewood and piled it in front of the entrance.

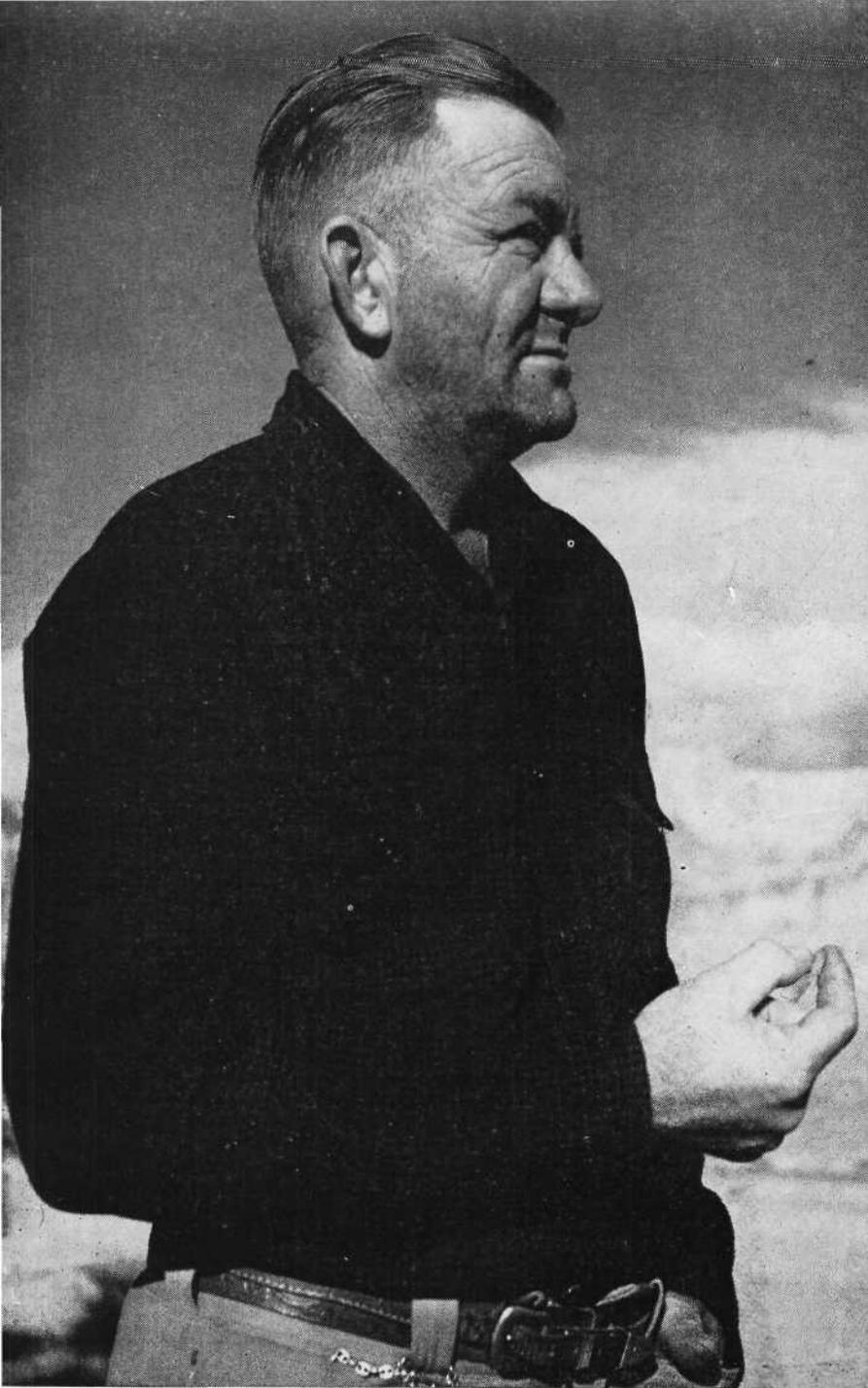
"With this done they set it afire. Feeling the heat *Hau'kauks* jumped up so hard

she made the earth tremble. And when she made a run for the outside she caused an earthquake that split the side of the mountain. But she never got out. For *Etoi* put his foot over the hole and that was the end of *Hau'kauks*, the Cruel Old Woman."

Seeming to search in my eyes for any hint of ridicule, he waited for a moment before he continued, "The corral, which you saw by the well, that was where they held the feast for *Hau'kauks*. And the cave which you rightly feared to enter, was that in which she was sealed to burn by *Etoi*. But what you did not find was the footprint of *Etoi*, which you shall see on your next trip to Pozo Verde."

Then I understood why Tomas had withheld a part of his story of the Monster until I had visited Pozo Verde and viewed the places where these events had occurred. He wanted me to believe by seeing. For Tomas, regardless of his long residence amidst the whites, is still a firm believer in his old faith.

Not only had he guided me to these sites of such religious importance to the old Papago, but he had given me a better understanding of the lives of the kindly Indians who dwell by the everlasting waters of *Cheotak' vavia*, the Green Well.



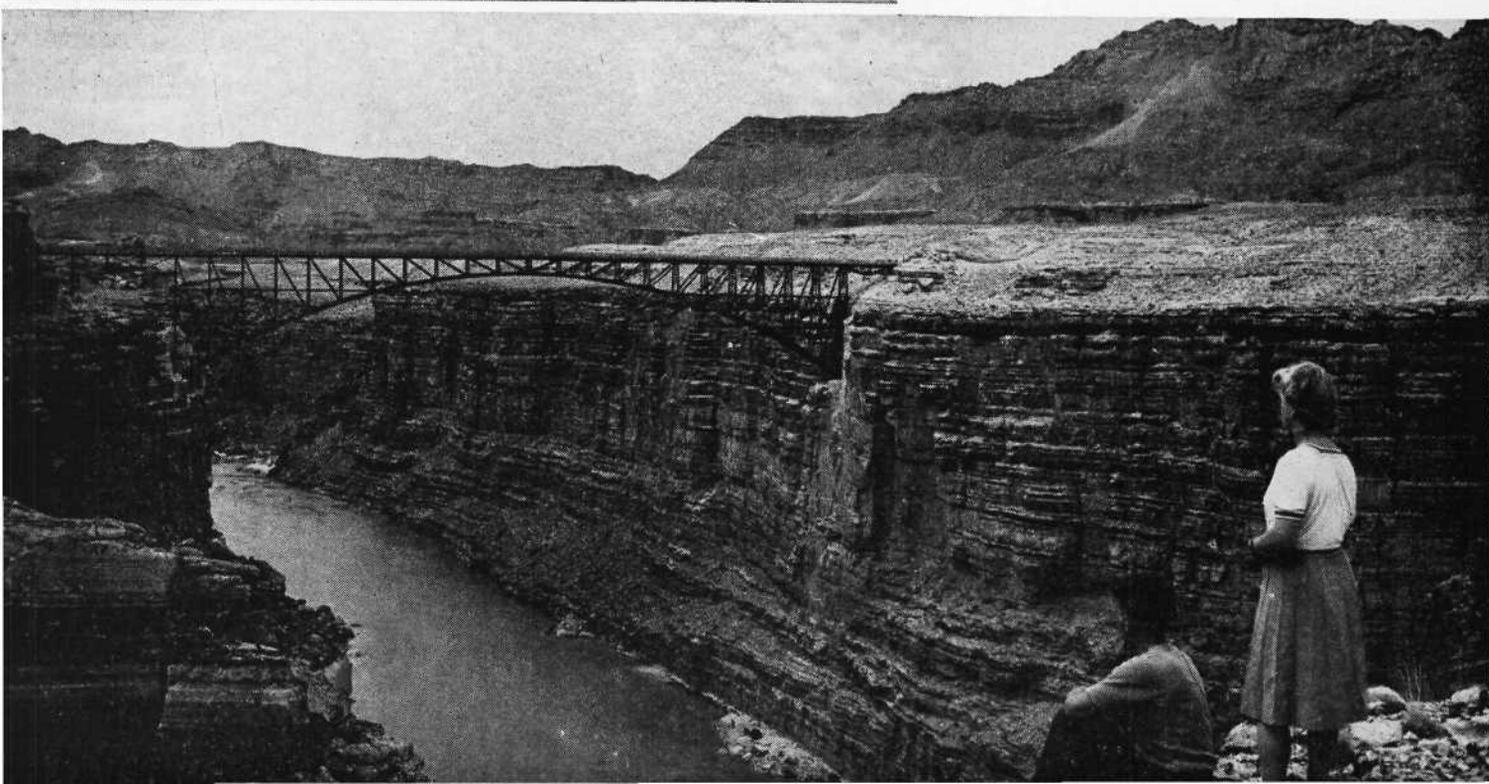
Where Wild Buffalo Roam

"Is there anything to see here?" asked Joyce Muench when she visited Marble Canyon lodge and met its grizzled host, Art Green, for the first time. Green's answer was a motor tour of the Marble Canyon country—to House Rock valley where one of the world's largest herds of buffalo grazes in a great pasture whose only fence is Nature's barriers—to historic Lee's Ferry—to Vermilion Cliffs—and to a rodeo in which the participants were Navajo Indians. And these are just a few of the strange and interesting features which Nature and hardy frontiersmen have provided for visitors in the Marble Canyon country.

By JOYCE ROCKWOOD MUENCH
Photographs by Josef Muench

Art Green, host at Marble Canyon lodge.

This 616-foot steel span over the Colorado river at Marble canyon is a connecting link between the north and south rims of Grand Canyon.





Protected by the State of Arizona, 200 buffalo roam unfenced in House Rock valley.

ART Green stood in the middle of U. S. Highway 89 admiring the sunset when we drew in at his Marble Canyon lodge and trading post. From the purple and rosy Vermilion cliffs above us to House Rock valley in the distance and the Echo cliffs behind, sky and earth were a cauldron of color.

"And it's never the same twice running," Art told us proudly as he extend-

ed the warm welcome forthcoming to everyone who stops at Marble canyon.

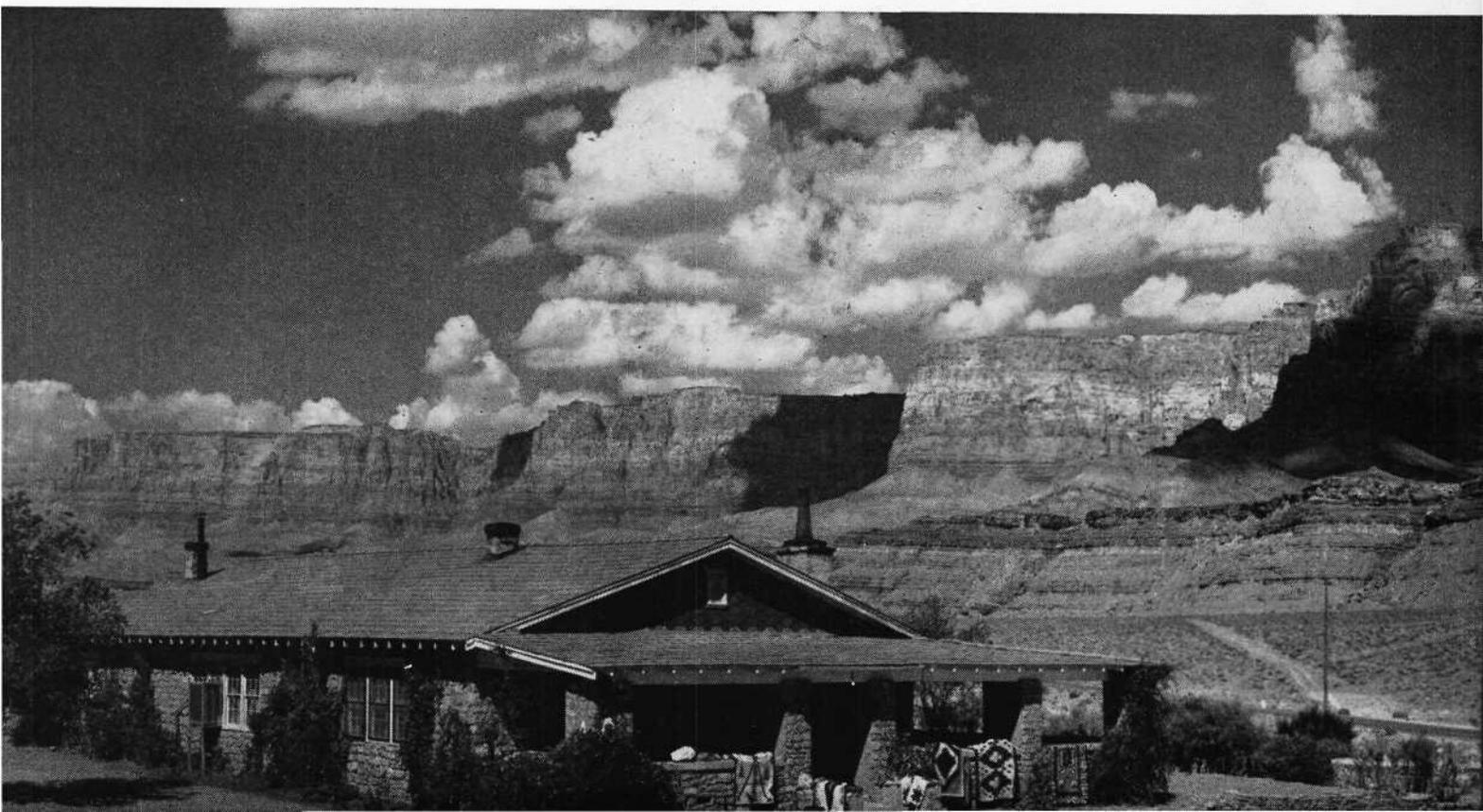
"Is there anything around here to see or do?" I asked.

"I can show you a herd of wild buffalo," Art told us. "Or you can go up and down the Colorado in a boat. Then there are limestone caves that haven't even been explored and old Lee's Ferry is seven miles by road. There is plenty to see there.

In a few days 400 Navajo will be here for a rodeo . . ."

This was the first time we had been to Marble canyon. We were on our way from the South Rim of Grand Canyon to the North Rim. From rim to rim of the Grand Canyon it is less than 15 miles by air line. But it is a 214-mile trip to reach the other side in an automobile by way of Navajo bridge, which spans the Colorado river

Marble Canyon lodge—the Colorado river on one side, Vermilion Cliffs on the other.





Old stone houses still mark the site of historic Lee's Ferry.

at Marble canyon near Art Green's lodge.

Next morning we went to see the buffalo. Their home is House Rock valley, at the foot of Vermilion cliffs, sloping to the Colorado river, where hundreds of feet of marble walls make an admirable fence for roaming creatures. Westward the land rises to the great plateau of the North Rim. Within this natural pasture are 200 head of shaggy brown buffalo. At a distance they look much like the cattle sharing the valley with them, but the herds do not mix.

Leaving the highway for a pair of ruts that wandered off through the sage, we crossed several dry washes before we spot-

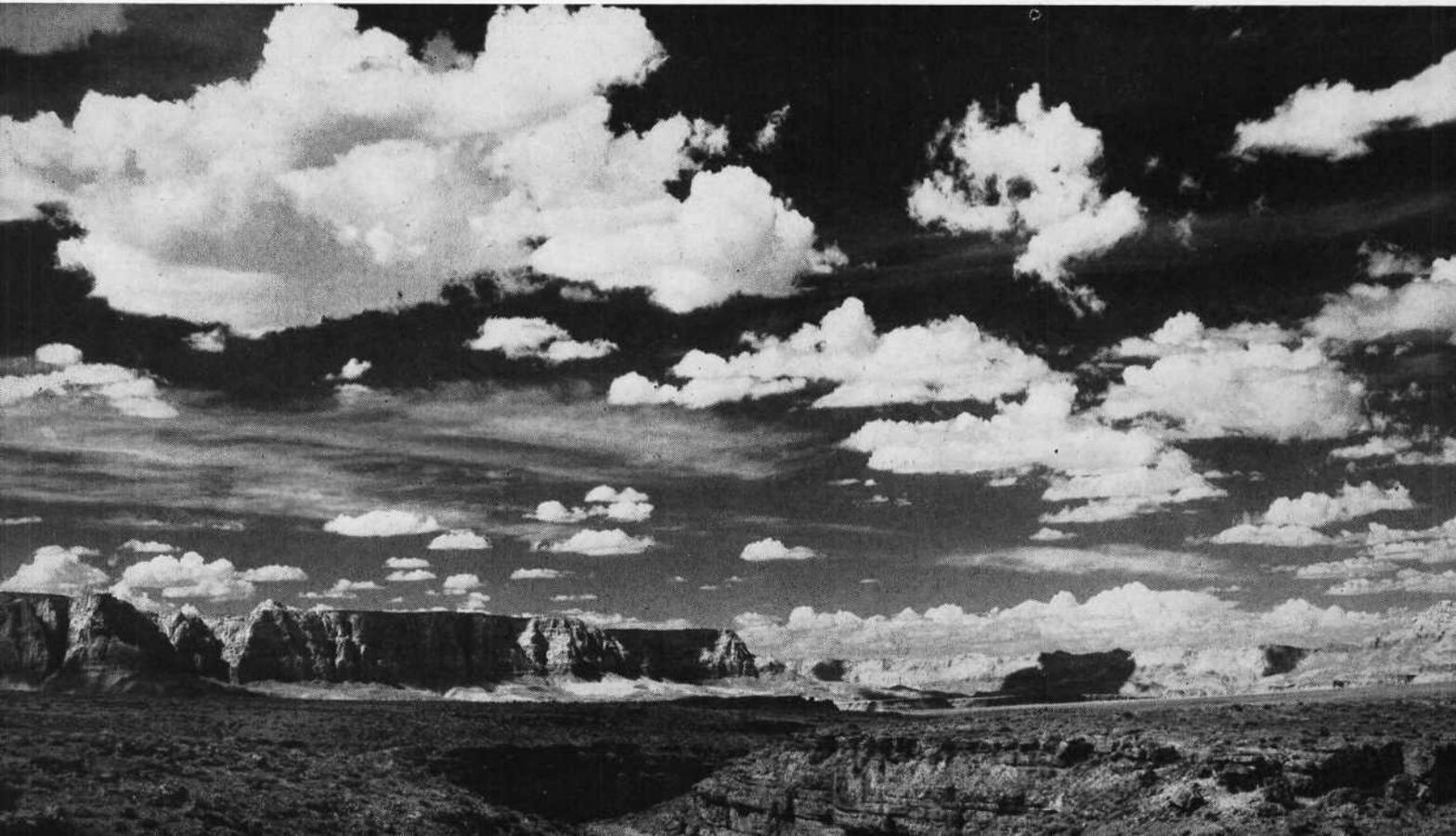
ted a group with humps. Soon Art's two grandchildren were laughing at the ugly brown calves they saw hugging their mothers' sides. It was midsummer and the coats that in a different season make beautiful buffalo robes were ragged and shedding in spots. Millions of these animals once ranged the plains. Today there are only about 5000 left in the United States. Here in House Rock valley is one of the few herds that roam free, except for the natural barriers of House Rock valley.

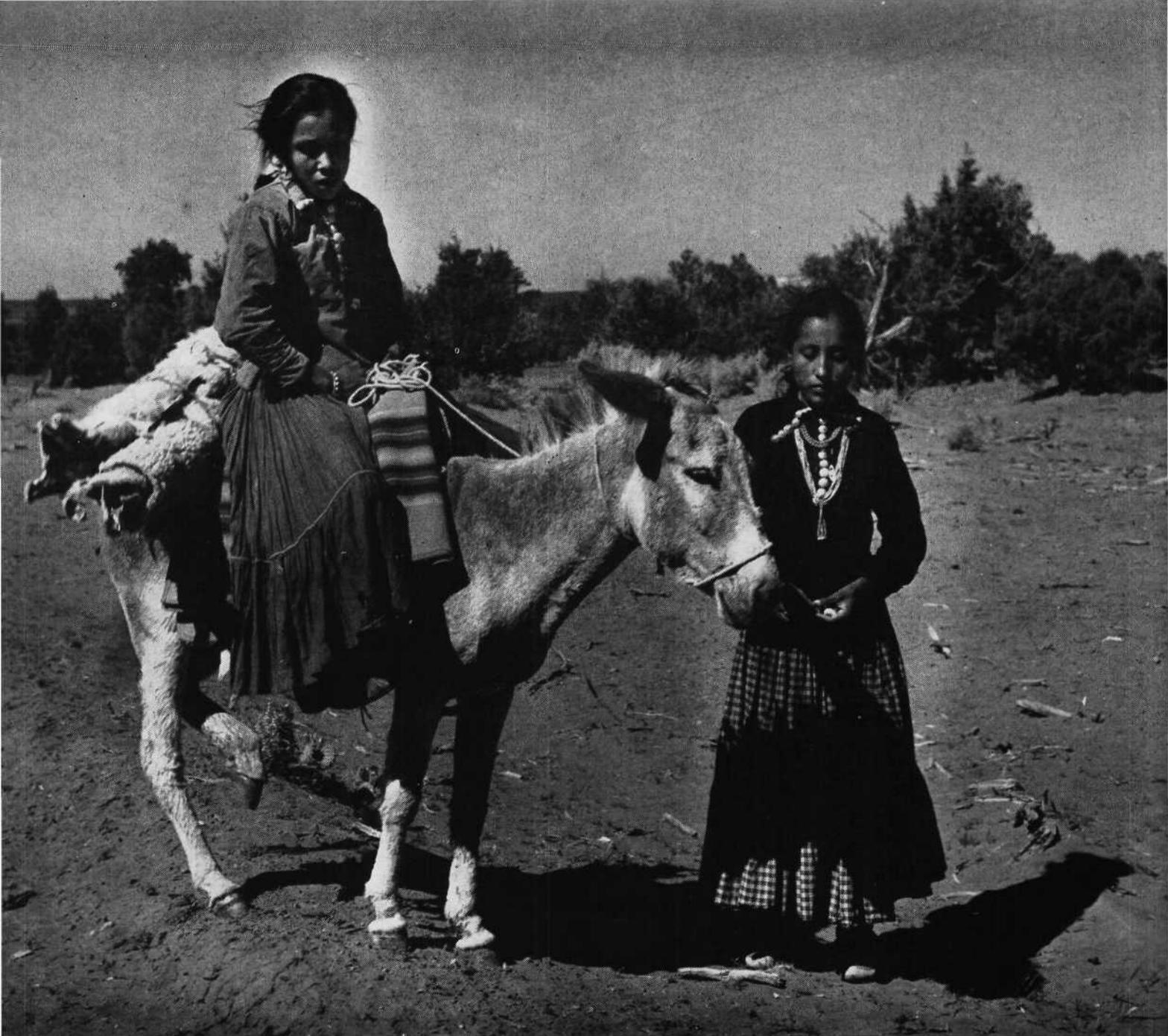
Joe had his camera out and was headed for a picture as soon as the car could be stopped. We noticed, with some concern, that he gave the bulls a wide berth, but he

didn't hesitate to get close to the cows. Later, he admitted he didn't know the mothers with young calves are the most dangerous!

One beautiful old bull was standing on a rise. Would Joe get close enough for a good picture before the huge animal either rushed him or turned away? We relaxed when the camera's click reached us. Soon Joe, Art and I were herding the buffalo while the children stayed in the car. It was nervous business. These animals won't stand much pushing around. They are still Old Man Buffalo! Once, when we had them all going in the right direction (for good lighting) they turned sud-

Blue cloud-flecked skies and red walls of Vermilion Cliffs make this an artist's dreamland.





Navajo girls of the Marble Canyon country take their sheepskins to the trading post.

denly in my direction and began pounding the ground in a rush. I made a tactical retreat and they stopped, to go on with the business of grazing. When the sun was high, we left them to their wonderful range.

Our next jaunt was to Lee's Ferry. The road winds and twists through rocks that have been eroded into strange shapes. The Cathedral is a spacious structure carved by wind and sand erosion. In apparent ruins it retains the lines of a style to be found in no architectural textbook.

Small canyons lead the road down to Lonely Dell. Here John D. Lee and his 18th wife came in 1871 for refuge. He was here only a few years but in that time laid out a farm, built a stone fort for protection against the Indians and established a ferry service. It was continued after his death until 1928 when Navajo bridge was completed.

In the quiet little valley things have

changed only slightly since Lee's day. An Indian family is living in one of the houses now. Until a short time ago, the descendants of his neighbors, the Johnson family, had their home a short distance from the Lee farm. Barns sag and fences need repair, but a gentle air of decay and peace floods the spot, set in its remote canyon where the Paria river flows down to the Colorado.

Following the road on foot, we saw a small cemetery. Four roughly cut sandstone tablets tell an eloquent tale. On May 19, 1891, Jonathan Smith Johnson (aged 6) died. One June 11, Laura Alice (aged 8) followed. Pemelia (aged 10) was next on June 15 and on July 5, Melinda (16) died. A man coming through the country the winter before left a trunk of old clothes with the Johnsons, saying that if he failed to return within six months they were to use the contents. Living was not easy and at the end of the six

months, they were glad to fit the children with made-over garments. Sickness followed, carrying off one after another. The Johnsons thought it was diphtheria but there was no doctor to diagnose or to stop the swift course of the disease.

Lee's Ferry lies close to the river. The little stone fort is still intact, with holes for rifles. A cluster of other small buildings age in the Arizona sun. Some are remnants of miners' perennial hope that gold can be panned from sandy deposits along the river. The shell of an old steamboat sits deep in the water. Its rusty boiler was manufactured in San Francisco and 20 yoke of oxen were needed to haul it here. It made only a few trips upstream. The current was so strong that it could haul nothing but the fuel to keep the boiler going.

The canyon cliffs have seen a colorful procession coming down the river or attempting a crossing at this historic site.



The Klohrs at Lee's Ferry—Christine, Jim, and their daughter, Ann. Jim is a resident engineer for the USGS.

Major John Wesley Powell saw it first in 1869 on his famous river trip. Almost every other expedition has stopped here to rest or obtain supplies. Jacob Hamblin, Mormon missionary, was a frequent visitor.

In 1923 the United States Geological Survey established a water gauging station at the ferry. One of the cabins was remodeled for the resident engineer. The dirt floor was covered with wood, a bedroom added and plumbing installed. Jim and Christine Klohr, who live there now, find it a satisfying and comfortable place.

"We don't mind seeing movies only once a month on our trip to Flagstaff," remarked Christine. "And we have neighbors in the valley and up at the lodge."

We remained at Marble lodge for the rodeo. Four hundred Navajo came in from all the points of the compass. They came in wagons, trucks and on wiry ponies. Some of them arrived by bus, having been picked up along the highway. Some of them brought sheepskins and bags of wool to trade.

The actual business of trading is full of interest. The trader, in this case Art or one of his sons-in-law, would put on their "swappin' clothes." The bags of wool were weighed on the scale, saddle blankets rugs and hides examined and valued. The wool joined other sacks along the wall and the rugs were piled in stacks on counters or perhaps hung on the wall. Overhead were parts of saddle and wagon gear, lanterns, ropes, tin pails and coffee pots. The shelves carried stationery, bobby pins, material for skirts and blouses, gaudy shirts and hand-tooled cowboy boots.

I couldn't follow the bargaining, but with a sprinkling of English, a dash of Navajo, and sign language when those ran out, articles from the shelves would pile up in front of the Navajo. He would stand with one foot on the rail, drinking soda. A big western hat on his head, black hair tied with a string, bright shirt (often orange), blue jeans, and hand-made moccasins made him a colorful figure. Other Indians stood around kibitzing. They had all the time in the world and there was much cheerful banter in the Navajo language, which falls strangely upon English-tuned ears.

Quantities of candy and crackers were consumed by the children and the men, as well as by the shy, dark-eyed women. Their velveteen blouses were decorated with coin buttons. We noticed dimes, nickels, and fifty cent pieces, each with a metal ring on the back, sewed so that the edges touched all the way up the front and down the sleeves. Beautiful turquoise bracelets and belts, earrings and necklaces gave them a holiday air.

Everywhere the Indians move, they make pictures. Even piled in trucks, their gay clothes and warm smiles make them picturesque. The freedom of the desert seems to animate them. I did so want to understand their language if only to discover how they kept so vastly contented when their life is so difficult.

Perhaps there is something about Marble canyon they love especially. Certainly they have lived here for a long time. They revere the buffalo and feel that it brings them good luck to have some of the sacred animals in House Rock valley. They take pride, too, in Navajo bridge. Although

official records do not mention it, Navajo medicine men propitiated the gods of the wind and helped complete the bridge. The wind blows a gale sometimes through the canyon and with the date set for the opening of the bridge close at hand, the final joining of the girders was prevented by fierce gusts. Navajo came to the rescue with prayer sticks and sacred meal, and the wind stopped. Yes, they had a part in making the bridge that opened up their beloved Marble canyon country.

Hard Rock Shorty of Death Valley



Hard Rock Shorty had been missing for several days from his accustomed spot on the porch of the Inferno store, and so upon his return he was the target for questions from his fellow sitters and whittlers.

"Doin' a little assessment work over on Eight-Ball," he yawned.

"Yeah, the place is improvin' right along," he answered an old timer. "The ole hen had chickens last week."

"No, Pisgah Bill ain't so well. He's ailin' in his neck, an' is only eatin' soup—strained soup. It seems this spell o' Pisgah's started the day the new catalog come in the mail. Ole Bill he set right down to look at the pitchers in that catalog, an' that give him the spring house-fixin' fever.

"He decided the shack gotta be papered, an' the purtiest paper in the book is what he got—rolls 'n rolls of it. Pisgah sure worked hard stickin' all that paper onto the shack walls an' ceilin' inside, an' what was left he put in the outhouse.

"He sed he never knowed he had such a big house until he got to gluin' all that paper down. But when he'd stuck down the last corner, his neck wuz cricked out at a right angle, an' his tongue wuz swolled tight to his false teeth, an' his mouth wuz stuck shut, all but a little slit which he drinks his soup through.

"Whut dunnit? Waal, yu see, this here wall-paper Pisgah ordered wuz that new-fangled stuff with the glue on the back of it like stamps, an' Pisgah got all crippled up a-lickin' it all."

Lost Treasure of Del Bac

Loyal Papagos secretly carried the treasure to the Esmeralda mine and buried it deep in the underground workings.

Did Father Kino take silver from a rich mine which he called La Esmeralda? The legend persists that he did, and that the altar at the old Mission Del Bac at Tucson, Arizona, was once adorned with silver ornaments worth a small fortune. If such ornaments actually existed they have long since disappeared. Their disposal and hiding place is the mystery with which the writer deals in this story.

By JOHN D. MITCHELL

Illustration by BILL EDWARDS

MANY interesting legends cluster around the beautiful old mission of San Xavier Del Bac, located on the west bank of the Santa Cruz river, a few miles south of Tucson, Arizona.

Father Eusebio Francisco Kino, the great Jesuit, wrote in his diary "On April 28, 1700, we laid the foundation of a very large and spacious church," and told how the Indians had labored with pleasure and zeal in digging and in bringing stones from a nearby hill.

When the foundation of the church had been laid and the work of construction was well under way, the headmen of the Papagos begged Father Kino to go with them to a point in the mountains about two

leagues to the southwest of Bac to see a rich vein of silver ore that had been discovered a few years before. It is related that the padre was well pleased with the rich outcropping and on account of its green color (horn silver) called it La Esmeralda (The Emerald), and made arrangements to open the mine without delay.

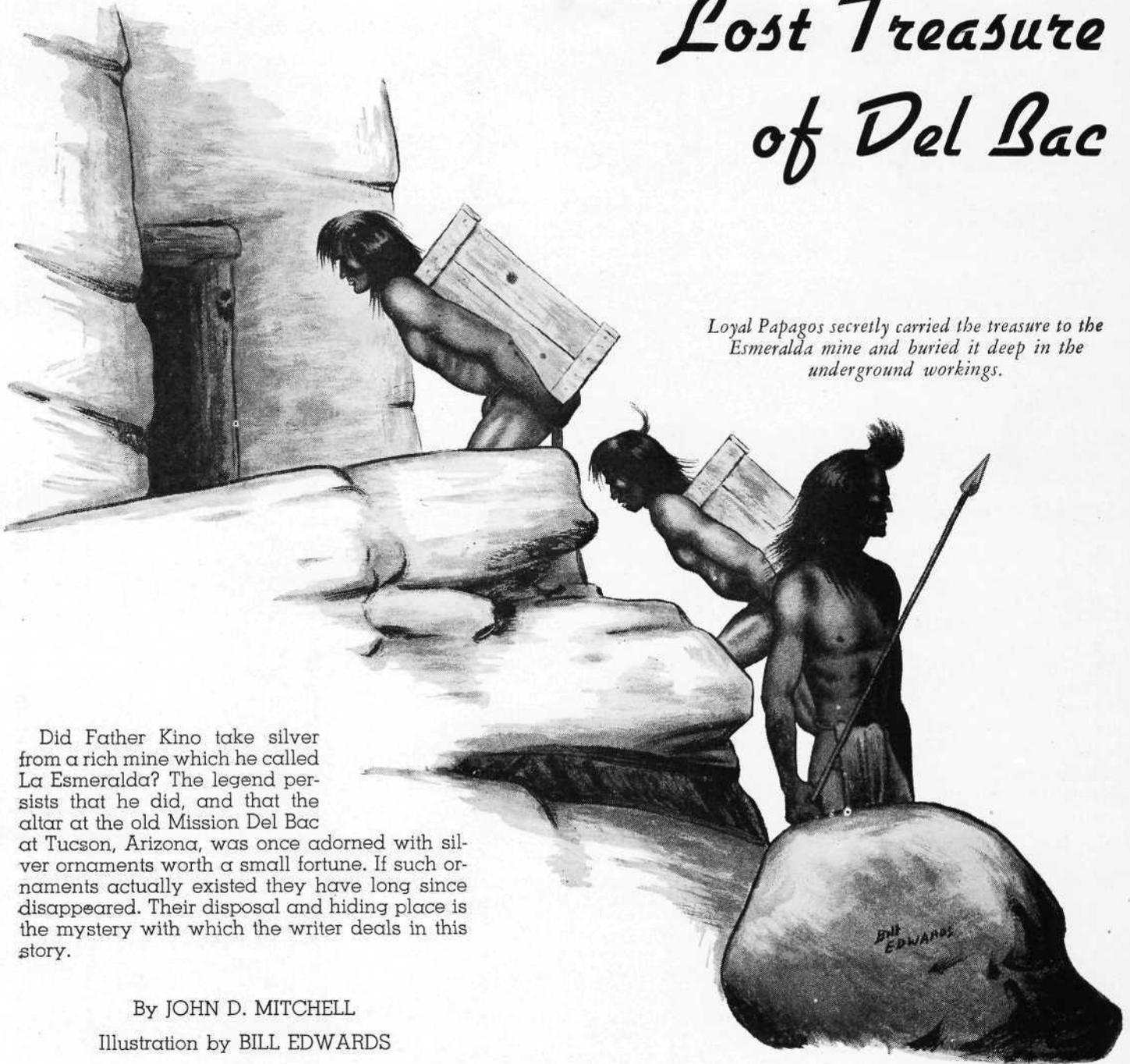
The rich ore was mined and carried to the mission on the backs of Indians and smelted in a small adobe furnace built for the purpose.

Father Kino died March 15, 1711, at Magdalena, Sonora, where his remains rest in the old church, long since in ruins. After Kino's death the missions passed

through many tribulations on account of minor revolts and the constant attacks of the Apaches.

On the date of the first revolt of the Papago and Pima tribes in 1723, the treasure and silver ornaments on the altar at San Xavier Del Bac were estimated to be worth more than 120,000 pesos. The loyal Papago neophytes secretly carried the treasure to the Esmeralda mine and buried it deep in the underground workings. In this revolt the churches at Bac, Tumacacori and Guevavi were partly destroyed and left without spiritual advisers.

In 1731 there came a small reinforcement of Jesuits. Two of them came north and effected what may be regarded as the



first Spanish settlements in Arizona. Father Felipe Segesser took charge of San Xavier Del Bac and Father Juan Baptista Grasshoffer of San Miguel de Guevavi, which from this time may be regarded as a regular mission.

In 1733 and 1736 Father Carpar Steiger was at San Xavier Del Bac. Father Steiger found that many of the rancherias of Kino's time had been broken up. In 1750 Father Jose Carucho was at San Xavier Del Bac.

In 1751 occurred the second revolt of the Pima tribes, in which Padres Francisco Xavier Saeta, Tomas Rollo and Enrique Ruen were killed and the missions at Sonoita and Caborca were destroyed and Guevavi, Tumacacori and San Xavier Del Bac were damaged and abandoned by all but a few loyal neophytes. In 1754 the Indians returned to their pueblos and stated that it was their desire to live peaceably. The great treasure was brought from the

Esmeralda mine and placed on the altar and for a number of years San Xavier Del Bac prospered greatly from agricultural, mining and stock raising industries and was considered one of the most flourishing of the long chain of missions established in Kino's time.

In 1767 King Charles issued his famous edict expelling all members of the Society of Jesus from Spain and its possessions. The Jesuits accepted their expulsion peacefully and after sealing the mines and burying their treasures made their way to the coast and the ships that were to take them away. After the departure of the Jesuits and before the Franciscans arrived to replace the black robed padres, the long chain of beautiful missions again was partly, if not completely, abandoned and soon fell into ruins. San Xavier Del Bac was partly destroyed but was not completely abandoned by the Papago neophytes who dearly loved the beautiful mis-

sion which stood out like a jewel in the green valley of the Santa Cruz, surrounded on all sides by lofty mountain ranges.

In 1783 Padre Carrillo was in charge of San Xavier Del Bac and in that year he laid the foundations of the present mission, a structure still notable for its beautiful style of mission architecture and which is still maintained in sacred use.

Following the fall of the colonial government in 1822, the Franciscans departed and San Xavier Del Bac and the Esmeralda mine were placed by the Bishop of Sonora under the charge of a secular priest at Magdalena. The faith had been so well set among the Papagos by the Jesuits and Franciscans that the church and treasure was jealously guarded and was almost intact in 1859 when the district was added to the diocese of New Mexico under Bishop Lamy.

San Xavier Del Bac was the only mission in the long chain that was not in ruins. The Indians welcomed the priest with delight and rang the church bells with joy. Many of them remembered their prayers and a few of them were able to sing at mass, while the articles for the altar were again produced from their hiding place where they had lain for many years.

In 1860 many of the American miners who had been operating along the border since the close of the Mexican war and the signing of the Gadsden Treaty, are said to have seen the treasure on the altar at San Xavier Del Bac and estimated its value to be more than \$60,000.

In 1861 when the American government withdrew the soldiers from Arizona to fight in the Civil war, the Apaches again started their raids on small mines and ranches and the great treasure at San Xavier Del Bac again disappeared. There is a tradition among the Indians around the old mission that the treasure still lies buried deep down in the old workings of the Esmeralda mine at the bottom of a large stope that has since caved in burying the silver under several hundred tons of rock and earth.

It is a singular fact that every year just before the fiesta of San Juan which occurs on June 24, the amount of rich silver ore brought to the ore buyers in Tucson and Nogales shows a marked increase. Most of this silver ore comes from two or three old Papagos who live on the banks of the Santa Cruz river near the mission. Many of the old time Mexicans who live near the river in Tucson, believe the ore comes from the dump and shallow surface workings of the Lost Esmeralda mine. It is understood in and around Tucson that many of the old Papagos know the location of the mine and treasure but refuse to disclose the information to any one outside their tribe. The old Papagos guard their secrets well.

PRIZE DESERT PHOTOS . . .

Do you have a prize picture among the vacation shots you brought back from national park and monument, Indian country, the plateaus, the canyons, the ruins? Every month, Desert Magazine awards cash prizes for the best pictures sent in by its readers, and the winning shots are printed in the magazine. Any photo with desert subject matter is eligible, and pictures which arrive too late for one month's contest are entered in the next.

Entries for this month's contest must be in the Desert Magazine office, Palm Desert, California, by July 20 and winning prints will appear in the September issue. First prize is \$10; second prize, \$5. For non-winning pictures accepted for publication, \$3 each will be paid.

HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED ONLY WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the Desert Magazine office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.

ADDRESS ALL ENTRIES TO PHOTO EDITOR, DESERT MAGAZINE,

THE *Desert* MAGAZINE
PALM DESERT, CALIFORNIA

A tiny vein of gold and a mountain spring were the lures that brought William Ellison to a remote hilltop in the Harqua Hala mountains of western Arizona. There he lived for 32 years. He was alone but never lonely. And if you wonder what that kind of a life does to one's character you will find the answer in this story.

He Lived Alone on a Mountain

By LOIS ROY

Photographs by George Merrill Roy

THIRTY-TWO years alone on a mountain-top!

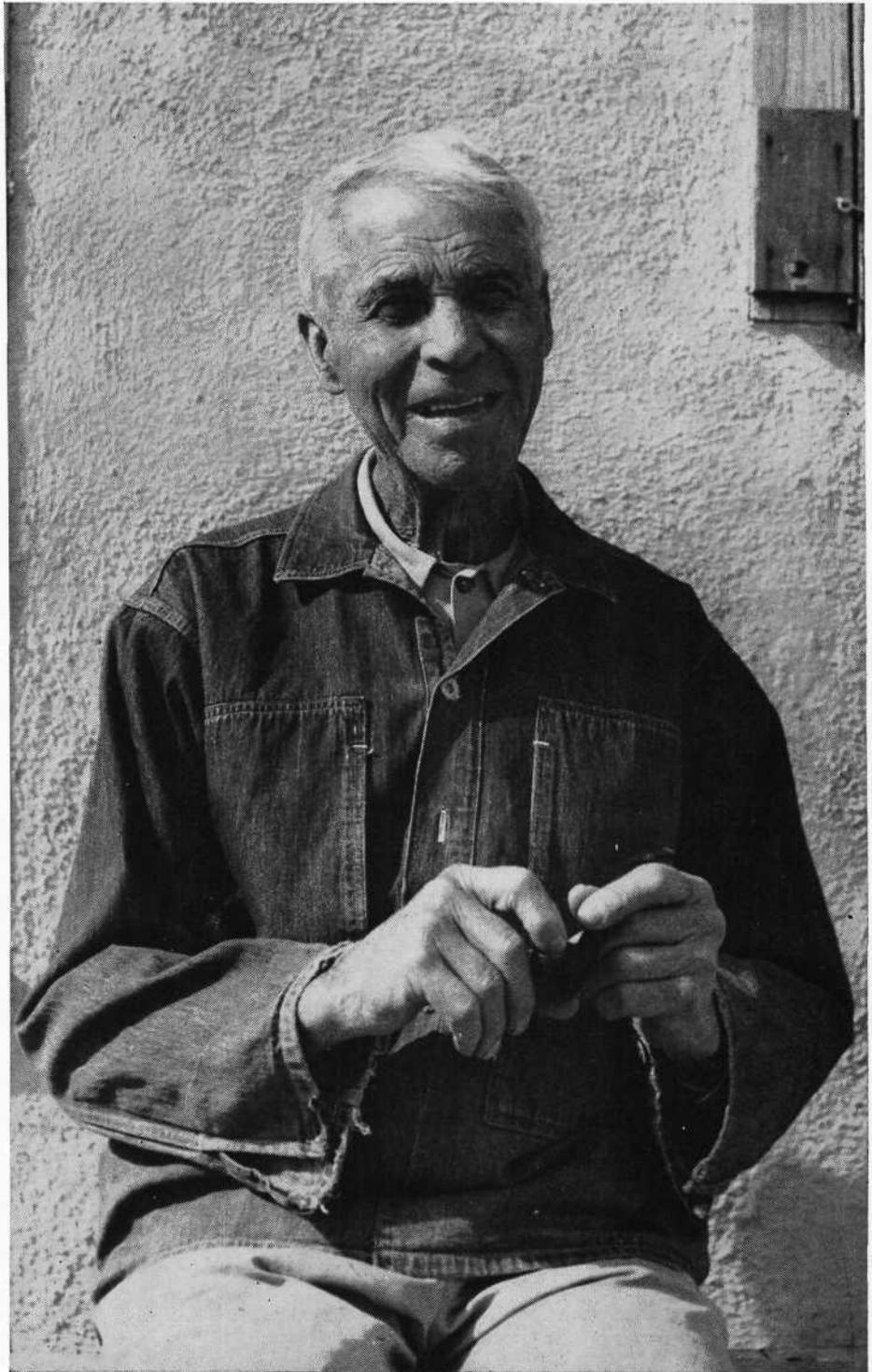
That is the almost unbelievable record of William B. Ellison, 79 year old philosopher, prospector and gold miner of the Harqua Hala region in northern Yuma county, Arizona.

At last, however, at the end of the 32 years, this old man of the mountain has come down from his rocky lair and is living in the little desert town of Aguila, about half way between Wickenburg, Arizona, and Blythe, California.

Harqua Hala peak belongs to a picturesque range of mountains noted for its rich deposits of gold ore. The name is of Indian origin and means "running water" or "always water." To the tourist speeding along Highway 60 through this section of the desert it is just another mountain. Casually his eyes wander over its rugged face, little dreaming that somewhere high up in the sun, lost to the human eye, is the beloved home of a lone man who for a third of a century dwelt in solitary peace and utter contentment. Nor is he aware that somewhere deep within the shadowy folds of up-thrust rock a spring of cool, life-giving water bubbles eternally, making possible the cultivation of a garden—the working of a gold mine.

I had heard vague stories about this old man of the mountain many times, but not until I had moved away from the desert did I have the opportunity to return and make the 7½-mile hike to the top of rugged old Harqua Hala and meet this kindly man who had become a part of the very mountain itself.

It was a glorious adventure! A winding



William B. Ellison of the Harqua Halas.

desert road, turning off the highway 14 miles west of Aguila, led our little party to the foot of the mountain trail. The youthful exuberance of my two children was highly contagious as we started out on our early morning hike. Edwin W. Mills, owner of the old Sheep Tank mine in northern Yuma county, proved to be a most excellent guide. To reach our goal and return in one day necessitated an early start and steady, methodical climbing.

The trail itself was a remarkable achievement. Ellison had painstakingly surveyed it. It was laid out almost with the precision of a highway, maintaining a con-

stant, not too steep grade. At no point did it become precipitous as do most mountain trails.

We reached the top of the mountain about noontime and had just finished a gay, camp-fire meal and were preparing to start down the 850-foot drop on the other side to the Ellison camp, when, quite unexpectedly, William B. Ellison unobtrusively appeared in our midst, leading a little pinto pack horse.

He came forward and greeted us as friends. His handclasp was firm, warm and cordial. I had come a long way expecting to see a typical "old man of the moun-

tain" with bearded face, wrinkled and seared from long years of exposure to wind and sun. Instead, I saw standing before me a man whose appearance was well-preserved, physically fit in every respect. He was lithe, of medium weight and height. I had expected to see a man in his early 70's. This one did not look a day over 60 years of age. His face was smoothly shaven, his snow-white hair neatly cut. The work shirt he was wearing was fresh and clean.

With sincere regret he informed us that he was on his way to the foot of the mountain to keep a very important appointment which he had made several months before with a man who was bringing him another horse. He said he was very sorry. Any other day in the year he would have been at home. However, he invited us to go on down to his camp and rest awhile in the shade. We would find plenty of cool water in the well. He would meet us on our return in the evening at the foot of the mountain where he intended to camp for the night.

Before we separated, I asked him if he would pose for a picture and he graciously consented, facing the camera as though it were a common everyday occurrence.

"Where shall we stand and what shall we be doing?" he asked obligingly. We soon learned that he never spoke of himself without using the personal pronoun "we," which included one or the other of his animals—his horse, his burros or a pet cat.

"Just smile!" I called gaily.

"What is there to smile at in this world of tribulation," he answered in mock seriousness; then added, with a sly bit of humor, "I haven't smiled in 40 years!"

But he did smile . . . and the words that followed were spoken proudly, as though we had challenged his right of possession:

"I sit up here on a hilltop and laugh at the world! I am closer to the stars than you are—closer to God. Why should I be lonely? I have health. I have peace of mind. I have friends whenever I want to go to them. I have gold—enough for all my needs. What more could any man want?"

Thirty minutes later we stood looking down at the Ellison Castle of Contentment, tucked away in the peacefulness of the hills. Spread out before us in a tiny, miniature valley was a cluster of five assorted buildings. The house in which this man lived was built of adobe and consisted of a single spacious room. The walls were painted a rich suntan and the roof was covered with dark green composition roofing. On one side of the house was an attractive grape arbor, and a well stocked vegetable garden—including a row of husky tomato vines, and one or two quince trees—gave a homey air to the tranquil surroundings.

As we approached, a burro came forward to greet us; and thereafter followed

us persistently wherever we went—except into the fenced garden. Although we tried several methods to lure him through the little gate he hung back as though he were trying to tell us that his master did not approve.

The interior of the house was painted white. The bed was neatly made. Comfortable chairs were placed at random about the room. Pots and pans hung on the wall in shining array. On one side of the room stood a small stand with white enameled wash basin, above it a white-framed mirror.

Outside on the porch stood a comfortable home-made rocking chair. A generous supply of wood had been cut and neatly piled against the wall. Numerous hooks had been driven on one side on which hung pack saddles and other riding and mining equipment.

Out in the yard near the stone blacksmith shop the remains of a crude old-time arrastre drew our attention. This antiquated contraption was built of stone and had been used back through the years to separate the gold from the ore—a tedious, hand process aided by burros. Back of it stood a much later model of concrete and iron. A 2½-horsepower engine attached to this improved arrastre told a mute story of human progress even in this remote locality.

A little farther on we found the spring which Ellison had developed into a 3-foot well of cool water. A concrete storage tank, about 10 feet in diameter, had been built as a reserve in time of drouth.

Our tour of inspection ended at the Ellison gold mine. Here, again, I marveled at the amount of work—the careful planning—the years of dreaming this lone, solitary man had put into the whole outlay before me. Every bag of cement, every board, every nail and piece of tin and iron, each door and window, had been carried long weary miles up the steep mountain-side on the backs of his burros.

Reluctantly, at the end of an hour, we started back up the trail on our homeward journey. We reached the foot of the mountain just as the evening shadows were creeping across the low desert hills.

We found Ellison bending over an old 1916 Model T Ford, which, he informed us, boasted a 1913 engine. One time he had taken the car into a garage for repairs and they had switched engines on him. Spread out on the ground around him was a variety of antiquated auto parts.

He asked us to be seated, furnishing each of us with an old box of one kind or another, seating himself last. After lighting his pipe he began telling us the story of his life. Long after the last flamboyant color had faded from the sky we sat listening.

Born in Illinois in the year 1869, he spent his early years in and around Chicago. Fifty years ago the doctors told him his days were numbered; that he had an

incurable disease. Thereupon, to best carry out his own plan for health, he chose the life of a prospector and miner. His idea worked. He became well and strong. With renewed health came an incentive to live. For years he wandered in Alaska and in every state in the Union. In 1907 while visiting friends in Yuma, Arizona, he became interested in the Sheep Tanks mining area. From then on, he spent all of his time prospecting that country.

On his first trip to Sheep Tanks he was misdirected along the wrong trail by a sketch map which took him to the end of a badly cut-up arroyo. He found himself and his burros desperately in need of water. Being in strange territory he decided to turn around and retrace his steps. His leading burro started off with the others but almost immediately circled and refused to budge one step farther. He kept nodding his head up and down as though he were trying to say: "There is water right here under my nose!" This procedure was repeated several times with such persistence that Ellison took a shovel from his pack and started to dig at the point indicated by the burro. Within two feet of the surface he struck seepage.

In the autumn of 1911, while hunting deer in the Harqua Hala mountains, he ran across some quartz which showed free gold. Later he discovered a narrow vein of rich ore which yielded over 100 ounces of gold per ton. This was the beginning of his campsite. The ore was packed in by burros to the arrastre at his camp—a distance of two miles—where he patiently made the separation of gold from the ore. In addition to the gold ore he partially developed a showing of copper-silver ore some distance away.

To one man, at least, the golden treasure of Harqua Hala was real. Twice each year, William Ellison came down from his aerial hermitage to barter with the Aguila merchants, exchanging gold from his mine for supplies. This was his only source of revenue while living on the mountain.

Twilight deepened as the old prospector narrated the story of his life. Although greatly fatigued, we were an alert and appreciative audience. Here, indeed, was a man whose soul had been enriched and mellowed by his long, lone sojourn with Nature.

Through the years, he told us, he had always welcomed visitors, although some years he had none. Other years a few venturesome folk would make the difficult trip on foot over the rugged trail to his camp. But he did not feel in any way the lack of human companionship for his four-footed friends fully understood him and made up the lack of human partners. He was always fond of his animals and they in turn showed their affection for him.

In 1922 he bought a radio, but seldom used it. There was too much advertising and he didn't like politics. His reading consisted mostly of last year's newspaper-

ers. He had never grown tired of his own cooking. His garden supplied fresh vegetables.

"You have to feed vegetables just as you do animals," he informed us. "I feed mine plenty of fertilizer and they grow big and firm and delicious."

He made his own bread, pies, cakes. He gave us the recipe for his sour-dough bread—his own improvement over the old-time Alaska sour-dough—but he warned us he had never known anyone else who could make it just right. Usually he would hurry through his morning meal, eager to be at the mine. After a hard day of work he would be ready to eat anything.

His horse, he said, was his doctor. "All anyone needs is a good liver shaking-up," he explained. Often he would climb the steep, 850-foot trail to the hilltop just for the effect it had upon his whole system.

Each year he kalsomined the interior of his home.

In his spare time he had worked out a unique irrigation system. No rusty pipes for him! "I gave the pipes a thought and decided to improve upon them," he said, simply. So he molded a concrete pipe 80 feet long to carry water from the well to his garden. This he buried in the ground knowing it would never rust out.

In dry seasons he shared his water supply with the deer. In 1934 about 30 head came to his door every morning. At times he was forced to wait many hours for fresh seepage. Just as he was about ready to pull out, the fall rains came and the deer soon disappeared.

Some years the snow measured 16 inches and stayed on the ground a week at a time. He always kept a pair of snow shoes in readiness for such occasions.

"But why do you live up there alone?" I asked.

"Well, you see," he replied, watching my face with an amused twinkle in his eyes, "I'm queer . . . and if I had someone living with me they might be queer, too!"

And so we left him there at the foot of his beloved Harqua Hala, the desert dusk closing in about him. As I turned away once more to face my own petty problems of complex living, my prayer of well wishes followed upward into the desert night—a prayer that again finds echo in the same good wishes after eight long years. On a recent trip through Aguila, enroute to Desert's new home, my husband and I stopped to inquire about this kindly old man who, once having met, one could never forget. We learned that he had come down from the mountain, that he had been seriously ill but was back on his feet again.

We found him at home this time and as he saw me his face lighted with a glow of recognition. Proudly he bade us enter his little new three-room home. The pass-



He built his cabin with his own hands—with materials brought up the mountain-side on a pack animal.

ing years had been very kind to William Ellison. It seemed but yesterday that I had met him on the mountaintop.

As we chatted he became reminiscent.

"I will never see the top of rugged old Harqua Hala again," he said, a little wistfully. "Looking back over the 32 years I lived there I recall both romance and tragedy."

The strings of my heart tugged a little as I followed his thread of thought for I remembered something he said to me that memorable day on the hilltop:

"We are governed," he had stated on that first visit, "by two emotions—judgment and feeling; but feeling is always uppermost in our makeup. Judgment tells me I should leave this hilltop now that I am getting old. But when I leave this place for a few days I always want to come back." He paused here to light his pipe. "There just isn't any other place in the world that means so much to me. So I guess I'll just have to go on all the rest of my life letting my feelings govern my judgment." He told us how he had broken his wrist five years ago on one of his trips to Aguila while cranking his old car and was taken to a hospital. He worried about his animals and made the return trip to his camp too soon. The exertion, in his weakened condition, was too much for him and for weeks he was very ill. Back on the mountain, he ate little food. The only time he got out of bed was to care for his animals. With one good arm, the other encased in a plaster cast, he drew water for them from the well. After being confined to his camp three months, he

packed a few things and made an attempt to reach the hilltop. He knew he could make the descent once he reached the summit. But half way up the little trail his strength gave out and he was forced to turn back.

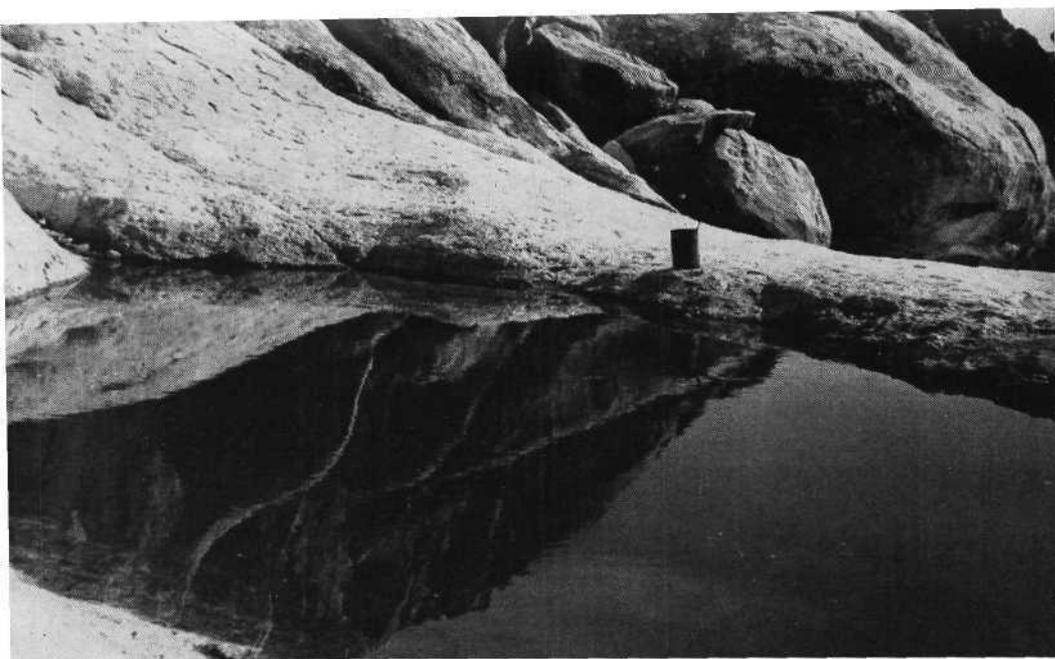
While groping his way back along the trail he heard the sound of an airplane and watched it as it circled his camp three times, apparently seeking signs of his presence there, then returning the way it had come.

Several days later he made a second attempt to leave the mountain and failed a second time. And once more from the trail he watched the airplane as it again circled his camp searchingly. Three more weeks passed and then Ellison knew that he must make one last try. This time he made it. And as he slowly worked his way down the mountain he was met by a party of friends who were on the way up to seek him.

But it is the romance that he remembers mostly—not the tragedy.

We made the climb once more to get pictures of the place as it looks today and upon our return, Ellison greeted us with eager anticipation as one who has been exiled in a far country awaits news from home.

May the beautiful vistas of fond memory continue to bring surcease and comfort to this kindly lovable old man of the mountain. And when at last the soft, sweet-scented winds of Harqua Hala waft the ashes he mentioned, may they fall gently upon the hallowed trails of his little earthly kingdom.



Photograph taken at Tinajas Altas in southern Arizona by Harold O. Weight.

WHEN THE MOON MAKES LOVE TO THE DESERT

By HALLIE NAY MACKAY
Hollywood, California

Lady moon sails down in her silver boat
Wearing her golden ring;
The desert smiles up from his glistening float
And softly the angels sing.
The evening star guides her ship through the blue,
Jeweled garlands in her hair.
She strews heaven's pearls of crystal dew
On her lover waiting there.
Each flowery dune breaks into tune
And rainbows over the sands are strewn
When the moon makes love to the desert.

The Joshua trees bow to her with delight
And the desert rose lends perfume to the night.
Love lights the yucca candles there
To guide the path of the lady fair.
The desert sighs as she sails along
And sings to her an old love song.
Hopes and dreams arise anew
To skies that sparkle with dazzling hue.
Each flowery dune breaks into tune
And rainbows over the sands are strewn
When the moon makes love to the desert.

DESERT MOODS

By CHARLES V. POWER
Desert Hot Springs, California

North Wind came—it took my roof,
But that's nothin'—it's no proof
That the desert isn't grand,
Don't build a house they say on sand.
So I started with a tent—
West Wind came and there it went.
Then I got lumber—used my hand
Found the desert plenty grand.
Rain came—washed my house away.
Lucky me—wasn't home that day.
Then I gathered rocks—bought cement
Figured I'd beat the element.
Earthquake foxed me—but I own the land
An' I'm a tellin' you—the desert's grand.

IMPASSE

By GRACE PARSONS HARMON
Los Angeles, California

The hills are powerful,
But the plains terrify them;
They halt abruptly
At the desert's edge,
Held back by its vastness,
Its solitude and its
Mystery!

MARKS OF THE CRUSADERS

By NELL MURBARGER
Costa Mesa, California

In the desert and the mountains,
Where but fearless may explore,
There are always signs and symbols
Of the men who came before;
Came and saw the land and claimed it—
Planted grain, and tree, and vine,
And in passing, left a message
Of their fight to hold the line.
Even when attempts proved fruitless,
Even though their hopes proved vain,
They left trails within the forest,
Left their mark upon the plain . . .
Marks which fell and aged and crumbled,
But which Time could not efface—
Marks which shout, "A man has been here;
Left his seal upon the place!"

"Left his mark that you might profit,
Might avoid mistakes he made,
And, as he did, add your little
To the Pioneer's Crusade . . ."
Crumbling cabins, sagging fences,
Flowers unknown to virgin view,
Shout like spirits of the Settlers—
"We have flung the torch to you!"

WELCOME HOME

By ARTHUR A. CRAWFORD
Evanston, Illinois

I spread my arms to the blazing sky,
And choked with a strange sensation,
And felt that I almost wanted to cry
With this quickly surging elation;
Took sand in my eagerly reaching hands
And let it sift through my fingers—
It's hard to describe how my spirit danced,
But that feeling of joy still lingers!
I bared my head to the dry, hot breath
Of the breeze from the desert plain,
And heard its voice, in a whispering rush,
Saying: "Welcome—you're home again!"

TAKE HOPE

By TANYA SOUTH

Think not that you now stand alone,
And God has turned His face away.
Whatever you have left undone,
God still is with you, and the Way
Unto the stars is still flung wide,
And Truth will guide.

Old Tin-can at a Waterhole

By WILLIAM M. MCKEEVER
Darwin, California

Wines I have drunk from sparkling crystal-ware;
Champagne, too, from goblets thin and rare;
Beer, stout, and ale from quaint lettered steins,
Cheered by the potion and the poet's sage lines.
But that cup cheering most my oft parched soul
Is the old tin-can at any waterhole!

It is rusty, dented, all acrawl with sundry germs;
Yet I accept libation on the simplest of terms.
A scour, a rinse to hamper whatever ill,
No counting the gallons I have drunk to my fill;
My fortunes, my life, my sin-tainted soul
Saved by old tin at a desert waterhole!
So traveler, take heed on whatever errand bent,
Engineer, rockhound, college-trained gent,
We prospector-folk have what care that we may
For every other pilgrim on the dry desert way.
Would you insure absolution for thine errant souls,
Just leave some bean cans at all waterholes!

UNDER NEW MANAGEMENT

By ALICE BANKERT
Denver, Colorado

We're the last of the pack
The old west is gone
We've watched her pass unafraid
Of the future she holds, we'll weather that too
Proud that her history's been made.
Our hearts mighta sunk
When we knew our last chip
Was gone for sure with her last roll
When we knew she was losing her fightin' heart
But it helped just to know that her soul,
Would go on to new hands
Wiser'n ours was
Bridle broke, givin' her best
Takin' her place in the plans of progress
A wiser and gentler, new west.

DESERT FANTASY

By RUTH B. PHILLIBER
Weiser, Idaho

Dame Desert stirs—and very soon
From slumber's couch she will arise—
To watch the weary last night's moon
Retire behind the greying skies.
The early star will guide to where
Her morning bath she daily takes.
It isn't far—just over there—
In bluely shimmering mirage lakes.

A chiffon scarf of purple haze
About her shoulders she will wear,
With cactus flowers of purest maze
All tucked throughout her sandy hair.

Then, in her gown of grey-green dressed—
So redolent of sage sachet—
And rose-pink blossoms at her breast
She keeps her rendezvous with Day.

OUT OF EARTH

By F. REDSHAW McGRATH
Los Angeles, California

A lean, brown squaw sits on the ground
And in her hand she rolls around
A lump of lifeless clay.
She shapes it in her skillful way
And paints it with design so neat,
Then fires it through the flaming heat;
Out of earth and heat and woman's soul
Comes a thing of beauty—a useful bowl.

*Within a cave he sat. And, in the gloom,
Fashioned by flint and fire a murderous club,
Which, when 'twas done, he sallied, naked, forth,
To spill his neighbor's blood upon the ground,
That he alone might rule, and own the earth . . .*

*"Lord, strengthen Thou my hands that I may slay!
"Power! Give me power—more power! My cause is just.
"Oh God of Battle and of Glory—Hear!"
(His cave is empty now. And in the Spring,
Above his bones, and ruins, wild birds sing.)*

*Rimmed by high towers of glass and gleaming steel,
He sat and pondered, lean and cold of eye.
And at his touch the lightnings flared and burned
And ghastly things of Steel, with mighty wings,
Sped high above the world—to give him power . . .*

*"Lord, strengthen Thou my hands that I may slay!
"And blast ten million lives at just one blow!
"Oh God of Battle and of Glory—Hear!"
(His towers shall perish, and the sea waves roll
O'er him who "gained the earth"—
and lost his soul.)*

—M.S.

Desert Trails

By MARSHAL SOUTH
Sketches by the Author

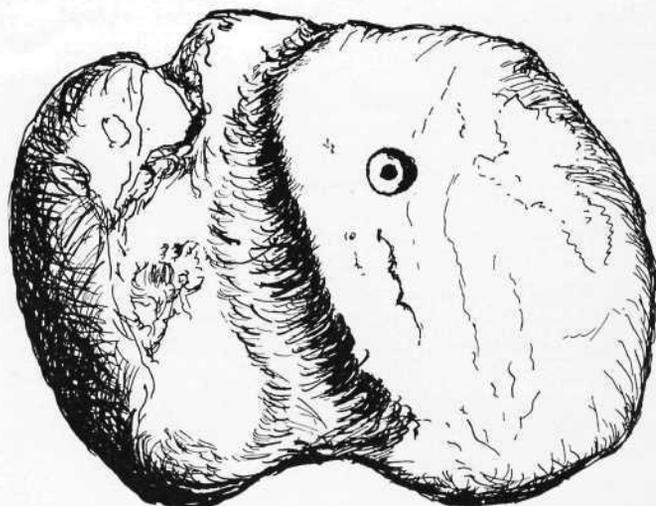
LIGHT grew in the east. On silver sandals, from the dusky dimness that was the distant line of the Rio Colorado, dawn came stealing across the desert. Coyote peak stood up cool and blue and phantomlike against the faint flush of the approaching sunrise. Far away, to the south, in the hazed reaches of the ancient river as it pushed towards the gulf, there lifted a dim column of smoke.

The desert was silent with the electric hush of expectancy—the old, old, ever-new miracle of a new day. Around the stony little open space where I had spread my bedroll the night before, tall mesal stalks, a-bloom in their full glory of yellow flowers, stood against the cool wash of the dawn like banners of gold. Already wild bees and a myriad of nectar-loving insects were gathering to the feast.

As the light brightened and the red ball of the sun rose out of the phantom mists of the eastern horizon like the fantastic dome of some Arabian mosque, I saw that all the ridge slopes around me were laced with a delicate weaving of gleaming silver lines—long, trailing streamers of spiderweb. In the glint of the sunrise they streamed and waved from every mesal stalk, way up and down the slope as far as the eye could reach. Fairy cables trailing in the softly stirring air like slipped mooring lines of a myriad dream ships that had set sail with the dawn. A hooded oriole came in a flash of color from across the ridge and perched on the stalk of a mesal flower almost over my head.

And it was then that I saw the olla neck. I had not noticed it the night before. It had been late when I had spread my bedroll. And I had been weary. But now, suddenly, just as the bird lit on the swaying flower, my eyes flashed to it. Was there some connection? Some strange interrelation of spirit-stirrings or magnetic currents about which we know so little? Who shall say? At any rate there the fragment lay. It was just under the shelter of a plump and bristling mesal plant and almost within reach of my hand. I scrambled out of my blankets and picked it up.

There is always something about primitive pottery that has



Ancient stone hammer found many feet below the surface of the ground at Pilot Knob. The dark eye is a hole that had been drilled one-eighth inch deep.

a particular fascination. It is a feeling that is deep and fundamental. After all, despite our advance along the road which is supposed to lead upwards from barbarism we have none of us come very far. Our heartstrings are still very closely interwoven with open fires and arrowheads and earthen pots. The bond between man and clay is still strong. It is a bond which, on this earth at least, can never be broken. The body of man is created of the dust of the earth—and so is the body of the pot.

Sitting on my blankets in the sunrise I examined my find. It was an olla neck—perfect, as far as the neck part went. And there was a bit of the side of the pot, about six inches long and three wide, in its widest part, still attached to one side. The rest of the vessel was missing. I searched among the mescals and found several other small pieces. But they were all tiny. The majority of the fragments which must have been strewn around when the pot broke had vanished.

A delicate and graceful pot. Smaller necked than most that I had seen. And very well made. The old Indian potters never used a wheel—which is perhaps why their pottery has so much soul. A wheel—the first step up the ladder of separation which leads from the soulful feel of handcraft to the soulless hardness of machine craft—destroys something in pottery. It is like all other mechanical inventions.

I sat a long time in the sunlight looking at my bit of hand-formed, baked clay. It was all at once more than just a bit of broken water bottle. It was a link. A timber in a vast bridge of souls that seemed to span, suddenly, all the tremendous stretch of space between the sunrise and my lonely hillside. The fingers that had made this fragment had been part of the vast human pattern of brotherhood of which I myself was a portion. The shadowy touch of them seemed to reach across the centuries. Almost under my own fingers I could feel the moist yield of the wet clay. In a breath, it seemed, my whole desert hillside was alive—peopled with an invisible unbroken procession of life. And was not raucous, jarring, trampling and shouldering life. It was a comforting, steady, all-enfolding ocean.

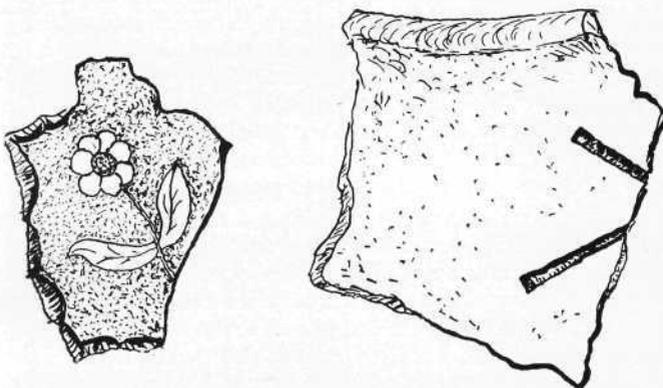
How many people are there who are interested in pottery? In primitive pottery sherds? The number is very great I imagine. Almost all desert-lovers are. It is a fundamental feeling. It is like following back along an old and well remembered trail.

And the trail has an endless fascination. Always, as one prospects for the traces left in the desert by its early dwellers, new angles and surprising discoveries are turning up. They do not have to be epochal or things that will shake the scientific world. There is just as much thrill in the simple finds (and probably just as much importance—when it comes right down to it.) Imagination is often a much more reliable guide than science

when delving into the past. Imagination speeds ahead—and senses. Science lags behind, poking in the dust and arguing over trifles. Science usually leans over backwards in a desperate effort to escape accepting a perfectly obvious fact. It is a painful life to be really scientific.

So, if you are independent enough to throw science and its dark glasses out of the window, you can have a lot of fun and acquire a very worthwhile understanding of human nature by collecting—and speculating over—the traces of primitive man which you will find almost everywhere in the desert. Human history, in this land which we today call America, stretches back to vast periods of romance and antiquity. The waves of human migration—the crest and ebb—the development and decline, form one of the most fascinating studies which it is possible to engage in. If you are not already familiar with the works of Churchward on the lost continent of Mu, you will find these books vastly interesting reading. Science is, grudgingly, being forced finally to consider this long known and very obvious evidence.

Even though you do not have the luck to find many—or any—perfect ollas or pots, you will most certainly discover a wealth of sherds. The desert is strewn with such an accumulation of these fragments that it provides much food for thought. Not



Left—Indians had attempted to chip an arrowhead from a piece of white man's glazed pottery. Right—Some design had been impressed into this bit of ancient pottery.

only as to the density of previous Indian populations, but also as to the duration of man's residence there. Most of these fragments are run of the mill—commonplace. But one never knows when something startling and thought provoking is going to turn up. Not only in pottery scraps but also in other evidence.

There was, for instance, the bit of old blue-and-white patterned plate—a looted piece perhaps from some burned wagon train. This provocative fragment, of which I have given here an illustration, was discovered down on the edge of the badlands of the Colorado desert. It is, of course, white man's pottery. But from it the dusky new owners—and perhaps also the murderers of some family of westward pushing emigrants—had endeavored to chip an arrowhead. Unacquainted with such hard pottery, and doubtless deceived by the glassy glaze into thinking that the material was akin to obsidian, they had tried to make an arrowhead from their prize. And had failed . . . What a story there may be behind this old fragment. He would be dull indeed who could not derive a thrill from trying to reconstruct it.

Then there are the occasional bits of painted pottery which will appear from time to time. These are always full of absorbing interest. Generally the potters of the Southern California desert tribes did not decorate their ware. So when you find a bit that has painted lines you instantly start a train of speculation. Did it come from the pueblo tribes, part of trade exchange? Did it come from Mexico? Or did it perhaps come from Asia in one of the ancient migrations? Then there is Mu always looming in the background. Did some potter of the ancient, vanished

continent originally fashion the pot whose remnant lies in your hand? Each possibility opens almost endless avenues of speculation. Clay, one of the most primitive of things, is also one of the most indestructible after it has been fired. It lasts and bears record. All the iron and steel and the fancy towers of a vain-glorious civilization crumble to rust and dust. But the pot that came from Mu may still survive. Fundamentals last. The further you get away from them the more perishable you become.

Or—and this is another fascinating scope for guesswork—the decorated bit you may happen to find may be a strictly local product. There were local potters who did decorate. There were only a few of them, it is true. But some did. Often this decoration consisted of inscribed lines, traced on the wet clay with a sharp stick or a thorn. But some of it was genuine painting. I have a friend who once found a fragment of highly glazed pottery in the litter of an ancient desert Indian camp. Was this glazing an accident? Was it local make or an import? Unfortunately there was just a scrap of the pot—just one. Questions like this are baffling. Sometimes it seems that fate enjoys beclouding the record.

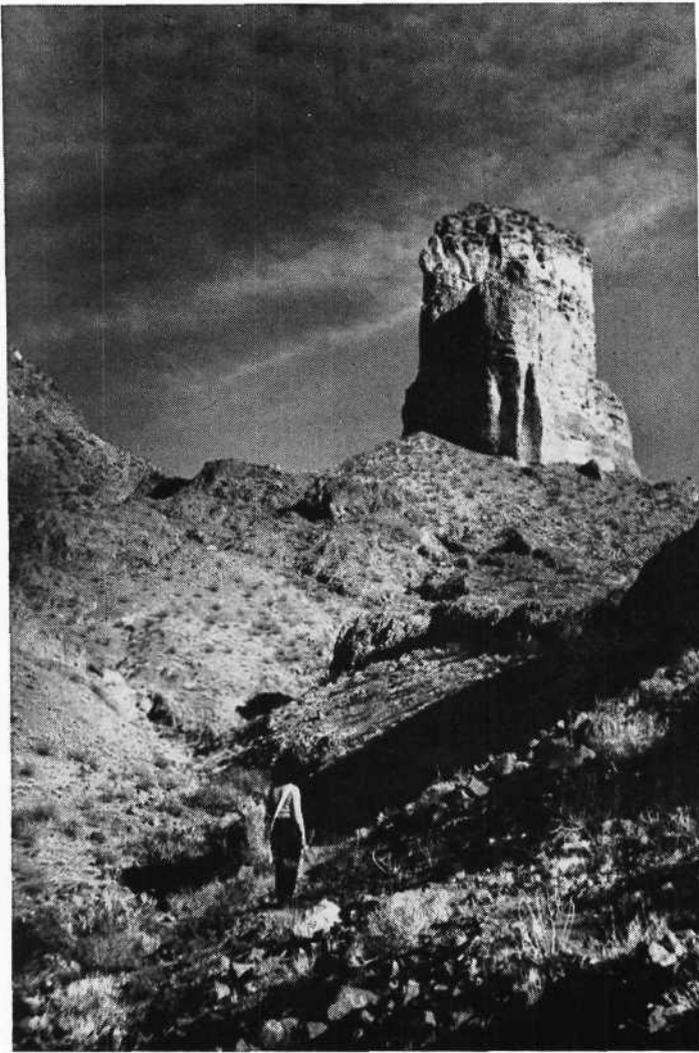
Then also there was the olla found in a cave not very far from Ghost mountain. Upon the side of that olla was a crude design of a man on a horse, with (as the discoverer told me) his feet pointing backwards instead of forwards. Was this a clumsy quirk of the potter artist—and primitive people seem to delight in such quirks—or was it an impression of an early Spanish horseman wearing the huge spurs which the Latins frequently affect? Here we have room for more speculation. This pot, however, dates itself. It was fashioned well within white-man's times.

The same however cannot be said of the bit of pottery picked up near the entrance to Sentenac canyon. This bit is undoubtedly very old. The illustration which I have drawn cannot show the crude texture of the clay or its color. But this bit shows the clear trace of some sort of an impressed design. Most designs are drawn crudely with a thorn. This one has been pressed in by some die or tool. It suggests the branching rays of a sun—or was it part of the arms and legs of a crude human figure? There is not enough of the design to answer these questions—and not another fragment of the pot.

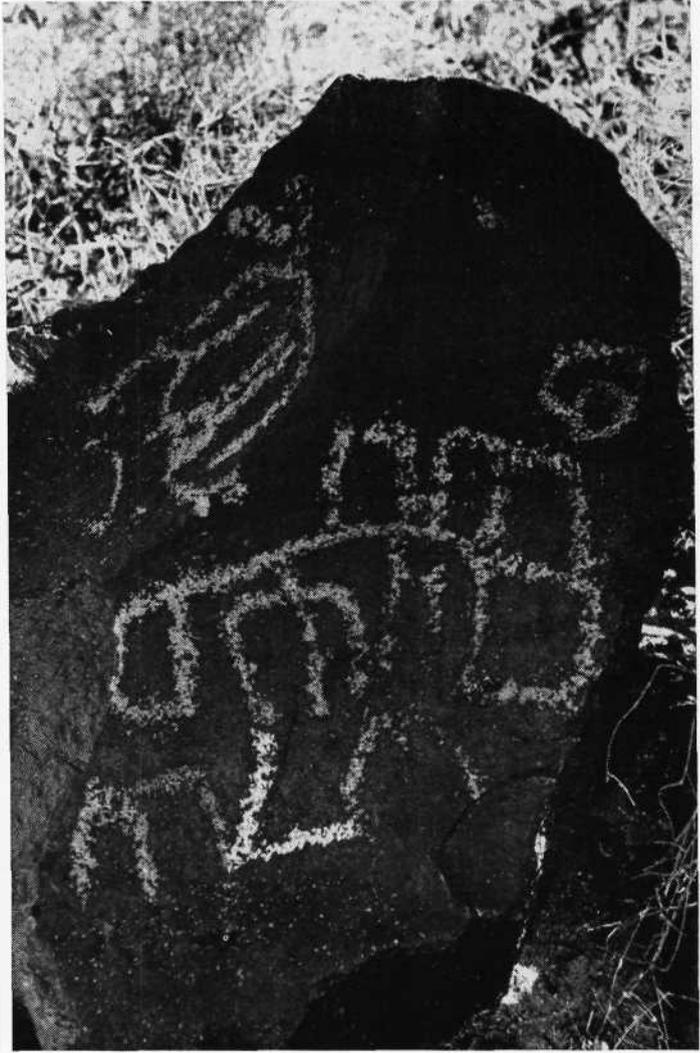
What also of the tiny pipe bowl, found buried in an old Indian campsite, also on the edge of the Colorado badlands. This relic is most probably not desert Indian. This little pipe bowl has evidence of glaze. It was obviously made in a mould of some sort, and was intended to be attached to a stem fashioned either from a quill or a reed. With it, at the same site, were found several small saucers, possibly used to contain face paint or for the materials of some witch doctor. Was this pipe bowl Chinese or Mexican? Or is it much older—or more modern? You can speculate.

Of undoubted antiquity however was the ancient stone axe—or hammer—head, discovered in 1937 by Robert Garmire, one of the earliest settlers in Imperial Valley. This relic, of which a sketch is here given, was dug up from a depth of many feet underground, in an excavation of the All-American canal, on the east side of Pilot Knob. Mr. Garmire, who was then—and still is—connected with the California division of highways, happened to be on the spot when the relic was uncovered, and it is still in his possession. How did it get where it was found? What sort of a man was it who dropped this primitive weapon? And how came the very obvious mark of a tube-drill on the side of the stone? More speculations. But they are a lure that beckons ever onward. Once a person starts down this trail of discovery and speculation there is no turning back.

So, if you are not already a student of the great book of the past, whose torn fragments are littered so generously over the desert, I recommend that you get started. It is fascinating. Also, broken pots, if enough fragments are found together, can be glued together and restored. Also, one can graduate to the actual making of pottery. There is a fascination in that, too, as I can testify—having done it.



Along the old Indian trail. Mohawk spring lies directly ahead in a small cliff in the wash.



According to one story these glyphs are a blue-print for the making of a primitive stamp mill.

On Turtle Mountain Trails

By HAROLD O. WEIGHT

WHEN Frank and Jesse Craik and Charley Brown were building a road through the Turtle mountains from Carson's well to their perlite claims, they were in a country seldom visited by men.

In this desolate region they found what Frank describes as "the blamedest contraption I ever saw." It was a home-made wheelbarrow crudely constructed of bicycle forks and parts from a washing machine and a baby buggy. A battered canvas-covered canteen still hung from the frame. The remnants of a shotgun, the barrel bent into a half circle, lay beside it. Near by Frank found part of a human jaw.

That is all we know about one early rock hunter who went into Turtle mountains and did not come out. The nearest road probably was 20 miles away when this determined prospector packed bacon and

Lost Arch Inn does not supply food or lodging to travelers in the northern end of the Turtle mountains of Southern California. It never was an inn and the arch for which it was named is not lost. But the isolated camp established by Charley Brown is the center of a desert wonderland for lost mine hunters, rockhounds, botanists and those who like to follow forgotten trails through scenic canyons.

beans, water and tools on his "contraption" and shoved it long sandy miles up the trackless bajada. He must have felt certain that golden wealth lay up the next wash, around the next bend.

Then he rounded his final bend and became one more mystery in that strange dis-

jointed range sprawling across California's Mojave desert west of the Vidal-Needles road. In the Turtles are many riddles: abandoned diggings, rock houses, arrastres, petroglyphs and deep-rutted trails that lead nowhere. And over-shadowing them all is the phantom of the Lost Arch and its golden nuggets.

When Lucile and I visited Charley Brown's Lost Arch Inn at the northern end of the Turtles, accompanied by Avis and "Dinty" Moore of Parker Dam, California, Charley showed us the crazy wheelbarrow, or what was left of it. We too were hunting rocks, but we belong to a new breed of prospectors. We were seeking stones which the wheelbarrow-pushing prospector would have kicked from the path of his primitive vehicle without a second glance—stones called carnelian and sard, moss agate and chalcedony rose. The present day rock hunter may visit this region without fear, thanks to the pioneers



The Moores at the end of the trail in Chalcedony cove.

who broke the roads through this desert land and developed its waterholes.

The Moores reside in the government-built village below Parker dam. "Dinty" works for the Reclamation bureau and Avis teaches the 4th, 5th and 6th grades in Parker Dam school. The duplex they rent from Uncle Sam pushes against canyon walls which rise so steeply the sun sets at 3:30 p. m. part of the year.

It was a pleasantly mild March night when Lucile and I drove up the river road. The moon was full and the broad Colo-

rado, winding between its willow and arrowweed-lined banks, was a glistening silver. Jagged mountain peaks on the California and Arizona shores stood out with unearthly clarity. Although it was late when we arrived at the Moore home, we discussed plans for tomorrow's field trip before going to bed.

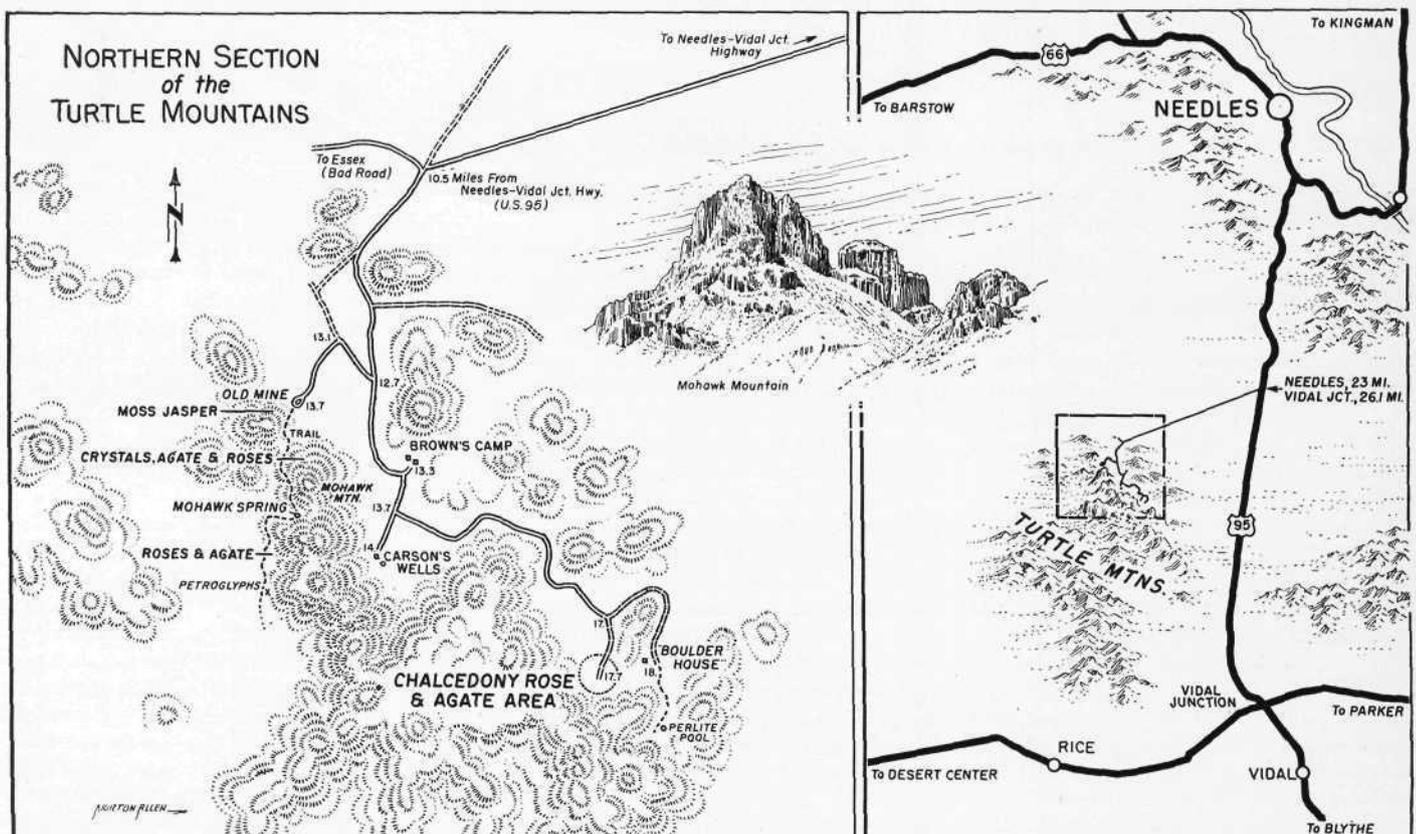
"The Turtles," Avis told us, "have everything." She showed us exquisite little chalcedony roses, stones cut from chalcedony spotted with the red of carnelian and brownish shades of sard. And there were

small opals with flecks of fire in their depths which she had cut from clear rounded nobbs found in a wash in the Turtles.

In the morning we saw Avis' collection of cut stones and silver work and the complete cutting and polishing shop the Moores have installed behind their home. Avis has been interested in lapidary work a long time, learning it at the high school in Kearny, Nebraska. Seriously ill when she came west five years ago she was given 18 months to live. Today she teaches full time, keeps house, conducts night classes, makes jewelry and spends weekends clambering over the desert after rocks. Credit for her regained health, Avis believes, should be divided between newly discovered drugs and the healthfulness of the desert.

She has many hobbies: leather tooling, ceramics, painting, needlework. She took up most of them when, partially paralyzed, she had to find work for hands and mind. But rock collecting is tops. "It's a three-way hobby," she explains. "You hunt and collect your material, work it into slabs and cabochons and make jewelry for the stones. You can work at it inside or out."

Dinty was purchasing agent, cost accountant, and in charge of rentals at the *El Tigre* mine in Sonora for many years, leaving when the property was taken by the Mexican government in 1931. The only American at the mine, he kept books in Spanish and English. But his interest in collecting rocks dates from his meeting with Avis, who taught him to cut and polish. Now it would be difficult to judge which of them is most enthusiastic. They



plan, before long, to establish their own jewelry business in conjunction with a rockhound tourist camp down river from the dam.

Recently Avis has installed a small cutting and polishing outfit in her school room. Students are permitted to do some of their work at home and use school time working in the shop and if they finish assigned work ahead of schedule, they can spend the extra time polishing. Problems of discipline have almost vanished in her classes and the children have cleared the surrounding territory of polishable rocks.

It was still early morning when we started from Parker Dam. The road led past foundations and chimneys where thousands of construction workers lived while building the dam. Below Parker bridge it climbs from the river valley and heads westward to Vidal Junction where we satisfied an inspector that we didn't intend to expose California agriculture to the assaults of out-of-state bugs. Then we drove northward on the long empty stretch of road between the junction and Needles. To the west, extending for 25 miles, rose the topsy-turvy buttes, the peaks and cliffs of the Turtle mountains.

Desert Magazine already has reported several rock trails into the Turtles (September, 1940; February, 1941; November, 1944). When Nature was building the range, she must have had an excess of silica on hand, and she must have decided to specialize on those beautiful little mineralogical bouquets called chalcedony roses. It is possible to find roses or pieces of roses close to the highway and up the bajada for many miles.

Most are battered by the ages of erosion and flash flood which brought them from parent-seams in the mountains to their present way-station. But, in compensation, those spotted with reds and browns seem deeper and richer in color than the ones just weathering out. There is a theory chalcedony is changed to carnelian and sard through centuries of exposure to moisture and to the ultra-violet of sunlight. Desert purple glass and the skins of visitors who do not protect themselves prove that sunlight can alter the color of objects.

We reached the turnoff to Carson's Wells, 26.1 miles north of Vidal Junction. Most approaches to the Turtles can cause trouble for stock cars, but this is a broad, straight bladed road to the foothills of the range and a reasonable one from that point to Charley Brown's Lost Arch Inn. Beyond the Inn, the tracks degenerate rapidly and at places it is difficult to determine where roads end and the trails of the mountain sheep begin.

An Automobile club sign marks the highway turnoff to the wells. Either the sign has been moved from its original location or road reconstruction has shortened the distance from the 18 miles marked to 14. Along the road Lucile identified the blooms of burroweed, desert lavender,



Above—Frank Craik with the crude wheelbarrow and gun with which a prospector once trekked into the Turtle mountain country—and failed to return.

Below—Starlight picture of Mohawk mountain. Four-hour exposure.

ender, encelia, loco weed and chuckawalla's delight. But the real display began when we reached the base of the foothills where the cactus was staging its spring show. Beavertail loaded with rose-magenta flowers spotted the slopes and mixed with them were Engelmann's echinocereus with blooms of almost the same shade. Scattered through the show were the honey-colored flowers of the teddy bear cactus and a salmon pink prickly pear.

And as we went on, higher in the mountains, we found rose-magenta pentstemon, white tackstem, lupine, purple phacelia, poppy, suncups, chia, apricot mallow, lilac mariposa, white four-o'clock, cream-flowered nicotiana, fiddleneck, ephedra,

tiny orchid-lavender gilia, little rock daisies, crimson chuparosa and Mojave aster. There were no mass displays, but flowers bloomed on every slope, in every wash we searched.

When Avis Moore told us, "The Turtles have everything," she was speaking of rocks for specimens and cutting, but the statement applies in a much broader sense. The Turtles have a thousand facets to interest those who come to the desert seeking release from the tension of mechanized living. One who delves into them for rock alone, so absorbed in his hobby that he cannot see the flowers, the stark beauty of butte and cliff, the half-obliterated evidences of those who have been before him,

is cheating himself. In the same way, the man who closes his mind to the beauty, the wonder and history Nature shows in stone and crystal receives but a poor part of what the desert has to offer.

A faded sign over the door of the building at Brown's camp, 13.3 miles from the highway, proclaims it the Lost Arch Inn. But visitors expecting accommodations other than a friendly welcome and information about the Turtles will be disappointed. The Inn was named for a large natural arch in the great sweep of cliffs facing the camp. A French architect from Los Angeles visiting Charley Brown 16 years ago became so enthusiastic about the story of the Lost Arch gold that he painted the sign, using a stub end of rope for a brush, and hung it over the door.

One of the most persistent legends of the desert, the tale of the Lost Arch diggings (*Desert*, February, 1941; November, 1944) has many versions. Most of them show ignorance of Turtle mountain topography, but they are in general agreement on a natural rock arch which is the landmark for a rich gold placer. Following meager clues, prospectors have risked and lost their lives in the Turtles, and perhaps that was the will-o-the-wisp the man with the wheelbarrow followed.

Charley Brown, who came to the Turtles in 1922, was at the Inn when we first visited it in March, 1947. Charley pointed out the big arch. It was wide enough to drive two cars through, he told us, and there was another big one right behind it. Charley didn't have much faith in the Lost Arch story. With gun, canteen and blanket he had taken long, lonely prospecting trips into the Turtles and he had found scores of arches. "There are just about as many as there are people hunting the Lost Arch mine," he said.

Charley did have faith in mining future of the Turtles and he held many claims. There was ore right behind the buildings of the camp which tested \$3 a ton, gold and silver. He led us to a spot near the Inn where he had uncovered some colorful chalcedony and moss agate. "Take all of it if you want to," he told us. "If it doesn't have gold or silver, I'm not interested." As we walked back to the buildings he pointed out great clumps of golden encelia and purple phacelia in bloom. "There's my garden," he said. "Mormon colors, too."

Charley Brown died in the hospital at San Bernardino, April 12, 1948, 77 years old. He was a desert old-timer who had prospected and mined and fought all over the Southwest and Mexico. For years he was the law in the Turtles—"sort of shirt tail to a deputy sheriff," a friend described him. There is ample evidence that he could be as harsh as his desert habitat. But to visitors in his mountains, he was friendly and helpful and gentle. Those who knew him will miss him, and much of the unwritten history of the Turtles has gone with him.

The buildings at Lost Arch Inn once stood at Carson's Wells, which lie in a clump of mesquite in an arroyo .7 of a mile to the south. Today one of the wells is filled in, the water in the other is undrinkable. Only the ruins of a stone cooler and a small one-room shack stand in the clearing on the bank above them.

On our first trip we followed the track from the inn toward the wells for .4 of a mile, then turned left. The road dropped into a wash and wandered erratically southeastward, its course determined by bushes, gulches, valleys and hills. We saw chalcedony beside the road, but we were heading for the wash where Avis had found the fire opal. At 17 miles from the highway—

3.7 miles beyond Lost Arch Inn—we took a right branch and continued .7 of a mile to the end of the road in a great cove surrounded by towering buttes and cliffs of many hues of red, green and buff.

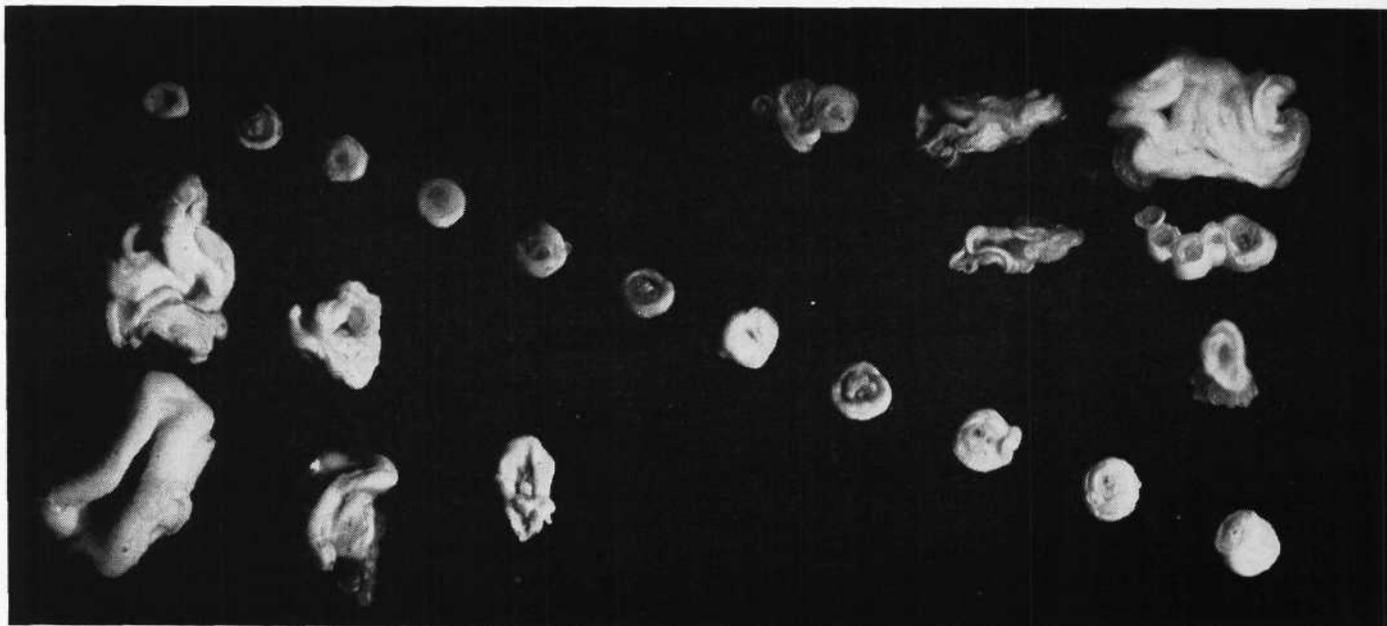
After setting up camp, we hunted until dark. Avis showed us the clear, colorless knobs of what appeared to be hyalite associated with the chalcedony flowers. Those, she said, would cut to show fire. They were not plentiful, but we found several. There was so much chalcedony weathering from the steep slopes on the northwest of the wash—colorless, white-banded, spotted and striped with carnelian and sard—that we called the spot Chalcedony cove.

In the wash Avis found a small arrowhead, evidence that hunters had been in the cove long ago. On the southeastern side of the wash where masses of conglomerate have fallen from the cliff, we found a partially hollow boulder converted into a rock house by stone walls, front and rear, doorway and windows. Later we were told it had been constructed many years before by a Dutch prospector who was killed unloading mining machinery before he could occupy his rock home.

Darkness interrupted our explorations. We woke next morning to the odors of hot cakes and coffee. Dinty was making half a dozen cakes at a time on a griddle over the open fire in the wash, and flipping them professionally. But he was kept busy assuaging appetites sharpened by hiking and by a night's sleep in the keen air under the desert stars and moon. The day went quickly, and we left the cove reluctantly, promising ourselves a return visit.

When we came to the Turtles again in April, 1948, Jesse Craik — Charley Brown's partner—and Frank Craik, Ernie Stender and Ken Lavelle were at Lost Arch

Chalcedony flowers and buttons from the Turtles. Lucile plans to make a set of decorative buttons from the little ones.



Inn. Jesse came out to spend a weekend with Charley many years ago, and he has been in the Turtles ever since. They all are desert people, and from them visitors may learn much about the history and geography of the Turtles and have a few tall tales thrown in.

Ken Lavelle told us about the petroglyphs along the old trail past Mohawk—or Tunnel—spring, on the west slope of the Turtles. Ken hasn't been in the Turtles many years but he has penetrated them deeply. He packs a portable aluminum cabin on his car and sets up wherever the country looks interesting. At present it is located close to the Inn. One day Ken sat on his folding cot trying to identify a mineral he had found, when a wandering Mojave breeze chose to include the cabin in its path. Quite suddenly Ken found himself blinking in the sunlight. The whirlwind had lifted the cabin right over his head—clearing him by several feet as he sat on the cot—and dumped it across the wash. Today Ken has the cabin anchored.

Ken heard about the odd petroglyph from a visitor interested in lost treasures and mines. The treasure-hunter had it all figured out. The petroglyph, which was close beside an unusual shaped stone, was a blue print of the manner in which that stone had been counterbalanced and used as a primitive gold stamp mill.

We had never seen a petroglyph blue print. We zigzagged across the valley and followed an old road to the point where it looped around a large mine dump. Faint traces of a still older road continued up the slope and beside it was a deeply grooved trail. We followed the road traces .2 of a mile farther and camped beside a wash at the base of Mohawk mountain. The trail Ken had told us to follow cut over the shoulder of the butte beside which we had stopped.

The petroglyph almost lost out to moss agate and colorful jasper right at the start. We found chunks on the northeast slope of the butte, so stained by desert varnish that most of them showed the beauty within only when chipped. The majority of the pieces were small and many had pits, but material which will make beautiful stones can be collected by those who will hunt and grunt.

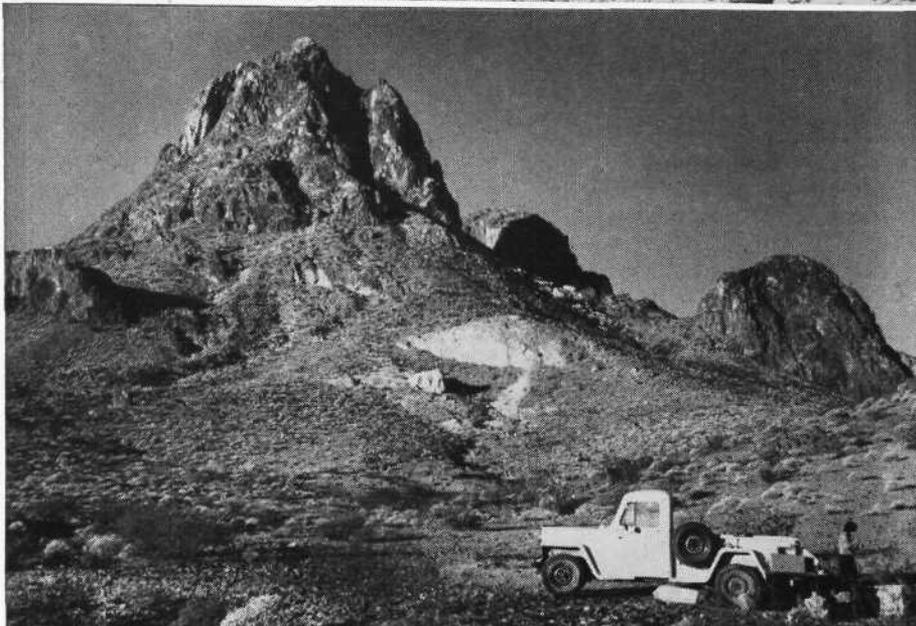
Remembering the petroglyph, we took the trail and climbed across a saddle to the slopes of Mohawk mountain. Here our progress was halted again as we found quantities of small but beautiful buttons of chalcedony and little chalcedony flowers ringed with quartz crystals. Later investigation showed these buttons and larger flowers and chunks weathering out of greyish outcrops on the slopes of Mohawk mountain.

We did reach the petroglyph, at the end of about a two-mile hike. As far as Mohawk spring, the trail has been cleared and blasted so thoroughly that it can be followed easily despite decades of disuse.



Above—Avis Moore with a chunk of agate found in the Turtles.

Below—Charley Brown who came to the Turtles in 1922. Picture was taken about a year before his death in April, 1948.



Above—Chalcedony roses weather out of rhyolite and softer rocks in many places in the Turtles.

Below—The author camps at the base of Mohawk mountain. Chalcedony and agate are weathering out of light-colored outcrop in center.

Probably water from the spring was hauled down it on mule back while the mine near which we had camped was being developed. The spring is located in a short tunnel which has been cut into the cliff in the V of a canyon. High above rises a majestic pillar in pale buffs and creams, contrasting with the surrounding dark peaks, ridges and domes. The spring—it is really a seep—lies behind the bright green foliage of a mesquite tree. Originally it was known as Mohawk and apparently miners, following it back into the cliff, have called it Tunnel spring.

Indians unquestionably used the spring. The trail we followed beyond it was laid out by them. That trail became fainter as we hiked farther, until it could only be followed by sighting the rock markers placed along it long ago. At last, across a wide wash we saw a large boulder which

looked like a huge pestle. When we reached it, slightly above the present trail, we saw the "blue print" on a large rock near by.

This lone petroglyph along the Mohawk trail is a strange one. If it marks the way to water, there are none of the usual water signs. It has too many blocks, too many sharp angles to suggest a trail map. There are no sheep or deer to show that an ancient hunter was bragging. But I do not believe that Indians simply "doodled" on rocks to pass the time. It would be so much simpler to scratch figures on sand. Someone was trying to say something. The petroglyph does look more like a plan or an abstraction than any other I have seen. And the darkening of the scratched lines would indicate it was done long ago.

Perhaps it is a clue to an ancient mine.

Perhaps it marks the way to a lost Indian village which could be found by following trail traces across the desert. It is another of the enigmas which confront those who wander the forgotten by-ways of the Turtles. But it is a problem which invites further investigation. And if it leads neither to gold nor to ruins, we will not be disappointed. There will be rock to collect where we search, flowers to see, savagely beautiful mountains and canyons to admire, and perhaps more of Charley Brown's many arches to speculate on. For those who love the desert, the Turtles offer endless variety.

LOG

Vidal Junction-Needles highway to Turtle mountains—

- 00.0 Carson Wells turnoff. 26.1 miles from Vidal Junction, 23 miles from Needles. Auto club sign marks turnoff and there is an "Abandoned Artillery Range" army sign almost opposite on east side of highway.
- 10.5 Road fork by old mailbox. Keep left.
- 11.7 Road fork. Keep left.
- 11.9 New appearing road left, now being worked by Craiks. Keep right.
- 12.7 Reverse Y. Keep ahead for Lost Arch Inn. Right for Mohawk mountain.
- 13.3 Lost Arch Inn.

Lost Arch Inn to Chalcedony cove—

- 00.0 Lost Arch Inn. Take road south, to Carson's Wells.
- 00.4 Turn left. Other branch continues to Carson's Wells, dead ahead, .3 of a mile.
- 00.6 Road enters wash.
- 2.8 Road crosses deep, narrow wash. Drivers of low cars advised to check before attempting. Good carnelian and sard, limited quantities, on the slopes up to the main mountain range.
- 3.7 Road branch. Turn right. Left branch continues one mile, dead-ending near perlite claims and natural water tank, Perlite Pool. Road bad, chalcedony fairly plentiful.
- 4.4 EOR in Chalcedony cove.

Lost Arch Inn to Mohawk mountain—

- 00.0 Lost Arch Inn. Backtrack from inn toward highway.
- 00.6 Take left fork (well traveled) of Y, go through rough wash. You are heading for a mine dump which can be seen near foot of mountains to the west.
- 1.0 Reverse Y, turn back, left, on old road.
- 1.6 Old mine dump and prospect hole, with road loop around it. Car can be driven up bajada to
- 1.8 Edge of wash. Traces of old road, impassable for cars, continues across wash, up slope of Mohawk where grey outcrops mark chalcedony rose field. Old trail goes up slope of butte, right, to Mohawk spring.

LETTERS...

Habits of a Scorpion . . .

Los Angeles, California

Desert:

In the summer of 1934 I was placer mining on the Applegate river in southern Oregon about 35 miles from Medford, and during the noon hour was sitting on a log eating my lunch.

I was startled by a large black scorpion which had leaped and captured a big fly. Now the sun was shining—it was noon. So, if the scorpion is strictly nocturnal as Richard L. Cassell says in his fine article in the May *Desert*, I wonder if I saw something unnatural—or why was that scorpion out hunting in midday?

JOSEPH P. OSWALD

Natt Dodge, Park Service naturalist, says scorpions "normally" remain in hiding during the day. William H. Carr, John Henry Comstock in his "Spider Book," Dr. Herbert Stabnke and Encyclopedia—all authorities on the scorpion—say they are nocturnal. However, it also is true that under differing environmental conditions the habits of all living things are in constant process of change. In Nature there are frequent exceptions to the "rules."—R.H.

Steve Ragsdale Started All This . . .

Littlerock, California

Desert:

I agree with Steve Ragsdale's letter in the May issue that *Desert Magazine* seems to have more pages devoted to rockhounds than your total space warrants.

There are magazines for reclamation, rockhounds, livestock raising and the like. You cannot possibly cover the field as each one does. I think that a majority of your readers prefer the *Desert Magazine* to cover the field of the desert in a general way and without delving too deeply into any one subject.

RALPH L. POWER

Banning, California

Desert:

Here are a few words you might whisper in Steve Ragsdale's ear. Tell him how many columns of advertising you receive from rock and mineral dealers and supply shops. Mention the fact that rock collectors buy a very large percentage of the *Deserts* sold on newsstands.

We know we rockhounds are nuts—and so do the little wild burros in Death Valley. They come up and stand around and stare at us when we are out tramping around in their territory. We have a lot of fun, and we love the desert and know the canyons and waterholes. Tell Steve that the lizards in the mineral fields have got-

ten so well acquainted with us they come out and stand in rows and bob their heads up and down and wave their left paw in greeting. No hard feelings toward Steve. He's a good desert rat—and there's room on the desert for all us nuts—both Steve's kind and our kind.

AL SHOWMAN

Tucson, Arizona

Desert:

About this *Desert Steve Ragsdale* and his letter in the May issue—nuts to him. Lots of us who aren't experts in the matter of rocks like to hunt them, and read about those who know more than we do. Even before I became interested in geology, I usually read the articles about field trips to rock sites, and simply passed over the pages devoted to gems, rocks and minerals. I advise Ragsdale and his ilk to do likewise. Of course, I'd like to see more articles about the fauna of the desert too—in other words, a bigger magazine with the present amount of rockhounding plus added material in other fields.

Another letter in the May issue theorizes about Navajo religion on the basis of Frazer's *Golden Bough*—from which the good Lord deliver us. Can't you please print somewhere a list of the sound anthropological studies which have been done on Southwestern Indians since Frazer's ancient—anthropologically speaking—day? It seems to me it's time to call a halt on such arm-chair romancing about cultures which happen to differ from our own, and get down to understanding them. One of the main Navajo problems is that too many Americans still look upon them as relics or penned-up oddities instead of fellow American humans.

Now I have a plaudit for the magazine. Weight's article on the Salton Sea "Nature's Freaks" was really appreciated in this family. Early last month I took my mother to the Bay area on a business trip, and allotted a day on the return trip to this locality. We took your magazine along, followed the map, saw the mud geysers and collected some obsidian. My mother said she hadn't known such things existed in this part of the country, and was very taken with the whole area. She said I must write and tell you what an excellent field trip the article outlined. I agree wholeheartedly, and look for more of the same.

HENRY F. DOBYNS

A Mind That Stays Young . . .

Sherman Oaks, California

Desert:

Countering the occasional suggestions in your letters page urging more of this or more of that, allow me to suggest that the

balance of subjects now used is precisely what makes the magazine so widely popular. Personally, I used to be interested only in limited subjects—but because of the great variety of subjects treated by *DM I* now find all of them of interest to me, and my knowledge of the desert increased thereby. I consider myself a well-informed old-timer as far as the desert is concerned, but I have learned a lot from the pages of *Desert Magazine*.

JOHN R. POSS

Kit Carson's Daughter . . .

Mono Lake, California

Desert:

I was interested in Charles Kelly's "Utah Mountain Man" in your May issue. However, with reference to Kit Carson's daughter, Adeline Carson Stilts, I would like to bring Mr. Kelly's information up to date.

Adeline Carson Stilts is buried in the grounds at Mono Inn, of which I am the owner, and at the time of our Mark Twain Days celebration in August, 1929, I erected a monument over the grave and it was unveiled by Henry B. Walthall.

If Uncle Louie Simonds story, as reported by Mr. Kelly, is true then Stilts must have been the man Adeline ran away with because she and her husband came to Mono diggings with the Wilson family. Mr. Wilson homesteaded the property now known as Mono Inn. When Adeline died he buried her on his property close to the shore of Mono lake.

We are asking that a marker be placed on Highway 395 as a guide to the grave.

VENITA R. McPHERSON

Missing Prospector . . .

Los Angeles, California

Desert:

For many years we have been trying to get information about our father. Born in Ontario, Canada, he came west 40 years ago and we have had no word from him for a long period. His name was James Henry Caesar, and as he was interested in mining and the desert, perhaps one of the old-timers will be able to give us a clue.

CASSIE BALLARD

The Farce of Border Inspection . . .

Los Angeles, California

Desert:

Referring to the item about the man who flew camellias into the state and was caught and fined. Has it ever occurred to you—or to anyone else—that this border examination of tourist automobiles is a terrible farce. It would be laughable, if it were not so ridiculously pathetic and childish?

I have made numerous trips out of the state by car, and as a rule return by way of the Yermo inspection station. Each time I am forced to stop and allow the inspectors to go through my luggage, for fear I might

bring into the state a diseased or infected plant of some sort.

I have always accepted this nonsense with good grace, knowing that the men there are merely doing what they are hired to do. But, and a very large but at that, while I am detained there a transcontinental train whizzes past with a dozen or so coaches filled with passengers whose luggage may be filled with all sorts of contaminated fruits or plants or whatever it is that has our experts in Sacramento so wor-

ried. Why should an automobile be so much more suspect than train passengers? Also, while I am outside of the state there is nothing to prevent me from shipping in by freight, express or mail anything I may see fit.

Has anyone, except myself, ever seen the utter futility of this border inspection, or could it be that some way has to be provided to employ agricultural college graduates?

A. C. SORENSEN

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DESERT CRAFTS SHOP — — — — — El Centro, California

Shrine for the Trail Hounds Indio, California

Desert:

Would it be an acceptable idea for each of the gem and mineral societies who get so much pleasure out of Desert's field trips to contribute a native plant or rock toward the landscaping of the beautiful site of your new publishing plant at Palm Desert?

The rockhounds have played so important a part in the progress of Desert Magazine I think most of them feel a personal interest in your project, and would welcome the opportunity to add some symbol of their interest to your landscaping plans.

How does Desert's staff feel about this?

BARNEY BARNES

Thanks, Barney, for the kind thought. Desert's staff has been mulling over the idea of having a "Trail Shrine" such as the desert Indians placed along their trails, in the garden in front of the new building—where each visiting rockhound, and others as well, could deposit a colorful stone for "good luck on the journey." There would of course be a register for the trail-hounds to sign as they paid their homage to the gods of travel. If enough of Desert's readers like the idea, we'll do it. More about this later.—R.H.

In Memory of Chief Tecopa Downieville, California

Desert:

About four years ago you had an article in Desert about Chief Tecopa with his picture.

Not long ago I was talking with an Indian named Bob Lee in Pahrump valley about Chief Tecopa and he told me that he was at his funeral and had seen them toss in the tall hat and band suit before the grave was filled. Bob Lee showed me where the grave is located. We found it badly neglected and sunken.

Several members of the "Lone Scouts" have filled up the grave of the Chief and those of his son and nephew who are buried on each side of him. They also placed a wire fence around the graves to keep airplanes from running over them when landing. When the landing field was graded the men had leveled one of the graves and made it part of the runway. The Indians resented this very much although few of them knew whose grave it is.

Bob Lee has promised to make a marker of native stone and with the help of the Lone Scouts place it at Chief Tecopa's grave. The Indians are counting on the help of the whites to make it something of an occasion.

The Indians would feel proud and happy if you would take some notice of their efforts.

CLARA E. STURMAN

Lupine Leads the Floral Pageant

By MARY BEAL

THE DESERT has many Lupine species which contribute much of the blue and purple color of the floral pageant, often in lavish profusion. I have seen great sweeps of Lupine that came into view from a distance as impressive blue lakes. Most vivid in my memory is such a "lake" that loomed up miles ahead in a high valley at the eastern end of Ord mountain in the central Mojave desert. As we crossed its miles of purple-blue, there were, at intervals, flames of Apricot Mallow for variation, almost scarlet in color, with now and then the tall pale-yellow plumes of Stanleya rising above the sheets of brighter hue. In the midst of that Lupine assemblage I found plants with white or delicate pink blossoms, exactly like the blue-flowered plants except in color. One plant even sported both white and blue racemes. A pleasing fragrance added to the charm of the delightful spot.

Lupine, an important genus of the Pea family, is widespread in western states. One species, known as Blue-bonnets, is the state flower of Texas and overspreads great stretches of plains and sandy wastes.

The genus is perplexing in its variability of species but one distinguishing feature is the palmately-compound leaves, divided into 4 to 17 leaflets radiating from a common center and inclined to fold at mid-day.

The foliage of some species is considered good forage for livestock but many others have the reputation of being toxic, especially to sheep. The seeds of several species are known to be poisonous and many others are under suspicion. Some Indian tribes made use of the seeds for food by boiling them to extract the bitterness and poison.

The species so prodigally abundant is the commonest one of arid habitats, often known in everyday terms as Mojave Lupine, or just as Desert Blue Lupine, but classed botanically as

Lupinus odoratus

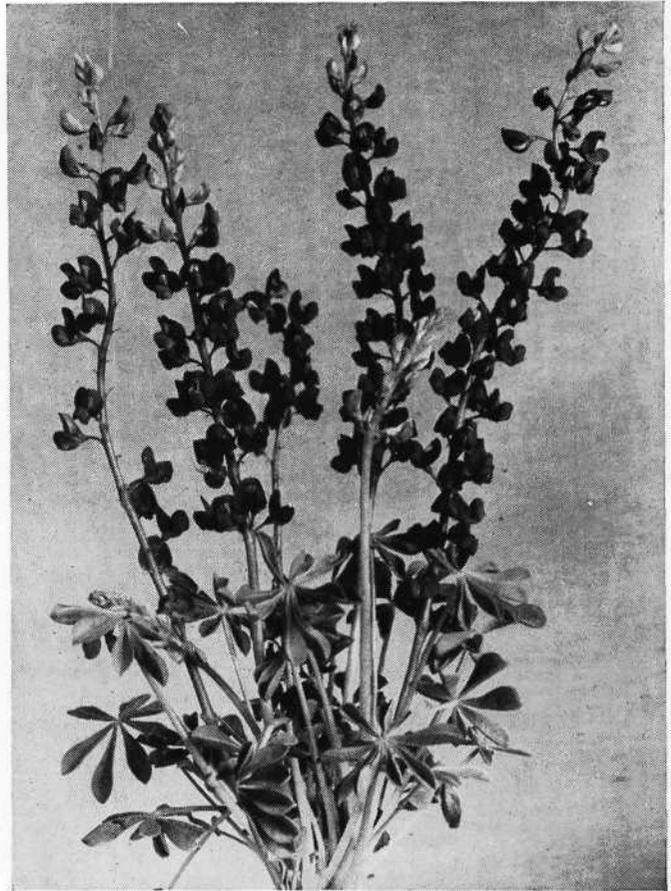
This delicately fragrant annual varies from 3 to 10 or 12 inches in height, the herbage nearly hairless or somewhat hairy. There is a variety, pilosellus, with stems and petioles conspicuously clothed with soft spreading hairs. The stout main stem is very short or shortly-branched, bearing several or many long-petioled leaves with 5 to 10 spatulate to obovate leaflets, $\frac{1}{2}$ to 1 inch long, and several or more rather open (sometimes dense) erect racemes of deep purple-blue flowers, quite a rich shade, the banner centered by a yellow or white spot, the corollas arranged in the common Pea blossom fashion of banner and wings. The oblong pods are about $\frac{3}{4}$ inch long, smooth and bald except for hairy margins.

Look for them on sandy plains and mountain valleys up to 4500 feet elevation in the Mojave desert and adjacent Arizona and Nevada from March through May. Several years ago when Army worms were devastating vegetation, I saw a phalanx of the ravaging pests eat their way through one of my favorite tracts of Mojave Lupine, leaving that stretch of the wide Calico wash with stark bare stems, denuded of leaves and blossoms. Next year those erstwhile acres of beauty carried only scattered spots instead of a great sheet of purple-blue.

Among other Lupines in the blue class are the following—

Lupinus shockleyi

A low very hairy plant, seldom over 5 inches tall, rarely up to 8 inches, the short stems and long petioles densely clothed with long soft hairs. The 7 to 10 spatulate leaflets are very



One of the commonest Lupines in arid regions, *Lupinus odoratus* is called Mojave or Desert Blue Lupine.
Beal photo.

silky-hairy on the under side, but hairless and bright green above except for narrow margins of hairs.

It is found on sandy flats and washes in the western Colorado desert and the Mojave desert, western Nevada and Arizona in April and May. One of the less noticeable species, not given to foregathering in great multitudes.

Lupinus rubens

The Red-stemmed Lupine is another hairy annual, 3 to 6 inches high, the stems and lower surface of the leaves beset with coarse stiff hairs as well as soft fine ones, the upper surface of the 6 to 9 leaflets being hairless and green. The short main stem branches near the base but first the terminal raceme rises erectly from the center, followed later by several flowering branches.

It favors dry sandy soil and may be found from April to June in the eastern part of the Mojave desert, northwestern Arizona, southern Utah and Nevada.

Its variety, flavoculatus, develops the very-flowery, wide-spreading branches early and frequents the Death Valley region and the Providence-New York mountains area in the eastern Mojave desert.

Smoke Trees Blooming on Colorado Desert . . .

The desert smoke tree, *Parosela spinosa*, was blooming for the Memorial day weekend in the washes of Yuha and Borrego badlands, and those leading down from the Santa Rosa mountains. Small trees, greyish stems and spines almost hidden by masses of blue-lavender and blue-purple flowers could be seen by motorists traveling along Highway 99 on the south shore of the Salton Sea. Larger trees were covered with thousands of buds, promising later and more spectacular showings. The smoke tree is a member of the pea family, its blooms resembling those of small wild sweet peas.

Mines and Mining . . .

Reno, Nevada . . .

Tests on gravel from the Rosebud placers of northern Pershing county have revealed the presence of gallium, rare metallic element resembling aluminum, according to Maurice Constant of Reno, who made the tests. Constant said that the gravel, from the properties of the Constant Minerals Separation Process, Inc., showed a content of 10 to 45 grams of gallium per ton, with current price of the metal \$40 per gram.

. . .

Washington, D. C. . . .

A house mining sub-committee has voted to suspend for this year the requirement that claimants to mining property must do at least \$100 worth of work on their claims annually. The senate interior committee has approved similar legislation. Both bills must be approved by the full committee and voted upon by both houses. The interior department has objected to the legislation on grounds that assessment requirement encourages development of new mineral resources. Rep. Frank Barrett, Wyoming, declared that because of present labor costs, only an insignificant amount of work can be done for \$100. In the meantime, miners have been warned that, according to present interpretation, the assessment work must be completed by July 1, 1948, or the claim will be open for relocation.

. . .

Salt Lake City, Utah . . .

The state of Utah holds title to the salt and minerals in Great Salt Lake and should collect a royalty on minerals removed from the water, the state land board has been informed. Attorney Edward W. Clyde, retained by the land board to review the question, said a recent state supreme court decision holds that the state owns the bed of the lake and ownership carries with it title to minerals in solution. The right to remove waters from the lake does not give any company the right to state-owned minerals in solution, according to Clyde.

. . .

Trona, California . . .

Production and sales of American Potash and Chemical corporation reached an all-time high during 1947 and income increased about 40 per cent, officials announce. The Trona plant produced 594,764 tons of chemicals during the year and sales totaled \$13,637,700. First unit of the \$2,000,000 power plant expansion was to be completed in May, with the second to be ready in October. Construction of the new \$5,000,000 soda ash-borax plant has proceeded on schedule and it was to be completed during June.

Battle Mountain, Nevada . . .

Barium Products company of Modesto, California, is opening a new barium property on claims purchased from Rossi brothers and Frank Childress, 25 miles south of Battle Mountain, two miles off the Battle Mountain-Austin highway. A road has been built to the property and the company will reportedly place large scale equipment on the ground where work has begun on storage bins and screening plant. Barite mined will be treated at the company's Modesto plant. John Tellia, Gabbs, is engineer in charge and James Jury, mine foreman.

. . .

Pioche, Nevada . . .

With its flotation concentrator treating 1000 tons of ore daily and more than 300 men employed, Combined Metals Reduction company reportedly is producing almost two-thirds of Nevada's output of lead and zinc with appreciable amounts of gold, silver, copper and manganese. Base pay for miners employed by the company is \$10.14 per eight-hour shift, with bonuses averaging about \$4 a shift and the best miners making \$20 a shift consistently.

. . .

Salt Lake City, Utah . . .

The multimillion dollar copper refinery to be built by Kennecott Copper corporation will be located immediately south of Garfield, which lies southwest of Salt Lake City, according to D. D. Moffat, vice-president and general manager of the Utah copper division of the concern. The refinery probably will consist of eight buildings covering 30 acres.

. . .

Oatman, Arizona . . .

Crosscut operations at the Victoria Gold Mines, Inc., near Oatman, have uncovered commercial grade ore on the 250-foot level, according to company officials. The company had completed the shaft and drifted 30 feet in a southern direction toward the Arataba vein when the five-foot ledge was encountered, and extremely rich pannings reported. At the same time a tremendous amount of water was said to have been uncovered and continual pumping operations are being carried on.

. . .

Washington, D. C. . . .

Senator Pat McCarran of Nevada and Representative Clair Engle of California have introduced a bill in both houses which would establish a free market for gold mined in the United States, its territories and possessions, or imported into the United States after enactment of the measure.

Washington, D. C. . . .

A uranium rush is reported in the West and Southwest, with prospectors, carrying odd-looking rocks which they hope may contain the radio-active ore, forming lines at local government agencies. The excitement is due to the Atomic Energy commission's incentive plan which will award bonuses for discovery and production of high grade uranium ores and concentrates and offer subsidies to aid production from low grade ores. Inquiries regarding the commission's uranium needs, and notice of discovery of a deposit believed to meet requirements should be addressed to: United States Atomic Energy commission, P. O. Box 30, Ansonia Sta., New York 23, Att. Division of Raw Materials.

Notice of discovery should be accompanied by an offer to deliver such ore to the commission, with a brief description of property location, size, relationship to mineral monuments or public land surveys, name of owner of record and location of office where ownership is recorded. A 10-pound sample should be forwarded to the commission. The sample will be analyzed. If it appears the claim may meet requirements the property will be inspected and weights and assays of material produced will be verified.

The commission has announced two allowances in addition to those previously listed will be paid for delivery of carnotite or roscolite-type uranium-bearing ores in the Colorado plateau area. A haulage allowance of 6 cents per ton mile, up to 100 miles, will be made for transporting the ore from the mine to the commission's purchase depot. An allowance of 50 cents per pound of uranium oxide in ores containing 0.20 per cent or more of the oxide will be made to stimulate reopening and equipping closed mines and to increase production facilities of mines now operating, in addition to the development allowance provided in circular No. 3. The two allowances will be in effect until July 1, 1949.

The public lands in 40 square miles of Montrose and San Miguel counties of southwestern Colorado have been set aside by the commission for uranium exploration. It was from this region, near Naturita, that several tons of uranium-bearing ore were mined and shipped to Paris in 1898. Also in the area are the ghost towns of Horsethief Trail, Wildhorse, Six-shooter Peak and others where silver and gold were mined in the 70s and 80s, which may come back to life if uranium is found.

. . .

Salt Lake City, Utah . . .

Reported rich silver strikes at the Columbus Rexall mining property in the Alta district at the head of Cottonwood canyon in the Wasatch mountains and the Cardiff mine in the Alta district, gave Salt Lake City stock exchange its most active session in two years.

HERE AND THERE . . . on the Desert

ARIZONA

New Lost Mine Hunt . . .

FLAGSTAFF—Visitors to Flagstaff this summer will search for the "Lost Treasure of the Padres" on one of a series of Sunday tours conducted by the Flagstaff Cavaliers, an organization of business and professional men sponsored by the chamber of commerce. According to legend, the great fortune in gold and silver bars was buried in the San Francisco peaks area near Sunset Crater by Spaniards who were attacked by Apaches while attempting to escape from the Pueblo Indian rebellion of 1680. Date for the treasure hunt has not been set.

Sahuarita Range Closed . . .

TUCSON—Sahuarita range, 17 miles south of Tucson, has been classified as a restricted area by officials at Davis-Monthan air force base and the public is warned not to enter it. It is imperative that cattle owners see that their cattle do not enter the range, according to base officers. The 23,580 acre area is being used for bombing and gunnery practice. It has been clearly marked and fenced off.

Water for Mountain Sheep . . .

YUMA—Work has been completed on four tanks on the Cabeza Prieta game range, according to Arthur F. Halloran, fish and wildlife refuge manager. One new tank, a former death trap for mountain sheep in the Sierra Pinta mountains, now holds 10,000 gallons and can be considered a permanent tank. The other three are in the Sierra Cabeza Prieta, and make water available in areas which have been dry during drouth periods. It is hoped that the new tanks will hold the bighorn sheep in the area throughout the year. Before, they traveled south into Mexico at times of water shortage.

The Horses are Laughing . . .

WICKENBURG—When Bob Cooper called for volunteers to help rid his ranch near Congress Junction of an estimated 200 wild horses overrunning it, 350 persons—experienced riders and dudes—arrived for the roundup. Several hundred others, it was reported, turned back at Octave because the road was too rough. Cooper had offered his volunteer riders the pick of the wild horses caught. The score at the end of a hectic day: four horses captured, two hunters lost. Sheriff's deputies from Maricopa and Yavapai counties and volunteers found the lost men—Robert K. Greene and Don Taylor of Phoenix—the next day in the rugged mountains east of Congress Junction. They were unharmed, tired and hungry.

Ancient Yuman Dies . . .

YUMA—Acoyhutapah Hills, 106-year-old Quechan (Yuma) Indian woman died at the home of her daughter on the Fort Yuma reservation, May 10. Norwood W. Cox, in charge of the Fort Yuma sub-agency, said records in his office show Mrs. Hills was born June 11, 1842. She told her children she was born along the Colorado river near Somerton. When she first saw the site of the city of Yuma "there was nothing but trees," she said. Cremation took place at the tribal burial ground.

Clarkston Vanishes . . .

AJO—Clarkston, landmark of the Ajo district, is being torn down to make room for the new \$5,000,000 smelter of the Phelps Dodge corporation. Clarkston was named for Sam Clark who came to the region in 1907, was the first to sink a deep shaft in the area where the big New Cornelia open pit is today, and to ship ore from the Ajo mine to Douglas. The town was founded in 1915. At its peak it had 400 buildings, 1600 population. The Ajo *Copper News* began its career there in 1916. Costly fires in 1931 almost destroyed the business district. Clark died in October, 1933. Last November, Mrs. Clark sold the property, known as the C & A mining claim No. 2, consisting of about 20 acres on which the town of Clarkston was located, to the Phelps Dodge corporation.

Navajo-Hopi Administration . . .

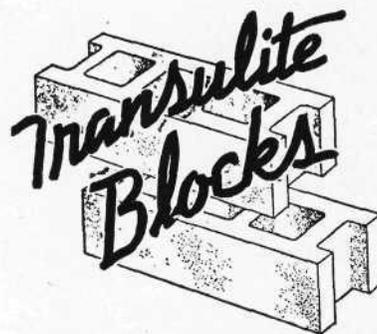
WINDOW ROCK—A Navajo-Hopi Indian administration to work for rehabilitation of the tribes would be set up in a bill introduced in congress by Senator Watkins of Utah. The bill would declare it the policy of congress to bring about assimilation of these Indians into the general population as soon as possible and the ending of federal administration of their affairs. Irrigation work on the Navajo and Hopi reservations would be transferred from Indian affairs to the bureau of reclamation. Health activities would be transferred from Indian affairs to public health service. The bill also would authorize \$25,000,000 for surveys and the immediate development of an educational program.

New Dress for Navajo Bridge . . .

FLAGSTAFF—The state highway department has called for bids on the painting of Navajo bridge on Highway 89, 125 miles north of Flagstaff. The bridge, only crossing of the Colorado for hundreds of miles either way, is 467 feet above water at its floor level. The main arch has a span of 616 feet and a rise of 105 feet. The span is 833 feet long and required a total of 1100 tons of structural steel. It was built in 1927 through joint efforts of state and federal governments.

Governor Osborn Dies . . .

PHOENIX—Governor Sidney P. Osborn, 64, who helped form Arizona's constitution and was one of its first officials, died of muscular atrophy, May 25. Osborn was the only Arizona governor to serve four consecutive terms.



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BOOKS — MAGAZINES

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BOOKFINDERS—Scarce, out of print, unusual books quickly supplied. Send wants. Clifton, Box 1377d, Beverly Hills, Calif.

THE ROYAL GORGE: 50c, illustrated booklet on the geology of the area, with maps of the fossil, gem and mineral localities charted to aid the touring collector. F. C. Kessler, Canon City, Colo.

SCENIC GUIDES—Now our handy guides cover the entire "Southwest."—Southern California; Nevada, Arizona, Utah, New Mexico. Maps, descriptions and pictures are attractively combined in an alphabetic arrangement for quick reference. Price \$1.00 each. Also a special guide to California's Century Old Gold Camps—the Scenic Guide to the Mother Lode—Price 75c. Postpaid from Scenic Guides, Box 288, Susanville, Calif.

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SATISFY THAT DESIRE—Read about the desert in Desert Spotlight, illustrated monthly magazine, featuring fascinating stories of desert folks, doings, animals; only \$1.75 for 1 year subscription. Box 162-DM, Yucca Valley, Calif.

MISCELLANEOUS

CACTI AND SUCCULENTS—From the deserts of the world. Don-Rita brand. By appointment only. Write us your needs and we will try to help you. Michael Donnelly Cacti Gardens, 334 Lowell St., Daly City, Calif.

LEARN the profitable jewelry and gold-smithing trade at home. Simplified course teaches jewelry designing, manufacture and repairing; gemsetting, etc. Gemcrafters, Dept. F., Kalispell, Mont.

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COLOR SLIDES—Travel, Nature, Geology, etc. Free list (with sample 30c, three for dollar). Kelly D. Choda, Box 5, Los Alamos, New Mexico.

WANTED—By elderly man, experienced irrigator, permanent Desert Caretaker position, with modest dwelling on nearby tract, with water, on installment or life-tenure plan. Excellent references. E. B. Hill, 387 La Cadena Drive, Riverside, Calif.

GOLDFIELD, NEVADA, invites you to visit this historic city. Tourist information can be obtained at the Rockhounds and Mining Headquarters. Hurry Back Trading Post on Highway 95 at the south city limits.

WANTED GIFT SHOP ITEMS—An opening better class gift shop, beautiful Hiway location, The Lake of the Ozarks region. Want legitimate wholesale quotations on gift shop items. Consider cabinet specimens colorful minerals, coral, sea shells, etc., and products. (No cutting material, please.) Also consider Mexican and Indian products, cactus novelties, alabaster products, baskets, bird houses, or what. Your suggestions appreciated and considered. Write J. D. Mahaffey, Niangua Gift Shop, Camdenton, Mo.

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THE Desert MAGAZINE
El Centro, Calif.

Apaches of the Ft. Apache reservation have formed their own American Legion post, with 40 members. The post was named for Frank Banashley, Apache killed on Luzon. Most of the members of the new organization fought with Arizona's Bushmasters.

The White Mountain Sportsmen's association has voted unanimously to ask the state game and fish commission to open a 144,000 acre area in the mountains for hunting of antelope with archery equipment.

The national park service has asked for \$3,300,000 for gradual expansion of present facilities at Grand Canyon and eventual replacement of El Tovar hotel on the South Rim.

CALIFORNIA

Markers for the Spanish Trail . . .

DAGGETT—William R. Palmer of Cedar City, Utah, has asked the aid of Dix Van Dyke, desert historian, in the projected marking of the Old Spanish trail from Santa Fe, New Mexico, to Los Angeles. Tentative plans call for a marker every miles of the route. Judge Van Dyke and Thomas Hanna traveled hundreds of miles by jeep across the Mojave, mapping the Spanish trail and two detours the Mormons used. Van Dyke reports some portions of the trail are impassable even by jeep, but most of it can be followed directly or on nearby roads by a passenger car.

Yuccas are Protected . . .

VICTORVILLE—A local jury returned a guilty verdict against a defendant who had trucked away yuccas for commercial manufacture. He was fined \$200 with a six-month jail sentence suspended. The complaint was signed by Lee Dolch, agricultural inspector, who acted for Victor Valley chamber of commerce. The yuccas were taken from the land of Walter Sapp. County ordinance 310 makes it unlawful for any person, firm, or corporation to dig up, remove, mutilate or destroy a yucca plant, or to pick or cut any bloom or blossoms therefrom, growing on public or private land, without a permit issued by the county forester of San Bernardino county or the written permit of the land owner. Joshua trees, Spanish dagger, Spanish bayonet, desert lily, smoke tree, desert holly and indigo bush are protected under the ordinance.

Maps for the Mojave . . .

BARSTOW—The geology students and departments of Pomona college, California Institute of Technology and U.C.L.A. are undertaking geological research and mapping projects in unsurveyed areas of the Mojave desert. The current project, instituted through efforts of

Dr. D. F. Hewett, former head of the metals section of U. S. geological survey, covers the area from Barstow to the southern end of Death Valley. It is being carried out by college volunteers whose only

recompense will be college research credits. Most of the work must be done week-ends during the school year. Pomona college students are working now in the Calico hills.

DESERT QUIZ

This monthly quiz covers a wide range of subjects. It touches the history, geography, Indian life, mineralogy and general lore of the desert country. It very often happens that high scores are made by readers whose only contact with the desert has been an occasional trip on its highways. But these are questions which every thoughtful person should be able to answer—and now is a good time to learn the answers you do not already know. Ten is an average tenderfoot score. Fifteen is excellent, and any score above 15 is superior. The answers are on page 36.

- 1—In driving your car through heavy sand you will probably get best results by— Letting your wife drive while you push..... Putting chains on the wheels..... Reducing the air pressure in your tires..... Turning the car around and backing through.....
- 2—The staple meat in the diet of the Navajo Indians is— Beef..... Mutton..... Wild game..... Pork.....
- 3—The historic feud between the Clanton gang and the Earps was staged at— Tombstone..... Ehrenberg..... Bisbee..... Prescott.....
- 4—The book *What Kinda Cactus Izzat?* was written by— Oren Arnold..... Edmund C. Jaeger..... Mary Beal..... Reg Manning.....
- 5—The fleetest wild animal now found in Nevada is— Mule deer..... Jackrabbit..... Antelope..... Bighorn sheep.....
- 6—According to legend the Indian god Tahquitz lived in the mountains of Nevada..... Utah..... Arizona..... Southern California.....
- 7—A lecture given by M. R. Harrington probably would be on the subject of— Rock collecting..... Archeology..... Dry land farming..... Placer mining.....
- 8—Ubehebe crater is located in the area of— Great Salt lake..... Painted Desert of northern Arizona..... New Mexican lava beds..... Death Valley.....
- 9—The Gadsden territory was purchased from— The Indians..... France..... Mexico..... Spain.....
- 10—The common name of the desert plant known to scientists as *Fouquieria splendens* should be spelled— Ocotillo..... Ocatillo..... Ocotilla..... Ocatilla.....
- 11—The mineral known as "volcanic glass" generally is— Chalcedony..... Obsidian..... Mica..... Chert.....
- 12—Berries of the juniper tree are— Red..... Black..... Yellow..... Blue.....
- 13—The name John D. Lee is associated with— Lincoln County war in New Mexico..... Capture of Geronimo..... Mountain Meadows massacre..... Kidnapping of the Oatman sisters.....
- 14—To visit the Petrified Forest national monument in Arizona you would take a side road leading off of— U. S. Highway 80..... Highway 60..... Highway 66..... Highway 70.....
- 15—Annual assessment work normally required on mining claims is— \$25..... \$100..... \$200..... 10 days' work.....
- 16—The mineral perlite has become much in demand in recent years for its value in— Making paint..... As a substitute for graphite..... For tempering steel..... For insulation.....
- 17—The Taylor act pertains to— Interstate commerce..... Mining..... Grazing..... Reclamation.....
- 18—Montezuma Castle national monument is located in— New Mexico..... Arizona..... Utah..... California.....
- 19—"Crossing of the Fathers" is a historic landmark along the Colorado river identified with— The trek of Father Escalante..... Mormon colonization..... The march of Coronado..... Gold rush to California.....
- 20—Sportsmen fish in Lake Mead mainly for— Rainbow trout..... Catfish..... Mullet..... Bass.....

He Saw Tarpon . . .

INDIO—Despite eye-witness reports, W. A. Evans, fisheries biologist of the state division of fish and game, declares no tarpon have been planted in Salton Sea and there is no evidence any of the big game fish exist there. Introduction has been considered, he says, but research indicates there is not enough food available for game fish. Small relatives called Ten Pounders are found in the Salton. But Roy Hunter of Desert Beach insists that he can recognize a tarpon when one jumps clear of the water and looks him in the eye. Commercial fishers have been taking between four and eight tons of mullet a day from the Salton, but Hunter says the big fish he saw off Desert Beach pier was not a mullet.

Survey Mesa Lands . . .

EL CENTRO—A land classification survey and engineering and economic surveys of West mesa and Pilot Knob mesa in Imperial Valley are being carried out by the bureau of reclamation. Maurice N. Langley of the land classification division, Yuma, is in charge of the project and a 13-man crew is making surveys north of Highway 80. There are 62,563 acres in the West mesa area, and 11,810 in the Pilot Knob section. Both are included in the Imperial Irrigation district for development under the All-American canal contract.

Mexican Train Ride . . .

CALEXICO—Calexico chamber of commerce is planning to sponsor an excursion train over the new Sonora-Baja California railway about the middle of October. Present tentative plans call for scheduled stops at Puerto Peñasco, Hermosillo and Guaymas with many prospective passengers asking for a one-day fishing layover at Guaymas. The chamber plans to compute the cost of the trip to cover rail fare, tourist sleeper accommodations, meals and refreshments. On overnight stops the passengers will use the pullman sleeper.

Congress has been asked to provide \$12,000,000 for highway work in Indian reservations during 1950, 1951.

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Willard Price, backed by Palm Springs Desert Museum, has proposed that Goat mountain, directly behind Cathedral City, be renamed Bighorn mountain. Desert bighorn sheep were said to be seen occasionally in the Santa Rosa mountains in the vicinity.

Yermo chamber of commerce plans to make a passable road approaching and through Sunrise canyon in the Calicos and to erect signs to direct tourists to the canyon.

The road between the Twentynine Palms entrance to Joshua Tree national monument and the Pinto basin "Y" is being oiled.

Trona Railway company has ordered two 200 horsepower diesel-electric locomotives to speed shipments of potash, borax and other chemicals on drag line hauls across the Mojave between Trona and Searles Station.

United States naval ordnance test station near Inyokern dedicated its huge new Michelson research laboratory during May. The laboratory is said to be the most complete scientific research facility of its type in the world.

NEVADA

Learn Native Plants . . .

RENO—Nevada plans to make its school teachers more familiar with the plant and animal life of the state. The University of Nevada is offering a five-week course in field biology this summer which may be taken without any prerequisite courses and which was designed for those wanting more general information on the natural life of Nevada. Since the university bus must be used for the field excursions, 16 of which are planned, membership in the class is limited to 30. Included in the schedule are trips to Pyramid lake, Fort Churchill, Lake Tahoe, Donner lake and Mt. Rose.

Burro vs. Bighorn? . . .

BOULDER CITY—Members of the national park service have started a war on the desert burros which, they claim, are making life tough for the bighorn sheep. April 27, Victor H. Cahalane, biologist with the park service, testified before a congressional committee that wild burros in the Lake Mead area of Nevada and Arizona are increasing in numbers and eat the limited supply of forage on which the bighorns depend. They also gang up around water holes and drive the bighorn away, he declared. Park service employees have destroyed a number of burros "but it is hard, tiresome work," he said. In California three days later, E. L. Summer, of Death Valley national monument, told the state fish and game commission the same story. Five hundred wild burros are battling it out with 500 bighorn sheep for

water rights in the monument and the burros are winning, he declared.

Tim Connolly Dead . . .

GOLDFIELD—Tim Connolly, 78, famous Goldfield figure since early boom days died here in April. Connolly, who was justice of the peace at time of his death, came to Goldfield in 1904 after an adventurous life which had included participation in the Klondike gold rush. During the town's rise to glory, he was foreman of the Mohawk and other Mackenzie properties. What he called his most profitable venture in Goldfield was a rooming house which netted him \$400 a month. He intended it as a private residence, but before it was completed faro dealers, bar tenders and miners were sleeping all over the floors and Tim converted the building into a hotel.

Close Air Base, Hold Range . . .

TONOPAH—Tonopah army air base has been declared surplus, but army authorities have announced their intention of retaining the vast Tonopah bombing range covering hundreds of square miles of land east and south of Tonopah. The range will be held for possible use of bombers flying to the area from outside bases.

The Will to Live . . .

BEATTY—Some years ago Burton K. Riggs and his son, Hyrum, prospecting the Kane Springs area 40 miles east of Beatty, found the remains of a ghost town. Perched on a bank overlooking the camp was a cactus plant growing in an old-fashioned wooden candy bucket—and the cactus was still alive although the town had been abandoned at least 26 years. The Riggs took the cactus to their home on the Amargosa where it proceeded to bloom. This year it is covered with buds again. The Riggs wonder who left the candy bucket on the lonely hill—but still more they wonder how the cactus managed to survive the long, dry years cooped in a wooden bucket.

ANSWERS TO DESERT QUIZ

Questions are on page 35

- 1—Reducing the air pressure in your tires.
- 2—Mutton.
- 3—Tombstone.
- 4—Reg Manning.
- 5—Antelope.
- 6—Southern California.
- 7—Archeology.
- 8—Death Valley.
- 9—Mexico.
- 10—Ocotillo.
- 11—Obsidian.
- 12—Blue.
- 13—Mountain Meadows massacre.
- 14—Highway 66.
- 15—\$100.
- 16—For insulation.
- 17—Grazing.
- 18—Arizona.
- 19—The trek of Father Escalante.
- 20—Bass.

Cowboy and His Horse . . .

AUSTIN—Roy Brown was helping at a roundup in Gabbs valley when his horse, Old Billy, pressing close on the tails of the cattle, went over the edge of a gully filled with large boulders. Roy threw himself backward but the horse landed headfirst against a rock. Old Billy had a bad fracture between his eyes. The cowboys gathered around—all but Roy—agreed the old horse must be shot. Roy took Old Billy home in a truck to Brown's station near Austin. He made a splint following ideas of his own and laced it over the horse's forehead. Today Old Billy is munching hay as usual and appears on the way to recovery.

They Knew It Was Rough . . .

LUNING—Two priests stopped in Luning and asked W. D. Edds about the old road that left Highway 23 just before the highway entered the mountains. Edds told them it was the old wagon road between Luning and Rawhide. "Don't try it," he advised. "It's practically impassable for a modern automobile." One priest nodded. "We know it is. We were lost and just came in over it."

May 16, the *Reese River Reveille*, of Austin, celebrated its 85th anniversary. The newspaper has never missed an issue, according to Editor W. M. Thacher, although it varied between a daily, weekly and semi-weekly. It is the oldest continuously published paper in Nevada.

Mina lays claim to being the driest place on earth according to C. E. Sullivan. Last year's precipitation was 1.37 inches, and there has been no rain since May 30, 1947.

With the low bid of \$95,330, the J. C. Compton company was awarded the contract for roadmix surfacing the Fish Lake valley road from a point three miles north of the California-Nevada state line to a junction with U. S. Highway 6 near Coal-dale.

NEW MEXICO

Use for Abandoned Mines . . .

GALLUP—Abandoned mines in and around Gallup are being used in an attempt to solve the town's water supply and drainage problems. A project to divert flash floods into the shaft of the abandoned Noce coal mine has been completed and work is under way on a dam across Heaton arroyo which will send flood waters into the old Thatcher coal mine. Gallup gets its water from wells in the area of the abandoned mines, and the project not only will take care of floods, but will put water into the ground which otherwise would run off the surface.

Rhodes Pardis See Movie . . .

ALAMOGORDO—Cole Railston of Magdalena, who was foreman of the Bar Cross ranch when the noted western au-

thor Eugene Manlove Rhodes was a cowboy there, was invited to be a special guest at the first Alamogordo showing of the picture made from Rhodes' book, *Pasó por Aquí*. George Henderson of Hot Springs, Finis Henderson of Tularosa and C. H. Haynes of Alamogordo, who rode with Rhodes on the San Andreas ranges, also were invited.

Vocational Training for Navajo . . .

GALLUP—Navajo Indians who already have some vocational skills will be given training to provide a pool from which 2000 semi-skilled workmen can be drawn for contemplated construction on the reservation under the department of interior's proposed 10-year rehabilitation program, according to George A. Boyce who heads the Navajo education division. Boyce said: "We are not going to import construction workers for this program." Those with skills in carpentry and other building trades will be given an opportunity for further instruction. Others will be trained in operation and maintenance of road machinery and other equipment to be used.

Frontier Indian Scout Passes . . .

FORT WINGATE—Jake Segundo, 95-year-old Indian scout and veteran of the Indian wars died in April at his home near Kit Carson's cave and was buried at Fort Wingate. He was one of the last of the Indian scouts who lived in the frontier era. He was born near Fort Wingate in 1853 and lived near Gallup throughout his life.

Study Lightning Factory . . .

ALBUQUERQUE—From the top of an 11,000-foot peak in the Sandia mountains, scientists have been using radar to observe the manufacture of hail and rain inside a thunder cloud, according to Dr. E. J. Workman, president of the New Mexico school of mines. Air currents surging upward within a cloud carry moisture up 30,000 feet where the temperature is about 24 degrees below zero. As warm air currents reach cold regions rain and hail begin to form. Churning air currents and

moisture droplets create an electrical field in the clouds and lightning and thunder result.

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Inyo County, \$15; E or W ½ \$7.50; San Bernardino, 73x110, \$15; No. or So. ½ \$7.50; NW., SW., NE., or SE ¼, \$3.75.

Also Oregon, Idaho and Washington County Maps.

WORLD'S MINERALS

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Kit Carson Will Stay . . .

SANTA FE—Any effort to move the body of Kit Carson, pioneer scout, from its resting place at Taos will be strongly resisted, Governor Mabry declared in a statement to the press. Mabry, referring to reported proposals to move Carson's body to Colorado said: "People of all New Mexico take pride in honoring the memory of Kit Carson and we want his body to rest in the soil of the state he called home."

Apache Wins Fellowship . . .

SANTA FE—Allan Houser, full-blooded Jicarilla Apache and grandson of Geronimo, has been awarded a Guggenheim fellowship in sculpturing and painting. Houser, who received his initial art training at the Santa Fe Indian school, has just completed a marble statue, "Comrade in Mourning," as a memorial to Haskell Indian school students who lost their lives in World War II. Houser has done murals in oil for buildings at Haskell and examples of his fresco work are to be found in

the Fort Sill, Oklahoma, and Riverside Indian schools and in the Jicarilla Apache agency school, New Mexico.

UTAH

Summer Geology School . . .

SALT LAKE CITY—Utah is one of the most attractive areas of the nation for geological study, according to Dr. Charles F. Deiss, University of Indiana professor. Dr. Deiss plans establishment of a summer school camp for midwest geology students, and locations in Utah, Wyoming and Montana are under consideration. Needed are a 16-building summer campus and housing for 100 students. The school is to be operated jointly by the university of the state where it is located and Indiana university with at least one other midwest school cooperating.

Will Divide Receipts . . .

SALT LAKE CITY—A bill to provide for distribution of receipts of the Colorado river development fund from 1949 to 1955, between Utah, New Mexico, Colo-

rado and Wyoming, has been approved by the house public lands committee in Washington. The receipts, amounting to \$500,000 a year, are to be used for investigations and construction of reclamation projects, and are to be divided on a basis "as nearly equal as practical." In the past the money has been spent in the order of project priority, which drew the protest from Wyoming that the other states are getting a lion's share.

Park for Fort Deseret . . .

DELTA—Daughters of Utah Pioneers have completed plans for a park on the site of old Fort Deseret, south of present Deseret. The fort was erected as a defense against threatened Pahvant attack in the Black Hawk Indian war in 1865. Four walls of the building, which was erected in 18 days by 88 men, still stand in a fair state of repair. The walls were made of adobe mud and straw mixed by the feet of oxen. The Deseret Daughters of Utah Pioneers have a deed and water right for 10 acres around the fort and the park there will be landscaped and planted with trees, lawns and shrubs.

Salt Lake Level Rises . . .

SALT LAKE CITY—The water line of Great Salt Lake is on an upward trend, after gradual recessions from 1873 to 1940 led many persons to believe it was drying up. The lake now is at an elevation of 4197.45 feet above sea level, four inches higher than a year ago and the highest level since 1933. It still is 14 feet below the all-time high of 1873.

Geyser Park Asked . . .

GREENRIVER — A proposal asking the state of Utah to purchase the cold-water geyser at Riverside, near Greenriver, for development as a state park has the approval of Governor Maw. Called Utah's "Old Faithful," the geyser started operating in 1936 when workmen drilling for oil struck a vein of water and then pierced a flow of carbon dioxide gas beneath. The geyser erupts about once an hour, spouting water high into the air.

Wild Sheep in Book Cliffs . . .

MOAB—Kenneth Beach has concrete evidence that wild mountain sheep inhabit the Book cliffs north of Thompsons in eastern Utah. Beach was east of Thompsons returning to Moab from Grand Junction when the sheep, which evidently had been frightened and was traveling at a high rate of speed, plunged into a cut in the path of the car. He saw the animal in the air and attempted to swerve to avoid collision, but the sheep struck the front bumper and was fatally injured.

On the 100th anniversary of the first wagon to travel over the Old Spanish trail from Santa Fe, New Mexico to Los Angeles, the first of a series of markers designating the route was dedicated in Iron county.

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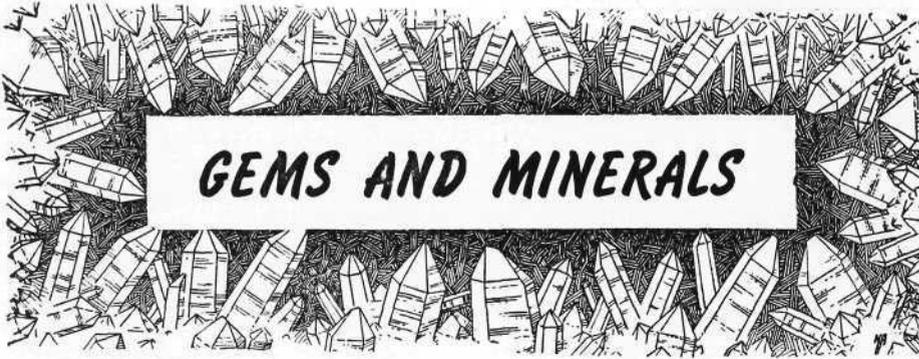
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GEMS AND MINERALS

"WORLD'S LARGEST" SHOW AT LONG BEACH, JULY 16-18

The ninth annual convention of the California Federation of Mineralogical societies, publicized as "the world's largest mineral and gem show," will be held in Long Beach municipal auditorium, July 16-18. Long Beach Mineralogical society is host organization for the convention, and Roy Wagoner is convention chairman. Doors will open at 10 a. m. daily.

In addition to scores of exhibits by member societies of the federation and individuals, the Los Angeles Lapidary society has been invited to hold its sixth annual show at the convention. All 200 members of the society are working on material to be exhibited at the show. Most of the Los Angeles society exhibits will be California materials, but gemstones from most states and nations will be represented. Gold and silver jewelry made by the members, and spheres, novelties, flats, geodes and nodules will be shown.

Lelande Quick, editor and publisher of the *Lapidary Journal* will act as moderator at a round table discussion held each day at 10:30 a. m., with persons competent to answer any questions on lapidary and jewelrycraft activity on hand. There will be a full program of entertainment—speakers, demonstrations, movies and slides.

Commercial space is filling rapidly, and almost every make of lapidary equipment will be exhibited and demonstrated.

THOUSANDS ATTEND EXHIBIT OF SAN JOSE SOCIETY

San Jose Lapidary society held its third annual gem exhibition April 24-25, and attendance was checked at 4968 visitors. The exhibit hall contained 9000 square feet of floor space and the show was arranged in the form of four islands with a total of 74 cases. As the visitor entered the hall he was greeted by the hospitality committee and presented with an illustrated brochure containing articles by members on the lapidary art and allied crafts, pictures of society members' work and a catalogue of material on display keyed to corresponding numbers in the display cases.

A permanent transparency display case was set up, containing 32 windows in vertical position with thin sections mounted on them. The windows were blacked out, except for the thin sections through which the light passed. In the regular cases, 50 of which were designed, financed and built by members of the society, 44 members exhibited 9000 pieces of work. At the south end of the hall was a machinery exhibit containing saw, lap unit, grinders, sanders and a polishing buff which were in operation Saturday and Sunday afternoons.

Judges for the show were Francis Sperison, A. L. Jarvis and Henry Samuelson. Winners were: cabochons: first, R. M. Addison; second, Russell Grube; third, C. Hitchcock. Flats: first, Arthur Maudens; second, Hal Pearsall; third, Herbert Stockton. Novelty: first, Mr. Henly. Facet cut: first, Bruce Holmes; second, Burton Stuart; third, A. B. Strong. Transparencies:

first, Herbert Stockton; second, Hal Pearsall; third, C. R. Rice. Jewelry: first, R. M. Addison; second, Mrs. Russell Grube. Jewelry under two years experience: first, Mrs. Walter Reinhardt; second, Alexander Tihonravov; third, Mrs. Morton Bachrach. Lapidary work under two years' experience: first, Mrs. Frank Gardiner; second, Morton Bachrach; third, Alice Everett. Grand prize for best overall exhibit: Raymond Addison.

Searles Lake Gem and Mineral society planned to visit the Barstow society in place of the June club meeting. At the May meeting, a number of films were to be shown, including a color-sound history of Carlsbad caverns; *The Phantom Sea*, a story of the Salton Sea and animal life of the desert; and *The Golden West*, featuring the Navajo, the gold rush and modern mining methods. The July 24 meeting was planned as an outdoor potluck dinner at 6 p. m. at Valley Wells and neighboring societies have been invited to attend.



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AMONG THE ROCK HUNTERS

"A Report on Jade" by Orlin J. Bell, president of the California Federation of Mineralogical societies, was to feature the May 20 meeting of the East Bay Mineral Society, Inc., of Oakland. The lecture was to cover occurrence of Jadeite in Burma and Nephrite in Alaska, Wyoming and California. At the May 6 meeting Glenn E. Daniels, government meteorologist, was to discuss water, its sources and effects. April field trip was to San Andreas fault, Point Reyes lighthouse, Shell beach and other points. May trip was planned to Lombardi's ranch after Napa county quartz crystals.

At May 4 meeting of the Mineralogical Society of Utah, Paul T. Allsman, chief of the local division, bureau of mines, was to describe the part the bureau played in locating oil reserves during the war. Meeting was scheduled for the geology building, University of Utah, Salt Lake City.

Long Beach Mineralogical society took advantage of home talent at the April meeting and heard a talk on diamonds by Mrs. Lowell Gordon. She gave historical information about early uses of diamonds, stories about the discovery of diamond fields in Brazil and Africa, mining procedures, and the histories of world famous diamonds. The club sponsored two field trips in April. One was to Crestmore quarries where fluorescent aragonite was collected. The second was to Afton canyon where collectors found the route in from Ludlow closed and entered from the Baker road. It was necessary to hike for two miles but it was reported that "hardy souls with hardy soles" found interesting material. Memorial day weekend expedition was planned to Red Rock canyon.

Ruth Smead of Fowler high school faculty was to show Kodachromes of a recent trip through Arizona and New Mexico at the May 4 meeting of Sequoia Mineral society at Parlier union high school. At the April 6 meeting, Mr. Frink, engineering geologist for the U. S. reclamation service, outlined the precautionary surveys necessary before building safe and serviceable dams for power and irrigation projects.

May 28 meeting of the Sacramento Mineral society was to feature a talk on jade by Dr. Austin F. Rogers. The lecture was to be illustrated with Kodachrome slides of carved jade, and jade was to be displayed on the mineral table. The society planned a four-day field trip to Nevada, May 29-June 1 for thulite and garnets in the Singtase mountains, petrified wood near Yerington and jasper, calcite formations and petrified wood near Coaldale and Blair Junction. Lillian Coleman, 2809 Tee street, Sacramento, California, is the club secretary.

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MONTANA WILL STAGE 1948 NORTHWEST CONVENTION

The Northwest Federation of Mineralogical societies will hold the annual convention and free exhibition at Bozeman, Montana, September 4-5, as the guests of the Bozeman Rock club. The main hall of the local armory has been secured for the display, the first of its kind held in Montana, and club officials predict the exhibit will be the largest the Northwest Federation has held. Post-convention trips are being planned to Yellowstone national park, the recently developed Lewis and Clark cavern, and the agate fields of eastern Montana. Professor H. E. Murdock, secretary of the local club and vice-president of the Northwest Federation, has been handling the show development. W. F. Brewer, 720 S. Third, Bozeman, Montana, is publicity chairman.

Dr. Mark C. Bandy, director of research of the Gemological Institute of America spoke on "The Mineralogy of Llalagua, Bolivia" at the May 10 meeting of Mineralogical Society of Southern California. Dr. Bandy spent a number of years at the Llalagua tin mine, largest in the world. From it 300,000 tons of tin valued at half a billion dollars has been mined. Forty-six main veins and 1300 branch veins have been worked and 98 minerals have been identified without microscopic examination. The richest vein, 6-8 feet wide and half a mile long, runs 40 per cent tin. Announcement was made that the annual picnic of the society will be held June 6 at Oak Grove Park, Pasadena.

More than 1000 visitors attended the third annual exhibit of the Minnesota Mineral club, according to *Rock Rustlers' News*, bulletin of the society. The show was held in the Curtis hotel, Minneapolis, April 11, and many tables of rough specimens, fossils, cut and polished material were on display. May field trip of the society was planned to St. Croix valley, for jaspers and agates in the gravel pits and fossils along the river.

San Gorgonio Mineral and Gem society entertained 60 persons with motion pictures May 19, at Banning high school. Stanton Bretschneider continued his series of talks on grinding. A large collection of cut and polished stones from the recent field trip to Lavic was displayed. James Adrian showed several rings he had mounted. Plans were made for a campfire meeting in June and for a picnic to be held in July. At the April 21 meeting, L. A. Horton, forest ranger stationed at Mentone, spoke on national forests and Dr. Marko Petinak showed colored slides of various trips.



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PENDANT FRAMES, with chain, 22mm Round or 18x25mm Oval, Sterling Silver or Gold filled, doz.	12.00
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Members of the Hemet-San Jacinto Rockhound club trekked into the Cerro Gordo region in May, collecting turquoise, jasper and azurite in the Owens valley region and Inyo county. The club was joined by the group from North Hollywood and the clubs from NOTS and Trona.

New officers of the Kern County Mineral Society, Inc., of Bakersfield, elected at the March 1 meeting, are: L. J. Blanchard, president; William Winn, vice-president; Mrs. Floyd M. Purdy, secretary-treasurer; Floyd M. Purdy, field scout; Della Chenard, curator. Program scheduled for the May 10 meeting was a repeat of the "Specimen Travelogue" by Gae Chenard. At the April meeting, a geological report on Horse canyon by Tom Dibble and Kodachrome slides by President Blanchard were presented. Eight members made a field trip to the Lavic district and reported much beautiful material and a wind.

Orange Belt Mineralogical society held its annual meeting and election of officers at the San Bernardino Valley college social hall in May. Officers elected were: president, Dr. Warren F. Fox; vice-president, F. D. Olien; secretary, H. Weston, Box 605, San Bernardino, California; treasurer, Mrs. A. B. Cyrog. A covered dish dinner preceded the meeting with 135 members and guests present. After the dinner, the program chairman, Mr. Thorne, conducted a "Can you top this" contest of rock trip stories, either true or false.

A special meeting of Doña Ana County Rockhound club April 2 heard a talk by A. C. Bohrnstedt, president of American Fluorspar Group, Inc., of Hot Springs, New Mexico. Bohrnstedt exhibited specimens of many minerals including white, pink and purple fluorite and his geologist, Mr. Brown, identified rock and mineral specimens brought by members. At the April 9 meeting, club members spoke on the history of the area. J. T. Kilgore told about the mines in the Organ mining district and exhibited pieces of ancient Spanish plate-mail, armor and weapons.

Annual dinner and installation of officers featured the May meeting of the Santa Monica Geological society. All officers were reelected. Specimens gathered on field trips during the year were exhibited and colored slides of trip locations and members in action featured the entertainment. A trip to Last Chance canyon was planned for May.

Los Angeles Lapidary society held its annual election of officers at the May meeting. Ted W. Schroeder is the new president; Victor Gunderson, first vice-president; James Underwood, second vice-president; Thomas Daniel, treasurer; Claire Schroeder, secretary; Leland Quick, historian. Archie Meiklejohn entertained members at the meeting with the new color slides that were presented to the society by Rolland Willis. Members of the society are preparing exhibits for their sixth annual show, to be staged at the convention of the California Federation of Mineralogical societies in Long Beach municipal auditorium July 16-18.

Dr. D. F. Hewett, staff geologist for the U. S. geological survey, described the geology of the Goodsprings quadrangle, Nevada, to the May meeting of the Pacific Mineral society. Dr. Hewett spent nine months in the area in 1921 and wrote the geological survey's professional paper on the ore deposits and geology of the region. He told the society the Goodsprings rocks were of the Cambrian, Paleozoic and Mesozoic periods. The society scheduled a May field trip to the Goodsprings area.

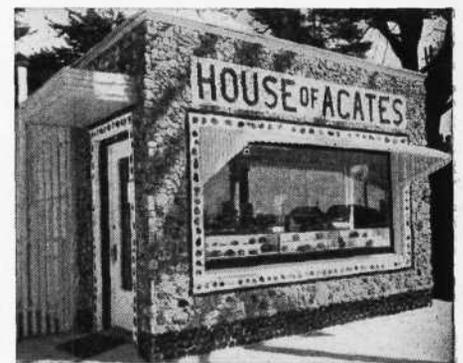
NOTS ROCKHOUND WORK AT DESERT FLOWER SHOW

NOTS Rockhounds displayed an extensive exhibit of minerals and rough and cut gems at the annual desert wild flower show at Naval Ordnance test station, Inyokern, April 17-18. Local materials were featured. It included five large cases of specimens, eight microscopes of micro-mount materials, nearly 2000 cut and polished pieces, jewelry made by members, and a beautiful fluorescent display. Material came from El Paso mountains, Darwin and Cerro Gordo mines, Searles lake, Lead Pipe springs, Greenhorn mountains, Inyo mountains, Death Valley, Panamint valley and the Calico and Barstow regions. Arrangements were under the direction of D. F. MacLachlan with Ralph Dietz in charge of displays.

Dr. John Herman, chemist of the Smith Emery company, Los Angeles, discussed the relation between plant and animal life and the minerals at the May 13 meeting of the San Fernando Valley Mineral and Gem society. Dr. Herman explained that the potato requires silver to stimulate its growth and that iron and copper can brighten up the color of flowers. He declared that rockhounds could be a great help to their country and themselves if they would watch for minerals as well as gemstones. June meeting of the club, to be held at Sepulveda Woman's club, was to feature an auction of gem material and jewelry. The society's field trip, June 22-23, was planned for Lavic and Mule canyon areas.

The Rockologist club of Livingston, Montana, joined the Bozeman club May 9 for a picnic at Morrison caves. The club was formed December 12, 1947, and has a membership of 28. Mrs. Arline Payne is secretary.

Joe Linz spoke on "The Gist of Gems" at the May 11 meeting of the Texas Mineral society held at the Baker hotel, Dallas. President Asa Anderson presided at the meeting. Members who had attended the exhibit of Texas State Mineral society at Austin reported on the show.



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MINERALOGISTS HOLD SPRING GEM SHOW

Southwest Mineralogists held their annual spring show at the Palestine Masonic temple in Los Angeles May 1-2, with more than 300 in attendance. Among displays receiving awards were: A. C. Gustafson, faceting; Mr. and Mrs. Ralph Nowak, faceting; Charles Cook, lapidary; Mr. and Mrs. A. E. Allard, lapidary; O. C. Barnes, Death Valley onyx; Henry Green, petrified wood and minerals; Mr. and Mrs. James Creighton, rocks; Mrs. Dorothy Craig, minerals; Albert Hake, cabochons; W. S. Shirrey, polished specimens; Mr. and Mrs. Harold Lippitt, jewelry display; Mr. and Mrs. Charles Standridge, most unusual display; Mr. and Mrs. James Ruddy, jewelry; and W. A. Clarke. Walt Shirrey was in charge of the show.

Silversmithing was to be Dr. David Monach's topic at the May meeting of Chicago Rocks and Minerals society. At the April meeting, J. L. Cunningham described the making of a gem-display set and exhibited samples of his lapidary work. Ernest Gradolph has been appointed acting vice-president of the Chicago group and Louis Holtz, acting treasurer.

A joint meeting of the Marquette Geologists association, the Chicago Rocks and Minerals society, the Joliet Mineralogists and the Wisconsin Geological society of Milwaukee was planned for the Academy of Sciences, Chicago, May 1. The Marquette society was to display minerals, fossils, gems, rocks and jewelry at the meeting. Talks were to be given by Professor Sheidler of Waukesha college, F. L. Fleener and Ben Hur Wilson. George C. Anderson president of the Chicago Rocks and Minerals society and head of the Midwest Federation of Geological societies was to outline plans for the annual convention of the federation to be held in Chicago, August 21-23.

To handle and discuss minerals are two very satisfactory ways of learning about them, according to the Mineralogical Society of Arizona. The society has a discussion night once a month, when specimens are brought in by members, discussed, and questions about them answered. The society planned its annual jamboree on June 6 at South Mountain park, Phoenix. There was to be a potluck dinner and prizes.

New officers of the San Jose Lapidary Society, Inc., are: Charles Murphy, president; Mrs. Norman Pendleton, vice-president; Burton Stuart, 310 Central avenue, North Palo Alto, California, secretary; David Burridge, treasurer.

A display of fluorescent minerals and two films featured the May meeting of the Mojave Desert Gem and Mineral society of Barstow. The minerals, shown by Ernest McMichael, president of the club, were all found in the immediate vicinity of Barstow.

Northern California Mineral society moved to its new quarters, 1001 Oak street, San Francisco, on March 14. Jessie Unwin was hostess at the opening, and members displayed collections of specimens and polished stones. The club's lapidary shop was opened in the quarters April 22, and lapidary classes were reported filling rapidly. There is no charge for instruction and all equipment is owned by the society. April 21, Richard Crippen of the state division of mines spoke on biconoids, unusual concretions from Templeton, California. March 21, more than 100 members and friends took a field trip to Marin county under leadership of Bert Walker. Actinolite, garnets and serpentine were collected. April 18 field trip was to Pescadero beach after agate, jasper and fossil bones. The club has added 40 members since January.

Forty individual exhibitors displayed their work at the annual meeting and mineral exhibit of the State Mineral Society of Texas, held April 17-18 at the Driskill hotel in Austin. Noon luncheon followed the business sessions and featured a talk by Peter Zodac, editor of *Rocks and Minerals*. Rocky Mountain Federation ribbon prizes were awarded winners at the show and Federation President Chester Howard, of Denver, Colorado, presented a Certificate of Recognition to President J. J. Brown of the Texas society. Brown was reelected president at the meeting. L. T. Johnson of Buda, Texas, is vice-president; Mrs. Mildred K. Spillmann, 2110 Travis Heights boulevard, Austin, secretary-treasurer.

Prof. J. J. Hayes was scheduled to speak to the Gem Stone Collectors of Utah May 20, at the Tribune-Telegraph auditorium, Salt Lake City. His announced subject was "Collecting in the Southwest." Club members were planning a group journey by bus to the American Federation convention at Denver in June.

Douglas, Arizona, Gem and Mineral club held a field trip to Skeleton canyon, April 25, treasure hunting and looking for rocks. Moss agate and opal were collected and the members were so pleased with the day that they have set aside the last Sunday in April each year for an annual treasure hunt. The club held a business meeting and swimming party at the Y.M.C.A. April 30. Ella White, 451 9th street, is the club president.

The 12th annual variety meeting of the Colorado Mineral society, to be held in May, was to feature colored slides of Texas agates, a final discussion of the American Federation convention plans, election of officers for the coming year, and several other items. The traveling collection of the society was shown at the April meeting and was to be exhibited at the convention. The box of 20 typical Colorado minerals accompanied by a framed description has circulated through the affiliated organizations in the Rocky Mountain Federation of Mineralogical societies. Vice-president Harvey C. Markman made the glass covered display case and secured the specimens. The minerals were chosen and described by Richard M. Pearl.

Perhaps the oldest amateur gem faceting machine in the United States was to be displayed by the Colorado Mineral society at the Denver convention in June. It was made before 1895 by Prof. Burton O. Longyear of Ft. Collins, a member of the society. Made of wood, it was constructed so he could hold it on his knees while traveling and turn it by hand.

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Pomona Valley Mineral club held its April meeting in the chemistry building of Pomona college, and officers for the coming year were elected. New officers are: Mr. Weist, president; Mr. Smith, vice-president; Mrs. Boileau, secretary; Mr. Grover, treasurer; Miss Dow, director. Miss Saylor was appointed program chairman. Jerry Lauder milk spoke on "Common Minerals of the Pomona Area." At the May meeting, Don Dressen described "Geophysical Oil Prospecting in South America." He showed colored movies of his travels and of the prospecting operations he described.

The newly organized Junior Rockhounds, sponsored by the Coachella Valley Mineral society made their first field trip, to Agate Valley, in May. Thirty-five members attended.

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The Junior Rockhounds of Prescott voted unanimously to join the Rocky Mountain Federation of Mineralogical societies at the regular meeting held May 7. The group, it was believed, will be the youngest in the federation and possibly in the nation. It now has 40 members, and was organized and developed by the young members themselves. Harold Butcher, vice-president of the Yavapai Gem and Mineral society was speaker at the meeting, telling his experiences during a four-day hiking trip into Havasu canyon with the Lumberjack hiking club of Arizona state college. At the May 21 meeting the Junior Rockhounds distributed federation membership cards. Certificates of recognition for "outstanding achievement and service in the development of earth sciences," signed by officers of the federation, were received for Chip Murdock, Eddie Pape, Anne Pessin, John Butcher and Nancy Merwin.

Regular monthly meeting of the Snohomish County Mineral society of Everett, Washington, was held March 8 at the Legion memorial hall. Eighty members and guests attended and heard a talk on diamonds by Professor D. A. Pifer of the University of Washington school of mineral engineering. Prof. Pifer worked for the DeBeers in Africa for a number of years. The revised constitution of the club was printed in the society bulletin, *Pebbles*.

John Fields entertained members of the Gem Collectors Club of Seattle with slides of scenery and flowers at the April meeting. Members of the club have formed another lapidary group, with Mr. Yerkes chosen as chairman. Meetings will be held the first Tuesday evening of each month. Display of specimens worked upon during the month and discussion of methods are planned. The other lapidary group met May 4 with John Fincke as newly-elected chairman. A number of members who have been working on jewelry met at the Roberson home and organized a second class patterned after the one which has been functioning for two years. Harold Wells was chosen as chairman and the group will meet the fourth Tuesday of each month.

The Feather River Gem and Mineral society of Oroville was to sponsor a mineral show in conjunction with a pot-luck picnic to be held at Bidwell Bar park, June 13. The group is planning to establish a shop where the lapidary art may be taught, and to put on display a classified mineral collection. Thirty-five members and visitors attended the May 13 meeting. The Feather River club scheduled a field trip for the end of May, to the Fallon, Nevada, area. Mrs. Alma Hogge has been appointed secretary of public relations for the society. Her address is 685 Pomona avenue, Oroville, and she will work in conjunction with the chamber of commerce in directing visiting rockhounds to others with the same interests in the vicinity.

The story of Arizona's Havasu canyon people was told by Harold Butcher, vice-president of the Yavapai Gem and Mineral society of Prescott, at the club's May meeting. According to legend, the Havasupai came to the canyon about 800 A. D. Butcher displayed specimens representing the geological periods of the area—Kaibab limestone, Coconino sandstone, red shale, Supai formation, and some travertine with fossil leaf imprints. The society voted unanimously to join the Rocky Mountain Federation of Mineralogical societies and President Moulton B. Smith appointed Mr. and Mrs. E. E. Michael as delegates and Harold Butcher alternate delegate to the Denver convention in June.

Lelande Quick was to be one of the principal speakers at the general meeting of the American Federation of Mineralogical societies at Denver, June 13-16. His subject: "The Second Stone Age."

SOUTH BAY LAPIDARY CLUB ORGANIZED FOR BEACH AREA

A new group, the South Bay Lapidary society, has been formed to serve the South Bay communities of suburban Los Angeles, including Manhattan Beach, Hermosa Beach, Redondo Beach, Torrance, Hawthorne, Inglewood and El Segundo. Officers for the first year are: president, DeWitte Hagar, Manhattan Beach; vice-president, Ellen Barrett, Redondo Beach; secretary, Chet Page, Hermosa Beach; treasurer, Mrs. George Curtis, Hermosa Beach. Hagar is a past president of the Los Angeles Lapidary society. An important feature of the new society is the minimization of business details to allow more time for discussion of stones and lapidary procedure.

John Wood of Henderson, president of the Mineralogical Society of Southern Nevada, Inc., spoke at the regular May meeting of the club, discussing the mining of sulphide minerals. He reviewed lead mining in the tri-state area, copper mining at Butte, and molybdenum mining at Bishop, California. On May 18, T. P. Turchan addressed the society on "Chlorine and the Chlorides." Members of the group visited a placer property on the Colorado river and practiced gold panning. At the June 1 meeting a discussion of the refining methods used with sulphide minerals was to be presented by A. T. Newell, general manager of the Stauffer Chemical company at Henderson.

The Eugene Mineral association, Eugene, Oregon, recently installed officers at its second annual banquet: president, C. R. Rees; vice-president, F. R. McCabe; secretary-treasurer, Alberta Heffron; custodian, L. H. Kerlee; member of the board of directors, Mrs. Frederick Davis. In two years the group has grown from seven members to 62. Its semi-monthly meetings are held in Condon hall, University of Oregon. Members vary in age from those attending school to one hobbyist 86 years old who has been collecting for 55 years. Anyone living in the vicinity of Eugene is invited to attend the meetings if he is interested in collecting. Address of the secretary is 126 City View Boulevard, Springfield, Oregon.

Speakers at the meetings of the Chicago Rocks and Minerals society are presented with cabochons made by society members.

DESERT WILL BE THERE . . .

Desert Magazine will have a booth at the ninth annual convention of the California Federation of Mineralogical societies, "The World's Largest Mineral and Gem Show," to be held in Long Beach municipal auditorium, July 16-18. Current and back issues of the magazine and binders will be on display, and Desert readers are urged to visit the booth and meet Desert representatives. The California Federation is sponsoring a Magazine row, in the northwest section of the auditorium near the club and personal exhibits, where principal publications of interest to the earth science groups will be represented.

AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

By the time this appears the first convention of the American Federation of Mineralogical societies held at Denver will be history. We will be on our way home with pleasant memories, we feel sure, for we will have had the honor of addressing the main meeting of all the mineralogical societies in America on the subject of "The Second Stone Age." This is our enlarged lecture on the enormous growth of the amateur gem cutting movement in America and the importance of stone in the lives of men. We only hope that our talk with the leaders at Denver will result in their including the word "gem" in the title of the American federation.

We will be coming home to face the enormous activity of the "world's largest mineral and gem convention" at Long Beach, California, on July 16th to the 18th inclusive. This will give us a great opportunity of meeting our many Desert Magazine friends for we are going to act as moderator at a round table discussion daily at 10:30 a. m. We will have on hand competent people to cover every phase of lapidary and jewelrycraft activity. All you have to do is to bring your problem to us and we will assign someone to answer it if possible. Stenographers will be on hand to record the entire proceedings so that the most useful questions and answers can appear here in later issues. We will be prepared to answer equipment problems, faceting problems and any question of technique in lapidary and silvercraft work. We will not answer direct questions as to what we consider the best available commercial equipment. Obviously we cannot do that. All equipment manufacturers of importance will be there, or will have representatives who will be demonstrating their equipment. Never before has there been so much equipment gathered under one roof for you to examine.

And never before has there been, anywhere in the world, as many gems and examples of the lapidary and jewelrycraft arts as you will see at Long Beach. The Los Angeles Lapidary society will be holding its sixth gem show concurrently with the federation (by invitation) at the same place—the municipal auditorium. This in itself would guarantee the greatest gem display in the history of the world but coupled with the fact that at least 50 federation member societies also will be displaying gems and jewelry you can imagine the magnitude of the displays.

In addition to all this we have the tentative promise that Donal Hord will permit us to exhibit his famed jade statue of Thunder, the largest jade statue in the world. At this writing Mr. Hord is in New York receiving the award, given once in five years to sculpture, by the National Academy of Arts and Letters. If the statue is not sold in New York, where it was exhibited at the award ceremonies, Mr. Hord has assured us that he is agreeable to exhibiting it at Long Beach.

And all this is free! But don't play a joke on

yourself. Don't arrive at Long Beach about 11 a. m. and expect to attend the Lapidary Round Table, see dozens of machinery exhibits, the many movies and mineral exhibits and several hundred cases of gems and jewelry and leave at 4 p. m. If you attend the convention every day for three days, coming in as they open the doors and leaving when they close for the night, you still can do no more than casually observe. Time will be inadequate for serious contemplation of the many items you would like to study. Therefore don't plan to go just for a few hours or even one day. Plan to really take in this convention and take it by easy stages for a couple of days so that you don't kill yourself. Of course the convention is in a mighty big place but the crowds are going to be mighty big too so it's wise to go early. The doors will open at 10 a. m. every day.

When this column first appeared here seven years ago, lacking one month, the gem cutting literature was confined to about four books on the subject. Those books are still good books but new ones are appearing with the regularity of tax increases. Among them are two that we can highly recommend to lapidaries of experience and to beginners. One is Richard Pearl's new book—*Popular Gemology*. Now gemology is the science of gems. A man skilled in the science is a gemologist. He used to be called a lapidarist but the word is obsolete although it still is used incorrectly by some lapidaries who call themselves lapidarists. That's like a carpenter calling himself an architect. Anyone seriously interested in gem cutting however is bound to be interested in the why and wherefor of gems and Pearl's book tells the story in readable and easily understood language. Of great value to the gem cutter is the information telling the best gem form in which to cut every gem mineral to bring out its best qualities.

Then there is J. Daniel Willems' new book which is simply called *Gem Cutting*. It is equally divided between cabochon cutting and faceting and I don't think it is possible for any one to state the procedures more clearly. It is well illustrated and among other things it contains a chapter that is a blessing for it gives the absolute minimum requirements for setting up a lapidary. How many times have I wished for something just like that so that I could have easily answered the many letters I have received that began with "please tell me briefly just what I need to start gem cutting and how do you do it?" It really takes a book to answer that question and Willems' book is it. It has one great asset. He not only tells you thoroughly just what you must do but he concludes every chapter with a list of things you must not do. Even if your shelves contain a long row of books on gem cutting and gemology you should add these books immediately. These books, and many others, will be for sale at Long Beach at many of the booths.

This page of Desert Magazine is for those who have, or aspire to have, their own gem cutting and polishing equipment. Leland Quick, who edits "The Lapidary Journal," will be glad to answer all questions in connection with your lapidary work. And he would like details about new short cuts or devices which lapidary workers have discovered, to pass on to readers. Queries and information should be addressed to Desert Magazine, El Centro, California.

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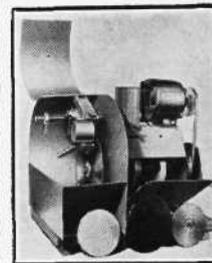
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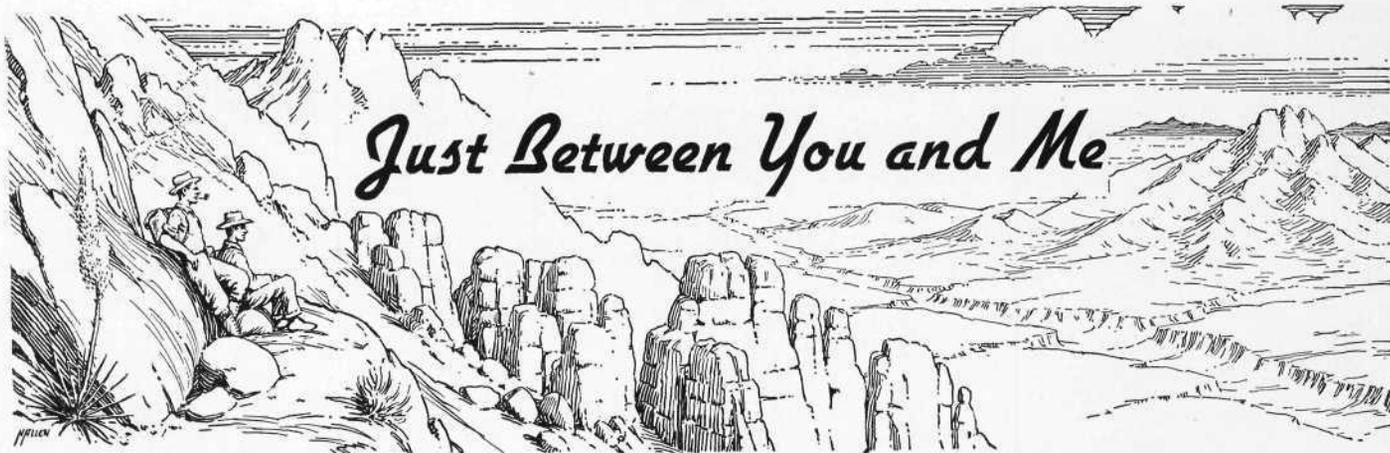
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LELANDE QUICK, Editor and Manager



Just Between You and Me

By RANDALL HENDERSON

DESERT'S readers dwell in every state, and they have many interests. Most of them have hobbies. Some are interested in flowers. Others in photography. Some would like to move out on a desert homestead, others have a yearning to go out in the hills and arroyos and pan for gold. Students among them are interested in the historical background of the desert land. A few of them prefer the poetry page. Many of them are fascinated by the beauty they find in rocks.

Edna Kilborn of Kimberly, Idaho, finds her greatest pleasure in polished stones. For her they are beautiful flowers that bloom the year around. She wrote a poem about them, and one of the verses, as I recall it—

*No artist's brush will ever
Paint the stones in colors true,
For God's great hand has g'iven to each
Small rock its own exquisite hue.*

* * *

On the Navajo reservation, and among those who are interested in the welfare of the Indians, there is heated controversy. It was started when a Chicago business man after several months on the reservation made a report to the Department of Interior recommending that the Indian traders be required to pay ground rental for the sites they now occupy rent-free. Added to that was the proposal that the government sponsor the formation of consumer cooperatives among the Indians themselves so that traders' profits eventually would be eliminated.

While consumer cooperatives are operating with great success in many parts of the world, including our own midwestern United States, they function well only when they are sponsored and managed by highly intelligent men and women.

I doubt if either the Indian Bureau or the Navajo themselves are qualified to manage such cooperatives successfully at the present time. But far-sighted traders will reconcile themselves to the idea that changes are coming. The arid lands of the Navajo reservation simply will not provide adequate subsistence for the 60,000 people who depend on it for food. In solving that dilemma it is inevitable that drastic changes will come to the business of trading with the Navajo.

But there need be no tragic aspect to that thought. Humans who keep their minds young and active do not fear change—this old world would be a rather dismal place if we were forever condemned to plod along in the same unchanging rut in which we have lived for the last ten or twenty years.

* * *

At last we know the price tag on Uncle Sam's jackrabbit homesteads. Ten years after the Five-Acre tract law was enacted by the federal government, the Bureau of Land Management (successor to the old U. S. Land Office), during the past month announced that the federal appraisers had set a price of \$20 an acre on California's Morongo valley 5-acre tracts near the highway, and \$10 an acre for lands farther away.

While \$20 an acre does not appear to be an excessive valuation on habitable land—it is higher than many of us expected. Actually the land in most instances is without water or roads. It is waste land—without productive value.

So far, the appraisals have been made only on a small fraction of the lands taken up under the 5-acre law. I am inclined to reserve judgment as to the justice of these appraisals until more figures are given out, since it evidently is the intent of the Land office to vary the price according to location.

I hope Uncle Sam's price-fixing agents do not get the idea that because Ol' Man Inflation is in the saddle all the jackrabbit homesteaders are rolling in wealth. Actually they are folks of very modest means. If they had lots of money they would have invested in tracts with water mains and paved streets.

I am sure there will be a howl from my neighbors and myself down in Section 36 if Uncle Sam tries to soak us \$20 an acre for our rocks and greasewood.

* * *

In recent months Desert Magazine has carried several stories designed to give readers a glimpse of that great mysterious desert peninsula of Lower California, which extends from near San Diego to the cape of San Lucas nearly 700 miles to the south.

Although the Jesuit padres brought the Christian religion to Baja California many years before missions were founded in Alta California, most of the land is too arid to invite settlers and the terrain has been little changed since that October day in 1697 when Father Salvatierra with an escort of six soldiers landed on the shore of the peninsula and said the first mass.

If I were asked to name the ten most interesting and informative books written about the American Southwest, Fierro Blanco's *Journey of the Flame* would be near the top of the list. The book is about Baja California—but it is no ordinary travel volume. Within its covers is more desert lore than any non-scientific book in print.

* * *

It has been a windy season on the Southern California desert. Hardly a week passed during April and May without a sandstorm. Some days it seemed as if whole dunes were in process of moving across the highway—and eastern motorists speeding across country to the Pacific coast wondered why folks would live in such a place.

But Nature has a way of keeping her books in balance. There was compensation for the annoyance of biting sand in the delightfully cool temperatures that followed when each sandstorm had blown its course and subsided. May, normally a month of uncomfortably high temperatures, was mild this year. Many desert dwellers had not turned on their air-cooling systems when June came.

And there are other compensations. Harsh, rigorous climatic conditions develop tough energetic humans. Extremes of cold and heat keep the adaptive functions in healthy working order. And when life loses the power of adaptation it grows old and decays.



WAS THE SOUTHWEST PEOPLED BY MEN OUT OF ASIA?

In *MEN OUT OF ASIA*, Harold Sterling Gladwin presents his theories on the origins of the American Indian in an entertaining and stimulating fashion. Gladwin is not a professional anthropologist according to Dr. Earnest A. Hooton, who writes the foreword, "but he has done as much dirt archeology—real digging—in contrast to armchair archeology as nearly any professional in the American field."

Gladwin breaks with most of the professionals when he declares that the peoples migrating to the new world brought inventions and advanced cultures with them, rather than developing arts and handicrafts independently here. Gladwin's studies have led him to believe there were five migrations to North and South America between 25,000 B. C. and 300 B. C. In order, the migrants were Australoid, Negroid (Folsom), Algonquin, Eskimo and Mongoloid. He traces these migrations and attempts to tie certain groups—in some cases certain individuals—to definite early American civilizations. Dr. Hooton says: "I think Harold Gladwin is sometimes resoundingly right and at other times magnificently wrong."

Right or wrong, in *MEN OUT OF ASIA* Gladwin has spread a splendid feast of entertainment and information. He outlines the known and surmised history of the American Indian, follows group wanderings and tells of artifacts discovered. Aided by 145 hilarious cartoons by Campbell Grant, he manages to make the book light reading, the best introduction to the prehistory of our continent available. Southwestern and Mexican Indians receive much attention in the volume.

Science for the Layman Series, Whittlesey House, New York, 1947. 390 pps., color frontispiece, color maps, cartoon illustrations, index. \$4.00.

PIONEER DOCTOR OF THE DESERT FRONTIER

Dr. Fred W. Peterson came to Imperial Valley in the years before the floods of 1905-07 and later brought his bride to share the hardships of pioneering in the Calexico area. He became doctor, comforter and diplomatist to Cocopah Indians, Mexicans and all the variety of humans in a rough frontier country. He became confessor, protector and sponsor for the broken in spirit, the lonely drifters. Years as a coroner added to his understanding of human weakness.

Doc Peterson has preserved his experiences in *DESERT PIONEER DOCTOR*. To an almost unequalled opportunity to observe human nature in all its phases, he has brought tolerance and the ability to picture scenes and people. The result is rich personal narrative and excellent regional history which brings early days in the Valley to vivid life. On horseback, by buggy and finally by automobile, Dr. Peterson spent night and day on calls of mercy over rutted trails, across New river to the "old town." His first obstetrical case in the Valley was an Indian woman. When he reached the Indians' home he realized that he could speak no Spanish, they could speak no English. After hopeless efforts at communication, Peterson went back to town and had a friend write out for him the words "What do you call this?" in Spanish. He returned to the tent house, pointed to the table and demanded of the Indian, "Como se llama esto?" From that moment things went well, and Peterson left with quite a Spanish vocabulary at his command.

Dr. Peterson's book is divided into two sections. The second is titled *EXPERIENCES IN OBSTETRICS*. While it contains a discussion of medical practice, it is so crowded with human examples that lay readers will find it fascinating.

Calexico Chronicle, Calexico, California, 1947. 215 pps. Photographic illustrations. \$3.50.

BOOK NOTES . . .

Anthropology publication No. 1 of the San Vicente Foundation, Inc., of Santa Fe, New Mexico, is a selected and annotated bibliography, *The Hopi Indians*, by Dr. Fred Eggan. The four-page mimeographed bibliography is given to those who contribute to the San Vicente foundation in one form or another, or is available at \$1.00. The foundation, with Willard Houghland as executive director, plans to publish important papers in anthropology, issue book news of publications in that field and make grants in aid for writers and publications on subjects the governing board decides to be of worth.

Stanford University Press has published a revised and enlarged edition of C. F. McGlashan's *History of the Donner Party*. The book has introduction and notes by George H. Hinkle and Bliss McGlashan Hinkle and is said to be the only account of the Donner party based on correspondence and personal interview with survivors of the ill-fated California emigrant party trapped by a Sierra winter in 1846-47. McGlashan's book has remained the classic account of the tragedy for 70 years. New illustrative material. \$3.50.

Big Fat is the story of a happy-go-lucky little prairie dog who has adventure after adventure in the mesaland country of New Mexico. And his puppies, Baby, short and fat, Kitty, like a cat, Slim, long and thin, Blacky, dark as sin, Peppy, fast as mice and Tiny, small and nice, add their share to this fun-provoking title in University of New Mexico's Mesaland series. *Big Fat* was written by Loyd Tireman, with color illustrations by Ralph Douglass.

Father Kino's Own Story . . .

Historical Memoir of Pimeria Alta

By EUSEBIO FRANCISCO KINO, S. J.

The day-by-day account of missionary adventuring through the savage wilderness of Sonora, Southern Arizona and Baja California in the years 1683-1711. Kino's diaries and letters, translated by Dr. Herbert E. Bolton from the manuscript in the archives of Mexico, have been out of print for many years. The original edition, a hard-to-find collectors' item, has sold for \$50.

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